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DUNRAINE MINES LTD.  
WAWA AREA GOLD PROPERTY  
McMURRAY TOWNSHIP, ONTARIO  
PROGRESS REPORT

INTRODUCTION

This Progress Report covers the work done to July 28th, 1981 respecting (A) de-watering the Parkhill Mine and (B) surface exploration, all of which is well removed from the immediate Parkhill Mine Area. This Report should be read in conjunction with my earlier report entitled Dunraine Mines Ltd. Wawa Area Gold Prospect and dated January 5th, 1981.

The purpose of this Report is to detail the progress made in 1981; to describe the economic potential resulting therefrom, and to re-estimate all costs.

The sources of information for this Report remain the same as for the previous report except for the addition of the consulting services of W. Don Sutherland, P.Eng., of Calgary, who discovered and developed the Surluga Mine which is located approximately 1½ miles north of the Parkhill Mine. Mr. Sutherland's knowledge and experience of the Wawa Gold Camp, acquired over many years, and successfully applied at the Surluga Mine, necessitates a major adjustment to the current diamond drill exploration program being carried out by Dunraine Mines Ltd.

OMEP-81-7-C-2

DUNRAINE MINES LTD.  
WAWA AREA GOLD PROPERTY  
McMURRAY TOWNSHIP, ONTARIO  
PROGRESS REPORT

JULY 28, 1981

H. GRANT HARPER, P.ENG.

As in the past, the writer continues to visit the Wawa property periodically and to advise and direct the exploration program.

My report of January 5th, 1981 adequately covers such topics as Property and Location, Access and Facilities, History and Development, and General Geology and none of this material need be repeated here.

#### 1981 REHABILITATION AND EXPLORATION PROGRAM

##### A. CAMPS, OFFICE & SERVICE FACILITIES

At the Parkhill Mine site a Port-a-Room bunkhouse, kitchen, and washroom-dry have been set up. These are adequate to accommodate the contractor's personnel consisting of six men and a cook. Similar accommodations plus an office capable of accommodating a company staff of four men have been set up and fully equipped. Electricity and water are supplied to all units utilizing a diesel generator for power. Two small sled-mounted storage sheds hold supplies and fire fighting equipment. A mine yard has been cleared, levelled, and partly stoned. The contractor utilizes a small front-end loader with a back-hoe attachment and a pick-up truck for general yard work and local servicing. The company personnel use a pick-up truck and a suburban truck. None of the buildings or services have been winterized.

B. MINE REHABILITATION AND DE-WATERING

The Parkhill shaft has been re-collared, all debris cleared from the shaft mouth, and all timbers, ladders, etc. replaced down to the water table. The shaft mouth has been capped by plank doors complete with track suitable for handling a wheeled skip. A 15 foot incline head frame has been erected and a sheave wheel mounted. The structure is adequate to provide required servicing during de-watering and underground diamond drilling. The installation of a 42" x 30" CIR single drum hoist is nearing completion and a hoist room is partly constructed. Compressed air is supplied by a portable compressor.

Since early in July a compressed air lift has been de-watering the mine and the water level is just at the 100 ft. horizon. The plan is to continue to use the air lift until the first level is de-watered at which time the requirements for proper shaft servicing can be evaluated and electric pumps installed. Each day water samples are collected from the discharge pipe and from Trout Creek above and below the discharge pipe. The pH of the water samples is measured and recorded by means of a pH meter. Each month the pH meter is tested against the one used at the Helen Mine.

As each level is de-watered, it will be mapped and sampled in advance of diamond drilling. To date there has been no opportunity to start this work.

Plans for underground diamond drilling cannot be finalized

prior to an examination of the workings but the general plan of attack is as follows.

There was very little underground geology done at the Parkhill mine and a geologist was on staff for only a short period during the mine life. Similarly, underground drilling was intermittent and very limited. No underground drilling was ever done on the bottom levels. Interviews have been held with personnel employed by the Parkhill mine during the 1930's. These included a former mine manager, a consulting geologist, and the mine captain. All are agreed that more ore can be found in the drift walls.

The general plan for underground drill exploration is based on studies of the stope plans. These show that in some instances at least, stopes overlap or echelon each other in plan and in section and, since almost no drilling was done underground, there must be a number of echelons which were never discovered. Also, certain stopes were mined upwards to the level above and never continued further up.

Therefore, the diamond drill plan is to probe the walls adjacent to the known stopes with short holes.

#### SURFACE EXPLORATION

Surface exploration has been underway since early in May. It consists of geological mapping and diamond drilling. The mapping program is covering three areas. First, the Van Sickle claims north of the Van Sickle Shaft, second, a strip running

southeast from the Mariposa Shaft, through the Darwin Shaft, and continuing on to the Darwin Shear, and third, the Darwin Shear itself. Control for the program consists of lines cut and chained at 200 ft. intervals.

To date diamond drilling has been concentrated entirely on the Darwin Shear. Five holes totalling 1541 linear feet have been drilled and logged to date. The sampling of these holes is incomplete.

#### EXPLORATION RESULTS

All 1981 exploration results are centred on two observable geological features: the Darwin-Jubilee Shear and the Parkhill-Darwin East-West Vein System and both of these hinge on the interpretation of the Diabase Fault. Air photographs 74-4739-9-34 and 74-4740-6-238 and Figures 1 and 2, all of which are appended to this report, illustrate the interpretations and relationships better than words can describe.

#### THE DIABASE FAULT

Attention was first focussed on the Diabase Fault during the 1930's in the Parkhill mine where orebodies, lying to the east of the diabase could not be located west of the diabase. This was perplexing, for a smaller diabase dike lay parallel to the larger dike some 50 to 100 feet to the east and orebodies

existed between the two dikes. The idea of fault movement along the line of the main diabase dike was not propounded in the 1930's.

R. P. Sage, geologist for the Ontario Geological Survey, is currently mapping several townships in the Wawa area including McMurray Township and it is his observation that the vertically dipping, northwest striking, faults of the area have an apparent horizontal displacement of east side north. Applying an east side north apparent horizontal displacement of about 1800 feet to the Diabase Fault brings the Jubilee and Darwin Shears into line and they become the same structure. This movement also suggests that the Parkhill and Darwin East-West vein systems are offsets of each other. Preliminary Map P828 gives a very approximate outline of the Jubilee stock and the suggested movement along the Diabase Fault does not upset the plotted outline of the Jubilee Stock. Insofar as the writer is concerned, the interpreted movement along the Diabase Fault is real and all exploration concepts and plans are based on the acceptance of this interpretation.

#### THE DARWIN-JUBILEE SHEAR

This is a major shear structure that can be easily traced from the middle of Wawa Lake southwesterly for a distance of 4½ miles to a point south of the Dunraine property where its further extension is uncertain. At the north end the shear dips eastward at 45 degrees rapidly flattening at depth. Towards its south end the shear dips from 55 to 70 degrees to the east. At

its north end, where it is called the Jubilee Shear, the shear zone has been extensively drilled and explored. Towards its southern end, where it is called the Darwin Shear, the shear zone has never been drilled prior to the present program.

The largest orebodies of the Wawa Camp have been found in the Jubilee Shear Zone. The horizontal lengths of the orebodies is not great, seldom over 200 feet. Widths vary greatly: maximum width at the Jubilee mine was over 70 feet while maximum widths at the Surluga mine were about 30 feet. The long axis of the orebodies trends down the rake where continuity was often unbroken for several hundreds of feet. The size pattern and attitude of the orebodies is consistent with their geological environment which is defined by the intersection of the Jubilee Shear and northeasterly trending linears. The linears intersect the Jubilee Shear at angles varying from 15 to 30 degrees and are readily observable and interpreted from the air photographs.

The orebodies associated with the intersection of linears and the Jubilee Shear are characterized by quartz lenses imbedded in a sericitic matrix. Accessory minerals included relatively minor amounts of pyrite, arsenopyrite, and tourmaline. Gold occurs in both the quartz and sericite matrix.

On the Dunraine property the Darwin Shear has several associated linears bearing the same relationship to it that the linears bear to the Jubilee Shear. However, when the current Darwin Shear drill program was started the significance of the linears was unknown and the holes drilled to date were not



located at the most prospective locations.

The strongest linear (called the Sutherland Linear) associated with the Darwin Shear (and stronger and more pronounced than any linear associated with the Jubilee Shear) is located near the north end of the Dunraine property but if ore is associated with the Sutherland Linear it will rake further onto the Dunraine property with increasing depth. The linear intersects the Darwin Shear on Claim SSM 195 and trends northeasterly near the southeast shore of Ward Lake. Now, applying the fault movement described above under the Diabase Fault heading, allows the Sutherland Linear extension to lie near the south shore of Minto Lake and to intersect the north-south Minto vein where gold ore was mined. This Minto Lake linear is illustrated as a fault zone on a map published by the Ontario Department of Mines in 1927. This observation strongly supports the Diabase Fault concept and supports the concept that the Sutherland Linear is of ore making character:- later, more will be said about similar ore making character respecting another linear and the Grace Vein at the Darwin mine.

Several observations were made near the intersection of the Sutherland Linear and the Darwin Shear. The actual intersection is located in a small pond and the nearest outcrop is located on the edge of the pond about 100 feet east of the intersection point. Here, some strong shearing is observable trending northeasterly along the line of the Sutherland Linear and diverging from the Darwin Shear at an angle of about 15 degrees.

The Sutherland linear shearing dips southeasterly at about 60 degrees. Occurring within the sheared section is sericite and minor quartz veining similar if not identical to that found on the Surluga property adjacent to the ore zones. The enclosing rocks belong to the Jubilee stock as do the host rocks at the Surluga and Jubilee Mines. In my opinion and in the opinion of W. Don Sutherland, P.Eng. who discovered and developed the Surluga orebodies, the trace of the intersection of the Sutherland Linear and the Darwin Shear is a high priority exploration target which will be explored as quickly as a diamond drill can be moved onto the location.

There are several observable linears associated with the east side of the Darwin Shear but none of the drill holes drilled to date were located so as to intersect the trace of the intersection of a linear and the Darwin Shear. Nevertheless, of the 5 holes drilled to date, 2 have encountered (by chance alone) favourable indications. For example, diamond drill hole 81-2 intersected a narrow quartz vein containing visible gold some  $3\frac{1}{2}$  feet before the hole entered the Darwin Shear. 0.5 feet of the vein assayed 1.02 ounces of gold per ton. The hole was located within a linear. Within the Darwin Shear diamond drill hole 80-3 intersected 1.5 feet of quartz sericite mineralization which, according to Sutherland, closely resembles the ore bearing mineralization encountered at the Surluga mine although this particular section contained only traces of gold. Obviously further drilling using improved control is required at these

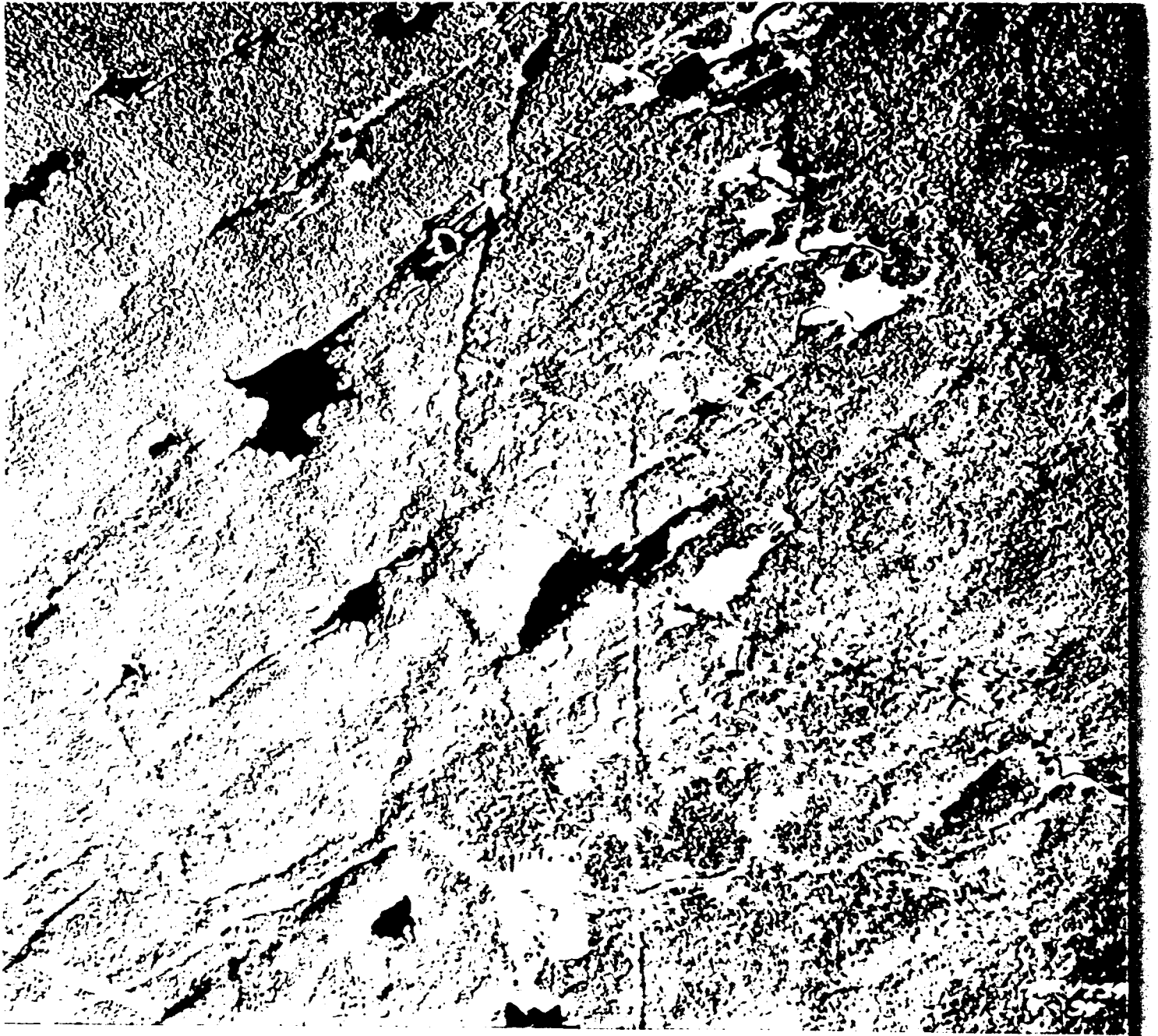
locations. Other known linears remain untested.

#### PARKHILL-DARWIN EAST-WEST VEIN SYSTEM

If the concept of movement along the Diabase Fault is accepted then the Parkhill and Darwin east-west veins become part of the same large ore zone. Relatively small spatial discrepancies can be attributed to secondary faulting, hinging effects, etc. Neither the Parkhill nor the Darwin East-West Vein System (actually N60E, dip 50S) are associated with strong linears coming off the Darwin-Jubilee Shear at an acute angle. But then the host rocks are metamorphosed volcanic tuffs and clastic sediments rather than the Jubilee acid stock, so linears understandably can be different from the Jubilee stock linears. It is also interesting to note that just as the intersection of the Sutherland Linear and the Minto North-South Vein was a loci for ore at the Minto mine, likewise the intersection of the weak Darwin-Parkhill linear and the Grace North-South vein was a loci for ore at the Darwin mine.

There are 14 levels in the Parkhill mine and although ore was found in contact with the east contact of the Diabase Fault, no ore was ever found to the west of it. The Darwin mine workings lie between 2500 and 3000 feet west of the Diabase Fault and mapping between the two has located several surface showings of east-west veins even though much of the intervening ground is covered by overburden and swamp. The best of these showings is called the Moody Pit and lies about 800 feet west of the Diabase Fault. There is a good showing of free gold in the Moody Pit





and the best grab sample assayed in excess of 6 ounces per ton. The Moody Pit is a very old timbered incline shaft of unknown depth which was sunk before the Parkhill and Darwin<sup>mines</sup> came into production.

No East-West veins have been found west of the Darwin mine workings but while mapping this area some typical east-west vein sugar quartz float was found under a windfall and assayed 0.03 ounces per ton. It is very likely that an east-west vein lies nearby well covered by overburden.

The general locale where the Parkhill-Darwin East-West Vein System intersects the Darwin Shear is regarded as one of excellent economic potential. The general area has been mapped and although outcrops are sparse and the terrain rough, diamond drill exploration is essential in this area.

#### MOUNTAIN LAKE VEIN

The Mountain Lake Vein, like the Minto, Boundary, Parkhill No. 4, and Grace veins is a north-south (actually N30W) east dipping vein. It is different from the other veins in several respects. First, it lies on the west side of the Darwin-Jubilee shear whereas all of the others lie on the east side. Secondly, it has a great deal of associated sericite and arseno pyrite which is unique for this class of vein. The vein has never been drilled and is a first class drill target especially in a south-easterly direction where it intersects the Darwin Shear.

## CONCLUSIONS AND RECOMMENDATIONS

1. It is recommended that the de-watering and re-habilitation of the Parkhill mine proceed as planned. As de-watering progresses, each level must be examined, mapped, and appraised from the viewpoint of searching for new ore in the nearby walls and up and down the rake from existing stopes. As targets are defined these should be diamond drilled. The advisability of development beyond diamond drilling (drifting, cross-cutting, etc.) must await a clearer picture of the status of the workings.
2. Excellent surface exploration targets have been defined. The surface exploration program of line cutting, geological mapping, and diamond drilling should continue. The following order of priorities is recommended.
  - a. The Darwin Shear;
  - b. The Darwin East-West Vein System from the Diabase Fault southwest to the Darwin Shear;
  - c. The Van Sickle property from the Van Sickle Shaft westward to the Parkhill boundary and northward to the Surluga boundary.

## COST ESTIMATES

The cost of de-watering and re-habilitating a mine that has been closed for 40 years is subject to many factors which cannot be anticipated and therefore certain cost estimates cannot be firmly based. In the opinion of a former mine manager and mine captain, the mine rock is solid and no collapsed areas are likely. Certainly, the mouth of the shaft where poor ground would be expected, showed no evidence of collapse and the shaft timbers, though rotted, were still in place.

## PHASE I

A. PARKHILL MINE DE-WATERING

Estimated time required: 6 months.

1.	Contractor expense and all operating costs: \$75,000/mnth	\$ 450,000.	
2.	Material costs: hoist, compressor, skip, cable, electrics, pumps, winterizing, etc.	400,000.	
3.	Powerline: clearing & construction, sub station & general servicing	300,000.	
4.	Underground mapping and drill supervision: 8 mnths @ \$2500/mnth	20,000.	
5.	Underground diamond drilling: 8,000 ft. @ \$15/ft.	120,000.	
6.	Sampling and assaying	20,000.	
7.	Maintenance and operations: 3 mnths @ \$15,000/mnth	45,000.	\$1,355,000.



B. SURFACE EXPLORATION

Surface exploration cannot be maintained at a high level of activity beyond November 30th due to problems of access, water supply, and snow.

1.	Mapping, trenching, drill supervision: 4 mnths @ \$5,000/mnth	\$	20,000.	
2.	Surface drilling: 10,000 ft. @ \$20/ft.		200,000.	
3.	Sampling and Assaying		10,000.	\$ 230,000.
			<hr/>	

C. CAMP AND OVERHEAD

1.	Camp operating: 8 mnths @ \$2,000/mnth		16,000.	
2.	Snowplowing, winterizing, and heating		13,000.	
3.	Vehicles and miscellaneous		8,000.	
4.	Consulting Services		30,000.	67,000.
			<hr/>	<hr/>
	TOTAL -			1,652,000.
	Contingency Allowance approximately 15%			248,000.
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	GRAND TOTAL -			\$1,900,000.
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## PHASE II

This phase would involve the underground development of ore zones established by diamond drilling, mill testing, and general pre-production costs. Reasonable estimates of these costs are not possible at this time. In addition, if

surface exploration continues to provide encouraging results, an extensive surface exploration program would be desirable for the Summer of 1982. Again, reliable cost estimates are not possible. In my opinion the overall cost of a Phase II program is likely to amount to something between one and three million dollars.

This report is respectfully submitted.

*H.G. Harper*

Willowdale, Ontario  
July 28, 1981

H. Grant Harper, P.Eng.  
Consulting Engineer.



CERTIFICATE

I, HUGH GRANT HARPER, of Metropolitan Toronto, in the Province of Ontario, certify as follows with respect to my Report on the Wawa Area Gold Property of Dunraine Mine Ltd., dated July 28, 1981.

1. For over twenty years I have been practising as an independent economic geologist, carrying on business as

H. Grant Harper, P.Eng.,  
314 Hendon Avenue,  
Willowdale, Ontario.

2. I graduated from the University of Toronto with the degree of B.A.Sc., 1950 and M.A.Sc., 1951 and have been engaged in my profession since that time. I am a Member of the Ontario Association of Professional Engineers registered in the Mining Branch, and a designated Consulting Engineer.
3. I have no interest, nor do I expect to receive any, either direct or indirect, in either the property or securities of Dunraine Mines Ltd.
4. I have visited the Dunraine properties on numerous occasions since September 24, 1979 and have been actively engaged in the exploration program.

July 28, 1981  
WILLOWDALE, Ontario

*H. Grant Harper*  
H. Grant Harper, P.Eng.  
Economic Geologist.



CONSENT

I, H. Grant Harper, P.Eng., of 314 Hendon Avenue, Willowdale, Ontario, author of the Report entitled Dunraine Mines Ltd., Wawa Area Gold Property, McMurray Township, Ontario dated July 28, 1981 do hereby consent to the use of my report in any Prospectus or Filing Statement of Dunraine Mines Ltd. filed with any properly authorized Canadian securities exchange or commission.

Dated this 28th day of July, 1981

By: \_\_\_\_\_

*H. G. Harper*

H. Grant Harper, P.Eng.



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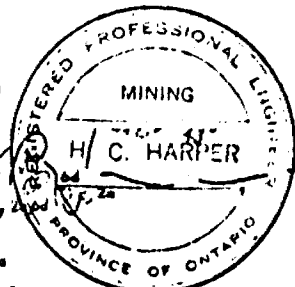
Figure 1.  
Dunrain Mines Ltd.  
post Diabase Fault Movement

1" = 1/2 mile

Jubilee Stock JUL 28 1981

linear

Modified OGS Map P828



H.C. Harper

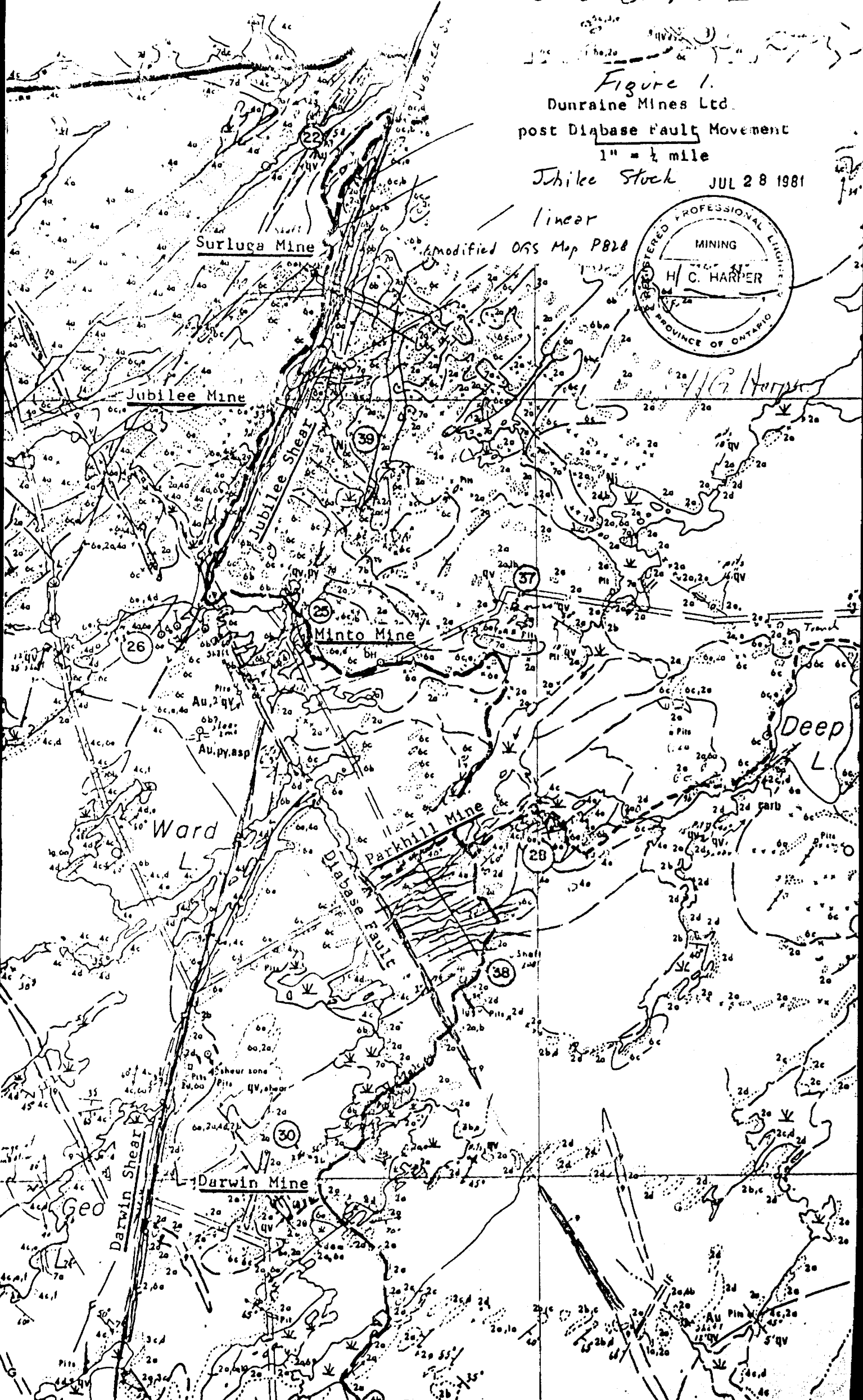


Figure 2

Dunraine Mines Ltd.  
Diabase Fault Movement

1" = 1/2 mile

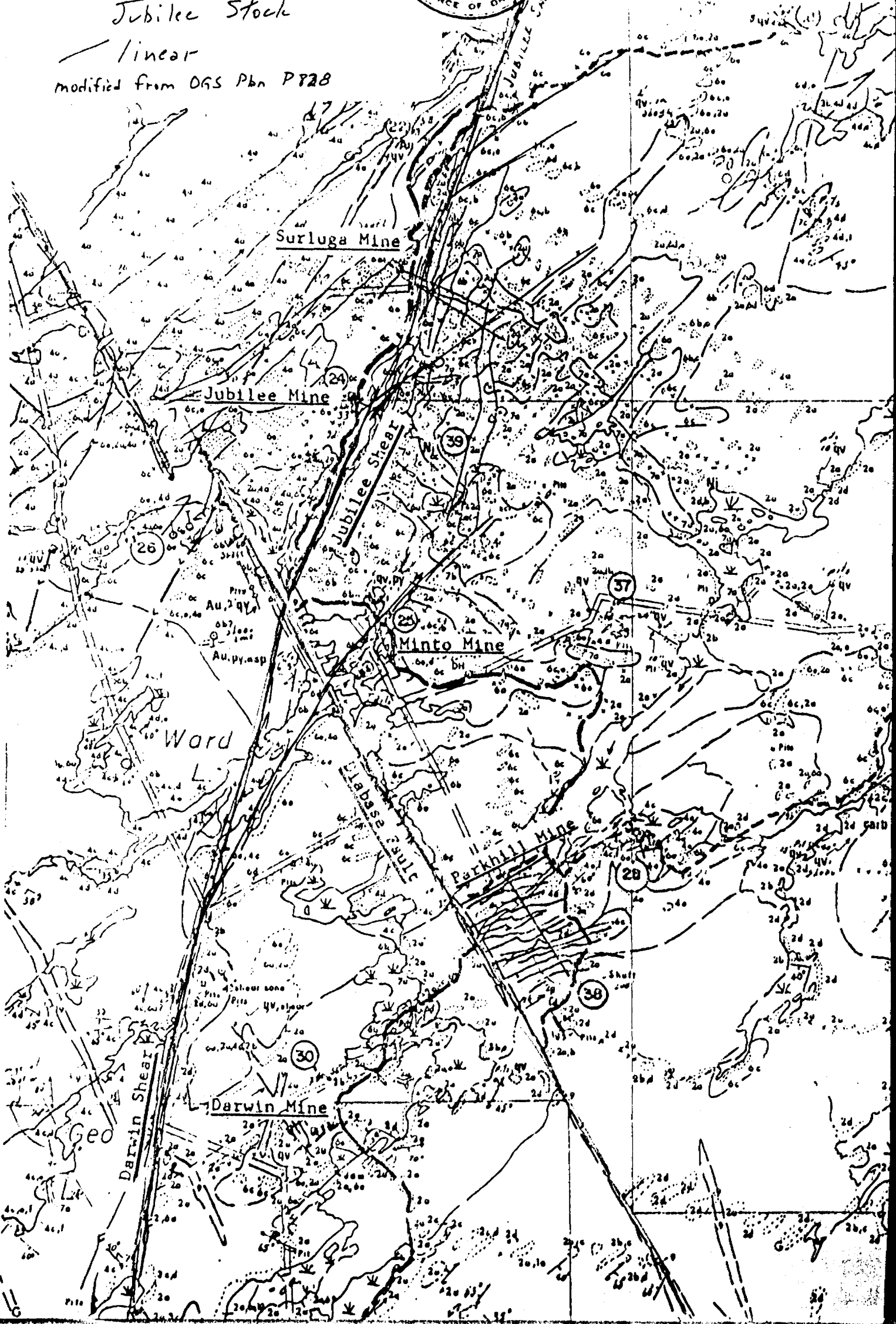
Jubilee Stock

linear

modified from OGS Pbn P728



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DUNRAINE MINES LTD.  
PARKHILL MINE PROJECT  
WAWA, ONTARIO  
1982 PROGRAM

*Report on Property Status  
and  
Proposed 1982 Program*

*by*

*H. G. Harper*

DUNRAINE MINES LTD.  
PARKHILL MINE PROJECT  
WAWA, ONTARIO  
1982 PROGRAM

INTRODUCTION

This report outlines the 1982 Program proposed for the Parkhill Mine Project of Dunraine Mines Ltd. Previous reports to the Company have detailed the Property, Location, Access, History, and Geology and are not repeated here.

Two prime goals have been set for the 1982 program.

1. To de-water the mine to its bottom or 14th level, to map the geology of the mine, and to plan an underground diamond drill program.
2. To carry out an underground diamond drill program to search for new ore within and adjacent to the existing mine workings.

Several secondary goals are included in the 1982 program. These are, further mapping of the surface geology on the main property and on the Van Sickle option and an exploratory surface drill program in the vicinity of the intersection of the Darwin Shear and the Darwin East-West Vein System.

During the 1930's the Parkhill Mine was the highest grade gold mine operating in Canada with a recovered grade of 0.43 ounces per ton. The mine stopes and drifts have never



~~been cleaned~~ When the mine is de-watered, the clean-up potential should be measured.

PROPERTY STATUS: EQUIPMENT AND SERVICES

The following summarizes the current status of the equipment and facilities now on or near the Parkhill shaft site.

1. Power line. - Most of the powerline right of way has been slashed out.
2. Accommodation. - Office and limited (engineers only) living accommodations are in place.
3. Parkhill Shaft. - The shaft has been re-collared, capped and is serviced by a small headframe. The mine escapeway has been re-opened.
4. De-watering. - During 1981 the Parkhill shaft was de-watered to below the 2nd level and there are no problems or hazards from surface to this level.
5. Hoist. - A hoist capable of de-watering the mine is installed in a combination hoist house - dry room.
6. Shaft Services. - Airlines, waterlines, skip-way tracks and signals are in place between the 2nd level and surface.
7. Mine Yard. - The mine yard has been cleared, stoned, and equipped with 2 small storage buildings.
8. Compressor. - A portable compressor of 1000 cfm capacity is on site.
9. Supplies. - There is a good supply of timber, lumber, pipe, fittings, small tools, etc. on site.

FACILITIES AND SERVICES REQUIRED - 1982 PROGRAM

A. GENERAL

1. Accommodations. - Install living and cooking accommodations for a 7 man crew.
2. Powerline. - Finish slashing powerline right of way and construct line and substation.
3. Hoist & Compressor. - Hook up hoist and install permanent compressor. Equip dry.

B. DE-WATERING FACILITIES

1. Large size pumps.
2. Improved hoisting and signalling system for men and materials.
3. Improve skip and cage.
4. Miscellaneous supplies. Pipe, track, small tools, etc.

C. MAPPING AND DIAMOND DRILLING SERVICES

1. Hoses for washing down.
2. All geological needs including men are available.
3. Air and water hoses, connections, flatcars, etc.
4. Diamond drill contract.

D. SECONDARY TARGETS

All required facilities and services are available.

CREW REQUIREMENTS - ONE SHIFT

A. GENERAL

- 1 only Hoistman.
- 1 only Deckman-mechanic.
- 1 only Cook
- 1 only Mine Captain
- 2 only General miners (timbermen, washers, pipefitters, etc.)
- 2 only Geologists, core loggers, mappers.
- 1 only Administration.

B. DIAMOND DRILL PROGRAM

- 1 only General underground drill contractor having  
2 men per shift.

MINE DE-WATERING PROGRAM

During 1981 the Parkhill mine was de-watered to just below the second level using an air blast system which was quite inefficient. The track in the shaft (30" gauge) was still in place and a small skip and tigger hoist was used to move pumps and material up and down. The shaft water level corresponded to that of Trout Creek. Where necessary, timbers, ladders, etc. located above the water table were replaced. Below the water table the timbers were sound but ladders needed re-nailing. A

water discharge line was installed as well as an elementary hoist signal system. Water inflow was minimal, consisting chiefly of surface rain water entering through old stopes.

No significant rock failure and/or collapse had occurred in the shaft or on either the first or second levels. According to Richard E. Barrett, P.Eng., Mine Manager during the 1930's and Paul Lepack of Wawa, Mine Captain at the time of closure, ~~the enclosing rocks are solid and neither man anticipates any significant collapse within the mine workings.~~

~~The experience gained in 1981 indicates that mine de-watering can proceed quickly and most probably without any significant delays due to unforeseen conditions within the mine workings.~~ To de-water the mine economically will require the installation of improved hoisting, pumping, and signalling systems.

#### UNDERGROUND MAPPING AND DIAMOND DRILL PROGRAM

This is the program upon which the ultimate and long term success of the Darwin project rests. Several mining engineers active in the Wawa Camp during and immediately after the Parkhill production period have written reports which unequivocally state that ~~more ore exists or can be found by~~ diamond drilling ~~within the Parkhill mine.~~ Four persons (two mining engineers, one consulting mining geologist, and one

mine captain) who worked in the Parkhill mine during its production period, have confirmed that ~~very little underground diamond drilling was done and that additional drilling is almost certain to find more ore.~~ These statements have been documented in earlier reports to the Company by the writer.

Surface drilling by Dunraine Mines Ltd. in 1980 located ~~four visible gold intersections in three drill holes~~ which penetrated the immediate area of the Parkhill workings between surface and the third level. ~~It is most likely that more such intersections can be found by underground drilling.~~

The writer is confident that a program of ~~short drill~~ holes preceded by a mapping of the geology of the mine (something that was not available during most of the production period) will locate more ore adjacent to and within the confines of the mine workings.

With respect to the underground drill program it is my opinion that very little diamond drilling should be done above the third level because of the surface terrain which limits the ore recovery potential at shallow depth.

Two of the principal target areas for diamond drill testing are first, the Van Sickle option and second, the 13th level. In the first instance, the large stope area lying east of the shaft between the 9th and 14th levels, was not pursued upward onto the Van Sickle claims because the claims belonged to a different company when the Parkhill mine was operating. Thus the easternmost stope system is open for exploration from

the 8th level through to surface. The second principal target is located between the 12th and 14th levels west of the shaft. According to the former mine captain the 14th level stopes terminate just above the level against the footwall side of a flat fault. No ore was found on the 13th level west drift. No drill testing of the 13th level walls was ever done to search for ore on the hanging wall side of the fault.

An examination of the mine stope plans show several instances of overlapping or echeloned stopes but there was never any systematic searching for echeloned veins. This indicates there numerous echeloned stope targets that can be searched for quickly and cheaply by a systematic program of short diamond drill holes. If this is done, some measure of success seems inevitable.

#### MINE DEVELOPMENT

It is reasonable to anticipate that the results of the underground diamond drill program will require follow-up development by cross-cutting and drifting. It is not possible at this time to anticipate how much work of this nature will be required. It is certain that time factors preclude any mine development in 1982.

## SURFACE EXPLORATION

There are certain ongoing aspects of past surface exploration programs which require follow-up but these are not pressing and they should be carried out during slack periods in the underground program. For example, surface mapping on the Van Sickle option and on the Danny Fraction claim should be completed during the coming season. Also, detailed mapping and some surface diamond drilling is required in the vicinity of the intersection of the Darwin East-West Vein System, the Darwin Shear, and the Mountain Lake Showing..

## MINE CLEAN-UP PROGRAM

According to the statistics maintained by the Ontario Ministry of Natural Resources, the average recovered grade of the Parkhill mine for all of its production was 0.432 ounces of gold per ton of ore mined and milled. During the major period of production (1930 to 1938) the cut-off grade was about 0.3 ounces of gold per ton according to R.E. Barrett, P.Eng. During the production period development muck that ran about 0.2 ounces per ton was stock-piled on surface where it remains today.

According to Paul Lepack, shift boss and mine captain during the last four years of production, none of the stopes or drifts were washed down or cleaned up. This information is

supported by underground stope and drift sampling carried out during the 1981 program. The results of this sampling are listed below.

The following samples are "pipe" samples each taken from a partially filled 45 gallon drum sample collected at the indicated locations.

Sample No.	Gold oz/ton	Location
1942	0.11	2nd level, Mill Vein, drift floor east
1943	0.65	2nd level, Mill Vein, drift floor west
1944	0.24	2nd level, Main Vein, stopes east
1945	0.17	1st level, Main Vein, stopes west
1946	0.36	1st level, Main Vein, stopes east
1947	1.01	2nd level, Mill Vein, stopes
1948	0.55	2nd level, Main Vein, 203W stope
1949	0.67	1st level, drift floor east.

The arithmetic average of the above samples is 0.47 ounces of gold per ton. The 45 gallon drum samples were shipped to the Temiskaming Testing Laboratories in Cobalt where they were combined into one large sample weighing some 2374 lbs. The large sample was then screened into a coarse fraction weighing 576 lbs. (24% of total weight) which assayed 0.269 ounces of gold per ton and a fine fraction weighing 1940 lbs. (76% of total weight) which assayed 0.510 ounces of gold per ton. Note the reasonable correlation with the results of the individual pipe samples. This material is now being used to develop a gold recovery process.

A second grade testing was carried out on the 1st level east which was sampled at roughly 10 foot intervals by 24 trench



samples which cut the drift wall to wall. The trench length varied from 3.5 feet to 7 feet with an average of about 5 feet. The trench samples were collected by pick and shovel and could not recover all of the finely divided material which presumably would carry most of the gold. The arithmetic average of the 24 samples is 0.24 ounces of gold. The individual samples showed wide grade variations - from 0.06 ounces to 0.76 ounces. The sample grade dropped as the down drift distance from a stope increased. There were 10 of the 24 samples which ran 0.25 ounces gold or higher. The arithmetic average grade of these 10 samples is 0.409 ounces of gold per ton.

The writer collected 7 samples from the 1st level east. The samples, approximately 10 lbs. weight each, were collected from holes and the holes were paired, one from the north side of the drift and one from the south side of the drift and the paired samples were located increasingly down drift from a stope. Each sample was assayed separately. Each sample was further divided into 3 fractions: a very coarse fraction (3/8" and larger) which was weighed but not assayed; an intermediate fraction which was weighed and assayed; a fine fraction which was also weighed and assayed. The results follow.

Location	Coarse Fract.	Intermed. Fract.	Fine Fract.		
	Wt. in kg.	Wt in kg	Wt in kg	Wt in kg	
105 Chute S.side	0.48	1.37	1.97	0.39	0.61
105 Chute N.side	1.73	1.60	1.87	0.81	0.64
8'W 105 Chute S.side	1.57	2.05	2.16	0.48	0.71
8'W 105 Chute N.side	2.56	1.60	1.49	0.23	0.49
17'W 105 Chute S.side	2.20	1.98	1.38	0.09	0.16
17'W 105 Chute N.side	1.42	2.55	2.59	0.40	0.49
Station 104	1.90	1.98	3.06	0.22	0.20
Total Weight	11.86	13.13	14.52	0.367	(39.51) Total
% of Total Weight	(30%)	(33%)	(37%)	<i>weighted average</i>	<i>0.466 weighted average</i>

In collecting the above samples it was absolutely impossible to get a uniform sample from the surface to the rock floor of the drift. Obviously, most of the coarse material was easily recovered but only a fraction of the very fine material could be recovered.

Before being sent for assay, a portion of the fine fraction of each of the above samples was panned. In most cases a fair to good tail of gold was quickly observable from those samples which subsequently gave assays of about 0.5 ounces of gold. Therefore, it should be possible to define clean-up areas within the workings by panning the fines at selected locations along the drift.

The foregoing assay data suggest the following conclusions.

1. The available information indicates that a substantial amount of gold can be recovered from a clean-up of the Parkhill mine. The clean-up should be done in two stages:

Stage I would consist of a clean-up of the obviously higher grade stopes and once costs of recovery versus gold recovery figures were available, one could then determine just how extensive the clean-up should be.

Areas where clean-up should start could be quickly and cheaply selected by referring to grade data on the original mine plans and by panning materials from stopes and drifts.

2. High grade fines exist in the stopes and in the drifts beneath the stopes.
3. A coarse screening can upgrade the clean-up muck for the fines appear to be richer in gold. The indications are that the coarse fraction would be of mill feed grade (i.e. approximately 0.2 to 0.3 ounces per ton) which might be sent directly to a gold milling operation.
4. A small treatment plant might produce a gold concentrate fraction that could be refined without further milling.

The sampling data collected to date indicates that it should not be difficult to maintain the grade of the clean-up muck at a level of about 0.5 ounces per ton. However, it is not possible to calculate or even reliably estimate the number of tons of clean-up muck in the mine. The fact that over 70 stopes produced ore suggests that the number of tons of clean-up muck must be appreciable. Total mine product was 125,000 tons and by considering the "ore loss" in drifts and uncleaned stopes in terms of percent increments of this tonnage, then one can construct

a frame of reference within which the economics of the clean-up can be contemplated. An example calculation follows.

ASSUMPTION

1. 2% ore loss = 2500 tons
2. Grade of clean-up muck = 0.5 ounces of gold per ton.

Total ounces =  $2500 \times 0.5 = 1250$  ounces gold.

Assume 70% recovery:  $1250 \times .7 = 875$  ounces gold.

Assume gold price: \$450 Canadian:  $875 \times 450 = \$394,000$  (approx.)

Now within this calculation there are two variables to consider.

1. Variation in the grade of the clean-up muck.
2. Variation in the price of gold.

Assumption: 2500 tons clean-up muck, 70% gold recovery.

Grade of muck	0.4 ozs.Au	0.5 ozs.Au	0.6 ozs.Au	0.7 ozs.Au
Ounces recovered	700	875	1050	1225
<u>Gold Price</u>				
\$450 Cdn.	\$315,000.	\$394,000.	\$472,000.	\$551,000.
\$500 Cdn.	\$350,000.	\$438,000.	\$525,000.	\$612,000.
\$600 Cdn.	\$420,000.	\$525,000.	\$630,000.	\$735,000.

For each 2% increment in the "ore loss" figure, each dollar calculation in the above table would be roughly doubled.

A clean-up would require a small processing plant. Basically this would be a washing and screening system and a

gravity type concentration system. One would anticipate three products from this plant. First, a coarse fraction probably of mill run grade; a high grade concentrate possibly suitable for immediate refining; and third, a fine fraction of excellent grade. It is interesting to note that 24% of the bulk sample weight consists of a coarse fraction which assayed 0.269 ounces of gold. Of the 7 drift samples that were screened, the coarse fraction represented 30% by weight.

The services of a metallurgical engineer experienced in this type of plant and operation are available to the Company.

#### COST ESTIMATES

##### A. De-Watering, Mine Re-habilitation and General Operations (12 months)

1. Powerlines, substation, & hook-ups	\$ 250,000.	
2. Accommodation, cook & cookery	120,000.	
3. Technical supervision, consulting & administration	100,000.	
4. Labour costs	180,000.	
5. Supplies, equipment, pumps & miscellaneous	205,000.	
6. Power consumption costs	<u>120,000.</u>	\$ 975,000.

##### B. Underground Diamond Drilling

1. Drill contract 10,000 ft. @ \$15/ft.	\$ 150,000.	
2. Assays, sampling, mill testing	<u>30,000.</u>	180,000.

C. Surface Program

1. Mapping geology	\$ 10,000.	
2. Surface drilling 2000 linear feet at \$25.00	<u>50,000.</u>	\$ 60,000.
Overall Total		1,215,000.
Contingency Allowance		<u>185,000.</u>
GRAND TOTAL		<u>\$1,400,000.</u>

The Ontario Ministry of Natural Resources, Mineral Resources Branch operates an industrial support program called The Ontario Mineral Exploration Program (OMEP). Under this program an application can be made whereby after the expenses have been incurred a substantial percentage of the cost can be recovered through a defrayment of taxes. Dunraine Mines Ltd. should make such an application for the 1982 work program.

## CONCLUSIONS AND RECOMMENDATIONS

- Several reports prepared by mining engineers and geologists familiar with the Wawa gold camp during its operating period state that ~~new ore can be found in the Parkhill mine by means of underground diamond drilling within the confines of the mine workings.~~ To carry out this drilling it is necessary to de-water and partially re-habilitate the mine. This is warranted as an exploration venture.

2. The Parkhill mine was a high grade mine and the stopes and drifts were never cleaned. Based on a partial sampling of the 1st and 2nd mine levels, and on the fact that the stope dip was less than the angle of repose, it is probable that there is a considerable tonnage of material grading about 0.25 ounces gold per ton remaining in the mined out stopes and drifts.

3. It is therefore recommended that the Parkhill mine be dewatered; that an extensive underground diamond drill program be carried out to search for new ore; and that the clean-up potential of the mine be measured. If the drill program located new ore zone then some cross-cutting and drifting will be required. Similarly, if the clean-up potential measures up to present indications, then a treatment plant will be required.

This report is respectfully submitted.

Willowdale, Ontario  
February 2, 1982.

HARPER CONSULTING SERVICES INC.

*H. G. Harper*  
H. G. Harper, P. Eng.  
President.



CERTIFICATE

I, HUGH GRANT HARPER, of Metropolitan Toronto, in the Province of Ontario, certify as follows with respect to my report on the Wawa Area Gold Prospect of Dunraine Mines Ltd. dated February 2, 1982.

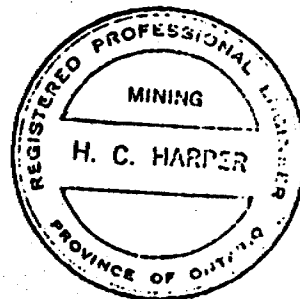
1. For over twenty years I have been practising as an independent economic geologist, carrying on business as

H. Grant Harper, P.Eng.,  
314 Hendon Avenue  
Willowdale, Ontario.

2. I graduated from the University of Toronto with the degree of B.A.Sc., 1950 and M.A.Sc., 1951 and have been engaged in my profession since that time. I am a Member of the Ontario Association of Professional Engineers registered in the Mining Branch, and a designated Consulting Engineer.
3. I have no interest, nor do I expect to receive any, either direct or indirect, in either the property or securities of Dunraine Mines Ltd.
4. Since late 1979 I have provided general geological and engineering advice to Dunraine Mines Ltd. with respect to its Wawa Area exploration program. I have been to the property on numerous occasions.

February 2, 1982  
WILLOWDALE, Ontario

*H. G. Harper*  
H. Grant Harper, P.Eng.  
Economic Geologist.





CONSENT

I, H. Grant Harper, P.Eng. of 314 Hendon Avenue, Willowdale, Ontario, author of the Report entitled Dunraine Mines Ltd., Parkhill Mine Project, 1982 Program, Wawa Area, Ontario dated February 2, 1982 do hereby consent to the use of my report in any Prospectus or Filing Statement of Dunraine Mines Ltd. filed with any properly authorized Canadian securities exchange or commission.

Dated this 2nd day of February, 1982.

By: \_\_\_\_\_

*H. G. Harper*

H. Grant Harper, P.Eng.

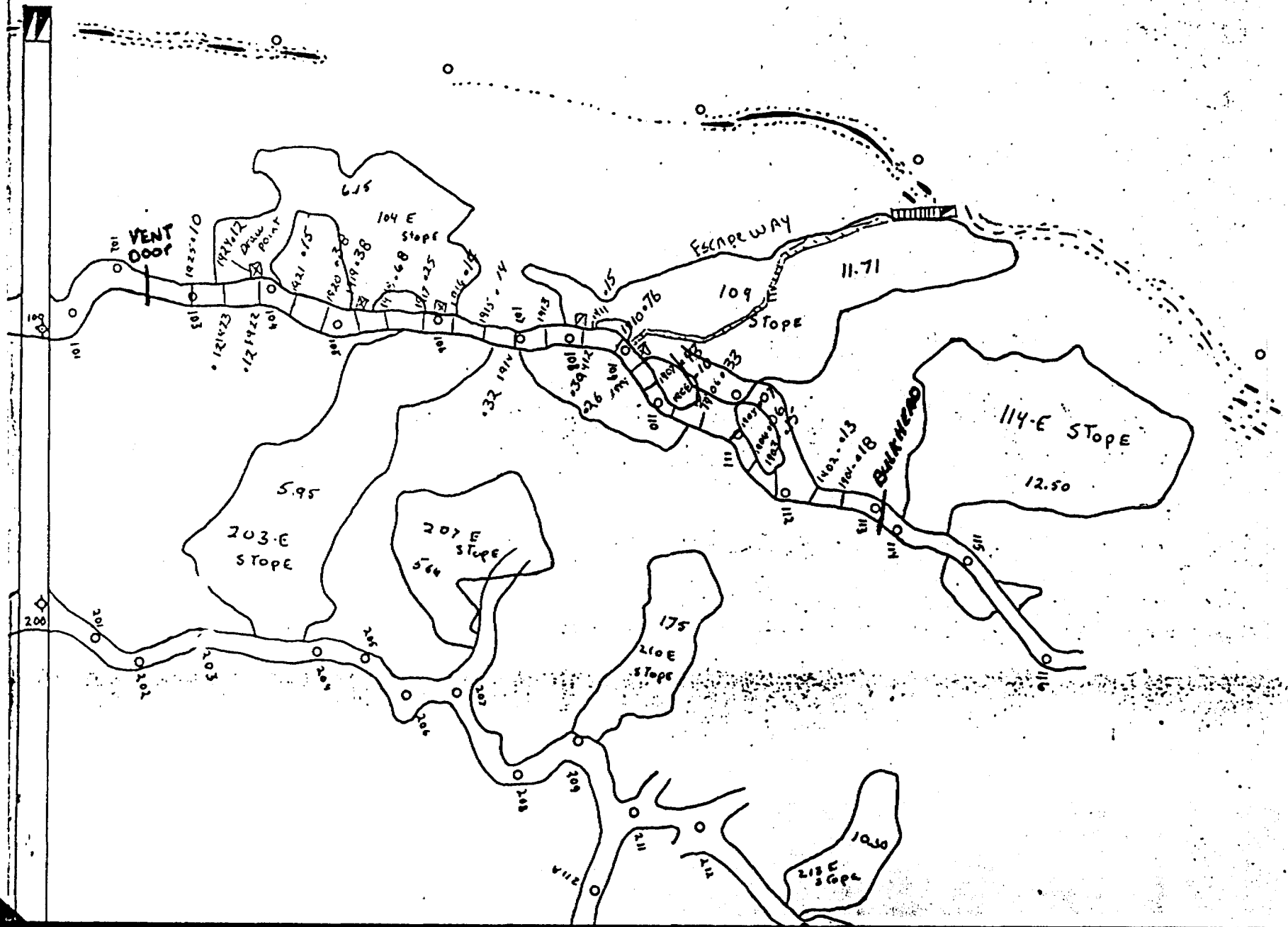


OMEP-81-7-C-2

- 1ST. LEVEL  
UNDERGROUND SAMPLING  
SHOWING ASSAYS & SAMPLE  
LOCATIONS.
- ALSO MISCELLANEOUS SAMPLE SHEETS

LOCATION  
STATION DESCRIPTION

STATION	DESCRIPTION	Oz Au/T	Oz Ag/T	UNIT
1412	Rock sample from sifted gtz under 102 slope chute	.14		
1901	4' TRENCH CUT ACROSS DRIFT 10' W OF 113E STN.	.11		
02	6' TRENCH CUT ACROSS DRIFT 20' W OF 113E STN. 4" OF WATER	.18		
03	8' TRENCH CUT ACROSS DRIFT 30' W OF 113E STN. 4" WATER, NEAR PILLAR	.13		
04	4.5' TRENCH CUT ACROSS DRIFT 40' W OF 113E STN. 3" WATER ON FLOOR	.15		
05	3.5' TRENCH CUT ACROSS DRIFT 50' W OF 113E STN. 3" WATER ON FLOOR	.06		
06	5.5' TRENCH CUT ACROSS DRIFT 60' W OF 113E STN. NO WATER, 4' W OF CHUTE	.07		
07	2.5' TRENCH CUT ACROSS DRIFT 60.5' W OF 110E STN. UNDER CHUTE.	.33		
08	4' TRENCH CUT ACROSS DRIFT 70' W OF 113E STN.	.43		
09	3.5' TRENCH CUT ACROSS DRIFT 80' W OF 113E STN.	.10		
1910	5' TRENCH CUT ACROSS DRIFT 100' W OF 113E STN. JUST W. OF ESCAPEWAY	.26		
11	EAST SIDE OF CHUTE ON 108E SLOPE, 4' E OF 108E STN. NEAR PILLAR	.76		
12	3' TRENCH CUT ACROSS DRIFT 110' W OF 113E STN. JUST W OF 108 CHUTE	.15		
13	3.5' TRENCH CUT ACROSS DRIFT 120' W OF 113E STN.	.30		
14	4' TRENCH CUT ACROSS DRIFT 130' W OF 113E STN. 3' W OF BIG SLASH			
15	4' TRENCH CUT ACROSS DRIFT 140' W OF 113E STN. 203E SLOPE TO SOUTH	.32		
16	5' TRENCH CUT ACROSS DRIFT 150' W OF 113E STN. UNDER CHUTE, 106E STN.	.14		
17	7' TRENCH CUT ACROSS DRIFT 160' W OF 113E STN. BETWEEN 2 CHUTES	.14		
18	3.5' TRENCH CUT ACROSS DRIFT 170' W OF 113E STN. 3' E OF CHUTE	.25		
19	5' TRENCH CUT ACROSS DRIFT 180' W OF 113E STN. JUST W. OF CHUTE	.68		
1920	3.25' TRENCH CUT ACROSS DRIFT 190' W OF 113E STN.	.38		
21	5.3' TRENCH CUT ACROSS DRIFT 200' W OF 113E STN.	.15		
22	4.5' TRENCH CUT ACROSS DRIFT 210' W OF 113E STN.			
23	5' TRENCH CUT ACROSS DRIFT 220' W OF 113E STN. NEAR 104E SLOPE	.12		
24	BROWN, SANDY FINES FROM CHUTE ON 104E SLOPE	.12		
25	5' TRENCH CUT ACROSS DRIFT 230' W OF 113E STN (BLIND AT 103E STN.)	.10		
26	Rock sample near pillar on east side // vein to main.			
27	" " " " " " " " " " " "			
28	" " " " " " " " " " " "			
29				
1930				
1617	H.L. sample s. sifted fines from 106 slope.	.076		
1618	D.S. sample - Fine packed muck from 106 slope. (W. vein)	.055		



First level

East

Harpur samples

Coarse Fraction			intermediate			Fines		
Sample #	Weight	% gtz.	#	wt	% gtz.	#	wt.	
1930	0.48	15-20	13951	1.37	35%	13952	1.97	Fair
1931	2.56	8-9	13953	1.60	17%	13959	1.49	Fair
1932	1.57	5-10	13957	2.05	25-35	13958	2.16	Fair
1929	1.73	10	13955	1.60	20	13954	1.88	little
1934	1.42	5-10	13959	2.55	25-30	13960	2.59	not much
1933	2.20	3-5	13951	1.98	25-30	13902	1.38	little
1935	1.90	3-5	13963	1.98	20	13964	3.06	Fine little

Location	Sample #	Fraction	B.W Sample #	Level #	Au assay	weight lbs
- Foot. 105 shoot. spillage N side Floor	1929	inter	13955			1.600
- 105 shoot. spillage S side Floor	1930	Fines.	13956			1.810
- 105 shoot. - 8' W N side Floor.	1931	inter	13951			1.365
- 105 shoot. - 8' W S side Floor.	1932	Fines	13952			1.970
- 105 shoot. 17' W N. Side Floor.	1933	inter	13953			1.600
- 105 shoot. 17' W S Side Floor.	1934	Fines	13954			1.485
- 104 station E - 3' W Harry Dan sample.	1935	inter	13957			2.050
		Fines.	13958			2.155
		inter	13955 13961			1.975
		Fines.	13956 13962			1.375
		inter	13959			2.550
		Fines.	13960			2.540
		inter	13963			1.975
		Fines.	13964			3.055

CONVERSION

1 kg = 2.2 lbs.  
 1 lbs = 0.453 Kgs.

WRITE IT DOWN  
DON'T TELL "HIM"

TO Head Office: Dunvorne Mines Ltd. DATE April 30 / 81  
Toronto:

IMPORTANT

AVOIDING DISPUTES MEANS WORKING TOGETHER VERBAL INSTRUCTIONS, INQUIRIES AND STANDING ORDERS CAUSE TROUBLE

① You will soon be receiving an assay certificate from Swantika Labs. To date there are <sup>three more</sup> ~~two~~ grab samples that have been taken & shipped. In order to minimize confusion when the certificate arrives - the sample numbers and particulars are as follows:

- # 4051 = West side of Darwin Shear - rusty mineralized out-crop.
- # 4052 = East side Darwin Shear - breccia of unknown origin.
- # 4053 to 4058 inclusive = Mariposa dump.
- # 4059 = Parkhill Dump = Pile 60 ft. West of shaft. 3/4 way up N. Side.
- # 4060 = Parkhill Dump = Top of same pile

... 2

138806

SIGNATURE

□ 0231

WRITE IT DOWN  
DON'T TELL "HIM"

... 2

TO \_\_\_\_\_

DATE \_\_\_\_\_

IMPORTANT

AVOIDING DISPUTES MEANS WORKING TOGETHER VERBAL INSTRUCTIONS, INQUIRIES AND STANDING ORDERS CAUSE TROUBLE

- # 4061 - Parkhill dump = 1/2 way up S. Side same pile.
- # 4062 - Parkhill dump = West of mill - crushed quartz.
- # 4063 - Parkhill = Rusty Fines - Floor of assay office.

② Lines are being cut in the vicinity of the Darwin shaft as of tomorrow

③ A conversation with Herb Funk set May 10 as the probable starting date for Diamond drilling of the "Darwin Shear".

- See you later:

138807

SIGNATURE

*Daniel Capras*

□ 0231

# SLUDGE SAMPLE ASSAYS

SAMPLE #	Footage	Assay <sup>mg</sup> /ton	HOLE #
629	265 - 285	0.015	D81-8
630	285 - 292	0.005 TRACE?	"
631	7 - 20	TRACE	D-81-9
632	20 - 40	TRACE	"
633	40 - 60	TRACE	"
634	60 - 80	TRACE	"
635	80 - 100	TRACE	"
636	100 - 120		"
637	120 - 140	TRACE	"
638	140 - 160	0.005	"
639	160 - 182	TRACE	"
640	182 - 202	TRACE	"
641	202 - 222	TRACE	"
642	222 - 243	TRACE	9
643	NO SAMPLE	NO SAMPLE	9
644	7 - 21	N/L	D-81-10
645	5 - 23		D-81-11
646	23 - 48		"
647	48 - 68		"
648	68 - 89		"
649	89 - 109		"
650	109 - 129		"
651	129 - 149		"
652	149 - 169		"
653	169 - 191		"
654	191 - 211		"
655	211 - 244		"
656	0 - 20		12



SLUDGE SAMPLE ASSAYS

SAMPLE #	Footage	Assay <sup>oz/ton</sup>	HOLES #
657	20-40		D31-12
658	40-60		12
659	60-81		12
660	81-101		12
661	101-121		12
662	121-141		12
663	141-161		12
664	161-181		12
665	181-201		12
666	201-233		12
667	233-253		12
668	253-274		12
669		1005	
670		NIL.	
671			
672			
673			
674			
675			
676			
677			
678			
679			
680			
681			
682			
683			
684			
685			
686			

Sept. 15/81

Please note these samples and particulars.

Surface:

Dunvaine Mines Ltd.

- # 1621 - Darwin - Grace vein From pit North of shaft.
  - 22 - Darwin - Grace vein From trench north of shaft.
  - 23 - Darwin - Extension of Grace vein beyond diabase dike - gtz from dump by 8'x5' timbered pit.
- note - all samples have plenty of arsenopyrite.

J. G. Resources.

- # 1624 - Holdsworth Gold - sericite From Footwall of vein.
- 25 - Holdsworth - dark gtz From Hang-Wall of vein
- 26 - Holdsworth - Rusty O.C. From Hang wall 2' up from REC. V.G.
- 27 - Holdsworth - E extension of vein - gtz carb FW contact.
- 28 - Holdsworth - sugar gtz From pit E of main showing
- 29 - Holdsworth - gtz vein by track - ran for W (Tungsten)
- 3319 - Holdsworth - gtz + WR from main vein.
- 20 - Holdsworth - vein gtz from OC 20' south of 3319.
- 21 - Holdsworth - vein gtz - hematite alteration.
- 22 - Vein gtz 1ft up from 1627. Holdsworth
- 23 - Holdsworth - carb alteration 12 ft W of vein in Hang wall.
- 24 - Holdsworth - sericite + mineral - talc. from pit near #1628

Under ground - Parkhill

- 1938 - 2nd level W - strong vein gtz in North wall btw 209-210 W
- 39 - 1st level E - WR sericitic 10' W of 113E, South side of drift.
- 40 - 203 E stope - in <sup>sculpt</sup> ~~main~~ way 1/2 way up - Fair V.G. tail.
- 41 - 2nd level E - muck from un-pulped skates 213E stope

George

# SLUDGE SAMPLE ASSAYS

SAMPLE #	Footage	Assay <sup>oz</sup> / <sub>ton</sub>	HOLE #
601	20-40	TRACE	D81-7
602	40-60	TRACE	"
603	60-80	TRACE	"
604	80-100	TRACE	"
605	100-120	TRACE	"
606	120-140	TRACE	"
607	140-160	TRACE	"
608	160-180	TRACE	"
609	180-200	TRACE	"
610	200-220	TRACE	"
611	220-240	TRACE	"
612	240-260	TRACE	"
613	260-280	TRACE	"
614	280-300	TRACE	"
615	300-316	TRACE	7
616	5-20	TRACE	D88
617	20-41	<del>0.005</del> TRACE	"
618	41-60	<del>0.005</del> TRACE	"
619	60-80	0.005	"
620	80-101	0.005	"
621	101-122	TRACE	"
622	122-143	TRACE	"
623	143-164	TRACE	"
624	164-184	TRACE	"
625	184-204	TRACE	"
626	204-224	TRACE	"
627	224-245	0.005	"
628	245-265	0.025	8





D.H. Resample:

Hole number: 3

Le #	From	To	Au. Assay	sample #	From	To	Au Assay
74	112.5	113.9	NIC				
75	113.9	115.0	.002				
76	262.7	264.0	NIL				
77	264.0	265.0	NIL				
78	265.0	266.0	NIL				
79	266.0	267.0	NIL				
80	267.0	267.8	NIC				
81	267.8	269.0	NIC				
82	269.0	270.0	NIL				
83	270.0	271.5	NIL				
84	271.5	272.8	.002				
85	275.0	276.5	.002				
86	276.5	278.0	.002				
87	278.0	279.0	NIL				
88	279.0	280.0	NIL				
89	280.0	281.5	NIL				
90	281.5	283.0	NIL				
91	283.0	284.0	NIL				
92	284.0	285.0	.001				
93	285.0	286.5	NIL				
94	286.5	289.0	NIL				
95	289.0	290.0	NIL				
96	290.0	290.8	NIL				
97	292.8	295.0	NIL				
98	295.0	296.5	.002				
99	296.5	298.0	NIL				
1000	303.5	304.5	NIL				
383	56.3	57.3	TRACE				
384	57.3	57.9	TRACE				
385	170.7	171.7	TRACE				
386	171.7	172.7	TRACE				
387	172.7	173.7	.005				
388	173.7	174.8	TRACE				
389	174.8	175.4	TRACE				
390	167.9	169.0	.005				
391	169.0	170.0	.005				
392	167.0	167.9	TRACE				
393	162.7	163.7	.005				
394	163.7	165.0	.005				
395	165.0	166.0	TRACE				
396	166.0	167.0	.005				
397	170.0	170.7	TRACE				

D.H. Resample:

Hole number: 4.

Plz #	From	To	Au. Assay	sample #	From	To	Au Assay
891	15.4	16.4	NIL	939	211.5	212.5	NIL
892	16.4	18.0	NIL	940	213.5	215.2	.002
893	44.0	45.0	NIL	941	218.0	219.2	NIL
894	48.0	49.5	NIL	942	220.0	221.0	NIL
895	70.7	72.0	NIL	943	221.0	222.5	NIL
896	78.0	79.0	NIL	944	222.5	224.0	NIL
897	79.0	80.0	NIL	945	224.0	225.6	NIL
898	80.0	81.0	NIL	946	226.0	227.0	NIL
899	81.0	82.5	.005	947	227.0	228.5	NIL
900	82.5	83.5	NIL	948	228.5	230.0	NIL
901	85.0	86.0	NIL	949	230.0	231.0	.003
902	86.0	87.5	NIL	950	231.0	232.0	.005
903	98.0	99.0	NIL	951	232.0	233.0	.002
904	100.0	101.0	NIL	952	233.0	234.0	.002
905	101.0	102.5	NIL	953	234.0	235.4	NIL
906	103.5	105.0	NIL	954	238.0	239.5	NIL
907	108.0	109.0	NIL	955	240.0	241.0	NIL
908	109.0	110.0	NIL	956	241.0	242.0	.005
909	117.5	118.5	.005	957	242.0	243.5	NIL
910	118.5	120.0	NIL	958	245.0	246.5	.045
911	121.0	122.0	NIL	959	252.5	253.5	.005
912	123.0	124.0	NIL	960	253.5	255.0	.002
913	124.0	125.0	NIL	961	255.0	256.5	.002
914	131.0	132.5	NIL	962	256.5	258.0	NIL
915	135.0	136.0	NIL	963	259.0	260.0	NIL
916	136.0	137.0	NIL	964	260.0	261.5	.002
917	137.0	138.0	.002	965	261.5	263.0	.002
918	139.0	140.0	NIL	966	263.0	264.0	.002
919	140.0	141.0	NIL	967	264.0	265.0	.002
920	144.0	145.0	NIL	968	266.5	268.0	NIL
921	158.5	160.2	.005	969	269.5	271.0	NIL
922	160.2	162.0	NIL	970	271.0	272.0	NIL
923	164.0	165.0	NIL	971	272.0	273.5	NIL
924	165.0	166.0	NIL	972	273.5	275.0	NIL
925	166.5	167.7	NIL	973	275.0	276.2	.002
926	173.5	175.0	NIL				
927	180.0	181.5	NIL	6398	154.2	155.3	TRACE
928	182.6	183.6	NIL	6399	156.5	156.8	.001
929	185.0	186.5	NIL	6400	156.8	158.1	TRACE
930	186.5	188.0	NIL				
931	189.4	190.5	NIL				
932	190.5	192.0	NIL				
933	196.0	197.0	NIL				
934	197.0	198.0	NIL				
935	198.0	199.7	NIL				
936	201.6	202.7	NIL				
937	203.5	205.0	NIL				
938	205.0	206.0	NIL				

DH Resample:

Hole number: 5

ple #	From	To	Au. Assay	sample #	From	To	Au Assay.
				848			NIL
801	27.7	28.7	.002	849	159.0	160.0	.002
802	28.7	30.0	NIL	850	160.0	161.0	NIL
803	56.4	58.5	.002	851	164.7	165.7	.002
804	71.3	71.7	NIL	852	165.7	166.8	NIL
805	72.7	74.5	NIL	853	178.3	179.3	.002
806	80.6	81.4	NIL	854	179.3	180.0	.005
807	82.1	83.2	.002	855	182.2	183.2	NIL
808	84.3	85.3	NIL	856	183.2	184.2	.005
809	85.3	86.3	NIL	857	184.2	185.0	.002
810	86.3	87.3	NIL	858	185.0	186.0	.002
811	87.3	88.8	NIL	859	186.0	187.0	.002
812	88.8	89.7	NIL	860	187.0	188.0	NIL
813	89.7	91.0	.002	861	188.0	189.0	.002
814	91.0	92.0	NIL	862	189.0	190.0	.01
815	92.0	93.4	NIL	863	193.0	194.0	NIL
816	93.4	94.7	NIL	864	194.0	195.0	.002
817	98.0	99.0	NIL	865	195.0	196.0	NIL
818	99.0	100.0	NIL	866	196.0	197.0	NIL
819	105.0	106.0	NIL	867	197.0	198.0	.002
820	106.0	106.7	NIL	868	198.0	199.0	.005
821	106.7	107.7	.002	869	199.0	200.0	.002
822	107.7	108.7	NIL	870	200.0	201.0	.005
823	109.4	110.0	NIL	871	201.0	202.0	NIL
824	111.1	112.1	NIL	872	202.0	203.0	.002
825	112.1	113.0	NIL	873	203.0	204.0	.002
826	113.0	114.1	NIL	874	204.0	205.0	.002
827	114.1	115.0	NIL	875	205.0	206.5	.002
828	115.0	116.0	NIL	876	206.5	207.5	NIL
829	116.0	117.0	NIL	877	207.5	208.5	NIL
830	117.0	118.6	NIL	878	209.5	211.0	.002
831	118.6	120.0	NIL	879	211.0	212.0	NIL
832	120.0	121.0	.002	880	212.0	213.0	NIL
833	121.0	122.0	NIL	881	213.0	214.0	NIL
834	125.0	126.6	NIL	882	214.0	215.0	NIL
835	126.6	127.6	NIL	883	232.0	233.3	NIL
836	129.0	130.0	NIL	884	277.6	278.5	NIL
837	130.0	131.7	NIL	885	278.5	280.0	.002
838	134.0	135.0	NIL	886	280.0	281.0	NIL
839	141.4	142.3	.002	887	281.0	282.0	.002
840	142.3	143.5	.002	888	282.0	283.0	.002
841	143.5	144.0	NIL	889	298.8	300.0	.002
842	144.0	145.0	NIL	890	300.0	301.2	.01
843	145.0	146.0	NIL				
844	146.0	147.0	NIL				
845	147.0	148.0	NIL				
846	148.0	149.7	NIL				
847	154.0	155.0	NIL				





*Assay Certificates OMEP-81-7-C-2*  
**SWASTIKA LABORATORIES LIMITED**

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

**Certificate of Analysis**

Certificate No. 51286

Date: April 30, 1981

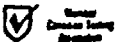
Received April 27, 1981 2 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz./ton
4051	0.002 W. side Darwin shear rusty mineralized out-crop
4052	NIL E. side Darwin shear - breccia of unknown origin

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51302

Date: May 4 1981

Received Apr. 29/81 11 Samples of Ore

Submitted by Dunraine Mines Ltd., Wawa, Ontario

SAMPLE NO.

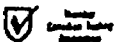
GOLD  
Oz./ton

4053	0.002	Mariposa dump
4054	Nil	Mariposa dump
4055	0.002	Mariposa dump
4056	Nil	Mariposa dump
4057	Nil	Mariposa dump
4058	0.002	Mariposa dump
4059	0.10	Parkhill dump 60' W of shaft - 1/2 up N side
4060	0.05	Parkhill dump - top scum pile
4061	0.04	Parkhill dump 1/2 way up S side scum pile
4062	0.24	Parkhill dump - W of mill - crushed quartz
4063	1.63	Flour of assay other rusty fine

Per G. Lebel

G. Lebel - Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51387

Date: May 22 1981

Received May 15/81 7 Samples of Tailings, Ore

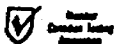
Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
4064	0.035	---
4065	0.077	---
4066	0.067	---
4067	0.116	---
4068	N11	N11
4069	N11	0.02
4070	0.002	0.01

*Assay  
Tailings*

*old prospect  
not emp.*

Per *G. Lebel*  
G. Lebel - Manager



ESTABLISHED 1928



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51470 Date: June 4 1981  
Received May 27/81 7 Samples of Ore  
Submitted by Dunraine Mines Ltd., Wawa, Ontario Att'n: Mr. D. Gignac

SAMPLE NO.	GOLD Oz./ton
4071	N11 N E side of Darwin tailings - braced qtz
4073	0.04 qtz from trench - L34W - 15 US then Darwins Park
4074	0.17 Darwin dump
4075	0.13 Darwin dump
4076	0.02 Darwin dump
4077	0.06 Darwin dump
4078	0.13 Darwin dump

Per G. Lebel  
G. Lebel - Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
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## Certificate of Analysis

Certificate No. 51491

Date: June 5, 1981

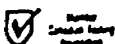
Received June 1, 1981 7 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
4079	0.07 min qtz vein - pitted & fractured btwn Park & Darwin
4080	NIL Van Sickle - face of qtz vein near big pit
4081	0.002 Darwin shear - L2N - 2W.
4082	NIL Darwin shear - L24N - 175E.
3301	0.002 Van Sickle - muck from capt. vein
3302	NIL Darwin shear - altered - banded sects - py.
3303	NIL Darwin shear intrusion some min.

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51517

Date: June 11, 1981

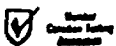
Received June 3, 1981 6 Samples of ore and ground rock

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

*Minto*

SAMPLE NO.	GOLD Oz./ton	
3304	0.002	
4083	0.15	Minto dump - bin by road - rusty fines
4084	0.08	Minto dump - qtz crushed
4085	0.27	Minto dump - fines under table
4086	0.12	Minto - fines on mill floor
4087	0.43	Minto - qtz rich muck pile

Per G. Lebel  
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

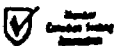
## Certificate of Analysis

Certificate No. 51548 Date: June 11, 1981  
Received June 8, 1981 2 Samples of ore  
Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
4072	0.005 NE side of Darwin tailings - more min
4088	0.002 Darwin shear - grand: mineral

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51568

Date: June 16, 1981

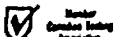
Received June 8, 1981 6 Samples of soil, ore, tailing?

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton	
4089	1.60	---	Darwin Dump-fines near assay off
4090	0.09	0.09	A1nel #3 vein - sulfides + qtz
4091	NIL	---	Murray Algoma Esquaga-qtz crushed in mill
4092	0.07	---	Murray Algoma crushed qtz inside mill
4093	0.11	---	Murray Algoma-fines inside ball mill
4094	0.005	---	Monk mine ore

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928







# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51636

Date: June 23, 1981

Received June 15, 1981 34 Samples of split core, whole core and ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton		SAMPLE NO.	GOLD Oz./ton	SILVER Oz./tc
6301	NIL		6320 ✓	0.002	
6302	NIL		6321 ✓	0.002	
6303	NIL		6322 ✓	0.002	
6304	NIL		6323 ✓	0.005	
6305	NIL		6324 ✓	0.002	
6306	0.002		6325 ✓	0.06	
6307	NIL		6326 ✓	NIL	
6308	NIL		6327 ✓	0.005	
6309	approx. 1.2oz.* <i>V.G. trigger</i>		6328 ✓	NIL	
6310	0.005			6.94	
6311	0.002			6.63	
6312	NIL			6.57	
6313	NIL	near wilcox J. rusty sulfides intrach-4096		0.005	0.01
6314	NIL	wilcox vein -qtz mineral -4097		0.09	
6315 ✓	NIL	(found by Harper) V.G.		0.11	
6316 ✓	NIL			0.07	
6317 ✓	NIL	wilcox vein -qtz non-mineral -4098		0.005	
6318	0.002	Dunrain shear -qtz, sericite mineral -4099		0.002	
6319	NIL	Dunrain shear quartz -4100 mineral.		NIL	

NOTE: \*Pulp and metallic results to follow.

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51636-A

Date: July 2, 1981

Received June 15, 1981 1 Samples of whole core

Submitted by Dunraine Mines Limited, Wawa, Ontario

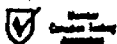
SAMPLE NO.	GOLD Oz./ton
6309	1.02

D81-2.

NOTE: The above result was obtained  
by using the pulp and metallic  
technique.

  
Per G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51703

Date: June 30, 1981

Received June 22, 1981 16 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.      GOLD  
                         Oz./ton

3305	NIL
6329 ✓	0.002
6330	NIL
6331	NIL
6332	NIL
6333	NIL
6334	0.002
6335 ✓	0.002
6336	0.002
6337	0.002
6338	0.002
6339	NIL
6340	NIL
6341 ✓	NIL
6342 ✓	0.005
6343 ✓	NIL

} D8C-1

Per *G. Lebel*  
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51754

Date: July 6, 1981

Received June 29, 1981 5 Samples of split core

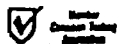
Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
6345 ✓	NIL
6346 ✓	0.002
6347 ✓	NIL
6348 ✓	NIL
6349 ✓	NIL

D81-3

Per *G. Lebel*  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51786

Date: July 10, 1981

Received June 29, 1981 8 Samples of ore and split core

Submitted by Dunraine Mines Limited, Wawa, Ontario

Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
1601	NIL	
1602	NIL	
1603	NIL	
1604	0.08	
6344	0.04 ✓	
6350	0.005 ✓	
6351	0.002 ✓	trace
6352	0.002 ✓	

} 281-3

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51833

Date: July 17, 1981

Received July 6, 1981 8 Samples of ore and splitcore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
1605	NIL
1606	NIL
3306	NIL
6353	0.03
6354	0.002
6355	NIL
6356	NIL
6357	0.005

*D81-4*

Per *G. Lebel*  
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51888

Date: July 23, 1981

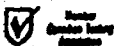
Received July 10, 1981 3 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
3307	NIL
3308	NIL
3309	0.02

Per   
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51916

Date: July 23, 1981

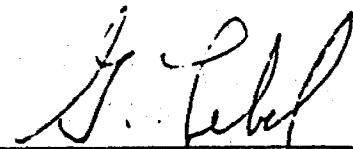
Received July 14, 1981 19 Samples of ore and split core

Submitted by Dunrains Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz./ton
(U.G.)3310*	0.37
	0.30
	0.32
6358 ✓	0.002
6359 ✓	0.002
6360 ✓	0.002
6361 ✓	0.002
6362 ✓	NIL
6363 ✓	NIL
6364 ✓	NIL
6365 ✓	0.002
6366 ✓	NIL
6367 ✓	0.002
6368 ✓	0.002
6369 ✓	0.005
6370 ✓	0.02
6371 ✓	0.005
6372 ✓	NIL
6373 ✓	NIL
6374 ✓	NIL
6375 ✓	0.005

D81-5

NOTE: \*indicates that this sample was completely pulverized.

Per   
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52018

Date: Aug. 5, 1981

Received July 27, 1981 90 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton
801 ✓	0.002	831	NIL
802 ✓	NIL	832	0.002
803 ✓	0.002	833	NIL
804 ✓	NIL	834	NIL
805	NIL	835	NIL
806	NIL	836	NIL
807	0.002	837	NIL
808	NIL	838	NIL
809	NIL	839	0.002
810	NIL	840	0.002
811	NIL	841	NIL
812	NIL	842	NIL
813	0.002	843	NIL
814	NIL	844	NIL
815	NIL	845	NIL
816	NIL	846	NIL
817	NIL	847	NIL
818	NIL	848	NIL
819	NIL	849	0.002
820	NIL	850	NIL
821	0.002	851	0.002
822	NIL	852	NIL
823	NIL	853	0.002
824	NIL	854	0.005
825	NIL	855	NIL
826	NIL	856	0.005
827	NIL	857	0.002
828	NIL	858	0.002
829	NIL	859	0.002
830	NIL	860	NIL

*Hold #5  
resample.*

con't...

Per G. Label  
G. Label, Manager



ESTABLISHED 1928



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis


Certificate No. 52018

Date: Aug. 5, 1981

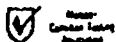
Received July 27, 1981 90 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz./ton
861	0.002
862	0.01
863	NIL
864	0.002
865	NIL
866	NIL
867	0.002
868	0.005
869	0.002
870	0.005
871	NIL
872	0.002
873	0.002
874	0.002
875	0.002
876	NIL
877	NIL
878	0.002
879	NIL
880	NIL
881	NIL
882	NIL
883	NIL
884	NIL
885	0.002
886	NIL
887	0.002
888	0.002
889	0.002
890	0.01

per   
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52070

Date: Aug. 6, 1981

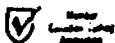
Received July 28, 1981 90 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton
501 ✓	NIL	542 ✓	NIL
502 ✓	NIL	543 ✓	NIL
503 ✓	NIL	891 ✓	NIL
504 ✓	NIL	892 ✓	NIL
505 ✓	NIL	893 ✓	NIL
506 ✓	NIL	894 ✓	NIL
507 ✓	NIL	895 ✓	NIL
508 ✓	0.08	896 ✓	NIL
509 ✓	NIL	897 ✓	NIL
510 ✓	NIL	898 ✓	NIL
511 ✓	NIL	899 ✓	0.005
512 ✓	NIL	900 ✓	NIL
513 ✓	NIL	901 ✓	NIL
514 ✓	NIL	902 ✓	NIL
515 ✓	NIL	903 ✓	NIL
516 ✓	NIL	904 ✓	NIL
517 ✓	0.10 ✓	905 ✓	NIL
518 ✓	NIL	906 ✓	NIL
519 ✓	NIL	907 ✓	NIL
520 ✓	NIL	908 ✓	NIL
521 ✓	0.002	909 ✓	0.005
522 ✓	NIL	910 ✓	NIL
523 ✓	NIL	911 ✓	NIL
535 ✓	NIL	912 ✓	NIL
536 ✓	NIL	913 ✓	NIL
537 ✓	0.01	914 ✓	NIL
538 ✓	0.002	915 ✓	NIL
539 ✓	NIL	916 ✓	NIL
540 ✓	NIL	917 ✓	0.002
541 ✓	NIL	918 ✓	NIL

con't....

Per G. Label, Manager



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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244  
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## Certificate of Analysis

Certificate No. 52030

Date: Aug. 6, 1981

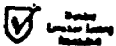
Received July 28, 1981 90 Samples of split core 981

Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO. GOLD  
Oz./ton

919 ✓	NIL
920 ✓	NIL
921 ✓	0.005
922 ✓	NIL
923 ✓	NIL
924 ✓	NIL
925 ✓	NIL
926 ✓	NIL
927 ✓	NIL
928 ✓	NIL
929 ✓	NIL
930 ✓	NIL
931 ✓	NIL
932 ✓	NIL
933 ✓	NIL
934 ✓	NIL
935 ✓	NIL
936 ✓	NIL
937 ✓	NIL
938 ✓	NIL
939 ✓	NIL
940 ✓	0.002
941 ✓	NIL
942 ✓	NIL
943 ✓	NIL
944 ✓	NIL
945 ✓	NIL
946 ✓	NIL
947 ✓	NIL
948 ✓	NIL

Per G. Lebel  
G. Lebel, Manager



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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52031

Date: Aug. 6, 1981

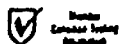
Received July 28, 1981 52 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./Ton		SAMPLE NO.	GOLD Oz./Ton
949 ✓	0.03		975	0.002
950 ✓	0.005		976	NIL
951 ✓	0.002		977	NIL
952 ✓	0.002		978	NIL
953 ✓	NIL	D81-4 Resample	979	NIL
954 ✓	NIL		980	NIL
955 ✓	NIL		981	NIL
956 ✓	0.005		982	NIL
957 ✓	NIL		983	NIL
958 ✓	0.45		984	0.002
959 ✓	0.005		985	0.002
960 ✓	0.002		986	0.002
961 ✓	0.002		987	NIL
962 ✓	NIL		988	NIL
963 ✓	NIL		989	NIL
964 ✓	0.002		990	NIL
965 ✓	0.002		991	NIL
966 ✓	0.002		992	0.002
967 ✓	0.002		993	NIL
968 ✓	NIL		994	NIL
969 ✓	NIL		995	NIL
970 ✓	NIL		996	NIL
971 ✓	NIL		997	NIL
972 ✓	NIL		998	0.002
973 ✓	0.002		999	NIL
974 ✓	NIL		1000	NIL

Per G. Lebel  
G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

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## Certificate of Analysis

Certificate No. 52052

Date: Aug. 10, 1981

Received Aug 4, 1981 13 Samples of split core and crushed ore

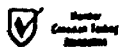
Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. GIGNAC

SAMPLE NO.	GOLD Oz./ton
524 ✓	NIL
525 ✓	NIL
526 ✓	NIL
527 ✓	NIL
528 ✓	NIL
529 ✓	NIL
530 ✓	NIL
531 ✓	NIL
532 ✓	0.002
533 ✓	NIL
534 ✓	NIL
1615 ✓	0.14
1616 ✓	0.11

} floor of drift under  
10 c stage chute  
under  
106 stage

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642 3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52111 Date: Aug. 18, 1981  
Received Aug. 10, 1981 43 Samples of split core  
Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	(GOLD) Oz./ton	SAMPLE NO.	(GOLD) Oz./ton
702	NIL	724	NIL ✓
703	0.01 <i>uM</i>	725	0.002 ✓
704	NIL ✓	726	NIL ✓
705	NIL ✓	727	NIL ✓
706	NIL ✓	728	NIL ✓
707	NIL ✓	729	NIL ✓
708	NIL ✓	730	NIL ✓
709	NIL ✓	731	NIL ✓
710	NIL ✓	732	NIL ✓
711	NIL ✓	733	NIL ✓
712	NIL ✓	734	NIL ✓
713	NIL ✓	735	NIL ✓
714	NIL ✓	736	NIL ✓
715	NIL ✓	737	NIL ✓
716	NIL ✓	738	NIL ✓
717	NIL ✓	739	NIL ✓
718	NIL ✓	740	NIL ✓
719	NIL ✓	741	NIL ✓
720	NIL ✓	742	NIL ✓
721	NIL ✓	743	NIL ✓
722	NIL ✓	744	NIL ✓
723	NIL ✓		

D-81-07

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52146

Date: Aug. 19, 1981

Received Aug. 14, 1981 17 Samples of whole core and split core

Submitted by Dunraine Mines Limited, Wawa, Ontario

Att: D. GIGNAC

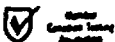
SAMPLE NO.	GOLD Oz./ton
783	0.002 ✓
784	0.005 ✓
785	NIL ✓
786	0.002 ✓
787	0.002 ✓
788	NIL ✓
789	0.005 ✓
790	0.03 ✓
791	0.03 ✓
792	0.71 ✓
	0.74 ✓
	0.70 ✓
793	0.21 ✓
	0.21 ✓
	0.20 ✓
794	NIL ✓
795	0.002 ✓
796	0.002 ✓
797	NIL ✓
798	NIL ✓
799	NIL ✓

DDH-81-08

Per G. Lebel

G. Lebel, Manager

ESTABLISHED 1928







# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO L0K 1H0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52151

Date: August 26, 1981

Received August 14, 1981 25 Samples of Cuttings

Submitted by Dunraine Mines Limited Wawa, Ontario Per: D. Gignac

SAMPLE NO. GOLD  
Oz/ton

1901	0.18
1902	0.13
1903	0.15
1904	0.06
1905	0.07
1906	<del>0.33</del>
1907	<del>0.43</del>
1908	0.10
1909	<del>0.26</del>
1910	<del>0.76</del>
1911	0.15
1912	<del>0.30</del>
1913	<del>0.69</del>
1914	<del>0.32</del>
1915	0.14
1916	0.14
1917	<del>0.25</del>
1918	<del>0.69</del>
1919	<del>0.38</del>
1920	<del>0.38</del>
1921	0.15
1922	0.12
1923	0.12
1924	0.12
1925	0.10

1st level  
1/6 drift floor

Per

G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0E 1T0  
TELEPHONE: (705) 642 3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

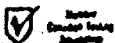
Certificate No. 52152 Date: August 25, 1981  
Received August 14, 1981 26 Samples of Split Core  
Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz/ton
757	0.002 ✓
758	Nil ✓
759	Nil ✓
760	0.002 ✓
761	0.005 ✓
762	0.002 ✓
763	Nil ✓
764	Nil ✓
765	Nil ✓
766	Nil ✓
767	Nil ✓
768	Nil ✓
769	0.002 ✓
770	0.002 ✓
771	Nil ✓
772	Nil ✓
773	Nil ✓
774	Nil ✓
775	Nil ✓
776	Nil ✓
777	Nil ✓
778	0.002 ✓
779	0.005 ✓
780	Nil ✓
781	0.01 ✓
782	0.002 ✓

Per

G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52161

Date: August 25, 1981

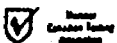
Received August 17, 1981 18 Samples of Split Core

Submitted by Dunraine Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz/ton
745	0.002
746	0.002
747	0.002
748	Nil
749	0.002
750	Nil
751	Nil
752	0.002
753	0.002
754	Nil
755	Nil
756	Nil
800	Nil ✓
4001	Nil ✓
4002	Nil ✓
4003	Nil ✓
4004	0.002 ✓
4005	0.002 ✓

Per   
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

PO BOX 10, SWASTIKA, ONTARIO L0P 1T0

TELEPHONE (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52178

Date: August 27, 1981

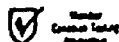
Received August 18, 1981 38 Samples of Split Core

Submitted by Dunraine Mines Limited, Wawa, Ontario Per: D. Gignac

SAMPLE NO.	GOLD Oz/ton	SAMPLE NO.	GOLD Oz/ton
4006	0.005 ✓	4025	0.002 ✓
4007	0.005 ✓	4026	Nil ✓
4008	0.002 ✓	4027	0.002 ✓
4009	Nil ✓	4028	0.002 ✓
4010	0.002 ✓	4029	Nil ✓
4011	Nil ✓	4030	Nil ✓
4012	Nil ✓	4031	Nil ✓
4013	Nil ✓	4032	Nil ✓
4014	Nil ✓	4033	Nil ✓
4015	Nil ✓	4034	Nil ✓
4016	0.002 ✓	4035	Nil ✓
4017	0.002 ✓	4036	Nil ✓
4018	Nil ✓	4037	Nil ✓
4019	Nil ✓	4038	Nil ✓
4020	Nil ✓	4039	Nil ✓
4021	Nil ✓	4040	Nil ✓
4022	Nil ✓	4041	0.01 ✓
4023	0.005 ✓	1619	0.07
4024	0.005 ✓	1620	0.15

Per G. Lebel  
G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52200

Date: Sept. 2, 1981

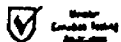
Received Aug. 21, 1981 6 Samples of Sludge, ore and split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
644	NIL ✓
1926	0.16
1927	0.002
1928	0.10
4401	NIL
4402	NIL

Per G. Lebel  
G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52276

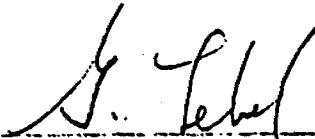
Date: Sept. 3, 1981

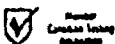
Received Aug. 31, 1981 39 Samples of split core and fine material

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton
4042	✓NIL	4062	✓NIL
4043	✓0.002	4063	✓NIL
4044	✓0.02	4064	✓NIL
4045	✓NIL	4065	✓NIL
4046	✓0.005	4066	✓0.002
4047	✓NIL	4067	✓NIL
4048	✓0.002	4068	✓NIL
4049	✓0.01	4069	✓0.005
4050	✓0.002	4070	✓NIL
4051	✓0.005	4071	✓NIL
4052	✓NIL	4072	✓NIL
4053	✓0.002	4073	✓NIL
4054	✓0.002	4074	✓NIL
4055	✓NIL	4075	✓0.002
4056	✓NIL	4076	✓NIL
4057	✓NIL	4077	✓0.005
4058	✓NIL	4078	✓0.002
4059	✓NTJ.		
4060	✓0.002	1936	0.91
4061	✓NIL	1937	0.49

Per

  
G. Lebel, Manager



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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
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## Certificate of Analysis

Certificate No. 52329

Date: Sept. 16, 1981

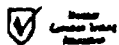
Received Sept. 8, 1981 49 Samples of split core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton
4079	0.002 ✓	4406 ✓	0.002
4080	0.002 ✓	4407 ✓	NIL
4081	0.005 ✓	4408 ✓	NIL
4082	0.002 ✓	4409 ✓	0.002
4083	0.002 ✓	4410 ✓	NIL
4084	0.10 ✓	4411 ✓	NIL
4085	0.005 ✓	4412 ✓	NIL
4086	0.002 ✓	4413 ✓	0.002
4087	0.002 ✓	4414 ✓	NIL
4088	0.002 ✓	4415 ✓	0.002
4089	0.002 ✓	4416 ✓	0.002
4090	0.002 ✓	4417 ✓	0.002
4091	NIL ✓	4418 ✓	NIL
4092	NIL ✓	4419 ✓	0.002
4093	NIL ✓	4420 ✓	0.002
4094	NIL ✓	4421 ✓	NIL
4095	NIL ✓	4422 ✓	0.002
4096	NIL ✓	4423 ✓	0.005
4097	NIL ✓	4424 ✓	0.01
4098	NIL ✓	4425 ✓	0.002
4099	NIL ✓	4426 ✓	0.002
4100	NIL ✓	4427 ✓	NIL
		4428 ✓	NIL
		4429 ✓	0.002
4403	NIL ✓		
4404	NIL ✓		
4405	NIL ✓		

Per G. Lebel  
G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52347

Date: Sept. 17, 1981

Received Sept. 11, 1981 4 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.

GOLD  
Oz./ton

1621

0.07 - Darwin - Grace vein from pit north of shaft.

1622

0.79 - Darwin - Grace vein from trench north of shaft

1623

0.20 - Darwin - N extension of grace vein beyond  
diabase dike - qtz from dump by 6'x8' timbered p.

1938

0.002

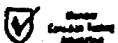
- underground Parkhill - 2nd level w  
- strong vein quartz in N. wall between 200-2100

\* All samples have plenty of  
arsenopyrite

Per

G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52417

Date: Sept. 24, 1981

Received Sept. 21, 1981 40 Samples of ore, core, and sludge

Submitted by Dunraine Mines Limited, Wawa, Ontario

Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton
669	0.005 ✓	4449	0.002 ✓
1939	0.05 - 1st level E - 10' w of HSE, S side of drift.	4450	0.02 ✓
1940	0.50 - 20' E slope - "way up" escape raise	"	NIL ✓
1941	0.03 - 2nd level E - much from unpolled chest.	"	0.005 ✓
4430	NIL ✓	"	0.005 ✓
4431	NIL ✓	4451	0.02 ✓
4432	NIL ✓	4452	0.002 ✓
4433	NIL ✓	4453	NIL ✓
4434	NIL ✓	4454	NIL ✓
4435	0.002 ✓	4455	NIL ✓
4436	NIL ✓	4456	NIL ✓
4437	NIL ✓	4457	NIL ✓
4438	NIL ✓	4458	0.01 ✓
4439	0.01 ✓	4459	NIL ✓
4440	NIL ✓	4460	NIL ✓
4441	NIL ✓	4461	NIL ✓
4442	NIL ✓	4462	NIL ✓
4443	NIL ✓	4463	NIL ✓
4444	0.02 ✓	4464	NIL ✓
4445	0.002 ✓	4465	NIL ✓
4446	NIL ✓		
4447	0.01 ✓		
4448	NIL ✓		

NOTE: Sample #4450 was completely pulverized and assayed in replicate with results as shown.

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 842-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52465

Date: Oct. 2, 1981

Received Sept. 28, 1981 24 Samples of ore and split core

Submitted by Dunrain: Mines Limited, Wawa, Ontario

Att: D. Gienac

SAMPLE NO.      GOLD  
                         Oz./ton

3325	NIL
3326	NIL
4466	✓NIL
4467	✓NIL
4468	✓NIL
4469	✓NIL
4470	✓0.002
4471	✓0.002
4472	✓NIL
4473	✓NIL
4474	✓NIL
4475	✓NIL
4476	✓NIL
4477	✓NIL
4478	✓NIL
4479	✓NIL
4480	✓NIL
4481	✓NIL
4482	✓NIL
4483	✓NIL
4484	✓NIL
4485	✓NIL
4486	0.002 ← ?
4487	0.002 ✓

Per G. Lebel  
G. Lebel, Manager

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# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52502

Date: October 9 1981

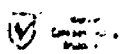
Received Oct. 5/81 34 Samples of Split Core

Submitted by Dunraine Mines Limited, Wawa, Ontario Att'n: Mr. D. Gignac

SAMPLE NO.	GOLD Oz./ton
4488	0.002 ✓
4489	Nil ✓
4490	Nil ✓
4491	0.002 ✓
4492	Nil ✓
4493	Nil ✓
4494	Nil ✓
4495	0.002 ✓
4496	0.002 ✓
4497	Nil ✓
4498	Nil ✓
4499	Nil ✓
4500	Nil ✓
4301	Nil ✓
4302	0.002 ✓
4303	Nil ✓
4304	Nil ✓
4305	0.002 ✓
4306	0.002 ✓
4307	0.005 ✓
4308	0.002 ✓
4309	Nil ✓
4310	Nil ✓
4311	Nil ✓
4312	Nil ✓
4313	Nil ✓
4314	0.005 ✓
4315	Nil ✓
4316	0.002 ✓
4317	0.002 ✓
4318	Nil ✓
4319	Nil ✓
4320	0.002 ✓
4321	0.005 ✓

Per G. Lebel  
G. Lebel - Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52504 Date: October 9 1981

Received Oct. 5/81 8 Samples of Fine Material

Submitted by Dunraine Mines Ltd., Wawa, Ontario Att'n: Mr. D. Gignac

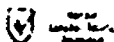
SAMPLE NO.	GOLD Oz./ton	
1942	0.11	2ND LEVEL MILL VEIN DRIFT FLOOR E
1943	0.65	2ND LEVEL MILL VEIN DRIFT FLOOR W
1944	0.24	2ND LEVEL MAIN VEIN STOPS EAST
1945	0.17	1ST LEVEL MAIN VEIN STOPS WEST
1946	0.36	1ST LEVEL MAIN VEIN STOPS EAST
1947	1.01	2ND LEVEL MILL VEIN STOPS
1948	0.55	2ND LEVEL MAIN VEIN 203W STOP
1949	0.67	1ST LEVEL DRIFT FLOOR EAST

*Av 176 Av*  
0.47 oz

*- 10 mesh  
+10 - Single weight  
- 10 pan over belt  
concentrate*

Per G. Lebel  
G. Lebel - Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52547

Date: Oct. 16, 1981

Received Oct. 13, 1981 16 Samples of split core

Submitted by Dunrain Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO. GOLD  
Oz./Ton

4322	NIL
4323	NIL
4324	NIL
4325	0.002
4326	NIL
4327	NIL
4328	NIL
4329	NIL
4330	NIL
4331	0.002
4332	0.002
4333	0.01
4334	NIL
4335	NIL

D81-17

Per

G. Lebel, Manager



ESTABLISHED 1928



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 110

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52677

Date: November 5 1981

Received Oct.30/81 8 Samples of Ore. Split Core

Submitted by Dunraine Mines Limited, Hawa, Ontario Att'n: Mr. D. Gignac

SAMPLE NO. GOLD  
Oz./ton

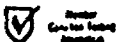
670	Nil
4344	Nil
4345	0.15
4346	0.17
4347	0.002
4348	0.002
4349	Nil
4350	Nil

*1.5' - 5 ft*  
*2.3 ft*

*Moody Pit*  
*D81-19.*

Per G. Lebel  
G. Lebel - Manager

ESTABLISHED 1928





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 25413

DATE: July 24, 1981

SAMPLE(S) OF: Rock(9)

RECEIVED: July 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunrairie Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>
1607	Trace
8	0.005
9	0.015
1610	Trace
1	Trace
2	Trace
3	0.01
4	Trace
3311	0.005

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 26244

DATE: July 30, 1981

SAMPLE(S) OF: Core(24)

RECEIVED: July 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Limited

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Sample No.</u>	<u>Oz. Gold</u>
C6377	0.055 *	C6389	Trace ✓
8	0.005	C6390	0.005 ✓
9	0.005	1	0.005 ✓
C6380	Trace	2	Trace ✓
1	0.005	3	0.005 ✓
2	0.005	4	0.005 ✓
3	Trace ✓	5	Trace ✓
4	Trace ✓	6	0.005 ✓
5	Trace ✓	7	Trace ✓
6	Trace ✓	8	Trace ✓
7	0.005 ✓	9	0.01 ✓
8	Trace ✓	C6400	Trace ✓

\* Checked.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 27533

DATE: August 10, 1981

SAMPLE(S) OF: Core(58) Sludge(5)

RECEIVED: August 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Ltd.

D-81-6.-

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Sample No.</u>	<u>Oz. Gold</u>
E544	Trace ✓	E576	Trace ✓
5	Trace ✓	7	Trace ✓
6	Trace ✓	8	Trace ✓
7	Trace ✓	9	Trace ✓
8	Trace ✓	E580	0.002* ✓
9	Trace ✓	1	Trace ✓
E550	Trace ✓	2	Trace ✓
1	Trace ✓	3	Trace ✓
2	Trace ✓	4	Trace ✓
3	Trace ✓	5	Trace ✓
4	Trace ✓	6	0.002* ✓
5	Trace ✓	7	Trace ✓
6	Trace ✓	8	Trace ✓
7	Trace ✓	9	Trace ✓
8	Trace ✓	E590	Trace ✓
9	Trace ✓	1	0.002 ✓
E560	Trace ✓	2	Trace ✓
1	0.005 ✓	3	Trace ✓
2	Trace ✓	4	Trace ✓
3	Trace ✓	5	Trace ✓
4	0.005 ✓	6	Trace ✓
5	Trace ✓	7	Trace ✓
6	Trace ✓	8	Trace ✓
7	Trace ✓	9	Trace ✓
8	Trace ✓	E600	Trace ✓
9	Trace ✓	E701	Trace ✓
E570	Trace ✓	E601	Trace ✓
1	Trace ✓	2	Trace ✓
2	Trace ✓	3	Trace ✓
3	Trace ✓	4	Trace ✓
4	Trace ✓	5	Trace ✓
5	Trace ✓		

\* Estimated.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 28133

DATE: August 11, 1981

SAMPLE(S) OF: Rock(6)

RECEIVED: August 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Limited

<u>Sample No.</u>	<u>Oz. Gold</u>
3313	Trace ✓
3314	Trace ✓
3315	Trace ✓
3316	Trace ✓
3317	0.045 ✓
3318	Trace ✓

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 31174

DATE: September 10, 1981

SAMPLE(S) OF: Rock(8) Fines(6)

RECEIVED: September 1981

SAMPLE(S) FROM: Mr. D. J. Gignac, Dunraine Mines Limited

<u>Sample No.</u>	<u>Oz. Gold</u>
F13951	0.39
2	0.61 *
3	0.23
4	0.49
5	0.81 *
6	0.64
7	0.48
8	0.71 *
9	0.365
F13960	0.47
1	0.09
2	0.16
3	0.22
4	0.20

\* Checked.

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

Per 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 28366

DATE: August 14, 1981

SAMPLE(S) OF: Sludge(10) Fines(3)

RECEIVED: August 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>	<u>Sample No.</u>	<u>Oz. Gold</u>
E606	Trace	E613	Trace
E607	Trace	E614	Trace
E608	Trace	E615	Trace
E609	Trace		
E610	Trace	1617	0.075
E611	Trace	1618	0.055
E612	Trace	3312	0.11

*HK.*  
*U.G. sample*  
*1045 Sludge*  
*Fines*  
*U.G.*  
*REC.*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 28869

DATE: August 19, 1981

SAMPLE(S) OF: Sludge(12)

RECEIVED: August 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>
E630	Trace
1	Trace
2	Trace
3	Trace
4	Trace
5	Trace
7	Trace
8	0.005
9	Trace
E640	Trace
1	Trace
2	Trace

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 28845

DATE: August 19, 1981

SAMPLE(S) OF: Sludge(15)

RECEIVED: August 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>
E616	Trace
7	Trace
8	Trace
9	0.005
E620	0.005
1	Trace
2	Trace
3	Trace
4	Trace
5	Trace
6	Trace
7	0.005
8	0.025
9	0.015
E630	0.005

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 33652

DATE: September 23, 1981

SAMPLE(S) OF: Sludge(10)

RECEIVED: September 1981

SAMPLE(S) FROM: Mr. D. Gignac, Dunraine Mines Ltd.

<u>Sample No.</u>	<u>Oz. Gold</u>
645	Trace
646	Trace
647	Trace
648	Trace
649	Trace
650	Trace
651	Trace
652	Trace
653	Trace
654	Trace

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 52615

Date: Oct. 27, 1981

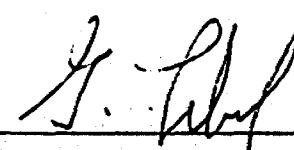
Received Oct. 21, 1981 9 Samples of split core and ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
1630	0.01
4336	NIL
4337	NIL
4338	0.01
4339	0.01
4340	0.02
4341	0.002
4342	NIL
4343	0.005

*See also sample  
4338 & 4339  
Gignac, Oct 27*

*4341-15*

Per   
G. Lebel, Manager

ESTABLISHED 1928







# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51286

Date: April 30, 1981

Received April 27, 1981 2 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario

*Dawn  
Sleat*

SAMPLE NO.	GOLD Oz./ton
4051	0.002
4052	NIL

Per *G. Lebel*  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51302

Date: May 4 1981

Received Apr. 29/81 11 Samples of Ore

Submitted by Dunraine Mines Ltd., Wawa, Ontario

	SAMPLE NO.	GOLD Oz./ton
<del>P</del>	4053	0.002
<del>S</del>	4054	Nil
	4055	0.002
Maniposa	4056	Nil
	4057	Nil
dump	4058	0.002
	4059	0.10
	4060	0.05
pkhill dump	4061	0.04
	4062	0.24
by mill	4063	1.63
Fines from assay office Floor		

Per G. Lebel  
G. Lebel - Manager



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51387

Date: May 22 1981

Received May 15/81 7 Samples of Tailings, Ore

Submitted by Dunrain Mines Limited, Wawa, Ontario

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
<i>4064</i>	0.035	---
<i>4065</i>	0.077	---
<i>4066</i>	0.067	---
<i>4067</i>	0.116	---
<i>4068</i>	N11	N11
<i>4069</i>	N11	0.02
<i>4070</i>	0.002	0.01

*Handwritten notes:*  
 - *4064-4067*: *old tails*  
 - *4069-4070*: *Frankes Rocks*

Per *G. Lebel*  
G. Lebel - Manager



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51470

Date: June 4 1981

Received May 27/81 7 Samples of Ore

Submitted by Dunraine Mines Ltd., Wawa, Ontario Att'n: Mr. D. Gignac

*Datwin  
Quartz*

SAMPLE NO.	GOLD Oz./ton
4071	Nil
4073	0.04
4074	0.17
4075	0.13
4076	0.02
4077	0.06
4078	0.13

Per *G. Lebel*

G. Lebel - Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51491

Date: June 5, 1981

Received June 1, 1981 7 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.      GOLD  
                         Oz./ton

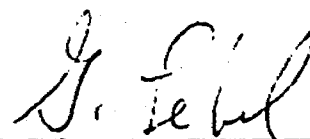
4079              0.07

4080              NIL

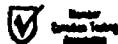
4081              0.002

4082              NIL

*capit vein  
matrix*  
- 3301              0.002  
*Dunraine  
shacr.*  
- 3302              NIL  
- 3303              NIL

Per   
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51548

Date: June 11, 1981

Received June 8, 1981 2 Samples of ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

	SAMPLE NO.	GOLD Oz./ton
<i>Dawin rocks by takings</i>	4072	0.005
<i>dawin shear</i>	4088	0.002

Per *G. Lebel*  
G. Lebel, Manager



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51517

Date: June 11, 1981

Received June 3, 1981 6 Samples of ore and ground rock

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton
<i>9 v.</i> — 3304	0.002
<i>unsuckle.</i> — 4083	0.15
4084	0.08
<i>mint</i> 4085	0.27
<i>dump</i> 4086	0.12
— 4087	0.43

Per *G. Lebel*  
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51568

Date: June 16, 1981

Received June 8, 1981 6 Samples of soil, ore, tailing ?

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
4089	1.60	---
4090	0.09	0.09
4091	NIL	---
4092	0.07	---
4093	0.11	---
4094	0.005	---

Per G. Lebel  
G. Lebel, Manager





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0  
TELEPHONE: (705) 642-3244  
ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 51636

Date: June 23, 1981

Received June 15, 1981 34 Samples of split core, whole core and ore

Submitted by Dunraine Mines Limited, Wawa, Ontario Att: D. Gignac

SAMPLE NO.	GOLD Oz./ton	SAMPLE NO.	GOLD Oz./ton	SILVER Oz./ton
6301	NIL	6320	0.002	
6302	NIL	6321	0.002	
6303	NIL	6322	0.002	
6304	NIL	6323	0.005	
6305	NIL	6324	0.002	
6306	0.002	6325	0.06	
6307	NIL	6326	NIL	
6308	NIL	6327	0.005	
6309	approx. 1.2oz.*	6328	NIL	
6310	0.005	4095	6.94	
6311	0.002	<i>Moody Pit</i>	6.63	
6312	NIL		6.57	
6313	NIL	<i>Wilcox</i> 4096	0.005	0.01
6314	NIL	4097	0.09	
6315	NIL		0.11	
6316	NIL		0.07	
6317	NIL	<i>Wilcox</i> 4098	0.005	
6318	0.002	<i>Darwin</i> 4099	0.002	
6319	NIL	4100	NIL	

NOTE: \*Pulp and metallic results to follow.

Per G. Lebel  
G. Lebel, Manager



41N15NE0061 MCMURRAY45 MCMURRAY

900

OM 81-7-C-2

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

DD LOG (#20) 1981 DD 25 (MCMURRAY-0014-A1)



Ministry of  
Natural  
Resources

Temiskaming  
Testing  
Laboratories

P.O. Box 799  
Presley St.  
Cobalt, Ontario

Tel: 679-8313

Report Number

CB 5339

Laboratory Report

Date Dec. 16, 1981.

Issued To: Dunraine Mine, c/o J. Kosa, Cobalt, Ont.

Sample Number	Gold Oz. Per Ton	Gold Value Per Ton	<del>Silver</del>	
Lot 63E1 Coarse				
Total	0.282		0.256	
Average	0.269 oz/ton Au			course fraction from U/G salvage material.

Fees Received Charged Invoice #02075

D.L. Lassie  
Manager  
m.

Except by special permission, reproduction of these results must include any  
qualifying remarks made by this ministry with reference to any sample.



Ministry of  
Natural  
Resources

Temiskaming  
Testing  
Laboratories

P.O. Box 799  
Presley St.  
Cobalt, Ontario

Tel: 679-8313

Report Number

CB 5340

Laboratory Report

Date Dec. 16, 1981

Issued To: Dunraine Mine, c/o Mr. J. Kosa, Cobalt, Ont.

Sample Number	Gold Oz. Per Ton	Gold Value Per Ton	SEVER OR REUSE
Lot 6882 Fines			
Total	0.505		0.515
Average	0.510 oz/ton Au		

*fine fraction  
from U/G bulk  
sample.*

Fees Received Charged Invoice #02076

*D.L. Karadie*  
Manager

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Ministry of  
Natural  
Resources

Temiskaming  
Testing  
Laboratories

P.O. Box 799  
Presley St.  
Cobalt, Ontario

Tel: 679-8313

Report Number

CB 5219

Laboratory Report

Date Nov. 6, 1981.

Issued To: Jack Koza Ltd., Cobalt, Ont.

Sample Number	Gold Oz. Per Ton	Gold Value Per Ton	SGDK OR BCKKOK	
Lot 6835				
Total	0.053		0.060	
Average	0.056 oz/ton Au			

*Bulk sample from  
Parkhill waste dump.*

Fees Received Charged Invoice #02029.

*D.L. Laroche*  
Manager

Except by special permission, reproduction of these results must include any  
qualifying remarks made by this ministry with reference to any sample.

HOMESTAKE MINING COMPANY

650 CALIFORNIA STREET · 9TH FLOOR  
SAN FRANCISCO, CALIFORNIA 94108

CABLE: HOMESTAKE  
TELEPHONE (415) 981-8150

December 15, 1981

Daniel Gignac  
Dunraine Mines Ltd.  
P.O. Box 265  
Wawa, Ontario  
Canada POS-1K0

Dear Mr. Gignac:

Some weeks ago I received the samples which you sent us. I recently sent some of them out for petrographic and mineralogic studies. Once we have received the results I will pass them on to you. It would be helpful if you could provide us with a map which shows the location of the drill holes. This will permit us to place the holes in their proper geologic context and improve our understanding of the property.

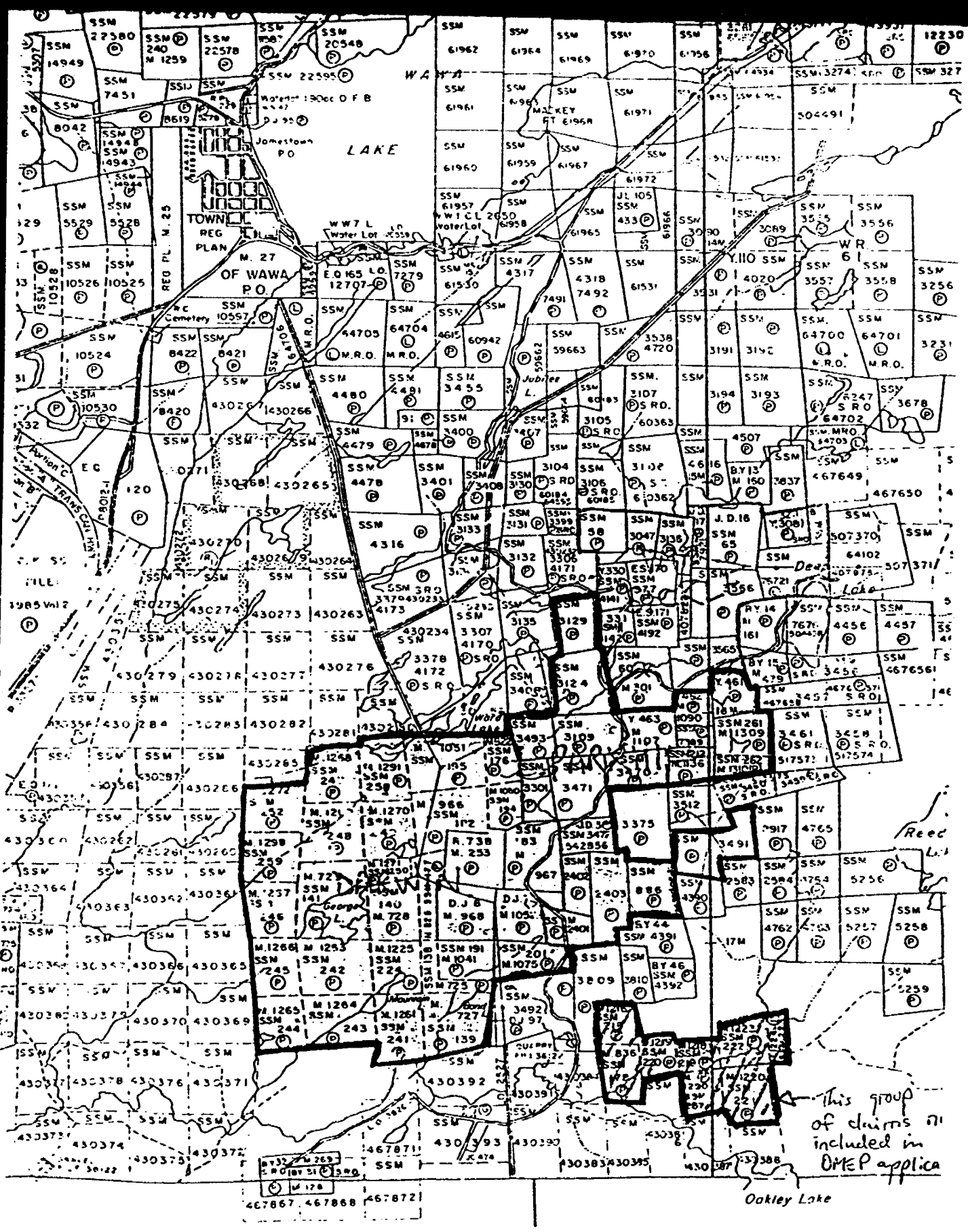
Yours truly,

  
Jeffrey T. Abbott  
Manager, Exploration Services

JTA:jc

RESULTS OF THIS TESTWORK WILL  
BE FORWARDED TO EMEP UPON  
ARRIVAL

samples of all rock-types  
encountered in Parkhill  
Project have been sent to  
Homestake for examination  
with regard to determination  
of possible sedimentary  
metallogeny.



# MCMURRAY

EXHIBIT #3 (Tp.29 R.23)

DISTRICT OF ALGOMA

*010181-7C-2*

SAULT STE. MARIE  
MINING DIVISION  
M1547

SCALE: 1-INCH = 40 CHAINS

## LEGEND

- |                       |                |
|-----------------------|----------------|
| PATENTED LAND         | ● or ⊙         |
| CROWN LAND SALE       | C.S.           |
| LEASES                | Ⓛ              |
| LOCATED LAND          | Loc.           |
| LICENSE OF OCCUPATION | L.O.           |
| MINING RIGHTS ONLY    | M.R.O.         |
| SURFACE RIGHTS ONLY   | S.R.O.         |
| ROADS                 | —              |
| IMPROVED ROADS        | —              |
| KING'S HIGHWAYS       | —              |
| RAILWAYS              | —              |
| POWER LINES           | —              |
| MARSH OR MUSKEG       | —              |
| MINES                 | Ⓧ              |
| CANCELLED             | □ DUNRAINE     |
| PATENTED S.R.O.       | □ CLAIM GROUPS |

## NOTES

400' SURFACE RIGHTS RESERVATION  
AROUND ALL LAKES AND RIVERS

THIS TOWNSHIP UNDER SUBDIVISION  
CONTROL OF THE MUNICIPALITY OF  
THE TOWNSHIP OF MICHIGIQUEN.  
Refer to Twp. By-Law 18-59 File:157561.

MINING CLAIMS SSM 10524, 25, 26, 27,  
SSM 10528, 29, 30, 31,  
SSM 10532 & 33

ARE PATENTED SURFACE RIGHTS ONLY.  
WITHDRAWN FROM STAKING FILE 114228, E 3

L.O. 3826 COVERS TELEPHONE LINE  
FROM WAWA STA. FOLLOWING THE  
MINES ROAD

Areas withdrawn from staking under Section  
43 of the Mining Act. (R.S.O. 70)

Order No. File Date Disposition

193894	DATE OF ISSUE
170625	

*this group of claims is included in OTEP applica*

NAVE

FOR ADDITIONAL

INFORMATION

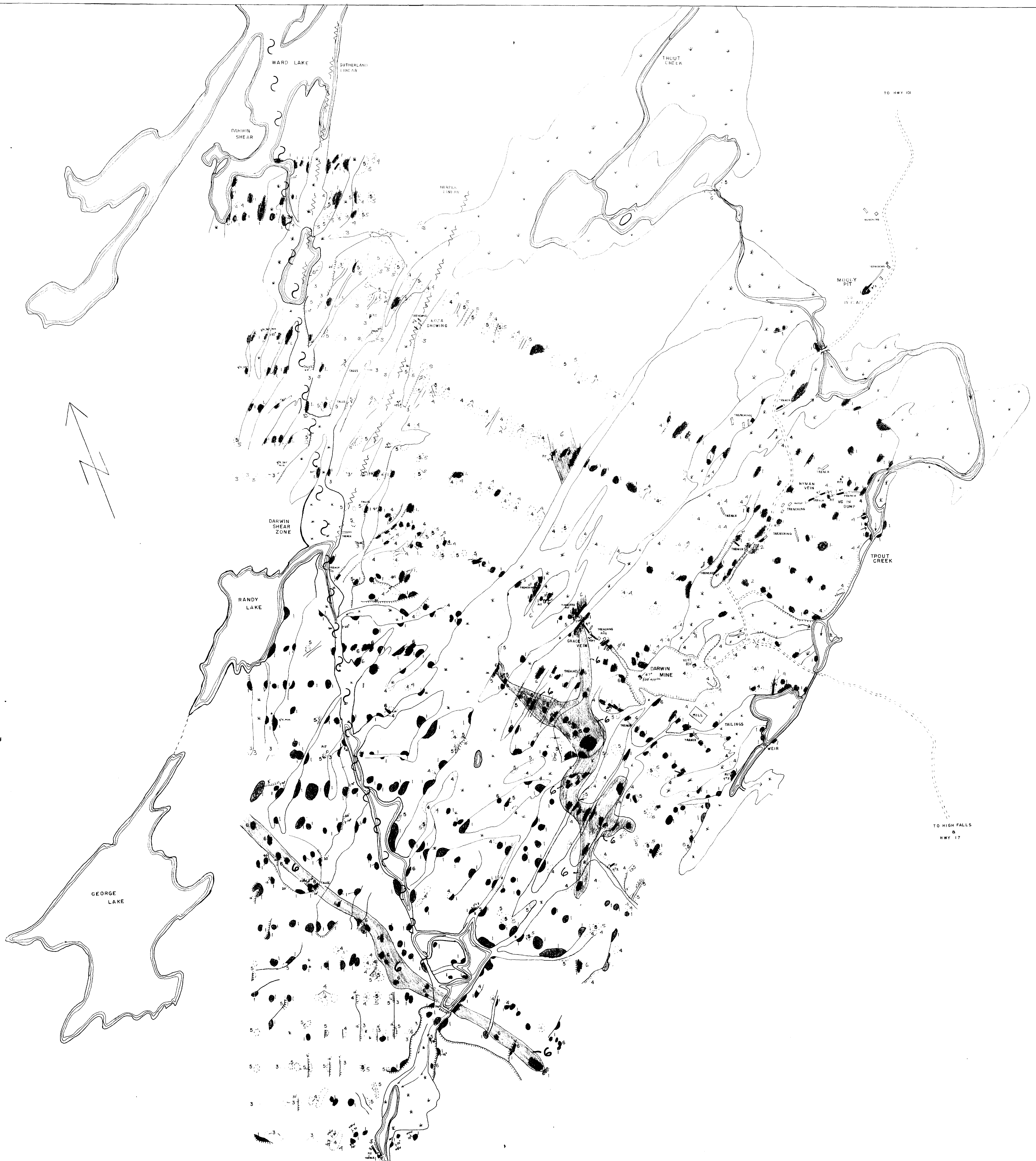
SEE MAPS:

MCMURRAY-0045

# 1

# 2





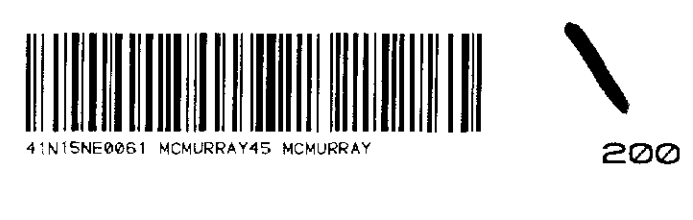
LEGEND

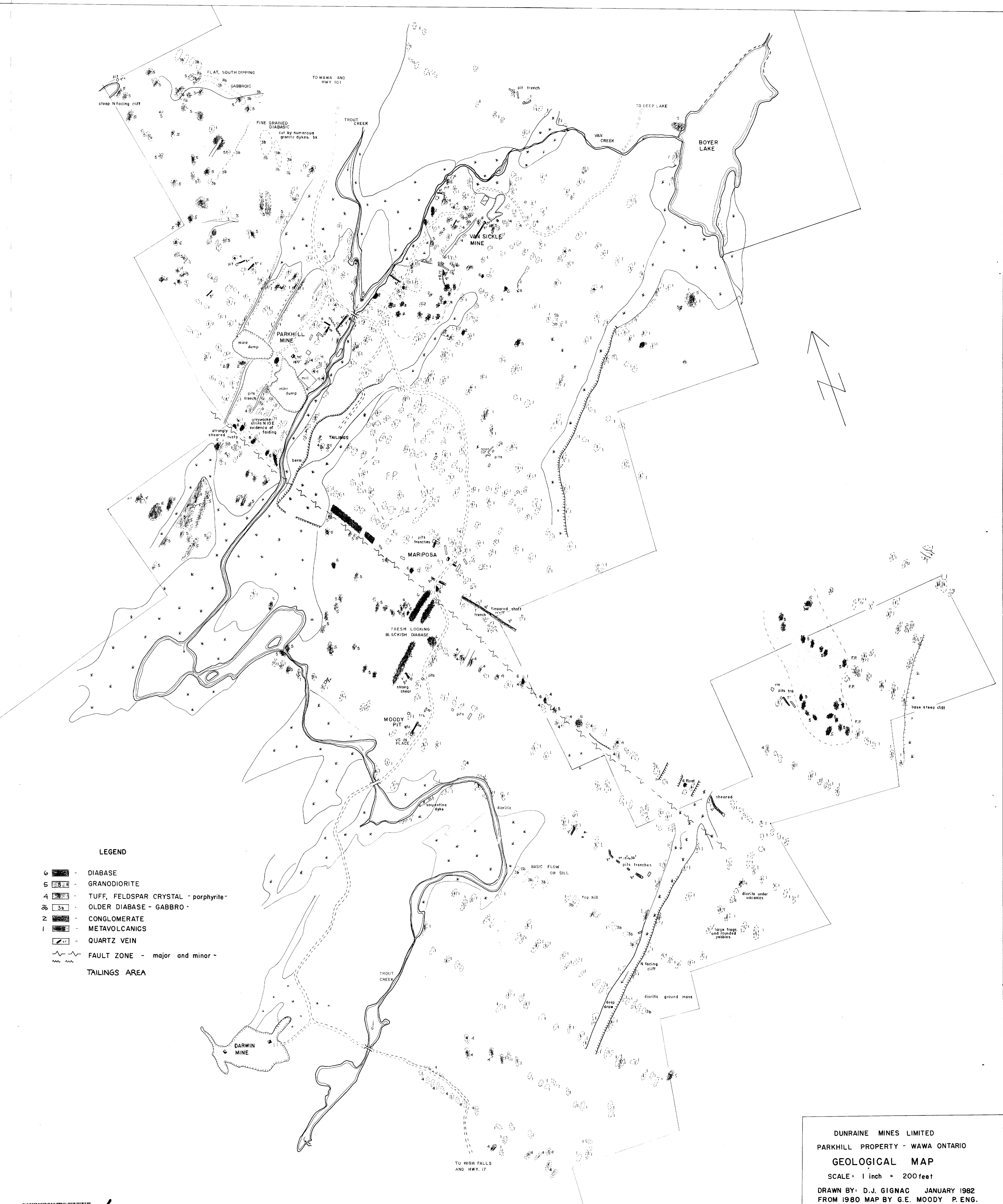
6	DIABASE
5	GRANDIORITE - QUARTZ EYE VARIETY -
4	FELDSPAR CRYSTAL TUFF - PORPHYRITE -
3	TUFFS - FINE GRAINED INTERMEDIATE TO FELSIC -
2	CONGLOMERATE
1	METAVOLCANICS
QV	QUARTZ VEIN
~	SHEAR ZONE
- - -	LINEAR

DUNRAINE MINES LIMITED  
 DARWIN PROPERTY - WAWA, ONTARIO  
**GEOLOGICAL MAP**  
 SCALE: 1 inch = 200 feet  
 DRAWN BY: R. Corbett, D. Gignac  
 POSTED: NOV./81

MCMURRAY-0045-# 1

ORP 81-1-C-2

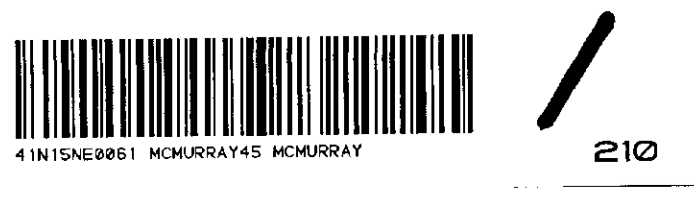




- LEGEND**
- 6 - DIABASE
  - 5 - GRANODIORITE
  - 4 - TUFF, FELDSPAR CRYSTAL - porphyrite -
  - 3b - OLDER DIABASE - GABBRO -
  - 2 - CONGLOMERATE
  - 1 - METAVOLCANICS
  - Q - QUARTZ VEIN
  - ~ - FAULT ZONE - major and minor -
  - TA - TAILINGS AREA

DUNRAINE MINES LIMITED  
 PARKHILL PROPERTY - WAWA ONTARIO  
**GEOLOGICAL MAP**  
 SCALE: 1 inch = 200 feet  
 DRAWN BY: D.J. GIGNAC JANUARY 1982  
 FROM 1980 MAP BY G.E. MOODY P. ENG.  
 VAN SICKLE MINE AREA GEOLOGY BY R.E. CORBETT JUNE 1982

MC MURRAY - 0045 #2



CMR 81-7-C-2 COLOURED COPY