A REPORT

on

THE MORGAN ISLAND AREA PROPERTY

of

NOBLE PEAK RESOURCES LTD.

SQUAW LAKE-STURGEON LAKE AREA

PATRICIA MINING DIVISION

DISTRICT OF THUNDER BAY

NORTHWESTERN ONTARIO

by

Donald E. Smith & Associates Limited

Donald E. Smith, P.Eng.

Toronto, Ontario

July 7, 1983

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SUMMARY

Five mineral claims, numbered as Pa 570183 to Pa 570187, inclusive, located on the northern end of Morgan Island and under the adjacent waters in the Northeast Arm of Sturgeon Lake, Patricia Mining Division, District of Thunder Bay, northwestern Ontario are held in escrow for the sole benefit of Noble Peak Resources Ltd. They will be transferred to the company upon completion of a $500,000 exploration expenditure on them. The unencumbered, unpatented mineral claims are in good standing until September 12, 1983. Certain assessment work credits are available and no problem is foreseen in keeping the property in good standing.

The geology of the region, as well as that of Morgan Island, has been mapped and details provided in various Government of Ontario and private reports. The regional geology is complex but locally, such as at Morgan Island, it appears to be more simplified. Favourably regarded Precambrian-aged volcanic and lesser sedimentary rocks predominate. These in turn have been highly metamorphosed and contorted by heat, pressure, fracturing, faulting, folding and younger acidic and basic intrusives. Large masses of younger plutons occur and these have had a profound influence on pre-existing rocks and, most probably, on metallic mineral deposition.

Initial gold discoveries made in the area in 1898 started a wave of prospecting and exploration activity that ebbed and flowed intermittently over the next several decades. Many gold occurrences were found and a few received significant

exploration and development attention. The most important development for gold only in the Sturgeon Lake area to date was the St. Anthony Mine which, between 1905 and 1941, produced 63,310 ounces of gold and some 16,341 ounces of silver, valued at $2,157,823 and $7,469 respectively. Not being essential to the war effort, the St. Anthony Mine was closed in 1941 and it has remained idle ever since.

Discoveries of large, economic, base metal deposits in the 1969-1970 period once again focused attention on the area and extensive exploration was conducted over the next few years. Exploration then declined until the significant gold price increase which, once again, resulted in a substantial increased level of claim staking and exploration for that metal during the last few years when many long known discoveries were restaked and these, along with new, as well as long existing properties, have been the focus of significantly increased exploration attention. New finds have been made and former properties such as the once producing St. Anthony Mine are now being reactivated. The area surrounding Noble Peak's holdings is now staked solidly for miles in all directions.

The base metal finds in the area have prompted the increased use of geophysical methods and these are now being employed to a greater extent in gold exploration. Geochemical surveying is also on the increase and it, along with well proven exploration techniques, is now widely employed.

Geochemical investigation results on Morgan Island have indicated the presence of syngenetic gold in the various carbonates and while generally low over large areas,

concentrations of much better gold values have been found in shear zones such as on the north end of Morgan Island where only limited diamond drilling has been conducted. Drill core sampling appears to have been limited to non-existent for holes drilled in the area now encompassed by Noble Peak's claims in spite of geochemical testing of certain rock members producing high assay results.

The writer inspected the property during the period of May 28 to June 1, inclusive, of this year during which time he field examined various rock types, verified the claim staking, supervised core and rock sampling and located the positions of former drill holes. In spite of the work conducted in the past, the writer is of the opinion that under present economic circumstances, including the price of gold relative to production costs, the favourable geological conditions present, the abundance of mineral occurrences (particularly gold) in the area and improved techniques used in the search for gold, further, well planned exploration of the north Morgan Island area is justified. In addition to the presence of widespread, albeit low, values in gold and the much higher concentrations indicated for certain areas or rock types, the noted occurrence of fuchsite which is considered to be an important gold indicator in various large, successful, past and presently producing operations, such as in the Kirkland Lake area, as well as being associated with the more promising gold occurrences in the Sturgeon Lake sector, must be regarded as an encouraging indication for Noble Peak's Morgan Island property, a suggestion supported by the contents of certain government reports.

The inspection of the northern end of Morgan Island confirmed tnat it is underlain by a significant area of rocks considered favourable to gold deposition based on exploration results and opinions expressed by company and government geologists familiar with the area.

CONCLUSIONS

The northern part of Morgan Island, located in the Northeast Arm of Sturgeon Lake, is covered by mineral claims Pa 570183 to Pa 570187, inclusive. It is underlain by rock types that must be considered favourable to gold deposition.

Various completed geophysical surveys, both magnetic and electromagnetic, did not provide much information considered useful in the search for gold deposition for the several reasons given but results of such work did assist in better locating various rock type boundaries and, because of that, additional surveying should be considered.

The limited geochemical sampling and assaying did produce encouragement and further such work appears justified.

Diamond drilling completed on the property appears to have provided only limited value since advantage of the information thus made available was not utilized and most, if any, of the core does not appear to have been systematically sampled, an error unknowingly committed by many nearly everywhere in the past but coming to light with increasing rapidity today as more knowledge on gold deposition is accumulating at an accelerated pace.

The numerous occurrences of gold in the area, together

with certain indicators such as the presence of fuchsite and other favourable geological conditions, cause the writer to conclude that the Morgan Island property of Noble Peak Resources Ltd. is worthy of an expanded exploration program in that company's search for economic gold deposits.

RECOMMENDATIONS

In view of the foregoing, a two-phase exploration program for Noble Peak's Morgan Island property is recommended as follows:

PHASE I

A. Land Portion

1.	The existing base lines be checked for direction and footages and re-chained and remarked as necessary	$ 500	
2.	Cross lines be established at 200 foot intervals and at right angles to the base lines and extended to the shoreline in both directions		
	5 miles @ $300 per mile	1,500	
3.	Additional detailed geological mapping be done		
	5 miles @ $300 per mile	1,500	
4.	A detailed geochemical survey or sampling of bedrock or appropriate soil sampling where deep overburden exists be conducted	3,500	
5.	An examination of existing geophysical data be carried out followed by additional geophysical surveying (Em and Mag) as required	2,500	
	Sub Total	$9,500	$ 9,500

B. Water Portion

1.	Establish a grid on ice		
	5 miles @ $150 per mile	$ 750	
2.	A detailed geophysical survey (EM and Mag)		
	5 miles @ $500 per mile	2,500	
	Sub Total	$ 3,250	$ 3,250

Services and Supplies, Wages and Fees

1.	Engineering and report writing, etc.	$10,000	
2.	Consulting fees	15,000	
3.	Board and lodging		
	3 men @ $50 each per day for 60 days	9,000	
4.	Assaying 200 rock samples @ $15.50	3,100	
5.	Freight and express on samples, etc., Savant Lake to Assay Office	2,500	
6.	Supplies, sample bags, etc.	500	
7.	Transportation of materials, supplies, samples, crew, etc. to and from property to Savant Lake	4,000	
8.	Salaries for 3 men for 2 months @ $2,500 each per month		
	3 x 2,500 x 2	15,000	
	Sub Total	$59,100	$59,100
		Sub Total	$71,850
	Add 20% for contingencies		14,370
	TOTAL PHASE I		$86,22[illegible]

PHASE II (Diamond Drilling)

Land and Water Areas

1.	4,000 feet @ $35 per foot	$140,000	
2.	Assaying 1,000 samples @ $15.50 each	15,500	
3.	Express on samples	2,500	
4.	Supervision, core logging, drafting, report writing, consulting, etc.	15,000	
5.	Travel and Transportation	2,500	
6.	Lodging and board - 1 man @ $50 per day for 60 days	3,000	
	Sub Total	$178,500	$178,500
	Add 20% for contingencies		35,700
	TOTAL PHASE II		$214,200

Total Phase I	$86,220
Total Phase II	214,200
GRAND TOTAL	$300,420

It is highly recommended that the water portion of Phase I be carried out as suggested since government geologists and others stress the need for such work in a major portion of the Sturgeon Lake area where large masses of water obscure rock formations and many geological features thought favourable to mineral deposition.

It is recommended that a minimum of $300,000 to $325,000 be made available as soon as reasonably possible in

order to permit carrying out the above designated exploration work.

Encouraging results from the Phase II program would initiate a recommendation for continued exploration of the property.

Respectfully submitted,
DONALD E. SMITH & ASSOCIATES LIMITED,

Donald E. Smith.
Donald E. Smith, P.Eng.

Toronto, Ontario
July 7, 1983

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SQUAW LAKE-STURGEON LAKE AREA

NORTHWESTERN ONTARIO

INTRODUCTION

The initial discovery of gold in the general Sturgeon Lake area of northwestern Ontario in 1898 attracted much attention and, as a result, many claims were staked there at that time.

Intermittent exploration, primarily for gold, continued over the next few years. Construction of the Lake Superior branch of the Grand Trunk Pacific Railway and the establishment of steamer service on Sturgeon Lake in 1909 to aid in the building of the railway brought about increased but short lived exploration activity.

Subsequent prospecting was rewarded by the finding of several attractive gold indications, some of which became the object of greatly increased exploration and development activity. One property, referred to as the St. Anthony Mine, located on the west shore of Couture Lake about one-third of a mile to the east of St. Anthony Bay in the Deadhorse Narrows sector of the North Arm of Sturgeon Lake became a gold producer. This property produced approximately 63,310 ounces of gold and 16,341 ounces of silver between 1905 and 1941 when, like many other

gold producers, the mine was closed as it was not considered essential to the war effort. It has lain dormant until recently when a new party became attracted by its potential mine-making possibilities.

Various other gold finds in the area have been investigated by means of exploratory shafts, adits, pits, trenches and, more recently, by geophysical surveying methods and diamond drilling. Most of this gold mineralization is associated with quartz veins in mafic metavolcanics or epizonal subvolcanic felsic intrusive rocks such as at the former Darkwater Mine. Gold has also been discovered in conjunction with sulphide ironstone and trondhjemite dikes. Vein type gold occurrences are often found to have minor pyrite, pyrrhotite, chalcopyrite, galena and sphalerite associations.

Exploration activity throughout the Sturgeon Lake area increased rapidly on a wide scale in the 1969-1970 period as a result of the 1969 base metal discovery, later known as Mattabi Mines Limited, on Block No. 7 of the Abitibi Paper Company Limited. Continued exploration in the area resulted in the discovery of the new base metal deposits such as the Boundary by Sturgeon Lake Mines Limited and the Lyon Creek by Mattagami Lake Mines Limited.

The increased price of gold relative to production costs in recent times has resulted in a greatly renewed interest in former gold producing properties and in those having similar geological conditions. Results of technical studies conducted on the Sturgeon Lake area by both government and mining industry representatives suggest that many

parts of it possess geological conditions that have been conducive to gold deposition elsewhere. These conditions have also rekindled interest in the St. Anthony property by Can-Con Enterprises & Exploration Limited, now Aubet Resources Inc.

The rights to five mineral claims located on the northern portion of Morgan Island and the adjacent waters of the Northeast Arm of Sturgeon Lake, northwestern Ontario are held in escrow for Noble Peak Resources Ltd. of Vancouver, British Columbia. The claims will automatically be released from escrow and become 100 per cent owned by Noble Peak when that company completes $500,000 worth of exploration expenditures on the property.

The writer was requested to make an independent appraisal of Noble Peak's Morgan Island property, particularly with respect to its potential for possible gold deposition, and to report on it accordingly.

PROPERTY, LOCATION and ACCESS

The present five claim, approximately 200 acre Morgan Island mineral property is held in escrow for Noble Peak Resources Ltd. of Vancouver, British Columbia by the legal firm of Worrall, Scott and Page, Stock Exchange Tower, 609 Granville Street in the same city. On completion of $500,000 in exploration expenditures on the Morgan Island property by Noble Peak a 100 per cent interest in the claim group will automatically be transferred to the company.

The Noble Peak Morgan Island property is situated

on the northern end of that island and adjacent waters of the Northeast Arm of Sturgeon Lake in the Squaw Lake area, Patricia Mining Division, District of Thunder Bay, northwestern Ontario as shown on Claim Map No. M-1904 for that area.

The property comprises the following staked and unpatented mineral claims:

Pa 570183	Pa 570186
Pa 570184	Pa 570187
Pa 570185	

They straddle the 6th Base Line near the 14 mile point as indicated on the Claim Map of the Morgan Island Claim Group, Figure 1, page 5 of this report.

Morgan Island is located approximately 130 miles northwest of Thunder Bay. It can be reached via Trans Canada Highway No. 17 to Ignace, some 180 miles west of Thunder Bay and from there north on Highway No. 599 approximately 77 miles to the town of Savant Lake, located about 2 miles north of the northwest corner of Sturgeon Lake. Savant Lake lies approximately 46 miles east of Sioux Lookout to which it is connected by Highway No. 642. An 18 mile boat ride down the lake from Trappers Landing, situated about 2.5 miles south of Savant Lake and accessible by car, is required to reach Morgan Island and the property. See Location Map, Figure 2, page 6. Accommodation is usually available at Mr. Arthur Mousseau's fishing lodge that is located on a small island about 1 mile south of the claim group and which served as a base from which the recent property examination was conducted.

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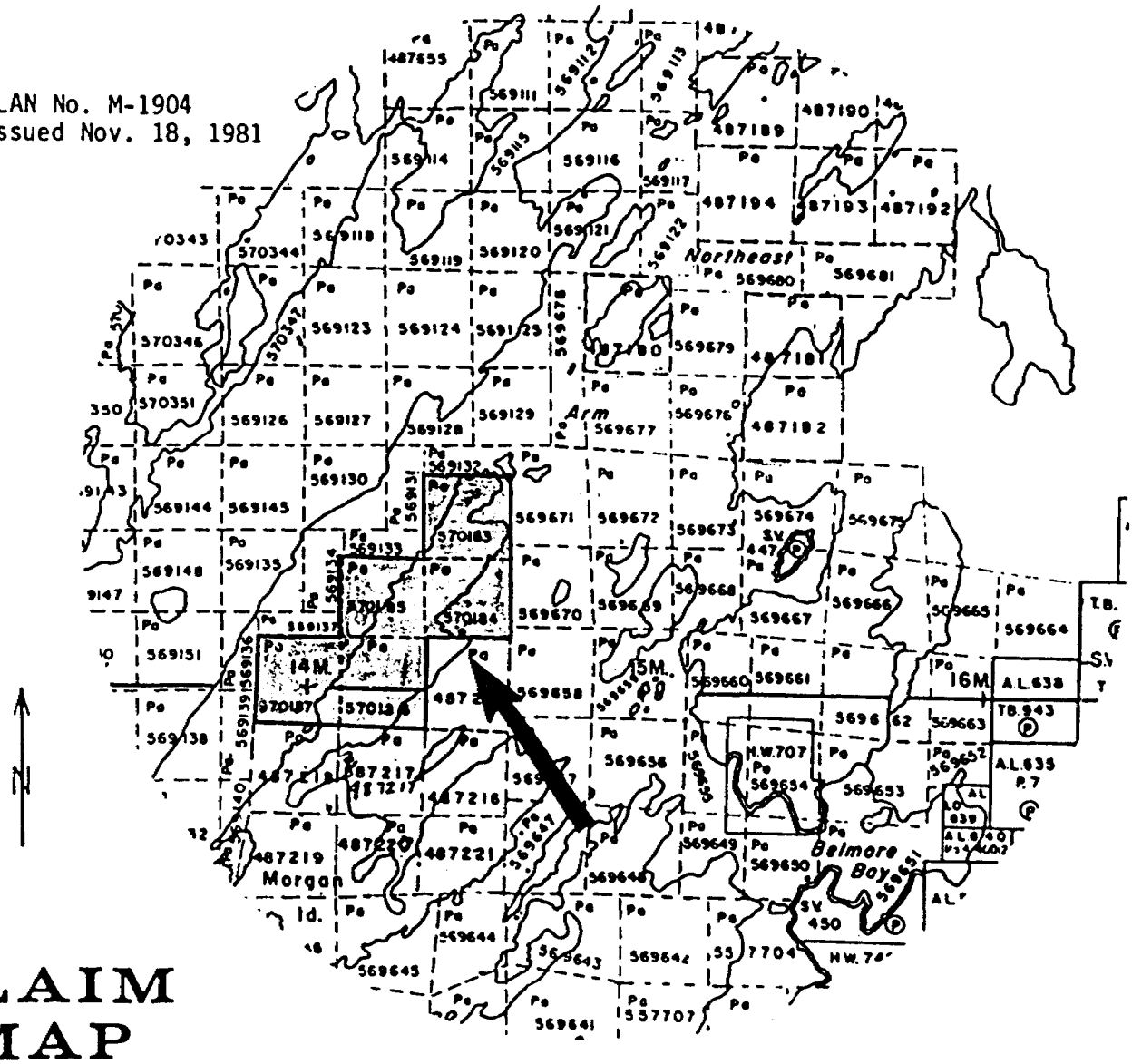
PLAN No. M-1904
Issued Nov. 18, 1981



CLAIM MAP

FIGURE 1

1 INCH = 40 CHAINS

0 1:31918 812 m.

2664 ft.

July 7/83

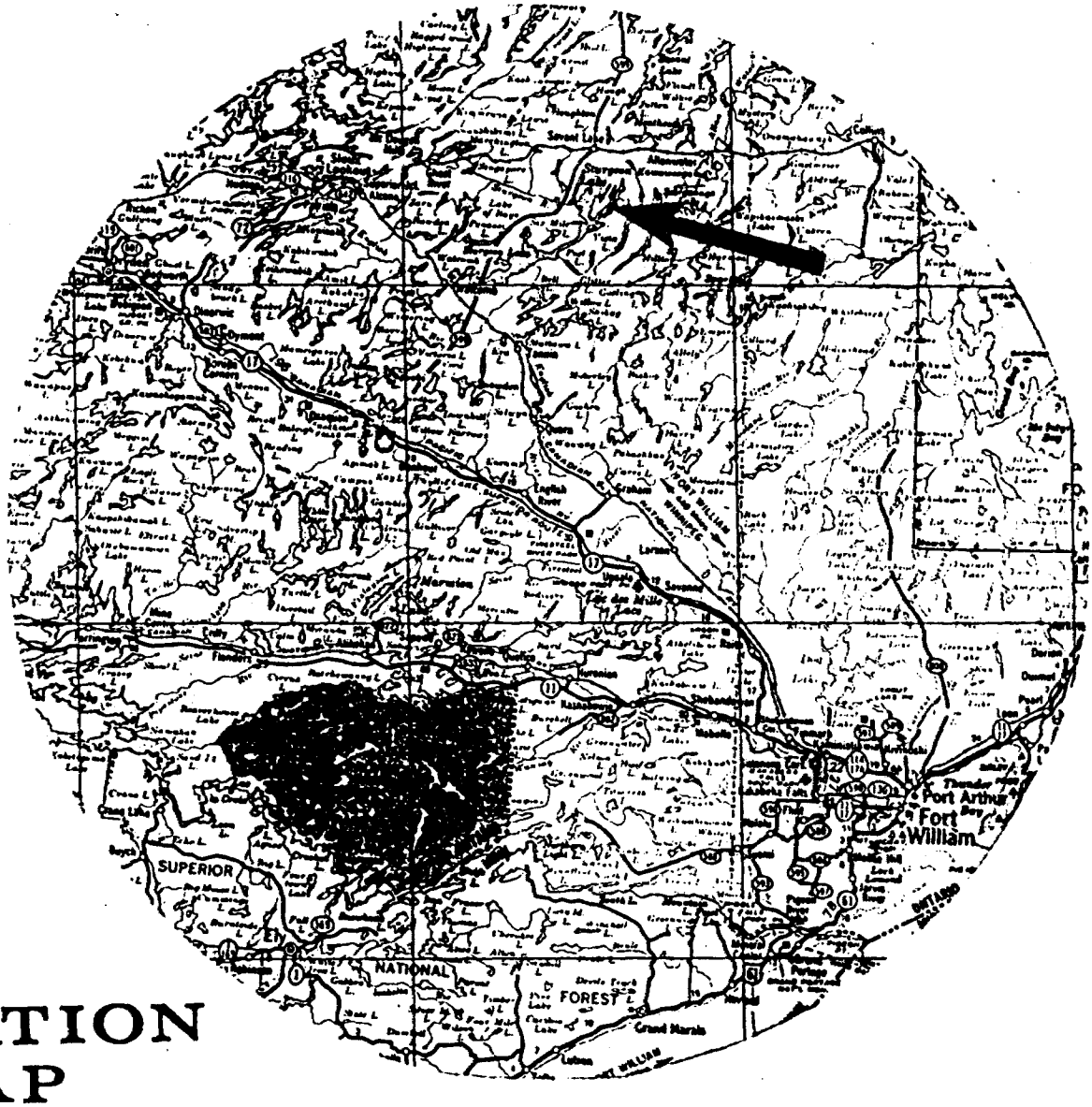
H.E.S.

MORGAN ISLAND CLAIM GROUP

MAY 1983

Northeast Arm of Sturgeon Lake
Patricia Mining Division, NW Ontario
N.T.S. 52 J2

NOBLE PEAK RESOURCES LTD.



LOCATION MAP

1"= approx. 34 mi.

FIGURE 2

MORGAN ISLAND CLAIM GROUP

July 7/83

N.E.A.

Northeast Arm of Sturgeon Lake
Patricia Mining Division, NW Ontario
N.T.S. 52 J2 Plan No. M1904

An air service is located on Sturgeon Lake close to the town of Savant Lake and from there the property can be reached by a 10 to 15 minute plane flight.

AREA AMENITIES

Deciduous and evergreen trees cover much of the property and while some could provide certain mining operational needs, most of them are of inferior quality. An abundance of clear, fresh water is available near at hand but power for a mining operation might have to be supplied by diesel powered generators on site, especially during the early stages of an operation. Long term production requirements would no doubt be better served by an 18 mile long powerline that would have to be constructed from Savant Lake but, other than being rather costly to build, no serious obstacles should be encountered.

Certain supplies can be purchased at Savant Lake and obtaining major items should not be difficult as that town is connected with Thunder Bay and Winnipeg by excellent quality paved highway and railway facilities. Major airlines serve both cities and smaller air carriers are situated near at hand.

Savant Lake could also provide limited living accommodation and room is available for expansion of the town, should a mining operation require that be done.

HISTORY

The area covered by the claim group dealt with in this report has been subjected to geological mapping, geophysical surveying (magnetometer and EM-17 vertical loop), a small amount

of geochemical surveying (soil and rock sampling) and very limited drilling (approximately 925 feet in 3 holes), all of which was prompted by the discovery of gold in the general area as well as on the property. While encouragement had been received from certain work, it was found that electromagnetic surveying, and to a minor extent, the magnetic work that had been carried out, provided little useful information. That may have been due to the manner in which the surveys were conducted, the quality of the equipment employed, a lack of experience or the combination of same, particularly with regard to their use in gold prospecting. Maps showing the results of this work are marked as: Map No. 1 (Geological); Map No. 2 (Magnetometer); and Map No. 3 (Electromagnetic EM-17) are contained in back pockets of this report.

According to Preliminary Map No. P 968 by Dr. N. F. Trowell and published in January 1975, a carbonate breccia area carrying anomalously high gold values was outlined on Morgan Island. Although earlier prospecting in the vicinity had provided modest encouragement, the real attractiveness of the area was not appreciated until publication of the above mentioned map.

TOPOGRAPHY

Although the topography of Morgan Island seems to rise gradually from the southern border of the claim group towards the northern end of the island for a quarter of a mile and then flatten out causing the relief to appear very moderate, rising only some 100 feet above lake level, the terrain is fairly rugged. The central carbonate core of the island possesses low relief, seldom exceeding 30 feet above lake

elevation. The more resistant volcanic rocks flanking the carbonate core are obvious by their much higher relief.

The area over the carbonate breccia zone is generally swampy. It is covered by a heavy growth of cedar, spruce, fir, jackpine and poplar, some reaching an appreciable size. Windfalls are common and travelling in that portion of the island is thereby greatly retarded. Vegetal growth over the volcanic rock areas is less abundant due to higher elevation, sparse soil cover and the chemical nature of the rocks. The uneven tree growth pattern provides a distorted appearance of the island by giving the illusion of a smooth topography.

Although line cutting was obviously difficult due to the heavy vegetation, irregular topography; swamps and dense windfalls, a well established base line and the remnants of an old grid exist over the land portion of the property. In order to be of much value, the grid, except for the base lines, needs to be reestablished to provide necessary control for future exploration work.

REGIONAL GEOLOGY

The area of present interest, Morgan Island, lies within the general Sturgeon Lake area as mapped by Dr. N. F. Trowell of the Ontario Geological Survey during the mid-1970s. It is situated approximately 48 miles east of the town of Sioux Lookout in northwestern Ontario and lies within the Wabigoon Subprovince of the Precambrian Shield. The bedrock formations in the area are all of Precambrian age and the geology is very complex.

On the basis of lithology and geographic distribution

the rocks have stratigraphically been subdivided into four main assemblages comprising several volcanic cycles. Each cycle comprises a lower unit of mafic metavolcanics and an upper unit of intermediate to felsic, generally fragmented metavolcanics. Volcanic cycle boundaries are marked by periods of quiescence during which erosion and sedimentation occurred. Two such major periods of clastic sedimentation are evident by the presence of interbedded sulphidic and graphitic ironstone and mudstone associated with intermediate to felsic metavolcanics while interbedded chert and silicate-quartz-magnetite ironstone were observed as being associated with clastic metasedimentary sequences.

While lower volcanic gabbroic and ultramafic intrusions favoured the lower mafic metavolcanics, they also occur extensively in felsic to intermediate fragmental and clastic sediments.

Batholitic granitic complexes, primarily of trondhjemite and granodiorite composition, outline the southern, eastern and northwestern boundaries of the volcanic-sedimentary belt. The late-aged rocks are marginal to and also intrude the volcanic and sedimentary complexes.

The metavolcanics, metasediments, felsic epizonal intrusions, mafic and ultramafic intrusions were all metamorphosed to a variety of greenschists.

Major structures include two synclinal folds having east and northwest-northeast directions respectively. The Sturgeon Narrows Cataclastic Zone transects the volcano-sedimentary belt and is about 30 miles in length providing one of the most dominant features of the area.

According to information provided by Ontario Geological Survey Reports 221 and 227, "Geology of the Sturgeon Lake Area" and "Geology of the Squaw Lake-Sturgeon Lake Area", respectively, Districts of Thunder Bay and Kenora by N. F. Trowell, 1983 published by the Ontario Ministry of Natural Resources and in which the geology of the area is very well described, Morgan Island is situated near the juncture of two metavolcanic assemblages. The lower one is composed of a mafic to intermediate metavolcanic sequence while the other is a higher, finely intercalated sequence of mafic to intermediate and intermediate to felsic metavolcanics. A rapid change of mafic to intermediate to felsic metavolcanics occurs suggesting that both took place simultaneously. Bedding, laminations and well rounded fragments suggestive of a partial marine environment during which reworking took place are common to the fragmental rocks. Metasediments of the area are composed of volcanic clasts. Metagabbro and metadiorite in the form of sills, dikes and irregular bodies intrude both metasediments and metavolcanics. At least three syenite-monzonite complexes intrude the metavolcanics and metasediments to the east and south in the Vanessa and Vista Lake areas respectively. A nepheline scapolite alkalic complex of early Precambrian (Archean) age intrudes the area to the north of Squaw Lake.

A major shear zone traverses the area in a northeasterly direction along the Northeast Arm of Sturgeon Lake. Northeasterly trending shear folding, possessing subvertical fold axes, has been recorded in the major shear zone. The geology has been greatly complicated by other types of extensive folding that has been further aggravated by syenite and other intrusive complexes which have rendered determination of structural relationships very difficult.

GEOLOGY OF PROPERTY

The Noble Peak Resources property is situated on the Northeast Arm Geological Assemblage of which the Morgan Island Section has been subdivided into five volcanic cycles.

The geology of the northern portion of Morgan Island, which is covered by the previously mentioned claim group, has been subdivided into six basic units which are from west to east the Dacite Unit, Felsic Carbonate Breccia Unit, the Mafic Carbonate Breccia Unit, the Andesite Unit and the Acid Agglomerate Unit including volcanic conglomerates, acid tuffs and breccias. These have been intruded in certain places by metadiorite and porphyritic metagabbro which are indicated on the geological map of the Morgan Island claim group as Unit six. (Refer to Map No. 1, "Geological Map of Morgan Island Claim Group", located in a back pocket of this report.)

The graded bedding and contact relationships between Mafic Carbonate and Agglomerate Units would indicate that their tops are to the east and that the Dacite Unit lies at the footwall of the carbonate formations. It has been suggested that field evidence exists to support the thought that the two Carbonate Breccia Units and the upper part of the Dacite Unit, together with the lower portion of the Agglomerate Unit have been subjected to aqueous sedimentary processes and may have been deposited in a marine setting.

A detailed description of each rock unit observed on the property follows.

Dacite Unit

This rock type is composed of subangular to subrounded felsic clasts from .5 to 25 cm in length. They contain subhedral quartz phenocrysts up to 5 mm in a matrix of chert and chlorite constituting about 70 per cent of the rock. Ash sized fragments of plageoclase (20%), quartz (25%) and chlorite (10%) with minor chert form the matrix. Local zones exist in which the fragments are smaller giving the appearance of a lapilli tuff. A 50 foot ± zone of highly sheared and altered dacite tuff, located at the top portion of the unit, contains an abundance of quartz phenocrysts. The alteration appears to have been to the sericite-pyrophyllite-talc series and uniformity of grain size suggests it may have been deposited in water.

Felsic Carbonate Unit

Overlying the Dacite Unit, the Felsic Carbonate Unit in places is also interbedded with the Mafic Carbonate Unit. Usually this Unit contains 2 to 3 mm long clasts that are subangular to well rounded and form 50 to 80 per cent of the rock. The cementing agent, composed mostly of ankerite with minor calcite and chlorite, surrounds the brown and greenish clasts and is often cut by narrow pinkish carbonate veinlets. Not uncommonly, the clasts exhibit reaction rims and carbonate filled amygdules. The extensive shearing and alteration in places tend to elongate the clasts and help in the development of fuchsite which gives rise to a pale apple-green coloration of the zone. This is a development common in the gold producing area of Kirkland Lake where it was a useful gold indicator.

Fuchsite is also to be found associated with other gold occurrences in the Sturgeon Lake area.

Mafic Carbonate Unit

This unit is composed of subangular to subrounded, 2 mm to 3 cm long, clasts which make up 50 to 80 per cent of the rock. They consist of chlorite, epidote, magnetite, leucoxene and other minerals. Although ankerite is usually the cementing agent, calcite and siderite may also be present.

Near the hanging-wall side of the unit breccia fragments up to 2 feet in length have been observed. Some of these were interbedded with the Agglomerate Unit while in other places there is a zoning of the felsic clasts which indicates some interbedding of the two carbonate units.

Andesite Unit

Massive mafic volcanics grade upwards into pillowed mafic volcanics in this unit where calcite-filled amygdules make up some 30 per cent of the rock. The rounded pillows are 2 to 3 feet in width and are surrounded by a one-half inch selvage. The fine grained andesites consist of chlorite, magnetite, plageoclase, leucoxene, epidote and minor carbonate.

Acid Agglomerate Unit

While the clasts and matrix are of similar

composition to the Dacite Unit, the clasts in this unit are more rounded and exhibit strong evidence of subaqueous reworking with bedding of ash size particles being quite common.

There are numerous zones of well rounded boulders up to 3 feet in diameter and the lower portion of the unit in particular might properly be called a volcanic conglomerate. Thin bands of chert and weathered zones, on the other hand, represent periods of quiescence. The matrix is generally a zone of mixed lapilli tuff and tuff breccia.

Metadiorite Intrusives

An isolated intrusion of metadiorite intersects the Dacite Unit along the northwestern shore of Morgan Island. The metadiorite exhibits residual vestiges of its original igneous texture even though it is highly altered to a chlorite, epidote, albite assemblage of minerals akin to greenschist facies of metamorphism.

A porphyritic metagabbro dike was noted in the eastern central portion of the map area as cutting the Agglomerate Unit. This dike possesses an unusual spotted or leopard texture due to metamorphism.

Structure

Field evidence indicated sedimentary structures to vary considerably in type and distribution. Even though bedding was most prominently displayed along the shore, bedding directions were appreciably deformed due to folding. Soft sediment deformation or secondary remobilization often

masked bedding indications in both mafic and felsic units. Bedded clasts of carbonate breccia, up to 1 foot wide and 2 to 3 feet long, were observed near the top of the Mafic Carbonate Unit and in the overlying Agglomerate Unit.

Dr. N. F. Trowell (1983) suggests that the North-east Arm of Sturgeon Lake is a major shear zone. Evidence of this is most pronounced by both the footwall side of the Felsic Carbonate and the hanging-wall side of the Mafic Carbonate Units at Morgan Island. While carbonate out-crops usually possess shear faces, up to 3 feet in height and of similar length, there are exceptions. Shearing direction varies from N10E to N60E and its dip is usually about vertical.

A strong fault scarp cuts the claim group in a northwesterly direction. It is very prominent in the Dacite and Agglomerate Units where almost vertical rock cliffs 50 feet or more in height occur. However, it becomes much less evident to completely obscured in the carbonate rocks.

Major shear zones existing within the carbonates could serve as localizing factors for gold bearing solutions.

SAMPLING and ASSAYING

Former Work

During the summer of 1974 a carbonate breccia unit on Morgan Island was mapped, sampled and geochemically analyzed by Mr. Wayne Gordanier and the data used as material in a Bachelor of Science thesis for the Department

of Geology at the University of Ottawa the following year. He subdivided the stratigraphy into: a lower intermediate tuff breccia; a carbonate breccia including a mafic fragmental and a carbonitized layered chert unit; pillowed and massive mafic volcanics; an upper intermediate tuff breccia; and, chloritoid schist. Sedimentary features included laminations, graded bedding, foreign clasts and sequential combinations of structure. Internal structures included predominantly mafic clasts which were in various stages of carbonitization.

Results of geochemical work done in the unit indicate that Fe distribution is controlled by iron-rich minerals in the clasts as well as in the Fe-iron bearing carbonates. Manganese was thought to be replacing calcium in the ankerite lattice as well as in silicate minerals in the clasts which also contained cobalt, chromium, copper and possibly zinc. Distribution of these minerals may be controlled by ultramafic to mafic clasts. It was concluded that strontium is probably controlled by carbonates and that sulphur is controlled by sulphides which may regulate the distribution of nickel, cobalt and copper. The distribution of lithium and barium was found to be very erratic according to the evidence obtained from the 17 samples collected and analyzed by atomic absorption spectroscopy. That work also indicated that iron and calcium caused severe interference with trace elements being sought. Finally, the samples were broken down into carbonate and silicate fractions in order to provide more meaningful results. While iron was found in abundance in both fractions, results of analytical work indicated that copper, zinc, nickel and cobalt were contained predominantly in the silicate fraction whereas lead and manganese

appeared mostly in the carbonate fraction of the samples analyzed.

Unfortunately gold was not one of the elements being sought in Mr. Gordanier's work.

During work carried out on the lands covered by the present claims in the fall of 1975 under the supervision of W. H. Higgins of Bayhill Development Ltd., Kingston, Ontario, fifty hand specimens and three 250 pound samples were collected and analyzed by combined fire and atomic absorption methods. The purpose of this work was to attempt to determine the possible existence of a uniform syngenetic gold content in the carbonates. Samples devoid of quartz veins or heavy alteration that might be suggestive of secondary gold introduction were collected in an attempt to avoid obtaining erroneously high anomalous gold indications. In spite of such efforts, one extensively fractured rock sample, reported to have been collected from near the sheared hanging-wall of the Mafic Carbonate Unit, ran anomalously high in gold at 4535 parts per billion (ppb). (See Map No. 1 included with this report.)

Twenty samples of mafic carbonate were assayed with 85 per cent yielding between 40 and 50 ppb in gold, two returned less than 40 ppb and one ran over 95 ppb in the yellow metal. The average gold content for this group of samples, excluding the high value, was 60 ppb.

Sixteen felsic carbonate samples were assayed of which eleven produced between 35 and 145 ppb, three

returned less than 35 ppb and two gave indications of greater than 148 ppb in gold. The average gold assay value of this group of samples was 82 ppb.

The eight samples of volcanic material analyzed ran from no gold detected to 100 ppb in sheared dacite while the average value for these samples was 46 ppb in gold content.

Mr. Higgins (1975) concluded that his preliminary work had established the carbonate units in limited detail and that their length appeared to be approximately 4,200 feet with an average width of 420 feet within the area encompassed by the present claim group. Results of his work indicated that the carbonates do contain a low syngenetic gold content and while it may generally be too low to be of economic significance, the shear zone close to the hanging-wall apparently is host to significantly higher gold values.

Suggesting that insufficient work had been done or data collected to fully evaluate the importance of the anomalously high gold value, holes were planned to be drilled across the carbonate units in the fall of 1975 in an attempt to locate the possible existence of major gold bearing zones. Three holes, indicated as DDH 1, DDH 2 and DDH 3, were drilled in a section from east to northwest across the eastern two-thirds of Morgan Island near Base Line 1 at approximately 23+00 to 24+00E and collared on claims Pa 570184 and Pa 570185 as indicated on the Geological Map (Map No. 1) of this report. In spite of the planned drilling having been done, little or no core

sampling appears to have been carried out.

Recent Sampling

During the recent inspection of the property the writer found major portions of the cores to Drill Holes 1 and 2 reasonably intact while no satisfactory evidence of the core to Hole 3 was to be found.

The reasonably assured portions of Holes 1 and 2 were sampled generally on 5 foot sections. Sample lengths did vary occasionally to longer portions of core and at other times they were reduced to a few inches where quartz-carbonate vein material was encountered. Equal portions of whole core, usually about 3 inches in length, separated by an equivalent length of core were taken, appropriately documented, labelled and sent to Barringer Magenta in Rexdale, Ontario for that organization's "Goldprint" analysis. In all, 72 core samples were collected for analysis and details are provided in Appendix A to this report.

The "Goldprint" method utilizes a geochemical pathfinder element suite designed for the analysis of rock samples, soil, stream and sediment by atomic absorption spectrophotometry in which gold and silver are two of the elements determined.

Seventeen representative core specimens from Drill Holes 1 and 2 were also collected, identified, labelled and delivered to the Mining Recorder's Office at Sioux Lookout, Ontario for assessment work credits and to provide technical information for the government's

data bank. Details of these specimens are contained in Appendix B of this report.

Twenty-three rock samples were collected from various parts of the property and forwarded to Barringer Magenta for the "Goldprint" analysis. These samples were located with respect to existing base lines and their gold values are plotted at appropriate positions on the accompanying Geological Map (Map No. 1). Details of these samples are listed in Appendix C of this report.

ECONOMIC CONSIDERATIONS

The Sturgeon Lake North Arm and the St. Anthony Plutons intrude the mafic metavolcanics of the North Sturgeon Lake and the Northeast Arm Assemblages. These plutons occur as equigranular to mildly porphyritic magmatic injections into the volcano-sedimentary rocks and they have associated gold mineralization. The gold mineralization associated with the North Arm Pluton is of the hydrothermal vein type probably superimposed on volcanic stratigraphy while that associated with the St. Anthony Pluton may have resulted from the upgrading of an original stratiform gold deposit by hydrothermal activity during the intrusion of the pluton. Both intrusions may have been emplaced at a relatively high formational level during an intermediate stage of greenstone development. According to Trowell (1983), the intermediate to felsic pyroclastic material located south of the North Arm Pluton may or may not be comagmatic with that pluton.

Major shearing along the Sturgeon Narrows Cataclastic Zone extends from the top of the Northeast Arm of Sturgeon Lake

south-eastward through Sturgeon Narrows. Late movement along the zone produced marked brecciation of the Sturgeon Narrows (Alkalic) Complex and the development of kink folds in intermediate felsic schists and phyllites along the Northeast Arm.

According to O. P. Lavin (1976) who carried out investigations on the South Sturgeon Lake assemblage including statistical analysis, mineralized cycles in the Sturgeon Lake area have a unique chemistry that is quite different from the unmineralized ones. This chemistry is due to widespread alteration processes even though primary differences in the magma or source area of the magma, if it came about by partial melting, should not be ignored.

Although other minerals such as molybdenite, ironstone units, fluorite, uranium, etc. occur in various parts of the Sturgeon Lake area, gold is presently one of the most sought after minerals in that part of northwestern Ontario. The gold occurrences can be classified into three distinct types as follows:

1. those associated to volcanic and subvolcanic stratigraphy;
2. those occurring with later felsic intrusions into the volcanic stratigraphy; and,
3. gold mineralization within quartz veins not directly related to volcanic stratigraphy or specific intrusions.

Examples of the three types of gold mineralization respectively are the gold mineralization of the Darkwater Mine where gold is found in the subvolcanic Beidelman Bay Pluton; gold and silver mineralization at the St. Anthony Mine which is

associated with a later granodiorite pluton that has intruded mafic metavolcanics and the third type includes general gold bearing units of gold bearing quartz and carbonate veins as found along the Northeast Arm of Sturgeon Lake according to N. F. Trowell (1977).

Many scattered gold occurrences are known to exist throughout the Sturgeon Lake area. Nearly all have as their primary host quartz veins, masses or segregations. The quartz veins occur in two modes: (a) in association with granitic intrusions; and, (b) isolated veins within the metavolcanics and metasediments. All occurrences have a close spatial relationship to mafic metavolcanics with the exception of perhaps one. Other common associations are quartz veins with carbonate and quartz veins with sulphide facies iron formation. The common mineral assemblage is quartz + carbonate $\pm$ tourmaline + sulphides (chalcopyrite + pyrite).

It is thought that the mafic metavolcanics were the source of the gold and that initial gold concentration occurred in siliceous sulphide or sulphide + carbonate (exhalative) units and that further gold concentration resulted from igneous activity, structural dislocation, quartz veining or segregation and possibly metamorphic segregation.

For example, the St. Anthony Mine was rich in gold and silver because of the intrusion of the St. Anthony Pluton which was large enough to provide the necessary heat, silica, water and volatiles and structural dislocation to effect a substantial concentration of gold and silver in what was probably a sulphide-carbonate exhalative unit.

Trowell (1977 and 1983) speculated that the presence of muscovite at the St. Anthony Mine was probably due to

hydrothermal alteration during generation of the ore zone and that the mineralization was a result of "hydrothermal upgrading" by the St. Anthony Pluton of an original gold bearing carbonate stratiform horizon in the mafic metavolcanics. In addition to gold and silver, the St. Anthony Mine ore zone also included as gangue minerals, quartz, calcite and siderite and the sulphide minerals, pyrite, chalcopyrite, galena, sphalerite and marcasite.

The carbonate breccia map unit commonly contains anomalous gold values in the 20 to 250 ppb area.

Quartz-carbonate veins or dikes and sills are present along the central portion of the Northeast Arm of Sturgeon Lake. They are often parallel to stratigraphy taking on contortions similar to those of the enclosing rocks. The quartz-carbonate veins locally cut the trend of the metavolcanics. They are zoned locally with the quartz concentrated toward vein centres. They contain traces of gold and copper. The units may originally have been stratabound, siliceous carbonate units which, during metamorphism and deformation, were mobilized into their present positions.

Regarding the origin of the carbonate breccia unit, it is thought possible that leached silica was subsequently involved in a period of deformation and metamorphism and is now represented in several gold bearing quartz-carbonate sulphide veins that contain fuchsite and comprise several old gold showings located along the Northeast Arm of Sturgeon Lake. Quartz veins that cut the carbonate breccia unit commonly carry anomalously high gold and copper values indicating that this unit should perhaps be examined from the viewpoint of exploring for large tonnage, low grade, gold bearing deposits.

On the basis of field relationships, internal structures and textures, mineralogy and chemistry, Trowell (1983) suggests that the carbonate breccia unit is essentially a hyaloclastic deposit.

Possibly following or concurrent with the waning stages of prolonged felsic volcanic activity a period dominated by mafic volcanism began and various chemical and physical reactions occurred.

FUTURE EXPLORATION CONSIDERATIONS

The mineral exploration potential of the Sturgeon Lake area is relatively high. It is in close proximity to the massive sulphide deposits of the Sturgeon Lake metavolcanic-metasedimentary belt and it also has numerous mineralized zones together with favourable lithology and stratigraphy.

The volcanic succession is lithologically and stratigraphically similar to that of the southern Sturgeon Lake area which contains massive sulphide deposits. A series of felsic to intermediate, chiefly pyroclastic, rock assemblages are separated by mafic to intermediate metavolcanic assemblages which are multicyclic in nature. The rock assemblage most dominant in the Morgan Island area in particular appears to represent the buildup of a differentiated volcanic pile with the composition becoming more felsic towards the top where it is dominated by coarse pyroclastic material. Chloritoid has been developed locally and, while no concentrations comparable to that in the footwall alteration zone at the Mattabi Mines Limited ore body were seen, its presence in a similar metamorphic mineral assemblage derived from felsic to intermediate

pyroclastic rocks is suggestive of comparable rock suites in the two areas, according to Trowell (1983).

Although some of the units appear to have been reworked and redeposited in a marine environment, they still comprise proximal facies volcanic fragmental rocks and, as a result, are probably close to the source area and, therefore, provide favourable exploration targets.

Exploration in the immediate area of the Northeast Arm is hindered by the majority of the rock units lying under water making correlation of geophysical data and surficial geology difficult. In addition to conventional ground magnetic and electromagnetic surveys, detailed geological mapping, rock geochemistry, and even vegetation biogeochemistry could all be useful exploration tools for use in the Northeast Arm sector.

Trowell also suggests that occurrences of exhalative units such as graphitic sulphide zones, pyrite-pyrrhotite zones, stratabound carbonate-sulphide zones encountered in diamond drilling in these rock assemblages should be geochemically tested for base and precious metals.

The stratigraphic position of pyroclastic units may be a determining factor in whether or not they contain significant amounts of metallic minerals. The closer these rock units lie to any original volcanic centre, the more likely they could contain significant amounts of base and precious metals.

The carbonate breccia unit might be amenable to whole rock geochemical surveying in an attempt to determine the distribution and concentrations of base and precious metals.

A carbonate breccia unit with associated chert was found to contain anomalous gold values. Quartz veins that cut the breccia often produce abnormally high gold and copper assay results. This association of carbonitized hyaloclastites of possible ultramafic composition containing anomalous gold and other metal values is part of a favourable stratigraphy for potential gold mineralization.

Any exploration program should focus specific attention towards locating structural dislocations, quartz veins and stockworks within the carbonate breccia where possible upgrading of initial gold values could have occurred and where prominent shearing exists.

Measurable gold appears in the base metal massive sulphide mineral deposits of the area and close examination of host rocks to such deposits could be rewarding in the search for gold.

Trowell (1983) also considers the Northeast Arm Assemblage, Morgan Island sector warrants exploration due to the abundance of intermediate to felsic fragmental rocks of calc-alkalic affinity.

GENERAL

The writer carried out investigations of and supervised core and rock sampling at Noble Peak's Morgan Island property during the period of May 28th to June 1, inclusive, 1983. A detailed inspection of the claims was performed and all claim posts were found to be in good order, properly located and tagged. An examination of the claim records at the Sioux Lookout, northwestern Ontario Mining Recorder's

Office confirmed the good standing of the claims through to September 12, 1983. Drill core specimens submitted recently by the writer will provide certain assessment credits and no problem is foreseen with meeting work requirements needed by the due date to maintain the property in good standing.

Much of the property investigation could only be cursory in nature because of time restraints since the purpose of the exercise was to confirm the presence of geological conditions as indicated. Although sampling of the drill cores was not expected to provide much useful information, it was decided to sample them anyway because of their availability. Rock sampling was done on a broad reconnaissance basis in order to obtain a general indication of possible gold deposition and distribution throughout the various rock units present. Careful detailed geochemical sampling is required to provide reliable, meaningful results.

REFERENCES

Private and Company Reports

1973 Woolham, R., Magnetometer Survey of Morgan Island Sector, Sturgeon Lake Area, for Phelps Dodge Corporation

1973 Woolham, R., Horizontal Loop EM-17, Survey of Morgan Island Sector, Sturgeon Lake Area for Phelps Dodge Corporation

1975 Higgins, W. H., Geology - Morgan Island (A review of geology of Morgan Island and work carried out in 1974 and 1975)

1975 Gordanier, W., Geochemistry Of A Carbonate Breccia Unit In N. W. Ontario. An unpublished Bachelor of Science thesis presented to the Department of Geology of the University of Ottawa, May 8, 1975

1983 Discussion with property representatives and local inhabitants

Ontario Government Reports and Maps

1983 Trowell, N. F., Ontario Geological Survey Report 221, Geology of the Sturgeon Lake Area, Districts of Thunder Bay and Kenora, Ontario and accompanying coloured Geological Map 2456, North Arm of Sturgeon Lake and coloured Geological Map 2457, Sturgeon Narrows, Districts of Kenora and Thunder Bay, Ontario. Scale 1 inch 1: 50,000

1983 Trowell, N. F., Ontario Geological Survey Report 227, Geology of the Squaw Lake-Sturgeon Lake Area, District of Thunder Bay, Ontario and accompanying coloured Geological Survey Map 2420, Squaw Lake, District of Thunder Bay. Scale: 1 inch to ½ mile

APPENDIX A

DIAMOND DRILL CORE SAMPLING
MORGAN ISLAND PROPERTY
of
NOBLE PEAK RESOURCES LTD.
STURGEON LAKE AREA, NORTHWESTERN ONTARIO

Sampling of the available portions of core from Diamond Drill Holes Nos. 1 and 2 was carried out and the seventy-two samples were forwarded to Barringer Magenta, Rexdale, Ontario for analysis by the "Goldprint" method. Details of that work follow.

Sample No.	Footage From	To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
D.D.H. No. 2									
6501	20	30	10'	Whole core	*-5	-.2	13.4	125	-.2
6502	30	35	5'	" "	-5	-.2	3.1	115	-.2
6503	35	40	5'	" " plus 2-3" of quartz-carbonate vein material	-5	-.2	11.9	74	-.2
6504	40	45	5'	Whole core	-5	-.2	5.3	83	-.2
6505	45	50	5'	" "	-5	-.2	6.6	65	-.2
6506	50	55	5'	" "	-5	-.2	24.4	97	-.2
6507	55	60	5'	" " plus scattered narrow quartz-carbonate veinlets	-5	-.2	30.0	82	-.2

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6508	60	65	5'	Whole core	-5	-.2	27.3	94	-.2
6509	61	61.3	0.3'	Whole core. Fuchsite staining prominent	15	-.2	21.5	65	.3
6510	65	70	5'	Whole core	-5	-.2	110	110	.3
6511	67.3	67.8	0.5'	Whole core of quartz-carbonate veining	-5	-.2	200	56	.6
6512	70	75	5'	Whole core plus minor quartz-carbonate veining	-5	-.2	230	65	.4
6513	75	80	5'	Whole core	-5	-.2	47.4	96	-.2
6514	77.0	77.5	0.5'	Whole core with quartz-carbonate veining	-5	-.2	148	57	.3
6515	80	85	5'	Whole core	-5	-.2	30.6	80	-.2
6516	85	90	5'	Whole core plus hematite staining on fracture planes	20	-.2	265	62	.4
6517	90	95	5'	Whole core	-5	-.2	200	68	.2
6518	95	100	5'	" "	-5	-.2	13.0	57	-.2
6519	100	105	5'	" "	-5	-.2	10.7	71	-.2
6520	105	110	5'	" "	-5	-.2	490	43	.7
6521	110	115	5'	" "	-5	-.2	98.4	91	-.2
6522	115	120	5'	" "	-5	-.2	59.3	68	-.2

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6523	120	125	5'	Whole core containing 3 inches of coarse brecciated zone of brownish weathered section of white calcite	-5	-.2	6.2	43	-.2
6524	125	130	5'	Whole core-mainly brownish weathered white calcite and quartz zone	-5	-.2	36.0	330	.5
6525	130	135	5'	Whole core-half brownish white calcite and half felsic carbonate breccia	-5	-.2	56.2	220	.2
6526	135	140	5'	Whole core of rusty weathered felsic carbonate breccia	5	-.2	98.4	100	.2
6527	140	145	5'	Whole core-rusty weathered felsic carbonate breccia	-5	.2	98.4	74	.4
6528	145	150	5'	Whole core-considerable shearing and chlorite in felsic carbonate breccia	-5	-.2	135	120	.3
6529	150	155	5'	Whole core-sheared and chloritized felsic carbonate breccia	-5	-.2	30.6	60	.2
6530	155	160	5'	Whole core-felsic carbonate breccia with 3 massive carbonate veins	-5	-.2	91.6	57	.2
6531	160	165	5'	Whole core-sheared and chloritized felsic carbonate breccia	-5	-.2	15.4	115	.3

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6532	165	170	5'	Whole core-sheared and chloritized felsic carbonate, breccia with fuchsite?	-5	-.2	325	99	.4
6533	170	175	5'	Whole core-felsic carbonate breccia	-5	-.2	2.0	97	-.2
6534	175	180	5'	Whole core containing narrow, fine grained 1' basic dike in felsic carbonate breccia	-5	-.2	325	54	.4
6535	180	185	5'	Whole core-felsic carbonate breccia	-5	-.2	71.9	40	-.2
6536	185	190	5'	Whole core-felsic carbonate breccia with narrow, up to 1" bands of carbonate	-5	-.2	220	68	.3
6537			25'	Random section of core. Mafic to felsic carbonate breccia, hematite staining	-5	-.2	47.4	48	.2
6538			25'	Random section of core. Fine to medium grained, greenish felsic rusty weathered carbonate	-5	-.2	120	91	-.2
6539				Miscellaneous drill core, mafic to felsic carbonate breccia, coarse to medium grained quartz-carbonate	-5	-.2	110	68	-.2

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6540				Several feet of miscellaneous drill core, mafic quartz-carbonate gneissic and brecciated	-5	-.2	19.1	34	-.2
6541			3'	Miscellaneous drill core being a mixture of mafic carbonate breccia	-5	-.2	13.4	43	-.2
6542				Several feet of miscellaneous drill core-felsic fine grained gneissic and brecciated carbonate	-5	-.2	7.3	54	-.2
6543				Several feet of miscellaneous drill core of mafic and rusted quartz-carbonate	-5	-.2	890	40	-.2
6544				Same as above plus gneissic appearance	-5	-.2	890	37	.4
6545				Mafic quartz-carbonate representing several feet of miscellaneous core	-5	-.2	190	23	.2
6546			0.9'	Quartz-calcite vein in mafic carbonate, whole core	-5	-.2	-.2	23	-.2
6547			2'	Random whole core-mafic gneissic appearing quartz-carbonate	-5	-.2	8.0	62	-.2

D.D.H. No. 1

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6548	370	375	5'	Mafic carbonate breccia medium to coarse grained	-5	-.2	490	115	-.2
6549	375	380	5'	" " " "	-5	-.2	14.0	57	-.2
6550	380	385	5'	Felsic carbonate breccia	-5	-.2	5 0	48	-.2
6551	385	390	5'	Scattered quartz-carbonate stringers	-5	-.2	16.0	57	-.2
6552	390	395	5'	Scattered sulphides (pyr.) to 1%, quartz-carbonate stringers in felsic carbonate	-5	-.2	271	63	.3
6553	394.4	394.9	0.5'	Felsic carbonate breccia containing 2" quartz-carbonate vein at 30 degrees to core	-5	-.2	261	9	.6
6554	395	400	5'	Mafic carbonate breccia	-5	-.2	25.0	65	.2
6555	400	405	5'	Medium to coarse grained felsic carbonate breccia, scattered pyrite	-5	-.2	7.8	100	.2
6556	405	410	5'	Medium to coarse grained felsic carbonate breccia, scattered pyrite, gneissic	-5	-.2	5.8	68	-.2
6557	410	415	5'	Medium to coarse grained felsic carbonate breccia, scattered pyrite, gneissic	-5	-.2	14.0	74	.2

Sample No.	Footage From	Footage To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6558	415	420	5'	Medium to coarse grained felsic carbonate breccia, scattered pyrite, gneissic	-5	-.2	6.8	45	-.2
6559	402.0	402.5	0.5'	Brownish, rusted quartz-carbonate vein in brecciated mafic carbonate	-5	-.2	1.4	60	.3
6560	420	425	5'	Mafic brecciated carbonate	-5	-.2	-.2	45	-.2
6561	425	430	5'	" " "	-5	-.2	.4	26	-.2
6562	426.5	427.0	0.5	4" quartz-carbonate vein at 45 degrees to core	-5	-.2	1.4	54	.2
6563	430	435	5'	Felsic carbonate breccia	-5	-.2	-.2	60	-.2
6564	435	440	5'	Felsic and mafic carbonate breccia	-5	-.2	-.2	40	1.6
6565	437.8	438.8	1'	Fine grained quartz-carbonate vein at 45 degrees to core	-5	-.2	78.0	99	.8
6566	440	445	5'	Mafic carbonate breccia	-5	-.2	10.0	135	1.6
6567	445	450	5'	Intermediate to mafic carbonate breccia	-5	-.2	21.6	40	.2
6568	450	455	5'	" " "	-5	-.2	11.1	40	-.2

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A.E.J.

Sample No.	Footage From	To	Width	Description	Assays Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6569	455	460	5'	Intermixed mafic to felsic carbonate breccia	-5	-.2	4.9	88	-.2
6570	200	225	25'	Mafic carbonate breccia	-5	-.2	.5	40	-.2
6571	225	235	10'	Medium to coarse grained mafic carbonate breccia	-5	-.2	1.0	20	.3
6572	235	252	17'	Diabase and andesite? dike in carbonate breccia	-5	-.2	4.9	90	-.2

Legend

* Minus signs as used in these tables indicates "less than". Example: -5, -.2, etc. means less than 5 and less than .2 respectively.

Where no sign exists the figure such as 5, 120, etc. indicates the exact value given.

July 7/83

D.E.A.

APPENDIX B

DIAMOND DRILL HOLE CORE SPECIMENS
MORGAN ISLAND PROPERTY
of
NOBLE PEAK RESOURCES LTD.
STURGEON LAKE AREA, NORTHWESTERN ONTARIO

Seventeen diamond drill core specimens from Diamond Drill Holes Nos. 1 and 2 drilled on Morgan Island, Northeast Arm of Sturgeon Lake were selected as being representative of the two holes and delivered to the Mining Recorder at Sioux Lookout, Ontario on June 1, 1983. Each three inch, or greater length, specimen submitted and accepted for the core data bank of the Geological Survey Branch of the Department of Natural Resources provides one day of assessment work credits.

Details of the core specimens submitted to the department follow:

Diamond Drill Hole No. 1

Located on former mineral claim Pa 431451 (now Pa 570184), drilled September 3 to September 20, 1976 on the north end of Morgan Island, Northeast Arm of Sturgeon Lake by the Avalon Syndicate.

The hole was logged by W. H. Higgins, P.Eng. and the core log was stamped as having been received by the Patricia Mining Division on April 1, 1977 and at the Ministry of Natural Resources Resident Geologist's Office, Sioux Lookout on May 10, 1977.

Reference: Above mentioned diamond drill core log.

Specimen No.	Footage	Details
6596	370'	5 inches of mafic carbonate breccia drill hole core
6597	390'	5 inches of felsic carbonate breccia and quartz-carbonate vein in drill hole core
6598	417'	4 inches of medium to fine grained felsic carbonate breccia drill hole core
6599	439'	6 inches of mafic carbonate breccia drill hole core
6600	462.5'	4 inches of mafic carbonate breccia drill hole core
6601	239'	4 inches of fine grained diabase dike or andesite? drill hole core
6602	213'	5 inches of fine grained mafic carbonate breccia drill hole core
6603	485'	9 inches of coarse grained felsic carbonate breccia containing a one-half inch veinlet of quartz-carbonate

Diamond Drill Hole No. 2

Located on former mineral claim Pa 431451 (now Pa 570184), drilled September 22, 1976, completed September 24, 1977? on north end of Morgan Island, Northeast Arm of Sturgeon Lake by the Avalon Syndicate.

The hole was logged by W. H. Higgins, P.Eng. and the core log was stamped as having been received by the Patricia Mining Division on April 1, 1977 and the Ministry of Natural Resources Resident Geologist's Office, Sioux Lookout on May 10, 1977. Obviously, the completion date shown on the log is a year out.

Reference: Above mentioned diamond drill hole log.

Specimen No.	Footage	Details
6587	19'	3 inches of mafic carbonate breccia drill hole core
6588	44'	3 inches of felsic carbonate breccia drill hole core
6589	69'	3 inches of felsic carbonate breccia drill hole core
6590	94'	3 inches of felsic carbonate with chlorite, epidote, fuchsite drill hole core
6591	118'	5 inches of felsic carbonate breccia with chlorite, epidote and fuchsite drill hole core
6592	140'	7 inches of felsic carbonate breccia, rusty coated drill hole core
6593	173'	5 inches of felsic carbonate breccia, drill hole core, rusty coated
6594	198'	5 inches of felsic carbonate breccia with hematite streaks
6595	230'	5 inches of mafic carbonate breccia, rusty coated drill hole core

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D. Ed.

APPENDIX C

ROCK SAMPLING

MORGAN ISLAND PROPERTY

of

NOBLE PEAK RESOURCES LTD.

STURGEON LAKE AREA, NORTHWESTERN ONTARIO

Sample No.	Location	Description	Assay Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6573	Base Line 2 5+30N	Altered, sheared, rusty weathering, high pyrite content	*-5	-.2	9.2	49	.3
6574	Base Line 2 14+00N	Sheared, bleached, medium to dark green andesite?	-5	-.2	2.9	36	-.2
6575	Base Line 2 5+30N, 0+20W	Sheared, greyish-green chloritic carbonate schisted breccia. Abundant fine scattered sulphides	10	1.2	10.0	630	-.2
6576	Base Line 2 14+00N, 0+30E	Pale brownish-grey schist with reddish flecks (hematite) throughout giving a mottled appearance	-5	-.2	6.9	5	-.2
6577	Base Line 2 5+30N	Altered, pale yellowish-green sheared rock with scattered small darker green fragments. Pyrite flecks	-5	.2	4.9	22	.3
6578	Base Line 2 5+30N	Highly sheared, med. to dark grey with reddish flecks, brecciated, deep rusty weathering. Scattered fine sulphides	-5	-.2	23.2	52	.3

Sample No.	Location	Description	Assay Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6579	Base Line 2 5+50N	Brownish-grey, reddish tinted carbonate schist	-5	-.2	78.3	71	.6
6580	Base Line 2 5+20E On Tie Line	Chloritic, talcose schisted breccia. Light greenish-yellow to brown. Abundant chlorite and epidote?	-5	-.2	29.3	33	1.5
6581	Base Line 2 5+30N	Fine grained reddish streaked chloritic carbonate schist. Deep rusted weathering	-5	-.2	7.0	104	.2
6582	Base Line 1 8+00N, 0+40E	Altered yellowish-green carbonate, Bx chlorite, epidote, fine sulphides including galena	-5	1.0	525	104	4.1
6583	Base Line 1 1+00E	Quartz vein in mafic carbonate Bx	-5	-.2	180	27	.8
6584	Base Line 1 8+00N, 1+20E	Mafic carbonate Bx (Breccia)	-5	-.2	11.5	33	-.2
6585	Base Line 1 8+00N, 1+10E	Quartz veinlet ½" in mafic carbonate	-5	-.2	79.5	8	.6
6586	Base Line 1 8+00N, 1+10E	Mafic carbonate Bx	-5	-.2	110	30	.2
6604	Base Line 2 4+20N, 2+10E near collar of DDH No. 2	Dark, dense, fine grained intrusive	-5	-.2	2.5	38	-.2
6605	Base Line 1 12+00N, 1+00E	Acid tuffs and breccia	-5	-.2	18.0	8	.2

Sample No.	Location	Description	Assay Au PPB	Ag PPM	As PPM	Hg PPB	Sb PPM
6606	Base Line 1 8+00N, 1+50E	Fine grained mafic breccia	-5	-.2	16.5	30	-.2
6607	Base Line 1 8+00N, 1+50E	Acid Agglomerate	90	-.2	120	52	.2
6608	Base Line 1 8+00N, 1+50E	Acid Agglomerate	-5	-.2	10.0	38	.2
6609	Base Line 1 5+25N, 0+90E	Felsic to mafic carbonate breccia	10	-.2	63.0	52	.3
6610	Base Line 1 5+25N, 0+90E	Quartz-carbonate vein, 4 to 5 inches wide	-5	-.2	7.0	11	.3
6611	Base Line 1 5+25N, 0+90E	Felsic to mafic carbonate breccia, scattered fine sulphides	5	-.2	460	150	.7
6612	Base Line 1 2+95N, 0+35E	Mixture of mafic and felsic carbonate breccia	-5	-.2	-.2	25	-.2

July 7/83

Legend

R.E.D.

* Minus signs as used in these tables indicates "less than". Example: -5, -.2, etc. means less than 5 and less than .2 respectively.

Where no sign exists the figure such as 5, 120, etc. indicates the exact value given.

CERTIFICATE OF QUALIFICATION

I, Donald E. Smith of 149 Grand River Boulevard, Scarborough, Ontario M1B 1G4 do hereby certify that:

(1) I graduated from Acadia University, Wolfville, Nova Scotia in 1950 with a Bachelor of Science Degree in Geology and Chemistry;

(2) A year of graduate studies in Mining and Geology was completed at Queen's University, Kingston, Ontario in 1951;

(3) I am a member in good standing of the Association of Professional Engineers of the Province of Ontario. Membership is also held in The Geological Association of Canada, The Canadian Institute of Mining and Metallurgy and other such organizations;

(4) Having practised my profession for 32 years, I have been involved in various aspects of the metallics and non-metallics mineral industries including exploration, development, production, supervision, management and financing of mining projects and their evaluations;

(5) The attached report entitled "A Report on The Morgan Island Area Property of Noble Peak Resources Ltd., Squaw Lake-Sturgeon Lake Area, Patricia Mining Division, District of Thunder Bay, Northwestern Ontario" is based on general information and technical data supplied by company officials, a review of Ontario Geological Survey Reports and files as well as an on-site inspection of the property during the period of May 28 to June 1, inclusive, 1983; and,

(6) I do not own directly, or indirectly, nor do I expect to receive an interest in the property or in the securities of the company dealt with in this report.

Donald E. Smith, P.Eng.

Toronto, Ontario

July 7, 1983

900

149 Grand River Boulevard,
Scarborough, Ontario M1B 1G4,
July 10, 1983.

Noble Peak Resources Ltd.,
5345 Trafalgar Street,
Vancouver, British Columbia V7N 1B8

Attention: Mr. N. H. Ursel, P.Eng.

Dear Sir:

Re: Morgan Island Area Property
Northeast Arm Sturgeon Lake
Northwestern Ontario
Mineral Claims Pa 570183 to
Pa 570187, inclusive

This letter is to verify that Mr. Ian Torrance of 5 Lamont Avenue, Agincourt, Ontario M1S 1A8 worked under my supervision in connection with prospecting, core and rock sampling at the above referred to property on the following dates:

May 28, 29, 30, 31 and June 1, 1983.

He also worked in connection with the above on May 27th at which time materials, supplies, reports and maps were assembled in preparation for the field work.

Total payment of wages to Mr. Torrance in connection with the services rendered amounted to $600.

I, Donald E. Smith, P.Eng. worked a total of 168 hours - the equivalent of 21 - 8 hour days - in connection with the Morgan Island claims during the period of May 10 to July 10, 1983. May 28, 29, 30, 31 and June 1 were spent at the property carrying out investigations of drill core, geology and supervising sampling, etc.

Total invoicing for services rendered amounted to $7,875.

Yours very truly,

Donald E. Smith, P.Eng.

X-RAY ASSAY LABORATORIES
LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

E TO
NOBLE PEAK RESOURCES
ATTN: N. URSELL
5345 TRAFALGAR STREET
VANCOUVER, BRITISH COLUMBIA
V6N 1B8

COPY TO

ITTED TO:
NOBLE PEAK RESOURCES
ATTN: N. URSELL
5345 TRAFALGAR STREET
VANCOUVER, BRITISH COLUMBIA
V6N 1B8

CUSTOMER NO. 620

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
18529	12-AUG-83	14460	8-AUG-83

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
			CRUSHED ROCK PULP

PKGS	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
BOX	PUROLATOR	6797651	

QUANTITY	DESCRIPTION METHOD	XRAL CODE	UNIT COST	AMOUNT
2	AU	50, 10, 7, 0, 0, 0	7.00	
	50 % SURCHARGE, 48 HOUR RUSH SERVICE	50, 10, 7, 29, 0, 0	7.00	
1	CRUSHED ROCK,	99, 1, 0, 0, 0, 0	1.75	
	MILLING TO -200 MESH (CHROME STEEL MILL)			
	50 % SURCHARGE, 48 HOUR RUSH SERVICE	99, 1, 29, 0, 0, 0	0.87	
	MINIMUM CHARGES APPLIED AGAINST THIS INVOICE			

83-8-004
Aug 22

CERTIFIED COPY.

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSELL

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

MISC. CHARGES	SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES	
				30.00	
	OTHER			SURCHARGE - PUSH SERVICE	$ 30.00
				TOTAL IN CANADIAN FUNDS	$ 30.00

GINAL INVOICE

X-RAY ASSAY LABORATORIES
LIMITED

1885 LESLIE STREET • DON MILLS ONTARIO M3B 3J4 • (416) 445-5755

E TO

NOBLE PEAK RESOURCES
ATTN: N. URSELL
5345 TRAFALGAR STREET
VANCOUVER, BRITISH COLUMBIA
V6N 1B8

COPY TO

TTED TO:

NOBLE PEAK RESOURCES
ATTN: N. URSELL
5345 TRAFALGAR STREET
VANCOUVER, BRITISH COLUMBIA
V6N 1B8

CUSTOMER NO. 620

INVOICE NO.	INVOICE DATE	WORK ORDER NO.	DATE SUBMITTED
18529	12-AUG-83	14460	8-AUG-83

TERMS

TERMS NET 30 DAYS
1.5% PER MONTH INTEREST ON ACCOUNT OVER 30 DAYS

P.O. NO.	CLIENT PROJECT NO.		TYPE OF SAMPLES SUBMITTED
			CRUSHED ROCK PULP

PKGS.	SHIPPED VIA	WAY BILL NO.	SHIPPED FROM
80X	PUROLATOR	6797651	

ANTITY	DESCRIPTION METHOD	CODE	UNIT COST	AMOUNT
2	AU	50, 10, 7, 0, 0, 0	7.00	
	50 % SURCHARGE, 48 HOUR RUSH SERVICE	50, 10, 7, 29, 0, 0	7.00	
1	CRUSHED ROCK, MILLING TO -200 MESH (CHROME STEEL MILL)	99, 1, 0, 0, 0, 0	1.75	
	50 % SURCHARGE, 48 HOUR RUSH SERVICE	99, 1, 29, 0, 0, 0	0.87	
	MINIMUM CHARGES APPLIED AGAINST THIS INVOICE			

83-8-004
aug 27

CERTIFIED COPY.

REGISTERED PROFESSIONAL ENGINEER OF ONTARIO
N. H. URSELL
MINING

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

MISC. CHARGES	SHIPPING CHARGES	CUSTOM BROKERAGE	TELEX	MINIMUM CHARGES	
				30.00	
	OTHER			SURCHARGE - RUSH SERVICE	$ 30.00
				TOTAL IN CANADIAN FUNDS	$ 30.00

GINAL INVOICE

May 30, 1983

IN ACCOUNT WITH

Noble Peak Resources Ltd.
5345 Trafalgar Street
Vancouver, B.C. V6N 1B8

Camp and Board:	7 days @ $110.00/day	$ 770.00
Motor		120.00
Gas		150.00
Labor		375.00
	Total	$1,415.00

CERTIFIED COPY

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSEL
PROVINCE OF ONTARIO

Received Payment
Arthur Mousseau

Arthur Mousseau

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

May 30, 1983

IN ACCOUNT WITH

Noble Peak Resources Ltd.
5345 Trafalgar Street
Vancouver, B.C. V6N 1B8

Camp and Board:	7 days @ $110.00/day	$ 770.00
Motor		120.00
Gas		150.00
Labor		375.00
	Total	$1,415.00

CERTIFIED COPY

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSEL
PROVINCE OF ONTARIO

Received Payment
Arthur Mousseau

Arthur Mousseau

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

SUMMARY

ADVANCE		$1,500.00
LESS EXPENSES		
Transportation	$1,047.65	
Express & Courier	95.40	
Meals & Tips	66.97	
Motel	29.40	
Telephone	29.00	
Supplies	121.95	
Postage	.64	
Reports, Map Drafting & Printing	115.70	
Wages	600.00	2,106.71
Balance due D. E. Smith		$606.71

Certified Copy.

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSELL
PROVINCE OF ONTARIO

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

SUMMARY

ADVANCE		$1,500.00
LESS EXPENSES		
Transportation	$1,047.65	
Express & Courier	95.40	
Meals & Tips	66.97	
Motel	29.40	
Telephone	29.00	
Supplies	121.95	
Postage	.64	
Reports, Map Drafting & Printing	115.70	
Wages	600.00	2,106.71
Balance due D. E. Smith		$606.71

Certified Copy.

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSEL
PROVINCE OF ONTARIO

BARRINGER MAGENTA LIMITED

304 CARLINGVIEW DRIVE
METROPOLITAN TORONTO
REXDALE, ONTARIO
CANADA M9W 5G2
PHONE: 416-675-3870
TELEX: 06-989183

SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

DATE: June 30, 1983

PROJECT: 100.41

PERIOD COVERED:

SALES ORDER:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT: 83-337

FED. SALES TAX: N/A

ONT. SALES TAX: N/A

Noble Peek Resources Ltd.
5345 Trafalgar Street
Vancouver, B.C.
V6N 1B8

TERMS: NET 30 days

AUTHORITY: N. Ursel

TO: ANALYSIS

95 Rock Samples, preparation	@ $ 3.20	$ 304.00
Gold Print Suite, Au, Ag, As, Hg, Sb	@ $15.50	1,472.50
TOTAL INVOICE		$1,776.5

CERTIFIED COPY.

REGISTERED PROFESSIONAL ENGINEER MINING N. H. URSELL PROVINCE OF ONTARIO

PATRICIA MINING DIV. RECEIVED SEP 12 1983 A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

INVOICE Nº 8869

INTEREST AT 2% PER MONTH PAYABLE ON

BARRINGER MAGENTA LIMITED

304 CARLINGVIEW DRIVE
METROPOLITAN TORONTO
REXDALE, ONTARIO
CANADA M9W 5G2
PHONE: 416-675-3870
TELEX: 06-989183

SERVICES FOR THE EARTH AND ENVIRONMENTAL SCIENCES

DATE: June 30, 1983

PROJECT: 100.41

PERIOD COVERED:

SALES ORDER:

PROGRESS BILLING:

SHIPPING REPORT:

WORK REPORT: 83-337

FED SALES TAX: N/A

ONT. SALES TAX: N/A

Noble Peek Resources Ltd.
5345 Trafalgar Street
Vancouver, B.C.
V6N 1B8

TERMS: NET 30 days

AUTHORITY: N. Ursel

TO: ANALYSIS

95 Rock Samples, preparation	@ $ 3.20	$ 304.00
Gold Print Suite, Au, Ag, As, Hg, Sb	@ $15.50	1,472.50
TOTAL INVOICE		$1,776.50

CERTIFIED COPY.

REGISTERED PROFESSIONAL ENGINEER
MINING
N. H. URSEL
PROVINCE OF ONTARIO

PATRICIA MINING DIV.
RECEIVED
SEP 12 1983
A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

INVOICE № 8869

INTEREST AT 2% PER [illegible] AVAILABLE ON

Ministry of Natural Resources
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

#83-101

F.W.M. ● Mining lands

The Mining Act

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s): Geological — 2-5907

Township or Area: Squaw ~~Sturgeon~~ Lake M-1904

Claim Holder(s): J. H. Randa, #606, 2190 Bellevue Street

Prospector's Licence No.: S-5831

Address: West Vancouver, B.C. (In Escrow for Noble Peak Resources Ltd.)

Survey Company: Donald E. Smith & Associates Ltd.

Date of Survey (from & to): 10 5 83 (Day Mo. Yr.) — 10 7 83 (Day Mo. Yr.)

Total Miles of line Cut:

Name and Address of Author (of Geo-Technical report): Donald E. Smith, P.Eng., 149 Grand River Blvd., Scarborough, Ont. M1B 1G4

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	36.4
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
Pa	570183	71
	570184	71
	570185	71
	570186	71
	570187	71

PATRICIA MINING DIV. RECEIVED SEP 12 1983 A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M. (First)

PATRICIA MINING DIV. RECEIVED OCT - 7 1983 A.M. 7 8 9 10 11 12 1 2 3 4 5 6 P.M.

Expenditures (excludes power stripping)

Type of Work Performed: Sect. 77-19 Geological Appraisal

Performed on Claim(s): Pa570183 - 570187 inc.

Calculation of Expenditure Days Credits

Total Expenditures: $ 5,328.21 + 15 = Total Days Credits: 355.2

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Pa. 569608

Total number of mining claims covered by this report of work: 5

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
537	Sept. 12, 1983	
	Date Approved as Recorded	Mining Commissioner
	84.2.17	

Date: Sept. 7, 1983

Recorded Holder or Agent (Signature): Norman H. Ursel

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Norman H. Ursel, P.Eng., 5345 Trafalgar Street, Vancouver, B.C., V6N 1B8

Date Certified: Sept. 7, 1983

Certified by (Signature): Norman H. Ursel

N. H. URSEL

1362 (81/9)

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc.

Type of Survey	Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
Geological — Ian Torrance	5	X 7 =	35	+		=	35	÷	5	=	7
Geological — Donald E. Smith, P.Eng.	21	X 7 =	147	+		=	147	÷	5	=	29.4
		X 7 =		+		=		÷		=	
		X 7 =		+		=		÷		=	

Confirming Certificate sent August 29, 1983
together with 2 copies of Report.

83-101

2.5907

1983 10 26

Mr. Albert Hanson
Mining Recorder
Ministry of Natural Resources
P.O. Box 669
Sioux Lookout, Ontario
P0V 2T0

Dear Sir:

We have received data for Geological Appraisal submitted under Section 77(19) of the Mining Act R.S.O. 1980 for mining claims PA 570183 et al in the Area of Squaw Lake.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

R. Pichette:mc

cc: J.H. Randa
Suite 606
2190 Bellevue Street
West Vancouver, B.C.
V7V 1C4

cc: Donald E. Smith & Associates Ltd
149 Grand River Blvd.
Scarborough, Ontario
M1B 1G4

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

File 2.5907

Mining Lands Comments

- missing cancelled cheques or receipts for expenditures
- maps are not coloured. ✓

☐ To: Geophysics

Comments

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Geology - Expenditures Mr. C. Krusta

Comments

☑ Approved ☐ Wish to see again with corrections | Date Dec 19/83 | Signature C Krusta

☐ To: Geochemistry

Comments

L.D.

☐ Approved ☐ Wish to see again with corrections | Date | Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

January 6, 1984 Our File: 2.5907

J.H. Randa
Suite 606
2190 Bellevue Street
West Vancouver, B.C.
V7V 1C4

Dear Sirs:

RE: Geological Appraisal Survey submitted on
Mining Claims PA 570183 et al in the Area
of Squaw Lake

Enclosed are the plans, in duplicate, for the above-mentioned survey. Please indicate designated geological outcrops, by a colour code and return all maps to this office. Also, we have not received receipts or cancelled cheques required in order to assess work performed on Mining Claims listed above. Please provide receipts verifying payment of the expenditure of $5,328.21 for Geological Appraisal as soon as possible.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

J.R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone:(416)96501380

M.E. Anderson:mc

cc: Mining Recorder
Sioux Lookout, Ontario

Encl.

Noble Peak Resources Ltd.
5345 Trafalgar St.
Vancouver, B.C. V6N 1B8

January 28, 1984

J. R. Morton
Acting Director
Land Management Branch
Whitney Block, Room 6643
Queen's Park, Toronto M7A 1W3

Ref: File 2.5967

Geological + geophysical maps with colour are enclosed.

Receipts for $328.21 were forwarded directly to the Mining Recorder in Sioux Lookout when the reports were filed.

Is it possible for you to influence a change in assessment work regulations which would replace the requirement for colouring maps to a method which is reproducible by normal blue line copy machines onto vellum or sepia? As you know, colour only copies into shades of grey, thus destroying the effectiveness of the information.

Yours truly,
Locke S. Goldsmith, P. Eng.
Consulting Geologist

Our File: 2.5907

February 15, 1984.

Noble Peak Resources Ltd.
5345 Trafalgar Street
Vancouber, B.C.
V6N 1B8

Attn: L.B. Goldsmith

Dear Sir:

RE: Your recent letter, dated January 28, 1984, inquiring about the possible revision of assessment regulations in regards to requirements outlined for geological plans.

At present, it is not possible to influence a change in assessment work regulations which would replace the requirements for colouring maps to a method which is reproducable by normal blue line copy machines. The shading provided by tnis method does not adequately distinguish between different geological outcrops and therefore does not fulfill existing requirements.

However, it is expected that if and when a revised Mining Act is passed, existing Assessment Regulations outlining requirements for geological plans will be somewhat altered, particularly with respect to colouring.

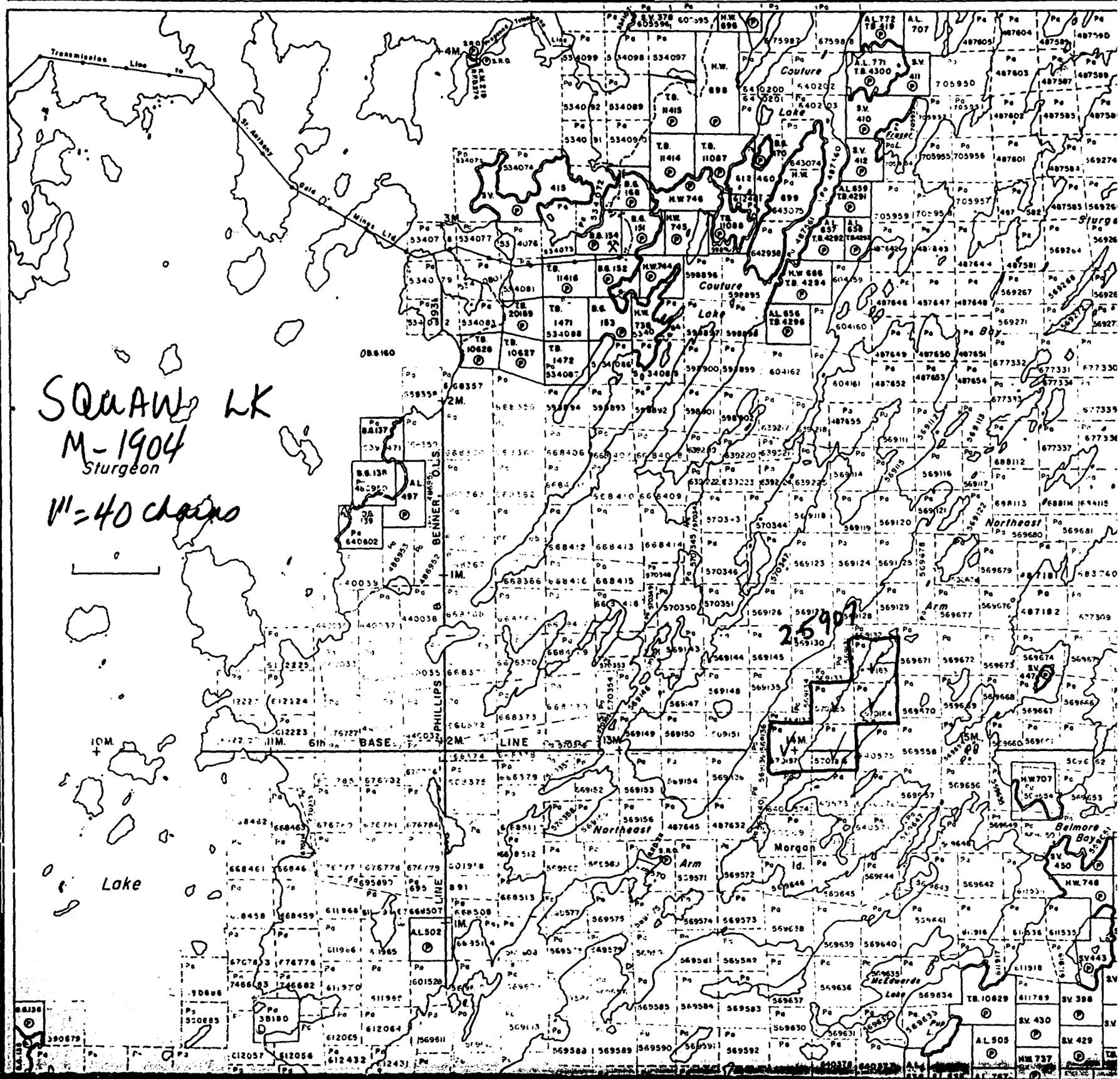
Fur further information, please contact Mr. F. W. Matthew at (416) 965-1380.

Yours very truly,

J. R. Morton
Acting Director
Land Management Branch

Whitney Block, Room 6643
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

M. E. Anderson:dg


SQUAW LK
M-1904
Sturgeon
1"=40 chains
Transmission Line
St. Anthony
Gold Mines Ltd.
PHILLIPS
BENNER
BASE LINE
Lake
Couture
Lake
Bay
Arm
Northeast
Morgan Id.
McEwards Lake
Belmore Bay
2690'

For Additional Information See Maps:

52J/02SE-0057 #1-3

MAP NO. 1

NOBLE PEAK RESOURCES LTD.

MORGAN ISLAND
CLAIM GROUP

NORTHEAST ARM STURGEON LAKE NORTHWESTERN ONTARIO
PATRICIA MINING DIVISION

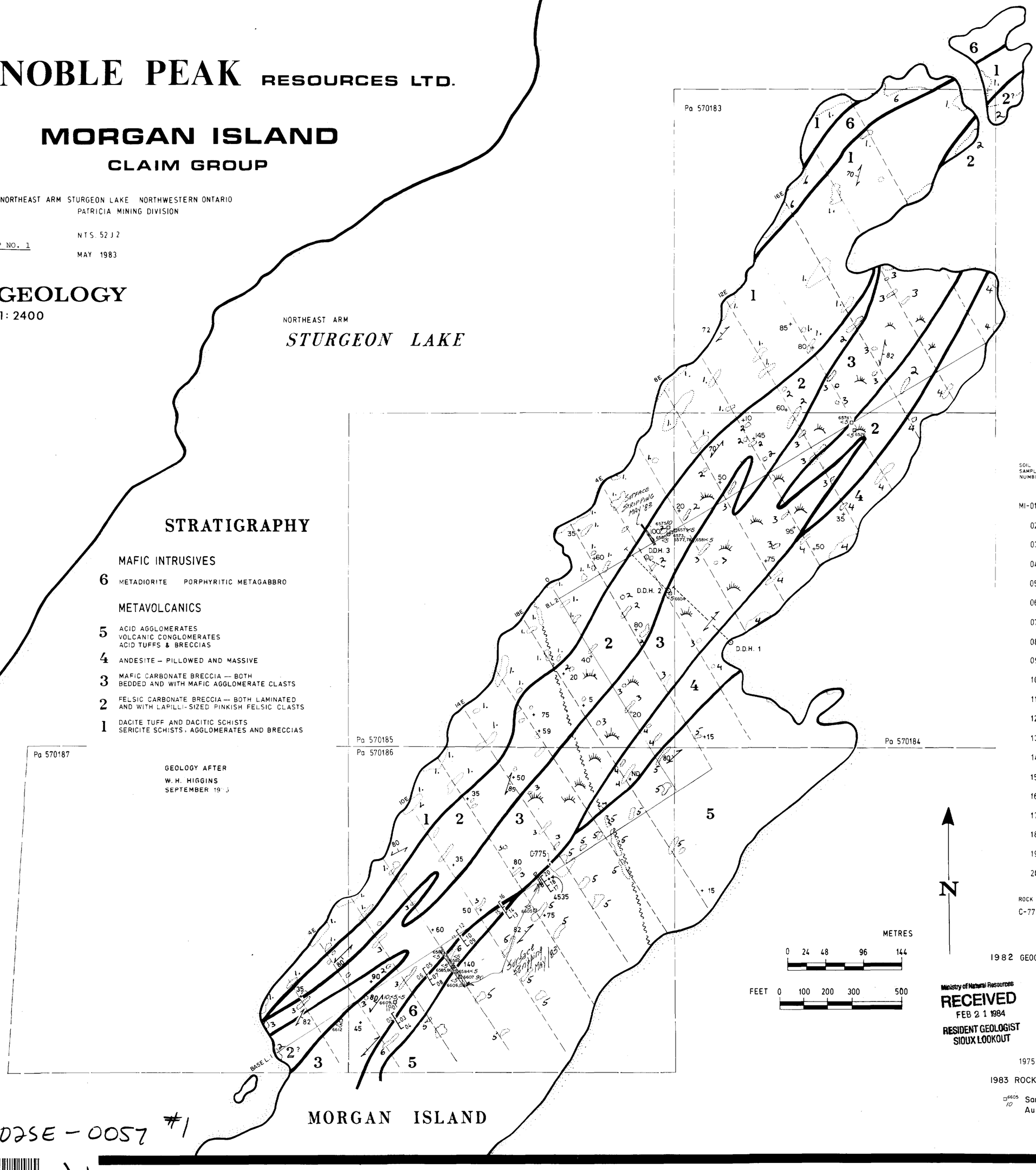
NTS 52 J 2

MAP NO. 1

MAY 1983

GEOLOGY
1: 2400

NORTHEAST ARM
STURGEON LAKE



STRATIGRAPHY

MAFIC INTRUSIVES

6 METADIORITE PORPHYRITIC METAGABBRO

METAVOLCANICS

5 ACID AGGLOMERATES
VOLCANIC CONGLOMERATES
ACID TUFFS & BRECCIAS

4 ANDESITE – PILLOWED AND MASSIVE

3 MAFIC CARBONATE BRECCIA — BOTH BEDDED AND WITH MAFIC AGGLOMERATE CLASTS

2 FELSIC CARBONATE BRECCIA — BOTH LAMINATED AND WITH LAPILLI-SIZED PINKISH FELSIC CLASTS

1 DACITE TUFF AND DACITIC SCHISTS
SERICITE SCHISTS, AGGLOMERATES AND BRECCIAS

GEOLOGY AFTER
W. H. HIGGINS
SEPTEMBER 19[illegible]

SWAMP
OUTCROP
CONTACT
GRID LINES
AVALON-1975
SHEARING
FAULT
DIAMOND DRILL HOLE
AVALON

METRES
0 24 48 96 144
FEET 0 100 200 300 500

N

Geochemistry

SOIL SAMPLE NUMBER	P.P.B. Au	P.P.M. Ag	P.P.M. Pb	P.P.M. Zn	P.P.M. Sb	P.P.M. As
MI-01	40	1.4	32	49	20	25
02	12	0.4	18	24	24	5
03	26	0.2	8	9	4	ND
04	24	0.4	6	18	12	5
05	28	0.2	14	27	18	5
06	18	0.2	8	62	8	5
07	20	0.6	18	92	18	25
08	8	0.2	6	11	14	5
09	4	0.2	8	26	10	5
10	6	0.2	10	23	20	5
11	6	0.6	14	46	42	40
12	2	0.2	12	30	28	5
13	32	0.2	8	31	12	5
14	4	0.5	45	86	45	15
15	8	0.8	24	67	32	20
16	4	0.5	30	67	40	5
17	46	0.8	30	117	42	40
18	42	0.8	34	167	48	15
19	24	0.6	24	123	48	10
20	16	1.0	44	180	44	30
ROCK						
C-775	115	16.4	7100	18720	68	250

1982 GEOCHEMICAL SAMPLES :
SOIL MI SERIES 01 02 03
ROCK °
SAMPLE LOCATIONS
20 +
1975 AVALON SYNDICATE SAMPLES p.p.b. Au
1983 ROCK SAMPLE LOCATIONS
$\square^{6605}_{10}$ Sample No. Au p.p.b.

July 7/83
K.R.A.

52J/02SE-0057 #1

200

MAP NO. 2 2.5907 Sq#

NOBLE PEAK RESOURCES LTD.

MORGAN ISLAND
CLAIM GROUP

NORTHEAST ARM STURGEON LAKE NORTHWESTERN ONTARIO
PATRICIA MINING DIVISION

N.T.S. 52 J 2

MAY 1983

MAP NO. 2

MAGNETOMETER SURVEY

1: 2400

AFTER
WOOLHAM (1973)
PHELPS-DODGE CORP.

NORTHEAST ARM
STURGEON LAKE

CONTOUR INTERVAL

200 gammas

Pa 570183

Pa 570185
Pa 570187
Pa 570186
Pa 570184

DDH 1
DDH 2
DDH 3

N

METRES
0 24 48 96 144

FEET 0 100 200 300 500

PHELPS-DODGE 1973 GRID

AVALON SYNDICATE 1975 GRID

DIAMOND DRILL HOLE

1982 GEOCHEMICAL SAMPLE LOCATIONS

MORGAN ISLAND

July 7/83
L.R.D.

52J/02SE-0057 2 #

MAP NO. 3

NOBLE PEAK RESOURCES LTD.

MORGAN ISLAND
CLAIM GROUP

NORTHEAST ARM STURGEON LAKE NORTHWESTERN ONTARIO
PATRICIA MINING DIVISION
N.T.S. 52 J 2

MAP NO. 3

1: 2400

HORIZONTAL LOOP
EM-17 SURVEY

AFTER
WOOLHAM (1973)
PHELPS-DODGE CORP.

MAY 1983

NORTHEAST ARM
STURGEON LAKE

EM-17 1600 Hz
COIL SPACING 400 FT.

% IN-PHASE LEFT
% OUT-OF-PHASE RIGHT

-20% +20%

VALUES PLOTTED
AT MIDPOINT BETWEEN COILS

SC – POSSIBLE ERROR
ROUGH TOPOGRAPHY

Pa 570183
Pa 570184
Pa 570185
Pd 570185-2
Pa 570186
Pa 570187
DDH 1
DDH 2
DDH 3
CLIFF

N

METRES
0 24 48 96 144

FEET 0 100 200 300 500

PHELPS-DODGE 1973 GRID
AVALON SYNDICATE 1975 GRID
DIAMOND DRILL HOLE

1982 GEOCHEMICAL SAMPLE LOCATIONS

MORGAN ISLAND

July 7/83
H.E.B.

52J/02SE-0057 #3