

6275

A

SUMMARY REPORT

on the

PYTHON-NOONDAY PROPERTY,

KAMLOOPS MINING DIVISION,

PROVINCE of BRITISH COLUMBIA,

for

MAKAOO DEVELOPMENT CO. LTD.

by

C.T. Pasieka, P.Eng.

March 22, 1977.

MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

NO. _____

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M-1-Makao Property Map

Summary

During the month of December, 1976, a small percussion drilling programme was carried out in an attempt to confirm the dip of the Copperhead zone and to extend its currently known length. The programme was partially successful in that the composite dip of the mineralized zone was found to be approximately 55° to the SW and that the zone is continuous to the NW. In two of the holes significant sections yielded values in copper and minor amounts of gold and nickel. Exploration work carried out over the past 25 years in the form of geophysical surveys, geochemical soil sampling surveys, percussion drilling, diamond drilling, and underground development, has indicated that at least four zones of significant copper mineralization are present on the property. The Python zone is reported to contain 220,000 tons of material grading 1.11% copper, and the Copperhead zone is reported to contain 90,000 tons of material grading 1.13% copper. The Noonday zone has recently reported to contain 600,000 tons of .74% copper, out of which 130,000 tons contain copper exceeding 1%. The Plain 19 area immediately adjoining the ComInco property to the south has yielded several individual sections containing significant copper mineralization, however insufficient work has been done to offer any continuity or evaluation of these sections. None of the above four mentioned mineralized areas have been completely delineated by means of drilling or underground development. In view of the improving economic climate, it is recommended that the Python and Copperhead zones be subjected to further exploration in an attempt to completely develop and evaluate these mineralized zones and in turn to develop a spatial and genetic relationship to the Noonday zone which occurs approximately one claim length to the ESE, along with what is thought to be the same structural lineation. Due to the steep topography in the area it is thought that the greatest economy can be effected by conducting the drilling programme from underground. The costs of rehabilitating the underground workings are nominal. Such a programme would entail the initial expenditure of some \$98,400.00.

PROPERTY

The property under discussion, hereinafter referred to as the Python-Noonday Group, consists of 65 located mineral claims and 5 Crown granted claims, forming a continuous group and lying within the SW limits of the City of Kamloops, B.C. The individual claims comprising the Python-Noonday Group are listed as follows:

| <u>Record No.</u> | <u>Claim Name</u> |
|-------------------|-------------------|
| 13887-91 | Python 3-7 |
| 13892 | Python 8 Fr. |
| 13899 | Python 15 |
| 13900 | Python 16 Fr. |
| 13903-04 | Cub 9-10 |
| 13907-10 | Cub 3-6 |
| 15701-02 | Dot 2-3 |
| 15704 | Dot 5 |
| 34165 | Pye 1 Fr. |
| 34166-67 | Pye 3-4 |
| 34168-69 | Pye 5-6 Frs. |
| 34170-71 | Pye 7-8 |
| 34172-76 | Jet 1-5 |
| 34177-79 | Line 1-3 |
| 34180 | Line 4 Fr. |
| 128708 | Shock Fr. |
| 128709-10 | Horse 1-2 Fr. |
| 128705 | Escort 1 Fr. |
| 122400 | Regina 1 Fr. |
| 34202 | Jet 6 |
| 34203 | Jet 7 Fr. |

HISTORY

The general area of the property has been prospected sporadically since prior to the turn of the century. The earlier efforts were directed towards the search for precious metals with some degree of success. In later years the emphasis was on copper exploration. During the early 1950's some underground development was carried out on the Python and Copperhead areas. This underground development was followed by underground diamond drilling resulting in the outlining of the Python ore body with a reported tonnage of 220,000 tons grading 1.11% copper, and the Copperhead zone with an estimated 90,000 tons of 1.13% copper. Subsequent work carried out sporadically up to 1972 to the east in the Noonday area, outlined in part the Noonday zone. Percussion drilling and minor diamond drilling indicate an additional 600,000 tons of approximately .74% copper, out of which may be abstracted 130,000 tons exceeding 1% copper. Also during 1972 some percussion drilling was carried out in the area of the Plain 19 claim at the south east extremity of the property. Several sections of copper mineralization were derived, however the mineralized zone was not delineated.

In the interval of 1954 to 1972 the area of the property has been subjected to geophysical and geochemical soil sampling surveys. The magnetometric survey has been moderately successful in that the major structural trends are indicated, however the technique may not be critically used in the search for copper mineralization per se. Induced Polarization has been somewhat more successful in that several of the anomalies have yielded underlying copper mineralization, though not necessarily of significant grade. The geochemical survey has indicated several extensive trends, however the drilling of these anomalies has not yielded copper mineralization of significance.

The general area, i.e. the linear trend of the Iron Mask Batholith, has yielded several zones of mineralization, some of immediate economic significance. Immediately to the west of the present property, Kamloops Copper Ltd. supported a viable operation during the late '30's,

producing high grade copper. Some 3 miles to the west construction is now underway on the site of Afton Mines Ltd. with an anticipated production early in the year 1978.

GEOLOGY

In the main the area of the property is underlain by a portion of the large intrusive mass locally known as the Iron Mask Intrusive. This intrusive is strongly linear in a north westerly direction and may reach widths of up to a mile and a half. The Iron Mask Intrusive is Cretaceous in age and is represented by diorite, monzonite and syenite. Within and along the margins of the acidic members of the Iron Mask Intrusive occurs a distinctive intrusive rock, genetically termed Picrite Basalt. This picrite basalt is thought to represent a late stage segregation of the parent magma and has the typical characteristics of a peridotite intrusive. The peridotite may contain large stope blocks of dioritic or volcanic rocks and its contacts are invariably highly distorted and convolute. The Iron Mask Batholith to the north is generally overlain by members of the Kamloops Group, i.e. rhyolite, andesite, basalt and associated pyroclastics. To the south and south west contact is made with volcanic rocks, Upper Triassic in age, and termed the Nicola Group. The Nicola Group is represented by greenstone, andesite, basalts, conglomerates and breccias with minor intercolated argillite, limestone and conglomerate.

Along the margins of the Iron Mask Batholith and occasionally within the intrusive mass, occur minor lenticular masses of a later intrusive locally termed the Sugarloaf. The Sugarloaf intrusive is mainly represented by porphyritic micro-diorite. The latest intrusive stage is termed the Cherry Creek Intrusive. The emplacement of this intrusive member was a dynamic one and frequently accompanied by gas-venting to yield a type of pyroclastic rock. The Cherry Creek Intrusive is usually represented by porphyritic micro-diorite, latite porphyry, trachyte porphyry, and igneous breccia and frequently accompanied by a pervasive feldspathization usually pink in colour.

Parallel to the contacts of the Iron Mask Batholith, i.e. NW-SE, occur a series of well developed faults. A secondary set of lineations normal to the major faults occur apparently sympathetic to the primary NW-SE faults. The above two sets of lineations are steeply oriented and appear to have suffered only minor displacement. A tertiary lineation in the form of flat lying shear dipping at a low angle to the SW occurs locally.

MINERALIZATION

Mineralization observed on the property is invariably associated with the late stage picrite basalt intrusive linears. Frequently the stoped blocks of either dioritic or volcanic material enclosed within the picrite basalt is frequently highly mineralized as observed on the Galaxy property immediately to the west of the Makao property. Cupriferous mineralization occurs mainly in the form of sulphides, i.e. chalcopyrite, although bornite and chalcocite have been identified in very minor amounts. Malachite and azurite are frequently observed on surface, however they persist in depth to only a few feet. Molybdenum disulphide has been observed, however its occurrence is very sporadic and normally not taken into account in the assays. Similarly gold, though not observed, has been noted in assays of material containing sulphides yielding values of up to \$9.00 per ton. Magnetite and pyrite are ubiquitous and bear little or no relationship to the cupriferous mineralization. The concept of a pyritic halo has been much discussed however little evidence has been found to date to support such a theoretical consideration.

The sulphide mineralization occurring on the property appears to be a late stage phenomenon with the sulphides lining micro-fractures, joints and shears, rather than an dissemination through the rock mass. Mineralization observed underground on the Python and Copperhead zones appears to be strongly structurally controlled with the mineralization permeating the contact between the picrite basalt and Iron Mask diorite

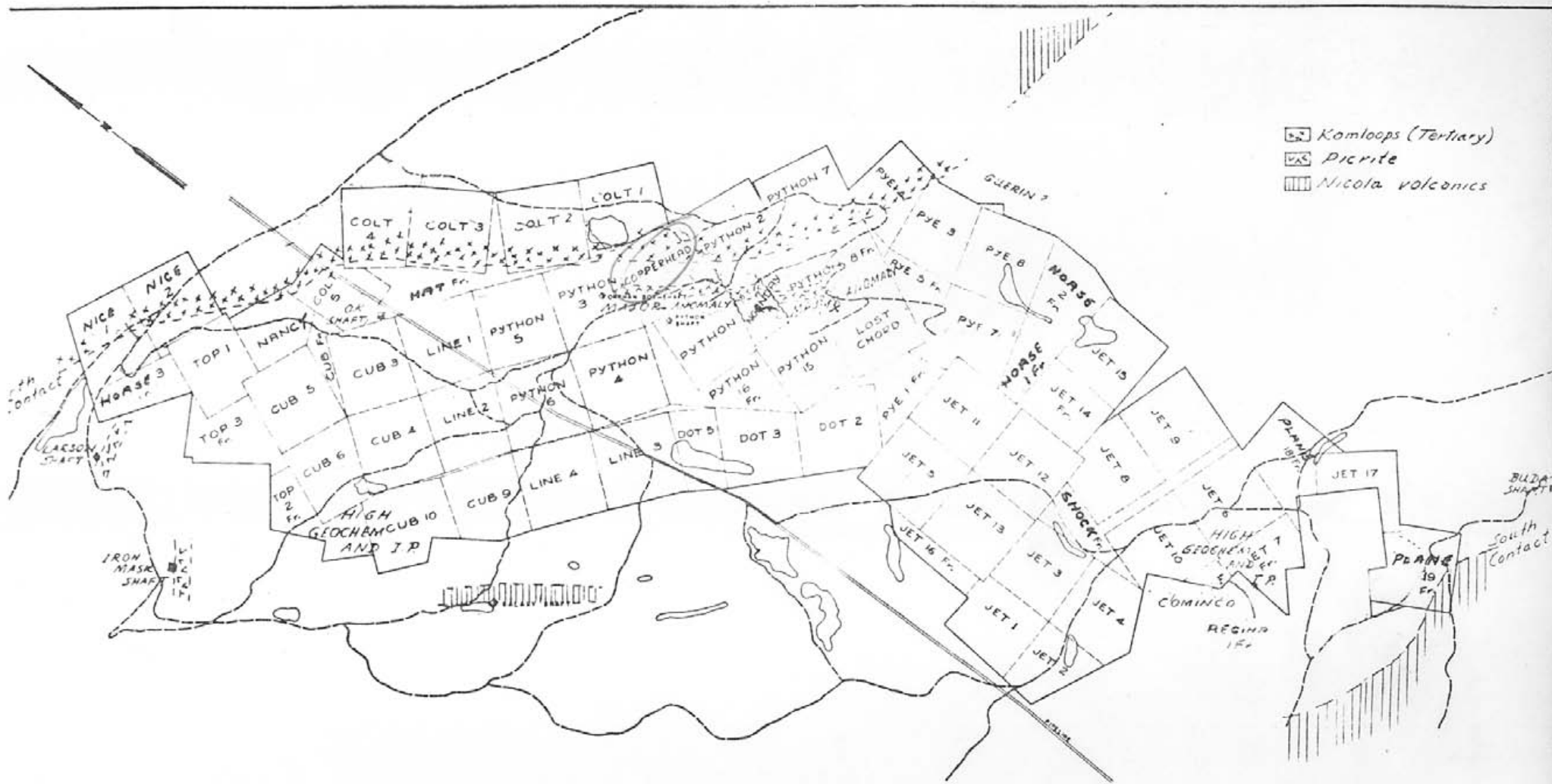
| <u>Record No.</u> | <u>Claim Name</u> |
|-------------------|-------------------|
| 34204-05 | Jet 8-9 |
| 34228 | Jet 10 |
| 34294-96 | Jet 11-13 |
| 34297-99 | Jet 14-16 Fr. |
| 34300 | Jet 17 |
| 34301-02 | Top 1-2 |
| 34303 | Top 3 Fr |
| 34304-08 | Colt 1-5 |
| 128699-700 | Nice 1-2 ✓ |
| 128701 | Nancy Fr. ✓ |
| 128702 | Horse 3 Fr. ✓ |
| 128703 | Bear Fr. |
| 128704 | Hat Fr. ✓ |
| 128706-07 | Plane 18-19 Fr. |

CROWN GRANTED CLAIMS

| <u>Lot No.</u> | <u>Claim Name</u> |
|----------------|-------------------|
| 2561 | Lost Chord |
| 2562 | Python No.2 |
| 2563 | Noonday |
| 2564 | Copperhead |
| 2565 | Python |

The above claims are owned outright by Makao Development Co. Ltd. and are recorded in the Mine Recorders office in Kamloops, B.C., Kamloops Mining Division, Province of British Columbia.

①



MAKAOO DEVELOPMENT



LOCATION AND ACCESS

The Python-Noonday Group of Claims lies some 6½ miles WSW of the city centre of Kamloops, Kamloops Mining Division, Province of British Columbia. The most convenient access is by means of the Trans Canada Hwy. to the Lac Le Jeune turnoff some 6 miles west of the City of Kamloops. From this point ranch roads traverse the property in various directions so that all parts of the property are accessible to normal vehicular traffic. Access may also be gained by ranch roads connecting with the Lac Le Jeune Road as well as #5 Hwy. to Merritt.

The City of Kamloops is serviced by Pacific Western Airlines, Canadian National Railway, Canadian Pacific Railway, as well as the Trans Canada Hwy. In addition, the property is crudely bi-sected in a N-S direction by the Trans Mountain Oil Pipeline. The Trans Mountain Pipeline right of way is serviced along a portion of its length by a B.C. Hydro line.

TOPOGRAPHY AND VEGETATION

The surface presented by the property is that of rolling hills elongate in a NW-SE direction in the manner of Roche Moutonne. These rounded hills owe their form to the scouring effect of glaciation and normally present minor bluffs facing south easterly. Outcrop available for examination is limited to less than 5% of the total area. Much of the surface is open rangeland supporting a variety of grasses and sagebrush, while a third of the total area is covered by sub-commercial pine and spruce. Elevations vary from 2700' to 3350' ASL.

Several small ponds occur on the property and offer a supply of water for exploration purposes. The water in the ponds is generally alkali, however the underground workings in the Python-Copperhead area offers a source of excellent potable water. This water is derived from a drill hole and it is suggested that the hole be reamed out and cased and capped so that the fresh water supply may be controlled.

and extending for a few feet in either direction or areas where the host rock has suffered a high degree of comminution by mechanical means near the contact zone. On occasion, such as the Noonday zone, there may be a repetition of the conditions described above so as to give an overall width of some 150'. On occasion these mechanical breccia zones may suffer an intensive permeation of feldspar. This permeation may proceed to the point of almost complete digestion of the original xenoliths to yield an impure feldsite. Within this felsitic breccia may occur knots and blebs of chalcopyrite transported by the felspathic solution.

WORK PROGRAMME

During the month of December, 1976, a programme of percussion drilling was carried out in an attempt to confirm the dip of the mineralization on the Copperhead zone and possibly extend the known length of the zone. Some 800' of drilling was completed. A truck mounted rig drilling a 2 and 5/8" hole was used for the programme. Quite some difficulty was experienced in locating the holes due to the steeply rising topography to the south.

Hole #1 was collared 27' west of the adit opening and drilled at -55⁰ to the SW. The first 40' of the hole yielded values of .44% Cu and .07% nickle. Copper values were observed in the cuttings of the entire length of the hole, however these lower sections did not yield significant values.

Hole #2 was collared some 150' south 30⁰ E of hole #1, and drilled vertically. This hole yielded minor values in copper throughout its length of 200', however the tenor was too low to be of any great interest. The hole was terminated at a depth of 200' due to shrinkage although the hole was projected to a depth of 300'.

Hole #3 was spotted 150' N 30⁰ W of hole #1 and drilled to a projected depth of 300'. From a depth of 40' to 80' assays yielded .44% Cu, and an average of \$4.24 in gold. The interval from 250' to 280'

yielded .5% Cu, as well as nominal values in gold, and nickle. The analytical results of these sections sampled are presented as follows:

| | <u>NUMBER</u> | <u>FOOTAGE</u> | <u>Au</u> | <u>Cu</u> | <u>Mo</u> | <u>NI</u> |
|----|---------------|----------------|-----------|-----------|-----------|-----------|
| #1 | G147-1 | 0-20 | Tr | .54 | Tr | .08 |
| | 2 | 20-30 | .01 | .26 | Tr | .08 |
| | 3 | 30-40 | .005 | .42 | Tr | .05 |
| | 4 | 40-50 | Tr | .15 | Tr | .01 |
| | 5 | 50-60 | .006 | .11 | Tr | Tr |
| | 6 | 60-70 | .005 | .19 | Tr | Tr |
| | 7 | 70-80 | Tr | .12 | Tr | Tr |
| | 8 | 80-90 | .004 | .09 | Tr | Tr |
| | 9 | 90-100 | Tr | .14 | Tr | Tr |
| | 10 | 100-110 | Tr | .15 | Tr | Tr |
| | 11 | 110-120 | .005 | .16 | Tr | Tr |
| | 12 | 120-130 | Tr | .12 | Tr | Tr |
| #2 | G147-42 | 130-140 | Tr | Tr | Tr | Tr |
| | 43 | 140-150 | Tr | .04 | Tr | Tr |
| | 44 | 150-160 | .005 | .03 | Tr | Tr |
| | 45 | 160-170 | .005 | .02 | Tr | Tr |
| | 46 | 170-180 | Tr | .03 | Tr | Tr |
| | 47 | 180-190 | .004 | .07 | Tr | Tr |
| | 48 | 190-200 | .006 | .08 | Tr | Tr |

| | <u>Number</u> | <u>Footage</u> | <u>Au</u> | <u>Cu</u> | <u>Mo</u> | <u>Ni</u> |
|----|---------------|----------------|-----------|-----------|-----------|-----------|
| #3 | G147-51 | 40-50 | .015 | .35 | Tr | Tr |
| | 52 | 50-60 | .06 | .41 | Tr | Tr |
| | 53 | 60-70 | .02 | .70 | Tr | Tr |
| | 54 | 70-80 | .018 | .28 | Tr | Tr |
| | G147-71 | 240-50 | .01 | .05 | Tr | .02 |
| | 72 | 250-60 | .03 | .48 | Tr | .02 |
| | 73 | 260-70 | .035 | .81 | Tr | .03 |
| | 74 | 270-80 | .008 | .43 | Tr | .03 |
| | 75 | 280-90 | .005 | .21 | Tr | .03 |
| | 76 | 290-300 | .008 | .15 | Tr | .02 |

On the basis of mineralized sections observed underground and the mineralized sections in drill holes, it would appear that the Copperhead zone has a composite dip of some 55° to the SW. Further, on the basis of the results of hole #3 it would appear that the zone is open to the NW.

CONCLUSIONS AND RECOMMENDATIONS

Exploration work carried out over the last 25 years in the form of geophysical surveys, geochemical surveys, percussion drilling, diamond drilling and underground development, has indicated the presence of several zones of cupriferous mineralization, i.e. Python zone, estimated 220,000 tons grading 1.11% copper. Copperhead zone, estimated 90,000 tons grading 1.13% copper. Noonday zone, 600,000 tons grading .74% copper, out of which may be abstracted 130,000 tons exceeding 1% in copper. Plain 19 zone, several short sections of significant copper mineralization have

been noted, however insufficient work has been carried out to evaluate the particular area. It is to be noted that none of the above zones have been fully delineated, especially so with regard to the Python and Copperhead zones. The drilling of these zones has suffered in the past due to the fact that the ore zones tend to dip into the hillside so that drilling from surface necessitates either traversing great distances when drilling from the upper side or drilling very flat holes when drilling from the footwall side. It is thought that by rehabilitating the underground workings that real economies could be effected by drilling from underground locations. This underground rehabilitation would also facilitate entry so that critical geological mapping may be carried out. Such a rehabilitation entailing the rebuilding of the portal, removal of a coffer in the main adit, and timbering a few areas in the underground workings where minor sluffing has occurred could be done at nominal cost. While the drilling is in progress it would be judicious to ream out the diamond drill hole making water underground and casing and capping same so as to protect the only current source of fresh water in the area, itself a valuable resource.

Upon completion of the evaluation programme for the Python and Copperhead zones, exploration efforts should then be directed in a SE direction towards the Noonday zone, in that there is a strong possibility that the Noonday zone is structurally related to the Python-Copperhead area. It would appear that there are several mineralized zones along this major lineation lying in an en echelon pattern, with the main lineation having suffered some lateral displacement along strike.

In summary then, it is recommended that a programme consisting of rehabilitation of the underground workings, surface and underground diamond drilling, and critical geological mapping be instigated in an attempt to fully delineate the Python and Copperhead zones. Further, an attempt should be made to determine the spacial and genetic relationship between the Noonday zone and the Copperhead zones in view of the fact that


they appear to occur along the same structural lineation.

Estimated costs for conducting the first phase of the programme of work outlined above on the Python and Copperhead zones are presented as follows:

| | |
|---|--------------------|
| 1. Rehabilitation of the underground workings... | \$12,000.00 |
| 2. Diamond drilling..5,00' of B.Q. Wireline @ \$10. per ft... | 50,000.00 |
| 3. Bulldozer support | 3,000.00 |
| 4. Geological mapping, surveying, underground/surface | 1,000.00 |
| 5. Equipment rental | 4,000.00 |
| 6. Sampling and assaying | 5,000.00 |
| 7. Engineering supervision & Consulting | 7,000.00 |
| 8. Contingency @ 20% | <u>16,400.00</u> |
| Total | \$98,400.00 |

There is a sense of urgency in completing the exploration and evaluation programme in the near future due to the extensive planned real-estate development immediately to the east of the property, with the inherent possibility of various pressures being exerted against mining development. Conversely, should real-estate development proceed on the Del Cielo property, the value of the land covered by the Copperhead and the Python claims would be greatly enhanced in that Makao Development Co. Ltd. hold complete surface rights.

Respectfully submitted,



C.T. Pasieka, B.Sc. P.Eng.

CERTIFICATION

I, Clemens Terence Pasieka, of the City of Kamloops, Province of British Columbia, hereby certify that:

1. I am a geologist and reside at 138 Saint Paul St., Kamloops, B.C.
2. That I am a graduate of University College, Dublin, B.Sc. 1963.
3. That I have been practicing my profession as a geologist for fourteen years.
4. That I am a member of the Associations of Professional Engineers of the Provinces of Alberta, Saskatchewan and British Columbia.
5. That I have no interest directly or indirectly in the property or securities of Makao Development Co. Ltd., nor do I expect to receive any such interest in the property or securities of Makao Development Co.Ltd.
6. That this report is based on data derived from work carried out under my supervision on the property, from personal experience in the area, and from relevant Government and private publications.

Dated this 22nd day of March, 1977, City of Kamloops, Province of British Columbia.



C.T. Pasieka

C.T. Pasieka, B.Sc. P.Eng.

BIBLIOGRAPHY

1. P. Badgely - Report - 1956.
2. A. P. Fawley - Report - October 1, 1963, July 9, 1968.
3. W. I. Nelson - Report - November 1, 1962.
4. G. Webster - Report - September 2, 1956.
5. B.C. Dept. of Mines - Report - 1956.
6. R. H. Seraphim - Report - May 1, 1972.

CERTIFICATION

I hereby certify that the following expenses were incurred by, invoiced to and paid for by Makao Development Company Limited during the course of the exploration programme carried out over the Python-Noonday Property in the Kamloops Area, Kamloops Mining Division, British Columbia.

| | |
|---|--------------------|
| Percussion Drilling 825' @ \$3.00/Foot (Contractor-A. Miller) | \$ 2,475.00 |
| Bulldozing and site preparation (Bregoliss Construction-D-8) | 871.00 |
| Assays (K.R.A.L.) | 133.00 |
| Truck Rental 11days @ \$25.00/day plus \$0.25/mile (412 miles) | 378.00 |
| Report and draughting | 700.00 |
| Sampler and survey assistant 7 days @ \$50.00/day | 350.00 |
| | <u>\$ 4,907.00</u> |

Dated this 18th day of May, 1977 at Vancouver, B. C.



C.T. Pasieka, P.Eng.

CERTIFICATION

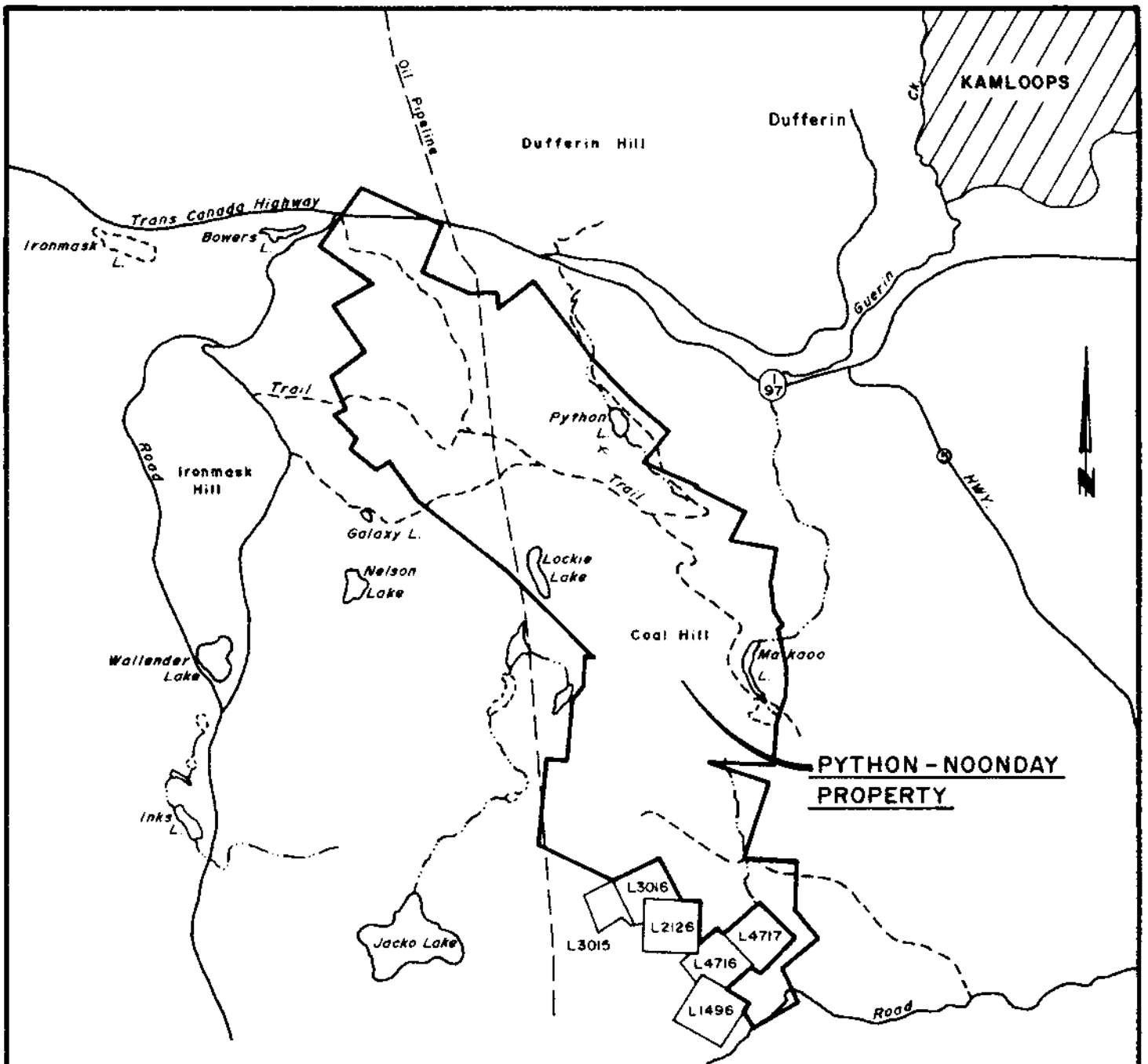
I hereby certify that the following personnel were employed on the property:

| | | |
|---|---------------------|-------------------------------------|
| C.T. Pasieka, P.Eng., Consulting Geologist, | Dec. 2-20 Inclusive | \$200.00/day |
| G.F. Sanft | Sampler | Dec. 7-13 inclusive \$ 50.00/day |
| A. Miller | Driller | Dec. 7-13 inclusive (Contract) |
| G. Miller | Driller | Dec. 7-13 inclusive (Contract) |
| S. Bregolis | Cat Skinner | Dec. 8,10 \$9.60/hour |

Dated this 18th day of May, 1977 in Vancouver, B. C.

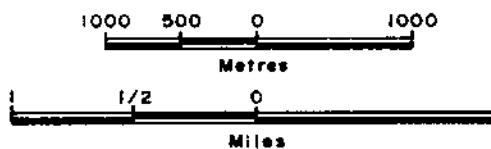


C. T. Pasieka, P.Eng.



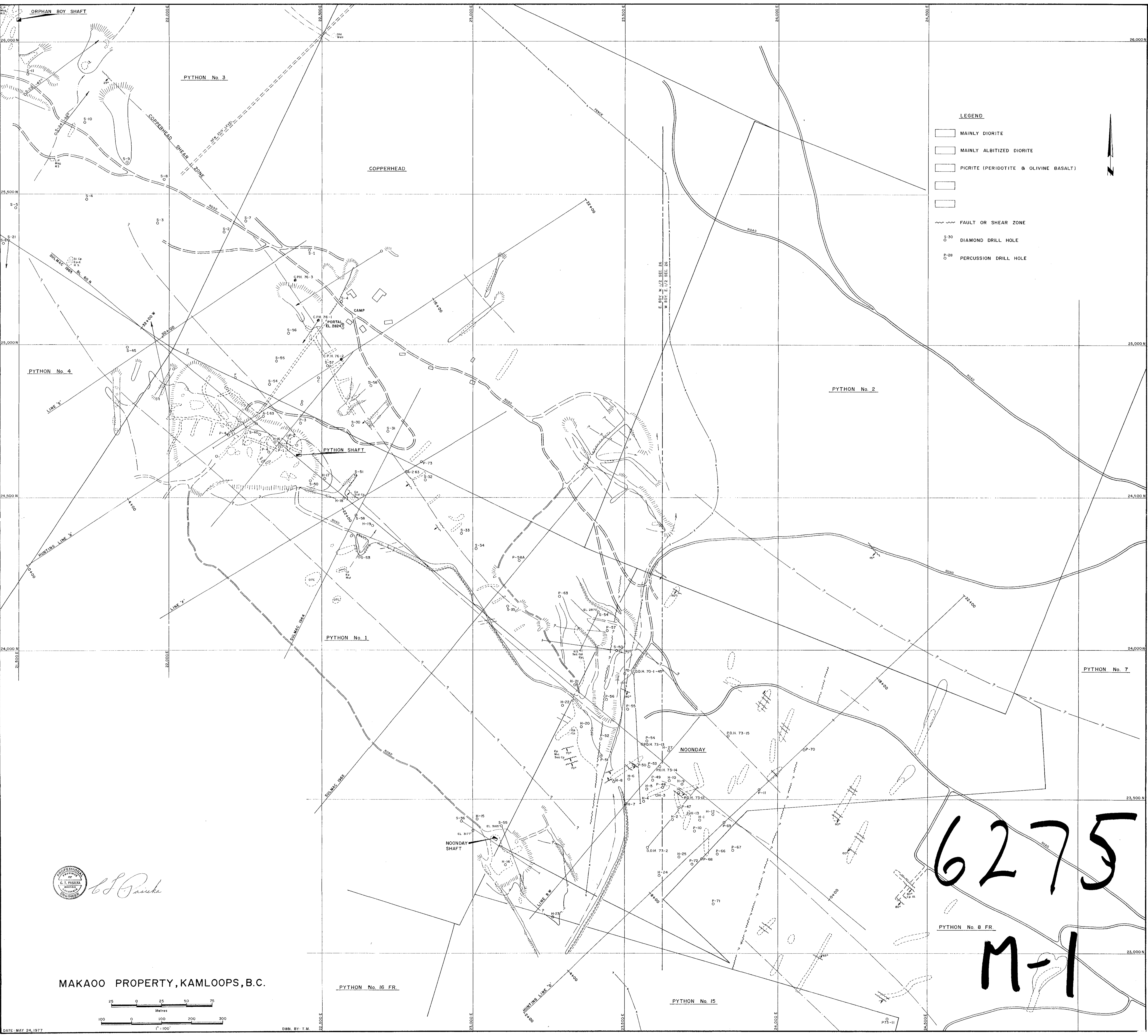
C. T. Pasieka

MAKAOO DEVELOPMENT COMPANY
 — LOCATION MAP —
PYTHON - NOONDAY PROPERTY
 KAMLOOPS MINING DIVISION - BRITISH COLUMBIA



DATE: MAY 24, 1977

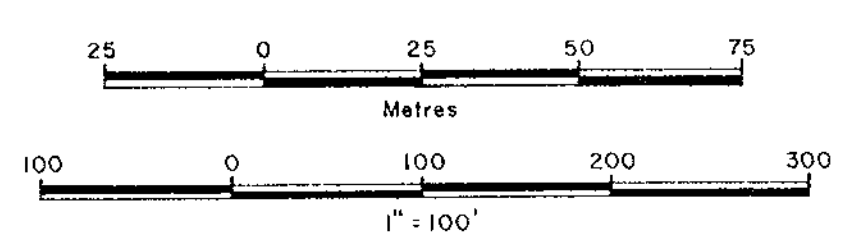
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- LEGEND**
- MAINLY DIORITE
 - MAINLY ALBITIZED DIORITE
 - PICRITE (PERIDOTITE & OLIVINE BASALT)
 -
 - FAULT OR SHEAR ZONE
 - DIAMOND DRILL HOLE
 - PERCUSSION DRILL HOLE


 C. T. Pasika
 PROFESSIONAL ENGINEER

MAKAOO PROPERTY, KAMLOOPS, B.C.



DWN. BY T.M.

6275

M-1