MORNNDA EXPLORATION COUPANX LIITYED
(Morper MA-1010n)

RESPORT ON THIS
yopprsons prorente

MCRRISCA LNKS (SMITHERS) Be C.
CUTERCA MTNTNM DTVISION
$55^{\circ} 22^{\circ} \quad 226^{\circ} 20^{\circ}$
2. Voodvertom

1963

The Morzison Lake doposit if e large aub-econonie porphyy ©opper. The ahoringe aro apnraximately $1 / 2$ mile from the onst ahore an sbout $12 / 2$ milea north of the south ond of Morrisors Lake, as Istitudes $55^{\circ} 122^{\circ}$ and loagitudes $126^{\circ} 20^{\circ}$, and about 45 milen nostheast os Sulthers. B. Go

The Morsinon Lake area was ailt sampled by boet in Soptomber, 1961 valiog holscogter sor transporting the boat and erver to the idve. Iab reaule obtainod during the vinter of $1961-1962$ indicated mn momaly es 517 pgen sol。 eopper, 900 ppm total coppar, and 10 zpe total molybdoman en the amall areols whloh drains the minerulimed seat.
 Sound in the areek cbout $1 / 4$ of a nile frem Morriacn lake tho hised


 Soet. The overburdon varioe frem sero an the Mlls to 20 or 30800 t is the Arawn. genil fealening gever the miateen wih lavegor epmenem and Mream in the draus and swamp areas and popins and shsoh on the elopec. Asthough pataher of devile elub, maler bresh and dead-sall exdat, some sreas ase almost pastor-luse.

Infolelly, mupglies wase Rlevim in farem 8mithore by Ondnoes Atro
 Fistabory Asin en Babine Inlon, where a vhare vay buils. Rasvy manglios, much an drisking ogulymont, man trangportad iny read eren senithors to Entthors lavding ea Babing Latre mat ly basgo frem the laviling to the Hatehery Ay whare

## grolocy

## Sondenals

wo Morrixas Lise area bas mot beom nologienliy rumped by the evormsuato Hlewver, O.S.C. map 972 a (Sadthersa - Jort Bt. Jomes) dnelvies the Babino Lake ares to the mowth, selcis Inko to the east, and the Rasosten msen to the woot de Verriacts Live.

The shorlage ecous in and rafsecost to a porgingoy steols


present northwest and southecst of the property. Either the alsoralisation occurs in a "window" caused by the thruat faulting or naar a regional contect botwoon the two sedimantary suries. Aleng the northeast shore of Morriscen Lakis, the younger sedimats strilke northweateriy and aip about $45^{\circ}$ or more to the southwest. Thoy form tho sulls in the eroek mear cary and are asso present near the west and of the I If treash.
Reok spong:
The agpareat geological eequence of oveats was as fousevis

Palaecome

 sypert is droludad an an appondix.
 atome, dimestone and quartaito. The ascictul sidtateno da. coseribed by stheag as a Ive grade motrancyihosed Mighy adisecons argillecoms reok. It centaine disocudmatod menotito (in the blotite estored ecateot phane around the porghigny bodios), varying amorasts as blotito, with adnes apilote and:

 H02. It may be am altoration phase of the aslistome. A shoert mostion of alfored axgilinocoms linosten mas ebsorved in eno

 bemals of quariaito were not pesesoat in the drid exe.

 is mot ciens. At tho falls is the oreck mans cany theso collmoats steriko noasiy anst-mest and $21 y$ Fo to the westo fioar tho cast onf of the 7 morth treash is vortical ham of
conglomerato striking north-3outh may bo intrudod by porphyey.
Iarge aplsto cykes are prosent in the 27 morth smernin area. Minor molybdealto ss assoodated with those dykes ad
 Sovad in the drill holes in the orsel mone. The compesitiser variea bet they aro sractured, asterod and ainosulisod, motriy vith yersta. The post-minerns dyises ase froch and enfraotigud.
 ailsatsied end rnollainod perpingy as well te tho dose altesed yasi as the main gtook were classifted as "gruy perghyyy. The Casts colorsa biotsto altered phase was mapped and loget
 Anshoes pecphyw wo that appesumty ulxiokseation ond frovism
 altorstisen.

## Btruetyong



 -ceseordant aitbotagh net slways.

The arill plase of the large sols has eypestatily becs
 through the creals and beaver poas area vilch can bo corrplisted with goug menos and yeos cest zecovery in the drills halos minder the exvels seme. Oxdoz brocelated arpas mare somed in this rame which aro cemorto sth quaris casyying prcitte. finor ohnleopgrit and sxueos os malyhanit..

Scea drag solis ase probebly jivesent in tha geets tresches although goel hodilng ma some it ary o sow piacon.

## Altarntions


 maclinised. Tho masrew "grey posybyry Lound isenbese yeum
 creatures and thoare.
 In the sodiments mous perghyy cantoots. IItihis the atoolio It ds sestriatos to genver striod imeenis and guago ameos aleng the yoramisum timass.

Motsto alterntion Reree "xin" along tho odgo of the stock in both the perphory and sodiments. It is aleo yrement


## Minorelvations

Tho sulftion prosent ase ococontratod within the blottio altased coathet sono and sselvie pyrito and pyrrhotste with sinar ohalcopgasto, barnito and molybiemito. The boat copper
 Imeat coatacte. Eovever, the bighest grude sample (8 800 t ohannel of 0.998 Gu ) was thken in the garrow keolinised seen in the esvel. Mines molyblouito 1 a also proseat in tho ayllte Gyias which ase wookly minosalisod. Vithin the comtina' sea0 of the stcals the sulpides' ane ceacentratod in the quarts siksed to brocela and aboar genos along the Lisoar.

 Ia procomt in both the sedimante and perphoyy. As shown en the magnotenoter migy, it forme " "rim" uhioh is aiment coluotident - Ath the blotite halo.

Hows DONE

## 9taking:

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| cintm | Lecatior | Bocord Date | Recent lige |
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| [2mes 18-26 | R. Voolvestou | June 4/63 | 19692-2570T |
| Pank | DoA. Bovrelo | Sme 19/63 | 20319 |
| A17is - 94 |  |  | 20320-20353 |
| House 1 - 20 | 8. Voolvertion | Jue 28/63 | 22006-22005 |
| Mosee 1 - 22 | 1. Eaundors | Juny 9/63 | 20650-20672 |
| crice \% Prantiom | 18. Toolvestom | A4\%. $23 / 63$ | 22000 |
| Tols 8 - 20 | A. Mutherseen | Eopt. 5/63 | $2370-2376$ |

Cays:
A coay man lualit the abere of Morriaen inke abont I/4 of a inic trem the aboulagis. Ive $14 \times 26 \mathrm{scot}$ tomt fermos, an affion ahook, eese shook, malipart; and amas vhart verw cemstruetod.
Mne Guthing
About 130,000 foet at limes apaced at 2008 oot imtosvals vose out at which aboest 53,000 soes wase camerseted to Molurzian,

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\text { - gun } 5
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 stagred gred uaing the reat curth tren evas as a baco ismo vee establimbed 805 seocmalecanee soll campling. gith is zoforsed to as the Tols grid es ogpeed to the rasu grill the showtage.
8uswortine and Mappings
 ausveged by Mollillian, ligto, Sesio, and Goble, B. C. Land Rurvegres and the lote recoriod tis the Crimeos Iand Distriet.

| cilas | 12 | M.O. | Lt | 6842 | Euem | 19 | M.C. | dot | 6848 |
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| . | 2 |  |  | 6847 |  | \$20 |  |  | 6853 |
| $\cdots$ | 碞 | $\omega$ | - " | 6843 |  | 4 | - | - | 684 |
| $\omega$ | ${ }_{4}$ | - | - | 6846 | $\ldots$ | 422 | - | - | 89 |
| - | 45 | $\cdots$ |  | 6844 | m | 13 | - | - | 685 |
| $\omega$ | \% | - |  | 6845 |  | 124 |  |  |  |

(13 Erecticmal - Lot 6854
Most af the Most trenchom were plane tabled. Howoves, the 27, 21 and 23 north trupohos and the trumobes east of the cseck wose arsveyod by trumatt and not reologleally mapged is dotail. The bese lians and tusm-alis were survaged by trimalt using slope distanoss. Drelli holes d, 2, and 3 veso lecatod by plane teble, th by transty, 55 and 16 by ohatit

 ase approximaticam. Iloat sloag the grid lines mes mapped priter to the tremohing.
Geoohomistisy and Geophriles:

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Soll samples were takon the grid at 200 root intervile. Initially thoy ware analywed by cold aoid extreatsen rhich gave extremoly hifh values along shoar senos and at the base of slopes. The gamples werv se-sua for total coppor coatemt which, althoagh atill sefloctiag tegograghy, did catline a broad ancmalous some. The resulte, howoves, were af uitio valuo in spotilug dexil holes.

The anis potoattal methed ves appilod hut aithouch it indsoated amemicus somon, it dis not boly lceato dilli targets.

Both the 1,800 and 5,000 eyelo J.E.M. wose mead. Semo small angles were obtained in the sane of interest. the bost J.E.M. anomaly (and coinoident S.P.) was found en the oastern ronching indscated a pyrito-pycrebetsto

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 highs whoreas tho cientral gart of tho latruaive and tho moser Linear wre expressed by a mag. 20 w . the amall high zago anemsy, west of the sese base $2 l i v e$ ot 12 morth may bo tom to a cencontration of pyschotits. Dafortunatoly, the 8 issit ankenis used roquised ropaire bofore complotion of the suswy. The reaults of the verk using the cecood askende do not cerrelate very woll with the daitled worl. gurlaonim:

A Dhis Gat, was rented frem Yort cuargo Centrenture of
 drive volicios vas built srem Hatabory Arw ca Babive Inte to the Morrisen Camp. A whart wes batlt and loeding ares clearred at Bablne Lahb. Iram camp, three secoms scede wero buist, ane to the wast sone at 25 mosth as the sese base lino, eno to the oast son at about 12 north an the 25 oast base Line, and ano to the morth most cosnos of the grid mear 96 mosth and 35 weat. 8leghthy mose then 20,000 zeot af cat. Aronohing wes teme an the cast and rost seses.

## Binvtific and Samplings

Pite were blastod in the cat. Aremahes uning a pleajer driss. Orab samples were takea from theso pite ealy in the 27, 21, 25 and 27 north trwehes in the wost sean. Ino small tronchos wore blestod and menckod out in the 25 aorth eat. treach.
Dedrling
Canadias Longyoar ceatracted two exilling jobs, coe in August (AX) and the othor (AX wireling) in Cotober, 1963. Holes $2,2,3$ and 4 were comploted unior the rlyst ecatseot and holes 5, 6 and 7 vere drilied da October giviag a total af 2,406 foet of drisling.
Ascessment:

 Additicand yoar vas applied to the Bllem olaim which was logally surveyod.

- 8ACRE 7 -

COSTS
Job Man Daya (Norands) as Contrect Cont
Staking 28
Camp 40
Line cutting of
Survoying \& Mapping 54
Geochem. 31
Geophyaies $\quad 72$
Road \& Stripping. 20 (Eupervision) 6,877.61

## CONCLUSION

The Morrison Property is a fairly typical sub-oconomio perphysy oopper doposit. The mineralization is rolated to the laulting and srecturing of biotito altered and ailloified porphyry and sodimonts. The best reausts ( 336 foet of $0.49 \% \mathrm{Cu}$ ) were obtainod is D.D.H. No. 1 mear the northern and of the stock and the intersection of the fault sano and altared rim of the intrusive.

 this bole. However, tho possible toanage and gredo mould yrebalit to gubmarginal. Thaseiore, surthor werk to not reccumondod.

## 8. Toolverten. Geologiat. <br> Apeld, 8964.

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## THF MICROSCOPIC STUDY ON THE DRILH CORES

## MOBRISOM LAKEAB.C.

## SIMMARY

Feldspar porphyrite $(E-1-175.4)$ and the low grade motamorphosed argillaceous rock (high sillca content) ( $5-1-268$, E-1-280) are the rock types shown by the drill cores.

Chalcopyrite, a minor amount silver white minerals ( $\mathrm{E}-1-175 . \mathrm{A})$ and bornite ( $E-1-268$ ) are observed in the sections. The chalcopyrite occurs as fine gralns disseminated in the rocks and in the quartz vilinlots, fine fractures which cut the rocks. The grain size of the chalcopyrite varies from extremely fine to visible grains. *

Bornite crystals are partly replaced by the chalcopyrite.

The fine fractures and quartz veinlets appear to be the controlling features for the copper mineralization in the rocks.

