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REPORT ON
NOR-WEST KIM RESOURCES LTD
PROPERTY
KAMLOOPS AREA

By: J.A. Mitchell,
April, 1972

*Kimberley
Copper*

REPORT
ON
THE PROPERTY OF
NOR-WEST KIM RESOURCES LTD. (N.P.L.)
KAMLOOPS MINING DIVISION
BRITISH COLUMBIA

by
J. A. Mitchell, P. Eng.

Vancouver, B. C.

April 24, 1972.

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INTRODUCTION

The following report is written at the request of C. C. Rollins, President of Nor-West Kim Resources Ltd. (N.P.L.), with registered office the 14th Floor, 1030 West Georgia Street, Vancouver, B. C. It is based on a review of old reports as listed in the bibliography and on past experience in the surrounding area which indicates that much of the mineralization in this area is so very close to being commercial ore that thorough investigation is thoroughly justified. This appears to be the situation on the property under review.

The object of this report is essentially that of updating the report of Mr. C.T. Pasioka, B. Sc., Geologist, dated April 12, 1968. The writer considers it to be an excellent report in every respect. The work recommended was only partly done by Phillips Petroleum. A final report covering the work done by Phillips Petroleum is not available to the writer but it appears that work was discontinued when funds budgeted were expended.

Mr. Pasioka's report is appended. The writer will only deal with changes that have taken place since Mr. Pasioka's report was written and draws attention to the excellent coverage by V.A.G. Preto in the 1968 Annual Report of the Minister of Mines and Petroleum Resources.

SUMMARY

After a review of all available information on the properties of Nor-West Kim Resources Ltd. it is obvious that while work done to date has not proved up any body of commercial ore at todays prices, that there are zones of appreciable copper content which could become ore under a more favorable price structure. It is also obvious that there are other areas of the property with promise on which no drilling or trenching has been done, but on which there are geophysical, geochemical and geological features of interest. In general the area is favorable because of :

1. The presence of generally well mineralized Cherry Creek Intrusives particularly a brecciated phase.
2. The presence of multiple faults.
3. The presence of both main contacts of the Iron Mask Batholith with favorable Nicola volcanics.
4. Recorded claims are apparently all in good standing for up to eight years on basis of work already done. Hence it is only necessary to keep up payments on Crown Grants.

It is recommended that the financial affairs of the company should be put in order and that additional funds be raised to complete recommendations of Mr. C. T. Pasioka and to carry out preliminary geological, geophysical and geochemical surveys on ground acquired since Mr. Pasioka's report was written.

PROPERTY

The property now consists of 7 Crown Granted claims and 69 claims held by right of location and presently in good standing on the basis of work recorded. These are as follows :

I Crown Granted Claims

<u>Name</u>	<u>Lot #</u>	<u>Certificate of Title #</u>
Kimberley	1447	205003F
Charlotte	1448	205003F
Last Chance	1449	205003F
Morning Star	1450	205003F
Stem Winder	1451	205003F
Occidental	1452	205003F
Keystone Fr.	1453	205003F

II Claims Held by Right of Location & Record

A. Purchased Claims

<u>Name</u>	<u>Record #</u>	<u>Expiry Date</u>
Alf 1-6 incl.	33470-5 incl.	May 17, 1982
Dan 1-4 incl.	43857-60 incl.	July 8, 1972
Jeep 1-10 incl.	42730-39 incl.	May 14, 1982
New 1	67115	Nov. 23, 1979
* New Fraction	67116	Nov. 23, 1979

<u>Name</u>	<u>Record #</u>	<u>Expiry Date</u>
Joe 1-4 incl.	69349-52 incl.	June 10, 1980
Joe 5-12 incl.	69355-62 incl.	June 10, 1980
Joe 13 & 14	69353 & 54	June 10, 1980
Joe 15-28 incl.	69363-76 incl.	June 10, 1980
KA2 Fraction	69734	July 10, 1980

B. Claims staked by Company

* Kim 1-5 incl.	62633-37 incl.	February 13, 1985
K102	67077	November 21, 1979
* Jeep 13	67170	November 16, 1979
Adze Fraction	69512	June 20, 1980
Dan 5 & 6	69513 & 14	June 20, 1980
Jeep 14 Fr. & 15	69515 & 16	June 20, 1980
Jeep 16 to 18 incl.	69667 to 69 incl.	July 4, 1980
Apex Fraction	69678	June 20, 1980
Zed Fraction	70137	July 31, 1980
K4	78860	April 17, 1980

* These claims are shown on government records to be in conflict with previously staked claims but in every case the previously staked claims appear to be the property of Nor-West Kim Resources and the later claims were probably staked to protect possible fractions.

The company also has acquired a 50% interest in 6 Crown Granted and 46 recorded mineral claims. The other 50% interest is owned by United Bata Resources (Canada) Ltd. These are as follows :

I Crown Grants

<u>Name</u>	<u>Lot #</u>	<u>Rights</u>
Kentucky	835	Metallic Minerals
Golden Star	845	Surface & Metallic Minerals
Number Seven	998	Metallic Minerals
Evening Star	1013	Surface & Metallic Minerals
Ben Hur	1037	Metallic Minerals
Prince of India	1038	Metallic Minerals

II Recorded Mineral Claims

<u>Name</u>	<u>Record #</u>	<u>Expiry Date</u>
Dart 1 & 2	34181 & 82	30/8/82
Key 1 & 2 Frs.	34183 & 84	30/8/82
* Rocket 1 to 16 incl.	34185 to 34200 incl.	30/8/82
* Ursus 1 to 5 incl.	34206 to 34210 incl.	1/9/82
* Shear 1 to 5 incl.	34211 to 34215 incl.	1/9/83
* Venus 1 to 11 incl.	34216 to 34226 incl.	1/9/83 (Venus 1) 1/9/82 (Venus 2-11)
Dart # 3	34227	1/9/82
Shear 7 & 6	34291 & 90	19/9/82
Ursus 6 & 7	34292 & 93	19/9/82

- * The following claims listed above are recorded as fractional claims:
Rocket 2, 5, 15, 16; Ursus 4, 5, 7; Shear 5, 7; Venus 11.

HISTORY

Since Mr. Pasioka has covered the history up to the date of his report it is only necessary to record that a drilling program apparently consisting of 11 holes was done by Phillips Petroleum during the latter part of 1968 and early part of 1969. This was all done along a zone or zones of mineralization indicated by I.P. and geochemical anomalies on the Kimberley, Charlotte and Morning Star Crown Granted claims. Apparently nothing has been done since Phillips Petroleum relinquished its option. Recent success on the Afton property on which, like on the Kimberley ground, mineralization has been known for 74 years, points to the importance of thoroughly testing all possibilities. Further work is therefore anticipated.

RESULTS OF DRILLING BY PHILLIPS PETROLEUM

A complete report on this is not available to the writer but a letter on file from J.J. Crawford of that company gives the following information: The letter is dated January 9th, 1969 and records that holes PK 1 to 7 and #10 had been completed in 1968 and that drilling was to be resumed shortly.

The eight holes completed totalled 4175 feet and all dipped at -45 degrees except 7 and 10 which were slightly steeper at -55 degrees.

Individual depths and assay results are tabulated below. Hole #10 shows 155.5' of core in three sections assaying in excess of 0.50% copper.

PK #1	866.5 feet, no assays given.
PK #2 & PK #3	351.0 feet and 279.5 feet respectively, showed only minor mineralization.
PK #4	438.0 feet assayed 0.35% copper for a core length of 62 feet of which 20.5 feet assayed 0.83% copper.
PK #5	502.5 feet deep shows 240 feet of 0.5% copper of which 121 feet assayed 0.70% copper.
PK #6	470.5 feet deep had 3 zones, an upper of 17 feet assayed 0.29% copper, an intermediate of 25.5 feet assayed 0.34% copper and a lower of 59.5 feet assayed 0.32% copper.
PK #7	267.0 feet deep had only 25 feet of 0.24% copper.
PK #10	1000 feet deep had 5 zones as follows : 54.5' - 0.52% copper 51.0' - 0.54% copper 120.5' - 0.33% copper 50.0' - 0.52% copper 117.0' - 0.38% copper

There is apparently no information on file regarding holes 11, 12, 13. The Minister of Mines Report for 1969 records that 3 holes totalling 750' were drilled.

These 11 holes drilled a portion of the westerly anomalous area on the Charlotte, Morning Star and Kimberley claims.

GEOLOGY AND MINERALIZATION

Full descriptions are given in Mr. Pasieka's report and Mr. V. A. G. Preto has added valuable information in the 1968 Minister of Mines Report. In particular he notes the four apparently separate zones of appreciable copper mineralization in the areas drilled and trenched. He notes that two of the zones appear to have a northerly to northeasterly trend but that in general the zones are irregular and unpredictable, thus corroborating Mr. Pasieka. He further notes that the smaller areas of copper mineralization are flanked by much larger zones of strong pyrite and magnetite mineralization, which tends to be strongest near but not exactly at the sites of, copper mineralization. He points out that this fact may be used advantageously as a prospecting guide in the area.

Mr. Preto also indicates that a porphyritic breccia of the Cherry Creek Intrusives, very distinctive in character and generally intensely altered is commonly associated with the copper mineralization. In the 1967 Minister of Mines Report this rock is described as follows by Mr. Preto : Quote " The breccia, most probably produced by intrusive and perhaps even explosive processes, consists of a fine grained, generally highly altered matrix, in which are set rounded, sub-rounded, and angular fragments of Cherry Creek and older rocks both of plutonic and volcanic nature. The matrix material usually forms a large proportion of the rock, so that fragments are seldom in contact with one another. The high degree of alteration of the matrix may indicate a large amount of fluids and

(or) volatiles available during the magmatic stage of formation of the rock." Unquote. This therefore forms another useful tool in the search for copper mineralization.

A small outcrop of Cherry Creek Intrusives is noted at the northwest boundary of the Occidental claim. This would coincide with an indicated increase in chargeability on the east end of lines 18N and 16N. It would appear that these lines and all those to the south should be extended easterly to catch the projected southerly extension of this body of intrusives.

A copper occurrence shown in the Nicola volcanics east of Knutsford in Dr. Cockfields map 886A, Nicola Map Sheet, would appear to be on the Joe # 10 claim and should be investigated.

GEOCHEMISTRY AND GEOPHYSICS

This work has also been covered thoroughly by Mr. Pasioka and is in any event too extensive to treat in detail in this report. It is noted that all anomalous areas have not been tested by drilling and this should most certainly be done. In particular there are I.P. anomalies in the Nicola volcanics which have not been investigated. As noted above there may be a band of favorable Cherry Creek Intrusives trending parallel to the main intrusive contact but just east of it in the Nicola volcanics as mapped. Mr. Pasioka draws attention to other areas not yet investigated.

The area of the United Bata - Nor-West Kim holdings adjacent to the southwestern contact of the batholith should also be investigated in the usual manner by geochemistry, geophysics and percussion drilling of anomalous areas.

CONCLUSION AND RECOMMENDATIONS

From my review of available information I conclude that the holdings of Nor-West Kim Resources could very well prove to be a valuable source of copper as several encouraging geophysical and geological features remain to be tested. The contacts of the batholith with the overlying Nicola rocks are considered the most likely areas in which to find ore particularly when the younger breccias and fault zones are also present. Nor-West Kim ground covers such favorable features on both contacts of the Batholith. It is therefore recommended that the company is fully justified in clearing itself of debt so that it may negotiate a deal with interested parties. ✓

Without a thorough study of all information which can be made available and time to fully assimilate this information it is difficult to lay out in detail a program of further work. This should be done either by someone thoroughly familiar with all the details of the work done to date or by the field staff of any group assuming responsibility for additional work.

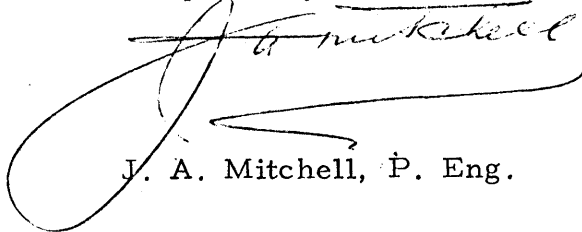
It is obvious however that additional work required on claims acquired since Mr. Pasioka's report was written, 37 in number of which only 4 are

(claims)

fractional would require an expenditure of about \$10,000 for line cutting and soil sampling, about \$20,000 for an I. P. survey and if anomalies are found a substantial amount for percussion drilling at about 200 foot centers to be followed where satisfactory results cannot be obtained by diamond drilling. One hundred thousand dollars spent on a diamond drilling program would do little more than test an area 1400 feet by 400 feet by 500 feet deep with vertical holes at 200 foot centers. It is thus likely that several hundred thousand dollars could be justifiably spent on this ground where the chances of finding an orebody are well above average.

It seems that some further work is justified to attempt to delineate the better zones found in drill hole #10 drilled by Phillips Petroleum but some if not most of the follow up expenditure recommended in phase II of Pasioka's report could be diverted to testing new ground which could prove more valuable than that covered by the Crown grants.

Respectfully submitted,



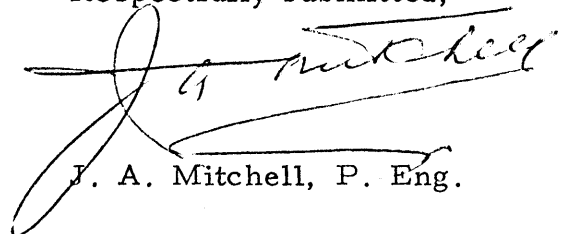
J. A. Mitchell, P. Eng.

CERTIFICATION

I, J. A. MITCHELL, of 2991 Mathers Avenue, West Vancouver, B.C.
HEREBY CERTIFY :

1. THAT I am a mining engineer, having graduated with the degree of Bachelor of Applied Science from the University of British Columbia in 1932.
2. THAT I have practised my profession continuously since graduation.
3. THAT I am a member of the Association of Professional Engineers of British Columbia.
4. THAT this report is based solely on a review of various reports dealing with the property of Nor-West Kim Resources Ltd. (N.P.L.) and the area of the Iron Mask Batholith.
5. THAT I have no interest either directly or indirectly in the properties or securities of Nor-West Kim Resources Ltd. (N.P.L.), nor do I intend to receive any.

Respectfully submitted,



J. A. Mitchell, P. Eng.

Vancouver, B. C.
April 24, 1972.

REFERENCE MATERIAL

- L. J. Manning Report on the Kamloops Property of Kimberley Copper Mines Ltd. (N. P. L.), November 10, 1967.
- L. G. Phelan M. A. Sc., P. Eng. - Summary and Progress Report on the Kamloops Area Property of Kimberley Copper Mines Ltd. (N. P. L.), October 1966.
- Philip G. Hallof PhD., Report on the Induced Polarization and Resistivity Survey of the Kimberley Claim Group, Kamloops area, B. C., October 1966. "
- L. G. Phelan Report on a magnetometer Survey of the Kamloops Property October 1966.
- L. G. Phelan Summary & Progress Report on The Kamloops Area Property of Kimberley Copper Mines Limited (N. P. L.), March 1967.
- Jon G. Baird B. Sc., P. Eng., Report on an Induced Polarization Survey of the Kamloops Property of Kimberley Copper Mines Limited, February 1968.
- V. A. G. Preto Report on Kimberley, Page 169, Report of Minister of Mines and Petroleum Resources, 1966, maps from this report attached to present report for reference.
- C. T. Pasieka B. Sc., Report on Property of Kimberley Copper Mines Limited (N. P. L.), Knutsford - Kamloops Area, Kamloops Mining Division, Province of British Columbia, Velocity Surveys Ltd., April 1968.

It is this last report that is being updated.

Reproduced from 1968 Report of
Minister of Mines and Petroleum
Resources.

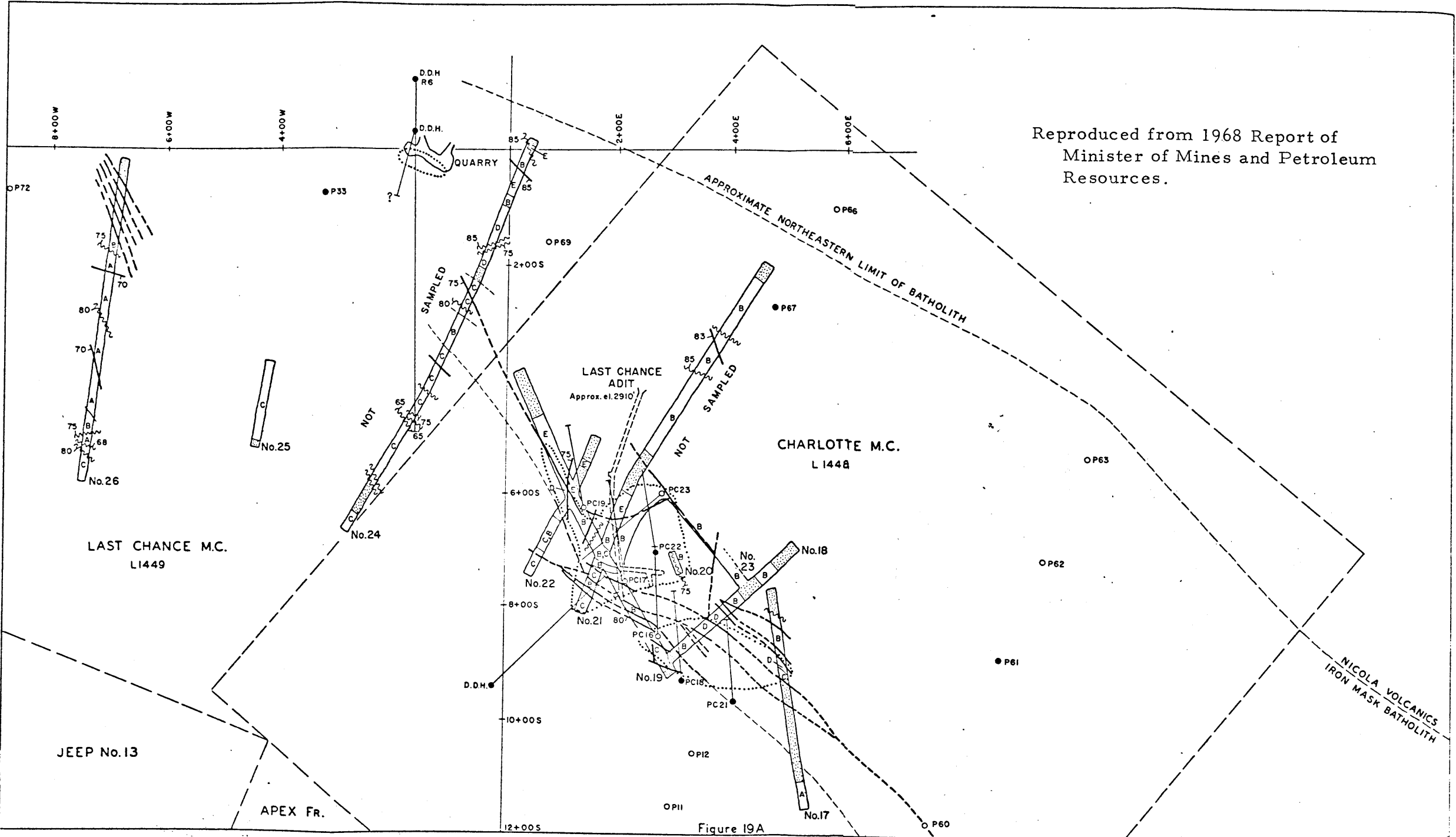


Figure 19A
Joins Figure 19
For legend see Figure 19

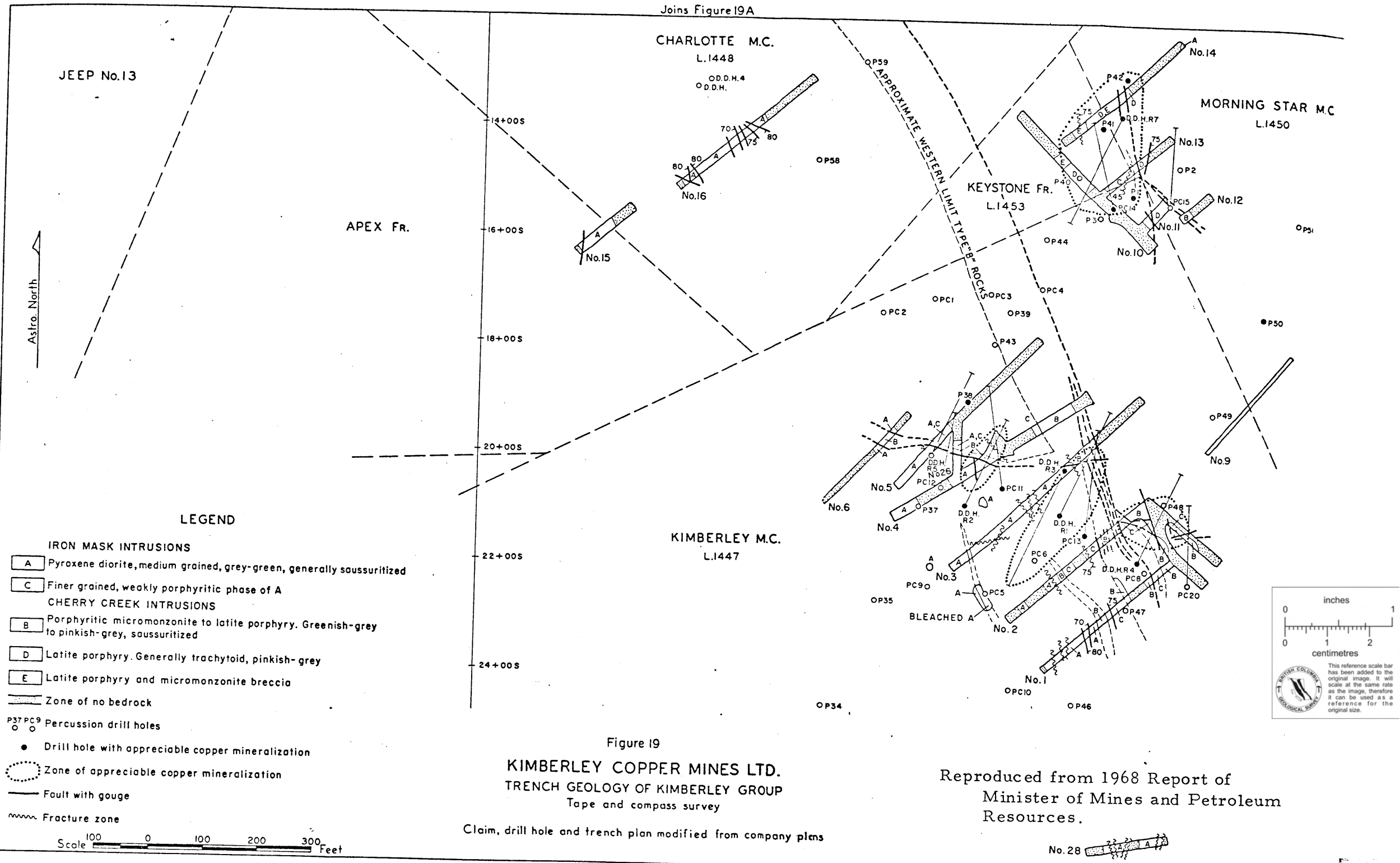


Figure 19

KIMBERLEY COPPER MINES LTD.
TRENCH GEOLOGY OF KIMBERLEY GROUP
Tape and compass survey

Claim, drill hole and trench plan modified from company plans

Reproduced from 1968 Report of
Minister of Mines and Petroleum
Resources.

No. 28

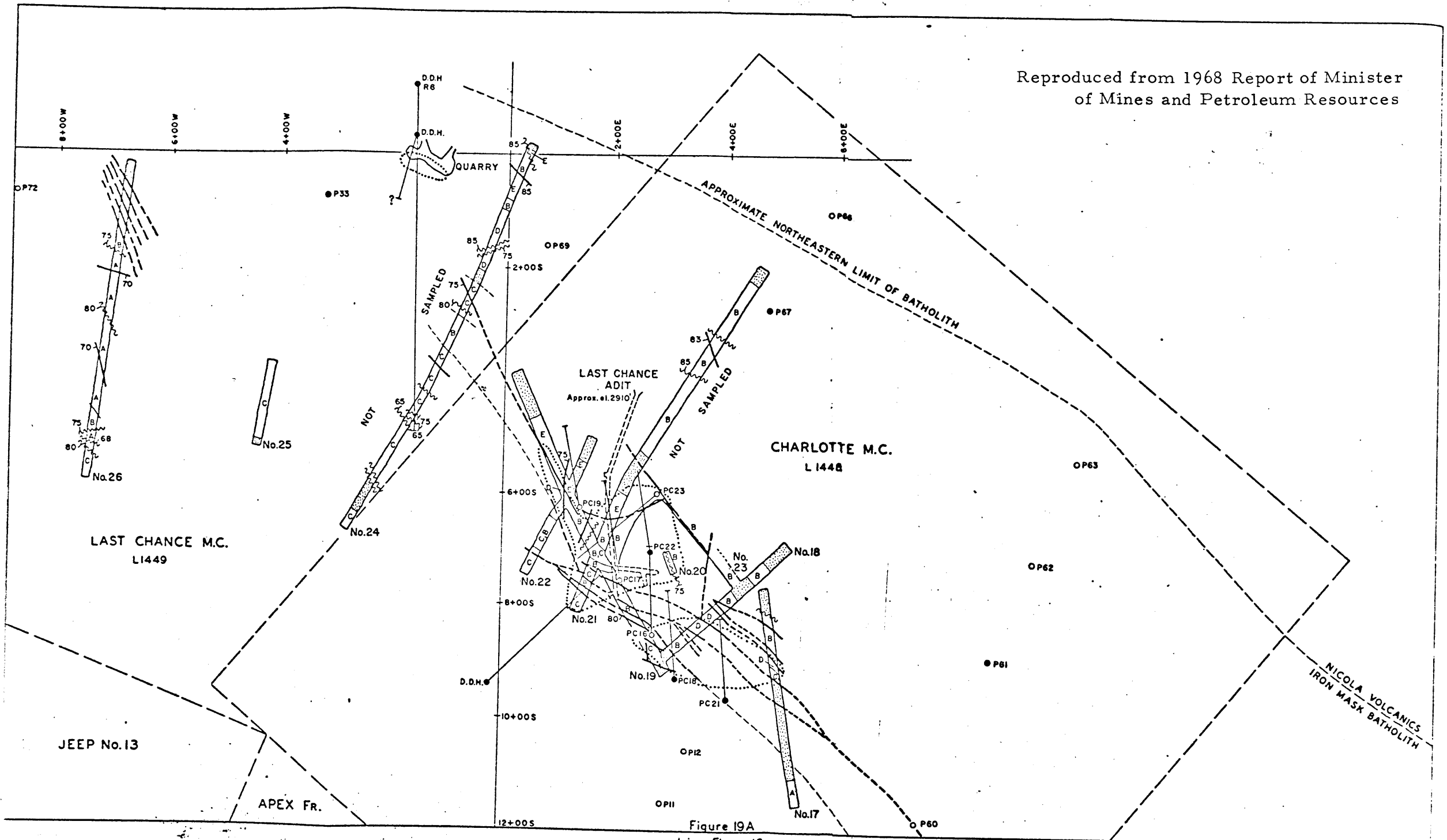


Figure 19A
Joins Figure 19
For legend see Figure 19

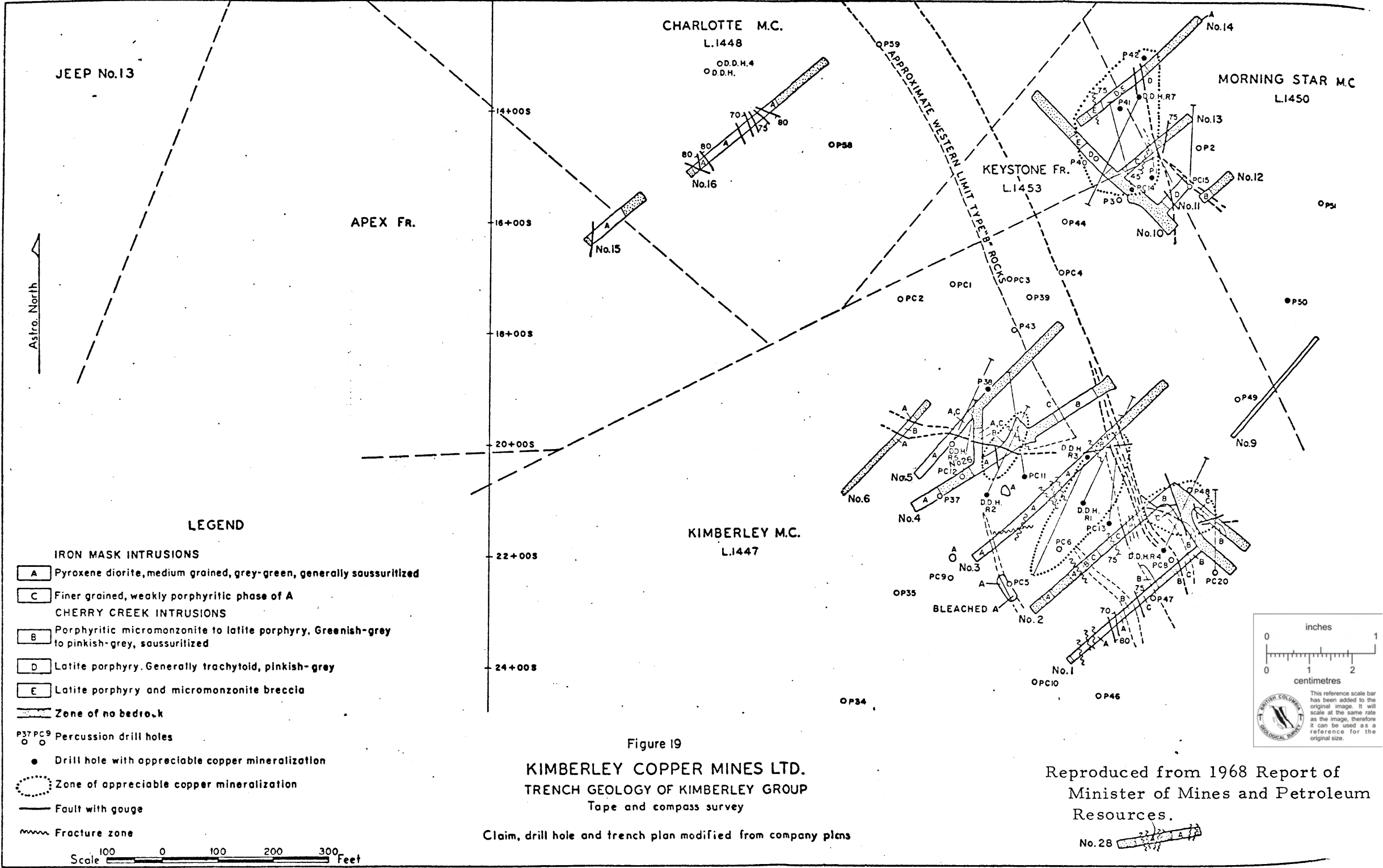


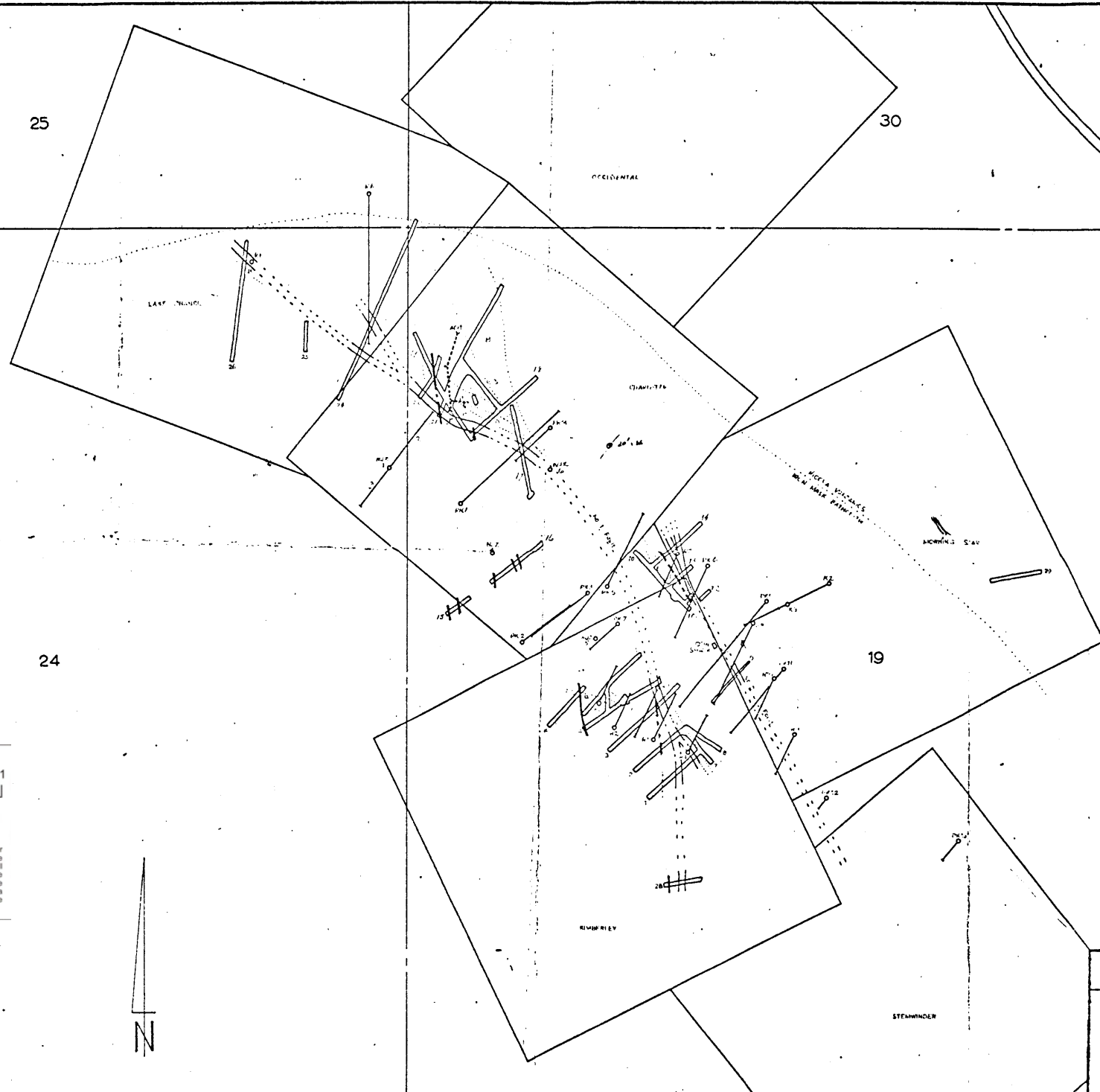
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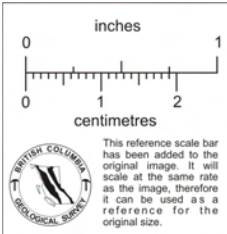
Reproduced from 1968 Report of
 Minister of Mines and Petroleum
 Resources.

No. 28



EXPLANATION

- A [Symbol] TYPE A VOLCANITE
- B [Symbol] TYPE B VOLCANIC BRECCIA
- C [Symbol] TYPE C VOLCANITE
- D [Symbol] TYPE D LATE PORPHYRY
- E [Symbol] TYPE E EARLY TYPIC MEDIUM
- F [Symbol] TYPICAL VOLCANIC
- G [Symbol] SECTION THROUGH STRATA
- H [Symbol] ROAD
- I [Symbol] TUNNEL
- J [Symbol] PLANNED DRILL HOLE
- K [Symbol] UNPLANNED DRILL HOLE
- L [Symbol] GEOLOGIC CONTACT



PHILLIPS PETROLEUM COMPANY
 MINERALS DIVISION JOB NO. MD-1113

MAP OF
 DRILL HOLES & GEOLOGY
 KIMBERLEY COPPER PROPERTY
 KAMLOOPS, BRITISH COLUMBIA
 CANADA
 Map 72-1