ASSESSMENT REPORT ON THE DARK 47 to 54 INCLUSIVE AND DARK 61 and 63 CLAIMS GROUP MINTO AREA WHITEHORSE MINING DIVISION YUKON TERRITORY

Long 130°-00'
Lat 62°45'

LION MINES LTD. [N.P.L.]

By

E.O. CHISHOLM, P. ENG.

August 15, 1974

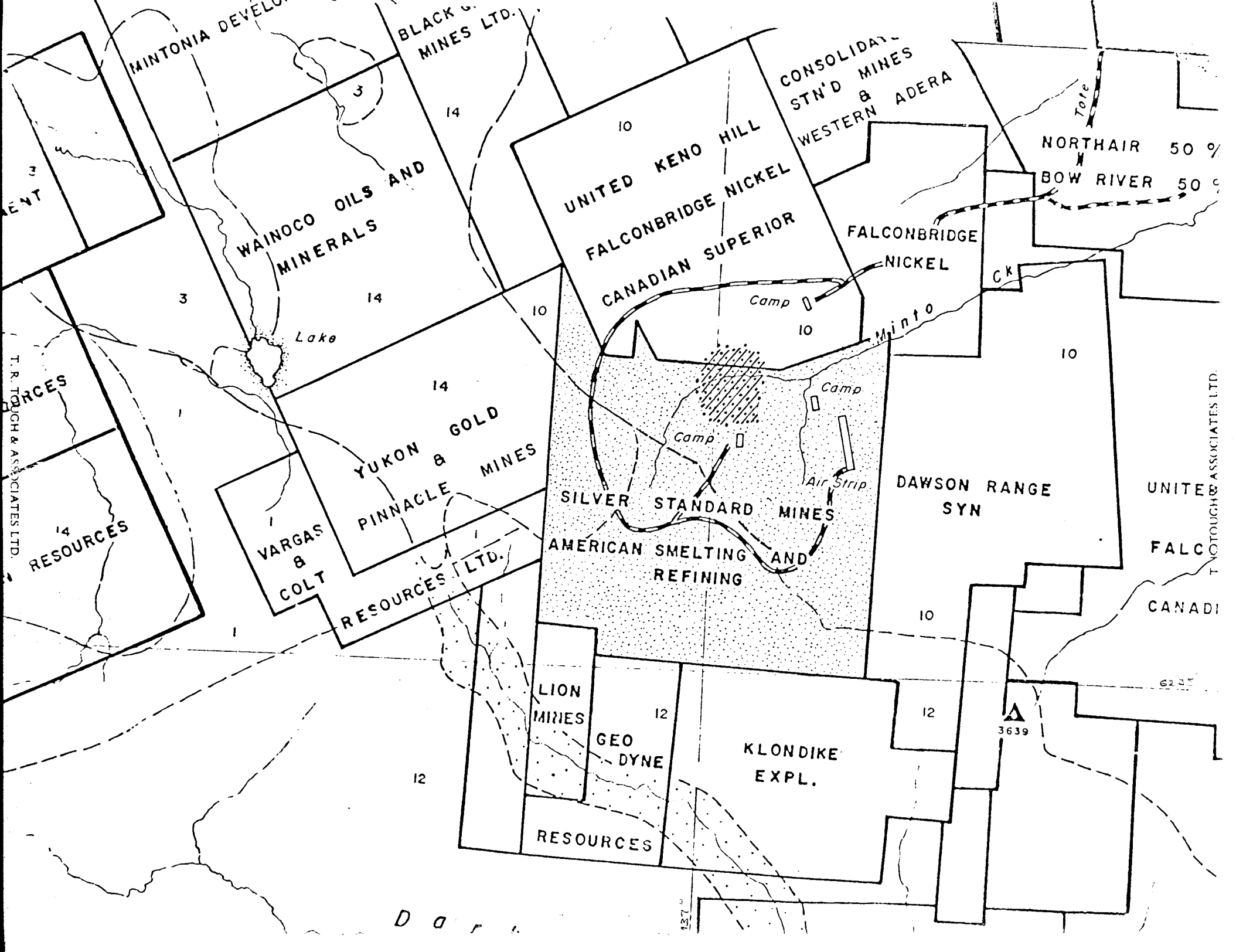
claim sheet 115-I-11

LOCATION: 55 miles northwest of Carmacks, Yukon Territory, Whitehorse Mining Division

AUTHOR: E. O. Chisholm, P. Eng.

PERIOD: July 9-12, 1974

HOLDER: Lion Mines Ltd. [N.P.L.]
821-602 West Hastings Street
Vancouver, B. C.


MINTONIA DEVELO
BLACK
MINES LTD.
CONSOLIDA
STN'D MINES
& ADERA
WESTERN
NORTHAIR 50 %
BOW RIVER 50 %
Tote
UNITED KENO HILL
FALCONBRIDGE NICKEL
CANADIAN SUPERIOR
FALCONBRIDGE
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Camp
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WAINOCO OILS AND
MINERALS
Lake
YUKON GOLD
& PINNACLE MINES
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I N D E X

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SUMMARY:

The Dark claim group of Lion Mines Ltd. [N.P.L.] are located two miles southwest of a major copper discovery in the Minto Area made jointly by Silver Standard Mines Ltd., and Asarco Exploration Ltd.

The claims are largely covered with overburden and a magnetometer survey was carried out by L. Sostad of Newcastle Explorations Ltd., 837 Friar Crescent, North Vancouver, B.C. All claims were tagged.

No marked anomalous conditions were noted and no further work is recommended at this time.

PROPERTY:

The Lion Mines property comprises a rectangular block of ten adjacent unpatented mining claims which were registered in Whitehorse as follows:

Name of Claim	Grant No.	Record Date
Dark 47 - 64	Y-76967 - 76974	September 4, 1973
Dark 61 & 63	Y-76981 & 76983	September 4, 1973

LOCATION & ACCESS:

The Dark claims are located about 55 miles northwest of Carmacks and 160 miles northwest of Whitehorse. The town of Minto lies 12 miles southeast on the opposite side of the Yukon River. It is some 150 miles by road from Whitehorse and has a landing strip for light and medium sized

planes. The nearest landing site on the northwest side of the river is located at the Silver Standard Mines property two miles to the north. A winter road passes from Minto to Silver Standard property. Helicopter service is available at Carmacks.

REGIONAL GEOLOGY:

The regional geology of the area is described by H. S. Bostock in G.S.C. Memoir #189. The geological setting of the new mineral discoveries made in the area between Minto and Carmacks in 1970-71 has been summarized by Alan R. Archer, Consulting Mining Engineer of the firm of Archer & Pathro, Vancouver, as follows.

These occur in a large Cretaceous batholith of granodiorite to diorite composition that has intruded Yukon Group metasediments and Mount Nansen Group volcanics. The Yukon Group is a metamorphic complex of Cambrian or older age that forms the basement sequence of southwestern Yukon The Mount Nansen Group is a highly altered and partially granitized [variably to syenite or monzonite] sequence of volcanic flows and breccias that is largely confined to a narrow northwest trending belt which follows the Yukon River and defines the position of the Teslin Lineament. The lineament is the major structural feature of the area and although it exhibits no post-Triassic lateral movement, it has been the site of Vulcanism from the Triassic through to recent times. Several younger volcanic events have partially covered the older rocks. These are the Tertiary Carmacks Group, which is the most extensive, and the modern Selkirk Series of flows and breccias.

This part of Yukon exhibits gentle, rolling topo-

graphy, with topographic relief of less than 1,500 feet. It is dry with annual precipitation of less than 15 inches. Vegetation cover, although not dense, is widespread and outcrop is usually less than 1 per cent. The western advance of Pleistocene glaciation has deposited various quantities of loosely consolidated till in the valleys to an elevation of about 3,500 feet above sea level. Although outcrop is scarce, overburden rarely exceeds 10 feet in thickness above the glaciated valleys and is composed mainly of decomposed bedrock. The southern portion of the Minto area has a cover of recent volcanic ash up to 12 inches thick immediately below a few inches of moss and peat. Permafrost is extensive but is not intense or deep.

The three recent discoveries, the Dawson Range Joint Venture Williams Creek Property and the Silver Standard and United Keno Hill properties, are all quite similar. Mineralization is found in schistose zones within the main dioritic intrusion. These zones have an orientation sub-parallel to the Teslin lineament, and are somewhat similar in composition to the enclosing granitic rocks, but with more biotite and hornblende. The main ore minerals are bornite, chalcopyrite, chalcocite and traces of molybdenum. Pyrite and pyrrhotite occur in minor quantities. Weathering has resulted in conversion of copper sulfide to copper oxide at surface with little change in grade. Published drill results by Dawson Range Joint Venture and Silver Standard Mines Ltd. suggests that individual schistose zones are fairly continuous both horizontally and vertically and have a width ranging from a few feet to a little over 100 feet. Assays over these widths range from 1 per cent to 3 per cent copper with minor gold and silver credits. Soil geochemistry, using copper as the indication metal, has proven to be the most effective exploration tool in locating the mineralized zones. The only

geological guidelines in exploration for other mineralized zones appears to be proximity [within 10 miles] of either the Teslin lineament on the Mount Nansen volcanics which follow the lineament. Also, all the showings of economic interest occur within the batholith rather than the older volcanics. The younger volcanics are not favourable for mineralization.

GEOLOGY OF THE DARK CLAIMS:

The published geological map of the area [Map 340A by H.S. Bostock] indicated the Dark claims are underlain by the same favorable granitic host rocks as the Silver Standard - United Keno discovery. This is further confirmed by government aeromagnetic map 3314G which outlines the granitic intrusive as a uniform northwest trending high anomaly surrounded by a series of small low-order anomalies that represent volcanic contact phases of the intrusive. The magnetics of the Dark group show a similar magnetic pattern to the copper bearing area on the adjoining Keno Hill - Silver Standard properties.

The property is mostly covered with shallow overburden and swampy ground. Indirect methods of exploration such as magnetometer survey is recommended for initial exploration, followed by bulldozer trenching and diamond drilling if warranted.

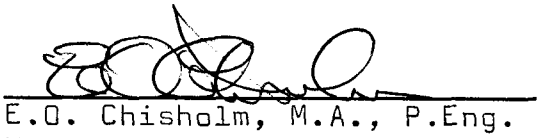
MAGNETOMETER SURVEY:

A Sharpe MF-1 Fluxgate Magnetometer was used, and looping back to base stations readings were taken at 100 foot intervals along east-west lines spaced at 400 to 800 foot

intervals. These lines covered a total length of seven miles. The diurnal variation was from 0-150 gammas per loop over a time of 40 minutes to one hour. Results are plotted on the attached plan. Cross lines were flagged each 100 foot station. A baseline of 7,600 feet was cut and flagged. All claims were tagged.

DISCUSSION OF RESULTS:

The magnetic relief was low and variation locally varied from 100 to 700 gammas. A low anomaly occurs at the south end of the claims group. A small outcrop of andesite lava was found near the northeast corner of claim Dark 52 where the magnetic intensity was in the order of 600 gammas. The claims are possibly underlain by lavas with a low magnetic relief. No further magnetometer work is recommended at this time.



E.O. Chisholm, M.A., P.Eng.
Vancouver, B. C.
August 15, 1974

LIST OF PERSONNEL

L. Sostad 837 Friar Cresc., No.Vancouver, B.C.	Magnetometer Operator	July 8-13/74	@ $100.00/day
P. McAkerian Whitehorse, Y.T.	Helper	July 8-13/74	@ $ 50.00/day

CERTIFICATE

I, Edward O. Chisholm of Suite 821 - 602 West Hastings Street, City of Vancouver, British Columbia, hereby certify that:

1] I am a graduate geologist with offices at 821-602 West Hastings Street, Vancouver, B. C.

2] I am a graduate of the University of Toronto, 1939, with a degree of B.A. and M.A. in Geology.

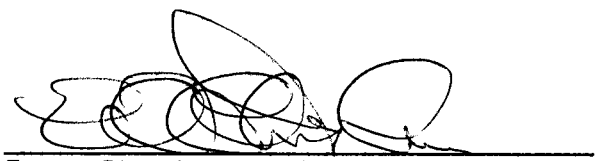
3] I have been actively engaged in Mineral Exploration for thirty years.

4] I am a member of the Association of Professional Engineers of Ontario and British Columbia.

5] I am the president of Lion Mines Ltd. [N.P.L.].

6] This report is based on geophysical data derived from work carried out under my supervision on the Dark property by L.R.W. Sostad of Newcastle Explorations, 837 Friar Crescent, North Vancouver, British Columbia.

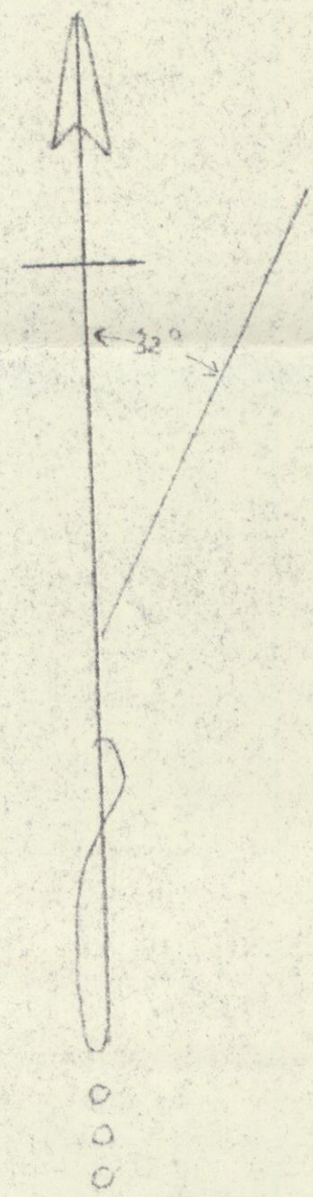
DATED at the City of Vancouver, in the Province of British Columbia, this 15th day of August, 1974.

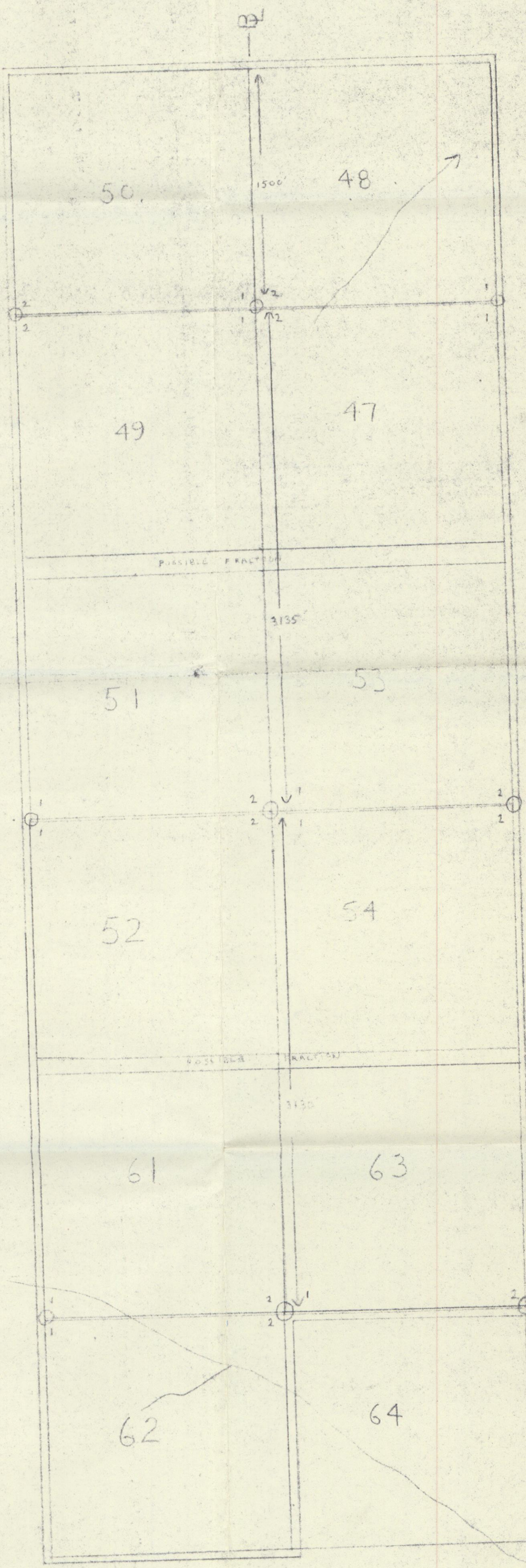


E.O. Chisholm, M.A., P.Eng.

DARK #47-54 & 61-63 CLAIMS

NOTE - SLOPE CORRECTION NOT APPLIED



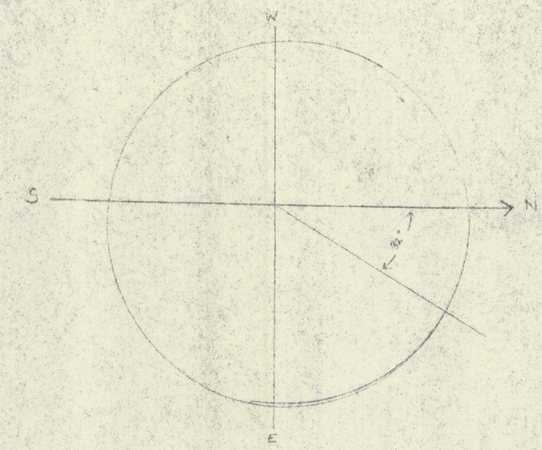


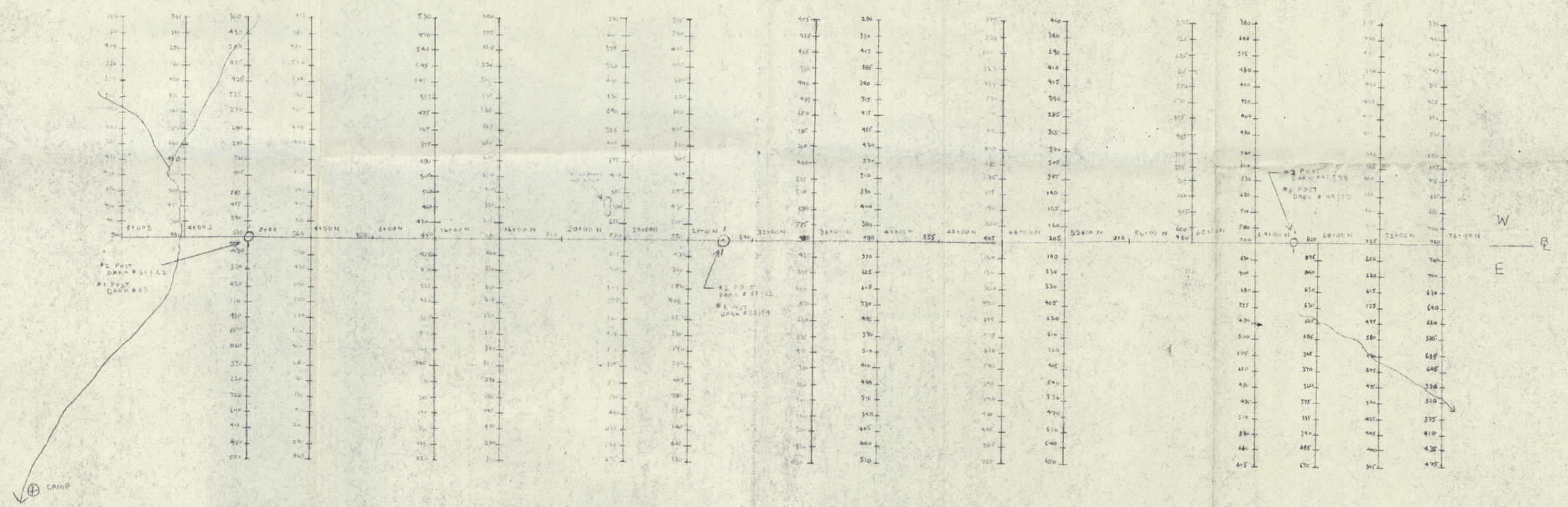
GEO-PHYSICAL SURVEY

LION MINES LTD

DARK Nos 47-54 & 61-63 MINERAL CLAIMS

WHITEHORSE M.D.





LEGEND

CLAIM POST - - - -⊙- -

CREEK ~ - - - - ↓

SCALE ~: 1 INCH = 400 FEET

MAGNETOMETER MODEL — SHARPE MF-1 (FLUXGATE)

PREPARED BY ~: NEWCASTLE EXPLORATION LTD.

L.R.W.S.

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
E.O. CHISHOLM