



REPORT ON
AEROMAGNETIC SURVEY
WHITEHORSE AREA, YUKON TERRITORY
ON BEHALF OF
LEWES RIVER MINES LTD.

6/8 done

by

Richard O. Crosby, B.Sc., P.Eng.

July 8, 1968

**This report has been examined by
the Geological Evaluation Unit.
Approved as to technical worth by:**

D. C. Yindler
RESIDENT GEOLOGIST

**Approved as to cost in the amount
of \$ 6108.15**

R. B. Hallam
FEDERAL MINING INSPECTOR

**Accepted as representation work
under Section 53(4) Yukon Quartz
Mining Act.**

James Smith
COMMISSIONER OF YUKON

018883

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alteration zones containing magnetite. In the present geological environment these localities could be of interest for copper mineralization.

The aeromagnetic survey was under the direction of Mr. Andrew Price with assistance from Mr. Ronald Pollard.

PRESENTATION OF DATA

The magnetic information is presented on five map sheets on a scale of 1:12,000. The planimetry on these sheets has been traced from the uncontrolled photomosaics employed for navigation purposes. Magnetic data are contoured at a 100 gamma interval. Corrections have been made for diurnal variations and any possible instrumental drift by means of (a) a recording magnetic base station and (b) control lines.

DISCUSSION OF RESULTS

Map Sheet 1

A 400 gamma linear anomaly extends southward from line 147 to line 136 centred along the western edge of the survey area. Quantitative depth determinations suggest the source of the anomaly to be shallow, probably at the surface of the ground. The linearity of the feature suggests a magnetic dike.

A circular anomaly of about 500 gammas relief is located approximately 1 mile northeast of this feature between lines 139 and 202. The magnetic relief of this feature is due to magnetite either in igneous rocks (intrusive or extrusive) or in skarn alteration zones. The source of this anomaly is also near surface.

Map Sheet 2

The most prominent feature on this map is a contorted area of

500 to 1000 gammas relief lying in the southwest half of the survey area. The relief is obviously not of sedimentary origin and is due to magnetite either in igneous rocks (intrusive or extrusive) or in skarn alteration zones. The 1500 gamma contour generally outlines the contact of this igneous mass.

Map Sheet 3

The igneous contact referred to in the discussion of Map Sheet 2 continues southeasterly across this map sheet. The extreme southwest corner of the survey area consists of high frequency, high amplitude anomalies rising to a maximum of about 3000 gammas on line 54. This area of high magnetic relief is interpreted as arising from magnetite, probably in extrusive rocks.

Map Sheets 4 & 5

The limit of the igneous rock on the southwestern edge of the survey area continues to be outlined by the 1500 gamma contour. The disturbed magnetic pattern on the eastern edge of Map Sheet 5 suggests an easterly swing to this contact. The magnetic gradient centred on line 27 trend parallel to the direction of flight suggests a major structure in this vicinity.

A magnetic dike is interpreted on Map Sheet 4 northeast of Canyon Mountain north of Cantlie Lake.

CONCLUSIONS AND RECOMMENDATIONS

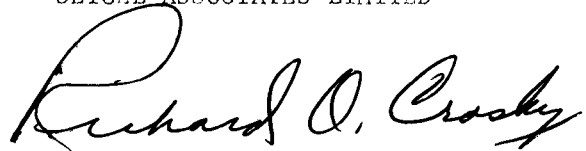
The aeromagnetic survey has outlined areas of igneous activity and possible skarn alteration zones.

It is recommended that these contact zones be surveyed by the

induced polarization method to check the distribution of metallic sulphide mineralization.

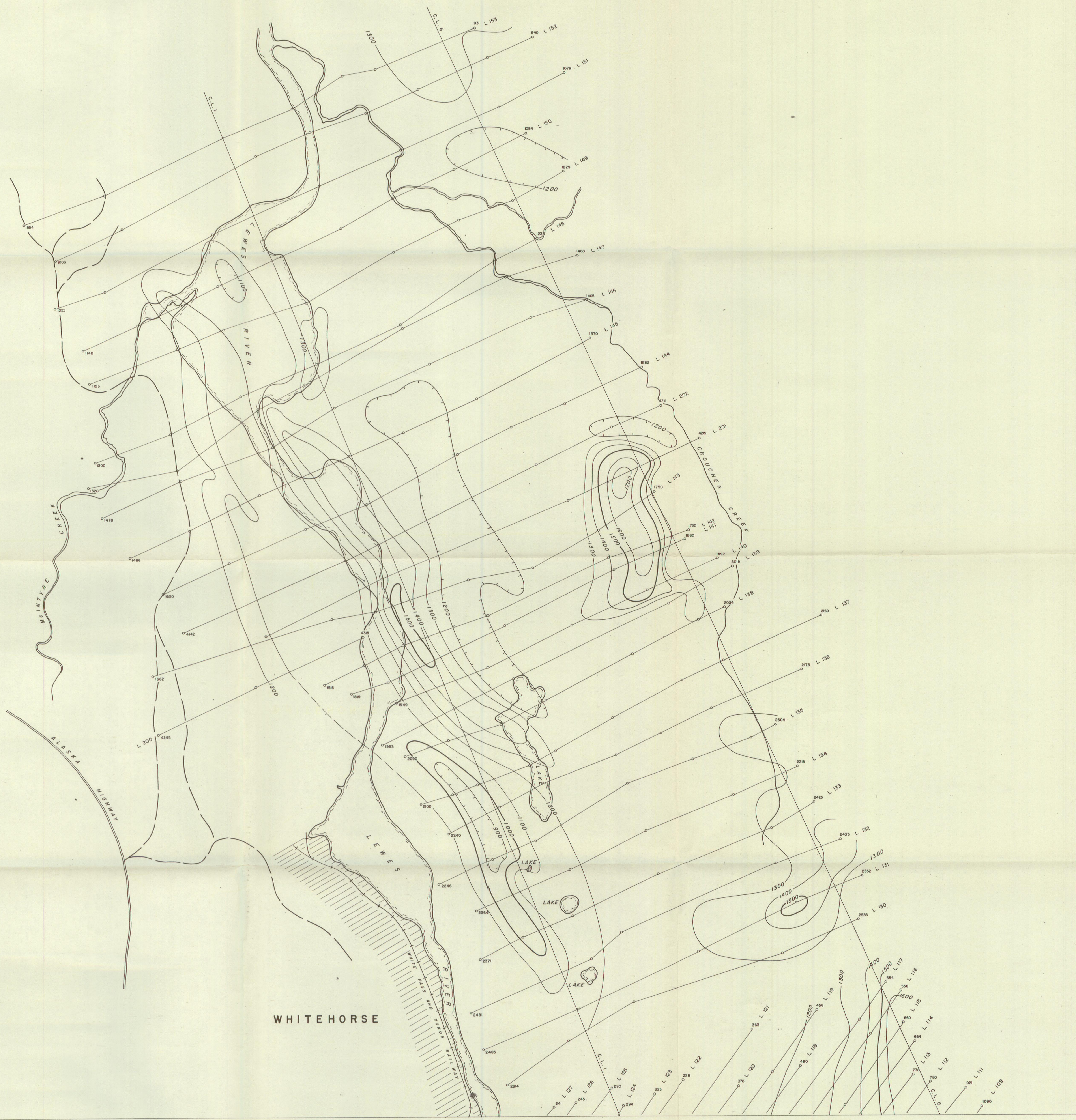
Respectfully submitted,

SEIGEL ASSOCIATES LIMITED

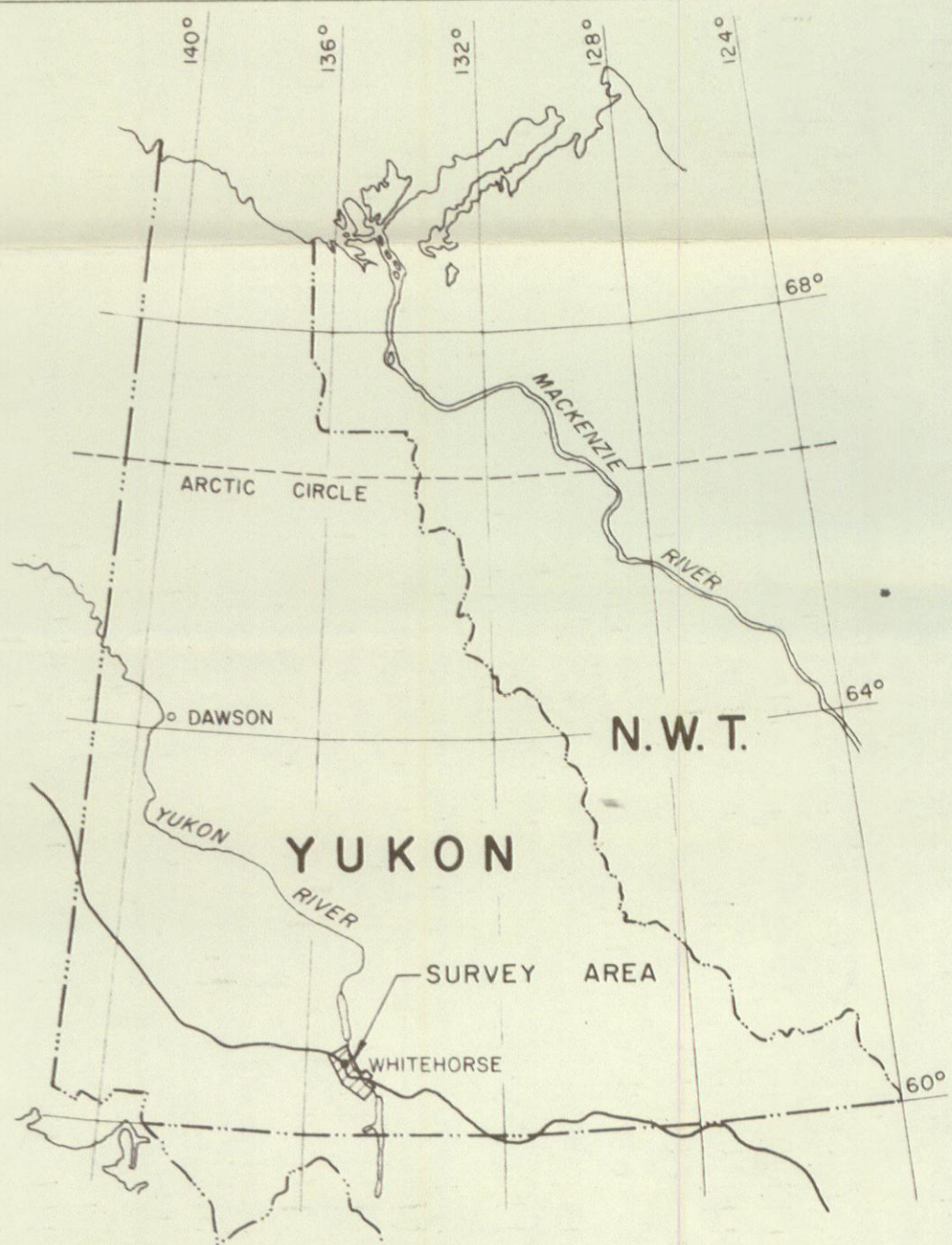
A handwritten signature in cursive script, reading "Richard O. Crosby". The signature is written in black ink and is positioned above the typed name and title.

Richard O. Crosby, B.Sc., P.Eng.
Geophysicist

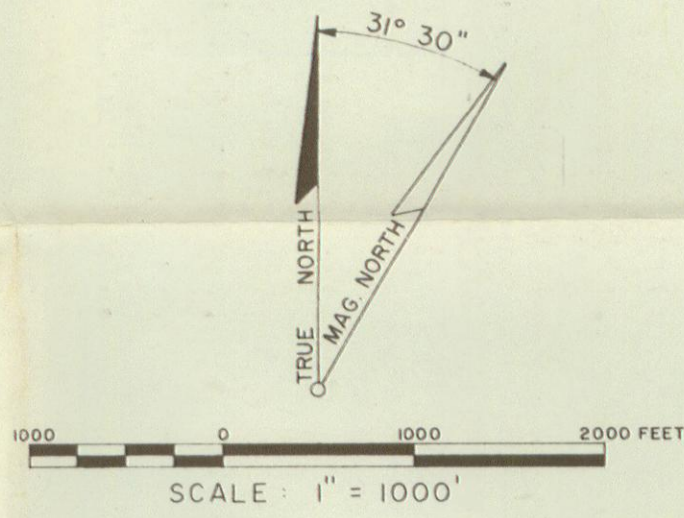
Vancouver, B.C.
July 8, 1968.



WHITEHORSE



LOCATION MAP



LEGEND

The planimetry for this map was obtained from a photo mosaic furnished by Lewes River Mines Ltd.

Total magnetic intensity at centre of survey area approximately 57,900 gammas with inclination 77° north.

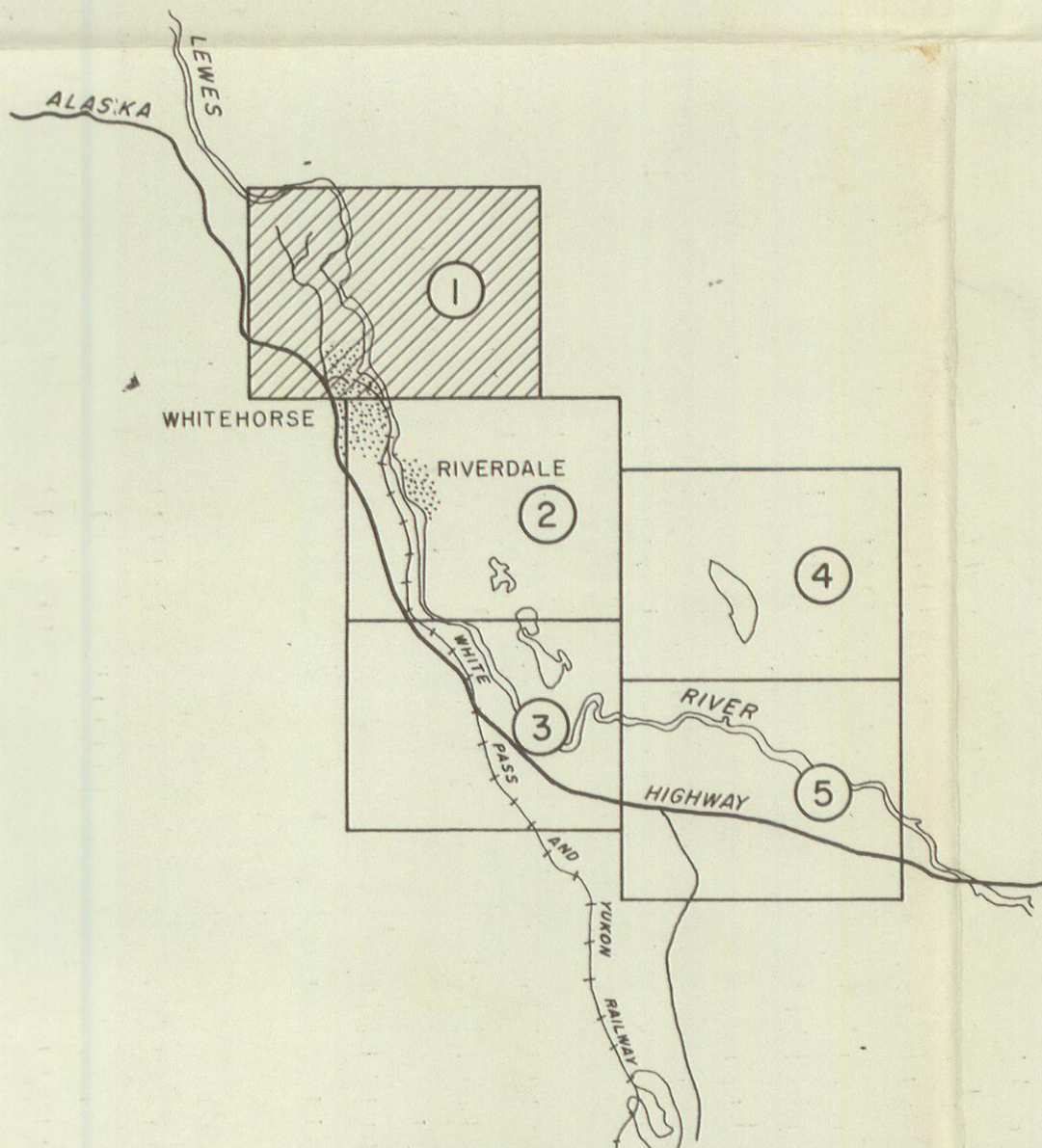
Flight altitude normally 200 feet above ground

Flight line spacing approximately 500 and 1000 feet.

Base intensity arbitrary.

Flight lines and photo identity points

Isomagnetic contours 500 Gammas
100 Gammas
Mag. Dep.



SHEET INDEX MAP

LEWES RIVER MINES LTD.
WHITEHORSE AREA, Y.T.
AIRBORNE MAGNETOMETER SURVEY
ISOMAGNETIC CONTOUR MAP
CONTOUR INTERVAL - 100 GAMMAS

FLOWN AND COMPILED BY
SEIGEL ASSOCIATES LIMITED
APRIL - MAY, 1968

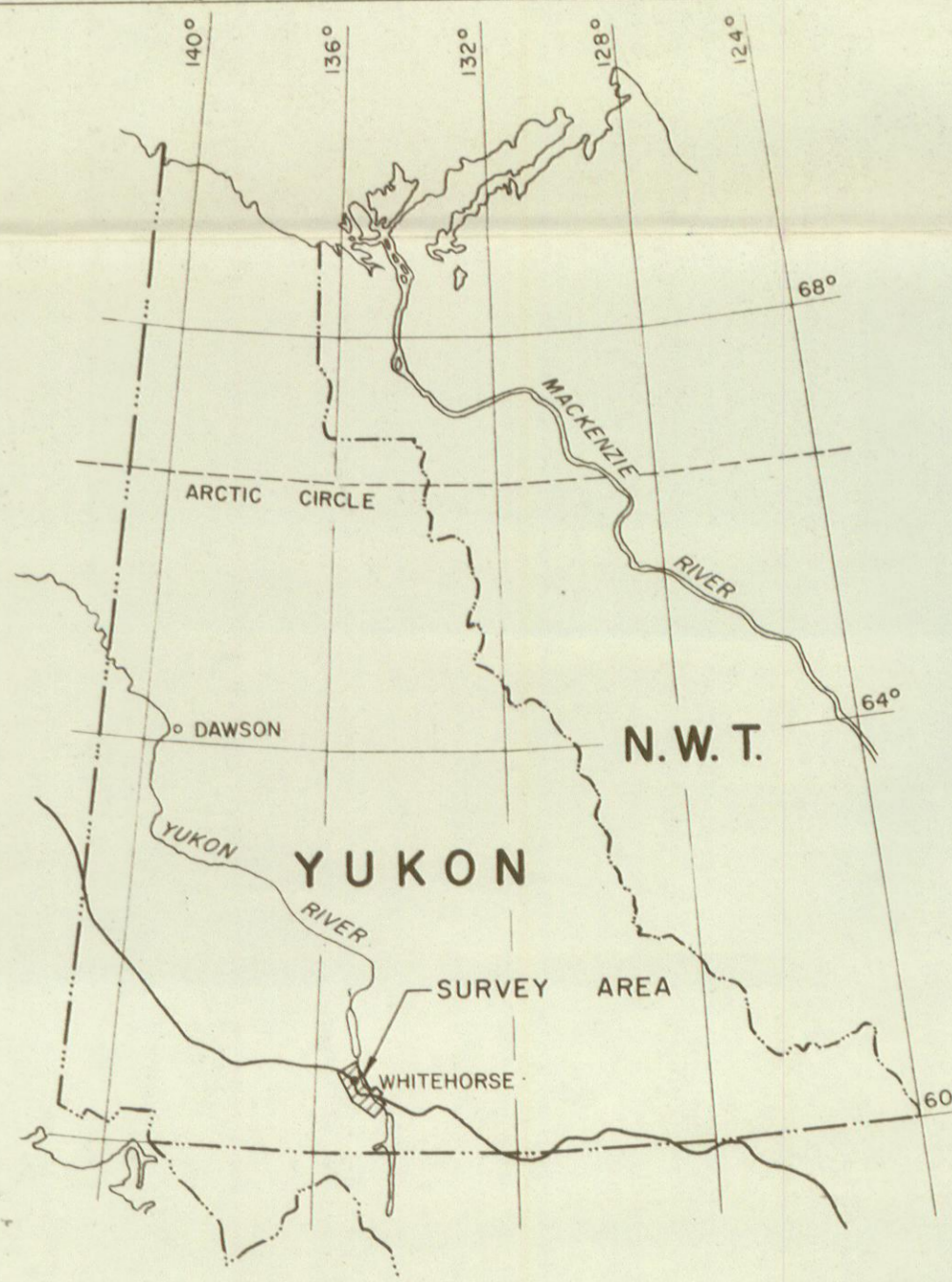
*Richard O. Seigel
July 8, 1968*

WHITEHORSE

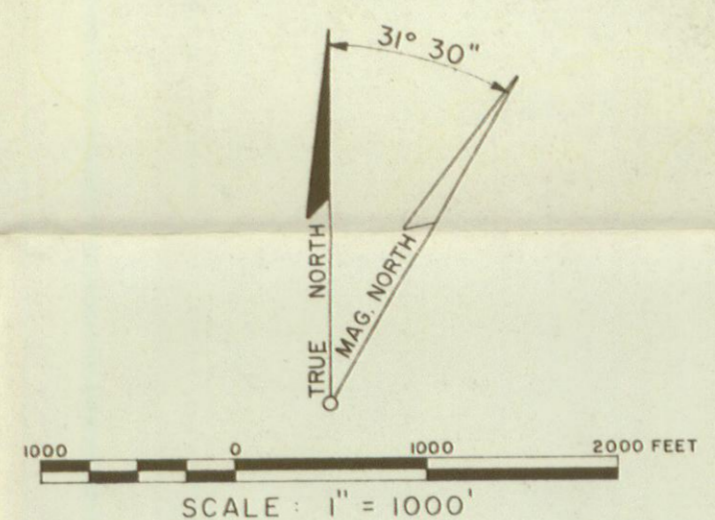
RIVERDALE

LEWES RIVER

WHITE PASS AND YUKON RAILWAY



LOCATION MAP



LEGEND

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Total magnetic intensity at centre of survey area approximately 57,900 gammas with inclination 77° north.

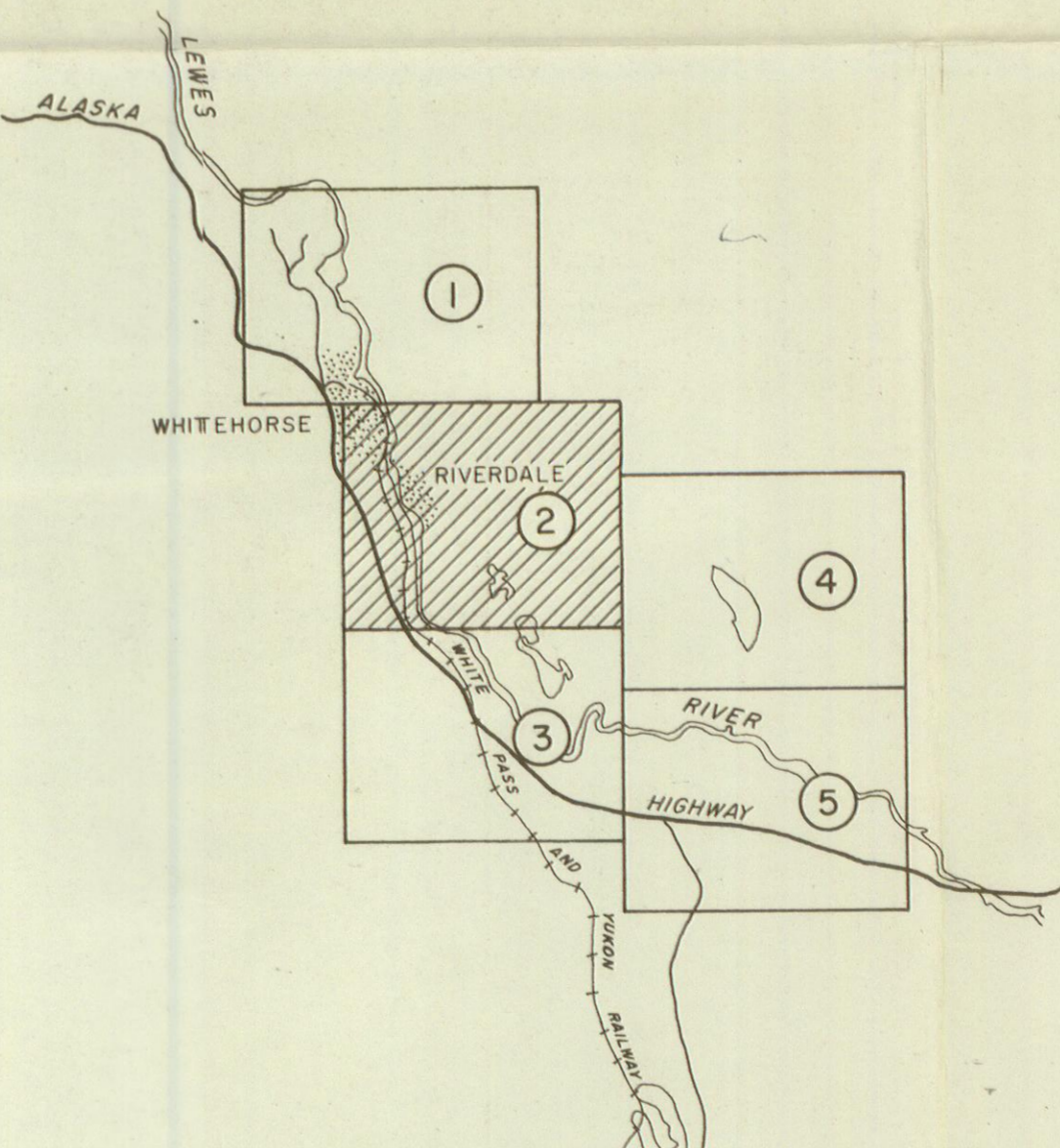
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Flight lines and photo identity points

Isomagnetic contours: 500 Gammas, 100 Gammas, Mag. Dep.



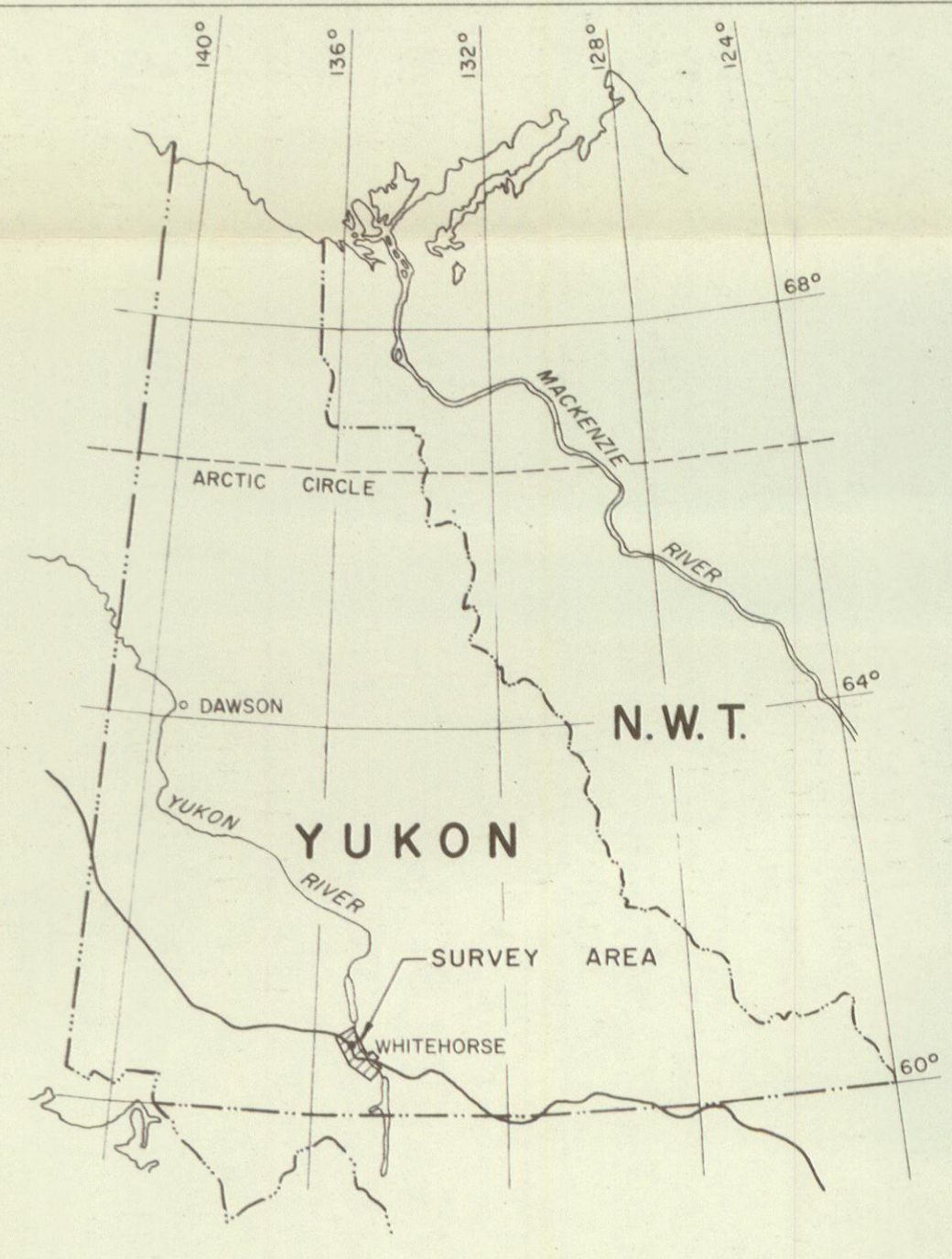
SHEET INDEX MAP

LEWES RIVER MINES LTD.

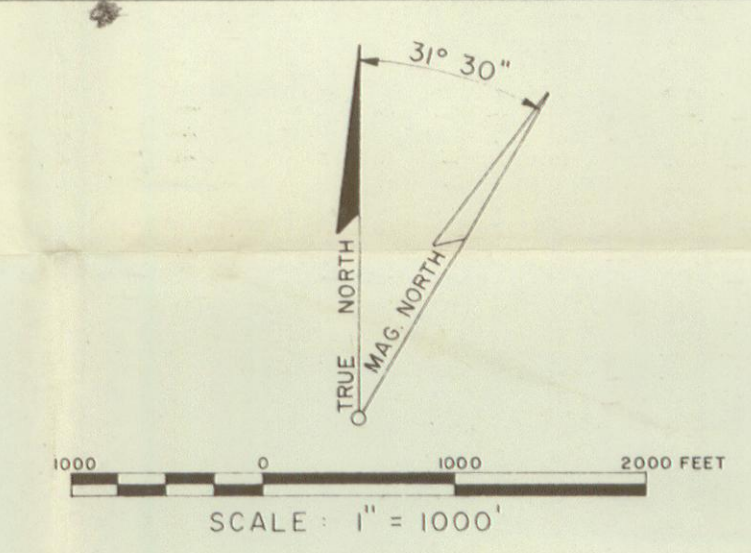
WHITEHORSE AREA, Y.T.
 AIRBORNE MAGNETOMETER SURVEY
 ISOMAGNETIC CONTOUR MAP
 CONTOUR INTERVAL - 100 GAMMAS

FLOWN AND COMPILED BY
 SEIGEL ASSOCIATES LIMITED
 APRIL - MAY, 1968

Richard A. Seigel
 July 8, 1968



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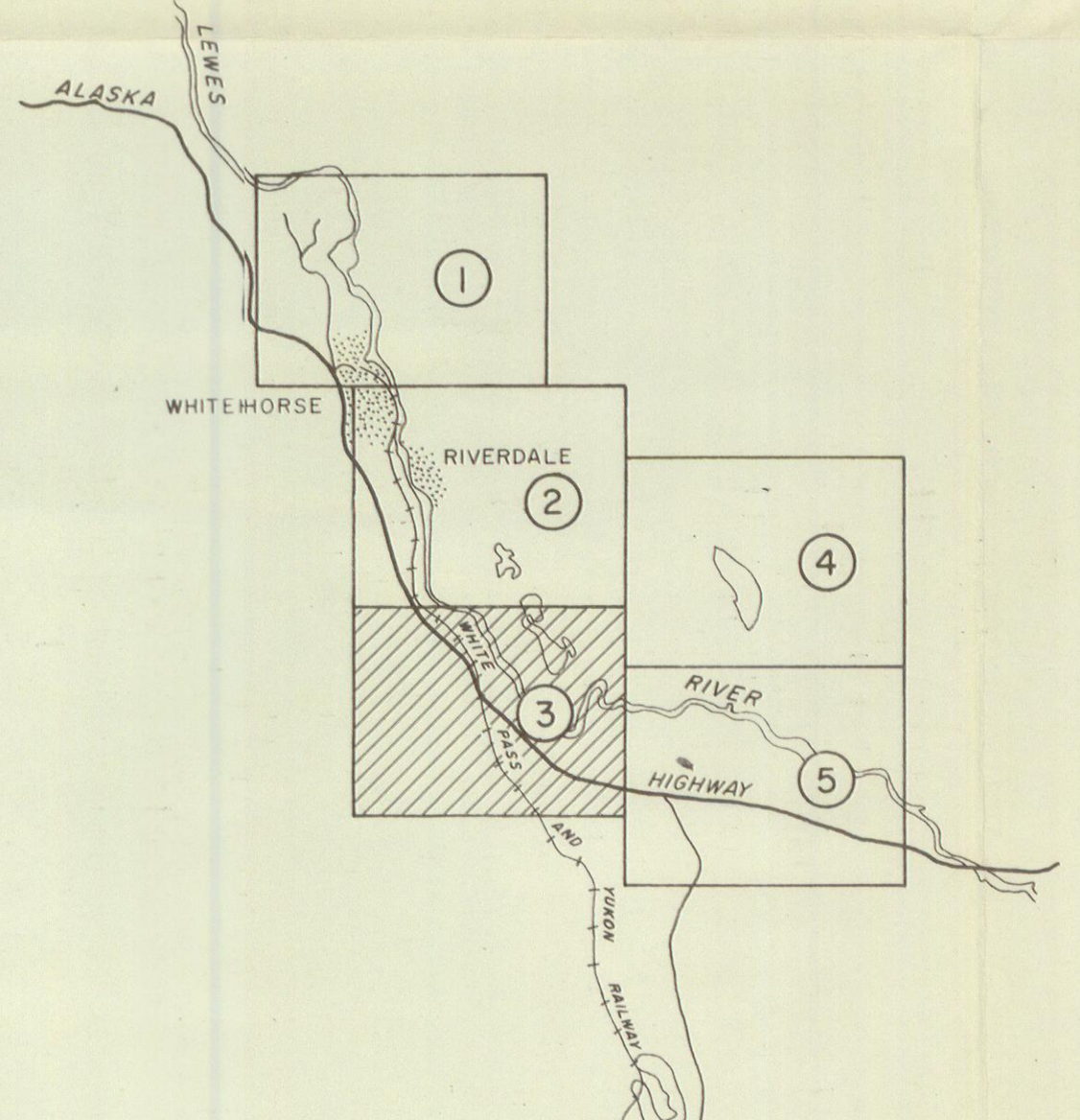
Flight altitude normally 200 feet above ground

Flight line spacing approximately 500 and 1000 feet

Base intensity, arbitrary

Flight lines and photo identity points

Isomagnetic contours: 500 Gammas (solid line), 100 Gammas (dashed line), Mag. Dep. (dotted line)



SHEET INDEX MAP

LEWES RIVER MINES LTD.

WHITEHORSE AREA, Y.T.

AIRBORNE MAGNETOMETER SURVEY

ISOMAGNETIC CONTOUR MAP

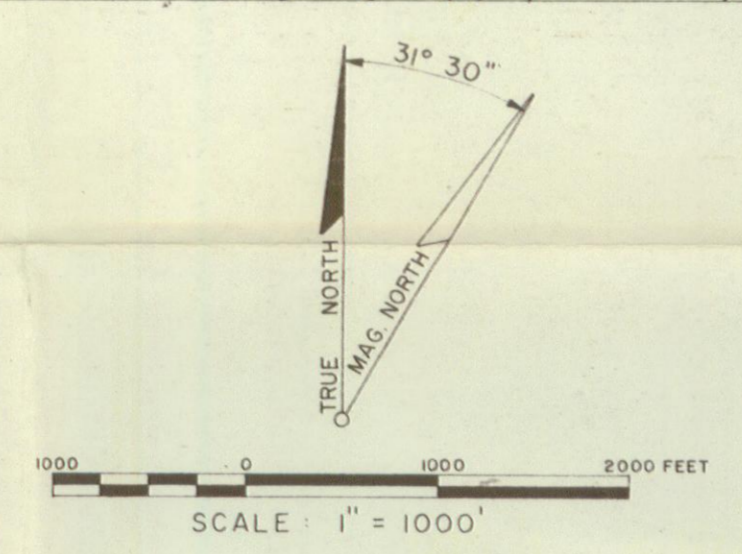
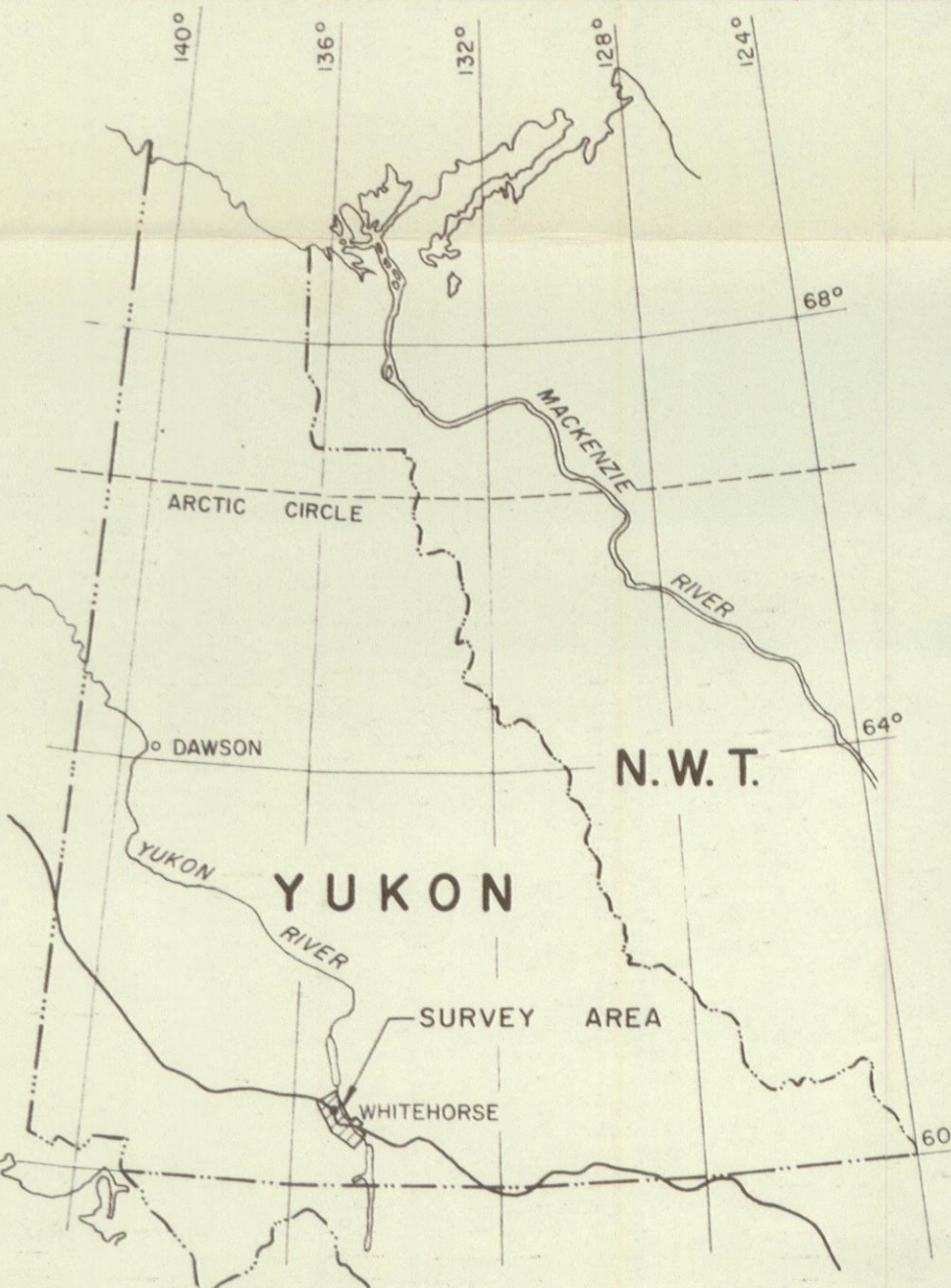
CONTOUR INTERVAL - 100 GAMMAS

FLOWN AND COMPILED BY

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APRIL - MAY, 1968

*Richard O. Cook
July 8, 1968*



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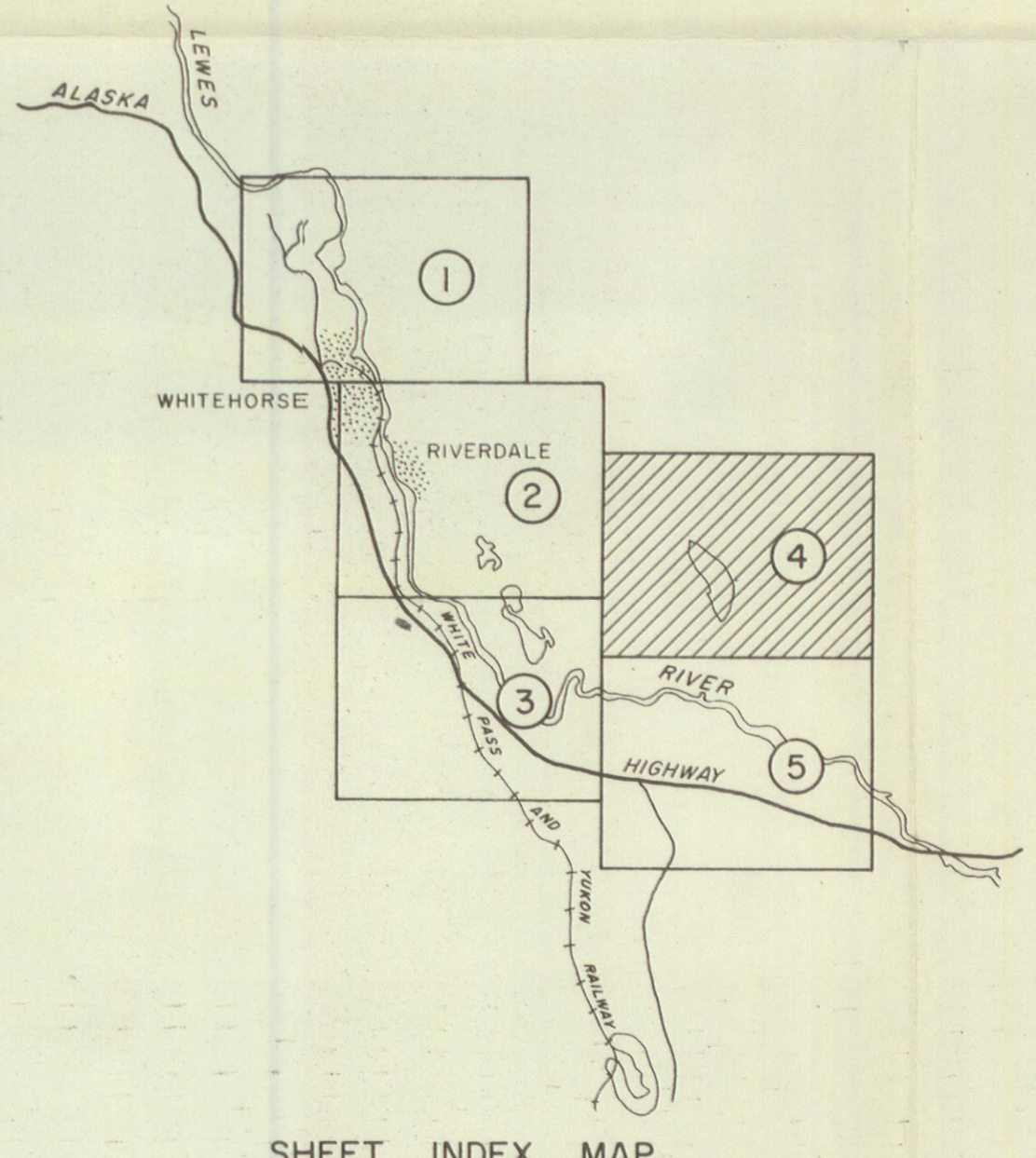
Flight altitude normally 200 feet above ground

Flight line spacing approximately 500 and 1000 feet

Base intensity arbitrary

Flight lines and photo identity points

Isomagnetic contours: 500 Gammas, 100 Gammas, Mag. Dep.



LEWES RIVER MINES LTD.

WHITEHORSE AREA, Y. T.

AIRBORNE MAGNETOMETER SURVEY

ISOMAGNETIC CONTOUR MAP

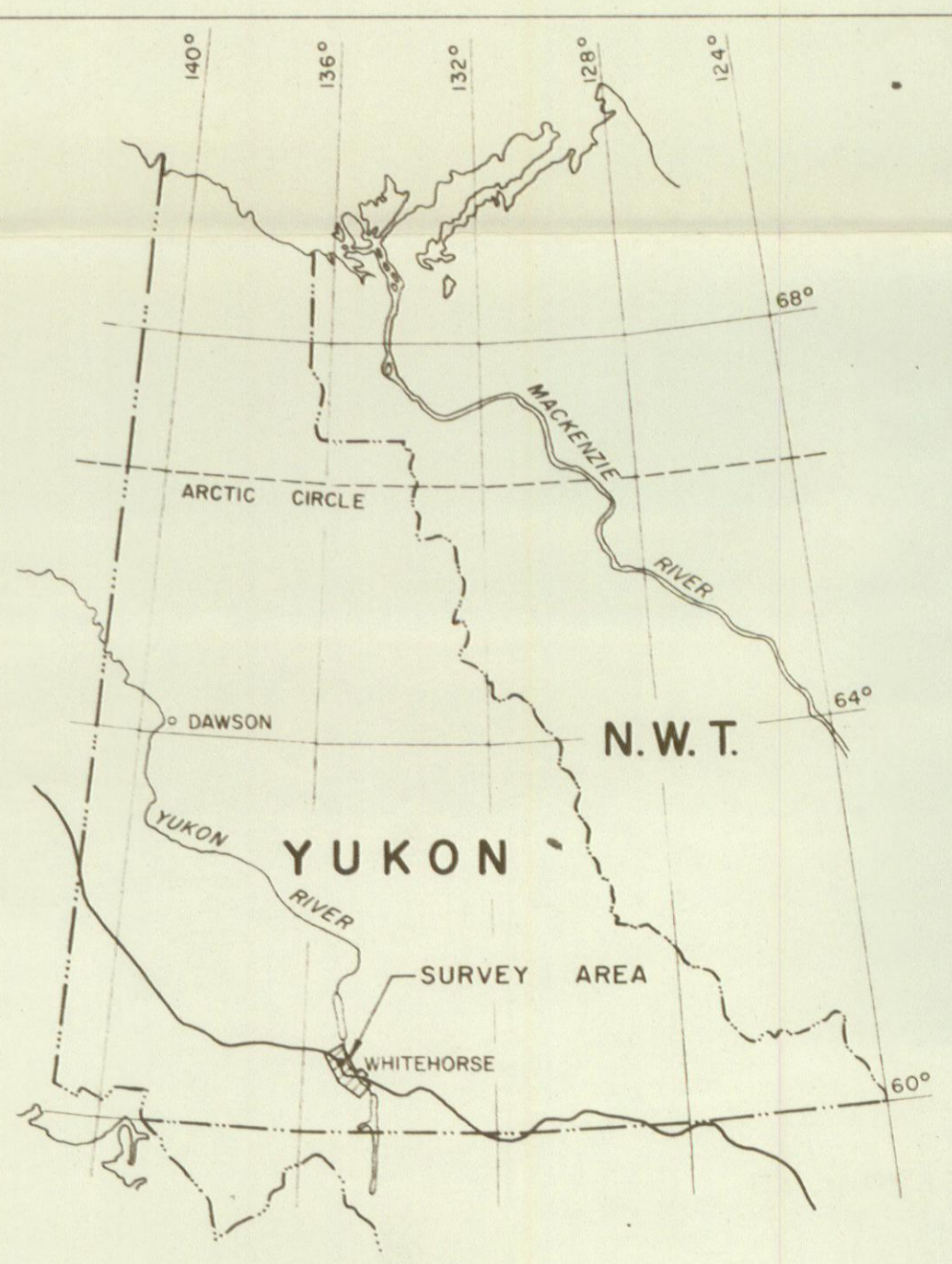
CONTOUR INTERVAL - 100 GAMMAS

FLOWN AND COMPILED BY

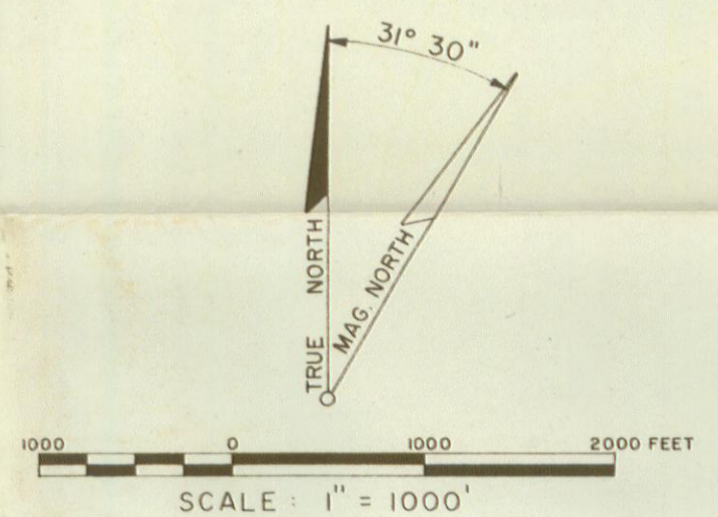
SEIGEL ASSOCIATES LIMITED

APRIL - MAY, 1968

Richard A. Cook
July 8, 1968



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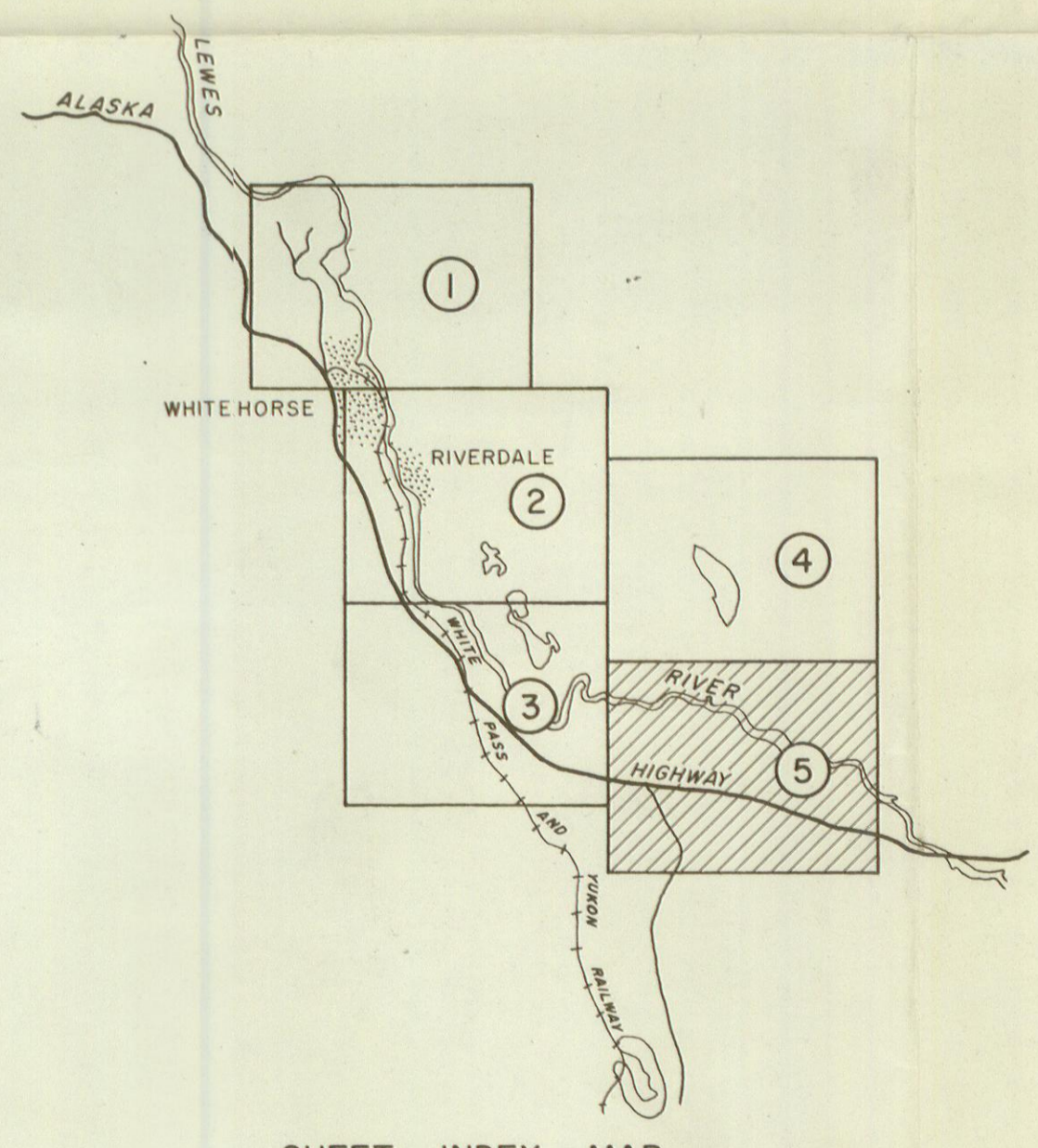
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SHEET INDEX MAP

LEWES RIVER MINES LTD.
WHITEHORSE AREA, Y.T.
AIRBORNE MAGNETOMETER SURVEY
ISOMAGNETIC CONTOUR MAP
 CONTOUR INTERVAL - 100 GAMMAS

FLOWN AND COMPILED BY
SEIGEL ASSOCIATES LIMITED
 APRIL - MAY, 1968

Richard O. Cronk
July 8, 1968