

MAR 19960003: HOLYOKE

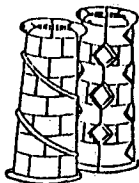
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ALBURY RESOURCES LTD.

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12th January 1996.

ALBURY RESOURCES LTD'S

HOLYOKE AND BEARTRAP LAKE ALBERTA METALLIC MINERALS PERMITS.

Assessment report prepared by

A.G.Mann, PhD, MBA, P.Geol.

and

related papers.

Contents:

A covering note dated 1st June 1993 by R.S.Westbury.

An orientation map, 1:250,000.

Excerpts from published aeromagnetometer surveys flown in 1952.

Dr Mann's assessment report.

Appendices to Dr Mann's report.

1. A memo dated 2nd June 1993.

2. A memo dated 4th October 1993.



ALBURY RESOURCES LTD.

#508, 630 - 8th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 1G6

1st June 1993

A introductory note ref the "Holyoke" and "Beartrap Lake" Permits, Alberta.

R.S. Westbury.

Formal applications were filed on the permits on Thursday 27th May, 1993, along with the required non-refundable deposit of \$450.00 per permit of up to 36 x 640 acre sections or a total of 23,040 acres per permit (9,216 Ha).

No written confirmation that these permits will be issued to Albury has as yet been received, however I have spoken with the people concerned in the Edmonton Office and am satisfied that they will indeed be issued.

It is required that \$10.00 per Hectare be spent on exploratory work within the initial two year term of the permits. The spending of lesser sums will allow the permittee to retain a proportionate area...which is exactly what one would wish to do after carrying out preliminary "recce" work, culling out the utterly hopeless areas.

I faxed the aeromag maps to Adrian Mann, who is sitting a well, and he sent back the accompanying comments.

I have since spoken with him: he apologised for being negative, ie stating the very evident fact that we have precious little go on in picking permits.

The Holyoke anomaly, happily, is slap on a mag' line. If the same anomaly had been only a short distance off-line it might not have been seen on this map! Following from this comment, the incidence of circular lakes, not on mag' lines may be significant: such lake have apparently been found to overlie Kimberlite pipes elsewhere in Canada: they MIGHT do so here.

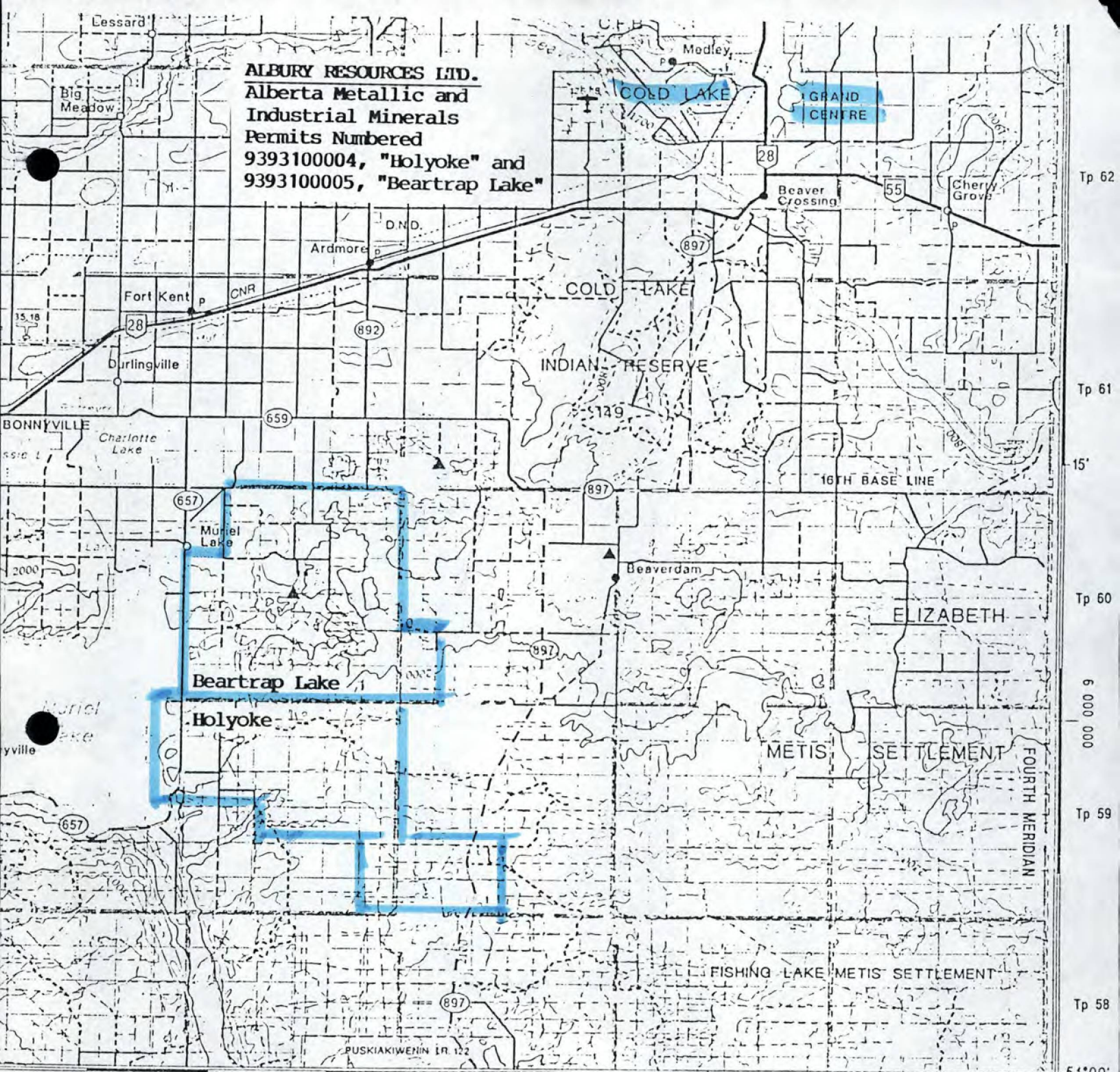
This is not a "Diamond Prospects", rather we have tied up a couple of areas which have seemingly anomolous geological features which can be checked with rather little cost and which, if they still need explaining can be dealt off to others who may wish to run with them.

The purpose of the exercise is that Albury should have SOMETHING to do when we apply for relisting.

I will be ordering air-photos of the entire area and these may help greatly with interpretation of the round lakes. Some "on the ground" work may be done with very minor cost.

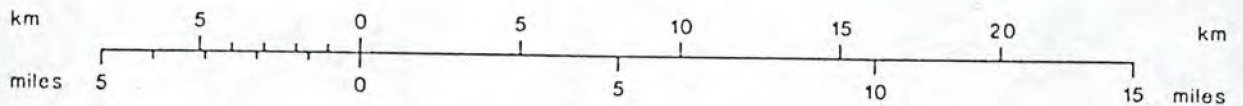
I have two Vancouver contacts who might well take these off our hands when the time comes.

ALBURY RESOURCES LTD.
Alberta Metallic and
Industrial Minerals
Permits Numbered
9393100004, "Holyoke" and
9393100005, "Beartrap Lake"



Commencement dates of both permits was 19th October 1993.

1:250 000



ASSESSMENT REPORT

ALBERTA MINERAL EXPLORATION

PERMIT NUMBERS
9393100004, 9393100005

HOLYOKE AND BEARTRAP LAKE LAKE
EASTERN ALBERTA

for

ALBURY RESOURCES LTD.,
935, 610 8th Ave S.W.,
Calgary Alberta - T2P 1G5

by

Adrian G Mann, P. Geol., Ph.D.

Introduction

No field visit was made to the permits. Work was confined to the study of extracts from the 1":1 mile government aeromagnetic sheets, and to air photo interpretation work.

Work Done

Appendices 1 and 2 are memoranda from Adrian Mann to Richard Westbury reporting on these two exercises.

Detail of Expenditures

It is difficult to present details of absolute expenses, but a figure of \$4160 has been calculated on the following basis:

Apart from purchase of the maps and aerial photographs, few hard costs were incurred. The aeromagnetic interpretation was done sporadically by Adrian Mann over a period of a week in late May 1993, during which some 29 hours were devoted to the work. The aerial photograph interpretative study occupied two geologists, Adrian Mann and S.P. (Ed) Santiago, for some 38 man hours in September of the same year. Geological discussions between Adrian Mann and Richard Westbury occupied some 14 man hours over the period late April 1993 to mid October 1993. One could reasonably ascribe some \$50.00 per man hour to this work - hence a cost of \$4150.00 in professional fees, plus \$130.00 in incidentals, made up of photographs, aeromagnetic map, telecommunications, stationary and xeroxing.

1 CERTIFICATION

I, the undersigned, certify that:

I am a graduate of the Universities of London, England and Witwatersrand, South Africa;

I hold the degrees of:

B.Sc. (General Honours) in Chemistry and Geology,
B.Sc. (Special Geology) (Honours),
Ph.D.,
M.B.A.

I am a member in good standing of
the Society of Economic Geologists,
the Geological Society of South Africa
the Institution of Mining and Metallurgy,
the Canadian Institute of Mining, Metallurgy and
Petroleum;

I am registered
in Alberta as a Professional Geologist,
in Britain as a Chartered Engineer,

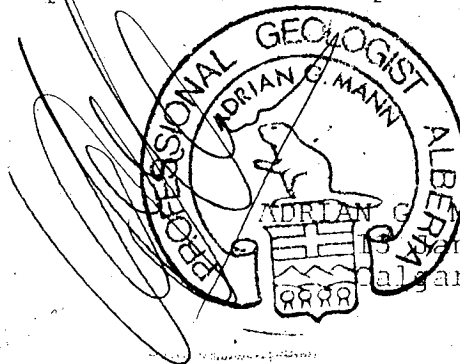
I have practised as a geologist continuously since first I graduated in 1965. My experience was gained in central and southern Africa, south and north America;

the work presented in this report is a fair and honest reflection of my understanding of the geology of the permit area;

The data on which this opinion is made derives from

a study of the quoted maps and aerial photographs;

the stated expenditures are a fair representation of those incurred by and on behalf of Albury Resources Ltd. in the exploration of the permit during the period stated;



ADRIAN G. MANN P. Geol., Ph.D.
January, 1996
Calgary, Alberta

Appendix 1

MEMORANDUM

To: Dick Westbury
From: Adrian Mann

2 June 1993

Subject: **ALBURY RESOURCES LTD. - BEAR TRAP LAKE
AND HOLYOKE PROSPECTS**

I have examined the copies of extracts from the 1":1 mile government aeromagnetic sheets which you faxed to me, and I have the following comments. Understand that my knowledge of the local geology is rudimentary, and draws only from memory, because, apart from your aeromagnetic map extract, I do not have published maps of any sort to hand.

Location

There are two contiguous metallic mineral exploration permit applications on township 59, ranges 3, 4 and 5 W4, and township 60, ranges 4 and 5 W4. Bordering the permit areas to the west is Muriel Lake, with the village of Holyoke roughly central to the southern permit ("A"), and Beartrap lake slightly north of centre of the northern permit ("B").

Geology

The area is underlain by lower Cretaceous (sands and shales) resting unconformably on Devonian (carbonates and evaporites) sedimentary rocks, in turn lying directly on the Archaean basement. Glacial drift over the area is likely to be of the order of several tens of metres, possibly up to 100m.

From discussion with other geologists active in diamond exploration elsewhere in western Canada, from hearsay, and from my own reading, it appears that two main kimberlitic events occurred at the lower/upper Cretaceous interface, equating to the Sweetgrass intrusives (96my), and during the Eocene. These later intrusions seem to lie more to the west, along the Rockies, and I, personally, believe they will prove barren. This suggests that the rocks under your permits are certainly of an age where any kimberlites which might occur would outcrop, or at least subcrop, beneath the superficial drift.

Geophysical Comment

There is a distinct east-west fabric to the aeromagnetic response, probably reflecting trends in regional basement geology. Along the eastern edge on Muriel Lake, this trend is sharply truncated, such that west of the permits the fabric is aligned north-northeast.

The most startling feature of the entire area is the precise coincidence of Angling Lake with a regional geophysical high, some 10km east of the permits. This has to have profound structural implications.

The ridge, on which this domal feature occurs, trends westwards from Angling Lake across the southern part of Beartrap Permit, peaking on the intersect of Sections 2 and 3-60-4 W4 and Sections 35 and 34-59-4 W4, where the fabric changes to a west-northwest alignment, then peaking again at 3,4,8,9-60-4 W4. A group of three small sub-circular lakes in 2 and 3-60-4 W4, on the apex of this regional magnetic ridge bear investigation. (*1)

The inflection point between the west-northwest trending and west trending arms of the ridge shows a subtle broadening of apex, almost into a plateau-like feature, immediately northwest of Reita Lake. This suggests that there is rather more character to the magnetic picture than these broad regional contours portray. This area requires more investigation. (* note #2)

To the north of the ridge, the magnetic intensity drops off fairly gently to a trough along the southern edge of sections 31 to 35-60-4 W4. To the south, the decline is rather more sharp, to a trough along a line on the northern edge of section 5-59-3 W4 to 3-59-4 W4. This trough does not change to follow the west-northwest trend of the ridge, but rather maintains course to the Muriel Lake truncation.

Centred a kilometre east of the village of Holyoke (19-59-4 W4), there is an aberrant circular low of some 30nT amplitude, 3500m diameter which requires careful investigation. Initial impression is that the Holyoke low relates to a feature some 1800m deep, in or near the basement. (* note #3)

Perhaps structurally related to the Holyoke low is the offshore high and north-south ridge in Muriel Lake. (* note #4)

Discussion

Bear in mind the limits of the data available in the context of what you are seeking. The geophysical map appears to have been flown at flight intervals of one mile, following section lines, which is not suitable for the very small targets envisaged - 10 to 50 hectares, or one eighth to one third of a quarter section. Elevation of the flights was probably of the order of 300m. Together, these two suppositions mean that, while the technique will reflect admirably the trends and sharp changes in basement geology, it is ill suited to detect subtleties at surface, unless one is fortunate enough for the flight line to have passed directly over a pipe.

With the high angle of magnetic declination in these latitudes, the pipe should be linearly magnetized from top to bottom, such that it will form a single pole at surface, the corresponding opposite pole of the dipole being deeply buried. A pipe would then appear as a single sharp spike in magnetic field above or below the regional trend (depending on the magnetic susceptibility of the pipe itself and of the surrounding rocks near surface). In the context of the

sedimentary rocks which here form the host, a magnetic high is more probable. Amplitude of the peak relates to the magnetic susceptibility differential, breadth of it is determined as much by the surface dimensions of the body as by the distance that the body is from the point of measurement.

Theory does not discriminate between vertical distance beneath the aircraft, and horizontal distance from it, so a pipe falling plumb between lines has little chance of being more than a flutter on the instrument! Consider a vertical cylindrical pipe 500 metres across at surface, covered by 100m of glacial overburden, lying midway between the 300m high, 1600m apart flight lines. The edge of the body would be 600m (shortest distance), the centre, 900m from the instrument. Width of the anomaly from centre would probably not exceed 700m hemispherical radius. Intensity of the anomaly would be of the order of 140nT at 300m directly above the body, 60nT at 250m off centre, and 20nT at 500m off centre, at the same elevation.

At Fort a la Corne in Saskatchewan, on half mile flight spacing, 300m altitude, and where background magnetism is very subdued, the anomalies over now known pipes had positive amplitudes of 10 to 100nT, radii of 400m to 1000m. Flight lines at one mile spacing would have missed 7 (odd lines) or 4 (even lines) of 11 anomalies in 120km² area, and would have rendered uninterpretable at least 3 of those touched.

Conclusions

The foregoing must seem very negative. In a way, yes, it is. There are no obvious features penetrating to surface, or near to surface, apparent to me on the aeromagnetic maps which you furnished. On the other hand, the method by which the data were collected was designed to eliminate, as far as possible, exactly such features!

There are four features annotated above which must be pursued further.

#1 Three Lakes - two of these features are too far from flight lines to have been recorded, if indeed they are the loci of pipes. That they occur along a coincident magnetic ridge nudges my curiosity, but I confess I hold little hope for them.

#2 Reita Inflexion - fascinating, isn't it. Again, the easternmost of the three lakes falls in this area, and reinforces my curiosity. Why not approach Hazel at Minerals Agreements, and ask her to excise the two section on the north bay of Muriel Lake, and tag 1-60-4 W4 and 12-60-3 W4 onto area "B" in their stead. She is very obliging, provided no-one else has claimed the land, and there is no extra cost.

#3 Hulsch Lake - although ostensibly a basement feature, there

remains the chance that this represents a massive caldera collapse structure, such as is envisioned for the Sturgeon Lake deposit at Prince Albert. It represents the hottest feature on the permits, if indeed it is such a structure.

#4 The offshore high. There seems to be some dislocation in the basement just west of this, which suggests crustal weakness, and therefore a possible plumbing system. However, depth of water may prove the biggest impediment to prospecting this feature.

Recommendations

Half a dozen judiciously sited samples for heavy mineral analysis would give some indications of diamond potential if surface debris in this area reflect the underlying geology.

Examine any and all seismic and well data for the permits areas. Of particular importance is the Holyoke Low.

Three or four days in the field, running ground based magnetic surveys on or near section boundary roads, would prove invaluable, especially in assessing the Reita Inflexion and Three Lakes.

There is no "down and dirty" quick answer to investigating the offshore high. Some midwinter on-ice magnetometer traverses are called for.

If current negotiations with a client are fruitful, I shall be sitting some wells near Unity, Saskatchewan in the near future, some 250km by road from the area. It may be worthwhile for me to swing past Cold Lake on the way to or from (or both) Calgary, armed with my little reconnaissance magnetometer.

Appendix Z

MEMORANDUM

To: R.S. Westbury
From: Adrian Mann

October 4, 1993

HOLYOKE MINERAL EXPLORATION PERMITS,
MURIEL LAKE, ALBERTA.

Further to my earlier memorandum, at your request, I have examined the aerial photographs which you furnished of the abovementioned properties held by Albury Resources Limited, and I have the following comments:

Photographic results

Outcrop:

There is very little outcrop apparent on the photographs, the only extensive area where rocks appears to crop out being to the south and southeast of the permits. These are shown in orange on the accompanying sketch map.

Structural features:

Whereas the east is relatively featureless, there is a strong north-northwest linearity in the extreme southwest, with some suggestion of tight fold closures contained between two definite linearities. These are off the permits, although the southwestern corner of the southern permit 'A' just covers a northern extension of the easternmost of these linearities.

To the southeast of the permits is a weak linearity trending north-northeast. This probably represents glacial scour.

Glacial features:

Coloured green on the accompanying sketch, in the extreme northeast, and directly east of the permits, is a scatter of north-northeasterly trending lineaments which probably represent glacial scour. These do not touch the permits.

Immediately east and south of the village of Holyoke, coloured yellow, there is a line of circular features trending west-southwest. It is difficult to explain these phenomena, except as manifestations of kettle lakes or perhaps the meanders of an abandoned river channel.

Relation to the aeromagnetic map.

Only two air-photo features can be crosslinked to aeromagnetics.

The southwestern structural fabric seems to mark the break between an eastern dome and basin magnetic domain, and a western northerly trending aeromagnetic pattern.

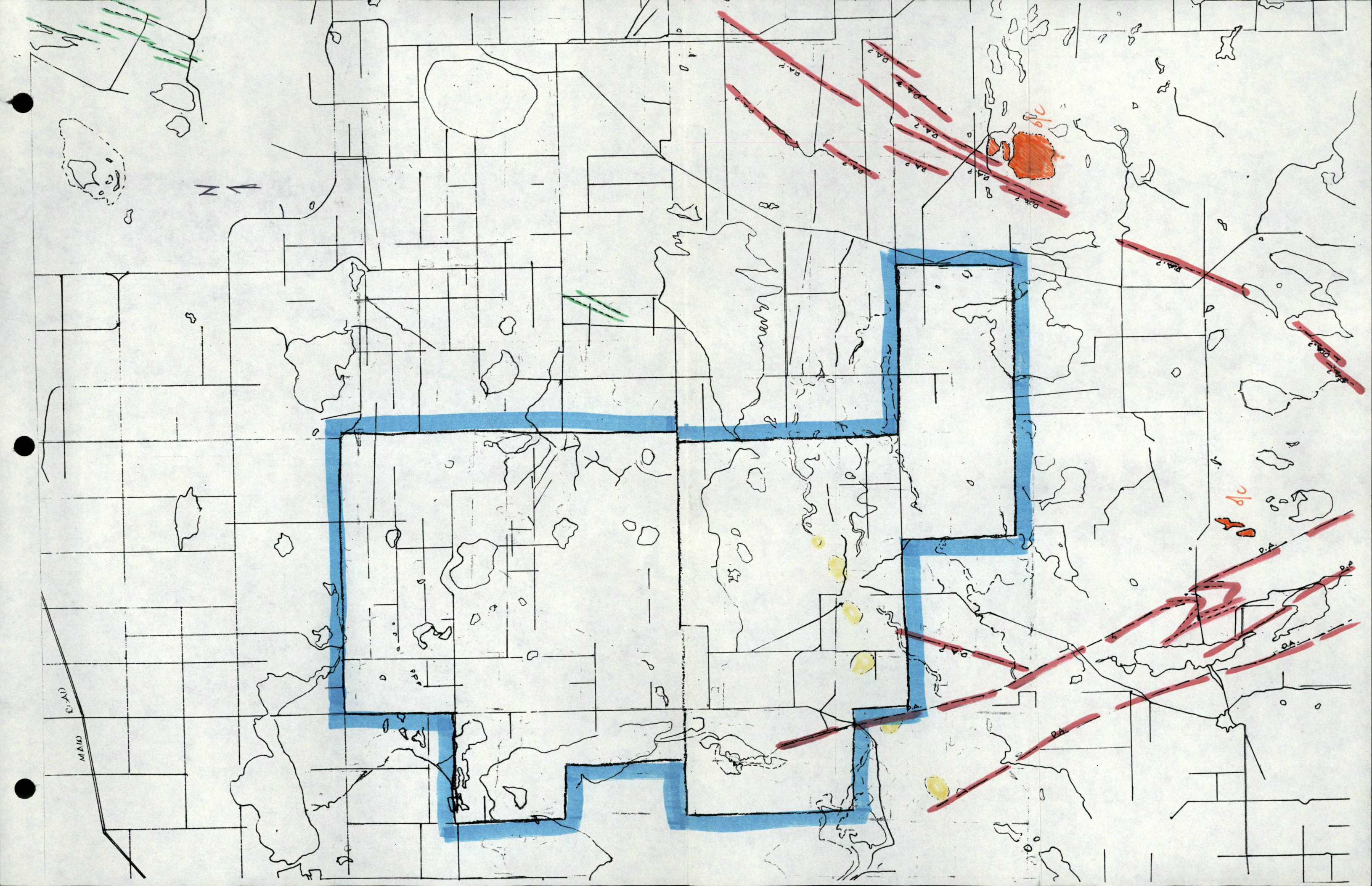
The line of circular features coincides with a local, but subtle, northeast trending magnetic high which serves to isolate the magnetic low east of Holyoke.

Conclusions

The exercise has been disappointing, in that a photo feature over the Holyoke low was expected, but not observed. The Holyoke low must still be investigated.

The line of circles is interesting, principally because of the coincidence with the magnetic shoulder. These circles must be followed up in the field.

Adrian Mann, Ph.D., P.Geol..



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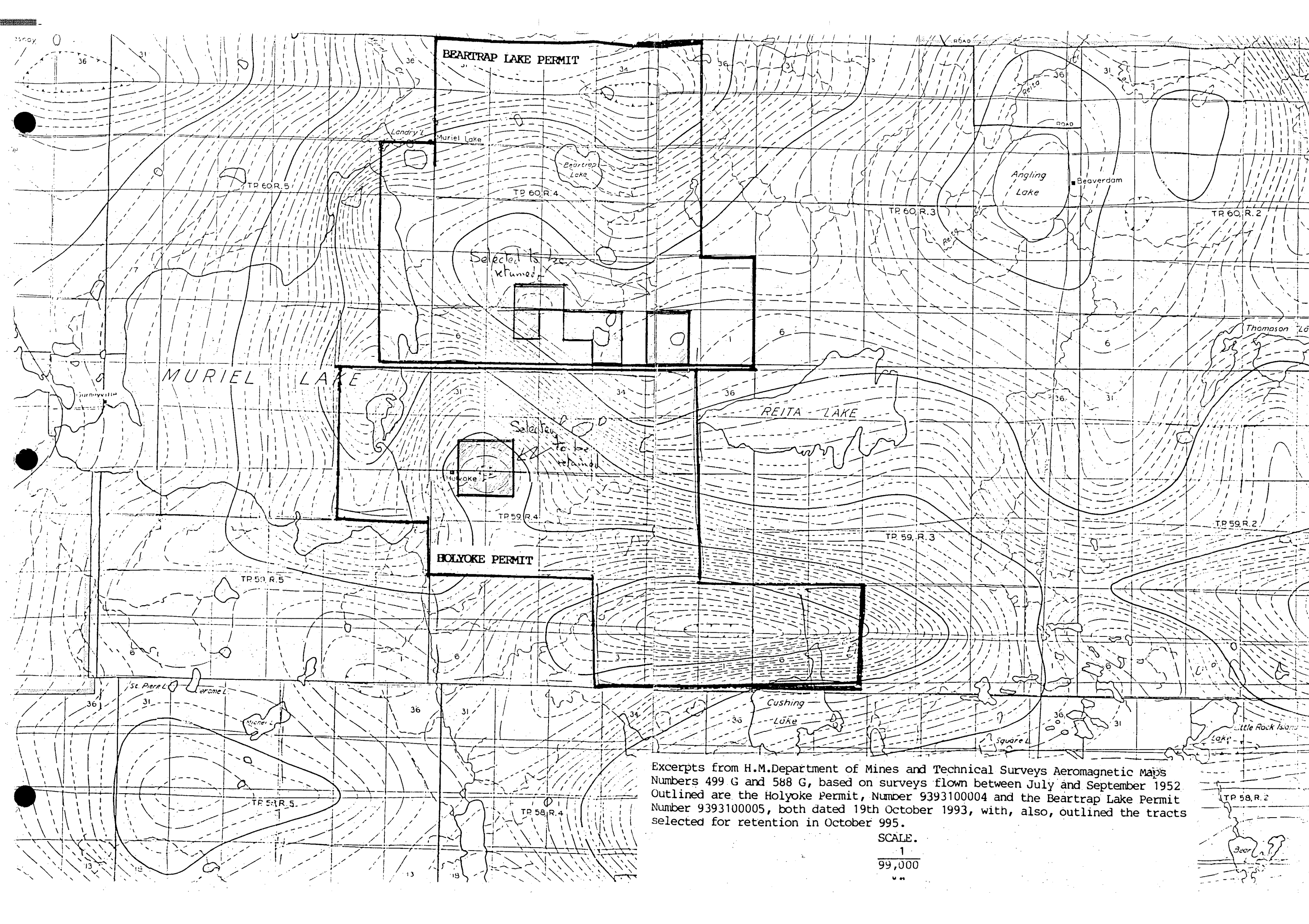
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BEARTRAP LAKE PERMIT

HOLYOKE PERMIT

Selected to be retained

Selected to be retained

Excerpts from H.M. Department of Mines and Technical Surveys Aeromagnetic Maps Numbers 499 G and 588 G, based on surveys flown between July and September 1952. Outlined are the Holyoke Permit, Number 9393100004 and the Beartrap Lake Permit Number 9393100005, both dated 19th October 1993, with, also, outlined the tracts selected for retention in October 1995.

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