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REVIEW
OF
EXPLORATION LICENCES
IN THE
MOLYHIL LOCALITY
OPEN FILE

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January 1985

GR85/051

REVIEW OF EXPLORATION LICENCES IN THE MOLYHIL LOCALITY

Introduction

This report briefly reviews the involvement of Petrocarb and its associated companies in the Molyhil area, east north east of Alice Springs.

Discovery of Molyhil Mine

The Molyhil scheelite-molybdenite deposit was discovered by the Johannsen family in 1971. The Johannsens, as Fama Mines, worked the outcropping portion of the Molyhil (magnetite chlorite skarn) lode using prospecting techniques until the ore ran out. With geological and geophysical assistance from the Northern Territory Geological Survey, a major magnetic anomaly was located south east of the outcrop which, when trenched, was found to be due to additional mineralized magnetite skarn containing high grades of scheelite and molybdenite. The Johannsens mined this deposit for some time taking out over 100,000 tonnes of ore and treating it through a small gravity concentrator. It is this large lode which is now known as the Molyhil deposit.

Petrocarb Involvement

Petrocarb have had an interest in this region for many years. They were initially involved in exploration as an extension of their ownership of the Jervois Mine. Exploration in the early 70's was directed at the discovery of further base metal resources.

When it became apparent that the Molyhil lode was sufficiently large to justify the development of an operation of a size larger than the Johannsen family could handle, the deposit was purchased by Petrocarb Exploration NL and during 1980-81 a small but complex mining and milling operation was developed to produce scheelite and molybdenite concentrate. Additional exploration was carried out into the size and disposition of the Molyhil ore body during this time with a shallow percussion drilling programme and the initiation of a major diamond drilling programme. Unfortunately, the mining operation was not successful and operations were terminated in September 1981. The failure was due to undercapitalization leading to equipment unreliability, difficulty in obtaining and keeping reliable operating personnel and water shortages.

Also during this time, recognizing the prospectivity of the area for additional "molyhil" type lode, application was made for a number of Exploration Licences by Petrocarb Exploration NL and related companies including Attutra Exploration Co Pty Ltd, Petrocarb Mineral Exploration (SA) Pty Ltd and Nicron Resources Ltd.

Peko-Wallsend

~~Petrocarb~~ Involvement

Peko-Wallsend Operations Ltd, a major Australian tungsten producer through its ownership of King Island Mines, in December 1981 reached two agreements with Petrocarb Exploration NL and the associated companies. One was an option to purchase 50% interest in the Molyhil Mine and the other was a joint venture in all exploration tenements outside the immediate mine surrounds. Geopeko, the exploration division of Peko-Wallsend Operations Ltd, became managers of the Joint Ventures.

Under the terms of the Joint Venture, Geopeko completed the diamond drilling programme of the Molyhil lode defining a proven resource of 2,000,000 tonnes grading

0.30% MoS₂ and 0.50% WO₃ to a depth of 150 metres. Geopeko also initiated investigations into the feasibility of using photometric ore sorting procedures based on the ultraviolet (U.V.) fluorescence of the scheelite. If successful, such a procedure would greatly reduce the volume of ore requiring complete milling thus reducing the concentrator size.

In addition, regional exploration was commenced in an attempt to find additional scheelite resource. A regional geological mapping programme was undertaken to define prospective provenances for skarn development. It was concluded from this work and surveys by previous workers, that magnetite skarn development was associated with Jinka "type" granites in the vicinity of a broad linear geological feature called Delny-Sainthill Fault Zone. Detailed low level aeromagnetics was determined to be the exploration method that would best locate additional magnetic skarn that may host tungsten mineralization. In July-August 1982, a major airborne geophysical survey was completed over the two most prospective portions of the Joint Venture tenure, refer Plan 1.

In the eastern area, some 30 magnetic and 2 radiometric anomalies were reviewed and 11 drill tested to reveal a source of magnetite in quartz-felspar-biotite gneiss or granite.

In the western area, 44 magnetic anomalies were chosen for follow up from very confusing magnetic background, along with 14 radiometric anomalies. Twenty-one of these were tested by percussion drilling with poor results.

It is important to note that this area is in the immediate vicinity of the Molyhil lode and that, while 50% of anomalies subject to reconnaissance ground magnetics were drilled, there remains numerous lower quality or deeper source anomalies not yet considered in such detail. "Molyhil" type mineralization, apparently being hydrothermally related to granites, can occur in random locations. The exploration, whilst thorough, cannot be considered exhaustive.

Geopeko's field work was essentially completed by March 1983. This was within the first year of tenure for most of the Exploration Licences and intensive field work was reduced although tenure was maintained.

Ore Sorting Research

At this time, the research and development of the U.V. ore sorting equipment was intensified after a long period of legal frustration brought about by ownership of patent rights and internal bickering within the development groups.

Subsidiary Joint Ventures

During the next 12 months to March 1984, the Peko-Petrocarb Joint Venture entered into a subsidiary Joint Venture with Uranerz Australia Ltd on EL 3308 and completed a detailed airborne geophysical survey over the EL and also concluded a Joint Venture with Anaconda Aust Inc over the eastern group of EL's for exploration for base metal deposits similar to those at the Jervois Mine. Both Joint Ventures concluded without success.

Expenditure

Expenditure on exploration by the Peko-Petrocarb Joint Venture to March 1983 totalled \$627,000 against an approx. EL commitment of \$225,000 and excluded expenditure of \$68,000 spent on resource evaluation and ore sorting test work of the Molyhil ore body.

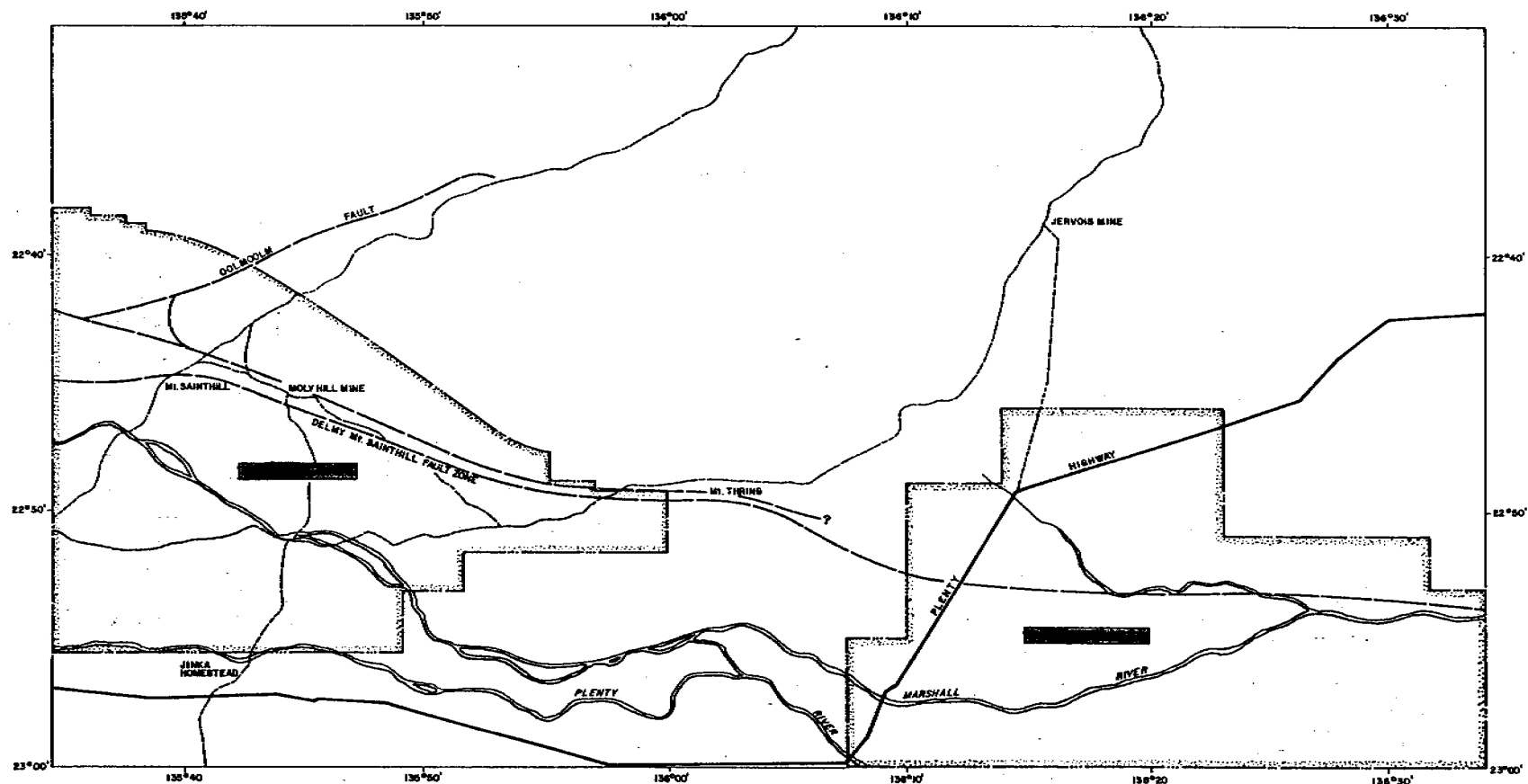
Expenditure to March 1984 totalled \$160,000 against an EL commitment of about \$200,000 but excluded expenditure by Anaconda on the eastern EL's of \$61,000 and \$84,000 spent on ore sorting research.

In April 1984, Peko abruptly withdrew from both Mine and Exploration Joint Ventures. Remnant Joint Venture committment, however, has allowed work to continue on ore sorting and metallurgical research. This activity is still in progress and offers hope for the eventual profitable reopening of the Molyhil Mine.

131,704 Expenditure from March 1984 to January 1985 totals
\$ 2, being \$ 29,594 for exploration on the western
EL's against a committment of approximately \$50,000 and
\$ 7,35,759 for continuing developmental work on ore sorting
and some additional metallurgical test work on concen-
trates.

Because of the slow progress of the research, it is important the Petrocarb retains exploration access to tenure surrounding the Molyhil Mine including all existing Exploration Licence tenure to allow further exploration should metallurgical results be promising.

In this context, Petrocarb has requested deferment under the terms of Clause 28 of the Mining Act 1980 of the reduction required by Clause 26 of EL's 2774, 3056, 3256, 3257, 3259, 3319 for a period of 12 months.



GEOPEKO

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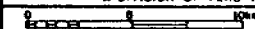


FIGURE N° 1

PROJECT

MOLYHILL

AREA

HUCKITTA

DATA

AIRBORNE GEOPHYSICAL AREAS

SCALE

COMPILED

DATE

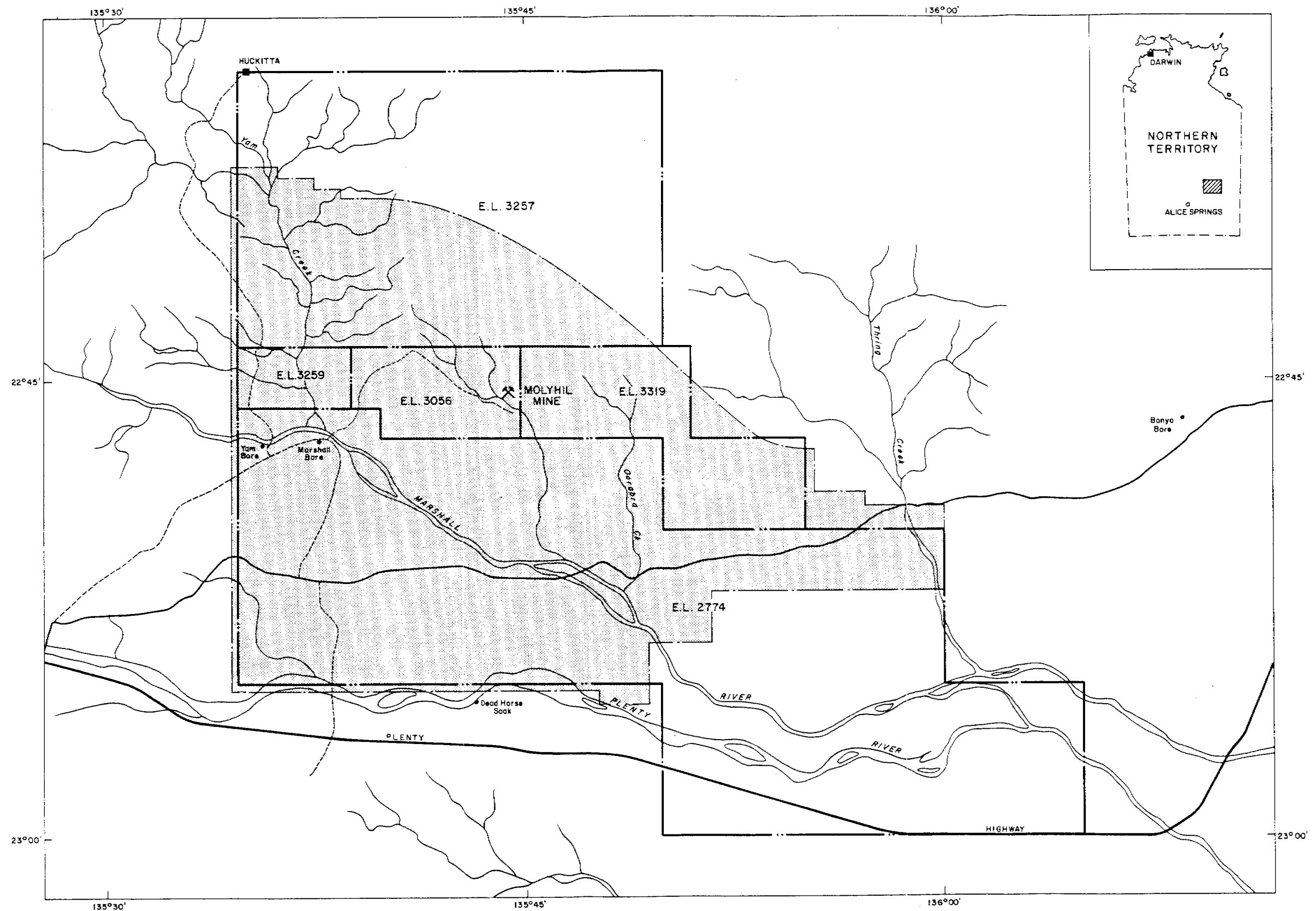
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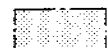
EDT

MAY, 1988

R.P.



LEGEND:



Area of airborne geophysics



GEOPEKO

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0 5 10 km

FIG. No. 1

PROJECT

MOLYHIL

AREA

HUCKITTA 1:250 000

DATA

EXPLORATION LICENCES
3257, 3259, 3056, 3319 and 2774
LOCATION DIAGRAM

SCALE

1:250 000

COMPILED

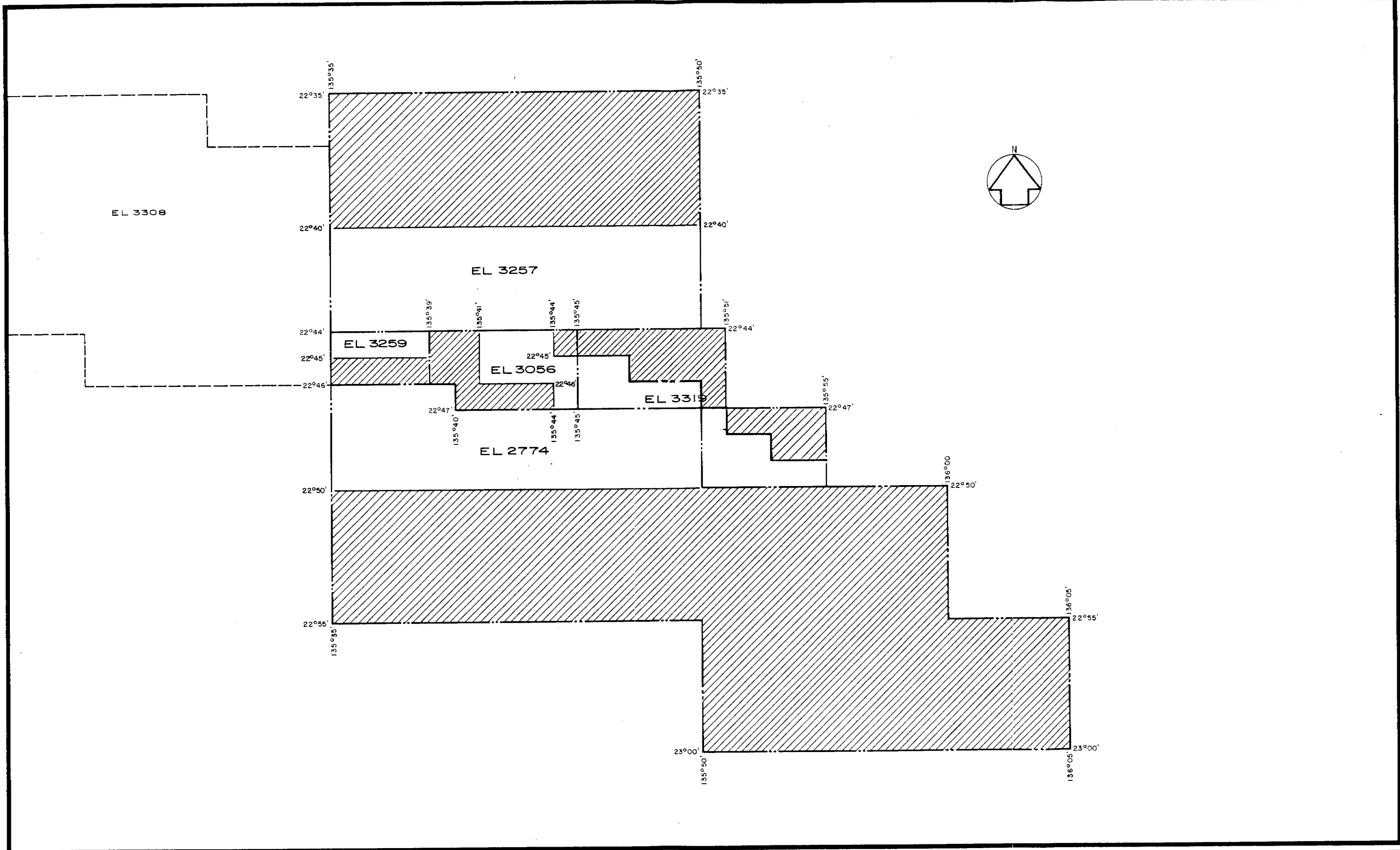
S.D.T.

DATE

APR., 1983

DRAWN

R.F.



LEGEND:



Indicates area relinquished



GEOPEKO

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5 2.5 0 5 10 km

PROJECT

MOLYHILL

AREA

HUCKITTA 1:250 000

DATA

EXPLORATION LICENCES
3257, 3259, 3056, 3319 and 2774

SCALE

1:250 000

COMPILED

R.L.A.

DATE

FEB., 1984

DRAWN:

R.F.

FIG. No.