RUSSGAR MINERALS NL

HARTS RANGE AREA, NORTHERN TERRITORY

EL 346, QUARTERLY REPORT

FOR QUARTER ENDING 14th FEBRUARY 1973

The Company's exploration effort in the Harts Range Area for the quarter ending 14th February 1973 consisted entirely of the continuation of the regional exploration programme (EL Nos, 110, 154, 155, 183, 283 and 346) which was commenced earlier when the area was held under PA 2580.

As advised in the last quarterly report the regional programme is a combined colour aerial photography 1:23,500 interpretation/geological mapping survey and rock geochemical survey.

With the commencement of the geological map compilation it was found that further geological mapping traverses were required, traverses which were then carried out. The preliminary geological map compilation is now completed and geological/geochemical interpretation has commenced.

The joint venture foreshadowed in the last quarterly report has progressed as far towards completion as is possible under the circumstances. In brief, the Exploration and Mining Agreement between Amoco Minerals Australia Company calls for an exploration expenditure by Amoco of 3.5 million dollars over 5 years and re-imbursement of expenditure to Russgar over the same period amounting to $300,000. In return, Amoco acquires the right to a 75% interest in the prospect.

The signed and stamped agreement is not as yet to hand, but is expected in the near future. In the meantime, we enclose a copy of the final agreement for your perusal. As you are aware, the agreement is to be approved by
your Department and the Federal Committee for Foreign Take-Overs.

The immediate forward exploration programme includes geological re-appraisal, regrading of access roads, and diamond drilling of not less than two holes, and a total footage of not less than 1,150 feet. We enclose the final report entitled "Oonagalabi Copper Zinc Gold Prospect" for your file.

The expenditure for the quarter amounted to $6,350.

Ken I. Nielsen,
Exploration Manager.
EL 346, QUARTERLY REPORT
FOR QUARTER ENDING 13TH NOVEMBER 1972

The Company's exploration effort in the Harts Range Area for the quarter ending 13th November consisted entirely of the continuation of the regional exploration programme (EL nos' 110, 157, 155, 183, 283 and 346) which was commenced earlier when the area was held under PA 2580.

As advised in the last quarterly report the regional programme is a combined colour aerial photography 1:23,500 interpretation/geological mapping survey and rock geochemical survey and some four hundred samples have been collected during the quarter and further visual prospecting has been carried out. The field component of the regional programme is now virtually completed and it is anticipated that it will take some two months to interpret all the data collected in the regional survey.

During the quarter we completed a brief initial magnetometer survey over a shear zone and also check sampled a small prospect where anomalous gold assays had been encountered earlier. The magnetometer data and the assays for this work are not as yet available and we will advise further in our next quarterly report.

Russgar Minerals has reached agreement in principle on a joint venture with a major company for the exploration of EL 346. The agreement provides for the general exploration and the drilling of two diamond drill holes during the first six months, and further exploration and development work amounting to
EL 346, QUARTERLY REPORT CONT:

$3,500,000 over five years provided that the preceding exploration warrants continued exploration. We will report to you in full regarding this joint venture and submit the agreement for your perusal as soon as the final draft is available.

The expenditure for the quarter amounted to $10,980.

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Ken I. Nielsen
EXPLORATION MANAGER
HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580
MONTHLY REPORT FOR NOVEMBER, 1971

The Company's exploration effort for the month of November, 1971 in the Harts Range Area consisted entirely of the continuation of the regional exploration programme and strong emphasis was given to field work in order to complete as much field work as possible before the hot summer months.

The field work, especially in the latter part of the month, was limited to areas where a minimum of climbing and excessive walking was required. The programme was again geological mapping based on aerial photography and rock geochemical sampling and 623 samples were collected during the month. It is anticipated that field work for the 1971 season is now largely completed and during the month of December, 1971 and January and February, 1972 exploration staff in Alice Springs will be engaged in the recording of geological data, aeromagnetic interpretation, geochemical data interpretation and aerial photography geological interpretation. With reference to the latter item the contractor for aerial photography to the Department of National Mapping has advised that the aerial colour photography will be forwarded before the end of 1971.

In the monthly reporting until now the Harts Range Area has been referred to according to their PA numbers. The six Prospecting Authorities are presently under Exploration Licence Applications and their respective Exploration Licence numbers are listed below:

- PA 2434    EL 183
- PA 2450    EL 283
- PA 2580    EL Application to be lodged
- PA 2703    EL 154
- PA 2705    EL 155
- PA 2768    EL 110

The Exploration Licence Application for PA 2580 will be lodged within the next few days.

Ken I. Nielsen,
EXPLORATION MANAGER
RUSSGAR MINERALS N.L.

November 14, 1971

HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580
MONTHLY REPORT FOR OCTOBER, 1971

The field work component and the interpretative component of the Company's exploration in the Harts Range Area during the month of October 1971 were both aimed at the furtherance of the regional exploration programme and only little work was undertaken on specific projects.

The regional exploration field work component consists of a combined geological mapping and rock geochemical sampling and some 450 samples have been collected during the month. In order to bring the field work as far forward as possible before the hot weather sets in very little reporting and only necessary data recording have been done.

Concurrent with the field work initial attempts are being made to interpret the aeromagnetic data by the removal of the regional geology and the topography effects.

The evaluation of the Oonagalabi Copper Zinc Prospect data is continuing and it is hoped that this evaluation will provide the basis for the formulation of further exploration in that region.

Ken I. Nielsen,
EXPLORATION MANAGER
October 14, 1971

HARTS RANGE AREA, N.T. EXPLORATION A TO F 2580
MONTHLY REPORT FOR SEPTEMBER, 1971

During the month of September, 1971 the exploration effort in the Company's Harts Range Area was largely of a regional nature with further aero-magnetic data and aerial photograph interpretation, while an orientation ground magnetic survey was completed on the Oonagalabi Prospect.

The regional exploration programme (continued) is a combined geological mapping (based on aerial photographs) and (rock) geochemical survey. Some 500 rock samples were collected as part of the rock geochemical survey with assays still outstanding. The Department of National Development has advised that some of the aerial colour photography (1:25,000) is now available and we are presently in the process of ordering these photographs.

Interpretation, assay correlation and first stage exploration programme final report compilation, is still in progress for the Oonagalabi Copper Zinc Prospect. The ground magnetometer (orientation) survey was completed and this data is presently being considered.

Some of the known minor mineralisations have been re-examined and subjected to detail geological mapping (alidade and plane table) and assay and petrological sampling. These examinations have shown that the potential of the mineralisations so far investigated is rather low, but at the same time some of these mineralisations are similar lithologically to the Oonagalabi Prospect and as such may be of profound importance when the regional data is interpreted.

Ken I. Nielsen,
EXPLORATION MANAGER
RUSSGAR MINERALS N.L.

24th September, 1971

HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580
MONTHLY REPORT FOR AUGUST, 1971

The exploration effort in the Company's Harts Range area, in August, 1971, consisted partly of regional exploration, partly a more detailed work on known mineralisations and partly interpretation of the data from the first stage Oonagalabi exploration programme.

The regional exploration programme (continued) is a combined geological mapping (based on aerial photographs) and (rock) geochemical survey. This survey has been given second priority for the time being as hopefully 1:25,000 aerial colour photography will be available within a month or so.

With the completion of the field work of the first stage Oonagalabi exploration programme a more detailed investigation (detailed geological mapping, assay and petrological sampling) of the known mineralisations, which was subjected to brief investigation earlier, has been initiated and it is expected that these surveys will be completed towards the middle of October 1971.

The data from the Oonagalabi drilling (assay data, etc.), from the geophysical surveys and from the costean sampling is still, to some extent, outstanding, but the preparation and drafting of cross sections, geological and geophysical maps and the interpretation is presently in progress.

During the month the Alice Springs team was enlarged by the engagement of two experienced geological field assistants.

Ken I. Nielsen,
EXPLORATION MANAGER
RUSSGAR MINERALS N.L.

18th August, 1971

HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580
MONTHLY REPORT FOR JULY, 1971.

The field work in the month of July 1971 in the
Company's Harts Range Area consisted of some
regional work and the completion of the Oonagalabi
Copper-Zinc Prospect 1st stage survey.

The regional work comprised aerial photography based
gеоlоgісаl mарріng іn thе vісіnіtу оf Ооnаgаlаbі
and experimentation away from Oonagalabi (eg. the
Virginia copper mineralisation) with VFL electromagnetic
instrumentation.

The field work at Oonagalabi comprised costean
sampling, completion of mapping (accurate location of
drill holes and costeans etc.) and VFL electromagnetic
orientation survey and consequent execution of a VFL
electromagnetic survey covering the surface mineralised
area, the latter survey indicating a strong "good
conductor" body over 1,200 feet strike length, an
anomaly which was confirmed in a resistivity traversing
survey.

In June 1971 Mr. K. Johansson joined our Alice Springs
staff (qualified geophysicist as well as geologist)
and casual labour was employed to assist in costean
sampling etc. The Exploration Manager visited the
area during the month.

Signature:
Ken I. Nielsen
EXPLORATION MANAGER.
RUSSGAR MINERALS N.L.


HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580
MONTHLY REPORT FOR JUNE 1971.

In the period from the 31st May 1971, the exploration in the Company's Harts Range Area, Northern Territory, was continued with emphasis on the Oonagalabi Copper-Zinc Prospect.

The detailed alidade and plane table geological mapping commenced in May 1971 has been completed and copper, zinc and minor lead mineralisation occurs over a strike length of 8,000 feet, over 4,500 feet continuously with intermittent barren surface zones in the remaining 3,500 feet with width varying from some tens of feet to 700 feet.

A survey of access track bulldozing and grading, bulldozer costeaming and down-hole-hammer drilling was undertaken and completed on the 1st July 1971 with a total of 2,103 feet drilled in 14 vertical holes (deepest hole 295 feet) and some 1,400 linear feet of costeaming.

Ken T. Nielsen
EXPLORATION MANAGER.
HARTS RANGE AREA, N.T., EXPLORATION A TO P 2580
MONTHLY REPORT FOR MAY 1971

Late April and during the month of May, several administrative changes have taken place in the Company. The Managing Director, Mr. R.A. Hancock has resigned and in Alice Springs the Area Manager, Mr. G.D. Louth, has resigned and the District Geologist, Mr. I.R.F. MacCulloch has taken over the duties of the latter.

The regional exploration in the Harts Range Area has been temporarily stopped with the completion of one north-south traverse as too much assay and petrological data is outstanding and the correlation of all this data is paramount to the efficient continuation of the regional programme.

A detailed (alidade and plane table) mapping and sampling programme was, therefore, undertaken on the Donagalabi Copper Occurrence in the eastern part of the area (A to P 2580) and although this programme is not completed, results to date indicate copper and zinc surface mineralisation, carbonates and sulphides with assays ranging from 0.1% to 5.6% Cu and 0.2% to 6.9% Zn (several higher values), over an area 5,000 feet plus long and an average width of 400 feet. It is anticipated that an access track preparation, costeening and "down-hole hammer" drilling programme will commence early in June 1971.

During the month, the area was visited by the Exploration Manager.

KEN I. NIELSEN
EXPLORATION MANAGER
HARTS RANGE AREA, N.T. EXPLORATION A TO P 2580,
MONTHLY REPORT FOR APRIL 1971

In the month of April the exploration carried out by the Company in the Harts Range Area was again of regional nature with two geological units working in the area.

The initial geological traversing referred to in the March month report and the additional orientation work in April month will form the basis for the formulation of a more rigid regional exploration programme when assay and petrological data and field reports are available. It is envisaged that geological mapping will be carried out in north-south traverses using aerial photographs as map basis and also for photo interpretation and between traverses correlation.

During the month the area was visited by the Managing Director and the Exploration Manager with special attention paid to the known mineralisations.

Ken I. Nielsen
EXPLORATION MANAGER
April 13th, 1971

HARTS RANGE AREA, N.T., EXPLORATION A TO P 2580
MONTHLY REPORT FOR MARCH 1971

During the month of March the exploration approach in the Harts Range Area was again regional and it is anticipated that in the forward programme the emphasis will be on regional work until enough geological data is available to evaluate the relative potential of smaller areas and known mineralisations.

The final, corrected magnetic contour maps have been received from the contractor and the initial preliminary (mainly in terms of broad geological structures) interpretation of the magnetic data was completed on the 1st April 1971.

One geological unit continued the ground investigation of the three tentative (airborne magnetic) target areas mentioned in the report for February 1971. A second geological unit commenced the preparation for the regional mapping survey by carrying out some initial traversing and collecting type specimens for petrological examination. In addition, preliminary inspections of known occurrences of mineralisation were made for the purpose of assessing, very tentatively, the potential of these occurrences and establishing an order of priority for the planning of further investigation.

Late in the month we advertised for further field personnel but at the moment it is not known what appointments will result from the advertising.

[Signature]

K.I. NIELSEN
Exploration Manager
RUSSGAR MINERALS N.L.
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REF. K1/M/78
February 12th, 1971

HARTS RANGE AREA N.T. EXPLORATION
A TO P 2580. MONTHLY REPORT FOR FEBRUARY 1971

In the early part of February the preparation for the 1971 field season was continued. An "Area Office" was established in Alice Springs and the prospecting unit has been operating in the area searching mainly for access tracks and routes, suitable camp sites and, to a minor extent, for mineralisation.

The interpretation of the airborne magnetic survey data (draft maps), commenced in January, has resulted in three tentative target areas (16th February 1971) and the ground investigation in terms of geological mapping of these target areas (anticipated to take three months) was initiated with the Geologist and Field Assistant leaving Sydney for Alice Springs on the 19th February.

Since the completion of the interpretation mentioned above, we have received the "final" magnetic contour maps (still minor corrections to be carried out) and the first stage preliminary interpretation is expected to be completed late in March month.

In the last week of February two new appointments were made:

Mr. K.I. Nielsen was appointed Exploration Manager, based in Sydney

Mr. I.R.F. MacCulloch - Geologist for the Harts Range area

Mr. MacCulloch will arrive in Alice Springs early in March.

K.I. NIELSEN
Exploration Manager
5th February, 1971

MONTHLY REPORT FOR JANUARY, 1971 for AUTHORITY TO PROSPECT 2560 NORTHERN TERRITORY.

No ground exploration work was done on this Authority during the month, although the above area was visited by Mr. G.D. Louth who was appointed Area Manager for Russgar Minerals N.L., based in Alice Springs, on the 18th January, 1971.

Mr. G. D. Louth was formerly with International Nickel Australia Limited.

Interpretation of the aeromagnetic survey results was proceeded with during the month by Mr. Peter Woyzbun based on the draft maps received. Final maps are not yet to hand but are expected some time in February. Receipt of these are essential before a plan of the interpretation can be accomplished.

The geologist will be returning to this area some time towards the end of February in order to do geological mapping and investigation, so as to assist in the interpretation of the aeromagnetic survey.

R. A. Hancock

R. A. HANCOCK,
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21st January, 1971

MONTHLY REPORT FOR AUTHORITY TO PROSPECT 2580 FOR DECEMBER 1970.

The geologist doing geological mapping in the Harts Range area returned to Sydney on 3rd December, 1970. Some exploration by ground parties was conducted in this area prior to the Christmas Period.

Applications for Area Manager at Alice Springs have been called with the view to an appointment being made to expedite the exploration of the Harts Range Area in the New Year. Due to the weather conditions at this time of the year, exploration work in the Area has been proceeding at a slower rate in the December period.

R. A. Hancock

R. A. HANCOCK,
MANAGING DIRECTOR.
11th December, 1970.

REPORT ON AUTHORITY TO PROSPECT 2580, NORTHERN TERRITORY

FOR NOVEMBER, 1970.

Geological mapping has been carried out during the month.

The geologist who has been mapping in the Harts Range has returned to Sydney and assessment and plotting of the geological information will proceed in December. During November Mr. Peter Woyzbun and myself spent several days inspecting the Harts Range Prospect. Receipt of the draft maps of the aeromagnetic survey has commenced, but interpretation is being delayed by the geophysicist contractor's failure to complete the contouring. At the end of the month only one of the sheets of magnetic contouring had been received and these were only in a preliminary form, and some time will elapse before the final contour maps of the area are available for interpretation. From the maps received the area is quite a complex one and the complexity of the job is obviously the reason for the delays.

The spectrometer tapes have been received by Mr. Peter Woyzbun and these have not revealed any major anomalies due to uranium. Further examination of these tapes will be used to assist geological correlation of rock types.

Due to the extreme weather conditions existing in the Harts Range during the months of December, January and February, it is proposed that geological field work be temporarily suspended in this period. During this time it is proposed to continue assessment of geological data already obtained in the field and also proceed with interpretation of the airborne geophysical data. Come March, it is hoped that we shall be in a position to greatly expand our operation in the area.

R. A. Hancock
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11th December, 1970.

REPORT ON ACTIVITIES UP TO 31ST OCTOBER, 1970 in HARTS RANGE
AUTHORITY TO PROSPECT 2580, NORTHERN TERRITORY.

Ground exploration work has been carried out for some weeks in this Authority to Prospect. In early September the airborne geophysical survey comprising aeromagnetic and radiometric surveys was flown by Geophysical Resources Development Company. The survey was flown in a north-south direction. The mapping of the area is proceeding since the completion of the flying and was still under way at the end of October.

During October Mr. Peter Woyzbun (who will be doing the aeromagnetic interpretation of the area) visited the Harts Range so as to gain knowledge which would be valuable for use in his interpretation. I myself visited the Harts Range in early September.

R. A. HANCOCK,
MANAGING DIRECTOR.