

SOUTH AUSTRALIA.

DRILLING IN THE MIDDLEBACK RANGE AREA.

PROGRESS REPORT.

1. WAGON DRILLING.

Up to the close of drilling operations for the year (18/12/53) six additional sites have been drilled since my last progress report, making a total of 30 sites drilled and three more sites not yet tested. Of these, one (Site 5C) was considered to be inaccessible to the wagon drill plant, and will have to be abandoned. Owing to various drilling difficulties more than one attempt was made to complete the holes at several sites. Samples from 4 sites have been received and logged at the Works Depot, the remaining samples being still in the field.

Selected material from Bore Line 4A has already been forwarded to the Chief Metallurgical Engineer for assays and Davis Tube magnetic separator tests and material from Bores Line 4B, Line 4E and Line 1 DX (2) have been prepared and are now available. In addition, the Chief Metallurgical Engineer has been notified of the order of grouping of samples required for practical iron ore concentration tests.

It is recommended that, with the completion of the present approved drilling programme, the wagon drill be returned to Adelaide as sufficient shallow drilling will then have been completed to enable a reasonable estimate to be made of the composition and mineral characteristics of the surface layers of the low grade iron formations in the Katunga Hills. Some deeper sampling by further diamond drilling (for which approval has already been given) will yet be required.

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2. DIAMOND DRILLING.

At the end of the drilling period during which 3 drilling plants were in operation, the position was:

Bore No. 1. Depth 1780 ft. In siliceous dolomitic marble - Middleback North Dolomite Formation (First penetrated at 1346 ft.)


Bore No. 3. Depth 932 ft. In banded chert - Lower Middleback Quartzite Formation. Formations penetrated are:
0 - 851' Cooks Gap Schists with amphibolite sills and dykes.
851 - 932' Lower Middleback Quartzite. Several short bands of massive powdery magnetite occur at the top of the Lower Middleback Quartzite /

It is recommended that drilling cease in this hole.

Radiometric logging has been completed to about 900 ft. in this bore.

Bore No. 6. Depth 114 ft. In banded iron formations of the Upper Middleback Quartzite Formation. Target depth for this hole is about 250 ft.

There are four (4) similar short holes yet to be drilled in the banded iron formation of the Katunga Hills area and one hole (Bore No. 5) yet to be drilled in the southern end of the Middleback Range.


(K. R. MILES)
Senior Geologist.

ENGINEERING GEOLOGY & MINERAL RESOURCES
SECTION.

KRM:AK
4/1/54.

Appended is the detailed log of
Diamond Drill Bore No. 3.

Middleback Range Bore No. 3.

Bore Serial No.

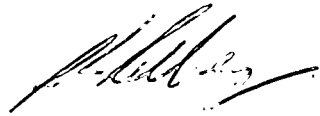
Drilling commencedcompleted

Driller R.S. Munro.

78'	-	135 ft.	Limonite enriched (with some hematite) sandy clay rock.
135'	-	250 ft.	Yellow decomposed gritty schist with ? pebble fragments. Quartz vein at approx. 178' (3% core recovery)
250'	-	270 ft.	Decomposed amphibolite grading to fairly fresh with increasing depth.
270'	-	292 ft.	Fairly fresh dolerite amphibolite med. gr.
292'	-	296 ft.	do. with a 2 ft. decomposed zone.
296'	-	315'6"	Med. grained dolerite amphibolite partly oxidised becoming denser finer grained.
315'6"	-	341'6"	Fresh dense fine to very fine grained dolerite amphibolite
341'6"	-	342'9"	Green schist - amphibolite and cherty bands grading to stretched pebble schist.
342'9"	-	360 ft.	Green sandy to gritty schist with scattered pebbly zones and bands of quartzite grades to
360'	-	425'6"	Well developed quartz-lenticle or stretched pebble schist - pebbles up to 1½" long - ½" across - shaly grit matrix.
425'6"	-	494'6"	do.
494'6"	-	518'	Fine grained amphibolite
518'	-	545'4"	Stretched pebble schist and grit
545'4"	-	565'	Fine grained amphibolite
565'	-	823'	Stretched pebble schists
823'	-	844'	Streaky fine grained banded
844'	-	851'	Spotted massive green schist
851'	-	872'3"	Brecciated ferruginous quartzite with thin bands of massive friable f.g. magnetite
872'3"	-	872'9"	Massive powdery magnetite
872'9"	-	874'9"	Slightly brecciated cherty quartzites
874'9"	-	876'5"	Massive powdery magnetite
876'5"	-	881'	Irregularly banded magnetite chert with magnetite bands
881'	-	884'	Banded chert

884'	-	895'6"	Dark chert with layers of powdery magnetite
895'6"	-	932'	Dark coloured streaky banded chert low in iron.

Recommended end of Bore.


(K.R. MILES)