

RB 41/38

DEPARTMENT OF MINES
SOUTH AUSTRALIA

NORTH - EAST URANIUM EXPLORATION
CROCKER WELL URANIUM FIELD

Report No. S.R. 11/2/78
G.S. 329
C.W. 37

REPORT OF COMPLETION OF DIAMOND DRILLING
AT THE CROCKER SOUTH PROSPECT

by

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U.S.A.E.C

MICROFILMED

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NORTH-EAST URANIUM EXPLORATION

Report on Completion of Diamond Drilling at the
Crocker South Prospect.

Summary

A bore of 508 feet length designed to test under an alluvial fill and explore along the strike of mineralization found only slight radioactivity from 92 to 93 feet. Davidite crystals are found in the outcrop in a biotite rich zone in hybrid granite that suggests a pegmatite origin. The low grade and discontinuous radioactive area does not merit any additional testing.

Introduction

Airborne scintillometer surveys conducted in the Crocker Well district brought to notice a sharp anomaly from a low outcrop surrounded by an alluvial flat. This radioactive zone was shown on an early map by R. Sprigg and K. Seedsman Geological Plan US109 during the mapping and testing of the original Crocker Well find. Their sampling program included an area fifty foot square which averaged one-third pound of U_3O_8 per long ton.

A re-examination in November 1954 led to the proposal for approval of a limited amount of diamond drilling to explore for the continuation of a possible better grade lode under the alluvial fill and test the possibility of a shear intersection with the known mineralization.

Location

This prospect is situated one-quarter mile south of the main Crocker Well deposit and one-half mile northwest of the Crocker Well camp.

Plan S 1064

Crocker South Prospect; Geology and Diamond Drilling and included Locality Plan.

Geology

Outcrops are represented by Archean rocks that consist

of massive and late stage leuco granite with later pegmatites which intrude older sediments forming migmatitic gneiss, hybrid granites, and sheared basic rocks of shining biotite.

Uranium mineralization is confined to an outcrop area 100 feet by 50 feet as vughy crystals of davidite in small clusters or pockets. Radioactivity favours the biotite zone and suggests a possible pegmatitic origin.

A sample of this davidite is reported by the Petrological Laboratory (A. Whittle) in S.R. 26/4/17 as follows:

"Dull submetallic black mineral with a sub-conchoidal fracture proved on polishing to consist largely of davidite containing numerous and irregular inclusions of rutile".

Diamond Drilling


Bore No. 1 was directed N. 45°E to follow and explore the strike mineralization and was depressed 40 degrees to pass under the most radioactive portion of the chip sample area. It was surmised that the alluvial fill represented a shear and the bore should pass through this intersection with the radioactive zone. Only one small cluster of davidite from 92 to 93 feet was found in the core which was mainly granite. The bore found no shear material and the 508 feet length adequately explored the alluviated area.

Radiometric Logging

The bore was logged to 507 feet by the Geophysical Department and the only radioactivity found was in the interval from 92 to 93 feet which gave a calculated radiometric assay from calibrated tube readings of six pounds of U_3O_8 per long ton.

Conclusions and Recommendations

No ore reserves are available at this prospect and no additional investigations are recommended.


W. R. Peterson
U.S.A.E.C.

DEPARTMENT OF MINES, ADELAIDE

DIAMOND DRILL LOG

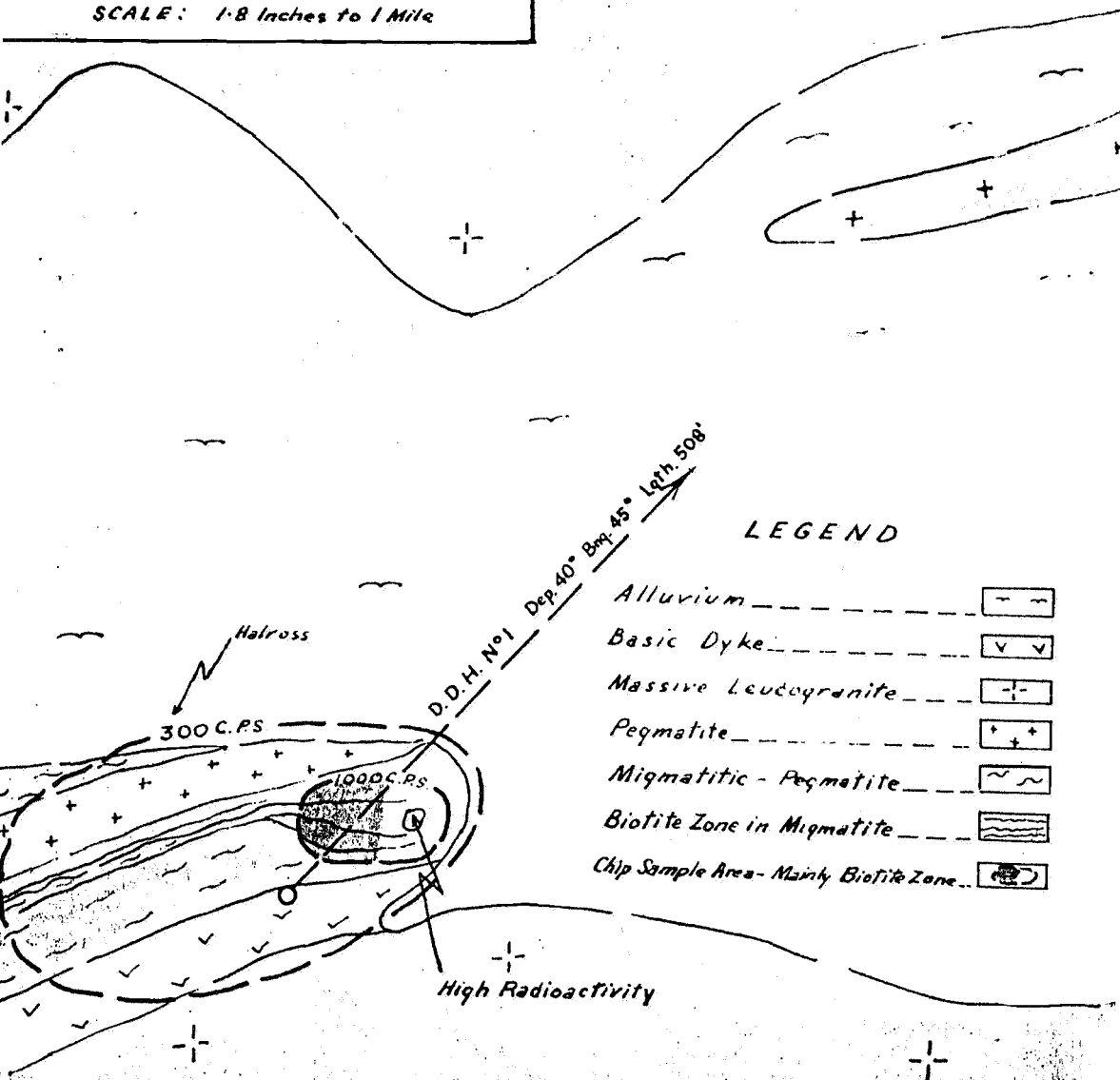
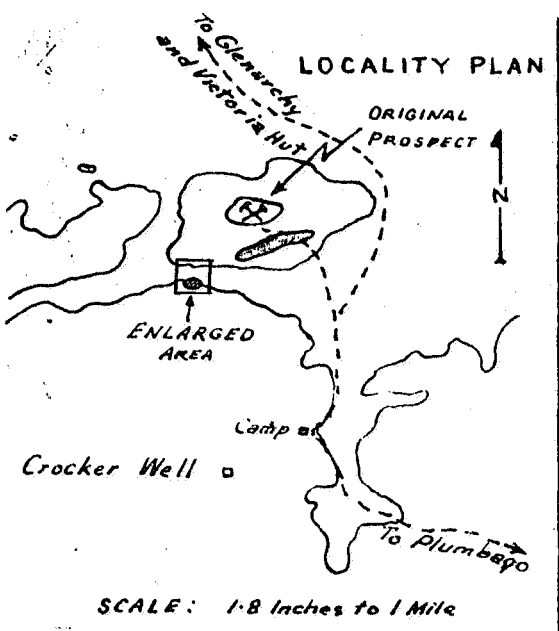
Project CROCKER WELL SOUTH DM
 Bore No. Crocker Well South No. 1 Bore Serial No. DD
 Hundred Section Plan Reference
 Co-ordinates N.45° E. R.L. of Collar
 Bearing Depressed 40° Driller R. Stempel
 Date Drilling commenced Date Drilling completed

LOG

Depth				Core Recovered		
From		To				
Ft.	In.	Ft.	In.	Ft.	In.	
0	0	11	5			Hybrid biotite granite
11	5	41	0			Grey hybrid granite with quartz-felspar intrusive small fragment of davidite at 22 feet (pegmatitic)
41	0	96	0			Hybrid biotitic with sheared brecciated zones full of biotite (unbrecciated zones are leucocratic) 92 to 93 feet slight amount radioactivity from davidite crystals.
96	0	111	4			Leuco granite
111	4	140	0			Hybrid biotite granite
140	0	140	4			Quartz seams
140	4	141	7			hybrid biotitic granite
141	7	142	0			Quartz seam
142	0	143	0			hybrid biotitic granite
143	0	144	4			Brecciated biotite zone
144	4	145	1			Quartz seam
145	1	272	0			Greenish hybrid biotitic granite
						171 feet calcite seam - shear foliation 45°
						184 to 184'6" pegmatite with pyrite 204, 207
						214, 253'6", and 255'6" pegmatites. Two to
						six inches wide cutting granite
272	0	274	0			Greenish sheared zone with biotite and epidote
						hybrid biotitic granite
274	0	279	0			Hybrid biotitic granite
279	0	282	6			Pegmatitic granite
282	6	290	6			Hybrid biotitic granite
290	6	298	10			Pink pegmatitic granite
298	10	301	0			Blue quartz with some pyrite
301	0	304	0			Pink pegmatitic granite
304	0	328	0			Hybrid biotitic granite
328	0	330	6			Pink pegmatitic granite
330	6	374	0			Hybrid biotitic granite
374	0	390	0			Pink pegmatitic granite with quartz seams intruded into hybrid granite
390	0	449	0			Hybrid biotitic granite
449	0	451	0			Blue quartz and pyrite in hybrid granite
451	0	508	0			Hybrid biotitic granite

W. R. Peterson

Bore logged by Date



S.A. DEPARTMENT OF MINES

Approved		CROCKER SOUTH PROSPECT	D.M.	Scale: 1" = 100 FT
Director	J.B.A.	GEOLOGY AND DIAMOND DRILLING		S1064
				File 4-5-55

Jagged Rocks
Prospect



GLENORCHY

Talbot Creek
Prospect



Windameria
Prospect

T.N.



Victoria Hut

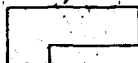
Crocker Well
Prospect



Crocker Well
South West
Prospect



Crocker East
Prospect



Crocker Well Camp

S.A. DEPARTMENT OF MINES

Approved

Passed

Drh.

CROCKER WELL

D.M.

Scale *1 inch to 1 mile*

Tcd. J.F.S

SOUTH WEST PROSPECT

Req.

S 1044

Ckd.

LOCALITY MAP

Director

Exd.

Fg

Date 15-4-55