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DEPARTMENT OF MINES

SOUTH AUSTRALIA

NORTH-EAST EXPLORATION

A MIN. SCHISTOGENE OCCURRENCE
ON OLD BROCKHURST STATION, OLARY, S.A.

by

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22nd March, 1955.

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TABLE OF CONTENTS

Page No.

SUMMARY	1.
INTRODUCTION	2.
PLANS	2.
GEOLOGY	2.
SAMPLING	3.
CONCLUSIONS	3.
RECOMMENDATIONS	4.

A NEW SCHEELITE OCCURRENCE
ON OLD BOICODHATA STATION, OLANY, S. A.

SUMMARY.

Geological surveys and sampling reveal that sporadic skarn outcrops which extend over a strike length of some 2500 feet, and widths of two to twenty feet, have an average grade of 0.10% W_3 . There are extensive soil covered areas which may overlie similarly mineralized ground both along the strike and at the western margin of the map area.

The scheelite bearing strata is adjacent to a parallel bed of carphosiderite which has been mined locally for use as pigment in paint manufacture.

The initial work has shown that although the overall tungsten content of the outcropping skarn rock is in itself too low to justify any additional action, it is considered that some surface trenching or bulldozing would be worthwhile to explore the alluviated parts of the deposit.

The upper fifty feet of the deposit could be cheaply mined by open pit methods and if a demand for carphosiderite arises, then the economics of jointly quarrying with scheelite ore should be reviewed.

INTRODUCTION.

Technical Assistant, J. Johnson, discovered this scheelite occurrence while prospecting Archean rocks in the Old Boolcoomata area.

H. Solomon (Assistant Geologist) mapped and reported on the carphosiderite in 1952. (Mining Review 93, page 131). A small tonnage was obtained for Fauldings Ltd. from shallow pits but the latest records show the claim has been abandoned.

The area was first visited on 13th December, 1954, with J. Johnson. Mapping and sampling was completed on the 4th and 5th of February, 1955, with the assistance of E. A. Clothier, a mining student from the University of Adelaide.

The scheelite occurrence is located two miles southeast, by rough track, from Old Boolcoomata Homestead.

PLANS.

Location and Regional Geology	C 1030
Old Boolcoomata Scheelite Zone Map	Map 55-28

GEOLOGY.

The deposit is found in an area of highly contorted metasediments consisting chiefly of mica schists, epidote quartzite, and skarn rock, marginal to the Old Boolcoomata granite massif.

Scheelite mineralization is localized within the carphosiderite - skarn formation and is considered to be genetically related to the later pegmatitic phases of the granite intrusion. Tungen from this source has apparently favored the lime silicate as a host rock.

The carphosiderite - skarn horizon can be traced along the strike for 2500 feet. Measured widths of these intermittent outcrops range from 10 feet to 30 feet. The eastern extremity lenses into quartzite and schist and the western end of the outcrop disappears under alluvium.

The stratigraphic sequence of the Archean metasediments in this area consists of a lower member of epidote quartzite, underlying the carphosiderite - skarn formation, and an upper quartzite bed, all three separated by thick mica schist horizons. General strike is northeast with dips of 70 degrees southeast, although on a regional scale they tend to follow the periphery of the granite cores.

The skarn remnant consists of impure marble and actinolite with lesser amounts of garnet, epidote, and hornblende. Scheelite is found as visible disseminations generally in former bedding laminae along with fluorite and pyrite.

SAMPLING.

Three non-representative grab samples nos. A 1427, A 1428, and A 1429 were obtained at night with a portable ultra violet lamp (See Plan 55-28) and assayed 2.29%, 0.87%, and 0.22% WO_3 . After additional mapping was completed, eight grab samples were taken from selected skarn remnants at localities where scheelite was detected. These samples are representative of the mineralized portion of the skarn outcrops and provide a reasonable grade appraisal of the deposits. These assayed from a low of 0.42% WO_3 to a high of 0.22%; averaging 0.18 WO_3 .

CONCLUSIONS.

Tungsten assays of the skarn outcrops show that the overall grade of 0.18 WO_3 is too low for a take-all mining venture and the richer outcrops which could be sorted by "lumping" are too small to be separately worked.

Investigations were confined strictly to the surface and no predictions of mineralization can be made at depth. Possible improvement of grade could be expected in depth, however, near the granite-skarn contact.

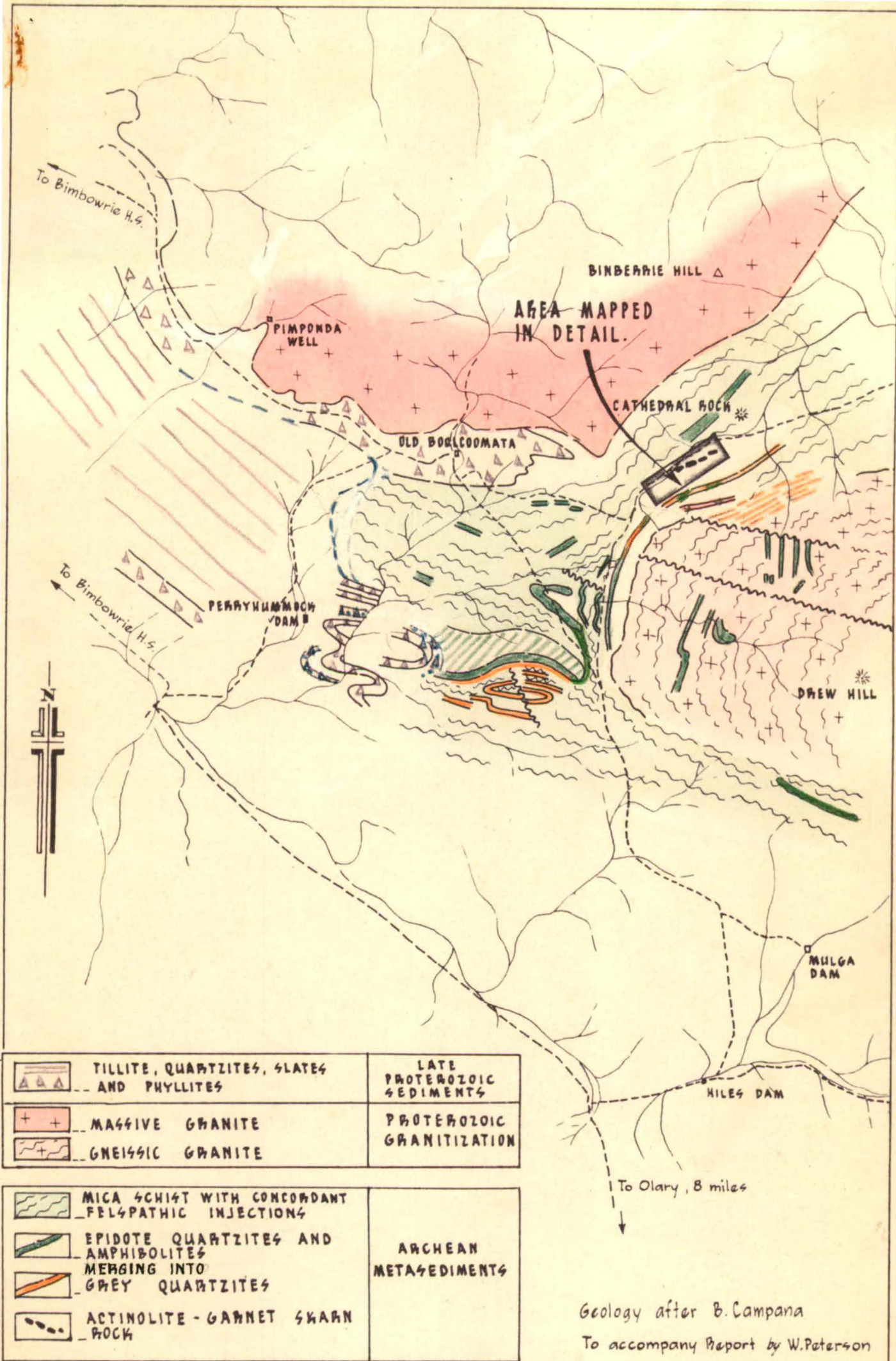
RECOMMENDATIONS.

Further prospecting and investigations are warranted to search for additional mineralization in these favorable formations.

J. R. Peterson
(U. R. PETERSON)

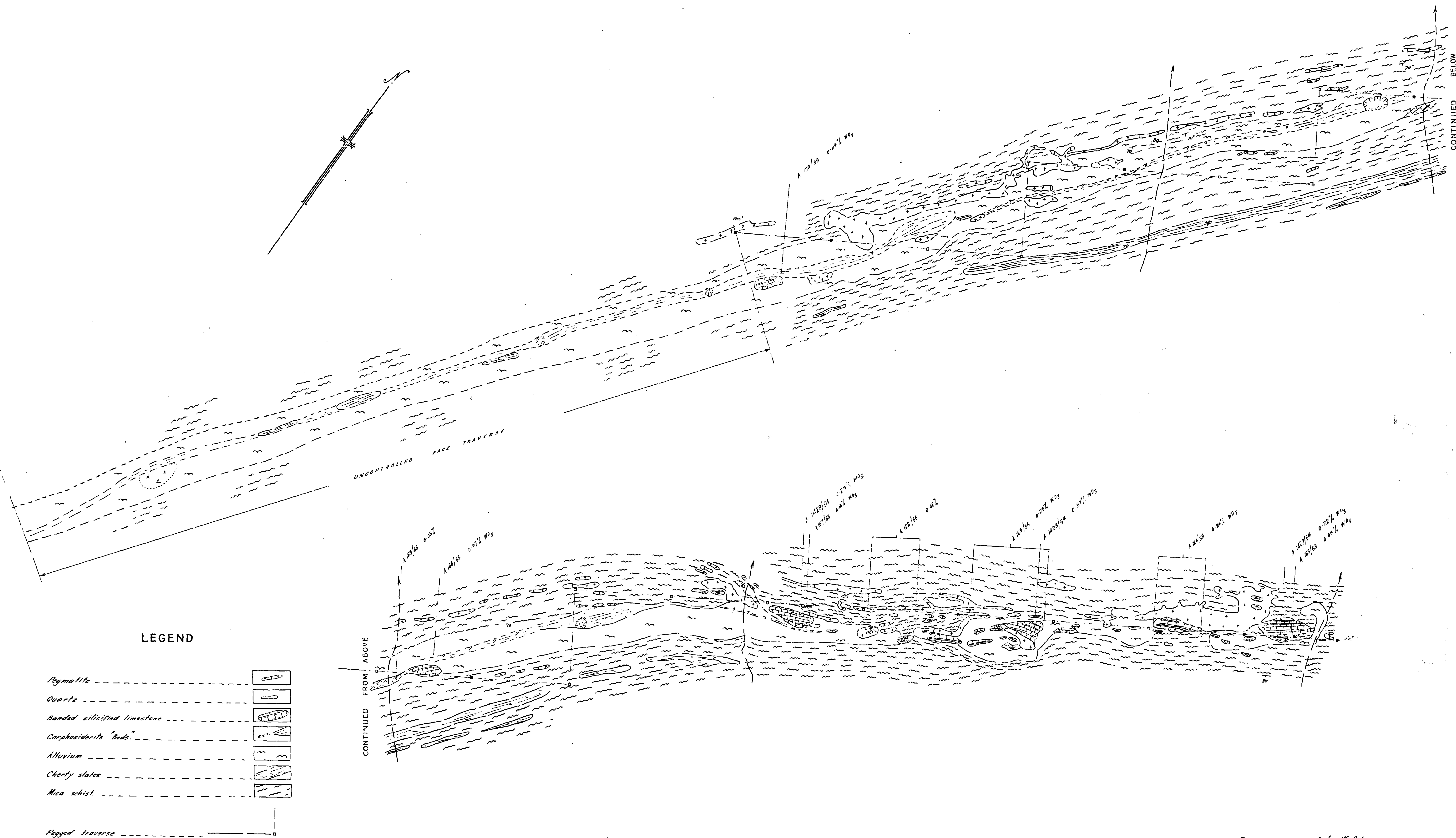
GEOLOGIST
U.S.A.B.C.

WRP:AGH
22/3/55.



S.A. DEPARTMENT OF MINES

Approved	Received	Dyn	16	OLD BOOLCOOMATA SCHEELITE AREA	D.M.	Scale 1 mile to 1 inch
		Fed.		GENERAL GEOLOGY	Req.	S1030
		Chd.		AND LOCATION PLAN		FL
		Encl.				Date 15.3.55



				S. A. DEPT. OF MINES				To accompany report by W. Peterson.	
				OLD BOOLCOOMATA SCHEELITE ZONE				Scale 40 Feet to 1 inch	
				Req. No. D.M. Compiled from		Approved		Issued	
						Director of Mines		a b	
Associated Drawing				No.	No.	Amendment	Ext.	Ute	