

DEPARTMENT OF MINES
SOUTH AUSTRALIA

ROBERTSTOWN CROCIDOLITE

REPORT ON DIAMOND DRILLING RESULTS AT THE BLUE HOLE DEPOSIT

ABSTRACT

Three diamond drill holes recently completed at the Blue Hole crocidolite deposits indicate the limited nature of the mineralization. Boring proved that the asbestos bearing rock extends below surface for a depth of 85 feet and that it occurs in a number of small disconnected masses.

Metallurgical treatment indicated that the drill cores contained less crocidolite than an earlier bulk sample taken from near the surface.

LOCATION

Farley's Blue Hole crocidolite asbestos deposit is situated in Hd. Apolunga, Section 295, three miles north west of Robertstown.

REFERENCES

- King, D. - "Investigation of Asbestos Deposits in the Robertstown and Frero Districts" - Min. Rev. 103, pp. 58-73, 1957.
- C. Kaiser & L. Dollen - "Robertstown Asbestos - Preparation of a Marketable Product" - unpublished report, 1956.
- LA. Thomson - "Robertstown Asbestos ... Part 2 - Examination of Drill Core" - unpublished report, 1958.

PLAN

The accompanying plans (No. S.1891) show the location of the deposit and boreholes.

THE DEPOSITS

Crocidolite occurs as irregular narrow veinlets filling joints in an albite - biotite - tourmaline replacement(?) rock in dolomite. The asbestos veins are up to three inches in width while narrow veins about $\frac{1}{8}$ inch wide with powdery incipient asbestos are common. Finely disseminated asbestos also occurs throughout the host.

MICROFILMED

DRILLING

Diamond drilling was undertaken at this locality to test the deposit in depth and to prove extensions to the north if any.

No. 1 hole sited in the floor of the existing quarry penetrated soft green to brown biotite - albite - hornblende rock with finely disseminated crocidolite and then irregular veinlets of asbestos up to one inch in width. At a depth of 75 feet buff dolomite was encountered.

Holes Nos. 2 and 3 were situated adjacent to the quarry in an alluviated area and both penetrated dolomite at a shallow depth. The logs of all holes are appended.

SEPARATION

Early work by the Research and Development Branch of this Department on the preparation of a marketable product was quite promising. A bulk sample taken from the "Blue Hole" was treated by wet classification and flotation to yield an asbestos product suitable as a paint filler and for heat insulation. The concentrate produced was 12.3% by weight of the ore and contained approximately 90% crocidolite.

Subsequent examination of the split drill core yielded a concentrate which represented 1.9% by weight of the original sample and contained 65% crocidolite.

CONCLUSIONS

A thin coating of emulsified and redistributed crocidolite has developed over practically the whole of the quarry face and the rejected rock in adjacent dumps and is responsible for the "salting" of the early bulk sample. The subsequent tests on drill core may be taken as a truer guide to the recovery attainable.

Assuming the asbestos bearing rock to be an inverted cone shaped body whose base has a diameter of 85 feet and depth of apex

below the base to be eighty feet, its volume would be about 10,000 cub. yards.

The small size of the deposit when considered in relation to the low asbestos content are discouraging and further work on this deposit is at present considered unwarranted.

R.K. Johns

R.K. Johns
Senior Geologist
MINERAL RESOURCES SECTION

REJ:ASK
3/9/58

Department of Mines
South AustraliaDIAMOND DRILL LOGProject: ROBERTSTOWN ASBESTOSD.M.: 1332/55Boxe No.: 1Boxe Serial No. No.: 61/58Handled: Apsinga Section: 295Direction: VerticalDriller: S. LopertDate Drilling commenced: 5/2/58Date Drilling completed: 13/2/58LOG

<u>From</u>		<u>Depth</u>		<u>To</u>		<u>Core</u>		
<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Recovered</u>	<u>In.</u>	
0		75	0	35	10			Green-brown biotite-albite rock with finely disseminated crocidolite and thin irregular veinlets of fine to coarse (1 inch) asbestos. Tourmaline occurs in sporadic veinlets and segregations.
75	0	93	0	6	9			Buff dolomite.

Boxe Logged by R.K. JohnsDate 18/2/58

Department of Mines
South Australia

DIAMOND DRILL LOG

Project: ROBERTSTOWN ASBESTOS

D.N.: 1332/55

Box No.: 2

Box Serial No. DR: 64/58

Hundred: Apsinga Section: 295

Direction: Vertical

Driller: B. Keizer

Date Drilling commenced: 19/2/58

Date Drilling completed:
20/2/58.

LOG

<u>From</u>		<u>Depth</u>		<u>To</u>		<u>Core</u>		
<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Recovered</u>	<u>Feet</u>	
	0	10	0			Nil		
10	0	24	6	6	0			Buff dolomite with small biotite cluster at 24'6".
24	6	30	0			Nil		

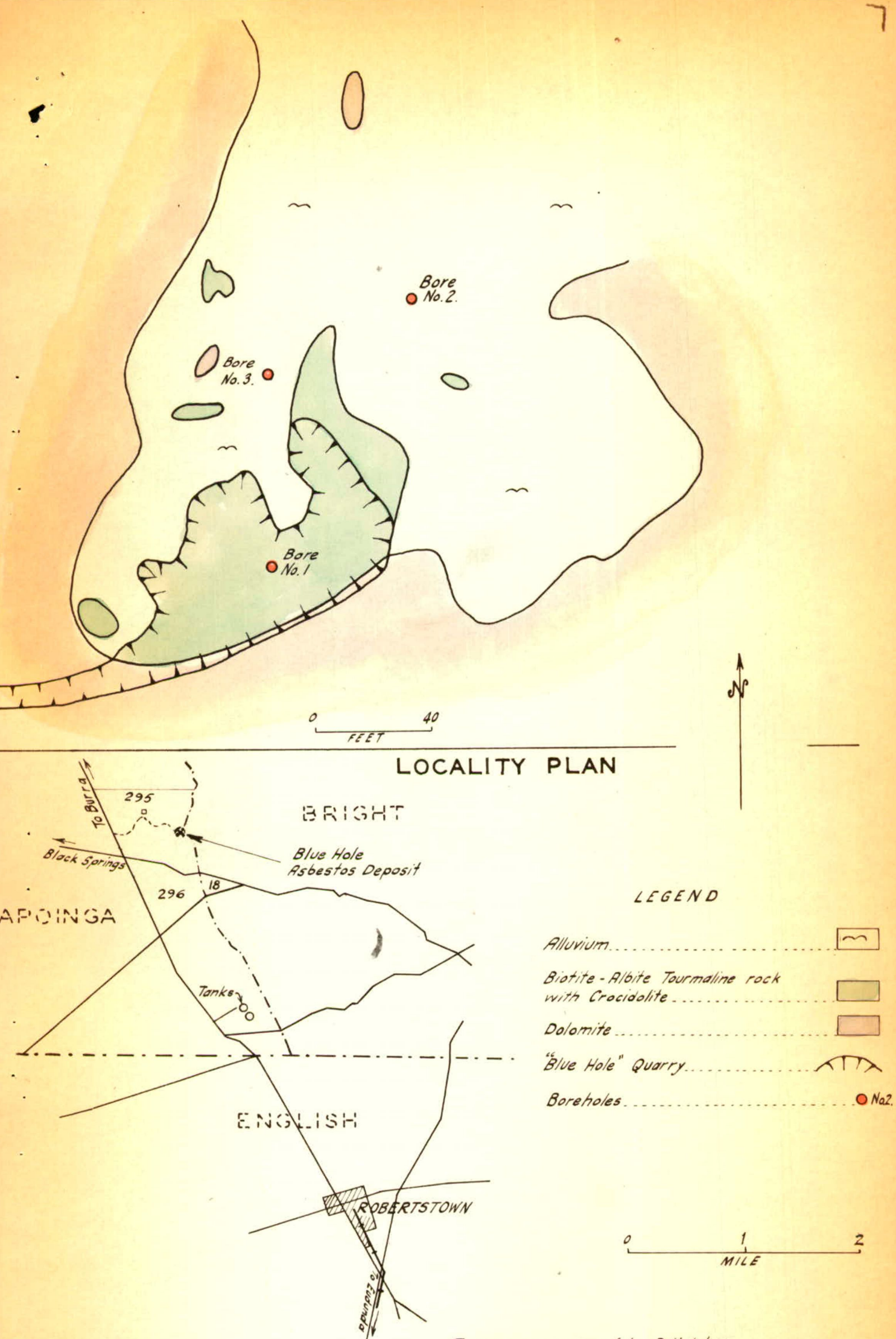
Core Logged by: R.E. Johns

Date: 3/3/58

Department of Mines
South AustraliaDIAMOND DRILL LOGProject: ROBERTSTOWN ASBESTOSD.M.: 1332/55Bore No.: 3Bore Serial No. DD: 65/58Hundred: Apolunga Section: 295Direction: VerticalDriller: B. KeizerDate Drilling commenced: 24/2/58Date Drilling completed: 25/2/58LOG

<u>From</u>		<u>Depth</u>		<u>To</u>		<u>Core</u>	
<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Ft.</u>	<u>In.</u>	<u>Recovered</u>	
	0	4	0			Nil	} Buff dolomite.
4	0	14	9	10	9		
14	9	19	6			Nil	
19	6	30	0	7	0		

Bore logged by: R.K. JohnsDate: 3/3/58



To accompany report by R.K. Johns.

S.A. DEPARTMENT OF MINES

Approved	Passed	Drn.	BLUE HOLE CROCIDOLITE DEPOSIT Hd. APOINGA SEC. 295	D.M.	Scale
		Tcd. A.W.		Req.	S1891
		Ckd.			Ge 9
Director		Exd.			Date 3-9-58