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NORTH EAST URANIUM EXPLORATION

CROCKER WELL AREA

PROGRESS STATEMENT ON ORE RESERVES AT THE

VICTORIA HUT PROSPECT TO 22/11/54.

by D. KING  
GEOLOGIST.

Report No. C.W. 27

G.S. 196

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MICROFILMED

## S U M M A R Y.

A revised estimate of ore established in the Victoria Hut Prospect is presented. Diamond drilling is still continuing and the figures herein are subject to further revision.

Ore occurs in four bodies as follows:

1. Main lode - 53,000 tons of mean grade 5.9 lbs.  $U_3O_8$  per long ton (0.26%)
2. South limb - 12,500 tons - 5.1 lbs.  $U_3O_8$  per long ton (0.23%)
3. South lode - 4,500 tons - 5.9 lbs.  $U_3O_8$  per long ton (0.26%)
4. Central lode - 1,000 tons - 4.7 lbs.  $U_3O_8$  per long ton (0.21%)

The total reserve is thus 71,000 tons, the mean grade being 5.8 lbs.  $U_3O_8$  per long ton (0.25%).

The main lode ore body is continuing strongly at the present established depth of 510 feet (measured down the dip -  $45^\circ$ ) where on present knowledge it is carrying at least 50 tons per foot of lode on the dip.

## I N T R O D U C T I O N

In a recent progress report (No. C.W.26) it was indicated that total ore reserves proven by diamond drilling to 28/9/54 amounted to 42,000 tons assaying 4.00 pounds  $U_3O_8$  per long ton; the likelihood of additional ore reserves at that stage seemed remote because of a marked decline in lode width to the tested depth of 270 feet down dip.

A deep borehole VH20-60 was subsequently drilled as an exploratory measure to intersect the lode channel at 400 feet down dip. This borehole revealed an encouraging improvement in lode width and grade which has since been duplicated in several additional boreholes, and led to this reconsideration of ore reserves.

## D I A M O N D   D R I L L I N G .

Eight diamond drill holes representing a total footage of 2300 feet have been completed since previous tonnage estimates were submitted. Details of lode intersections are as follows:-

<u>Bore No.</u>	<u>Lode Intersections</u>	<u>Width</u>	<u>Weighted Assay</u> lbs. $U_3O_8$ per/ton (Chem- long ical)	
VH7-70	{ 95'9" - 98'6" 209'6" - 210'9"	2'9" 1'3"	2.0 12.8	Main Lode
VH15	202'6" - 215'8"	13'2"	8.8	Main Lode
VH15-70	211'0" - 227'0"	16'0"	8.1	Main Lode
VH19-70	{ 152'0" - 153'8" 229'0" - 229'6"	1'8" 0'6"	1.5 5.6	Main Lode
VH20-60	{ 281'7" - 288'1" 301'10" - 305'0" 314'9" - 324'3"	6'6" 3'2" 9'6"	1.1 4.0 7.5	Main Lode
VH21-65	260'2" - 284'0"	23'10"	5.2	Main Lode
VH21-90	377'4" - 383'10"	6'6"	7.1 (Rad)	Main Lode
VH23-70	{ 322'1" - 326'3" 343'10" - 347'1"	4'2" 3'3"	3.6 (Rad) 4.8 (Rad)	Main Lode

The total footage of diamond drilling now completed is of the order of 5,000 feet. The cost has averaged £2/10/- per foot, or 3½ shillings per ton of proven ore.

# 1. MAIN LODE ORE RESERVES

The Main Lode ore reserves are calculated below from measurements of the cross-sectional areas of the lodes in the plane of the dip along each 50 ft. N.-S. grid interval. The cut-off factors used in the definition of these reserves are an overall value of greater than 1 pound  $U_3O_8$  per ton over a width of 4 feet. Ore of such specifications has been proven to a depth of 500 feet down-dip, (Borehole VH21-90) in the central part of the deposit. It extends laterally for 300 feet at the surface between grid lines 125 W and 425W, and has at least 100 feet length in the lowest levels tested.

The following factors used in the ore reserve estimates are computed from details of Main Lode intersections listed in Table I.

<u>Grid Line</u>	<u>Proven Ore Depth</u> (Down Dip) feet	<u>Ave. Lode Width</u> feet	<u>Cross-Section Area</u> (Down Dip) sq. feet.
400W	230	4.5	1030
350W	200	2.3	460
300W	160	8.3	1330
250W	400	7.3	2920
200W	500	13.3	6650
150W	100	4.0	<u>400</u>

Total 12790 sq. ft.

Average cross-section area = 2130 sq. feet

Proven length of deposit = 300 feet

Tonnage using factor of 12 cubic feet per ton

$$= \frac{300 \times 2130}{12} = \underline{\underline{53,000 \text{ tons}}}$$

This estimate is confirmed by planimetric calculations on the longitudinal cross-section of the deposit (Plan U.S. 468 ).

The ore reserves of 53,000 tons comprise approximately 100 tons of ore per vertical foot of depth to the limit of testing at 500 feet down dip. The average width of the Main Lode included as reserves is 8 feet, and the overall weighted average grade as calculated from chemical assays of a total of 142 feet of drill

hole samples is 5.9 pounds  $U_3O_8$  per long ton.

These figures represent a reserve of approximately 140 tons of uranium oxide.

## 2. ADDITIONAL ORE RESERVES

Ore reserves of the smaller lode formations in the hanging wall are not appreciably affected by the recent diamond drilling results. The following figures are extracted from the previous progress report (C.W. 26) and can be regarded only as an approximation due to lack of knowledge of the actual lateral extent of these ore bodies.

<u>South Limb</u>	12,500 tons	at	5.1 lbs. $U_3O_8$ per ton.
<u>South Lode</u>	4,500 tons	at	5.9 lbs. $U_3O_8$ per ton.
<u>Central Lode</u>	1,000 tons	at	4.7 lbs. $U_3O_8$ per ton.

## TOTAL ORE RESERVES.

Total of the ore reserves described in this report are 71,000 tons assaying 5.8 pounds  $U_3O_8$  per long ton.

*D. King*  
D. KING  
GEOLOGIST

CROCKER WELL AREA  
VICTORIA HUT PROSPECT

T A B L E I.  
MAIN LOBE ORE INTERSECTIONS

GRID LINE	BORE NO.	LOBE INTERSECTIONS				WIDTH  Inches	WEIGHTED ASSAY  lbs/ton U <sub>3</sub> O <sub>8</sub> (Chemical)
		From Ft.	ins.	To Ft.	ins.		
400W	VH4	64	- 0	69	- 0	60	1.7
	VH6	110	- 0	115	- 6	66	3.7
	VH17	201	- 0	204	- 0	35	2.3
	VH17-70	below spec.					
350W	VH2	143	- 0	147	- 6	54	1.8
	VH7	194	- 0	195	- 2	14	5.2
	VH7-70	209	- 6	210	- 9	15	12.8
300W	VH3	42	- 6	50	- 0	90	0.8
	VH9	152	- 3	161	- 6	111	9.2
	VH19	199	- 6	200	- 0	} below specifications	
	VH19-70	229	- 0	229	- 6		
	VH23-70	322	- 1	326	- 3		
250W	VH10	135	- 0	147	- 0	144	2.2
	VH16	198	- 8	203	- 5	57	7.6
	VH16-70	220	- 0	220	- 10	34	2.8
	VH20-60	314	- 9	324	- 3	114	7.5
200W	VH1	52	- 9	62	- 1	112	10.6
	VH5	133	- 7	142	- 9	110	6.8
	VH15	202	- 6	215	- 8	158	8.8
	VH15-70	211	- 0	227	- 0	192	8.1
	VH21-65	260	- 2	284	- 0	286	5.2 (Rad.)
	VH21-90	377	- 4	383	- 10	78	N.A.
150W	VH11	126	- 1	130	- 2	49	2.0

TO THE DIRECTOR OF MINES:

Estimate of Ore Available Victoria Hut Prospect.

Attached is a statement prepared by Geologist, D. King, summarising the quantitative data obtained by diamond drilling at the Victoria Hut Prospect. The ore bodies comprise -

1. The Main Lode which contains the greater part of the established reserves. This body dips at 45° and varies in width up to 23 feet. Drilling to a present maximum depth (measured down the dip of the lode) of 510 feet has established 53,000 tons of ore of mean grade 0.26%.

Ore is continuing in depth at the rate of 50 tons for each inclined foot of lode depth.

2. Auxiliary Lodes - 18,000 tons at 0.24%.

Drilling is still proceeding and these estimates are subject to revision. It is not expected that further reserves will be available from the auxiliary lodes but the main lode will clearly contribute an additional tonnage in depth.

*L. W. Parkin*

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LWP:AGK  
23/11/54.