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O T T A W A September 27th, 1940.

R E P O R T

of the

ORE DRESSING AND METALLURGICAL LABORATORIES.

Investigation No. 899.

Diamond Drill Core Rejects from the
Orenada Gold Mines Limited,
Bourlamaque, Quebec.

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BUREAU OF MINES
DIVISION OF METALLIC MINERALS
—
ORE DRESSING AND
METALLURGICAL LABORATORIES

CANADA
DEPARTMENT
OF
MINES AND RESOURCES
MINES AND GEOLOGY BRANCH

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Orenada Gold Mines Limited,
Bourlamaque, Quebec.

Shipment:

A shipment of diamond drill core rejects from the above property, net weight 26½ pounds, was received on September 18th, 1940. The shipment was submitted by Col. M. W. MacDowell, 11 Granite Street, Brockville, Ontario.

Location of the Property:

The property of the Orenada Gold Mines Limited is located in the south central section of Bourlamaque township, Quebec.

Purpose of the Investigation:

The ore was submitted to determine its value and its response to straight cyanidation.

Character of the Ore:

The shipment consisted of a number of bags of crushed ore samples, rejects from the company's assay. These were all crushed approximately through 100 mesh and no mineragraphic examination was made.

Sampling and Analysis:

The various small samples of the rejects were combined, mixed, and a head sample was cut out. This sample was found to contain:

Gold - 0.10 oz./ton
Silver - 0.02 "

Investigative Procedure:

The ore was cyanided for 24 and 48 hours.

Results:

The extraction by cyanidation was 95 per cent. The cyanide tailing after 24 hours' agitation assayed 0.005 ounce gold per ton.

Details of the Test:

Straight Cyanidation.

Two samples of the mixed rejects were agitated

(Straight Cyanidation, 'cont'd) -

in cyanide solution at a dilution of one part solids to 1½ parts of solution containing 1.0 pound NaCN per ton. The ore was not reground. Lime was added to give protective alkalinity to the pulp.

Results:

Test No.	Agitation, hours	Assays, Au oz./ton: Feed	Tailing	Extraction: of gold, per cent	Final titration, lb./ton solution: NaCN	CaO	Reagents consumed, lb./ton ore: NaCN	CaO
1	24	0.10	0.005	95.0	1.0	0.10	0.90	9.85
2	48	0.10	0.005	95.0	1.0	0.11	1.50	15.80

The reducing power of the solution after 24 hours' agitation was 120.0 millilitres of N/10 $KMnO_4$ per litre.

A screen test of the cyanide tailing from Test No. 1 shows the degree of grinding:

Mesh	Weight, per cent
+ 65	0.2
+100	0.7
+150	2.2
+200	3.3
-200	93.6
	100.0

Conclusions:

The test work shows that the ore is amenable to straight cyanidation. The high consumption of reagents is most probably due to oxidation taking place after crushing.

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