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RIVALE INDUSTRIES LIMITED

Garnet Property at River Valley,

Dana Township, Ontario

A QUALIFYING REPORT
By

Michael Ogden, B.A.Sc., P.Eng.
Toronto, Ontario
July 21, 1969

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RIVER VALLEY GARNET PROPERTY DANA TOWNSHIP, ONTARIO

SUMMARY

The River Valley Garnet Property is about 7 miles north and west of the little town of River Valley, which is 15 miles north of Highway Number 17, half way between Sudbury and North Bay.

The property, of about 500 acres in size, has a history of some garnet production from a pit near the centre of the claim block, around the year 1946.

The Rivale interests have extended the mineralized zone some 700 feet more to the west by bulldozer stripping, and cleaning to bedrock with a high power water hose.

The exposed mineralization is estimated by visual examination to contain some 14,000 tons of rock per vertical foot containing about 25% garnet. This is considered adequate for mining purposes, for it is about double the grade of the major supplier of garnet to the world.

Mill tests are recommended to get a more accurate estimate of grade.

Respectfully submitted,

Michael Ogden, B.A.Sc., P.Eng.

RIVALE INDUSTRIES LIMITED GARNET PROPERTY AT RIVER VALLEY DANA TOWNSHIP, ONTARIO

INTRODUCTION

The property was examined on the 2nd of July, to see if there were sufficient tonnage of garnetiferous rock to support a mining operation. The major North American producer at present is that of Barton Mines Corporation, near North Creek, in upstate New York. Their grade of about 12% garnet is sufficient for them to supply some 90% of the world's requirements.

REFERENCES

- 1. Ontario Department of Mines, Vol. 41, Part 4, 1932.
- Canada Department of Mines and Technical Surveys,
 Investigation Report 59-65 on Garnet from the Sudbury Area, by J.S. Ross.
- 3. Feasibility Report on Production of Garnet Abrasive from River Valley, by R.A. Elliott, 1964.
- 4. Claim Map, Dana Township.
- 5. Air Photographs.
- Geological Map, Rivale Industries, by M. Ogden,
 July 1969.

LOCATION AND ACCESS

River Valley is a little railway town about half way between Sudbury and North Bay, some 15 Miles north of Highway 17 on Route 539. The property, which is 5 miles north of town, can be reached by gravel road by going west from town for about 2 miles, then north on a good bush road for another 5 miles.

PROPERTY

The claims, in total, would encompass some 500 acres.

The central core of three claims has 100 acres, and these are numbered T-45216, -217, and -218. Completely surrounding these is a ring of unpatented mining claims, numbering T-61828, -831, -832, -834, -835, -837 and T-62006, -007, -008, -009.

HISTORY

The property was worked by the Niagara Garnet Company during the period 1943 to 1949. Garnet concentrates were produced in Sturgeon Falls and some of the production is said to have been sold to the Minnesota Mining and Manufacturing Company, as abrasives. Cubar Uranium Mines had the ground for some years after that, but do not seem to have done any work on it. Then, in 1959, Industrial Garnet Company

Limited acquired the ground by staking and commenced quite a lot of test work. They carried out stripping, cleaning and test sampling of the deposit, and also did some market investigation of the product. Production was never attained.

The successor to Industrial Garnet is a re-formed company called Stonecrest Ornamental Aggregates, from whom Rivale Industries is to acquire the leased ground.

The Rivale group has been exploring their staked claims by bulldozing off the overburden and then cleaning the bedrock surface with a high pressure fire hose. Some 1,000 square feet of garnetiferous bedrock has thus been exposed and cleaned up. The work is continuing in order to expose as much of the garnet zone as possible.

The access road has also been improved this year, with fresh gravel in many places, and some new culverts.

TABLE OF GEOLOGICAL FORMATIONS

Recent and Pleistocene

necesse and recovers

Cobalt Series

Keeweenawan

- Sand, clay, and gravel

- Various acid and basic intrusives

- Gowganda conglomerates
with some slate and
quartzite

Sudbury Series

-Quartzite, conglomerates, quartz biotite gneiss, and quartz biotite garnet gneiss

Keewatin

-Greenstone and chlorite schist.

GENERAL GEOLOGY

The exposed rock in the vicinity of the garnet showings is of the Sudbury Series of highly metamorphosed sediments. The zone of garnetiferous rocks extends for 20 miles or more across the country from 3 miles north of Markstay, near Number 17 Highway, to about 3 miles north of River Valley. This trend is roughly parallel to the Grenville Front and some 2 - 3 miles southeast of it. Most of the known garnet showings along this zone are either coated with chlorite or consist of small garnets.

LOCAL GEOLOGY

The garnets at River Valley occur in a biotite granite gneiss which strikes east with a steep dip to the south. Towards the east, the zone bends to the southeast; to the west, it curves down to the southwest and flattens in dip to 35°. The higher grade material is associated with high biotite content, whereas the quartzitic or granitic forms are low in garnet content.

The garnets are pink to dark red in colour, average about one inch in size, although they occur up to 7 inches in diameter. They are poorly formed with some inclusions.

North of the garnetiferous zone is a conformable dark green to black fine grained hornblende gneiss. South of it is a dearth of outcrop, until a grey granite gneiss is encountered, some 100 feet south of the garnet zone.

TONNAGE RESERVES WITH A VISUPL ESTIMATE OF PROBABLE GRADE
The writer has estimated the grade of various portions of
the garnetiferous zones by an "eyeball estimate" based on
volume. These percentages have been corrected to read in
percent by weight but still the results are an estimate.

THE HANGWALL ZONE

The Hangwall Zone displays the highest grade material available. It varies in width from 90 feet wide on the west to 30 feet at the east end, some 900 feet away. This gives about 4,800 tons per vertical foot of 30% garnet.

THE INTERMEDIATE LEAN ZONE

Just under the high grade zone, there is a lean brand which can be clearly seen on the big central outcrop. It is 60 feet wide where exposed, but was not observed to the east

or west. This would amount to about 2,000 tons per vertical foot of 8% garnet, but would be considered waste rock.

THE FOOTWALL ZONE

The north or Footwall Zone is by far the biggest, and seems to be open to the east. It varies from 70 feet wide on the west to 210 feet towards the east, and has been exposed for a total length of 750 feet. This gives a tonnage of some 9,300 tons per vertical foot of 22% garnet.

TOTAL TONNAGE

Combining both the Footwall and the Hangwall Zones, there seems to be some 14,000 tons per vertical foot of rock that will run about 25% garnet.

CONCLUSIONS

- 1. The grade of the River Valley deposit appears to be about double that of the Barton Mine.
- 2. Tests should be made as soon as possible on bulk samples of ore, to determine accurately the grade in a few places.
- 3. Total tonnage is adequate for the immediate future and surely more near-surface ore is available if exploration

were carried on to the east.

Respectfully submitted,

Michael Ogden, B.A.Sc., P.Eng.

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CERTIFICATE

- I, W. Michael M. Ogden, residing at Deanwood, Rural Route #4, Stouffville, in the County of York, Ontario, do hereby certify as follows:
- 1. That I am a graduate in Applied Science (Mining Geology) from the University of Toronto in 1950.
- 2. That I am registered as a Professional Engineer in the Province of Ontario and have been practising my profession for 19 years.
- 3. That I have no interest, either direct or indirect, and do not expect to receive any interest in the properties or in the securities of Rivale Industries Limited.
- 4. That this report is based on information contained in the references listed in the body of this report and on a personal examination of the property on 2nd July, 1969.

Michael Ogden, B.A.Sc., P.Eng.

Dated at Toronto, Ontario, this 21st day of July, 1969.





