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Pioneer Construction Inc.



Borehole Assessment and Geological Interpretation Of Pioneer Claims Township of Jaffray District of Kenora Northwestern, Ontario

(N.T.S. 52 E/16)

By: David Pilkey

April, 2015

(Covering work performed January 2015 and early visits to the area)

INTRODUCTION

Pioneer Construction Inc. owns the mining rights to claim # 4256950 and surround claims, located in Jaffray Township in the District of Kenora. Pioneer's Metail Quarry is currently in operation within this area producing aggregates for a variety of purposes and providing excellent exposure of the rock types typical of the area. Homogenous rock with limited or no alteration and mineralization are best suited for the production of these aggregates.

Several visits to the quarry show the primary lithology to consist of a fine to medium grained mafic metavolcanic rock with local areas of quartz and quartz-carbonate veinlets and lens.

Pioneer Construction Inc. undertook a small drilling and sampling program in early 2015 in attempt to delineate the extent of the mafic metavolcanic unit within the claims adjacent to the quarry. Two shallow, vertical percussion drill holes were completed along the Northwest and Northeast corners of the property to depths of 24 and 44 meters. Sampling of the grindings was done at 1 meter intervals with follow up examination and gold analysis.

The results and observations from these samples form the basis of this report.

LOCATION AND ACCESS

Pioneer Construction Inc's claim lies approximately 9.0 kilometers east-north-east of Kenora, in the Township of Jaffray, Lot 16, Concession 5. From Kenora the claim can be accessed up Highway 17 to Jones Road, then Homestake Road heading west through the claims. The claim block lies 2 kilometers southwest of the airport.

Power line access runs through the northern portion of the claim converging toward Rabbit Lake.

<u>REGIONAL GEOLOGY</u>

The geology surrounding Pioneer's claim consists of metavolcanic, metasedimentary and intrusive rocks of Achaean age characteristic of the Wabigoon Belt. Mafic flows and pillow volcanics are intercalated with intermediate to felsic volcanics and intrusive porphyritic units within the immediate claim area.

Intrusive rocks of the Jones Road Quartz Monsonite and Island Lake Diorite are present to the South and East, respectively. To the Northwest rocks of the Wabigoon Belt are flanked by English River gneisses.

The claim is centrally located within the zone of metavolcanic rocks, measuring approximately 4 kilometers in thickness across the property.

Historical mapping and visits to the claim area indicate the dominate lithology to consist of relatively homogenous, fine to medium grained mafic volcanic rock. Minor quartz and quartz-carbonate veinlets have been identified in workings within the claim area.

Work by King and Foster (1983) describe a greenstone belt with tholeiitic mafic volcanic rocks as the primary lithology. Intercalated within this unit are intermediate and felsic volcanic units as well as intrusive rocks. Evidence of structural activity associated with the Kenora Orogeny is evident within the region in the form of folding and metamorphism.

PROPERTY GEOLOGY

The majority of Pioneer's claims have limited outcropping with the best exposure in the Northwest portion of the block. Rocks consist primarily of fine to medium grained mafic, metavolcanic flows with lesser amounts of intercalated intermediate metavolcanic rocks. Locally small intrusive fingers of porphyry have been documented but were not observed by the author.

Quarry operations in the area show a relatively homogenous unit of mafic metavolcanic rock with local areas of quartz and quartz-carbonate veining. Shearing is encountered throughout the area with a typical Northeasterly trend, dipping vertically or steeply to the Southeast.

The southern extension of the properly shows limited outcrop exposure and is characterized by lower swampy ground. Geology within this area is extrapolated from historical mapping and early works.

Historically several gold occurrences have been indentified around the area. Visits by the author, to Metail Quarry have encountered localized areas of alteration, quartz-carbonate veining, but little to no mineralization.

WORK SUMMARY

Pioneer Construction Inc. completed a small drilling program during the winter months of 2015. The program consisted of two shallow depth boreholes located in the northern portion of their claims.

The first hole was drilled in the upper Northwest corner of the claim, slightly north of the pole line, at $49^{\circ}46'33.49"$ N and $94^{\circ}23'55.58"$ W. The hole was drilled to a depth of 24 meters. The second hole is located in the Northeastern corner of the claim, between the pole line to the north and access road to the south. Hole # 2 is situated at $49^{\circ}46'40.55"$ N and $94^{\circ}23'21.08"$ W and was drilled to a vertical depth of 44 meters.

Samples of the drill cuttings were taken at 1 meter intervals consisting of approximately 1 kilogram of material in each. Each sample was visually examined to identify the predominant rock type, as well as the presents of any noticeable alteration or mineralization. The majority of the samples are comprised of a uniform mixture of mafic to intermediate metavolcanic rock that is fine to medium grained, grey to greenish grey in colour. Only minor changes are noted with the inclusion of small amounts of quartz-carbonate material, presumably small veinlets. The area wide metamorphic imprint is characterized by the presents of mica to varying degrees within the sample. Drill hole #1 exhibits features of localized shear zones with the development foliations and patching chlorite. No visual mineralization was noted in any of the sampling, from either hole location. In borehole # 1 these veinlets are most prominent between 4 - 6 meter and 10 - 12 meter depth where they comprise 2 to 5 % of the samples. Borehole # 2 shows the appearance of these features from 8–11 meters, 24-26 meters and 38–40 meters. A summary of the visual inspection of each sample is provided in the appendices of this report.

With the presents of several gold properties bordering Pioneer's claims it was decided to test any altered or mineralized portions of the grindings for gold. Five samples were selected for gold analysis based on the presents of quartz-carbonate material within the cuttings. The samples were shipped to Actlabs for gold analysis by fire assay. The laboratories detection limit was 5 ppb. No significant mineralization was found in the samples and the analysis showed no significant gold values as well. The laboratory test results are provide in the accompanying appendices and are summarized below.

Sample #	Borehole #	Sample Depth	Au in Sample
1	2	8 – 10 m	< 5
2	2	24 - 26 m	6
3	1	10 – 12 m	< 5
4	2	38 – 40 m	< 5
5	1	4 – 6 m	< 5

Table 1: Gold Analysis Summary

CONCLUSIONS

The intent of Pioneer's small drilling program was to evaluate the extensiveness of the Metail Quarry rocks within the northern portion of its claims. Homogenous, unaltered and unmineralized bedrock is best suited for the production of aggregates with information obtained from drilling being used to guide any further work.

Based on historical work within the area it is expected that the primary lithology will continue, northerly, but levels of metamorphism, alteration or mineralization were not known. Observations of the drill hole cuttings suggests the rock type to be the same as those encountered in aggregate production and along the faces of Metail Quarry.

Varying amounts of fine to medium grained mica were encountered in both drill holes and is typical of rocks within the area. Drill hole # 1 shows evidence of a better developed foliation, possibly shearing, and chloritization throughout most of its length.

Local quartz-carbonate veining was most prevalent in drill hole # 2 but no mineralization was found in either holes. Gold analysis from five drill hole samples returned only one sample about the laboratories 5 ppb detection limit.

Based on information collected any future work would be best directed toward the northeast portion of the claim. Field assessment could be done to confirm the findings of the drill program if required.

Sudbury, Ontario May, 2015 Respectfully submitted

David Pilkey BSc

REFERENCES

King, H.L., 1983:	Precambrian Geology of the Kenora-Keewatin Area
	Eastern Part Kenora District, Ontario
King, H.L. and Foster	Kenora Keewatin Area - Eastern Part, Kenora District.
J. R., 1983	Ontario Geological Survey Map, P 2618
Murdy, A.W. 1985:	Geology of the Airport Claims, Township of Jaffray,
	District of Kenora, Northwestern Ontario (Assessment File)
Kuehnbaum, R.M. 1987:	Geological Report of Claim K824761, Scramble Mining
	Ltd., Jaffray Township, District of Kenora, Ontario

Appendix A

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Borehole Sample Grindings

Visual Inspection and Classification

BH # 1	% Carbonate	Lithology and Comments
	Veining	<i></i>
0 – 1m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
1 – 2m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
2 – 3m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
3 – 4m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
4 – 5m	1 – 2 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ? Minor chlorite
5 – 6m	1 - 2 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ? Minor chlorite
6 – 7m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
7 – 8m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
8 – 9m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
9 – 10m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
10 -11m	2 - 5%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification?
11–12m	2 - 5%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification?
12–13m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
13–14m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
14–15m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
15–16m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
16–17m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
17 – 18m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
18–19m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
19–20m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
20-21m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
21-22m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
22–23m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
23-24m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.

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BH # 2	% Quartz -	Lithology and Comments
	Carbonate Veining	Liniting, and comments
0 – 1 m	< 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
1 - 2m	< 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
2-3m	< 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
3 – 4m	Trace	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
4 – 5m	Trace	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
5 – 6m	Trace	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
6 – 7m	Trace	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
7 – 8m	Trace	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
8 – 9m	1 – 2 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification?
9 – 10m	2 -4 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
10 -11m	< 1%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
11–12m	< 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Minor quartz-carbonate.
12–13m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
13–14m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
14–15m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
15–16m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
16–17m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
17 – 18m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
18–19m	Trace – 1 %	Fine to medium grained, gravish mafic to intermediate volcanic. No mineralization noted.
19–20m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
20–21m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
21–22m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
22–23m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
23–24m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
24 - 25m	2 - 5%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
25 - 26m	2 - 5%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
26 - 27m	1 - 2%	Fine to medium grained, gravish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
27 - 28 m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
28 - 29m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
29 - 30m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.

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BH # 2	% Quartz -	Lithology and Comments
	Carbonate Veining	
30 - 31m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
31 - 32m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
32 - 33m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
33 - 34m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
34 - 35m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
35 - 36m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
36 - 37m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
37 - 38m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
38 - 39m	2 - 4%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
39 - 40m	2 - 4%	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted. Carbonate veinlets, silicification ?
40 - 41m	Trace – 1. %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
41 - 42m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
42 - 43m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.
43 - 44m	Trace – 1 %	Fine to medium grained, grayish mafic to intermediate volcanic. No mineralization noted.

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Appendix B

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Gold Analysis Results

ACTLAB Testing

Final Report
Activation Laboratories

Report Number: A15-02267	Act
Report Date: 10/4/2015	AU
Analyte Symbol	Au
Unit Symbol	ppb
Detection Limit	5
Analysis Method	FA-AA
Sample #1 8-10m	< 5
Sample #2 24-26m	6
Sample #3 10-12m	< 5
Sample #4 BH #1 4-6m	< 5
Sample #5 BH #2 35-40m	< 5





: Drill Hole 1			4
Zone:	15 U		
Easting:	399290.00 m E		
Northing:	5514660.00 m N		
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