moneta
porcupine

# MONETA PORCUPINE MINES 

Assessment Report 2010 DIAMOND DRILL PROGRAM

Porcupine Mining Division

Timmins, Ontario
N.T.S. 42A/6 \& 42A/II

# Moneta Porcupine Mines Inc. 

## North Tisdale Project

## Summary

The Moneta Porcupine property lies between 2 and 10 kilometers north of Timrnins, Ontario and is accessed by Highway 655 and adjoining bush roads, including a haulage road linking the McIntyre tailings dam to Hwy. 655.

The property potentially covers the extension of the Hollinger - McIntyre gold system to the north east, the western extension of the Bell Creek - Hoyle Pond belt, and the western extension of the Pipestone fault system.

Past and recent work has confirmed that the Property is underlain an east-west trending belt of intercalated (tholeiitic) mafic volcanics and minor (komatiitic) ultramafic volcanic flows locally intercalated with graphitic argillites, recognizable as a prominent regional EM airborne conductors from historical surveys. Due to the lack of outcrop and thick overburden ( $5-50 \mathrm{~m}$ ) on the property, areas of interest detected by geophysics are best tested by diamond drilling.

Between September $12^{\text {th }}$ and $15^{\text {th }}$ 2010, Moneta completed 1 diamond drill hole totalling 317 metres. DDH MNT10-02 was drilled on the southeasterly and historical "Porcupine Prime" portion of the property (P948851/852) testing for a northwesterly trending structure with an associated felsic/porphyry intrusive. No significant gold mineralization was intersected.

## Previous Work

Several major campaigns of exploration have been completed on this property due to its' proximity to the Hollinger-McIntyre gold mines ( 35 million ounces gold -past production) 5 km south of the property. These included phases of linecutting, ground and airborne geophysical surveys as well as diamond drilling on various portions of the property by various operators including Keevil Exploration in 1964-65, Esso Minerals in 1982-1983, Hollinger Argus in 1984, Robert S. Middleton Exploration Services and Newmont Canada in 1984, and Moneta Porcupine Mines in 1987-2007.

From 1989 to 1991 Independence Mining completed linecutting, ground mag, IP, and a total of 5 diamond drill holes totalling 1500 metres with no significant results.

The work completed in 1996 by Placer Dome (Canada) included complete blanket coverage of Magnetic and HLEM geophysical surveys that generated several drill targets within the northcentral portion of the Property. Seven diamond drill holes totalling 1667 metres were completed to test stratigraphy, and investigate numerous geophysical targets. The best results from this drilling were from Hole 546-005, which intersected $1.99 \mathrm{~g} / \mathrm{t}$ Au over 1.18 m (including $10 \mathrm{~g} / \mathrm{t} \mathrm{Au}$ over 0.22 m from within "Grey Zone" carbon altered mafic volcanic in the central portion of the property.

Pentland Firth completed a MMI soil geochem survey over selected areas of the central and "Prime" areas of the property in 1998 and drilled 2 follow-up holes testing identified trends. Results were generally negative.

## Geology

The geology of the area has been well documented in the OGS reports by D.R. Pyke (1982) and by S.A. Ferguson (1968). The majority of the rocktypes underlying the Timmins area are

Archean in age. Metavolcanic rocks have been subdivided into two groups, the Deloro and Tisdale assemblages with the latter being the target stratigraphy for gold mineralization.

A major change in volcanism marks the beginning of the younger Tisdale Group. The basal formations are largely made up of ultramafic to mafic komatiitic flows, which are overlain by a thick sequence of tholeiitic basalts. The top of the group is composed primarily of calc-alkaline, dacitic volcanoclastics. Small quartz-feldspar porphyry intrusions, possibly of subvolcanic origin, were intruded into a restrictive stratigraphic interval of the Tisdale mafic flows.

The property is underlain by the lower portion of the favourable Tisdale Assemblage stratigraphy and most of the magnesium tholeiitic rocks of the Tisdale Group. including intercalated graphitic argillites and feldspar porphyry. Numerous zones of "grey zone" altered mafic volcanics containing quartz veining with locally anomalous gold values, were intersected by several drill holes throughout the northern volcanic stratigraphy. Structural trends are generally east southeasterly and east westerly often localized along graphitic horizons and major lithological contacts. Large scale fold axis follow a similar orientation.

The various volcanic central and northern horizons tested by past drill holes are thought to represent the extension of the general North Mine trend west of the Burrows Benedict fault. Past diamond drill holes had found weak gold values and carbonate/grey zone alteration. This geology also appears to be defined by several MMI soil geochem anomalies (Pentland Firth). To the south volcanic stratigraphy is more directly related to the flows associated with the historical Timmins camp with associated felsic intrusives and quartz tourmaline veining.

## Exploration Work

Between September $12^{\text {th }}$ and $15^{\text {th }}$ 2010, Moneta completed a one diamond drill hole totalling 317 metres. DDH MNT10-02 was drilled northeast to test target $C$ which represents a magnetically inferred northwest structure and its contact to a potential felsic intrusive, as well as historical drilling results from Porcupine Prime Gold Mines (1950). These include $14 \mathrm{~g} / \mathrm{t}$ Au over 0.76 m and $73 \mathrm{~g} / \mathrm{t}$ Au over 0.77 m in DDH PRG-12, as well as $113.5 \mathrm{~g} / \mathrm{t}$ Au over 0.46 m in DDH PRG-16.


Gold mineralization in this area may be associated with prominent NW-trending faults, magnetic trends, and EM anomalies. The NWtrend is present in the SE portion of the property where one historical drill hole drilled into the margin of the magnetic low anomaly and intersected a porphyry body. Other holes drilled in to the west of the magnetic low anomaly intersected altered rocks/additional porphyry(?), sometimes described as felsic rocks. To the SW of the property, gold zones and mines are associated with porphyry units.

The drill area was accessed first by powerline, road, then the haulage road.

Fig. 2
Magnetic map (total field) of the SE corner of North Tisdale property with location of historical high grade intercepts. Small white dots are DDH. Magnetic low interpreted as porphyries and confirmed in some cases with drilling

Note that when assays/samples from the historical drill hole that returned high grade values in the SE part of the property were repeated or re-split, they did not return similar values and frequently were nil. In addition to the questionable results, it may be possible that veins (qtz/qtztour) are oriented parallel to the drill hole (or NW-trending) and thus were missed by most holes.

From DDH PRG-16


Unaltered to locally moderately altered mafic volcanics with scattered narrow carbonate veining constituted the upper portion of the drill hole. Deformation was variable with local shearing, blocky, and contorted sections. The drill hole ended in an undifferentiated mafic intrusive after crossing a series of mafic volcanic flows with minor pervasive carbonate alteration and minor shear in the contact area. The bulk of the deformation was within the ultramafic volcanics. A narrow intercalated mafic volcanic was crossed near the footwall contact of the ultramafic package which may represent the core of the North Tisdale Anticline. Several centimetre quartz, carbonate and quartz carbonate veins were intersected no significant mineralization was noted with trace results. Additional drilling along this drill hole azimuth is recommended as the current hole steepened and may not have advanced far enough.

## References

-ODM Rpt. 219, Geology of the Timmins Area, by D.R. Dyke (1982)
-ODM GR 58, Geology and Ore Deposits of Tisdale Twp., S.A. Ferguson (1968).
-Geological Setting of Gold Deposits in the Porcupine Gold Camp, Timmins, Ont.,
PhD Thesis, Dan Brisbin (1997)
Company reports in the assessment files by:
-Porcupine Prime Gold Mines (assessment files)
-Independence Mining Co.
-Placer Dome work filed
-Pentland Firth work filed
Internal company information

R.Skeries

April 30 ${ }^{\text {th }}, 2011$


Page: 2 of 5

| From (m) | $\begin{aligned} & \text { To } \\ & \text { (m) } \end{aligned}$ | Geology | Sample | From (m) | To (m) | $\begin{gathered} \mathrm{L} \\ (\mathrm{~m}) \end{gathered}$ | AU $\mathrm{g} / \mathrm{t}$ | $\begin{gathered} \mathrm{AU}(\mathrm{D}) \\ \mathrm{g} / \mathrm{t} \end{gathered}$ | $\begin{gathered} \mathrm{AU}(\mathrm{P}) \\ \mathrm{g} / \mathrm{t} \end{gathered}$ | $\begin{gathered} A U(R) \\ g / t \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 170.42 | 174.12 | to the core axis. <br> 93.22 93.58 Pillow rim with 5\% fine Py. <br> 97.6499 .13 Well developed mafic flow breccia with weak chill margins around many of the clasts. <br> 102.25 102.73 Interval with three parallel irregularly shaped white-cream coloured quartz carbonate veins with a few minor fine anhedral pyrite crystals. Veins range from 2 cm to 5 cm in width and are at 20 degrees to the core axis. <br> 110.26110 .348 cm white-cream colured quartz vein breccia with several elongated inclusions of pale green mafic volcanic flow breccia. Vein is more of a stockwork vein breccia and is at 25 degrees to the core axis. <br> 116.84116 .9915 cm grey-cream coloured ladder quartz vein. No pyrite. Several hairline grey quartz stringers perpendicular to the main vein give the vein a brecciated and ladder like appearance. Other hairline discontinuous grey quartz stringers occur parallel to subparallel to the main vein, and in most cases are offset by the set of quartz stringers perpendicular to the main vein. The main vein is at 40 degrees to the core axis. <br> 124.59124 .798 cm to 10 cm white-cream coloured quartz vein breccia with several subangular to subrounded clasts of host mafic volcanic. These clasts range from up to 1 cm to 5 cm and most are alligned parallel to the vein breccia. Several irregular discontinuous translucent grey quartz stringers cut through the main vein breccia and most of these stringers are parallel to subparallel to the main vein breccia. The vein breccia is at 40 degrees to the core axis. <br> 133.16 134.06 Interval of bleached pale green fine tetured mafic volcanic. <br> 134.06135 .15 Interval of light green-brown fine textured mafic volcanic flow breccia with a few hairline white and white-grey quartz carbonate stringers. <br> $146.16146 .67 \mathrm{3cm}$ to 4 cm grey-white quartz carbonate vein which runs subparallel to the core axis. Probable pillow rim. <br> 149.00150 .42 Well developed mafic flow breccia with several of the clasts displaying well defined chill margins. Some localized sections have a hyaloclastite like appearance. <br> 154.54154 .69 Blocky core. <br> 165.86166 .07 Localized zone of bleaching, carbonate veining and minor quartz stringers. Carbonate and quartz veining is wavy and parallel to the core axis. Minor amount of pyrite which occurs as fine isolated anhedral crystals scattered throughout the carbonate vein component of the interval. <br> MAFIC VOLCANICS - ALTERED <br> 170.42 174.12 Unit of bleached pale green carbonatized mafic volcanic flow breccia with carbonate and lesser quartz carbonate stringers throughout. The unit hosts a minor amount ( $\ll 1 \%$ ) of pyrite and the veins in general are barren of any sulphides. The main feature of the unit is a white quartz carbonate vein which runs parallel to the core axis from 171.14 m to 171.82 m . <br> $171.14171 .822 \mathrm{~cm}+$ white quartz carbonate vein which appears to be sheared (ductile shear zone) \$. <br> Several elongated host rock inclusions and chloritic laminae which run parallel to |  |  |  |  |  |  |  |  |

MNT10-02 (continued)
Page: 3 of 5

\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|c|}
\hline From (m) \& $$
\begin{aligned}
& \text { To } \\
& \text { (m) }
\end{aligned}
$$ \& Geology \& Sample \& From (m) \& $$
\begin{aligned}
& \text { To } \\
& \text { (m) }
\end{aligned}
$$ \& $$
\begin{gathered}
\mathrm{L} \\
(\mathrm{~m})
\end{gathered}
$$ \& AU
$$
\mathrm{g} / \mathrm{t}
$$ \& $$
\begin{gathered}
\mathrm{AU}(\mathrm{D}) \\
\mathrm{g} / \mathrm{t}
\end{gathered}
$$ \& $$
\begin{gathered}
\mathrm{AU}(\mathrm{P}) \\
\mathrm{g} / \mathrm{t}
\end{gathered}
$$ \& $$
\begin{gathered}
A U(R) \\
g / t
\end{gathered}
$$ <br>
\hline 174.12
193.75

203.18 \& \begin{tabular}{l}
193.75 <br>
203.18 <br>
264.35

 \& 

subparallel to the main sheared vein. <br>
172.26172 .4618 cm to 20 cm grey-white quartz carbonate vein breccia with very minor pyrite (only a few isolated fine anhedral crystals noted). Several angular to subrounded clasts of host carbonateized volcanic breccia occur throughout. Vein breccia is at 45 degrees to the core axis. <br>
172.73 173.06 Interval of intensely bleached cream coloured silicious volcanic breccia with several hairline grey translucent quartz stringers and stockworks. <br>
174.11 174.12 Contact between the strong to intensesly altered (bleached, carbonatized) and a weaker altered light grey-green mafic volcanic is gradational over 15 cm . <br>
MAFIC VOLCANICS - UNDIVIDED <br>
174.12 193.75 Light grey to grey-green mafic volcanic with localized intervals displaying weak to moderate brecciation. Much of the brecciation appears to be associated with increases in carbonate stringers and hairline stockworks. Unit hosts very minor amount of pyrite. Veining is primarily carbonate with only a very minor amount of quartz veining. <br>
193.74 193.75 Assumed contact between the unaltered mafic volcanic and the altered volcanic is 35 degrees to the core axis. <br>
MAFIC VOLCANICS - ALTERED <br>
193.75203 .18 Unit of weak to moderately bleached moderately carbonatized and weakly sheared mafic volcanic. Carbonate and minor quartz veining increases noticeably from 199.33 m to 202.75 m . This veining may represent a ductile shear zone at 15 degrees to core axis. <br>
194.14194 .172 cm to 3 cm white carbonate vein, weakly sheared. Vein at 25 degrees to core axis. <br>
199.32202 .751 cm to 3 cm grey-white quartz carbonate vein which runs parallel to subparallel to the core axis. Vein is boudinaged. No pyrite was noted in the vein or sheared host. The quartz component is grey opaque fragments up to 3 cm in size which are suspended in a white carbonate matrix. Lower contact at 15 degrees to the core axis. <br>
203.17 203.18 Contac between the sheared weakly altered volcanic and the unaltered mafic volcanic is at 20 degrees to the core axis. <br>
MAFIC VOLCANICS - UNDIVIDED <br>
203.18 264.35 Medium grey-green fine to medium textured mafic volcanic. Only minor carbonate and quartz veining occurs within the unit. Very minor pyrite was observed, much less than $1 \%$. <br>
204.61204 .62 1cm cream coloured quartz carbonate vein with several hairline grey translucent quartz stringers cutting through the vein. Main vein is at 35 degrees to the core axis. Average measurement of the hairline quartz stringers is at 140 degrees to the core axis ( 85 degrees to the main vein). <br>
204.89204 .944 cm to 5 cm white quartz vein vein with no pyriet. Vein is at 70 degrees to the core axis. <br>
$205.88205 .92 \mathrm{4cm}$ white quartz carbonate vein. Most of the vein is white carbonate with less than $10 \%$ composed of translucent quartz. Vein is at 50 degrees to the core axis. <br>
208.66208 .682 cm white carbonate vein with some minor gouge along the hangingwall.

\end{tabular} \& \[

$$
\begin{array}{||l||}
\hline \text { A51830 } \\
\text { A51831 } \\
\text { A51832 } \\
\text { A51833 } \\
\text { A51834 } \\
\text { A51835 } \\
\text { A51836 }
\end{array}
$$

\] \& \[

$$
\begin{array}{|l|}
\hline 212.25 \\
212.25 \\
213.25 \\
213.25 \\
214.25 \\
214.75 \\
215.45
\end{array}
$$

\] \& \[

$$
\begin{array}{||l|} 
\\
\\
212.25 \\
213.25 \\
213.25 \\
214.25 \\
214.75 \\
215.45 \\
216.45
\end{array}
$$

\] \& \[

$$
\begin{array}{r}
.00 \\
1.00 \\
.00 \\
1.00 \\
.50 \\
.70 \\
1.00
\end{array}
$$

\] \& \[

$$
\begin{array}{r}
\text { <. } 005 \\
.01 \\
4.66 \\
.02 \\
.01 \\
.00 \\
.01
\end{array}
$$
\] \& \& 4.80 \& <br>

\hline
\end{tabular}

MNT10-02 (continued)
Page:
4 of 5

| From (m) | $\begin{aligned} & \text { To } \\ & \text { (m) } \end{aligned}$ | Geology | Sample | From (m) | To (m) | $\begin{gathered} \mathrm{L} \\ (\mathrm{~m}) \end{gathered}$ | AU $\mathrm{g} / \mathrm{t}$ | $\begin{gathered} \mathrm{AU}(\mathrm{D}) \\ \mathrm{g} / \mathrm{t} \end{gathered}$ | $\begin{gathered} \mathrm{AU}(\mathrm{P}) \\ \mathrm{g} / \mathrm{t} \end{gathered}$ | $\begin{gathered} A U(R) \\ g / t \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $264.35$ $270.65$ | $270.65$ $279.53$ | Vein and gouge are at 30 degrees to the core axis. <br> 212.25 <br> 213.25 <br> 214.27 214.75 Shear zone consisting of narrow white carbonate veining, green chloritic veining and laminae, host green mafic volcanic, small angular clasts of black mafic material (chlorite?), and approximately $10 \%$ pyrrhotite. The carbonate, chlorite, and pyrrhotite are orientated in the direction of the shear which is approximatly 20 degrees to the core axis. <br> 216.00216 .21 Sheared, blocky core with some minor gouge. Possible shear/fault at 20 degrees to the core axis. <br> 223.08223 .146 cm grey opaque quartz vein with $15 \%$ to $29 \%$ white carbonate. The carbonate concentrates within microfractures and along the vein-host contacts. Host is a moderately carbonatized mafic volcanic with numerous hairline carbonat stockworks. Vein is at 60 degrees to the core axis. <br> 229.15229 .235 cm to 8 cm irregulaly shaped white quartz carbonate vein. No sulphides. Vein is mainly carbonate with up to $5 \%$ being quartz. A few large (up to 6 cm in length) inclusions of host mafic volcanic are found in the vein. Upper contact at 60 degrees to the core axis. The lower contact is at 35 degrees to the core axis. <br> 248.61 248.86 Interval of blocky core and gouge. Probable orientation of shearing is at 30 degrees to the core axis. <br> 250.23 252.00 Interval with increased hairline carbonate stockworks. The core has a faint brownish hue due to the carbonate alteration. <br> 256.35 258.56 Another brownish grey fine textured volcanic. Less carbonate stockworks than above. <br> 264.34264 .35 Contact between the fine to medium textured light green to brownish-grey mafic volcanic and a dark green chloritic mafic volcanic flow breccia is at 50 degrees to the core axis. <br> MAFIC VOLCANICS - FLOW BRECCIA <br> 264.35 270.65 Medium to dark green chlorite-rich mafic volcanic flow breccia. Breccia is matrix supported with less than $25 \%$ composed of clasts. The clasts range from angular to subrounded and the vast majority are less than 1 cm in size, with only a few clasts exceeding 2 cm . Only a few narrow carbonate stringers occur within the unit. <br> 266.03266 .045 mm to 1 cm grey-white carbonate vein at 30 degrees to the core axis. <br> 267.31267 .325 mm to 1 cm grey-white carbonate vein at 30 degrees to the core axis. <br> 268.58268 .592 mm to 5 mm discontinuous white carbonate vein with $2 \%$ pyrrhotite. Vein is irregular and parallels the dominant foliation at 30 degrees to the core axis. <br> 270.64 270.65 Contact between the mafic flow breccia and the light green fine textured silicified mafic volcanic is irregular at 25 degrees to the core axis. <br> MAFIC VOLCANICS - ALTERED <br> 270.65 279.53 Light green to greenish-grey very fine textured mafic volcanic with several sections of moderate silicification. Numerous irregular hairline carbonate stringers and stockworks occur throughout the unit. In some intervals, the hairline stockworks are to such a degree that |  |  |  |  |  |  |  |  |





## Laboratoire Expert Inc.

${ }^{* * *}$ Certificate of analysis ***

127, Boulevard Industrie

Canada, J9X 6P2
Telephone : (819) 762-7100, Fax : (819) 762-7510

| Client |
| :--- |
| Addressee |

Moneta Porcupine Mines Inc.

Addressee
Rainer Skeries
$\square$

65, Third Avenu
Ontario
Telephone : (705) 264-2296 (705) 267-7490

## Ontario P4N 1C2

Designation
A51813
A51814
A51815
A51816
A51817
A51818
A51819
A51820
A51821
A51822
A51823
A51824
A51825
A51826
A51827
A51828
A51829
A51830
A51831

A51832 | 5 |
| :---: |

$\underset{\text { FA-GRAV }}{\text { Au }}$ $\mathrm{g}-\mathrm{t}$
0.03

| Au-Dup | Au |
| :---: | :---: |
| FA-GRAV |  | ppb

5

| Folder | : |
| :--- | :--- |
| Your order number |  |

29205

Project : MNT
Total number of samples : 24

## Laboratoire Expert Inc.

${ }^{* * *}$ Certificate of analysis ***

127, Boulevard Industriel
Canada, J9X 6P2
Telephone : (819) 762-7100, Fax : (819) 762-7510

| Addressee | Rainer Skeries <br> 65, Third Avenue Timmins |  |  | Folder <br> Your order number <br> Project | $29205$ <br> MNT |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Ontario <br> P4N 1C2 | Telephone Fax | (705) 264-2296 <br> (705) 267-7490 | Total number of samples : | : 24 |
| Designation | $\begin{gathered} \text { Au } \\ \text { FA-GEO } \\ \text { ppb } \\ 5 \end{gathered}$ | $\begin{aligned} & \text { Au-Dup } \\ & \text { FA-GEO } \\ & \text { ppb } \\ & 5 \end{aligned}$ | $\begin{gathered} \hline \mathrm{Au} \\ \mathrm{FA}-\mathrm{GRAV} \\ \mathrm{gt} \mathrm{t} \\ 0.03 \end{gathered}$ |  |  |
| ${ }^{\text {a }} 1833$ | 23 |  |  |  |  |
| A51834 | 13 |  |  |  |  |
| A51835 | 5 |  |  |  |  |
| A51836 | 6 |  |  |  |  |

Designation
Moneta Porcupine Mines Inc.

