

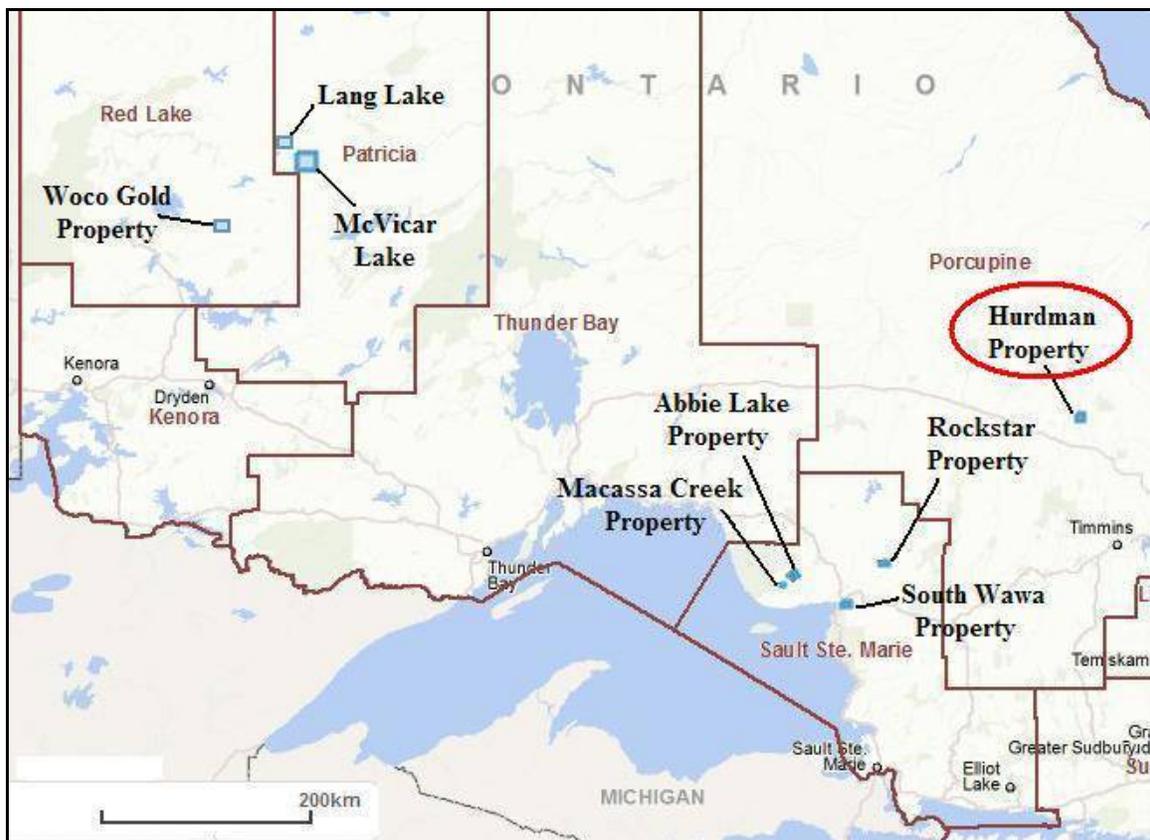
Hurdman Zn-Ag Property Hurdman Township

Location, Accessibility, Infrastructure and Local Resources

The Hurdman Property is situated in northeastern Ontario, approximately 120 km north-northwest of the city of Timmins and 30 Km north-northwest of Smooth Rock Falls on Hwy 11. Smooth Rock Falls is capable of providing personnel, contractors, equipment and supplies to a number of operations in the area. Timmins is a major mining and exploration hub and can provide various services and personnel.

The Property is accessible by travelling westward along Trans Canada Highway no. 11 from Smooth Rock Falls for a distance of 12 km then northward along a winter logging road for an additional 28 km. The first 20 km of the logging road are useable year round by ATV but the last eight kilometres are strictly winter road, although skidder access should be possible for summer programs. Access is also possible by boat from Indian Lake north along the Poplar Rapids River, and directly by helicopter.

The topography of the Hurdman Property is flat (elevation 220 ± 20 m) and characterized by poor drainage and swampy terrain. The Poplar Rapids River traverses through the western side of the property and drains north into James Bay.



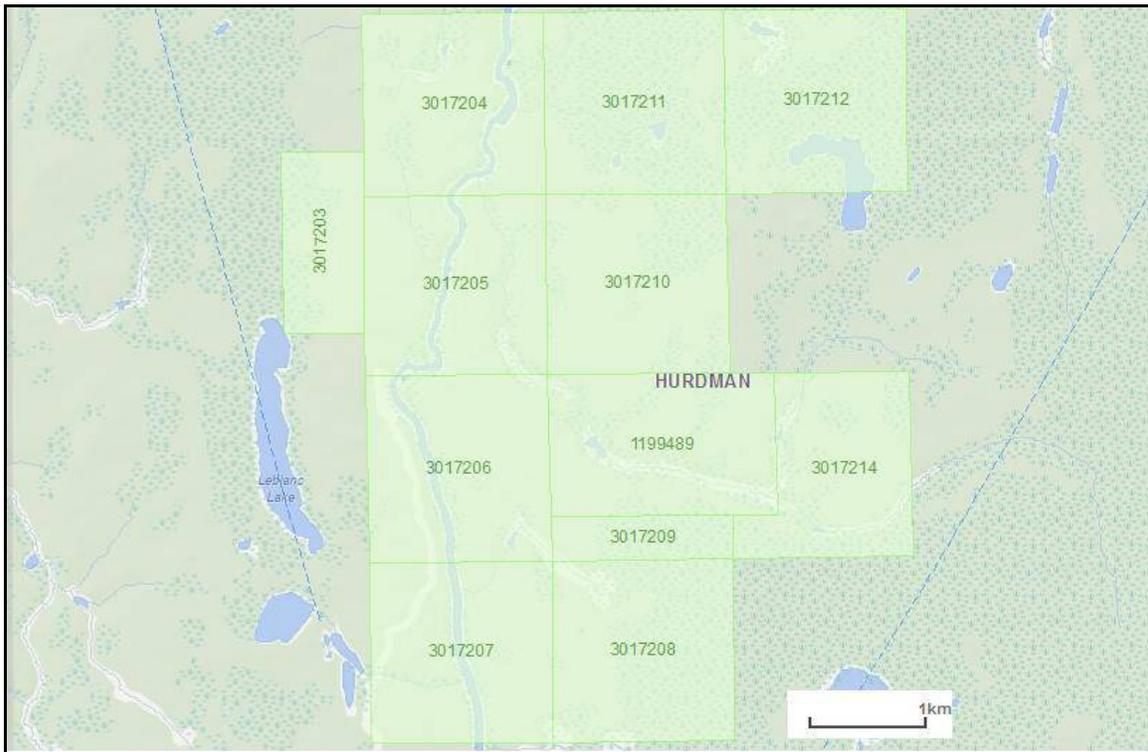
Hurdman Zn-Ag Property Location Map

Claim Ownership

The Hurdman Property consists of 12 contiguous mining claims, comprising (168) individual claim units and covering 2688 hectares in Hurdman Township. The property requires \$67,200 assessment work yearly and has a reserve of \$564,455 remaining (8.4 years).

Argo Gold (formerly Arbitrage Exploration) inherited the property from Blue Vista Technologies who had acquired the Hurdman property from Eoro Resources in 2011. Argo Gold holds 100% of the mineral rights on the property subject to a 1% PPR.

It should be noted that the current claim holdings represent about 50% of the original property extent, and that a number of conductive zones occur east of the current claim boundaries that have not been tested. In addition, the eastern end of the Hurdman Sulphide Zone (HSZ) strikes onto crown land to the east.



Hurdman Zn-Ag Property Claims

Recent and Historical Exploration

From the mid-1960s to mid-1970s initial mineral exploration for massive sulphide deposits took place with INCO completing airborne Magnetic and electromagnetic surveys followed by similar ground geophysical surveys and drilling identified targets.

From 1975 to 1981 Mattagami Lake Exploration followed the same pattern with airborne geophysics, ground geophysics, including IP, and then completed an extensive drilling program. Some of the holes intersected sub-economic zinc-silver and minor amounts of copper and lead mineralization associated with semi-massive to massive pyrite-pyrrhotite.

In 1988, McKinnon Prospecting conducted a fixed-wing and helicopter-borne airborne EM and Mag surveys over the property followed by HLEM ground surveys. The HLEM surveys identified what later became known as the Hurdman Sulphide Zone. This was followed by DDH programs by Noront Resources in 1991 and Galico Resources in 1992 that tested the 1980-81 drill holes and confirmed the presence of semi-massive Zn-Ag mineralization accompanied by pyrite and pyrrhotite. Additional drilling in 1997 by Baltic Resources extended the Zn-Ag mineralization.

From 2004 through to 2008, Eloro Resources conducted additional airborne and ground geophysical surveys, including a VTEM survey, which better defined the conductive zones on the property. By 2005 diamond drilling had delineated the main Hurdman Sulphide Zone to a depth of 80 m, 250 m long strike and 125 m down dip. Additional drilling in 2006, 2007, and 2008 delineated a mineralized zone over a strike length of 450 m, 350 m down dip, and over widths varying from 1.5 to 38 m. The mineralized zone was determined to have an E-W strike and dipped north at 15-25°. Drilling in 2008 also identified a mineralized zone 1.5 km east of the main zone referred to as the East HSZ.

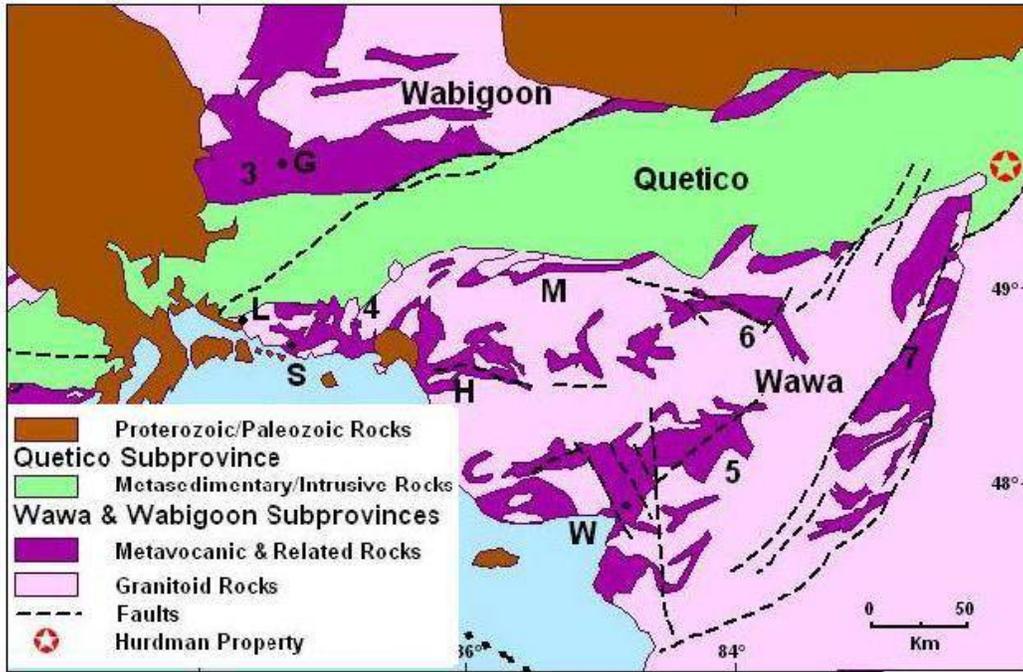
No further work was conducted after 2010. In 2011 the property was sold to Blue Vista which later became Argo Gold Inc.

Geology, Structure, and Mineralization

Regional Geology

Hurdman Township lies within paragneiss and migmatite of the Quetico Terrane but lies close to the boundary of gneissic tonalite of the Wawa Terrane in the west. It is also transected by a major NNE trending fault that bounds the Kapuskasing Uplift to the east, and it is cut by northerly trending mafic dikes.

West and southwest of Hurdman Township, mafic to intermediate volcanic rocks, felsic flows and pyroclastics, greywacke, argillite, quartzite, arkosic sandstones and iron formation have been recognized (Nielsen, P. 1979). With increasing metamorphic grade these lithologies become amphibolite, quartz feldspar gneisses, biotite quartz feldspar gneisses and garnetiferous biotite quartz feldspar gneisses. The gneisses vary from near massive, uniform units to segregated and banded units. Hybrid granite gneiss, granodiorite, quartz monzonite and pegmatite have been described throughout Hurdman Twp. Proterozoic diabase dikes intrude all other rock types in the area. The known dikes trend northerly throughout the area (after Durham, Noront Resources, 1992).



Regional Geology and Geological Sub-Provinces

Property Geology

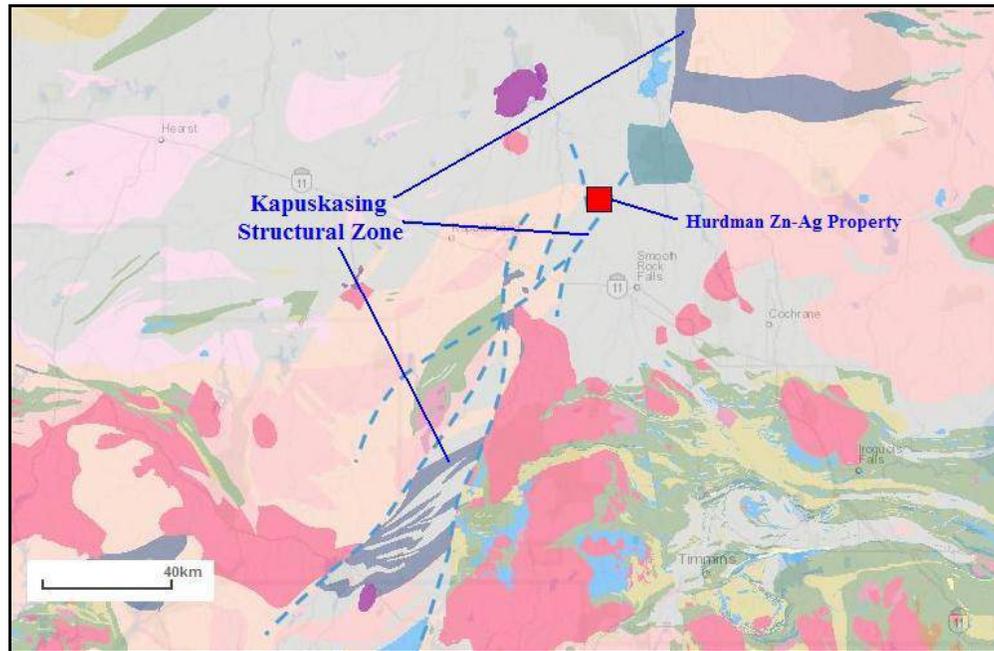
The property is located at the eastern end of the structurally complex boundary between the Wawa sub province and the metasedimentary-migmatitic Quetico sub province. The area is also at the junction of the Kapuskasing NNE trending structural zone. The metamorphic grade increase northward from greenschist to upper amphibolite facies like the Hemlo-Schreiber (Hemlo Mine) and the Manitouwadge (Geco Mine) greenstone belts. Quetico metasedimentary rocks are migmatitic and have granulite facies assemblages.

Outcrop exposure is virtually absent on the property and almost all information is from historical drill logs from diamond drill core and interpretation of geophysical data. The current knowledge of the property geology is known from reports by Paul Nielsen (1979) and Bruce Durham (1992). The available information indicates that the area is underlain by gneisses of sedimentary and volcanic-tuffaceous origin. Geological interpretation and stratigraphic correlations between drill holes is hampered by the high degree of regional metamorphism, which has obliterated all primary structures and made the distinction between units often very subtle.

The available information indicates that the property is underlain predominantly by quartz-feldspar-biotite gneisses, hornblende biotite quartz feldspar gneisses, garnet quartz biotite feldspar gneisses, and quartz feldspar gneisses. Granodiorite, pegmatite, lit-par-lit gneisses and diabase dikes have been identified.

Logging of drill holes indicated that in addition to the gneisses noted above, alteration minerals such as sillimanite, anthophyllite, muscovite, tremolite, cordierite and gahnite

were identified. The occurrence of the latter mineral has been found to be largely restricted to areas where significant zinc mineralization is located.



Regional/Local Geology Hurdman Property

Mineralization and Alteration

The Hurdman Sulphide Zone (HSZ) strikes ENE and dips $15 \text{ } \delta \text{ } 25^\circ$ north with the high-grade zone raking at a shallow angle to the northeast (Pierce, Baltic Resources, 1998). The zinc bearing zone can be followed 450m along strike, 350m down dip and over widths varying from 1.5 to 38m. The zone remains open to the west, east and down dip.

Mineralization consists of disseminated and massive layers of pyrrhotite and pyrite that include sphalerite, gahnite, silver and smaller amounts of lead and copper. Sulphides ranging from 2-10% include pyrite, pyrrhotite and sphalerite and are described as banded and very well banded, parallel with the layering/foliation. The sulphides generally occur in disseminated form but can become massive (50-90% sulphides) over short widths (Eloro Resources 2005 drill logs).

Notably, the Hurdman Sulphide Zone (HSZ) is clearly identifiable as a unit within the drill logs and occurs in host rocks referred to as altered biotite-sillimanite-quartz gneiss. There is evidence of strong silicification in the mineralized zone along with reference to the strong development of sillimanite.

Durham (1992) identified a series of alteration minerals, including sillimanite, tremolite, muscovite, cordierite, anthophyllite and gahnite which he suggested are typically associated with base metal massive sulfide deposits. Their presence associated with zinc bearing sulfides is suggestive that mineable zinc deposits may be located nearby.

The mineralized zone is not restricted to the HSZ, but also occurs for a short distance (up to 4 m) into the hanging wall and footwall rocks. Hanging wall rocks consist of biotite-quartz-sillimanite gneiss with apparently less silicification and moderate mineralization. The sulphides range from 1-3% and have a disseminated and banded form similar to the HSZ.

The footwall rocks are biotite-quartz-feldspar gneiss intruded by foliation parallel pegmatitic dykes which appear to be mineralized at the HSZ contact. At further distance from the contact the pegmatitic dykes and biotite-quartz-feldspar gneiss are unmineralized and are characterized by being rich in muscovite.

From a cursory inspection of the drill logs, it would appear that the HSZ reflects stratabound mineralization accompanied by mineral alteration. The sulphides, alteration and host rocks have undergone upper amphibolite to granulite facies grade metamorphism caused by forces related to the Kapuskasing Structural Zone. Metamorphism associated with this series of northeast striking, deep seated structures have destroyed all recognizable primary structures.

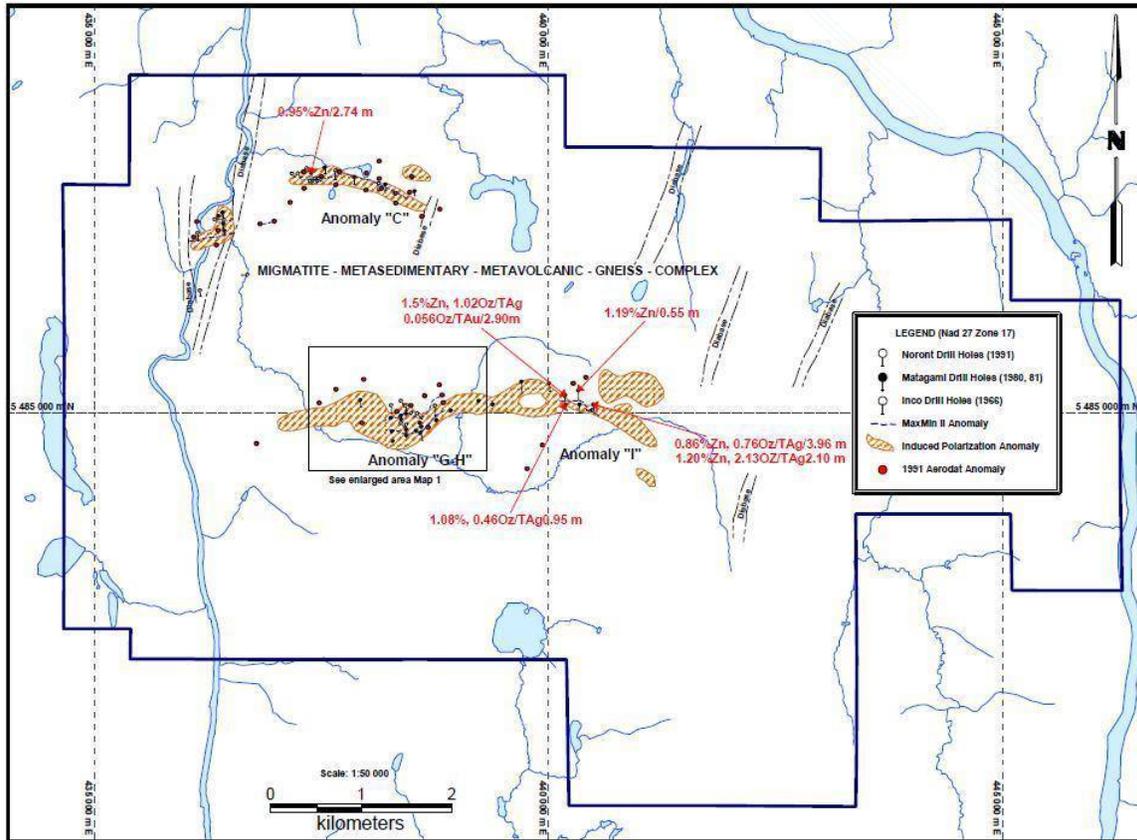
Gold is also a significant component of the mineralized system. Significant gold grades are linked to very coarse pegmatite veins and dykes, generally with higher silver grades and lower zinc grades, located at the footwall of the semi-massive sphalerite horizons and with silicified zones within the zinc-silver horizon. The anomalous gold content could have a positive impact on future scoping studies at the Hurdman Property.

Geophysics

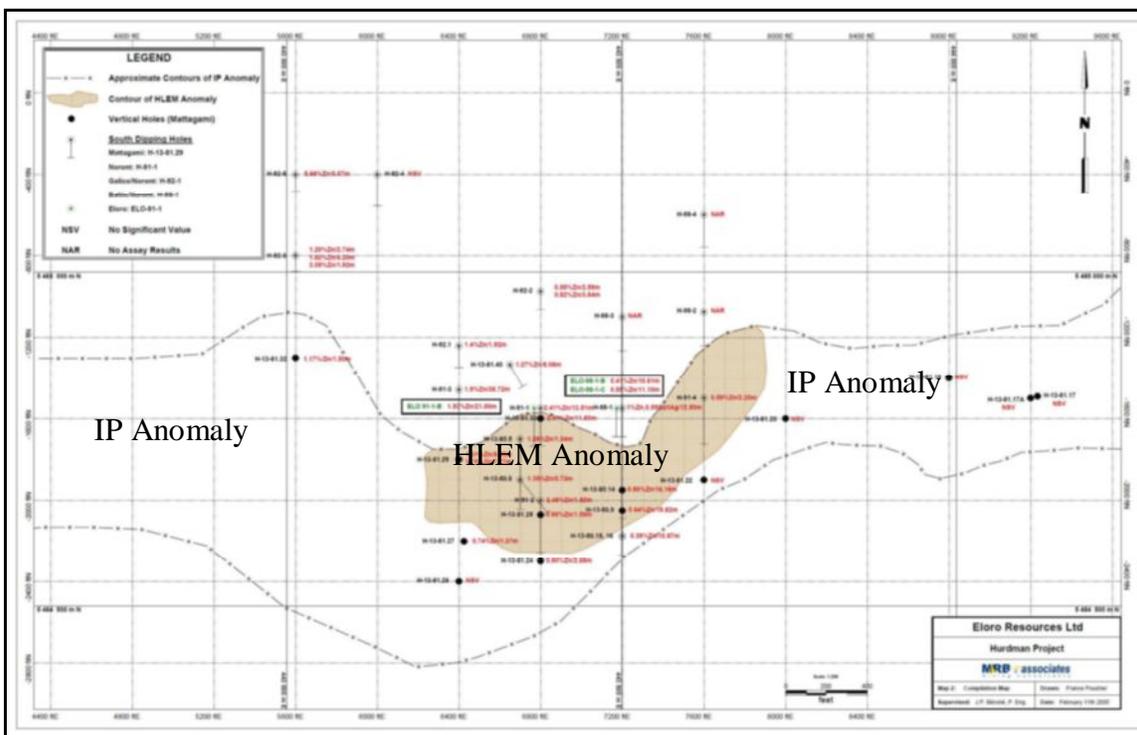
Several airborne and ground geophysical surveys have been flown over the Hurdman Property due to the thick overburden cover and the presence of disseminated to massive sulphides which respond well to airborne and ground geophysical methods.

Initial airborne surveys were followed by ground EM, Magnetic, and IP surveys. IP results from the 1980s indicated a main east-west trending zone that responded well to the disseminated to semi-massive sulphides. This was followed by various electromagnetic surveys; the most significant HLEM survey identified a more conductive zone within the IP conductivity boundaries.

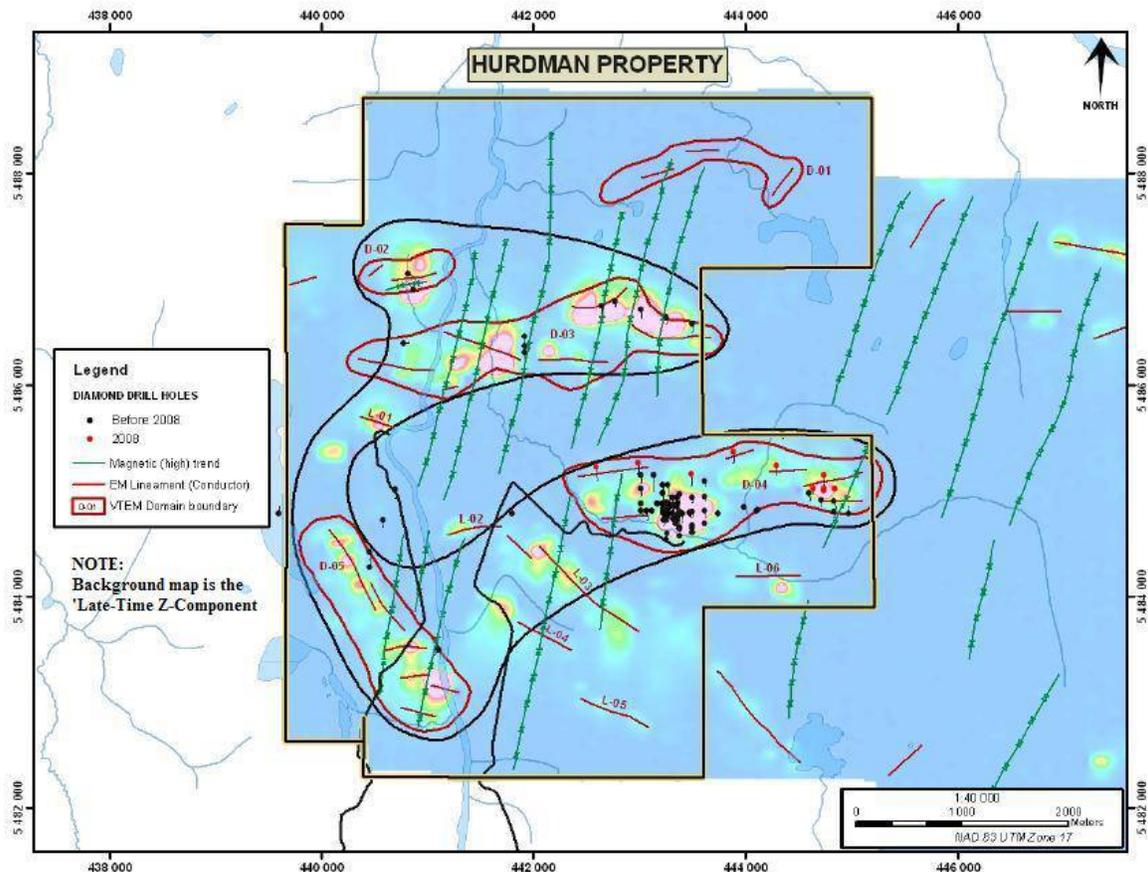
More recent airborne surveys included an aeromagnetic and resistivity survey in 2006, and an airborne magnetic and VTEM survey in 2008. The VTEM survey was able to identify the main sulphide-rich area as well as a number of other EM anomalies on the property. The combination of magnetic and electromagnetic anomalies appears to define a horseshoe-shaped pattern. However, the presence of NNE trending dikes and NE trending late faults make the magnetic pattern difficult to interpret.



Hurdman Property (2005 extents) with IP anomalies and pre-2000 DDH



Hurdman Property with IP anomaly and HLEM Anomaly (after Berube, 2005)



VTEM, AMAG and DDH, Hurdman Property (modified after McCutcheon 2011)

Drilling Programs

The majority of the drilling on the property occurred in 1980-81 (Mattagami Lake Exploration), 1991-92, 1998 (Noront, Galico, and Baltic Resources), and 2005-2008 (Eloro Resources).

In the 1990 drill programs, drill logs identify the presence of alteration minerals associated with the mineralized zone, such as sillimanite, gahnite, cordierite, anthophyllite and tremolite along with silicification.

The most continuous drilling was done by Eloro Resources between 2005 and 2008. The resulting drill logs and assays were entered into a digital database. A summary of the more significant assay results are provided in the Table 1. The weighted average grade for the higher-grade subset is 2.28% Zn, 15.96 g/t Ag over an average thickness of 12 metres (not a true width).

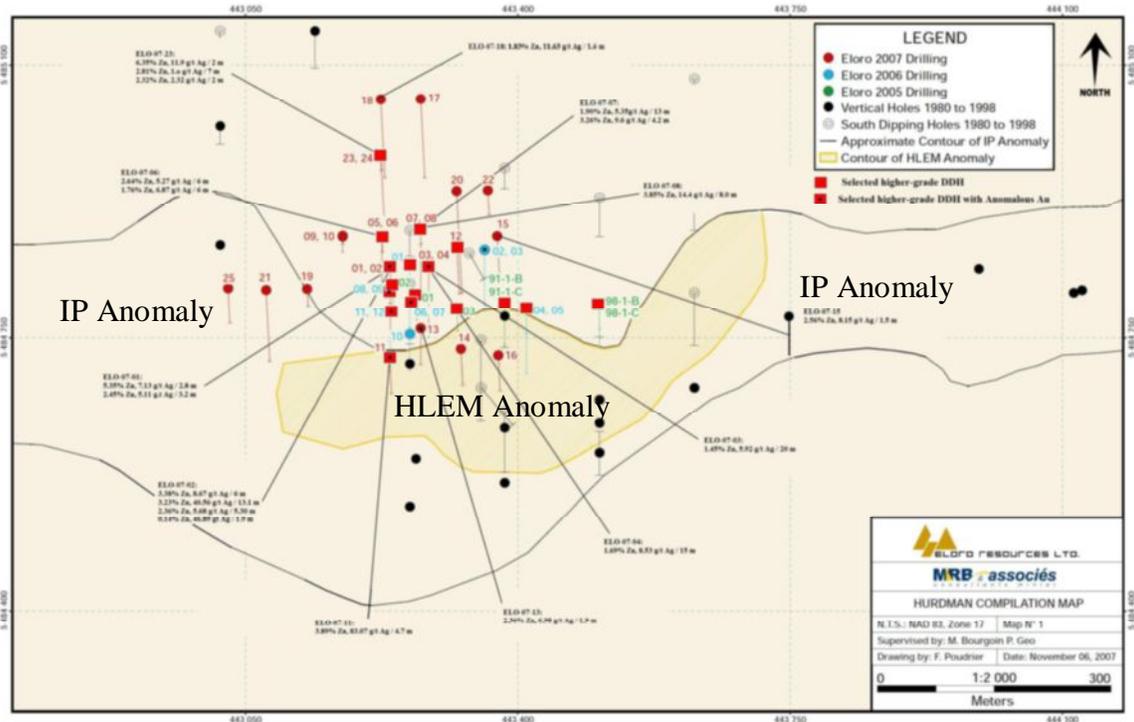
A number of drill holes also intercepted anomalous and high grade gold values (Table 2), including ELO-06-12 with 48.69 g/t Au, 166 g/t Ag, and 0.41% Zn over 0.45 m, in a mineralized pegmatite dike with 2-4% Pyrite, Pyrrhotite, and Sphalerite.

Table 1: Selected high-grade drill holes from the Hurdman Sulphide Zone (HSZ)

DDH	FROM(m)	TO(m)	INTERVAL(m)	Zn%	Ag(g/t)
ELO-98-1B	45.70	56.80	11.10	0.55	18.71
ELO-98-1C	45.00	55.60	10.60	0.42	13.14
ELO-91-1B	46.50	67.50	21.00	1.53	10.18
ELO-91-1C	54.45	63.00	8.55	1.85	15.16
ELO-05-01	58.20	81.95	23.75	1.17	11.26
ELO-05-02	64.90	88.50	23.60	3.00	12.12
ELO-05-03	53.60	69.50	15.90	1.09	22.22
ELO-06-01	85.80	97.40	11.60	3.70	7.71
ELO-06-04	60.10	71.40	11.30	2.09	39.56
ELO-06-06	38.80	59.50	20.70	2.08	9.51
ELO-06-07	62.50	70.40	7.90	2.48	10.43
ELO-06-08	52.30	80.50	28.20	2.79	20.00
ELO-06-12	39.20	46.50	7.30	4.99	26.57
ELO-06-12	52.40	58.50	6.10	3.48	15.46
ELO-07-01	95.80	98.60	2.80	5.35	7.13
ELO-07-02	89.10	102.20	13.10	3.23	40.56
ELO-07-03	71.60	91.55	19.95	1.45	5.92
ELO-07-04	85.25	91.15	5.90	3.26	9.17
ELO-07-06	87.00	93.00	6.00	2.64	5.27
ELO-07-07	96.00	109.00	13.00	1.90	5.35
ELO-07-08	109.00	117.00	8.00	3.86	14.40
ELO-07-11	33.30	38.00	4.70	3.89	83.07
ELO-07-12	80.00	84.00	4.00	6.09	14.80
ELO-07-23	132.00	139.00	7.50	2.13	10.86
ELO-H-08-10	109.50	119.30	9.80	1.45	9.00

Table 2: Selected drill holes with high gold grades from the HSZ

HOLE	FROM_m	TO_m	INTERVAL_m	GOLD_gpt
ELO-07-02	79.30	80.10	0.80	1.63
ELO-07-02	96.00	96.70	0.70	2.00
ELO-07-02	112.30	112.70	0.40	6.13
ELO-07-04	84.80	85.30	0.50	2.68
ELO-07-11	38.90	43.00	4.10	2.53
ELO-07-11	38.90	40.00	1.10	5.23
ELO-07-13	52.30	53.00	0.70	2.19
ELO-06-03	83.00	83.40	0.40	5.10
ELO-06-06	79.80	80.10	0.30	1.99
ELO-06-07	74.90	75.35	0.45	1.95
ELO-06-08	72.00	76.40	4.40	1.97
ELO-06-11	42.95	44.60	2.15	1.73
ELO-06-11	43.70	45.10	1.40	2.40
ELO-06-11	43.70	44.15	0.45	5.97
ELO-06-11	60.50	61.00	0.50	3.39
ELO-06-12	39.20	39.80	0.60	2.05
ELO-06-12	40.50	41.35	0.85	2.00
ELO-06-12	58.50	58.95	0.45	48.69



Hurdman Sulphide Zone with IP Anomaly, HLEM Conductor, and DDH

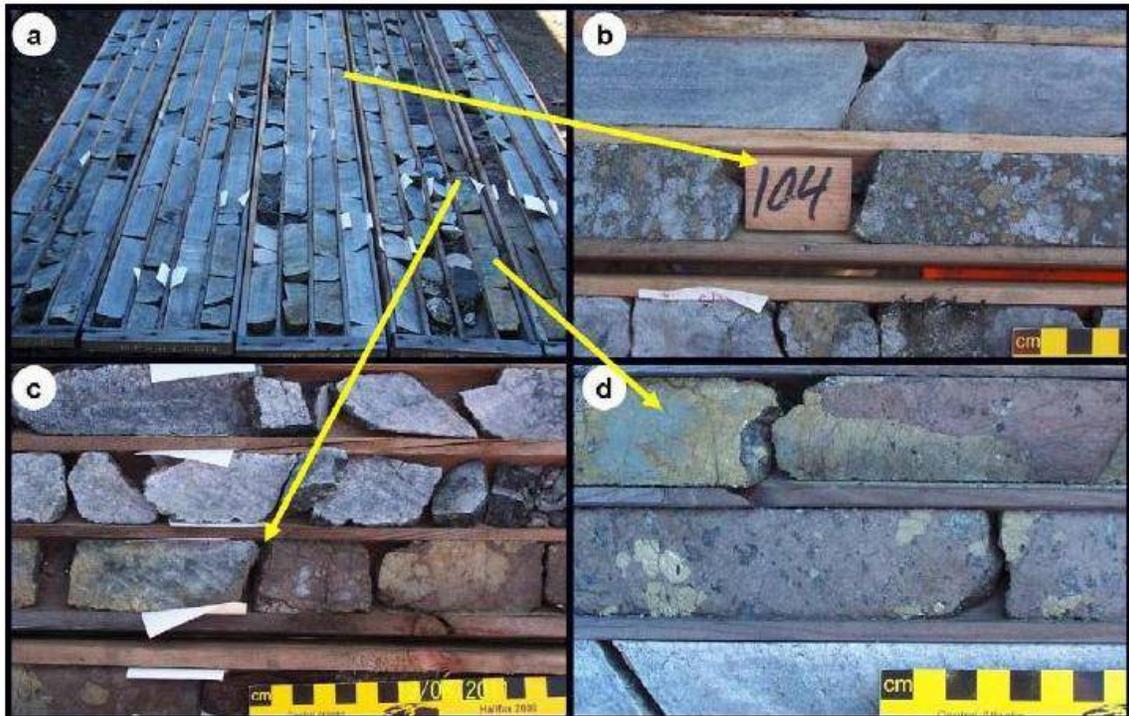
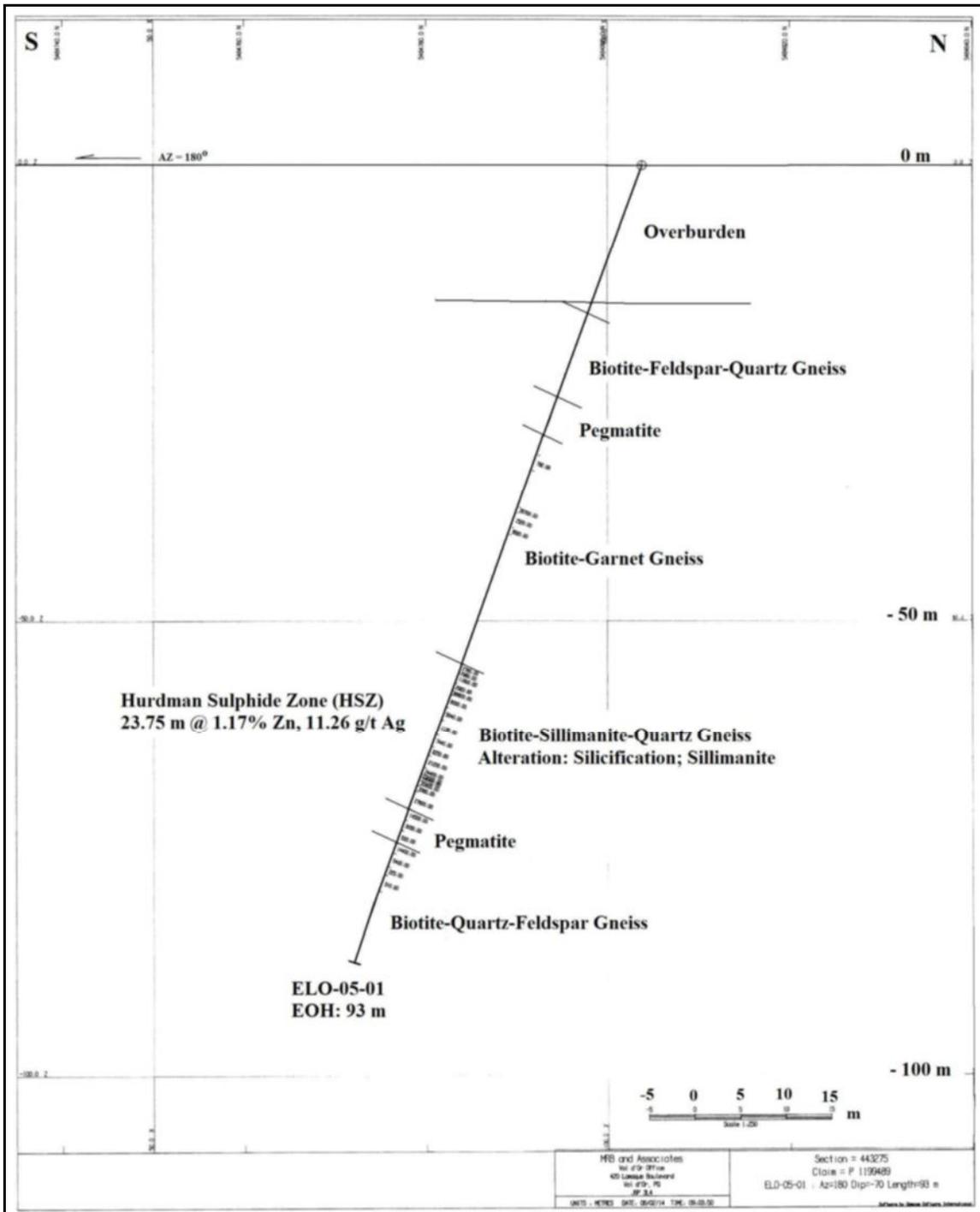
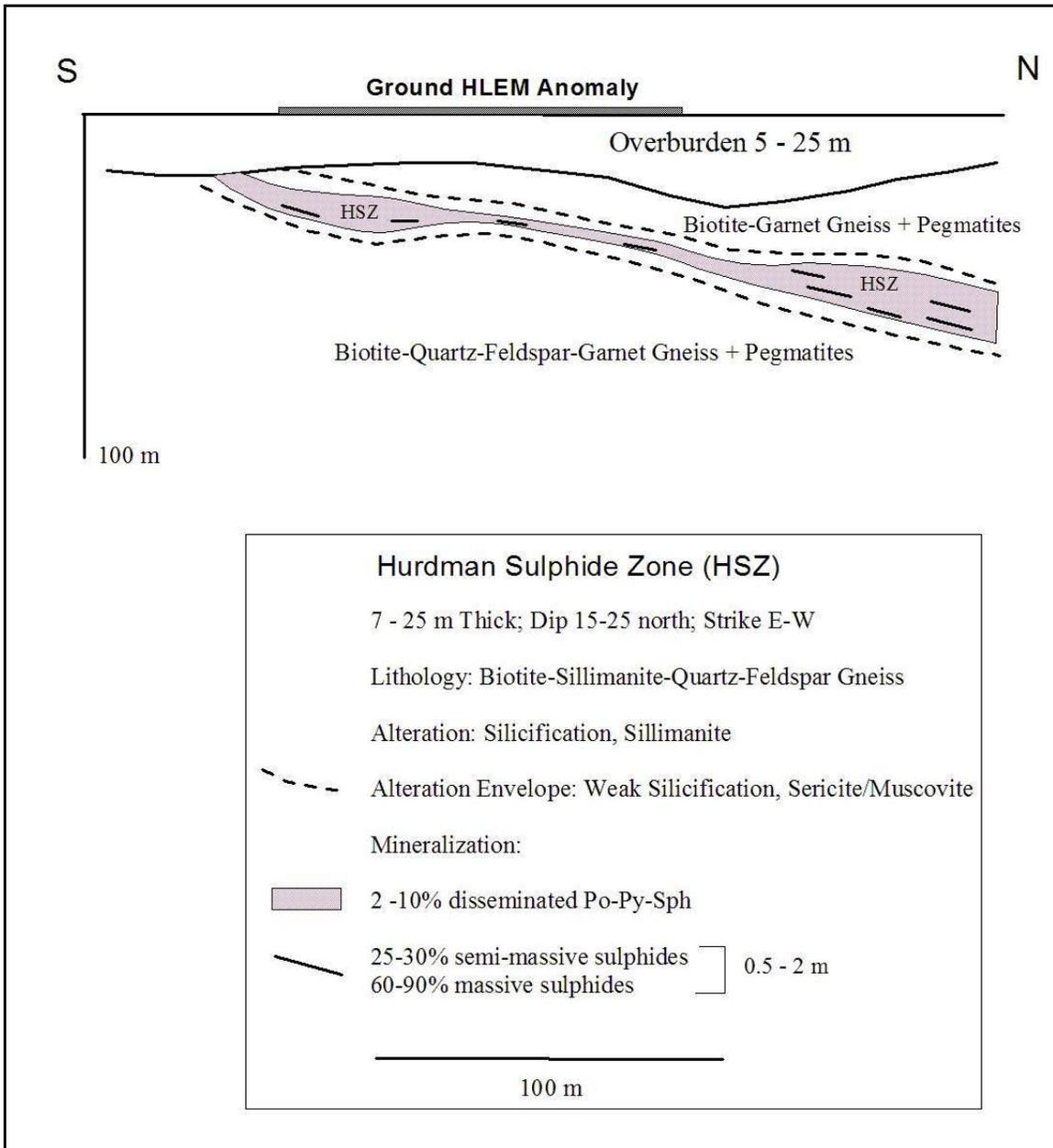


Photo of DDH ELO-07-02: 87 to 116 m; a) altered-mineralized zone, light grey altered rock and dark brown, pyrrhotite-pyrite lode; b) coarse grained pyrite (grayish yellow) and magnetite (dark grey) intergrown with quartz; c) pyrrhotite-pyrite lode (brown) and host rock (light grey); d) close-up of reddish brown pyrrhotite and greyish yellow pyrite within the lode (modified after McCutcheon 2011).



Typical DDH Cross Section of the HSZ; ELO-05-01 (modified after Bérubé 2005)



Idealized Cross Section, Hurdman Sulphide Zone (HSZ), (modified after Bérubé 2005)

Summary

Airborne and ground geophysical surveys have identified a number of conductive zones on the Hurdman property, the main one being the Hurdman Sulphide Zone or HSZ. The nature, location, and distribution of the sulphide mineralization allowed both ground IP and Horizontal Loop EM (HLEM) surveys to delineate an east-west trending zone with a more concentrated core of sulphides in the area of the HSZ.

At least 8 drill programs have been undertaken on the Hurdman Property to test the HSZ and surrounding EM anomalies. Early exploration in the 1980s concluded that the disseminated sulphides were too erratic in concentration and restricted to flat lying pegmatite dikes. Much of the mineralization consisted of disseminated to semi-massive and massive pyrite and pyrrhotite with low grades of sphalerite and silver, and low content of copper and lead.

During the 1990s the deposit model changed to stratabound sulphide mineralization. The disseminated, semi-massive to massive sulphides along with identified alteration minerals such as sillimanite and gahnite, were viewed as products of hydrothermal alteration that had been subjected to high grade metamorphism at upper amphibolite to granulite facies. Comparisons were made to Geco-type massive sulphides in the Manitouwadge Mining Camp.

From 2005 to 2008 drill programs were designed to delineate the HSZ. VTEM and AMAG surveys were completed which better identified other anomalous areas on the property similar to the HSZ. Many of the DDH cross sections through the HSZ identify values for Zn and Ag which can vary significantly over short distances, and so are difficult to interpret due to a lack of coherency to the distribution of Zn and Ag grades both in terms of thickness and grade.

The Hurdman Sulphide Zone is a buried deposit characterized by an east-west strike over approximately 450 m and dipping 15-25° north over at least 350 m. The zone has a similar strike and dip to the surrounding rocks (hanging wall and foot wall). The mineralization occurs in bands or layers occurring parallel to the gneiss layering and foliation. Foliation angles in the HSZ have been noted to vary from 60-70° CA to 20-30° CA over short distances, suggestive of folding.

The mineralized host rock is biotite-sillimanite-quartz-feldspar gneiss. The well mineralized portions of the host rocks are described as being silicified and rich in sillimanite along with sulphide mineralogy ranging from 2-10% pyrite, pyrrhotite, and sphalerite. Sulphide minerals are predominantly in disseminated form but can increase to 25-30% semi-massive sulphides and 60-90% massive sulphides over 0.5 to 2 metres core lengths. The more massive zones are referred to as 'lodes' but cannot be easily interpreted between drill holes at current drill spacings.

Gold is also a significant component of the mineralized system. Gold grades ranging from 2 to 6 g/t Au over 0.5 to 1 m are linked to very coarse pegmatite veins and dykes, generally with higher silver grades and lower zinc grades, located at the footwall of the semi-massive sphalerite horizons and with silicified zones within the zinc-silver horizons.

In the 2008 DDH program, a VTEM anomaly 1.5 km east of the HSZ was found to contain similar mineralization and was referred to as East HSZ. The zone occurs at the eastern strike extension of the HSZ and was originally identified by early IP surveys. A limited amount drilling was completed on the East HSZ in 2008.

Interpretation and Conclusions

Previous geologists have noted the mineralogical and geological similarities of the Hurdman Sulphide Zone to base metal mines at Manitouwadge, Winston Lake, and some of the base metal mines of northern Manitoba (B. Durham, Noront Resources, 1992). Durham also noted that as near surface mineralization goes, the original values intersected above the Winston Lake and Louvicourt base metal deposits were not nearly as high as those encountered on the Hurdman property.

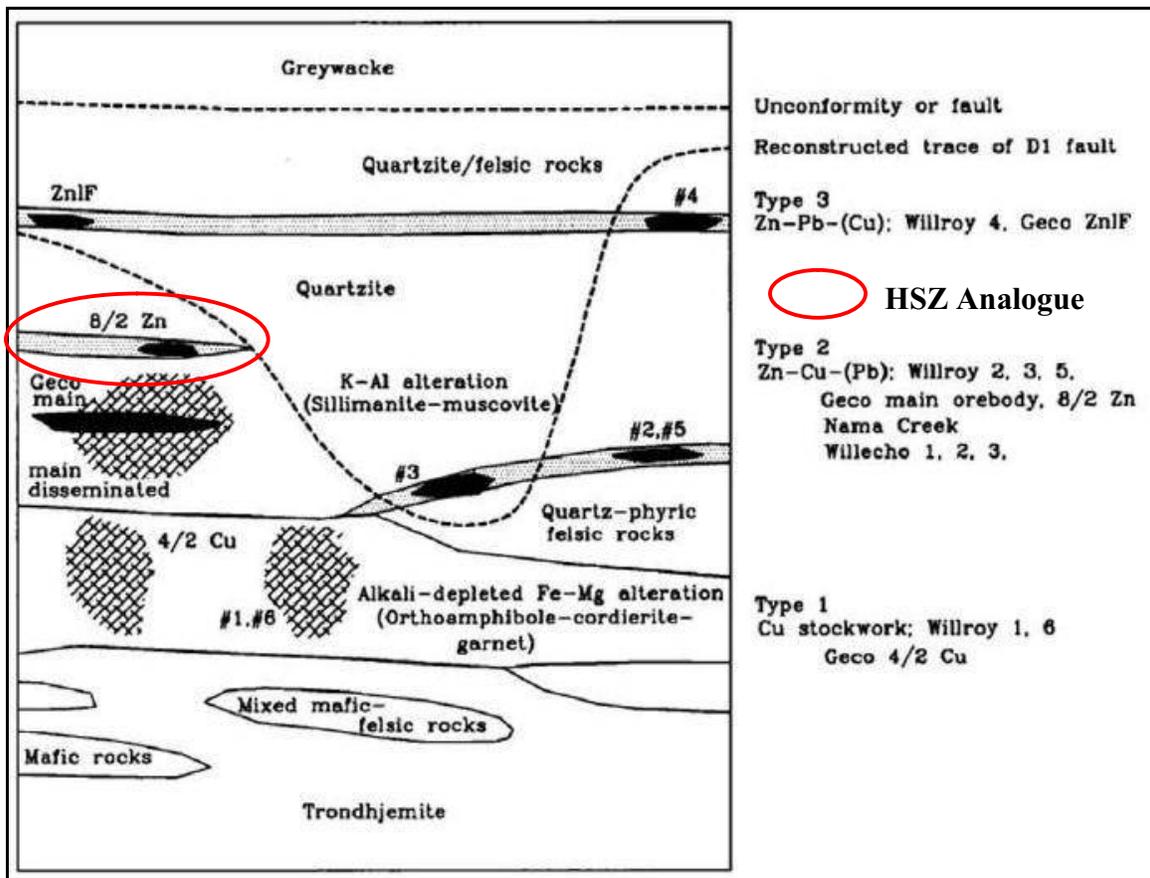
Durham (1992) noted that the known mineralization in the vicinity of the HSZ was originally thought to be genetically related to coarse grained, late pegmatite dikes. One of the main reasons for not continuing with exploration (in the 1980s) was that the company interpreted the zinc mineralization to be erratic concentrations restricted to the contacts of flat lying pegmatite dikes.

It was Durham (1992) that concluded that the most significant mineralization was stratabound, disseminated to near massive sulfide in gneisses that reflects hydrothermal alteration and some had been remobilized into the pegmatite dikes. The reinterpretation of the available geological and geophysical data indicated that the zinc bearing zones remain untested in all directions. Some of the alteration minerals, sillimanite, anthophyllite, muscovite, gahnite and cordierite are typically associated with volcanogenic massive sulphide deposits in high grade metamorphic terrain.

Geological interpretation is hampered by the ubiquitous overburden cover, and the very high degree of regional metamorphism. This upper amphibolite to granulite facies grade metamorphism was thought to be caused by forces related to the Kapuskasing Structural Zone. Metamorphism associated with this series of northeast striking, deep seated structures and related intrusions has destroyed all recognizable primary structures.

Notably, Pierce (Baltic Resource, 1998) indicated in his report that the HSZ is similar to the 8/2 Zn zone at the Geco massive sulphide deposit. The style of mineralization was analogous to the Geco deposit. The gneisses which host the Hurdman Sulphide Zone were comparable to the units at Geco, and were recognized as hosts for the 8/2 Zinc Zone at that deposit. Such zinc rich stratigraphy is the most latterly extensive of the many ore types at Geco and occurs at the hanging wall of the main deposit.

Berube (Eloro Resources, 2005) believed that the Zn-Ag±Cu±Pb assemblage was not typical of volcanogenic massive sulfides. The Hurdman Sulphide Zone contains very little chalcopyrite and it would be premature to compare it with the Upper Horizon of the Geco's Mine stratigraphic sequence (8/2 Zn Zone). The author believed that at the beginning, the main gneissic rocks in which the mineralization settled could have been made up of sedimentary units and felsic tuffs. The sulphide rich hydrothermal fluids would have used channel ways (syn-sedimentary faults) oblique to lithologies and deposited mineralization within porous layers of sediments like Sedex type deposits. However, Sedex type deposits are lead enriched and they are not chronologically associated with rocks of archean age.



Schematic reconstructed section showing the inferred stratigraphic positions of the various orebodies at Geco (after Zaleski and Peterson 1995).

Most recently, McCutcheon (Blue Vista, 2011) interpreted the pyrrhotite-pyrite lodes and pegmatite sills to represent a melting front (anatexis) in high-grade metamorphic (migmatitic) rocks. In this scenario, sillimanite-bearing rocks of the HSZ are genetically related to fluids that formed by the breakdown of hydrous minerals (micas and amphiboles) during anatexis; these fluids rose and altered the rocks ahead of the melting front. Such fluids reduced the melting temperature of sulfides and allowed pyrrhotite-pyrite-sphalerite melts to form, which co-mingled with pegmatite melts at their mutual contacts, forming *ø*ball texture*ö* (analogous to oil droplets in a vinaigrette salad dressing). The metal source was believed to be derived from an original Sedex type deposit where the melting front intersected pre-existing massive sulphide deposits.

Deposit Model

Based on previous reports, it appears that the Hurdman Sulphide Zone has many similarities to a Geco-type deposit such as the 8/2 Zn Zone. The main areas of contention are: the original nature of the host rock (sedimentary or volcanic) and the processes involved during the transformation of a primary Sedex-type deposit under the influence of high-temperature and pressure metamorphism and accompanying deformation. The

fact that there is some general level of coherence to the mineralized and altered zone suggests that regional metamorphism does not remobilize metals significantly (Stanton, 2006).

One would expect that an originally more massive and continuous zone of sulphides would retain much of its coherence, unless it had been subjected to significant displacement along deformation zones. The presence of the Hurdman Sulphide Zone suggests that the Sedex type model is applicable in the Archean, but with lower lead and copper content. The comparisons with the Geco and other Zn-rich deposits suggest that others may be present in the area.

Recommendations

There is a significant amount of DDH data along with geophysical data that should be further analyzed in order to better characterize the mineralized zone. MRB & Associates completed much of the field work and reports for Eloro Resources Ltd. and may have additional information and reports that have not been made public. One report contains a 3D image of the interpreted faults, dikes and a mineralized zone, and suggests that additional 3D work was completed by MRB & Associates.

Although the grade of zinc and silver can vary over short distances, little effort has been made to plot the % sulphide values identified in mineralized drill core. Although somewhat subjective, this would help in delineating the mineralized zone, even where there is a lack of Zn and Ag. Similarly, sulfur content could be plotted on sections along with other anomalous elements (Cu, Pb, Au, Si) and the presence of alteration minerals (silicification, sillimanite) could assist in defining the HSZ.

An interpretive report should be completed on the Hurdman Sulphide Zone and various geophysical surveys to produce 3D renderings and re-interpreted DDH cross sections using the results of a re-analysis of the drill logs.

A deeper-penetrating ZTEM survey is recommended on the property in order to identify conductive zones to a depth of 500-1000 m.

The nature of the gold mineralization in a number of the drill holes should be investigated further. In particular, DDH ELO-06-12 which contains 48.69 g/t Au, 166 g/t Ag, and 0.41% Zn over 0.45 m, in a mineralized pegmatite dike with 2-4% Pyrite, Pyrrhotite, and Sphalerite.

Knowledge Gaps

- Where is the drill core currently stored? how much of the drill core is available (2005 ó 2008)?
- How much additional information and reports are available but have not been submitted for assessment work?
- Is there a possibility of a low grade, high tonnage bulk mining operation due to the shallow dip and near surface location of the HSZ?
- If the HSZ was originally an Archean Sedex-type deposit, what are the chances of other mineralized horizons or stacked lenses within a series of layered gneisses?
- How deformed are the host gneisses; do they represent an mantled gneiss dome?
- How significant is the Kapuskasing Structural Zone on the metamorphic and deformation history of the rocks in Hurdman Township?