

Troilus



Location	Canada
Ownership	100%
Type of mine	open pit
Primary metal	■ gold
Secondary metal	■ copper
End product	gold doré and copper concentrate
Expected mine life	2009
Average reserve grades	gold – 0.7 grams / tonne copper – 0.1%
Infrastructure	close to roads and rail
Employees	243
Contractors	37

Business structure

Troilus operates as a division of Inmet.

About the property

The Troilus property is about 175 kilometres north of Chibougamau, at 400 metres above sea level. The site is on Category III lands under the James Bay and Northern Quebec Agreement.

The property includes:

- one mining lease covering an area of 840 hectares
- 481 unpatented claims covering a total area of 7,511 hectares surrounding and adjacent to the mining lease
- five surface leases over an area of 1,502 hectares, which include the tailings lease, camp site, solid waste disposal site and access road.

Physical characteristics of the deposit

The Troilus disseminated gold and copper deposit is in the eastern section of the Archean Frotet-Evans greenstone belt.

The host rocks consist mainly of mafic volcanic rocks and intrusives with lesser intermediate to felsic volcanoclastic metasedimentary rocks intruded by numerous sills and dykes of felsic porphyry.

Geology

Gold generally occurs as electrum, a gold-silver alloy, and native gold. The gold occurs as discrete grains, from 20 to 4,000 microns in diameter, along sulphide grain boundaries, along fractures within the sulphides and along grain boundaries in small quartz veinlets.

The mineralization contains 2 to 3 percent sulphides:

- sulphides are pyrite, chalcopyrite, pyrrhotite, and rare sphalerite. The sulphides form disseminations, tiny veinlets and narrow semi-massive seams that are controlled by both foliation and fractures
- mineralization occurs within a zone of potassic altered in-situ brecciation at the margin of a mafic intrusive. Mineralization also occurs in felsic dykes cutting the zone.

The mineralized zone strikes in a northeast-southwest direction, and dips at approximately 55 degrees to 65 degrees to the northwest.

Environmental

The Troilus site consists of two open pits, waste rock, overburden and tailings storage facilities, processing infrastructure, administrative offices, camp facilities, an explosives supply facility and magazine, landfill and access roads. Treated water is discharged to the environment from the tailings facility.

As part of preparations for closure of Troilus in 2010, we will prepare a final version of a site closure plan and cost estimate in 2009 to be submitted to Quebec regulatory authorities. The primary liabilities associated with the Troilus closure include demolition of infrastructure, re-sloping certain waste and overburden storage facilities, placement of soil covers and re-vegetation. The discharge from the tailings facility will be re-configured to a passive discharge system. Geochemical testing of mine waste materials indicates that acid drainage is not likely to develop, however, post-closure monitoring will continue for a period of time to confirm these conclusions. Our current closure cost estimate is \$15 million. Financial assurance of \$3 million has been provided to the Province of Quebec.

Community agreement

Inmet is a party to an impact and benefits agreement with the Mistissini Band of the Cree, according to the provisions in the James Bay and Northern Quebec Agreement for employing the local Cree community of Mistissini. The agreement formalizes the relationship between Troilus and the Cree community and includes provisions for employment, contracting and environmental oversight.

Mining method

Troilus operates as a conventional open pit mine, using two hydraulic excavators, three other excavators, a front-end loader, a fleet of nine haul trucks, two bulldozers and two graders.

PRODUCTION

	2009 objective	2008 results	2008 target	2007 results	Change (target to 2008)	Change (2007 to 2008)
Tonnes of ore milled (thousands)	6,200	5,800	6,600	6,000	-12%	-3%
Tonnes of ore milled per day	16,900	15,900	18,100	16,500	-12%	-3%
Strip ratio	0.3	1.4	1.1	1.1	+27%	+27%
Grades	gold (grams/tonne)	0.82	0.93	0.87	+3%	+10%
	copper (percent)	0.11	0.10	0.11	-9%	+100%
Mill recoveries	gold (percent)	81	83	82	+1%	+2%
	copper (percent)	92	92	88	+1%	+6%
Metal production	gold (ounces)	132,200	163,200	138,400	-7%	+9%
	copper (tonnes)	6,000	7,000	2,800	-19%	+104%
Cost per tonne of ore milled (C \$)	\$10	\$15	\$12	\$13	+25%	+15%

Mill throughput lower than last year and below expectations

Troilus milled 5.8 million tonnes in 2008, which was well below the target of 6.6 million tonnes. This was the result of hard ore in the southwest extension area of the pit, which limited grinding mill throughput for most of the year, and lower production from the softer areas in the main ore body in the second half of the year. A total of 151,300 ounces of gold were recovered during the year. Copper production reached 5,700 tonnes.

We completed mining in the J4 pit early in the year, and the southwest ore body extension of the 87 pit in the third quarter. By the fourth quarter, production was confined to the main ore body in the 87 pit. The 87 pit should be complete by April 2009. Production access and sequencing became very difficult late in 2008 because of the constrained mining area and reduced working faces, but delays in accessing the pit were mitigated by processing ore from the low grade stockpile.

Production grades and metal recoveries were as planned in 2008. In 2008 gold production was higher than 2007, mainly because grades from the 87 pit were higher. Copper grades were also higher in 2008 increasing copper production over 100 percent year over year.

Outlook for 2009

Troilus should complete mining in the 87 pit in the second quarter of 2009, and then begin stockpile recovery. We expect mill throughput of 6.2 million tonnes for the year at average grades of 0.8 grams per tonne gold and 0.11 percent copper, which should produce 132,200 ounces of gold and 6,000 tonnes of copper. As we complete mining of the pit, we will work to maximize resource recovery while maintaining the stability of the walls.

The workforce will be reduced during the year as mining in the open pit is completed and less equipment is required. We will assign some of the Troilus workforce and available equipment to reclamation activities.

PLANNING FOR THE REMAINING MINE LIFE

Processing of the stockpile should start in the second quarter of 2009, and continue until the second quarter of 2010, when closure of the site and tailings facility will begin.

The closure plan will address the transition from operations to closure and from closure to eventual site monitoring. Management will continue to communicate the closure and layoff plans to our workforce and local communities throughout 2009.