Scott Wilson Mining

AURIZON MINES LTD.

TECHNICAL REPORT ON THE CASA BERARDI MINE, NORTHWESTERN QUÉBEC, CANADA

NI 43-101 Report

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1 SUMMARY

EXECUTIVE SUMMARY

Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) was retained by Aurizon Mines Ltd. (Aurizon) to prepare an independent Technical Report on the Casa Berardi Mine (the Mine), in the Abitibi region of Quebec. The purpose of this report is for public disclosure of Mineral Resource and Mineral Reserve estimates, as of December 31, 2008. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects.

Aurizon is a Canadian gold mining company based in Vancouver, British Columbia, with an administrative office in Val d'Or, Quebec. Aurizon owns one hundred percent (100%) of the Casa Berardi Property.

The Casa Berardi gold deposits are located along a five-kilometre East-West mineralized corridor. They include the East and West mines, and the Principal Zone. Prior to Aurizon's acquisition of the mine, production spanned ten years, 1988 to 1997, at first by Inco Gold Ltd. (Inco Gold), and then by TVX Gold Inc. (TVX). During this period, a total of 3.5 million tonnes of ore was mined, and 688,400 ounces of gold were recovered in the ore processing plant.

In September 1998, Aurizon acquired 100% of Casa Berardi's assets from TVX. Aurizon re-opened the mine in November 2006, achieving commercial production on May 1, 2007. Currently, the major assets and facilities associated with the Mine are:

- West Mine Mineral Reserves, including Lower Inter, South West, North West, 109, 111, 113, 115 and 117S zones.
- East Mine Mineral Reserves in the East Mine open pit and underground.
- Additional Mineral Resources associated with West Mines (Inter, 104, 118, 123S) Principal Mine (Open Pit and Underground) and the East Mine (Underground).

- West Mine infrastructure, including surface maintenance facilities, backfill plant, mine dry, a decline for underground access, and a shaft down to a vertical depth of 760 m.

- East Mine infrastructure, including a crushing plant, an ore processing plant, a building complex with warehouse, maintenance facilities, a mine dry and offices; an underground decline, a shaft down to a vertical depth of 380 m, and a series of ramp-connected levels.

- Facilities providing basic infrastructure to the mine, including: electric power, ventilation, heat, water treatment and supply, and sewage treatment.

- Tailings impoundment facilities.

- Access by highway and gravel roads.

CONCLUSIONS AND RECOMMENDATIONS

In Scott Wilson RPA's opinion, the Casa Berardi Mine has been developed and operated by Aurizon in a reasonable and professional manner. Mineral Reserves as of December 31, 2008, are summarized in Table 1-1:

TABLE 1-1 MINERAL RESERVES SUMMARY

Aurizon Mines Ltd. – Casa Berardi Mine

Area	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground	Proven	880,000	8.18	231,400
Underground	Probable	2,321,000	8.62	643,400
Open Pit	Proven	407,000	4.16	54,400
Open Pit	Probable	228,000	3.66	26,800
Total	**Proven & Probable**	3,836,000	7.75	956,000

Notes:
1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at a cut-off grade of 4.4 g/t Au for underground, and 1.2 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US$750 per ounce and a US$/C$ exchange rate of 1:1.10.
4. A minimum mining width of three metres was used.
5. Bulk density is 2.70 t/m^3 for 113 Zone, and 2.77 t/m^3 for other zones.

Mineral Resources, exclusive (in addition to) reserves summarized above, as of December 31, 2008, are summarized in Table 1-2:

TABLE 1-2 MINERAL RESOURCES SUMMARY

Aurizon Mines Ltd. – Casa Berardi Mine

Area	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground	Measured	418,000	7.07	95,000
	Indicated	2,050,000	6.38	421,000
	Inferred	3,188,000	7.11	728,000
Open Pit	Measured	310,000	3.11	31,000
	Indicated	2,184,000	5.54	389,000
	Inferred	1,151,000	5.18	192,000
Total	**Measured & Indicated**	4,962,000	5.87	936,000
Total	**Inferred**	4,339,000	6.60	920,000

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at cut-off grades of:
   - 4 g/t Au for the West Mine, Principal Mine and East Mine
   - 3 g/t Au for the South West, Inter and 104 zones in the West Mine. Those zones were estimated by Aurizon in 2000 using 2D polygons on longitudinal sections and reviewed by Scott Wilson RPA (then RPA) in 2005.
   - 1.30 g/t Au for East Mine – Open Pit (Geostat, 2008)
3. Mineral Resources are estimated using an average long-term gold price of US$750 per ounce, and a US$/C$ exchange rate of 1:1.10.
4. Minimum mining widths of two to three metres were used.
5. Mineral Resources are exclusive of Mineral Reserves.
6. Totals may not represent the sum of the parts due to rounding.

In Scott Wilson RPA's opinion, there is good potential for further conversion of Mineral Resources to Mineral Reserves. Scott Wilson RPA recommends that resources considered for conversion to reserves should continue to be estimated using parameters and methodology similar to those used for the current reserves.

Over the last three years, Aurizon has completed extensive work in all of the geological aspects of the mine: geological interpretation, developing QA/QC programs, integration of the Gemcom software and training, and 3D solid modelling and 3D block

model grade interpolation. Aurizon has enjoyed good success in generating new resources, and converting resources to reserves.

Mill production results reconcile well with Mineral Reserve estimates.

Ground control problems experienced in previous operations have been addressed by measures included in current operating procedures. Stability of mine development has been increased by locating the major infrastructure on the north side of the Casa Berardi Fault, and by applying ground support in accordance with commonly accepted practice for the anticipated conditions. Stope stability has been enhanced by the use of a smaller typical stope size, conservative sublevel spacing, and application of cemented rock fill.

Mill recovery increases from past experience are due to more consistent feed rates, the addition of intensive cyanidation, reduced levels of "preg-robbing" graphite, and increased gravity circuit capacity.

Scott Wilson RPA's recommendations are as follows:

GEOLOGIST DEDICATED FULL TIME TO GEMCOM

A geologist must be dedicated full time to Gemcom and to database management, to ensure consistency throughout the process of geological interpretation, solid modelling, and integration/validation of data in the Mineral Resource and Mineral Reserve estimation process. A geologist with Gemcom skills must carry out or supervise the following activities:

- Interpretation and modelling of the multiple mineralized zones
- Regular block model updates for mine planning, budget purposes and mineral resource updates
- 3D modelling of excavations (development and stopes, planned and mined-out)
- Management of the definition drilling, exploration drilling and QA/QC databases.

GEOLOGICAL INTERPRETATION AND SOLID MODELLING

Scott Wilson RPA reviewed cross-sections, longitudinal sections, and plan views of different zones, and found the interpretation of the mineralization to be generally well done. Scott Wilson RPA, however, is of the opinion that the mineralized outline, especially in 113 Zone, is locally too generous and includes low grade material on the walls or locally conforming to stope design constraints rather than to geology. Scott Wilson RPA recommends that senior geology staff approve geological interpretation before solid modelling is undertaken.

GEMCOM DATABASE CLEAN-UP

The Gemcom database should be cleaned up in order to maintain only one drill hole database. To date, there are nine drill holes database, namely DrillHoleA, Drillholes, Exploration, MineEst, MineOuest, MinePrinc, transfert, Travail, and TravailExplo. Only the Drillholes database should be kept and updated.

CHIP SAMPLES IN GEMCOM DATABASE

To date, chip samples from development headings have been used only in the East Mine. Chip samples of other sectors should be entered in the database and be used for geological interpretation and solid modelling, as well as in block model grade estimation. This would also help in the mine-mill grade reconciliation, especially on a stope by stope basis.

GRADE AND VOLUME CALCULATION FOR MINE PLANNING AND MINERAL RESERVE REPORTING

Because the block models are not updated on a regular basis, or as needed, with the latest information, the stope grades are estimated using the nearest neighbour method for all of the stopes for mine planning and some of the stopes for Mineral Reserve reporting. In 2008, all of the stopes that were in the mine plan and 22% (103/471 stopes) of the stopes that were reported in the Mineral Reserves were estimated that way. Volumes are estimated from 3D solids in Gemcom.

To obtain the grade of a particular stope, only drill hole intercepts that are found within that stope are used, instead of using all surrounding drill hole samples (composites), no matter where the composite is located, inside or outside a stope. Scott

Wilson RPA recommends that the nearest neighbour grade interpolation method be discontinued, and a regularly-updated Gemcom block model be used. Grade interpolation based on composites should be used not only for long term Mineral Resource estimation but on a day-to-day basis.

CAVITY MONITORING SURVEYS OF MINED-OUT STOPES INTO GEMCOM DATABASE

Volumes of mined-out stopes are evaluated from a cavity monitoring survey (CMS) system by the geology department; however, these solids have not yet been imported into Gemcom. Integration of CMS information into Gemcom would allow calculating tonnes and grades of mined-out excavations and the grade of dilution from the block model. This should also facilitate the mine-mill reconciliation process.

BLOCK MODEL PARAMETERS

In order to diminish the size of block model data and to accelerate data processing, block dimensions could be increased. Percent models should be tested, especially in the Principal Mine where multiple lenses are close to each other. Kriging should also be tested for grade interpolation and compared to the presently used inverse distance squared method.

DENSITY DETERMINATIONS

Lower Inter: In 2006, Aurizon carried out an extensive definition drilling program on the Lower Inter Zone, however, no density determinations were carried out on drill core. Scott Wilson RPA recommends that density determinations be carried out on any Lower Inter drill core that is still available.

113 Zone: Scott Wilson RPA recommends revisiting density in the case of 113 Zone in order to use the latest information. In 2004, a total of 629 measurements were completed, with 95% of values ranging between 2.50 t/m^3 and 3.00 t/m^3. On average, the density varied from 2.67 t/m^3 for quartz veins to 2.85 t/m^3 for schist, however, as the majority of the ore in this zone lies within quartz veins (>90% of the resources) and wacke (<10%), an average density of 2.70 t/m^3 was assumed to be representative of 113 Zone.

Despite density determinations aforementioned, Aurizon provided Scott Wilson RPA in December 2008 with a file of density determinations that were extracted from the Gemcom assay table. The mean density of the 947 determinations provided is 2.74 t/m^3 while to date, a density of 2.70 t/m^3 has been used for Mineral Resource estimation.

Data Entry: Scott Wilson RPA is of the opinion that the assay table should be revisited to ensure all density determinations have been entered.

RQD MEASUREMENTS

Since Aurizon acquired the property, RQD measurements and core recovery measurements have been carried out in all surface and underground holes prior to logging. In general, RQD measurements have been carried out over three metre lengths, with shorter lengths used in areas of bad ground. More recently, RQD measurements have been carried out over much longer lengths, five metres to 15 m. Approximately 84% of the RQD database consists of lengths of three metres or shorter. Scott Wilson RPA recommends keeping the general length of measurements to three metres, as it corresponds to the drill rod lengths. This will allow better hole to hole interpretations of areas of good and poor RQD values.

QUALITY CONTROL/QUALITY ASSURANCE PROGRAM

Mine Laboratory: The mine lab has its own QA/QC program, including the analysis of one blank sample, one standard, and one duplicate in every 24 samples. The results of blank and standard assays and types are not indicated in the assay certificates provided to the geology department. Scott Wilson RPA recommends the results of blanks and standards be shown on the assay certificates.

The compilation of blanks and standards is carried out by the lab chief analyst. This compilation is not provided to the geology department. Scott Wilson RPA recommends that the lab provide this compilation to the geology department.

Pulps #1 for Check Assay: Based on the QA/QC graphs and tables, Scott Wilson RPA is of the opinion that the amount of check assays of Pulps #1 can be reduced from 10% to 5%.

QA/QC Database: Numerous macros and queries that were created before 2007 make the database confusing. It is difficult to determine which tables are relevant, and which need to be updated or deleted. Several macros that were created in the past should be updated or deleted. More work is required to make the database more user friendly.

CUT-OFF GRADE DETERMINATION – UNDERGROUND RESERVES

In Scott Wilson RPA's opinion, the cut-off grade is reasonable, however, it is recommended that some changes to the calculation be considered:

- Use LOM underground mining, processing, and G&A costs, rather than budget costs for the current year. Mineral Reserves cover the full LOM, and the costs should match.

- Include underground development capital costs in the cut-off grade calculation. It is particularly important to consider these costs when evaluating small zones, which typically require greater amounts of development per tonne of reserves.

- Evaluate mill operating data to establish grade-recovery relationships.

EAST MINE OPEN PIT RESERVE ESTIMATION

Scott Wilson RPA considers the East Mine open pit reserve estimate to be reasonable and acceptable, however, the following changes to the estimation method are recommended:

- Dilution: change the block size in the block model to reflect the selective mining unit (SMU) rather than evaluating minimum cut widths and applying an external dilution percentage.

- Input Parameters: pit optimization and cut-off grade inputs date back to 2007 or earlier, and should be updated to reflect current values.

In Scott Wilson RPA's opinion, increased costs and possible increases in dilution resulting from these recommendations would be balanced by a significant increase in the gold price.

PRINCIPAL MINE CROWN PILLAR – OPEN PIT POTENTIAL

Based on pit optimization which indicates that part of the Principal Mine zones could be extracted from surface, Scott Wilson RPA recommends that a lower-grade mineralized envelope be developed. While the average grade of the open pit would decrease, overall

pit economics would become more favourable. In addition, the stripping ratio would be reduced.

Production scenarios should be explored to better develop the operating cost assumptions. The costs used in the current analysis are based on a production rate of approximately 880 tpd. At the current milling capacity of 2,200 tpd at Casa Berardi, the open pit could support approximately 3.4 years of production as a stand-alone operation. Depending on the mill feed split between open pit and underground production, the operating costs could potentially be lowered to improve pit economics.

With open pit grades similar to underground feed grades at Casa Berardi, it may be more economic to mine the deeper portions of the deposit using underground methods. A trade-off study should be completed to evaluate the potential to mine the deposit using both types of mining, and determine the elevation where methods change from open pit to underground.

ECONOMIC ANALYSIS

A pre-tax Cash Flow Projection has been generated from the Life of Mine production schedule and capital and operating cost estimates, and is summarized in Table 1-3. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

- Five year mine life (2009-2013)
- 1,800 tonnes per day mining from underground.
- 500 tonnes per day supplemental ore from open pit mining (2011-2013).
- Mill recovery by zone, as indicated by testwork, averaging 91%.
- Gold at refinery 99.9% payable.
- Exchange rate US$1.00 = C$1.1.
- Metal price: US$750 per ounce gold.
- Net Revenue includes doré refining, transport, and insurance costs.
- Mine life capital totals $76.9 million.
- Average operating cost over the mine life is $101 per tonne milled.

TABLE 1-3 PRE-TAX CASH FLOW MODEL
Aurizon Mines Ltd. - Casa Berardi Mine

			2009	2010	2011	2012	2013	TOTAL
PRODUCTION	Underground	Tonnes	655,593	687,905	643,200	658,920	555,643	3,201,260
		Grade	7.87	7.91	8.45	8.49	10.05	8.50
	Open Pit	Tonnes	-	-	155,116	186,540	293,303	634,960
		Grade	-	-	3.59	4.13	4.09	3.98
	Overburden	Tonnes	-	-	6,720,680	4,766,536	2,356,459	13,843,676
	Waste	Tonnes	-	-	726,945	1,162,691	1,237,300	3,126,936
		Strip Ratio			48.01	31.79	12.25	26.73
	Mill Feed	Tonnes	655,593	687,905	798,316	845,460	848,946	3,836,220
		Grade	7.87	7.91	7.50	7.53	7.99	7.75
REVENUE	Contained Gold	ounces	165,847	174,843	192,584	204,555	218,171	956,001
	Mill Recovery	%	92.2%	92.0%	91.3%	90.7%	89.9%	91.1%
	Recovered Gold	ounces	152,934	160,776	175,756	185,482	196,067	871,015
	Payable	%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
	Payable Gold	ounces	152,781	160,615	175,581	185,297	195,871	870,144
	Payable Silver	ounces	30,556	32,123	35,116	37,059	39,174	174,029
	Exchange Rate	US$/C$	1.10	1.10	1.10	1.10	1.10	1.10
	Gold Price	US$/oz	750	750	750	750	750	750
	Silver Price	US$/oz	10	10	10	10	10	10
	Gross Revenue	$'000s	126,380	132,861	145,240	153,277	162,025	719,783
	Refining, Transport, Ins.	$'000s	178	198	216	228	241	1,061
	Net Revenue	$'000s	126,202	132,663	145,024	153,050	161,784	718,723
		$/tonne	193	193	182	181	191	187
OPERATING COSTS	Mining - Underground	$'000s	52,377	55,794	55,295	54,738	46,467	264,671
	Mining - Open Pit	$'000s	-	-	5,456	9,618	6,823	21,897
	Processing	$'000s	13,423	13,951	15,603	16,308	16,360	75,645
	G&A	$'000s	4,955	5,040	5,040	5,040	5,040	25,115
	Total	$'000s	70,755	74,785	81,394	85,704	74,690	387,328
	Mining - Underground	$/t ug ore	79.89	81.11	85.97	83.07	83.63	82.68
	Mining - Open Pit	$/t moved	-	-	6.19	7.13	4.46	5.82
	Mining - Open Pit	$/t op ore	-	-	35.17	51.56	23.26	34.49
	Mining - Average	$/t milled	79.89	81.11	76.10	76.12	62.77	74.70
	Processing	$/t milled	20.47	20.28	19.54	19.29	19.27	19.72
	G&A	$/t milled	7.56	7.33	6.31	5.96	5.94	6.55
	Total	$/t milled	107.93	108.71	101.96	101.37	87.98	100.97
	Operating Cash Flow	$'000s	55,447	57,879	63,630	67,345	87,094	331,395
CAPITAL COSTS	UG Development	$'000s	12,996	7,346	11,724	6,755	858	39,679
	Mining Infrastructure	$'000s	2,313	1,286	1,285	1,231	408	6,522
	Open Pit	$'000s	-	396	13,414	3,582	84	17,477
	Equipment	$'000s	4,398	721	214	107	-	5,439
	Tailings	$'000s	260	5,000	-	-	-	5,260
	Payments and Bonding	$'000s	821	884	773	-	-	2,478
	Total	$'000s	20,788	15,633	27,409	11,675	1,349	76,855
CASH FLOW	Net Cash Flow	$'000s	34,659	42,246	36,221	55,670	85,745	254,540
	Cumulative	$'000s	34,659	76,904	113,125	168,795	254,540	
	Total Cash Cost	US$/oz	419	421	419	418	345	403
	Capital Cost	US$/oz	124	88	142	57	6	80
	Total Production Cost	US$/oz	543	510	561	476	351	483
	Net Present Value	$'000s	5.0%	215,598				
		$'000s	7.5%	199,365				

CASH FLOW ANALYSIS

Considering the Casa Berardi Mine on a stand-alone basis, the undiscounted pre-tax cash flow totals $255 million over the mine life. Net Present Value (NPV) at a 5% discount rate is $216 million.

The Total Cash Cost is US$403 per ounce of gold. The mine life capital unit cost is US$80 per ounce, for a Total Production Cost of US$483 per ounce of gold. Average annual gold production over the LOM is 174,000 ounces per year.

At the current (February 6, 2009) gold price of US$913 per ounce, and C$/US$ exchange rate of 0.75, the undiscounted pre-tax cash flow totals $530 million, and the NPV at a 5% discount rate is $453 million.

The U.S. Securities & Exchange Commission requires that Mineral Reserves be evaluated at three-year trailing average metal prices. The three-year trailing average gold price is US$737 per ounce. At that price, the undiscounted pre-tax cash flow totals $242 million over the mine life, and the NPV at a 5% discount rate is $205 million.

SENSITIVITY

Key economic risks were examined by running cash flow sensitivities:

- Gold price
- Exchange rate
- Head Grade
- Operating costs
- Capital costs

NPV sensitivity over the base case has been calculated for -20% to +20% variations. The sensitivities are shown in Figure 1-1 and Table 1-4.

FIGURE 1-1 SENSITIVITY ANALYSIS

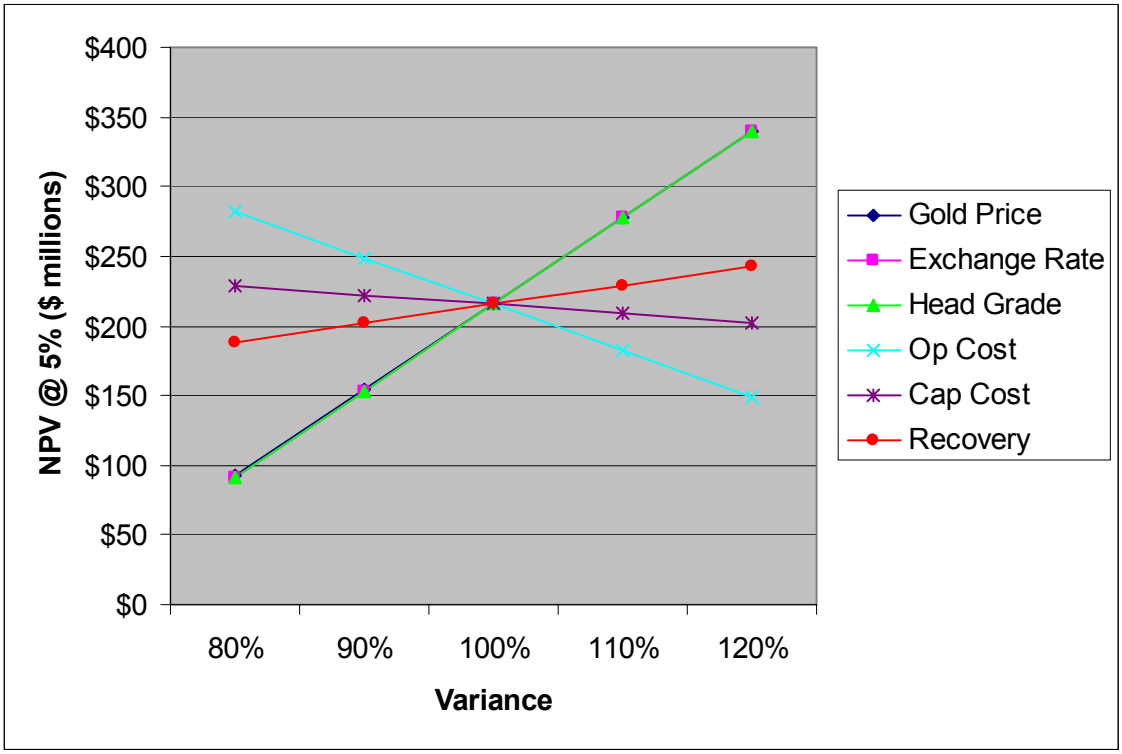

TABLE 1-4 SENSITIVITY ANALYSES

Aurizon Mines Ltd. – Casa Berardi Project

Parameter Variables	Units	-20%	-10%	Base	+10%	+20%
Gold Price	US$/oz	600	675	750	825	900
Exchange Rate	US$/C$	0.88	0.99	1.10	1.21	1.32
Head Grade	g/t	6.20	6.98	7.75	8.53	9.30
Operating Cost	US$/t	81	91	101	111	121
Capital Cost	$ millions	61	69	77	85	92
Recovery	%	87%	89%	91%	93%	95%

NPV@5%	Units	-20%	-10%	Base	+10%	+20%
Gold Price	$ millions	92	154	216	277	339
Exchange Rate	$ millions	92	154	216	278	339
Head Grade	$ millions	92	154	216	278	339
Operating Cost	$ millions	283	249	216	182	149
Capital Cost	$ millions	229	222	216	209	202
Recovery	$ millions	188	202	216	229	243

Gold price, exchange rate, and head grade impact the cash flow in the same proportion, as they affect revenues in the same way.

The Project is most sensitive to external economic criteria related to the gold price (spot price and C$:US$ exchange rate). Changes in the Canadian dollar will have a direct impact, since costs are almost entirely in C$ and revenues are in US$.

TECHNICAL SUMMARY

PROPERTY DESCRIPTION AND LOCATION

The Casa Berardi property is located in the Province of Quebec, approximately 95 km north of the town of La Sarre, in the James Bay municipality.

LAND TENURE

The property is composed of 299 contiguous designated claims, covering a total area of 14,796.28 ha, and two mining leases, BM 768 and BM 833, covering areas of 367.09 ha and 84.35 ha, respectively. On the whole, the property totals 15,247.72 ha (Figure 24-1, Appendix 1). Other legal titles, under the name of Aurizon, include the non-exclusive lease BNE 0010752 (sand & gravel pit), the tailings lease 70218, and an additional five hectares of land contiguous to mining lease BM 768 for rock waste material storage.

The Casa Berardi claims are in good standing.

INFRASTRUCTURE

Surface infrastructure at the East Mine includes a crushing plant, a 2,200 tpd ore processing plant, a tailings pond, and a two-storey administrative building with offices, shops, and a warehouse. Underground infrastructure includes a 379 m deep shaft, a decline, and a series of ramp-connected levels.

Surface infrastructure at the West Mine includes a backfill plant, a dry house with offices, shops, and warehouses; core racks, and a gate house. Underground infrastructure includes a decline and an 760 m deep shaft.

There is no infrastructure related to the Principal Mine. A five-kilometre track drift joins the East and West mines and provides access to the Principal Mine.

HISTORY

Before 1974, the Casa Berardi area was explored for base metal and iron formations. In 1974, the first 13 claims were staked by Inco Gold. The discovery hole was drilled in 1981, and 590 additional claims were staked.

Inco Gold and Golden Knight Resources Inc. (Golden Knight) formed a joint venture to operate the mine. September 12, 1988 marked the official opening of the East Mine, and the commercial production of the West Mine began in 1990. The total combined production for the period from 1988 to 1997 was 3.5 million tonnes at an average grade of 7.1 g/t. The total gold recovered during the operating years was 688,400 ounces, with a mill gold recovery rate averaging 87%.

In 1991, TVX acquired Inco Gold's 60% interest in the Mine. In 1994, TVX and Golden Knight purchased the remaining interest in the Domex claim block, a part of the Principal (Main) Zone between the West Mine and East Mine, from Teck Corporation.

In January 1997, TVX announced the closure of the East Mine due to ground control problems. Two months later, the West Mine was closed.

In September 1998, following the due diligence work, Aurizon signed an agreement and completed the acquisition of all Casa Berardi assets and mining rights.

Following the acquisition of Casa Berardi, Aurizon completed exploration diamond drilling programs, feasibility studies, underground development, shaft sinking, and construction.

In November 2006, Aurizon completed construction and development at the West Mine area and commenced underground mining and milling operations, achieving

commercial production as of May 1, 2007. The following table lists Aurizon production by year.

TABLE 1-5 CASA BERARDI ANNUAL PRODUCTION
Aurizon Mines Ltd. – Casa Berardi Mine

Year	Tonnes	Grade (g/t Au)	Ounces Recovered	Recovery (%)
2006	68,481	8.6	17,731	93.9
2007	545,258	9.8	159,469	93.0
2008	654,397	8.2	158,830	92.5
Total	**1,268,136**	**8.9**	**336,030**	**92.7**

GEOLOGY

The Mine is located in the northern part of the Abitibi Subprovince, a subdivision of the Superior Province, the Archean core of the Canadian Shield. The Mine area belongs to the Harricana-Turgeon Belt, which is part of the North Volcanic Zone.

More specifically, the regional geology is characterized by a mixed assemblage of mafic volcanics, flysch-type sedimentary iron formations, and graphitic mudrocks that are limited by a large granodioritic to granitic batholith.

Structurally, the property is enclosed in the Casa Berardi Tectonic Zone, a 15 km wide corridor that can be traced over 200 km. A network of east-west to east-southeast and west-northwest ductile high strain zones mainly follows the lithological contacts.

The Casa Berardi Fault is defined by a stratigraphic contact between a graphite-rich sediment sequence, northern continuous mafic fragmentary volcanic units, and a southern polymictic conglomerate unit. On the north side of the fault, a thick sequence of very homogeneous wacke and volcanites is observed. The fault strikes east-west and dips 80° to the south. Inside the fault zone, ductile deformation intensity is heterogeneous. Foliation is uniform in larger competent rock units, such as mafic volcanites and conglomerates.

The Casa Berardi gold deposit can be classified as an Archean sedimentary-hosted lode gold deposit. Gold mainly occurs south of the Casa Berardi Fault, and sometimes is found on both sides of the fault. Mineralization is found in large low-sulphide quartz veins and low-grade stockworks. Gold is fine grained.

Mineralized zones of the West Mine, such as Lower Inter, Inter, and North West, show weak or no plunge, a moderate south dip (30°), and have extensions which branch off from the fault at 130°. On the east side of the mine, the mineralized zones, such as 111 and 113 zones, show a steeper plunge (> 50°) with a dip varying between 70° south and 70° north, similar to the Casa Berardi Fault.

The 113 Zone is a 20 m to 70 m wide mineralized corridor, with an east-west strike, subvertical, adjacent to the Casa Berardi Fault. The width of the zone along holes varies from five metres to 20 m. The zone extends vertically for over 650 m, the top being at the 250 m level. Lateral extension decreases from 300 m at the 600 m level to 150 m at the 700 m level.

In plan view, the South West and South East zones can be interpreted as a dome which is cut by the South Fault and by the subsidiary Auxiliary Fault. The mineralized system extends 200 m laterally and 300 m along dip, from surface to the 300 m level.

The Lower Inter Zone is located between the 375 m and 610 m levels, dips at 25° to 45° south, and plunges to the west at 15°. It is controlled by the Casa Berardi and Lower Inter faults. The Casa Berardi Fault dips steeply north, while the Lower Inter Fault dips 40° to 45° to the south, joining with the South Fault. Thickness varies from four metres to 50 m, with the maximum observed just below the contact of the two faults, and thinner sections observed down-dip along the Lower Inter Fault. The mineralized zone extends for 200 m.

MINERAL RESOURCE ESTIMATES

Mineral Resource estimates by zone are summarized in Table 1-6. Total Measured and Indicated Resources, which include the portion of undiluted resources that have been

converted into Mineral Reserves, are 8,262,000 tonnes at 7.33 g/t Au representing 1,946,000 gold ounces. Inferred Resources total 4,339,000 tonnes at 6.60 g/t Au for 920,200 gold ounces.

Mineral Resources are classified based on density of drill hole data, and continuity of the auriferous zones. The classification complies with the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves as of December 11, 2005. The classification of Mineral Resources is guided by the drill hole spacing, which ranges from 15 m to 50 m, and by the ranges of variograms, which are between 10 m to 50 m, and is based on the distance of drill hole composites to block centres.

A polygon was created around blocks that were estimated based on drill hole composites with an average maximum distance to block centres of 25 m. The resources were classified as follows:

- Measured Resources: blocks inside the polygon + local development that confirms the continuity of mineralization.
- Indicated Resources: blocks inside the polygon.
- Inferred Resources: blocks outside the polygon.

Each block of the model is therefore classified as Measured, Indicated or Inferred Resource.

TABLE 1-6 MINERAL RESOURCES INCLUSIVE OF MINERAL RESERVES

Aurizon Mines Ltd. – Casa Berardi Mine

Classification Location - Zone	Tonnes	Au g/t	Oz
Measured			
West Mine - 113	772,000	10.03	249,000
West Mine – North West	110,000	6.55	23,200
East Mine - Crown Pillar	649,000	4.09	85,300
East Mine - Underground	299,000	6.84	65,800
Total Measured	**1,829,000**	**7.20**	**423,200**
Indicated			
West Mine - South West	365,000	4.80	56,400
West Mine - Lower Inter	939,000	10.45	315,700
West Mine - Inter	124,000	4.43	17,700
West Mine - 109	60,000	6.28	12,200
West Mine - 111	84,000	5.81	15,600
West Mine - 113	1,039,000	10.45	349,000
West Mine - 115	139,000	14.54	64,900
Principale - 117S	17,000	8.24	4,500
Principale - 118	230,000	7.04	52,000
Principale - Crown Pillar	1,785,000	6.19	355,300
Principale - Underground	837,000	6.38	171,700
East Mine - Crown Pillar	589,000	3.20	60,600
East Mine - Underground	138,000	8.20	36,400
Low Grade Development	87,000	3.90	10,900
Total Indicated	**6,433,000**	**7.36**	**1,522,800**
Total Mea. + Ind.	**8,262,000**	**7.33**	**1,946,000**
Inferred			
West Mine - Lower Inter	43,000	5.62	7,800
West Mine - 104	115,000	6.62	24,500
Principale - 118	854,000	6.64	182,500
Principale - 123S	714,000	9.42	216,300
Principale - Crown Pillar	841,000	5.97	161,500
Principale - Underground	836,000	5.97	160,500
East Mine - Crown Pillar	310,000	3.02	30,100

Classification Location - Zone	Tonnes	Au g/t	Oz
East Mine - Underground	156,000	9.10	45,600
East Mine - Cherty	225,000	6.80	49,300
East Mine - 160	243,000	5.40	42,200
Total Inferred	**4,339,000**	**6.60**	**920,200**

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at cut-off grades of:
   - 4 g/t Au for the West Mine, Principal Mine and East Mine.
   - 3 g/t Au for South West, Inter and 104 zones in the West Mine. Those zones were estimated by Aurizon in 2000 using 2D polygons on longitudinal sections and reviewed by Scott Wilson RPA (then RPA) in 2005.
   - 1.30 g/t Au for East Mine – Open Pit (Geostat, 2008).
3. Mineral Resources are estimated using an average long-term gold price of US$750 per ounce, and a US$/C$ exchange rate of 1:1.10.
4. Minimum mining widths of two to three metres were used.
5. Mineral Resources are inclusive of Mineral Reserves.
6. Totals may not represent the sum of the parts due to rounding.

Except for Inter and South West zones, which are 2D polygonal estimates prepared by TVX and Aurizon, and the East Mine Crown Pillar, which was estimated by Geostat, the resource estimates for the different mineralized zones at Casa Berardi have been carried out by Scott Wilson RPA, assisted by mine staff, using block model grade interpolation techniques. The current Mineral Resource estimate is based on the mine drill hole database and geological interpretation results. In Scott Wilson RPA's opinion, the estimates are valid and representative of the geological context.

ESTIMATION PARAMETERS

Density was evaluated by zone, ranging from 2.7 t/m^3 to 2.9 t/m^3. Minimum mining widths vary between two and three metres. Scott Wilson RPA believes that the impact of variable widths on resource figures is negligible.

MINERAL RESERVE ESTIMATES

Underground Mineral Reserves are estimated for 113 Zone, Lower Inter Zone, and a number of smaller zones. Open Pit Mineral Reserves are estimated for the East Mine Crown Pillar. These portions of the total Mineral Resources have the best potential for economic extraction due to size, grade, and proximity to existing workings and infrastructure. Mineral Reserves are classified based on the transfer of Measured

Resources to Proven Reserves, and Indicated Resources to Probable Reserves. Inferred Resources are not used in the reserve estimation.

TABLE 1-7 UNDERGROUND MINERAL RESERVES BY ZONE

Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground				
113	Proven	709,000	8.73	199,200
North West	Proven	83,000	5.43	14,400
East Mine	Proven	88,000	6.27	17,800
113	Probable	993,000	9.35	298,400
Lower Inter	Probable	953,000	8.91	273,000
South West	Probable	72,000	4.64	10,700
109	Probable	68,000	5.38	11,700
111	Probable	37,000	5.44	6,400
115	Probable	30,000	11.75	11,400
117S	Probable	19,000	6.96	4,300
East Mine	Probable	63,000	8.20	16,500
Low-Grade Dev.	Probable	87,000	3.90	10,900
Open Pit				
East Mine Crown Pillar	Proven	407,000	4.16	54,400
East Mine Crown Pillar	Probable	228,000	3.66	26,800
Total	**Proven & Probable**	**3,836,000**	**7.75**	**956,000**

Notes:
1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at a cut-off grade of 4.4 g/t Au for underground, and 1.2 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US$750 per ounce and a US$/C$ exchange rate of 1:1.10.
4. A minimum mining width of three metres was used.
5. Bulk density is 2.70 t/m^3 for 113 Zone, and 2.77 t/m^3 for other zones.

Underground Mineral Reserves were estimated for a longhole open stoping mining method without pillars, mined in a primary-secondary sequence. Each stope was forecast for tonnes and grade, including ore development inside the stope outline. Dilution

quantities were estimated for each stope, including hanging wall/footwall sloughage, and backfill dilution, where applicable. Dilution averages 21%. Extraction was estimated at 90% for primary stopes, and 95% for secondary stopes.

East Mine open pit reserves are contained in the crown pillar left behind by previous mining. Open pit optimization and detailed design were updated in November 2008, after an in-fill drilling campaign was completed. A dilution factor of 20% was applied to open pit mineralization within the pit design, and above the 1.2 g/t Au cut-off grade.

TONNAGE AND GRADE RECONCILATION: MINERAL RESERVES VS. MILL

Tonnage and grade reconciliation between Mineral Reserves and mill production was carried out on a stope by stope basis. In 2008, ore came from 59 stopes from 113 Zone, five stopes from North West Zone, and development headings. The Mineral Reserve estimate for ore mined in 2008 totals 651,362 tonnes at an average grade of 8.56 g/t Au. 2008 reconciled mill production totalled 654,397 tonnes at an average grade of 8.16 g/t Au. Reserves to Mill ratios were 0.995 and 1.049 for tonnes and grade, respectively, which Scott Wilson RPA considers reasonable and acceptable.

MINING

Current reserves at Casa Berardi comprise eight zones at the West Mine, spread over a moderate horizontal distance from each other and located at different elevations, plus open pit and underground areas at the East Mine. The 113 Zone, Lower Inter Zone, and East Mine comprise the bulk of the deposit tonnage. The zones are of varying thickness, ranging from over 50 m to less than three metres, which is the minimum mining width. Most of the hanging walls are subvertical (55º to 85º) and exhibit similar wall characteristics with the exception of the Lower Inter Zone, which in a number of places has relatively shallow hanging wall configurations (less than 45º).

A transverse blasthole open stoping mining method was selected for the Casa Berardi mine to provide the desired production rate. Timely supply of both cemented and unconsolidated backfill plays a crucial role in controlling dilution and maintaining a short stoping cycle.

Stopes are nominally 15 metres long by 20 metres high (floor to floor), oriented in a transverse manner to the strike of the ore, and alternating in a primary and secondary extraction sequence. Overcut and undercut drifts are driven to provide access to the top and bottom of the stope. Cable bolts are installed in the hanging wall. Ring drilling takes place from the overcut drift, using a production 75 mm top hammer longhole drill. 42-inch diameter raise bore holes are used to create a free face into which the blast holes break.

After blasting, the broken ore is removed from the stope through the undercut drift, using a remote-controlled scooptram, and hauled to an ore pass. When mining is completed, the stope is backfilled from the overcut, with cemented rock fill for primary stopes, and with unconsolidated waste rock for secondary stopes. Stope sequencing generally proceeds from the bottom of a zone to the top.

Underground work is carried out by contractors.

GROUND STABILITY

A history of ground instability and related incidents during pre-Aurizon operations points to the importance of addressing rock mechanics issues for mining at Casa Berardi. Ground instability is mainly restricted to the Casa Berardi fault system, where graphitic fault rocks comprise the hanging wall of the ore zones. The rock environment south of the Casa Berardi fault is composed of relatively weak sediments with a frequent occurrence of schistose and graphitic rocks exhibiting weak contacts. It is prone to develop wedge forms, due to frequent unstable joint formations, flat-lying gouge, or graphite-filled joints above mine openings.

Since Aurizon re-opened the mine, ground control incidents have been minor for the most part, mainly involving sloughing in the graphitic fault at various locations. One incident in January 2007 involved an unravelling stope back, when backfill was delayed due to commissioning problems at the CRF plant. In that case and other, smaller incidents, sloughing has been controlled through application of shotcrete, or by

backfilling with cemented rockfill from levels above. Minor sloughing incidents have been on the decline, due to changes in development techniques near the graphitic fault.

PROCESSING

Ore is hauled by truck from the West Mine headframe complex to the crusher dump pocket. A reciprocating feeder under the dump pocket meters the ore into a jaw crusher. The ore is crushed to approximately 5.5" (140 mm), and fed to a semi-autogenous (SAG) mill.

The SAG mill operates in closed circuit with a sizing screen. The screen oversize material is returned to the SAG mill for further reduction, and the screen undersize is sent to primary and secondary cyclones.

Cyclone underflow is diverted and equally split to two parallel gravity circuits. Each circuit is comprised of a vibrating screen and a Knelson gravity concentrator. The gravity concentrates are leached in an intensive cyanidation reactor (ILR). The pregnant solution from the ILR unit reports to the electrowinning circuit for gold recovery, and the tail reports to the secondary cyclone pump box.

The #1 Carbon-In-Leach (CIL) tank overflows into the #2 CIL tank and subsequently through the #3, #4, #5, #6, and #7 CIL tanks. Overflow from the #7 CIL tank feeds a carbon safety screen to collect any fugitive carbon. Oversize from the safety screen is collected in a collection bin and recycled back to the CIL circuit. The safety screen underflow is discharged into the effluent treatment tank for cyanide destruction or by-pass to the tailings pump box. The tailings pump box pumps the material to the tailings pond.

Samplers cut representative CIL feed and tailings samples. Process air is added to each CIL tank. Cyanide solution is added to the first CIL tank as required.

Regenerated and fresh carbon is supplied by batch to the #7 CIL tank and advanced from tank to tank counter current to the slurry flow. Loaded carbon from the #1 CIL tank

is pumped to a loaded carbon wash screen to remove any residual cyanide solution. Oversize carbon from the loaded carbon wash screen flows by gravity to a loaded carbon surge bin. The loaded carbon screen undersize returns to the # 1 or #2 CIL tank.

Loaded carbon from the surge bin is transferred to the stripping vessel. Hot barren solution is pumped through the stripping vessel to remove the gold from the carbon. The solution exiting the top of the stripping vessel is defined as a pregnant solution containing gold in solution. To maintain the required volume and strength of the barren solution entering the stripping vessel, caustic and cyanide are added as required.

After stripping, the carbon is transferred to a regeneration circuit where organic contaminants are removed from the carbon by heat in a carbon regeneration kiln. Carbon is discharged from the kiln into a quench tank. Quenched carbon is educted to the sizing screen. Fresh carbon from an attrition tank is also fed to the sizing screen.

Regenerated carbon is pumped to the #7 CIL tank to maintain the required carbon loading in the CIL circuit.

Pregnant solution from the CIL circuit, along with pregnant solution from the ILR unit, is fed to two electrowinning cells for gold removal. The solution exiting the electrowinning cells is returned to the process. The gold extracted from the solution is deposited on cathode plates. The gold is removed from the plates, filtered, and smelted in an induction furnace. The refined gold is poured into gold bullion moulds to form "dore" bars. These bars are shipped to a refiner for further upgrading.

LIFE OF MINE PLAN

The mine and mill complex were designed to produce and process 803,000 tonnes of ore per year at a rate of 2,200 tpd. Prevailing ground conditions at Casa Berardi constrain stope sequencing, and currently limit underground production to 650,000 to 690,000 tonnes per year (1,800 tpd). The current LOM plan forecasts a return to 2,200+ tpd in 2011, using open pit ore from the East Mine to supplement mill feed from underground.

The LOM plan totals 3.8 million tonnes of ore grading 7.8 g/t Au, to be mined over five years (2009 to 2013) from 113 Zone, Lower Inter Zone, and six smaller West Mine zones, plus open pit and underground production from the East Mine.

CAPITAL AND OPERATING COST ESTIMATES

LOM capital costs of $76.9 million, summarized in Table 1-8, include contractor mine development, mine infrastructure, open pit costs, equipment costs, tailings management, repayment of government loans, and mine reclamation & closure costs.

TABLE 1-8 LOM CAPITAL COSTS
Aurizon Mines Ltd. – Casa Berardi Mine

	Cost in $ millions					
Item	**2009**	**2010**	**2011**	**2012**	**2013**	**Total**
UG Mine Development	13.0	7.3	11.7	6.8	0.9	39.7
Mining Infrastructure	2.3	1.3	1.3	1.2	0.4	6.5
Open Pit	-	0.4	13.4	1.3	0.1	15.1
Deferred Open Pit Costs	-	-	-	2.3	-	2.3
Offices	0.2	0.3	0.2	0.1	-	0.8
Equipment	4.2	0.4	-	-	-	4.6
Tailings Management	0.3	5.0	-	-	-	5.3
Loan Repayments	0.6	0.6	0.8	-	-	2.0
Reclamation & Closure	0.2	0.3	-	-	-	0.5
Total	**20.8**	**15.6**	**27.4**	**11.7**	**1.3**	**76.9**

Operating costs, averaging $77 million per year, are presented in Table 1-9:

TABLE 1-9 UNIT OPERATING COSTS

Aurizon Mines Ltd. – Casa Berardi Mine

Item	Units	LOMP Average
Underground Mining	$/t ug ore	82.68
Open Pit Mining	$/t moved	5.82
	$/t op ore	34.49
Mining - Average	$/t milled	74.70
Mill	$/t milled	19.72
Administration	$/t milled	6.55
Total	**$/t milled**	**100.97**

2 INTRODUCTION AND TERMS OF REFERENCE

Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) was retained by Aurizon Mines Ltd. (Aurizon) to prepare an independent Technical Report on the Casa Berardi Mine (the Mine), in the Abitibi region of Quebec. The purpose of this report is for public disclosure of Mineral Resource and Mineral Reserve estimates, as of December 31, 2008. This Technical Report conforms to NI 43-101 Standards of Disclosure for Mineral Projects.

Aurizon is a Canadian gold mining company based in Vancouver, British Columbia, with an administrative office in Val d'Or, Quebec. Aurizon owns one hundred percent (100%) of the Casa Berardi Property.

The Casa Berardi gold deposits are located along a five-kilometre East-West mineralized corridor. They include the East and West Mines, and the Principal Zone. Prior to Aurizon's acquisition of the mine, production spanned ten years, 1988 to 1997, at first by Inco Gold Ltd. (Inco Gold), and then by TVX Gold Inc. (TVX). During this period, a total of 3.5 million tonnes of ore was mined, and 688,400 ounces of gold were recovered in the ore processing plant.

In September 1998, Aurizon acquired 100% of Casa Berardi's assets from TVX. Aurizon re-opened the mine in November 2006, achieving commercial production on May 1, 2007. Currently, the major assets and facilities associated with the Mine are:

- West Mine Mineral Reserves, including Lower Inter, South West, North West, 109, 111, 113, 115 and 117S Zones.
- East Mine Mineral Reserves in the East Mine open pit and underground.
- Additional Mineral Resources associated with West Mines (Inter, 104, 118, 123S) Principal Mine (Open Pit and Underground) and the East Mine (Underground).
- West Mine infrastructure, including surface maintenance facilities, backfill plant, mine dry, a decline for underground access, and a shaft down to a vertical depth of 760 m.

- East Mine infrastructure, including a crushing plant, an ore processing plant, a building complex with warehouse, maintenance facilities, a mine dry and offices; an underground decline, a shaft down to a vertical depth of 380 m, and a series of ramp-connected levels.

- Facilities providing basic infrastructure to the mine, including: electric power, ventilation, heat, water treatment and supply, and sewage treatment.

- Tailings impoundment facilities.

- Access by highway and gravel roads.

SOURCES OF INFORMATION

Site visits were carried out at many occasions since 2005 by Bernard Salmon, Ing., and by Jason Cox, P.Eng, Senior Mining Engineer from September 29 to October 1, 2008. Scott Wilson RPA has carried out block model updates and assisted mine staff in the use of Gemcom software. The underground workings were visited by Scott Wilson RPA personnel during the September trip.

The key Aurizon contacts during Scott Wilson RPA's visits were:

- Vice-President Michel Gilbert
- Chief-Geologist Jeannot Boutin
- Principal Mine Geologist Sylvain Picard
- Senior Exploration Geologist Réal Parent
- Geology Technicians Denis Labbé, Nathalie Brissette and Fernand Pouliot

Property review and preparation of the Technical Report was carried out under the direction of Bernard Salmon. Mineral Resources were estimated by Bernard Salmon, except for 2D polygonal estimates. Mineral Reserves and mining aspects of the operation were reviewed and audited by Jason Cox, P.Eng.

Geostat System International Inc. (Geostat) and Breton, Banville & Associates (BBA) provided reports on the East Mine crown pillar. G. McIsaac provided reports on the East Mine underground, and on the Casa Berardi Life of Mine (LOM) plan.

The documentation reviewed, and other sources of information, are listed at the end of this report in Section 22 References.

Units of measurement used in this report conform to the SI (metric) system. All currency in this report is quoted in Canadian dollars (C$) unless otherwise noted.

LIST OF ABBREVIATIONS

μ	micron
°C	degree Celsius
°F	degree Fahrenheit
μg	microgram
A	ampere
a	annum
m^3/h	cubic metres per hour
CFM	cubic feet per minute
bbl	aarrels
Btu	British thermal units
C$	Canadian dollars
cal	calorie
cm	centimetre
cm^2	square centimetre
d	day
dia.	diameter
dmt	dry metric tonne
dwt	dead-weight ton
ft	foot
ft/s	foot per second
ft^2	square foot
ft^3	cubic foot
g	gram
G	giga (billion)
Gal	Imperial gallon
g/L	gram per litre
g/t	gram per tonne
gpm	Imperial gallons per minute
gr/ft^3	grain per cubic foot
gr/m^3	grain per cubic metre
hr	hour
ha	hectare
hp	horsepower
in	inch
in^2	square inch
J	joule
k	kilo (thousand)
kcal	kilocalorie
kg	kilogram
km	kilometre
km/h	kilometre per hour
km^2	square kilometre
kPa	kilopascal
kVA	kilovolt-amperes
kW	kilowatt
kWh	kilowatt-hour
L	litre
L/s	litres per second
m	metre
M	mega (million)
m^2	square metre
m^3	cubic metre
min	minute
MASL	metres above sea level
mm	millimetre
mph	miles per hour
MVA	megavolt-amperes
MW	megawatt
MWh	megawatt-hour
m^3/h	cubic metres per hour
opt, oz/st	ounce per short ton
oz	Troy ounce (31.1035g)
oz/dmt	ounce per dry metric tonne
ppm	part per million
psia	pound per square inch absolute
psig	pound per square inch gauge
RL	relative elevation
s	second
st	short ton
stpa	short ton per year
stpd	short ton per day
t	metric tonne
tpa	metric tonne per year
tpd	metric tonne per day
US$	United States dollar
USg	United States gallon
USgpm	US gallon per minute
V	volt
W	watt
wmt	wet metric tonne
yd^3	cubic yard
yr	year

3 RELIANCE ON OTHER EXPERTS

This report has been prepared by Qualified Persons Bernard Salmon, ing., and Jason J. Cox, P.Eng., (the QPs) of Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA) for Aurizon Mines Ltd. (Aurizon). The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to the QPs at the time of preparation of this report,
- Assumptions, conditions, and qualifications as set forth in this report, and
- Data, reports, and other information supplied by Aurizon and other third party sources, the reliability and integrity of which has satisfied the authors of this report.

For the purpose of this report, the QPs have relied on ownership information provided by Aurizon. The QPs have not researched property title or mineral rights for the Casa Berardi Mine and expresses no opinion as to the ownership status of the property.

The QPs have relied on Aurizon for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from the Casa Berardi Mine.

Except for the purposes contemplated under the securities laws of Canada or the United States of America, any use of this report by any third party is at that party's sole risk.

4 PROPERTY DESCRIPTION AND LOCATION

The Casa Berardi property is located in the Province of Quebec, approximately 95 km north of the town of La Sarre, in the James Bay municipality (Figure 4-1). The mine site is located at longitude 79° 16' 46.4" and latitude 49° 33' 56.7". The property is limited to the west by the Quebec/Ontario border and covers parts of Casa Berardi, Dieppe, Raymond, D'estrees, and Puiseaux townships.

The Casa Berardi property extends east-west for more than 37 km and reaches 3.5 km in width. Even though the overall property covers several thousands hectares, the area directly involved in the Mine covers only a few hectares (Figure 4-2). The Casa Berardi gold deposits are located along a five-kilometre east-west mineralized corridor. They include the East and West mines, and the Principal Zone (Figure 4-3).

LAND TENURE

The property is composed of 299 contiguous designated claims (CDC), covering a total area of 14,796.28 ha, and two mining leases, BM 768 and BM 833, covering areas of 367.09 ha and 84.35 ha, respectively. On the whole, the property totals 15,247.72 ha (Figure 24-1, Appendix 1). Other legal titles, under the name of Aurizon, include non-exclusive lease BNE 0010752 (sand and gravel pit), tailings lease 70218, and an additional five hectares of land contiguous to mining lease BM 768 for rock waste material storage.

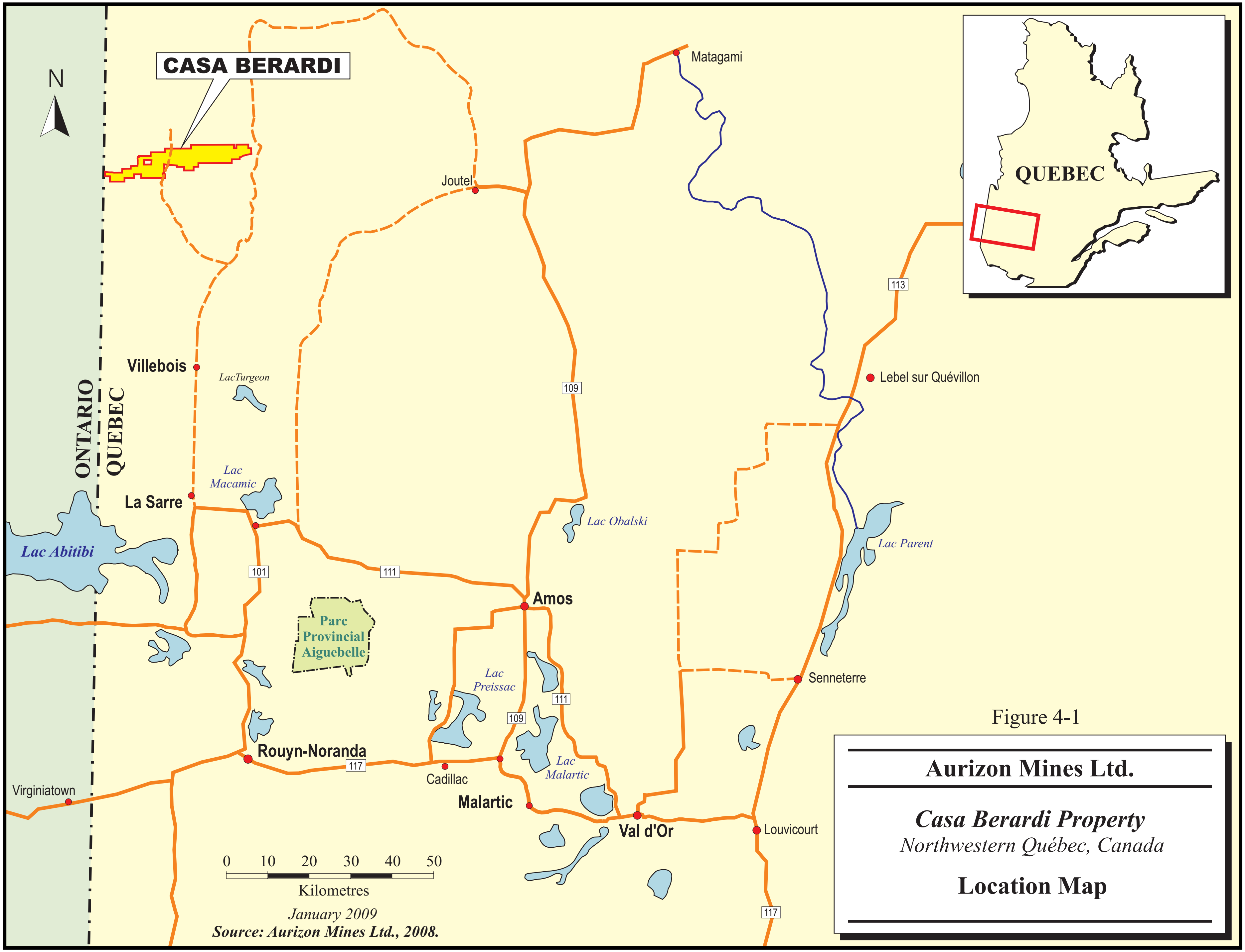

Figure 4-1

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Location Map

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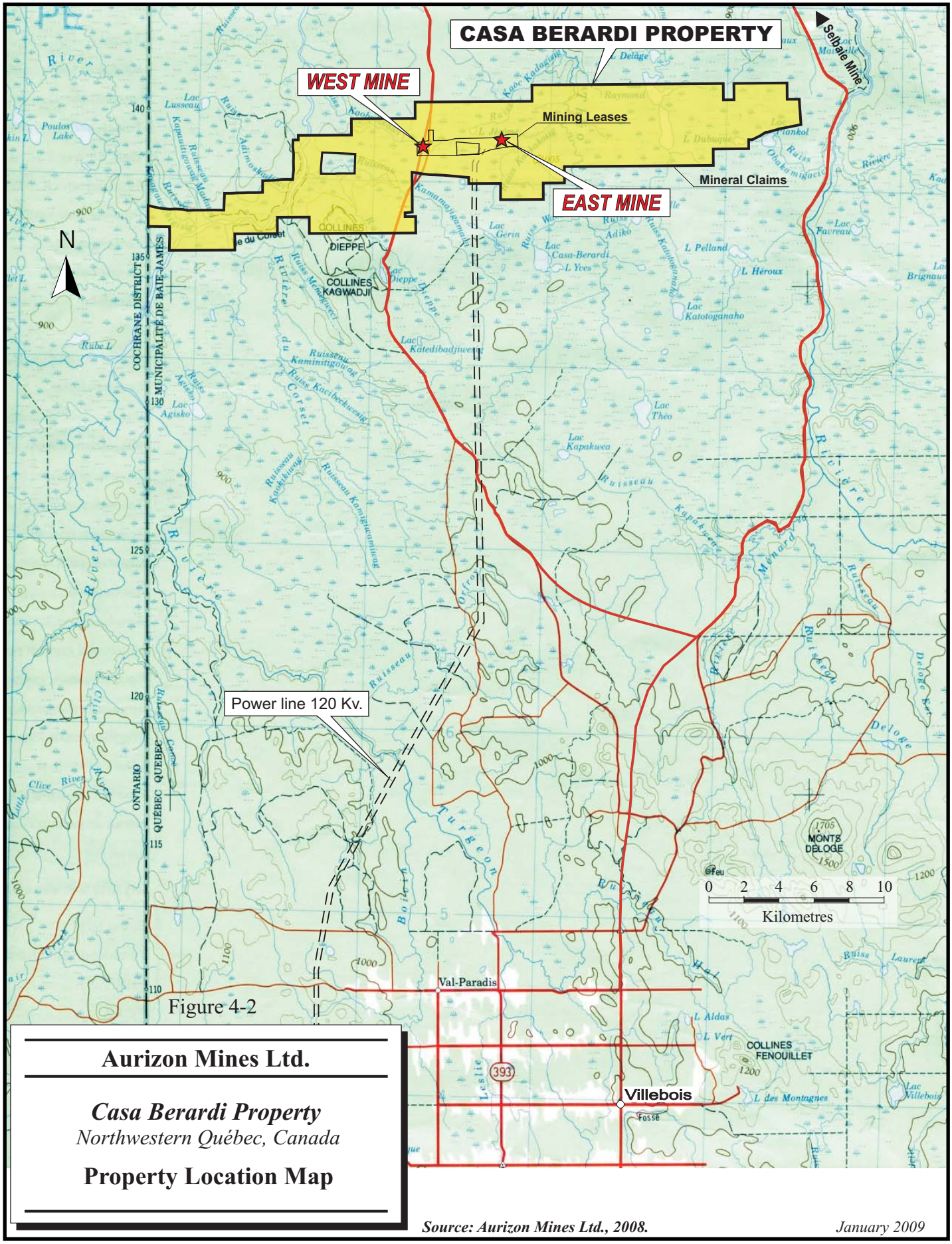


Figure 4-2

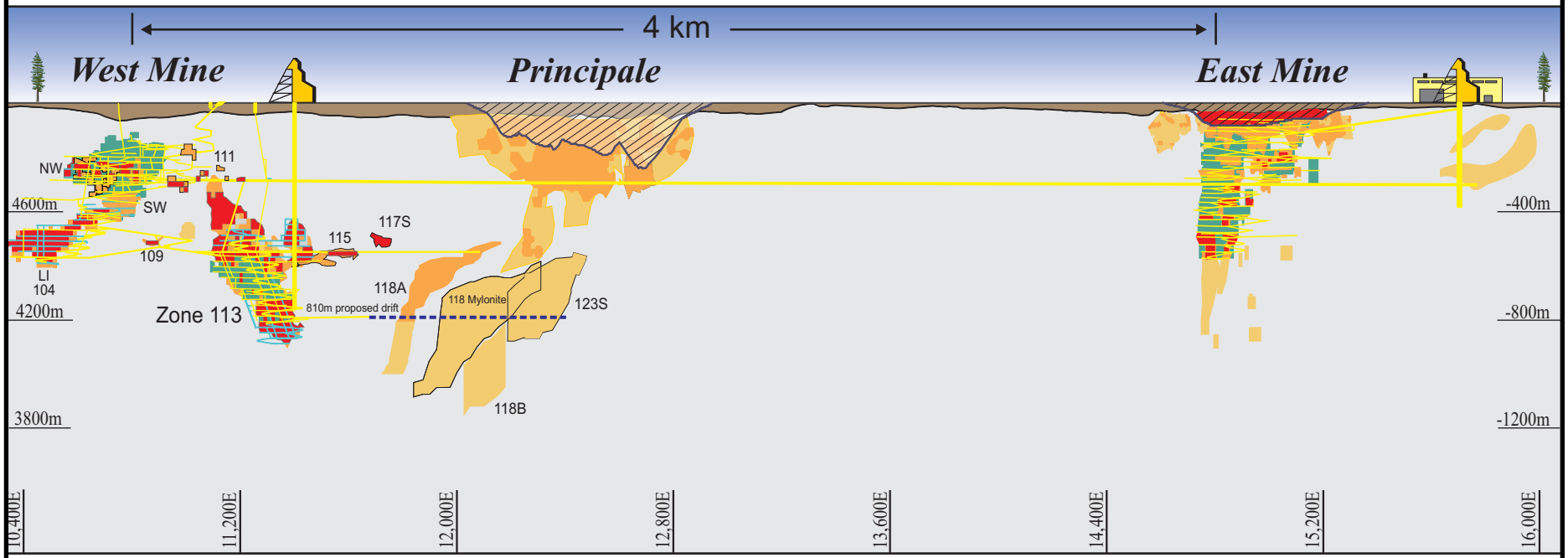
Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Property Location Map

Source: Aurizon Mines Ltd., 2008. *January 2009*



0 200 400 600 800 1000
Metres

Legend:

- *Proven & Probable Reserves*
- *Measured & Indicated Resources*
- *Inferred Resources*
- *Past Production*
- *Existing Infrastructure*
- *Proposed Development*

Figure 4-3

Aurizon Mines Ltd.

Casa Berardi Property
Northwestern Québec, Canada

Composite Longitudinal Section

January 2009

Source: Aurizon Mines Ltd., 2008.

According to Quebec's Mining Act, renewal of claims takes place every two years, with cost depending on area. According to Aurizon's claim manager Gescad Inc. (Gescad), the claims and mining leases were renewed for a total amount of $34,684.86 (Figure 24-1, Appendix 1). The Casa Berardi claims are in good standing.

The Mining Act stipulates that titleholders are required to conduct statutory work during the validity period of the claim. Each claim or lease shows excess spending amounts for required works. These amounts are put to the credit of the claims and are expected to cover several years in most cases. According to Gescad's report, the Casa Berardi exploration property has excess work credits of $6,640,852, while the Casa Berardi Mine property has excess of work credits of $4,033,654.

The school taxes to the James Bay School Board and the Lac-Abitibi School Board, totalling $19,179.22, have been paid for 2008.

The municipal taxes to the James Bay Municipality, the Villebois Municipality, the Dupuy Municipality and the La Sarre Municipality, totalling $116,119.95, have been paid for 2008.

As of July 4, 2002, Aurizon had purchased all rights, title, and interest of TVX in the net smelter return royalty that had previously been granted by Aurizon as partial consideration for the payment of the purchase price for the Casa Berardi property on April 30, 1998.

Aurizon owns a 100% interest in the Casa Berardi property. The transfer of the mining rights regarding titles registered for the property was completed on September 15, 1998. The transfer of the mining rights on the tailings lease was completed on December 3, 1998.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

ACCESSIBILITY

The Casa Berardi property is located 95 km north of the town of La Sarre, in the James Bay Municipality in the Abitibi region of northwestern Quebec. The nearest commercial airport is located at Rouyn-Noranda. La Sarre can be reached from Rouyn-Noranda via provincial roads 101 and 111. The 38 km all-season gravel road to Casa Berardi branches off from the paved road linking La Sarre and the Selbaie Mine through the village of Villebois. The branch is approximately 21 km north of Villebois. On the property, a gravel road links the East Mine and the West Mine, and a number of forestry roads provide access to the rest of the property from east and west.

CLIMATE

The mean annual temperature for the area is slightly above the freezing point at 0.8°C. Average July temperature is 16.8°C, and average January temperature is -17.9°C.

According to the 1961-1990 precipitation data, the average annual precipitation is 856 mm. Rain precipitation is highest in September, averaging 113 mm of water. Snow precipitation is registered between October and May, but its peak falls on the period between November and March, when its monthly average reaches 39 mm (expressed in millimetres of water).

LOCAL RESOURCES

The Abitibi region has a long history of mining activity, and mining suppliers and contractors are locally available. Both experienced and general labour is readily available from La Sarre area, a municipality of 7,728 inhabitants (2001 census). Aurizon has had success in hiring experienced staff and personnel with good mining expertise, despite tight current labour markets experienced industry-wide. The mine enjoys the support of local communities.

INFRASTRUCTURE

The surface and underground infrastructure at the East Mine includes the following:

- A 2,200 tpd mill;
- A tailings pond comprising three cells, a polishing pond, and a process water pond;
- A crushing plant;
- A two-storey administrative building covering an area of 1,887 m^2 with office space, including a conference room, a warehouse, a dry, an infirmary, a laboratory, a main garage of 970 m^2, a millwright shop, and an electrical shop;
- A warehouse for reagents and lubricants;
- A second garage used as a core shack and covering an area of 430 m^2;
- A pumping station;
- A backfill plant located at the ventilation raise collar;
- A hoistroom, a headframe, and a 379 m deep shaft;
- A decline and a series of ramp-connected levels.

Existing surface and underground infrastructures at the West Mine includes the following:

- A backfill plant, including a compressor room and a ventilation raise intake;
- Settling ponds;
- A pumping station;
- A 380 m^2 garage;
- A dry house with offices and warehouse;
- A second warehouse;
- A core storage area;
- A gatehouse;
- A decline providing access to all intermediate levels;

- A shaft down to a vertical depth of 760 m.

There is no infrastructure related to the Principal Zone. A five-kilometre track drift joins the East and West mines and provides access to the Principal Zone at the 280 m level.

The power supply of the site is provided by a 55 km, 120 kV power line, from the town of Normetal.

PHYSIOGRAPHY

The topography is generally gentle and is mostly characterized by swamps and thick overburden coverage (up to 60 m locally). Elevation varies between 270 m and 360 m above sea level. An esker crosses the property south of the West Mine, and was once quarried for gravel. According to the map of ecological regions of Quebec, the area falls within the boreal zone and the spruce and moss domain. The forested zones are characterized mainly by jack pine and spruce and have generally been logged. The Mine area is characterized by swamps and is therefore classified as a bare to semi-bare wetland. The Turgeon River crosses the property in its western part, while Raymond Lake is located to the east of the mines.

6 HISTORY

PRE-AURIZON ERA

Before 1974, the Casa Berardi area was explored for base metal and iron formations. In 1974, the first 13 claims were staked by Inco Gold. The discovery hole was drilled in 1981, and 590 additional claims were staked. In 1983, a joint venture agreement was reached between Inco Gold and Golden Knight Resources Inc. (Golden Knight). The following years were marked by exploration drilling and, eventually, project engineering and construction. September 12, 1988 marked the official opening of the East Mine, and the commercial production of the West Mine began in 1990 - both under the ownership of Inco Gold/Golden Knight.

In 1991, TVX acquired Inco Gold's 60% interest in the Mine. In 1994, TVX and Golden Knight purchased the remaining interest in the Domex claim block, a part of the Principal (Main) Zone between the West and the East Mine, from Teck Corporation.

By 1997, 3,769 holes had been drilled on the property for a total of 463,492 m. Approximately 92% of these holes were located in the area between the West Mine and the East Mine. Table 6-1 summarizes the drilling program.

TABLE 6-1 HISTORICAL DIAMOND DRILLING
Aurizon Mines Ltd. – Casa Berardi Mine

Project	Location	Drill Holes	Metres
Casa Berardi – Exploration	West side	205	18,695
	East side	261	17,821
Casa Berardi – Mine	West Mine	1,480	177,876
	Principal Zone	379	76,037
	East Mine	1,444	173,063
Total		**3,769**	**463,492**

The first mineral inventory was published in 1987. The Mineral Reserve estimation reported 11.1 million tonnes grading 6.8 g/t Au and a gold reserve of 2.4 million ounces

(all categories). Mineral Reserves were estimated yearly during the life of the mine until 1997. Following mine closure, the remaining mineralization was reclassified as Mineral Resources. Table 6-2 shows the evolution of the mineral inventory at the mine from 1987 to 1997.

TABLE 6-2 MINERAL RESOURCES AND RESERVES 1987-1997
Aurizon Mines Ltd. – Casa Berardi Mine

	Mineral Resources			Mineral Reserves		
Year	**Tonnes**	**g/t Au**	**Ounces**	**Tonnes**	**g/t Au**	**Ounces**
1987				11,106,000	6.8	2,421,000
1988				12,412,000	7.4	2,909,000
1989				9,652,000	7.3	2,251,000
1990				8,934,000	7.1	2,028,000
1991				6,234,000	6.3	1,265,000
1992				6,216,000	6.4	1,275,000
1993				4,767,000	6.2	946,000
1994				4,526,000	6.1	881,000
1995				3,253,000	5.9	620,000
1996				6,199,000	5.5	1,105,000
1997	3,189,000	5.8	591,000			

Production began at the East Mine in September 1988 and at the West Mine in April 1990. The total combined production for the period from 1988 to 1997 was 3.5 million tonnes at an average grade of 7.1 g/t Au. The total gold recovered during the operating years was 688,400 ounces, with a mill gold recovery rate averaging 87%. Although average statistics are not readily available for daily production, it appears that during the life of operation, the average production rate of the mill was less than 1,800 tpd. Annual production is presented in Table 6-3.

TABLE 6-3 HISTORICAL MINE PRODUCTION
Aurizon Mines Ltd. – Casa Berardi Mine

Year	Tonnes Milled	g/t Au	Recovery (%)	Oz Rec.
1988	124,057	5.9	88.0	19.025
1989	337,130	5.5	86.4	51,096
1990	361,935	8.9	87.4	88,999
1991	487,769	8.7	86.9	119,015
1992	315,938	9.3	87.1	80,319
1993	306,597	10.0	89.3	86,964
1994	550,638	6.5	86.8	97,518
1995	469,542	4.7	85.7	61,179
1996	498,405	5.4	87.2	76,039
1997	51,356	5.8	87.2	8,270
TOTAL	**3,503,367**	**7.1**	**87.0**	**688,424**

The maximum annual production of over 550,000 tonnes was achieved in 1994. In the following years, the figures fell below 500,000 tonnes. In January 1997, TVX announced the closure of the East Mine due to ground control problems. Two months later, the West Mine was closed.

AURIZON ERA

The Casa Berardi assets and property were offered for sale in the fall of 1996. In January 1997, Aurizon expressed interest in a letter to TVX. In September 1998, following the due diligence work, Aurizon signed an agreement and completed the acquisition of all Casa Berardi assets and mining rights.

Following the acquisition of Casa Berardi, Aurizon completed an exploration diamond drilling program totalling more than 76,000 m (50,000 m from surface and 26,000 m from underground). The main objective of the campaign was to increase the gold mineral inventory of the property by drilling prospective sectors below the 400 m level in the West Mine area. The program resulted in the discovery of 113 Zone and other smaller mineralized bodies.

Using the results of this drilling program as a basis for Mineral Resource estimation, Aurizon issued an internal study in March 2000, which provided positive indications of the economic potential of the West Mine area below the 400 m level.

Following two years of limited exploration drilling activities due to depressed gold prices, Aurizon re-embarked on a surface exploration program that led to the discovery of additional zones east of 113 Zone.

To increase the confidence level of the mineral resources and prove the potential of a mining operation, an underground exploration program was planned and initiated in April 2003 to test the continuity of the mineralization of Zone 113. That year, the West Mine ramp was extended 1,074 m from the 450 m level down to the 550 m level, to provide access to 113 Zone for metallurgical testwork and to provide drill bases for in-fill definition drilling. Approximately 44 m of the exploration drift were completed by the year-end, allowing the completion of 1,400 m of definition drilling. A further 21,000 m of surface exploration drilling was completed in the area of zones 118-120 during 2003.

In 2004, $25.9 million was invested at the Casa Berardi Mine for the construction of the surface foundations and shaft collar, a shaft pilot raise from the 550 m level to surface, 878 m of exploration drifts, 53,100 m of exploration and definition drilling, 102 m of ventilation raising; and 1,590 m of ramping down to the 550 m level. Aurizon commissioned Met-Chem Canada Inc. (Met-Chem) to prepare a feasibility study (the FS). Aurizon proceeded with the implementation and construction of the West Mine infrastructure.

In 2005, $41.1 million was invested at Casa Berardi for:

- Completion of two feasibility studies (the FS by Met-Chem in January 2005, based upon Mineral Reserves above the 700 m level, and the Updated Feasibility Study in October 2005 incorporating Mineral Reserves down to the 900 m level);
- Construction of a new headframe, hoist room, ore and waste bins;
- Shaft sinking 290 m down from surface;

- 113 Zone ramp extension 1,200 m down to the 680 m level;
- Access to the Lower Inter Zone down to the 570 m level with the completion of 429 m of ramping and drifting;
- 685 m of drifting and 367 m of ventilation raising;
- Initiation of mill rehabilitation with the refurbishing of the crushing circuits, conveyors and assay laboratory;
- 33,500 m of definition drilling from 137 holes; 19,000 m of surface exploration drilling from 32 holes; and detailed engineering for the shaft and surface infrastructure.

In 2006, an additional $74.5 million was invested to fund the aforementioned construction and development. In early November, Aurizon completed construction and development at the West Mine area and commenced underground mining and milling operations.

In 2007, $33.9 million was invested to fund pre-production up to May 1, 2007, the date of achieving commercial production.

Mine production through Dec. 31, 2008 is summarized in Table 6-4.

TABLE 6-4 CASA BERARDI ANNUAL PRODUCTION

Aurizon Mines Ltd. – Casa Berardi Mine

Year	Tonnes	Grade (g/t Au)	Ounces Recovered	Recovery (%)
2006	68,481	8.6	17,731	93.9
2007	545,258	9.8	159,469	93.0
2008	654,397	8.2	158,830	92.5
Total	**1,268,136**	**8.9**	**336,030**	**92.7**

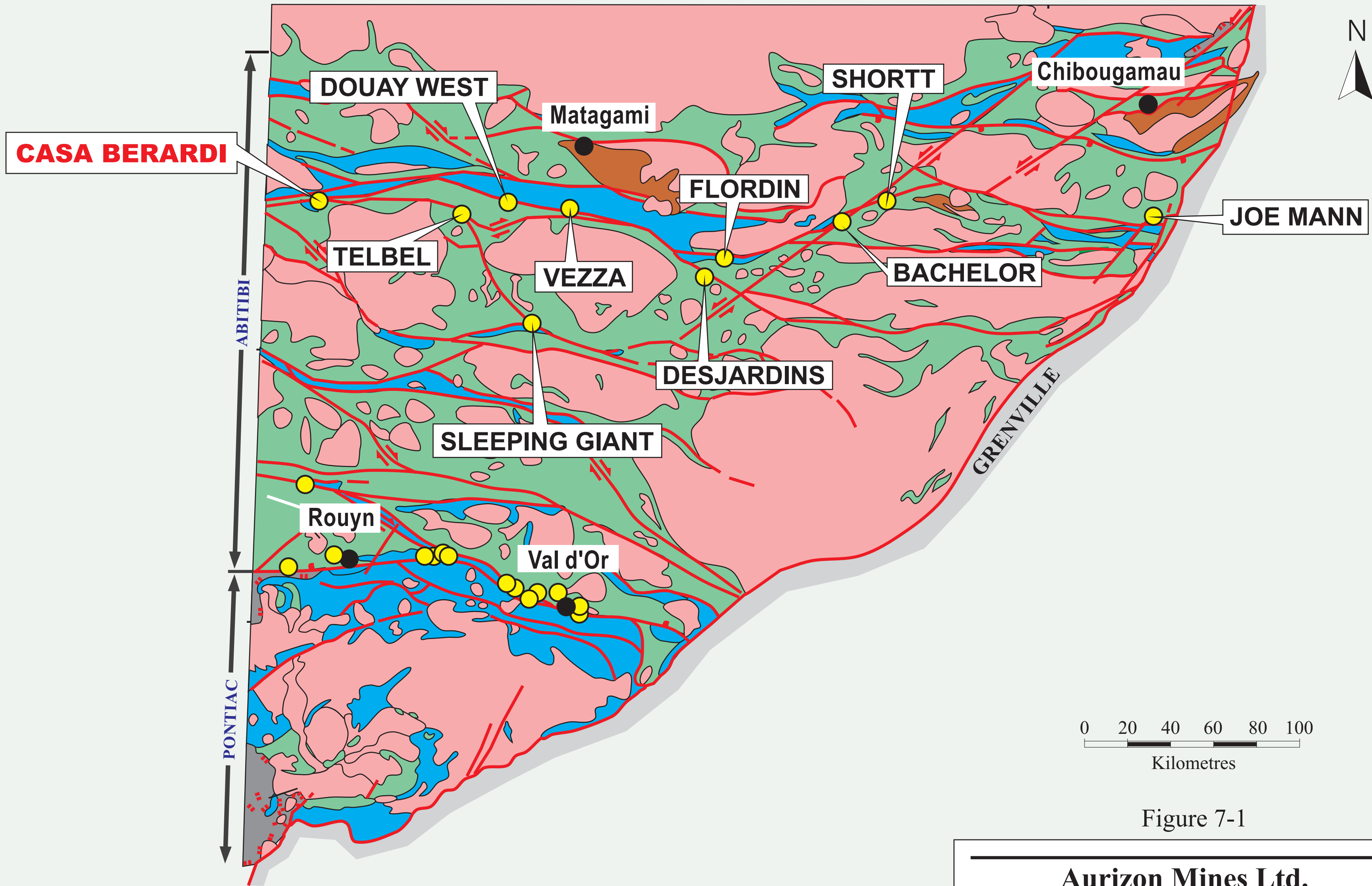
7 GEOLOGICAL SETTING

REGIONAL GEOLOGY

The Mine is located in the northern part of the Abitibi Subprovince, a subdivision of the Superior Province, the Archean core of the Canadian Shield. The Mine area belongs to the Harricana-Turgeon Belt, which is a part of the North Volcanic Zone (Figure 7-1).

More specifically, the regional geology is characterized by a mixed assemblage of mafic volcanics, flysch-type sedimentary iron formations, and graphitic mudrocks that are limited by a large granodioritic to granitic batholith.

Structurally, the property is enclosed in the Casa Berardi Tectonic Zone, a 15 km wide corridor that can be traced over 200 km. A network of east-west to east-southeast and west-northwest ductile high strain zones mainly follows the lithological contacts.



Legend:

Gold	*Volcanic Rocks*
Major Faults	*Plutonic Rocks*
Sedimentary Rocks	*Production + Resources*

Figure 7-1

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Regional Geology

January 2008

Source: Aurizon Mines Ltd., 2005.

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Many significant deposits and past producers of different types are present in the region. Base metals have been produced from the Joutel (Selbaie Mine, Estrades Mine) and Matagami camps. New deposits have been identified 15 km south of Casa Berardi, on the Gemini property. Eastward, in the Casa Berardi structural trend, is the former Agnico-Eagle Telbel Mine. Other deposits, with tonnages in the order of one to three million tonnes and grades between 4 g/t Au and 6 g/t Au, have also been outlined on the Douay, Vezza, and Desjardins properties.

PROPERTY GEOLOGY

STRATIGRAPHIC DIVISIONS

The property geological environment is centred on the Taïbi volcano-sedimentary domain, which is bounded on the north by the Recher batholith and on the south by different volcanic domains of tholeiitic affinity (Figures 7-2 and 7-3). The Dieppe domain covers half of the southwestern part of the property, and the Turgeon domain lies immediately south of the eastern half of the property. Dieppe volcanism is recognizable by a thick (up to 100 m) massive flow or volcanic conduit with sub-ophitic textures which indicate a deep volcanic environment with high rates of magma generation.

Well-defined flysch-type sedimentary units, like magnetite-rich wacke and conglomerate, can be traced over tens of kilometres without significant facies variations. Volcanics units extend for five to fifteen kilometres inside the sediments and form lens-shape structures. Smaller lenses are a few hundred metres wide and are included in the Casa Berardi deformation zone.

Basaltic to andesitic flows, with thickness generally less than 50 m, show normal progression facies from coarse crystalline to massive, amygdalar, and vesicular in lapilli tuffs and tuffs. Flow contacts are identified by graphitic mudrock horizons. Gabbroic sills, which are related to the Dieppe domain, are visible near the flow contacts. The Turgeon volcanism is considered as a distal, near surface, more evolved volcanism environment.

Graphitic rocks (in the form of pyritic graphitic mudrock), black chert, wacke, and conglomerate form a 500 m wide structural corridor that coincides with the Casa Berardi Fault.

The stratigraphic sequence starts with basal mafic volcanism (2,730 to 2,720 million years old). Pyrite-rich graphitic mudrock and the associated chert appear to be synchronous with the volcanism as evidenced by fragmentary hyaloclastic units of different compositions. The main sedimentary event corresponds to a flysch-type sequence deposition. U/Pb dating of the iron formation and conglomerate indicates ages between 2,695 and 2,692 million years for this event.

STRUCTURES

The mafic volcanic units along the Taïbi domain represent in plan view a lenticular shape corresponding to structural doming. Polarity inversions are recognized in sediments on both sides of their contacts with these units. Tight isoclinal folding forms an asymmetric dome and basin pattern which is well preserved around volcanic units in the iron formations. The main north-south compression event, which is responsible for an 8:1 elongation ratio, is indicated by a strong penetrative east-west foliation.

Two fabrics are observed:

- A constant main penetrative east-west foliation, dipping 60° south.
- A crenulation cleavage with an undefined oblique orientation related to northeast or northwest fold components. A higher strain rate along main sediment-volcanic contacts has resulted in a small-scale complex dome and basin folding and strong stretching mineral lineation with steep opposite plunges.

The Casa Berardi Fault is defined by a stratigraphic contact between a graphite-rich sediment sequence at the base of the Taïbi domain, a northern continuous mafic fragmentary volcanic unit, and a southern polymictic conglomerate unit. On the north side of the fault, a thick sequence of very homogeneous wacke and volcanites is observed. The fault strikes east-west and dips 80° to the south. The 200 m to 600 m wide deformation zone shows a tight dome and basin pattern, dipping generally sixty degrees (60°) south. The deformation zone can be traced along the basalt-conglomerate-

iron formation sequence. At depth, as evidenced by observations and gravimetric profiles associated to metamorphic rocks, the lithological units dip towards the fault.

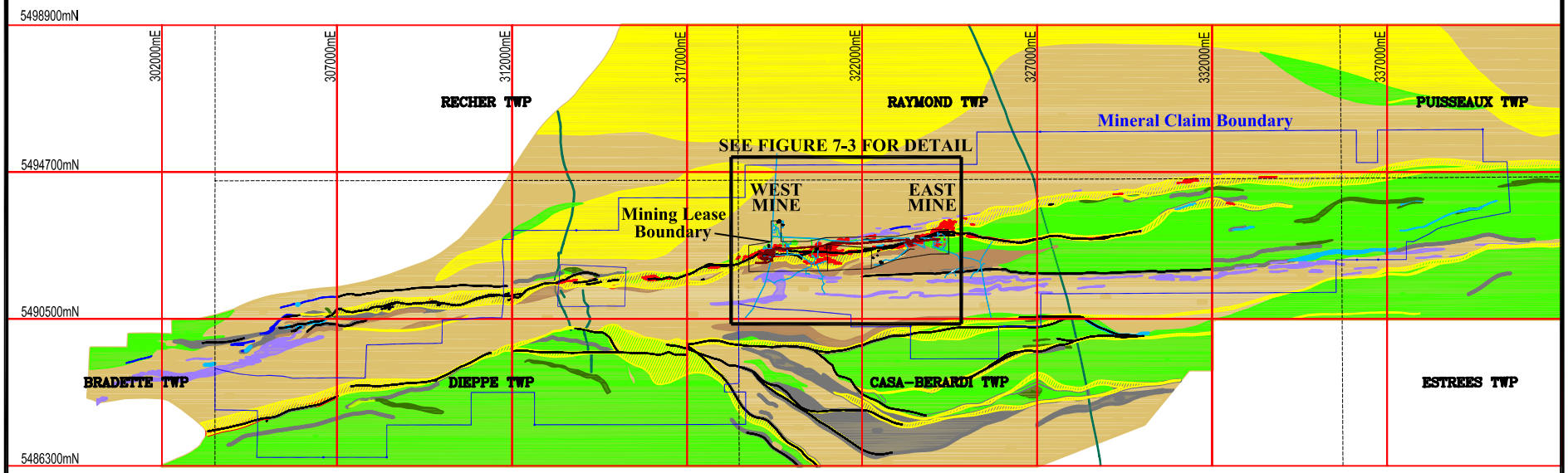
The Casa Berardi Fault crosscuts locally asymmetric (drag) fold axes in the iron formation along the deposit, especially at the Principal Zone and Zone 160 locations, indicating an early sinistral displacement. Stretching is represented by a 4:1 ratio in the vertical plane.

Inside the fault zone, ductile deformation intensity is heterogeneous. Foliation is uniform in larger competent rock units, such as mafic volcanites and conglomerates.

ALTERATION AND METAMORPHISM

The regional metamorphism, which is of lower greenschist facies, is locally influenced by a series of syntectonic batholiths with associated thermal aureole. The Recher thermal aureole limit follows the northern boundary of the property located approximately two kilometres from the batholith and the Casa Berardi Fault.

Inside the contact metamorphism halo, the sediments are affected by a quartz-plagioclase-biotite assemblage. In the case of iron-rich sediments, the sediments are affected by a chlorite-chloritoid assemblage. Garnet is locally visible. Mafic volcanics are affected by a plagioclase-tremolite assemblage. Chloritoid, plagioclase, and garnet are porphyroblastic, with chlorite-biotite pressure shadows indicating the synchronicity of crystallization and regional foliation.



Legend:

R1QZ	Quartz Vein	I2	Intermediate Intrusive
PY	Massive Sulphide	I1	Felsic Intrusive
V4I4	Ultramafic Volcanic	S3	Wacke
V3	Mafic Volcanic (thol.)	S4	Conglomerate
V3	Mafic Volcanic (trans.)	S6	Mudrock
V2	Inter. Volcanic (thol.)	S9	Iron Formation
V2	Inter. Volcanic (trans.)	S10	Chert
V1	Felsic Volcanic	GP	Graphite
Tu	Tuff		
Td	Ash Tuff		Corridor of Deformation
T1	Lapilli Tuff		
I3A	Mafic Intrusion		
I3B	Diabase		

0 2 10

Kilometres

Figure 7-2

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Property Geology

January 2009

Source: Aurizon Mine Ltd., 2005.

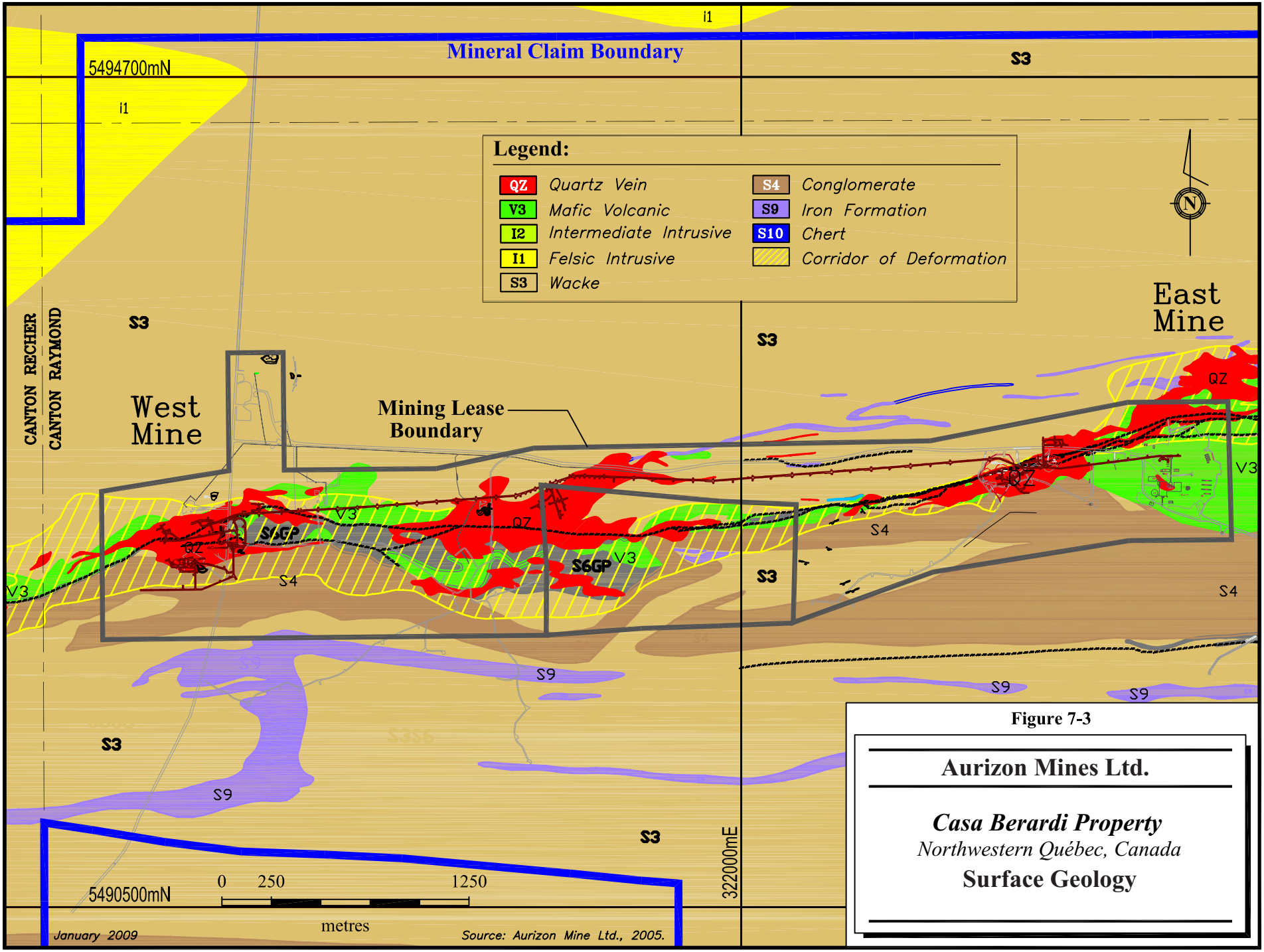


Figure 7-3

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Surface Geology

8 DEPOSIT TYPES

The Casa Berardi gold deposit can be classified as an Archean sedimentary-hosted lode gold deposit.

The gold mineralization is superimposed on a continuous graphitic mudrock unit corresponding to the Casa Berardi Fault plane. The deposit surface signature shows two main gold concentrations distributed over five kilometres. Gold occurs mainly south of the Casa Berardi Fault, and sometimes on both sides of the fault.

9 MINERALIZATION

DEPOSITION MODEL

Some essential conditions were initially present in the Casa Berardi area during the formation of the Harricana-Turgeon volcano-sedimentary belt, preparing conditions for a later gold deposition event.

The Casa Berardi Fault represents an old discontinuity at the top of a mafic volcanic rock in a basement where hydrothermal activity has led to the formation of chert and graphitic mudrock containing large massive pyrite lenses. The 30 to 40 million years old unconformity between the mafic volcanites and the flysch-type sequence is exposed in many places along the Casa Berardi Fault. Iron formations and iron rich sediments are present near the base of the sequence and appear on both sides of the Casa Berardi Fault zone. The presence of sulphur and iron in the environment is a factor which is highly favourable for gold mobilization.

The tectonic mechanism generated many structural features at different scales, creating a favourable context for the formation of gold deposits. The regional north-south main compression events resulted in tight kilometre-scale isoclinal folding and in bringing the geological units into a vertical position. The Casa Berardi Fault was generated during this stage by a movement at the contact of a graphitic unit. The proximity of large volcanic units, such as the Dieppe and the Joutel-Raymon domain, has formed competent cores inside antiforms. Those competent cores forced oblique movement and generated a polyphase elongated dome and basin folding pattern. This first tectonic stage corresponds regionally to a 50% shortening and happened under ductile conditions at a depth of six to ten kilometres.

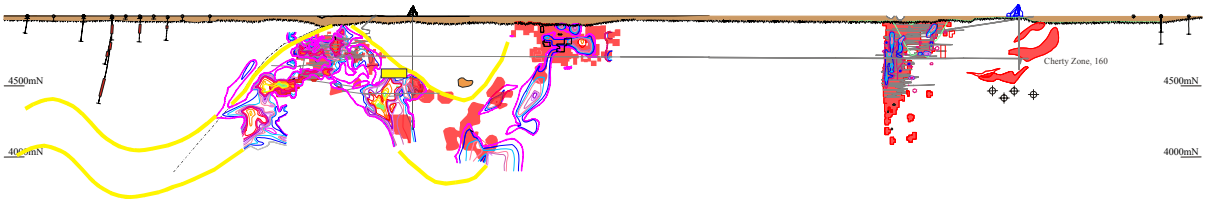
High constraint zones, associated with pervasive carbonization, are generally developed where graphitic mudrock horizons are localized at major rock contacts. This combination of factors acted as a ground preparation for the positioning of vein networks and long veins. The general orientation of the veins and internal structures are generally concordant with the ambient fabric. The veins are localized within the foliation and

contain two types of enclaves: foliated host rocks and graphitic planes showing a stylolithic pattern. The vein contacts are usually sharp. The lack of fabric development indicates a late emplacement.

STRUCTURAL CONTROL

The mineralized zones are closely associated with the Casa Berardi Fault and are found on both sides of the fault. They are restricted to a 500 m wide corridor, which is folded and plunges lightly to the west (Figure 9-1). This corridor is intimately associated with the conglomerate and follows the same structural pattern. The mineralized corridor and the conglomerate are located close to the contact between the basement and the sedimentary basin. This contact plunges slightly to the west.

FIGURE 9-1 MINERALIZATION CORRIDOR AT THE WEST MINE



STYLES OF GOLD MINERALIZATION

Gold mineralization is essentially located in quartz veining, either in the form of plurimetric veins, small-scale veins, or veinlet networks. Veins are heterogeneous and contain a variable percentage of foliated enclaves showing a laminated appearance. Veins are of different colour, texture, and structure. Gold grades are generally correlated with increasing complexity. Different quartz phases have been recognized in mineralized veins to show the following sequence:

- Phase 1: grey quartz, with abundant sulphides and fluid inclusions, comprising more than 50% of mineralized veins.
- Phase 2: mosaic micro-crystalline quartz occurring in higher grade portions of veins.

- Phase 3: non-mineralized coarsely crystallized white quartz which cuts the two others.

The gold bearing vein filling is rarely massive, but often brecciated, micro-brecciated, or laminated. The fracture planes are rich in graphite and muscovite. Veins contain only minor sulphides (1% to 3%), including mainly arsenopyrite, pyrite, and traces of sphalerite, chalcopyrite, pyrrhotite, tetrahedrite, galena, and gold. Arsenopyrite is the main gold bearing sulphide present in all veins of the deposit.

The granulometric distribution of gold is similar for all locations. According to petrographic compilations, 50% of the gold particles have an average diameter less than 30 μm, and approximately 3% are > 100 μm. The gold distribution inside the mineral assemblage varies slightly according to the mineralized zones. In the West Mine area and 113 Zone, the vein mineralization, which is related to the Casa Berardi Fault, shows that gold is mostly free and in contact with arsenopyrite grains (< 10 μm to 0.5 mm). Arsenopyrite is associated with sphalerite and tetrahedrite in clusters, joints, and in micro-brecciated areas. In the South West Zone, the Principal Zone, and some areas of the East Mine, where the mineralization is not related to the Casa Berardi Fault, the gold distribution is variable and depends on the amount of sulphides in quartz veins and host rocks. Fifty percent (50%) of gold grains that have been observed are inclusions in pyrite and arsenopyrite crystals.

Gold bearing veins are typically enclosed in carbonate-sericite alteration envelopes, with LOI varying between 12% and 40% depending on the host rock reactivity. High volatile values appear mainly along the Casa Berardi Fault zone, but develop also as continuous areas inside the ductile deformation zones, near the South Fault or in the higher deformation levels between the two faults.

In the West Mine, an albite-sericite assemblage is observed in metasomatized ultramafic dykes below the 400 m level. Those dykes, enclosed in graphitic mudrocks, are associated with the gold bearing quartz vein system. Sulphidation is an important part of the mineralization process in iron environments, such as the carbonated chert-

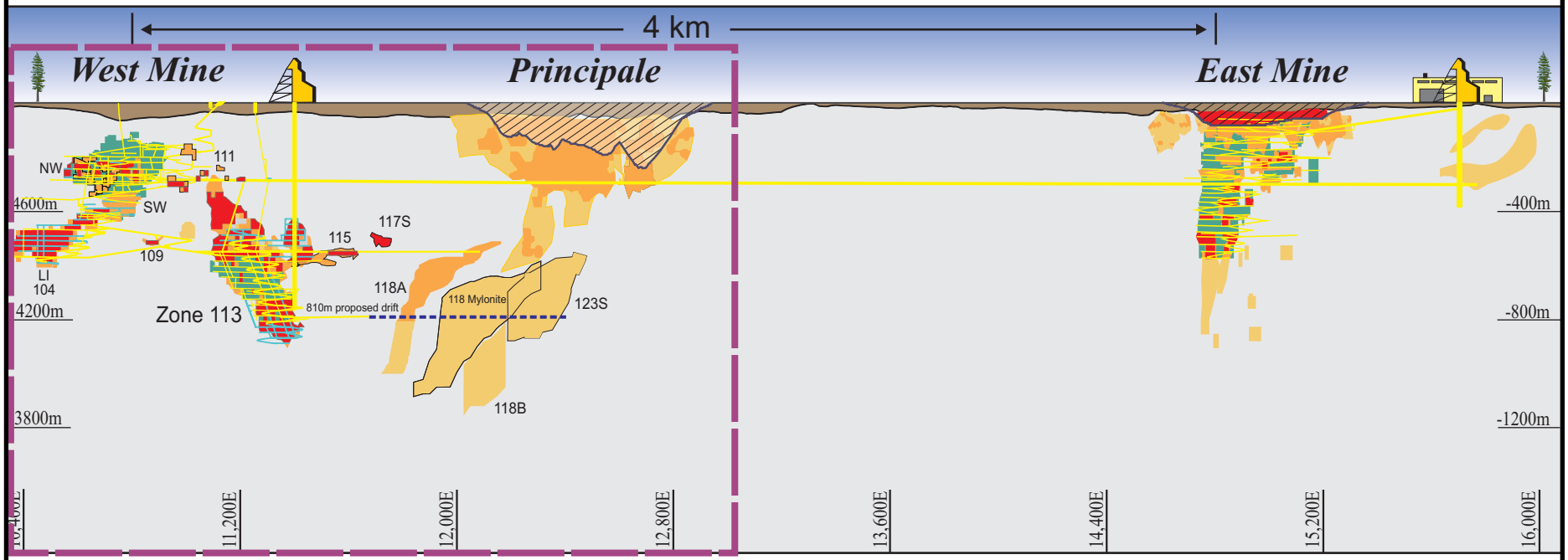
magnetite iron formations and primary massive pyrite lenses in Zone 25-8, where magnetite is pervasively replaced by pyrite with coeval arsenopyrite crystallization.

Alteration halos with gold values of above 100 ppb and anomalous values of As and Sb surround most of the mineralized zones along the Casa Berardi Fault. Those halos can be found up to five kilometres away, on both sides of the deposit.

Stockworks are the second style of gold mineralization in the deposit and represent nearly the same volume as the large quartz veins. The stockworks are low grade and largely unexploited. Across the deposit, hanging wall stockworks are present in contact with important mineralized quartz veins. Between 10% and 20% of the rock volume is composed of centimetre- to decimetre-thick quartz veins with gold values ranging from 1 g/t to 10 g/t. Veins of all textures and composition are concordant with host rocks. Foliated and finely bedded rocks are cut by concordant veins. Less deformed basalts or heavily carbonated iron-rich rocks are cut by fracture-controlled vein sets.

At the deposit scale, the Principal Zone and the East Mine zone areas correspond to the stockworks surrounding quartz cores. The stockworks are not limited to the fault and can affect the total width of the deformation zone. They appear as a superposition of metre to decametre wide mineralization subzones.

In the Principal Zone, the stockwork extends laterally for 400 m at a 50° western plunge. In the East Mine, the mineralized system extends laterally also for 400 m, reaching a depth of 800 m down the dip. The system crosses the Casa Berardi Fault at a low angle over a 100 m stripe. Mineralization continues laterally westward on the south side of the fault and eastward on the north side of the fault.



Refer to Figure 19-1
West Mine Longitudinal Section

0 200 400 600 800 1000
Metres

Legend:

- *Proven & Probable Reserves*
- *Measured & Indicated Resources*
- *Inferred Resources*
- *Past Production*
- *Existing Infrastructure*
- *Proposed Development*

Figure 9-2

Aurizon Mines Ltd.

Casa Berardi Property
Northwestern Québec, Canada

Composite Longitudinal Section

January 2009

Source: Aurizon Mines Ltd., 2008.

The third type of mineralization is the Banded Iron Formation (BIF) hosted mineralization. This type of mineralization is found in:

- The Principal area (Zones 117 and 25-8),
- Areas between the mines (Zone 140), and
- At the continuity of the East Mine area (Zone 160).

These examples are restricted to the north iron formation which is composed of 10% chert-magnetite beds in chloritic wackes. Major sulphide minerals are pyrite and arsenopyrite. These sulphides have replaced the oxide rich layers which surround the quartz veins and the veinlet stockworks where strong carbonization and chloritization are observed.

WEST MINE MINERALIZATION

The mineralized zones in the vicinity of the underground infrastructure of the West Mine are all located between sections 10,350 E to 11,250 E, which correspond to the western limit of the Lower Inter Zone and the eastern limit of Zone 111, respectively. This is the sole mineralization located across the South Fault that has been mined to date.

The mineralization at the West Mine is represented by two main types:

- Low sulphide quartz veins: networks of centimetric to plurimetric quartz veins located south of the Casa Berardi Fault in sedimentary rocks that are predominantly wacke and mudrock types.

- Sulphide-rich stockworks: represent the same volume as large quartz veins, but have lower grades and are largely unexploited. Hanging wall stockworks are present in contact with important mineralized quartz veins across the deposit.

In the West Mine area, a continuous two metre thick, 400 m wide, and over 1,400 m long quartz panel contains most of the mineralized zones. The mineralized zones are stacked and appear to be located along an east-west folded trend. The latter shows a double plunge, which is interpreted as a structural dome (Figure 9-3).

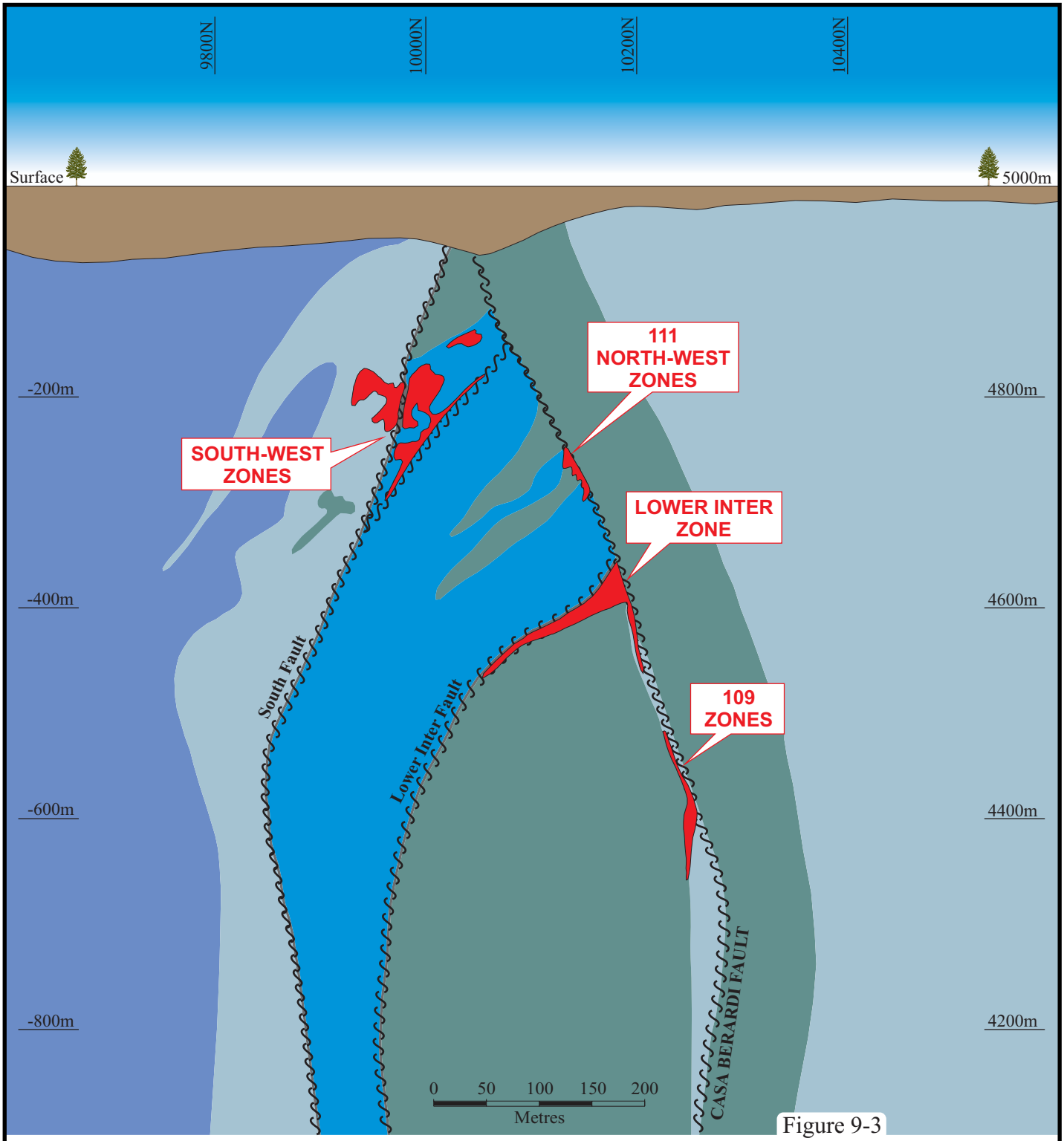


Figure 9-3

Legend:

- *Basalt*
- *Graphitic Mudrock*
- *Wacke + Mudrock*
- *Wacke*
- *Conglomerate*
- *Quartz Vein*
- *Fault*

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Geology - West Mine Zones (Section 10,700E)

January 2009

Source: Aurizon Mines Ltd., 2005.

Mineralized zones of the West Mine, such as Lower Inter, Inter, and North West, show weak or no plunge, a moderate south dip (30°), and have extensions which branch off from the fault at 130° (Figure 9-3).

On the east side of the mine, the mineralized zones, such as zones 111 and 113, show a steeper plunge (> 50°) with a dip varying between 70° south and 70° north, similar to the Casa Berardi Fault.

MINERALIZATION IN THE 113 ZONE

The 113 Zone is a 20 m to 70 m wide mineralized corridor, with an east-west strike, subvertical, adjacent to the Casa Berardi Fault (Figures 9-4 and 9-5). Some off-shoots have been interpreted as fold noses and strike between N 065° and N 295° (Figure 9-6). The width of the zone along holes varies from five metres to 20 m. The zone extends vertically for over 650 m, the top being at the 250 m level. Lateral extension decreases from 300 m at the 600 m level to 150 m at the 700 m level.

Gold mineralization is found within narrow to large folded quartz veins and in associated wall rock. The quartz veins consist of white to grey quartz, locally brecciated and laminated, vitreous in places, and contain 5% to 15% graphitic mudstone in thin bands and stringers. The mineralization occurs as fracture filling and dissemination of arsenopyrite, pyrite, and fine grained free gold. Sphalerite and tetrahydrite are present in minor amounts. Pyrrhotite, galena, and chalcopyrite occur in traces. Visible gold is reported.

Wall rocks of 113 Zone are composed of graphitic mudstone, greywacke, conglomerate, and mafic volcanics, and have thickness between 5 m and 50 m.

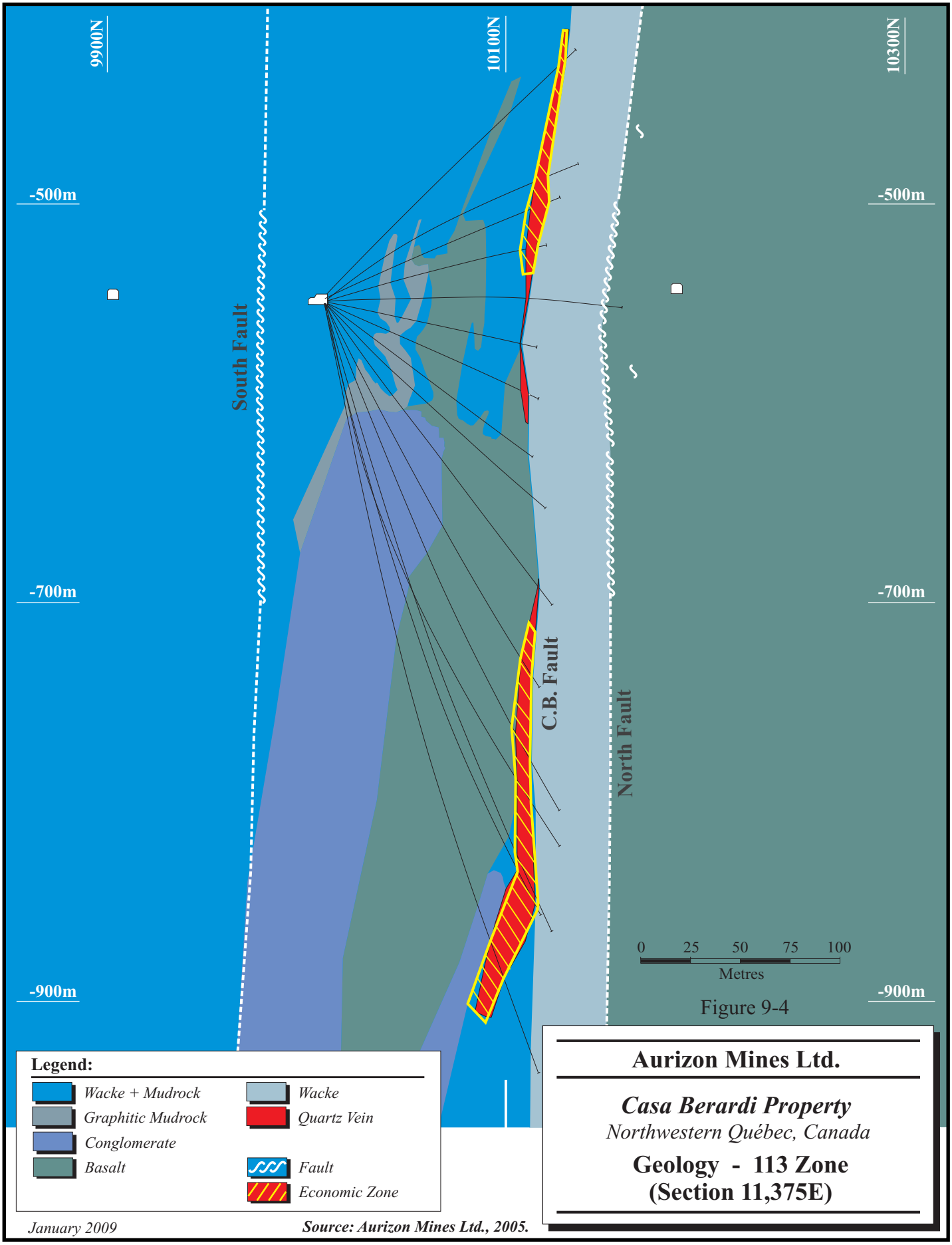

9900N
10100N
10300N
-500m
-500m
-700m
-700m
-900m
-900m
South Fault
C.B. Fault
North Fault
0 25 50 75 100
Metres
Legend:
Wacke + Mudrock
Graphitic Mudrock
Conglomerate
Basalt
Wacke
Quartz Vein
Fault
Economic Zone
Aurizon Mines Ltd.
Casa Berardi Property
Northwestern Québec, Canada
Geology - 113 Zone
(Section 11,375E)
January 2009
Source: Aurizon Mines Ltd., 2005.

Figure 9-4

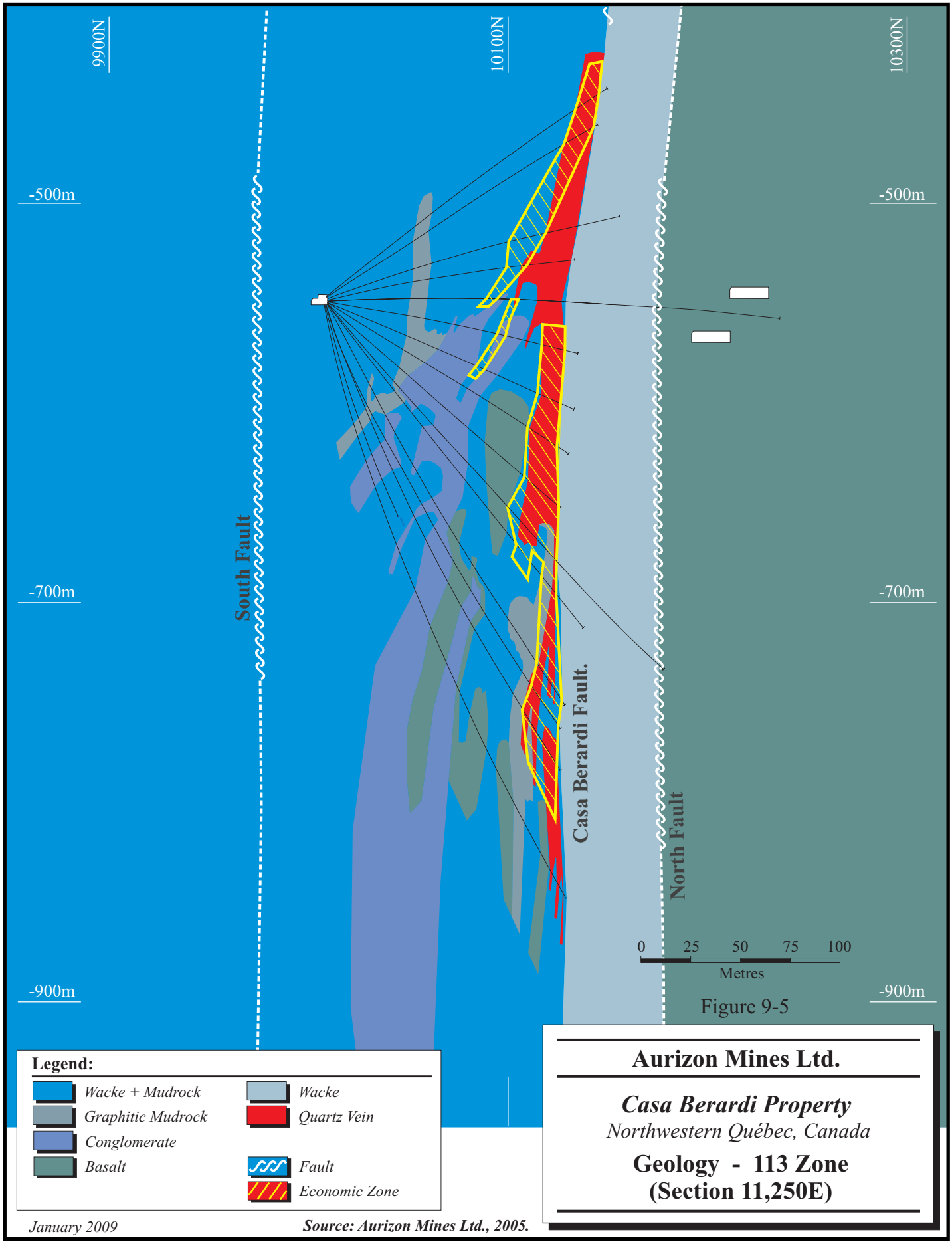

9900N
10100N
10300N
-500m
-700m
-900m
South Fault
Casa Berardi Fault.
North Fault
0 25 50 75 100
Metres
Legend:
Wacke + Mudrock
Graphitic Mudrock
Conglomerate
Basalt
Wacke
Quartz Vein
Fault
Economic Zone
January 2009
Source: Aurizon Mines Ltd., 2005.
Aurizon Mines Ltd.
Casa Berardi Property
Northwestern Québec, Canada
Geology - 113 Zone
(Section 11,250E)

Figure 9-5

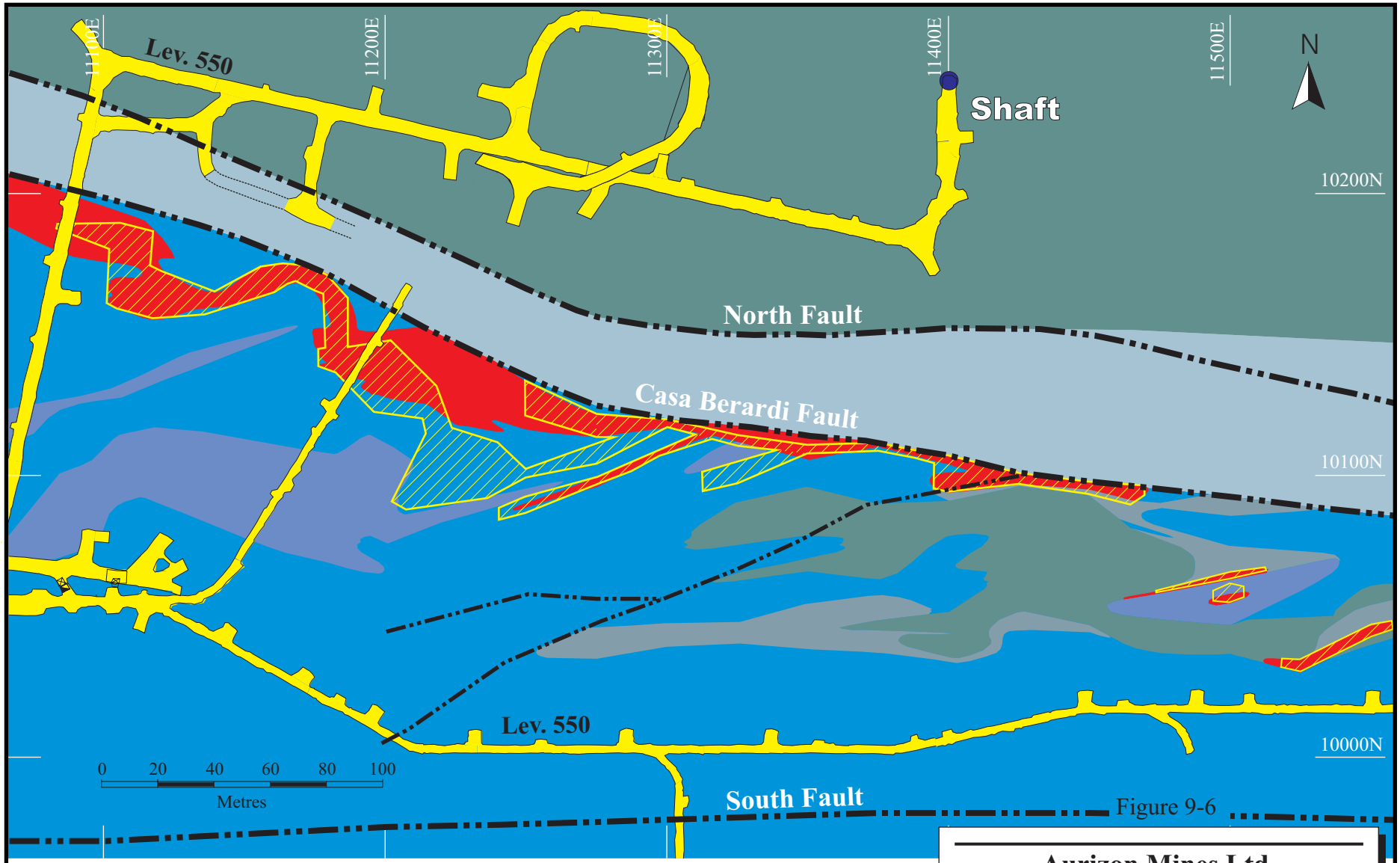


Figure 9-6

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Geology - Zone 113 (550m Level)

January 2009

Source: Aurizon Mines Ltd., 2005.

MINERALIZATION IN THE SOUTH FAULT

In plan view the South West and South East zones can be interpreted as a dome which is cut by the South Fault and by the subsidiary Auxiliary Fault. The mineralized system extends 200 m laterally and 300 m along dip, from surface to the 300 m level.

The main quartz vein structures are developed at the contact between a conglomerate and a graphitic mudrock, and are associated with a large stockwork of disseminated sulphides. The internal vein structure shows variable orientations and is, in many places, brecciated. The economic mineralization extends down dip and is represented by a system of parallel veins which dip at 60° and split from the main quartz vein.

SOUTH DIPPING MINERALIZATION

The main remaining resource at the West Mine is represented by the Lower Inter Zone. This zone is located between the 375 m and 475 m levels, and between sections 10,525 E and 10,360 E. The mineralized zone, which dips at 25° to 45° south and plunges to the west at 15°, is controlled by the Casa Berardi and Lower Inter faults. The Casa Berardi Fault dips steeply north, while the Lower Inter Fault dips 40° to 45° to the south, joining with the South Fault. Thickness varies from four metres to 50 m, with the maximum observed just below the contact of the two faults, and thinner sections observed down-dip along the Lower Inter Fault. The mineralized zone extends for 200 m. A stacking of quartz veins is observed in a deformation zone that is located at the lithological contact between a mafic volcanic rock in the footwall and a graphitic mudrock in the hanging wall.

Mineralized veins are characterized by a grey to white layering. Variations in the quartz textures are due to millimetric to decimetric graphitic-rich bands. Gold is not uniformly distributed throughout the vein, the hanging wall being barren. Weak disseminated arsenopyrite, with which gold is associated, is restricted to a few metres outside of the vein. Gold grades are low.

The previously mined-out portions of the Inter Zone, which are located between the South Fault and the Casa Berardi Fault, present similar characteristics. The quartz vein,

the mineralized stockworks, and the chert are related to a ductile deformation zone which is bounded at the hanging wall by a brittle fault. The fault is developed at a contact between the graphitic sediments and the vo1canoclastic units. The mineralized structure is located at the contact between the graphitic sediments and a mafic volcanoclastic unit. The mineralized structure strikes southeast with a shallow dip to the south (5º to 45º), and extends 150 m laterally and 75 m along dip. Its upper part is connected to the NE Zone.

MINERALIZATION IN CASA BERARDI FAULT

A group of mineralized zones, including North West, North East, 109, and 111 zones, are located in the vicinity of the Casa Berardi Fault. The North West and North East zones are the most important in terms of mineralized volume.

The mineralization is contained within a quartz vein which extends between section 10,385 E and section 11,125 E. 111 Zone extends between the 150 m and 400 m levels. Gold is found in quartz veins on the south side of the Casa Berardi Fault, at the contact with an assemblage of wacke, mafic pyroclastites, and graphitic mudrocks. The North West Zone is enclosed in chert shreds located on the north side of the Casa Berardi Fault. 111 Zone is developed in the same context.

The mineralization dips steeply to the north, parallel to the fault. Its thickness ranges between two metres and 25 m. Sulphide dissemination and veinlets are generally restricted to a few metres away from the veins. No significant gold is reported except the areas where chert is observed. In this case, economic grades are associated to conformable pyrite veinlets and disseminated arsenopyrite in chloritic layers.

Over several tens of metres along its south contact, the fault dips generally south; its dip varying accordingly with the dip of the host rocks.

109 Zone strikes east-west and dips 60º to 65º to the south. It is a quartz vein-type structure with 15% to 30% graphitic mudstone in stringers and thin bands. It splays off to the south from the Casa Berardi Fault approximately at the 450 m level.

PRINCIPAL ZONE MINERALIZATION

The mineralization in the Principal Zone occurs near surface and extends to a depth of 1,000 m. The zone is located between section 12,200 E and section 12,800 E. The Principal Zone is connected to the West Mine area by continuous mineralization. Previous exploration works identified nine auriferous zones located primarily north of the Casa Berardi Fault and at a depth of 350 m. The mineralization in zones 25-8, 22-6, and 27-1 is developed in a chloritic sediment/chert assemblage where the iron formation has been replaced at the contact with mafic volcanics. The mineralization occurs both in quartz vein networks with disseminated arsenopyrite and in pyrite rich fracture fillings. Mineralization in zones 25-3 and 25-4 is in highly deformed and altered tholeiitic basalt to the north of the Casa Berardi Fault. Zones 24-1 and 24-2 are located south of the Casa Berardi Fault, oriented east-west.

The Principal Zone down-dip extension, which is south of the Casa Berardi Fault, represents a different quartz and quartz-carbonate vein system. The quartz veins, which are not always mineralized, show maximum depth extensions of 400 m and a westward plunge of 50°.

EAST MINE MINERALIZATION

The mineralized zones in the East Mine area are located between sections 14,700 E and 16,000 E. The past production came from stopes which were located between surface and the 550 m level, and was restricted to two main parallel veins averaging five metres in thickness and not exceeding 150 m in lateral extension.

The North Zone is located along the Casa Berardi Fault. The subvertical to steeply-dipping zone lies between 100 m and 500 m levels, and its lateral extension is less than 150 m. The South Zone is oblique in plan with variable directions, and dips at 60° due north.

The drilling information indicates mineralization down to a depth of 900 m. The remaining resources are located in the crown pillar, and between the 550 m and 800 m levels. The Cherty Zone and Zone 160 are located north of the Casa Berardi Fault and

have been drilled to a depth of 300 m, however, information is restricted to a 100 m thick corridor.

Based on geometry, structural and geological contexts, the East Mine mineralized structure can be divided into three depth-related parts:

- Between surface and the 200 m level, the sediments and mafic volcanic units, which are located south of the Mine Fault, are south dipping and have variable directions. The mineralized envelope is composed of quartz veins of several metres in thickness and stockworks, both located in the 30 m wide sulphide-rich sericitic schist, which dips 60° to the north. Main veins of steeper dips are associated with subhorizontal tensional gashes. From surface to the 100 m depth, two parallel subvertical veins (North Zone and South Zone) compose most of the crown pillar residual resources.

- Between the 200 m and 550 m levels, the mineralization is restricted to a continuous vertical decametric quartz vein which is parallel to the Mine Fault. Host rocks, except the narrow graphitic schist layer which controls the fault position, are mafic to intermediate volcanic rocks.

- Between the 550 m and 900 m levels, the remaining resources are located in the south dipping area which is represented by a succession of mudrock layers inside the volcanic sequence. Unit contacts are heavily faulted, intersecting the Mine Fault at a 60° dip. Veins and stockworks are cut by the fault. A 10 m to 30 m down-dip displacement is observed.

The 152 Zone lies to the north of the Casa Berardi Fault. Vertical extension is 150 m, down to the 100 m level, and lateral continuity is over 100 m. En-echelon veins are concentrated at a folded mafic volcanite-wacke contact. The dip and thickness of the mineralization are highly variable. The economic portion of the zone has been mined out in the subhorizontal sector of the zone.

The Cherty Zone and 160 Zone are located between sections 15,700 E and 16,000 E, 30 m and 400 m north of the Casa Berardi Fault, respectively. They have a lateral extension of 200 m and a vertical extension of 100 m down to the 350 m level. The zones are not defined by tight drilling.

The mineralization in 160 Zone is mainly related to sulphides in veinlets close to the iron formation and wacke. Significant gold grades are related to the density of magnetite-

chert beds. Drilling at depth has confirmed the extension of the mineralization below the 350 m level. The Cherty Zone context is similar to the carbonate altered magnetite-chert-iron formation near the Casa Berardi Fault.

10 EXPLORATION

Following the acquisition of the Casa Berardi Mine, Aurizon outlined a large surface-drilling program to investigate the West Mine Area. A total of more than 76,000 m of core was drilled during the 1998-1999 campaign. Holes were planned to intersect mineralization below the 400 m level. The program resulted in the discovery of 113 Zone and other smaller mineralized bodies, such as 109 and 104 zones. The program was extended, and the results of the widely spaced holes were used to estimate Mineral Resources in those areas.

In 2002-2003, a surface wide-spaced drilling program was conducted to investigate the lateral eastern extension of the known mineralization. The program resulted in the discovery of multiple en-echelon lenses along the Casa Berardi and South faults, and south of the Principal Zone.

In 2004, a deep exploration drilling was conducted to investigate the dip extension of the mineralization below the 1200 m level. The program confirmed that the geological context below this level was similar to the context above this level. Also, a wide-spaced drilling program was carried out to investigate the deep and lateral extension of the East Mine deposit. The program resulted in the discovery of zones 140 and 157.

In 2005, a wide-spaced drilling program was carried out to investigate the potential outside the mining camp. The program resulted in the discovery of a 50 m wide quartz vein located 1.5 km west of the previously known mineralization.

In 2006, definition drilling was active in the 113 and the Lower Inter zones. A total of 336 holes for 24,578 m were carried out as follows:

- 113 Zone - 185 holes totalling 9,612 m.
- Lower Inter Zone for finalizing stope design and access - 151 holes totalling 14,966 m.

Exploration drilling was carried out to follow-up on inferred resources in the area of 118-120 Zones that were identified by wide spaced surface drilling. In the Principal

Zone, which contains multiple lenses, wide-spaced drilling was conducted from surface. The majority of the Principal Zone is located north of the Casa Berardi Fault, 1,000 m east of the new production shaft. Extension of the mineralization contained in the crown pillar of the East Mine was also tested. Exploration of Zone 122-Deep continued where underground exploration intersected high grade mineralization along the Casa Berardi Fault, 1,000 m below surface and 800 m from the existing infrastructure. A total of 48,083 m of exploration drilling was completed in 2006, including 19,779 m of underground drilling and 28,304 m of surface drilling.

In 2007, definition drilling continued in Zone 113. The first phase of definition drilling in Lower Inter Zone was completed.

Underground exploration drilling was focused on the 118-120 Zones and surface exploration drilling targeted the 123-S Zone, the most significant discovery of mineralization to date outside the Casa Berardi Fault. The 123-S Zone is located 350 m south and 900 m east of the existing West Mine infrastructure. Best intersections returned (along the hole) are 32.7 g/t Au over 13.8 m and 13.1 g/t Au over 11.6 m.

The 2007 drilling program was as follows:

- Definition drilling: 210 holes totalling 11,961 m:
    - 113 Zone: 177 holes totalling 8,779 m.
    - Lower Inter Zone: 33 holes totalling 3,182 m.
- Exploration drilling: 18,918 m including:
    - 118-120 Zones: 62 holes totalling 8,473 m of underground drilling
    - 123 Zone: 10,445 metres of surface drilling.

In 2008, definition and exploration drilling totalled 29,995 m in 299 holes. The highlights of the 2008 drilling are as follows:

- Approximately half of the drilling (14,653 m, 213 holes) was carried out in 113 Zone for definition and testing of the depth extension of the zone. Drilling at depth returned positive results along the eastern plunge of the deposit, thus increasing the Mineral Resources.
- Three holes totalling 122 m were drilled in Lower Inter to test extensions.

- An exploration drift is being developed at the 810 m level, east of 113 Zone and south of the Casa Berardi Fault, to provide drill access to test the depth extension of 113 Zone and to test the continuity and extension of 118-120 Zones and 123-South Zone. Four holes totalling 3,379 m were drilled from surface to test 123-South Zone. Two of those holes had to be abandoned and the other two did not return significant results.

- A total of 28 holes representing 2,025 m were drilled in 115 Zone for definition and testing of extensions. Geological reinterpretation was carried out and Mineral Resources were updated. Some of the Mineral Resources were converted to Mineral Reserves.

- Drilling has commenced from the rehabilitated track drift on the 280 m level in the area of the Principal Zone and between the East and West mines, where limited surface exploration has been performed to date. Open pit and underground mining opportunities in the area of the Principal Zone are currently being evaluated. A total of 5,254 m in 24 holes were completed.

- Five holes totalling 1,639 m were drilled to target 140 Zone. Two of the holes hit the geological structure. Geological interpretation is under way.

- At the East Mine, drilling was carried out from surface and from underground. A total of 1,014 m in 10 holes succeeded to convert in-pit inferred resources into indicated resources. The rehabilitation of the underground workings was completed and drilling was initiated with the objective of upgrading the Mineral Resources and evaluating mining opportunities. A total of 1,900 m in 12 holes were completed and some of the Mineral Resources were converted into Mineral Reserves.

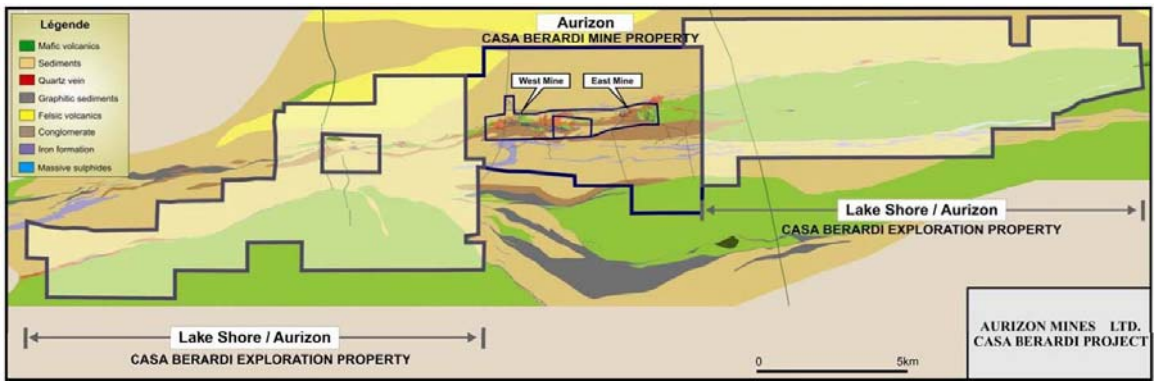
The 2009 definition program will test the north and upper limits of the Lower Inter Zone, the eastern part of 113 Zone, and 109 and 115 zones. A total of 21,000 m is planned to be completed. Exploration drilling will focus on the completion of the exploration drift at the 810 m level of the West Mine. A total of 14,000 m of drilling, to test the depth extension of 113 Zone and the continuity and extension of 118 and 123-South zones are planned.

LAKE SHORE GOLD CORP OPTION

On September 6, 2007, Aurizon granted Lake Shore Gold Corp. (Lake Shore), an option to earn a 50% interest in Aurizon's large land position surrounding the Casa Berardi Mine (referred to herein as the "Casa Berardi Exploration Property") by incurring exploration expenditures of $5 million over a five-year period, including a firm

commitment of $600,000 in the first year. The Casa Berardi Exploration Property is located outside the perimeter of Aurizon's mining leases comprising the Casa Berardi Mine (Figure 10-1).

FIGURE 10-1 LAKE SHORE OPTION – CASA BERARDI EXPLORATION PROPERTY



The Casa Berardi Exploration Property includes 227 claims adjacent to the east and west of the Casa Berardi Mine, and covers an area of 11,594 ha along a 30 km section of the Casa Berardi Fault. The Casa Berardi Fault is a major structural zone that is host to a number of gold and base metal deposits. Numerous gold showings occur within the Casa Berardi Exploration Property and have been the subject of limited exploration since their discovery in the 1980s.

Lake Shore is the operator of the exploration programs on the Casa Berardi Exploration Property during the earn-in period. If an Indicated Mineral Resource of at least 500,000 ounces of gold at a minimum grade of 6.0 g/t Au (or economic equivalent thereof) is established, the area containing the resource plus a one kilometre radius surrounding the outer perimeter of the resource may be transferred to a specific property joint venture, in which Aurizon and Lake Shore will each have a 50% interest. Aurizon will then have the right to earn an additional 10% interest in the specific property by funding the costs of a feasibility study.

The historical exploration data were received and a detailed compilation was conducted in the fourth quarter of 2007. The work program started in the first quarter of 2008, with the first-year expenditure commitment of $600,000 having been met during

the quarter. Initial work focused on the claim block located east of the Casa Berardi mines. Twelve holes have been drilled totalling 4,470 m. Holes are located at a 14.5 km block of claims located contiguous to the east of Aurizon's existing Casa Berardi mining operations. The program was designed to investigate areas of interest detected by previous operators. The main area of drilling comprised ten holes centred 7.5 km east-northeast of Aurizon's Casa Berardi East Mine and Mill Complex. Holes were drilled north along sections approximately 100 m apart, with one to two holes per section. Two additional holes were drilled two kilometres to the west of this area. In addition, 79 reverse circulation (RC) holes were simultaneously completed over the eastern claim block.

Lake Shore also has under option from Aurizon a 15 km length block of claims located contiguous to the west of the Casa Berardi mining operations. The western block is also contiguous with the Burntbush and Blakelock properties, which are both located in Ontario, cover 60 km of strike and are 100%-owned by Lake Shore.

On October 23, 2008, Lake Shore announced results from the first phase of its 2008 drill program at Casa Berardi. The results included the discovery of a new gold zone, with the best intercept being 13.03 g/t Au over 6.45 m within a broader intersection of 8.58 g/t Au over 10.4 m (Hole CE-08-03). Hole CE-08-03 returned the deepest mineralized intersection at a vertical depth of 247 m, located approximately 90 m below a historic intercept of 11.11 g/t Au over 2.24 m. The new intercept is open both at depth and laterally.

The new zone lies to the east of Aurizon's mining operations, and covers a total strike length of more than 500 m from west to east. Included within the new zone are three high-potential subzones (G-S Zone, G-Mid Zone and G-N Zone), which trend approximately 260^{o} azimuth and dip moderately south (60^{o} to 75^{o}). Better mineralization displayed stronger wall rock alteration and increased sulphide content, with some quartz and sulphide stringers at a shallow angle to the core axis, an occurrence also noted at Aurizon's Casa Berardi mines.

Mineralization encountered by Lake Shore occurs within sediments located north of a mafic volcanic package. Gold is associated with quartz-carbonate veining and sulphides. Better mineralization displays sericite alteration and occasionally albitization, and increased sulphide content, including pyrite, pyrrhotite and especially arsenopyrite.

The 79-hole RC drill program was designed to both define new targets by testing new areas and to follow up on areas of interest identified through the compilation of previous data. In addition, 173 bedrock samples were collected during the RC program. The samples analyzed for gold by fire assay with atomic absorption finish (FA-AA) and a multi-element inductively coupled plasma (ICP) method.

Two interpreted gold dispersal trains were determined to occur near the northern mafic volcanic-sedimentary contact east of the Theo River. The first gold train comprises three holes and occurs south of Lake Shore's western diamond drill holes CE-08-06 and CE-08-09. The second gold train occurs east of Lac Germain and 5.1 km along trend and east of the main 2008 diamond drill program conducted by Lake Shore. Both gold dispersal trains offer new drill targets near the northern volcanic-sedimentary boundary.

11 DRILLING

This section describes the drilling protocol used in the recent drilling programs at Casa Berardi.

Drill holes are planned (azimuth, dip, length) by geologists on vertical cross-sections and on vertical longitudinal sections. Drill lines are marked underground (front sight and back sight) by the mine surveyors. Prior to drilling, a technician verifies the drill rig alignment on hole set-up. On surface, drill collars are spotted on the field lines with the use of GPS equipment. Usually, two front sights and one back sight, identified with wood pickets are used to align the drill rig.

Hole deviations (azimuth and dip) are measured with Reflex instruments approximately every 50 m. In addition, dip angles are measured at intervals varying from six metres to 25 m by using Microsync or Easy Dip instruments. All of these instruments provide accuracy better than $\pm 1^{o}$. Once a hole is completed, collars are surveyed by mine surveyors.

Drill core from exploration, in-fill and definition holes is NQ in diameter. In some surface holes, the drill core diameter has to be reduced from NQ to BQ (telescoping) due to ground conditions problems, generally faults.

Once retrieved from core barrel the core is placed in sequential order in core boxes labelled with the hole number. Each run, usually three metres, is identified by a wood block on which the depth of the hole was marked. Missing (not recovered) core is identified by a wood stick indicating the length of the missing section. At the end of each shift, core boxes are transported from underground to surface and then to core shack by the drillers foreman. Core boxes from surface drilling are picked by mine staff at the drill rig set-up and transported to core shack.

Scott Wilson RPA considers the drilling protocol at Casa Berardi to be representative of industry standards.

12 SAMPLING METHOD AND APPROACH

Drill core that resulted from Aurizon exploration and definition programs is handled and sampled essentially by Aurizon technicians, while core is logged by Aurizon geologists at the mine core shack. Access to core shack is restricted to geology personnel by the use of magnetic cards that open the core shack door.

Upon receipt, core boxes are placed on tables and opened. Core is washed and verified for length accuracy prior to logging.

Since Aurizon acquired the property, rock quality designation (RQD) measurements and core recovery measurements are carried out in all surface and underground holes prior to logging. In general, RQD measurements have been carried out over three metre lengths, and in areas of bad ground, the measurements have been carried out over shorter lengths. At the time of the site visit, however, RQD measurements were carried out over 15 m lengths. Approximately 84% of the RQD database consists of three metre or shorter lengths. Scott Wilson RPA recommends keeping the general length of measurements to three metres, which corresponds to the drill rod lengths. This would allow better hole to hole interpretation of areas of good to poor RQD values.

The entire Aurizon core from underground drilling is photographed. Systematic photography of core from surface drilling started in 2008.

The core recovery is generally very good, nearly 100%, with the exception of short intervals within fault zones or highly deformed mudrock. Such intervals are generally marked during drilling and checked later by the geology personnel for depth accuracy and missing sections.

Geological and structural data are described by geologists and entered into a digital logging package. Drill hole logs show hole parameters, core description, and sampling intervals. Core logging is carried out in French.

Drill core is stored at the mine site.

Sample selection is done by Aurizon's geologists. Selection is determined visually according to rock type, alteration, quartz veining and mineralization. Sample positions are identified, and sample tags are placed under the core in the core boxes at the end of each sample. The beginning and end of each sample is also marked on the core. Core shack employees verify holes to be sampled.

In the case of exploration and in-fill holes the selected samples which are generally one metre in length are split into two halves by the core shack technician using an electrical core saw equipped with a diamond impregnated blade. One half is placed in a plastic bag with the corresponding tag number. The other half core is returned to core boxes, with the corresponding tag placed at the beginning of the sampled core. Sample tags are stapled to core boxes. The core saw, core splitter, and metallic pans are cleaned between samples. In the case of definition drill holes, core is not split and the entire sample is sent for assaying. Bags are folded and sealed to prevent spillage during transportation to the laboratory. Each batch of three to four samples is placed in a plastic container for transportation to the mine lab or in a burlap bag for transportation to external lab.

The samples are then transported by pick-up truck to the sample receiving facilities of the mine laboratory in the case of in-fill, definition, and exploration drilling. When the mine cannot meet the demand the samples are sent to Swastika Laboratories Inc. (Swastika) in Swastika, Ontario. A list of all samples is attached to the shipment.

Lithogeochemical sampling consists of selecting a three metre interval for every 30 m to 50 m of a drill hole, from which a dozen of pieces of core, each being 5 cm to 10 cm long, that are representative of the whole three metre interval, are collected.

Scott Wilson RPA has identified no drilling, sampling, or recovery factors that could have materially impacted on the accuracy and reliability of the Mineral Resource estimates.

Scott Wilson RPA considers the sampling method and approach at Casa Berardi to be consistent with industry standards.

13 SAMPLE PREPARATION, ANALYSES AND SECURITY

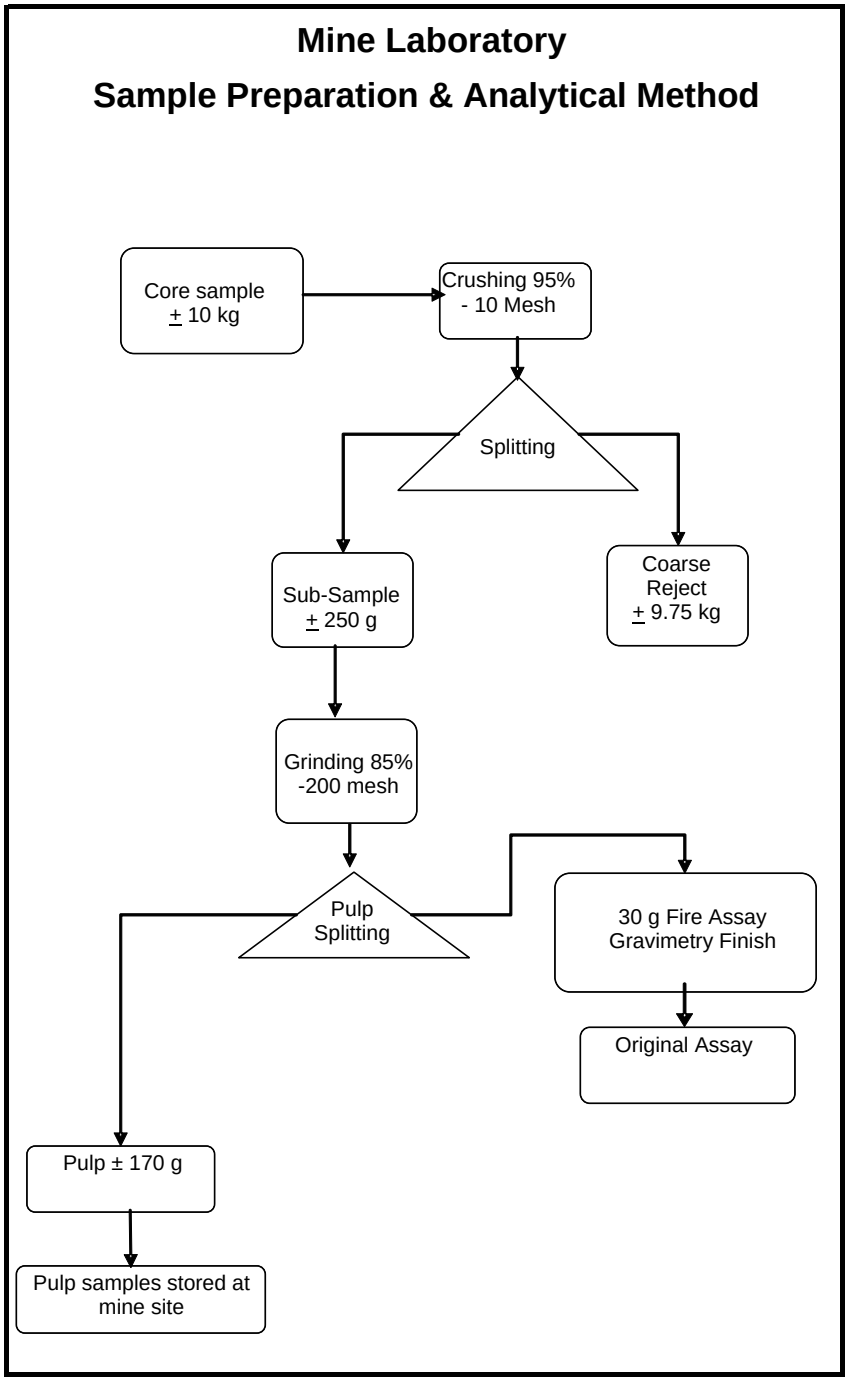
Upon arrival at the mine lab, samples are sorted by number and checked according to the sample shipment list. If moist, they are dried in the oven for a few hours. When dried, whole core samples are crushed in a jaw crusher while split core samples are crushed in a Rhino crusher (95% passing 10 mesh). Samples are then split by a riffle splitter in order to obtain a 250 g subsample. The subsamples are then ground for 90 s to 85% passing 200 mesh. This is called the pulp. The rest (reject) is returned into the original plastic bag.

The pulp is laid down on a piece of carpet and mixed for homogenization. A 30 g subsample is then collected from the previous subsample and weighed for assay. Each 30 g sample is analyzed by fire assay with gravimetric finish. The laboratory flow sheet is presented in Figure 13-1. All results, reported in grams per tonne, were sent electronically to Aurizon, followed by the original, signed certificate.

Scott Wilson RPA considers the sample preparation, analysis and security at Casa Berardi to be consistent with industry standards and has no reason to believe that those could have negatively impacted on the accuracy and reliability of the Mineral Resource estimates.

Scott Wilson RPA has reviewed the mine laboratory preparation and analytical procedures, and quality assurance/quality control (QA/QC) protocol, and considers them to be consistent with industry standards.

FIGURE 13-1 MINE LABORATORY FLOW CHART



14 DATA VERIFICATION

CROSS-SECTIONS, LONGITUDINAL SECTIONS, PLAN VIEWS, CORE LOGS, AND DATABASE

Scott Wilson RPA reviewed cross-sections, longitudinal sections, and plan views of different zones, and found the interpretation of the mineralization to be generally well done; however, Scott Wilson is of the opinion that senior geology staff should spend more time on interpretation, especially of 113 Zone, prior to creation of the 3D solid. Scott Wilson RPA has found that the mineralized outline is locally too generous and includes low grade material on the walls.

Scott Wilson RPA has reviewed the database and found it relatively well managed. When notified, errors were diligently repaired.

Core logs are located in the same place and are in order. Holes are easy to find. Spot checks between core logs and the database confirm the integrity of data.

Scott Wilson RPA reviewed the QA/QC database and recommends that it be cleaned. Numerous macros and queries that were created before 2007 make the database confusing. It is therefore difficult to determine which table is relevant and which needs to be updated or deleted. Several macros created in the past have to be updated or deleted.

CORE SHACK VISIT

Scott Wilson RPA examined the core shack during one of the site visits and found it to be efficient and well organized. Logistics were good, and all employees appeared to be well trained and very professional. Samples were individually sawed and wrapped in closed plastic bags, with assay tickets inside. Samples were placed in order for shipment. There were no significant delays in core logging.

GENERIC GOLD QA/QC PROGRAM

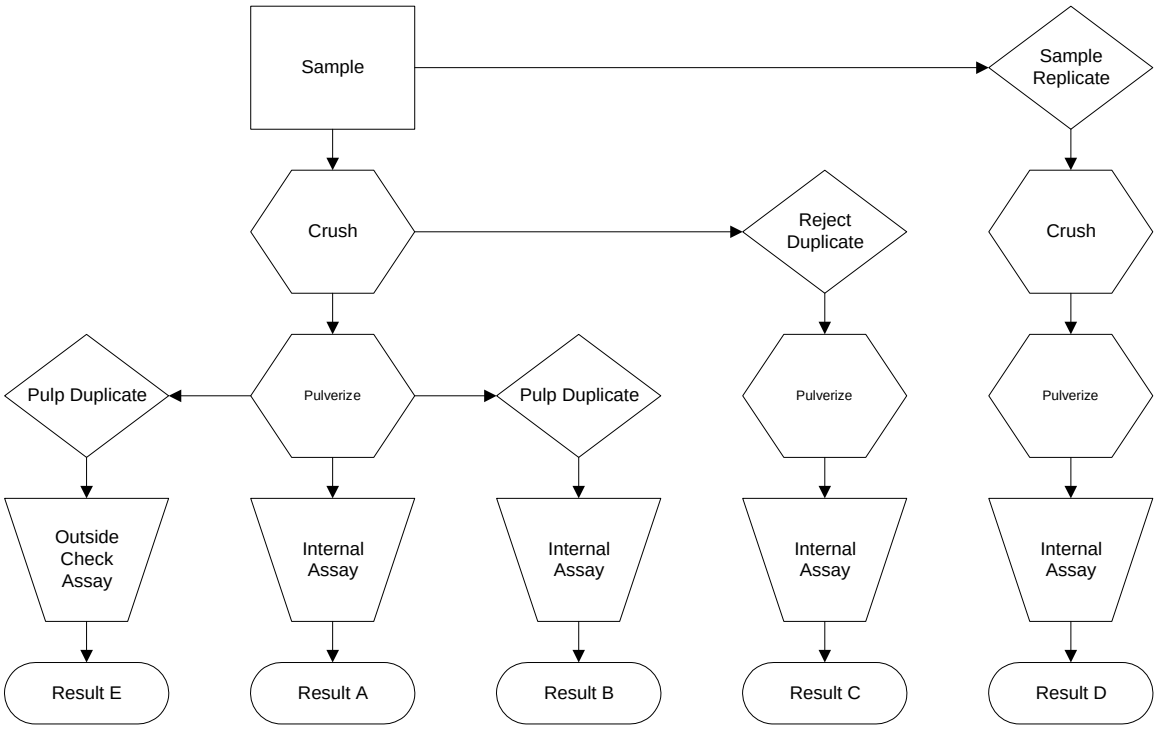
The purpose of a generic QA/QC program is to ensure that good quality sampling and assay results are in keeping with regulatory reporting requirements and to reduce uncertainty in future resource and reserve estimation. With more stringent regulatory reporting guidelines under NI 43-101, QA/QC has become an important component of exploration and production sampling and assaying.

Quality assurance procedures are designed to demonstrate that the assay data have precision and accuracy within generally accepted limits for the sampling and analytical method(s) used, in order to be relied upon with confidence in the resource estimation. Quality control procedures ensure that an adequate level of quality is maintained in the process of sampling, preparing and assaying the exploration drilling samples. In general, QA/QC programs are designed to prevent or detect contamination and allow assaying (analytical) precision (repeatability) and accuracy to be quantified. In addition, a QA/QC program can reveal the overall sampling – assaying variability of the sampling method itself, which, in the case of Casa Berardi, is core drilling with a specific core size.

Assay precision and accuracy may affect the degree of smoothing in grade interpolation for resource estimation and the reliability of local or block grade estimates, depending on the grade interpolation method employed. Accuracy is assessed by a review of assays of certified reference material standards, and by check assaying at outside accredited laboratories. Assay precision is assessed by reprocessing duplicate samples from each stage of the analytical process, from the primary stage of core splitting through sample preparation stages of crushing/splitting, pulverizing/splitting, and assaying.

In Scott Wilson RPA's opinion, the QA/QC program should be adequate to permit assessment of precision and accuracy variances that allow assessment of assay risk in resource reporting. Figure 14-1 illustrates the sample preparation and assaying flow chart and incorporated QA/QC procedures that establish these assay quality parameters.

FIGURE 14-1 SAMPLE PREPARATION AND ASSAYING FLOW CHART



AURIZON QA/QC PROTOCOL

Aurizon has done tremendous work to develop its QA/QC programs and database over the years. The QA/QC database contains certificate numbers, sample numbers, dates, original assays, duplicate assays, standard assays, standard types, laboratories used for assaying, etc. Numerous macros have been created in the past to generate printable reports to provide quick evaluation of check assays, however, the database has to be cleaned as the macros make it confusing. It is difficult to determine which table is relevant, which needs to be updated or which to be deleted. There is still some work needed to make the database clear and user friendly.

Since 2006, most of the samples have been assayed at the mine lab. When the mine lab cannot handle all of the samples, the surplus is sent to SGS or Techni-Lab or Swastika. Samples from definition or exploration drilling are identified on the basis of their first digit:

- Definition drilling: B…, C…..
- Exploration: A…., D…..

Aurizon's QA/QC protocol consists of:

- An inclusion of one Certified Reference Material (CRM, or standard) in every 24 core samples. The standards are easy to find in the list of samples, as their two last sample digit numbers are 00, 25, 50 or 75. Several standards, with different grades, are used. Standards are generally bought at Analytical Solutions Ltd. They are prepared in 30 g bags and are ready to use. No standards are used in chip or muck sample batches.

  Aurizon has not prepared standards from the mine rocks that are typical of the mineralization. Scott Wilson RPA is of opinion that preparing and introducing Casa Berardi standards should be considered as per recommendations issued by the Mining Task Force in 1999, Appendix F – Quality Control Program for Advanced-Stage Exploration Projects.

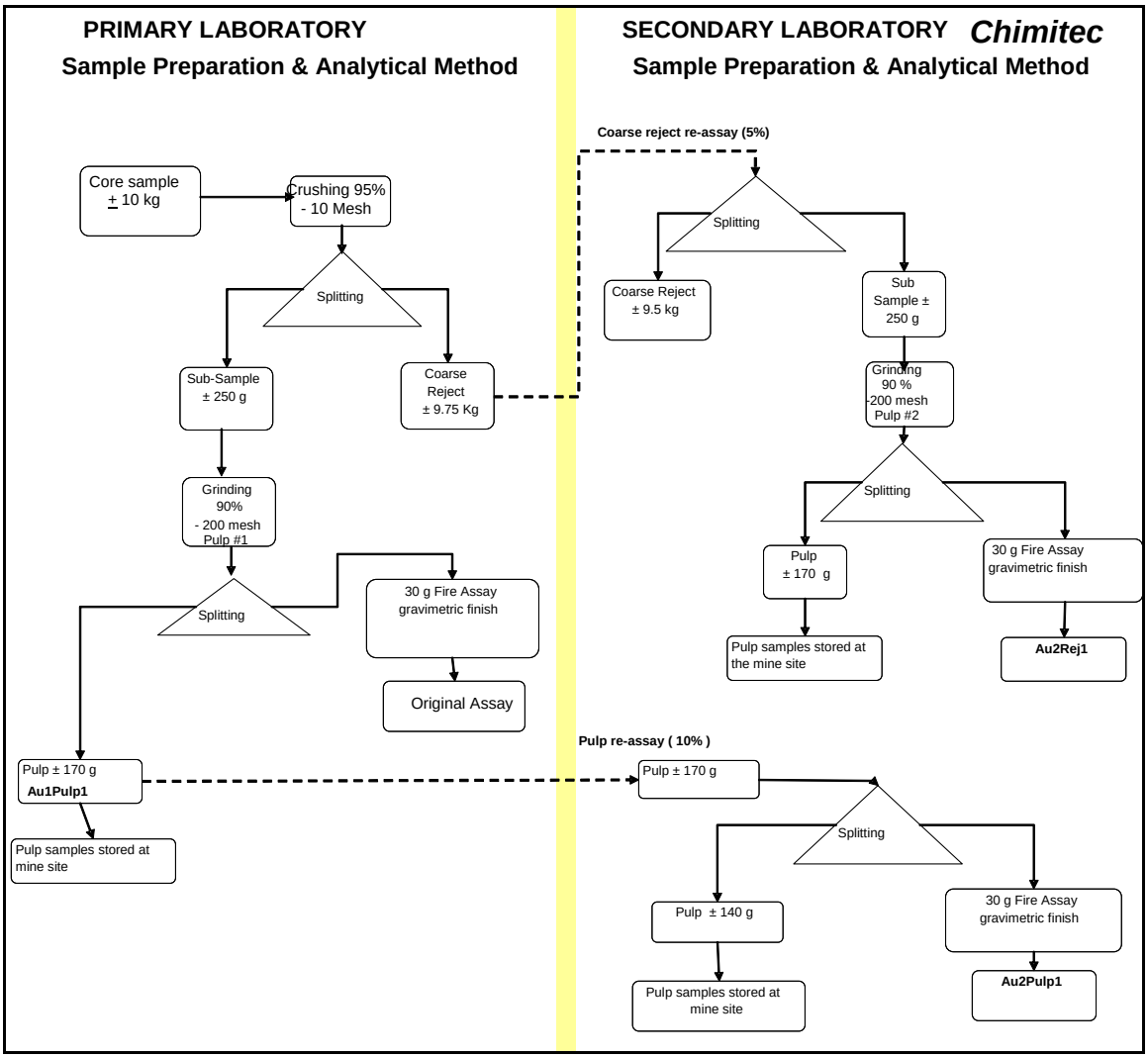
- 10% of original pulps (Pulp #1) - to be sent for reassay at ALS Chemex laboratory in Val d'Or (Figure 14-2). Samples with grades above 1 g/t Au are selected. Sample numbers for reassays are the same as original assays.

- 5% of original rejects – to be sent for reassay at ALS Chemex laboratory in Val d'Or (Figure 14-2), therefore, a second pulp is prepared from original rejects (Pulp #2). Samples with grades above 1 g/t are selected. Sample numbers for reassays are the same as the numbers of original assays.

ALS Chemex, formerly Chimitec Bondar Clegg (2001) and ALS Chemex Chimitec (2002), is the Minerals Division of ALS, a global company that provides services for mining and exploration companies. The ALS Chemex quality system complies with the ISO 9001:2000 and ISO 17025:2005 requirements and is ISO registered. The mine laboratory is not ISO registered.

Figure 14-2 summarizes the flow sheet of the primary and secondary laboratories.

FIGURE 14-2 PRIMARY AND SECONDARY LABORATORIES FLOW CHARTS



MINE LAB QA/QC PROGRAM

The mine lab has its own QA/QC program including the analysis of one blank sample, one Certified Reference Material (standard) and one duplicate in every 24 samples. The blank and standard assays and types are not indicated in the assay certificates provided to the geology department. Scott Wilson RPA recommends that the results of blanks and standards be included in the assay certificates.

The compilation of blanks and standards has been carried out by the lab chief analyst. The compilation data are not provided to the geology department. Scott Wilson RPA recommends that the lab provide this information to the geology department.

ORIGINAL VS. DUPLICATE ASSAYS

Core samples have been assayed at different laboratories:

- 2004, 2005 and part of 2006: SGS Laboratory (SGS) in Rouyn-Noranda.
- 2006: Mine laboratory, SGS, Techni-Lab in Ste-Germaine-Boulé, and Swastika.
- 2007: Mine laboratory and Techni-Lab.
- 2008: Mine laboratory and Lab-Expert in Rouyn-Noranda.

Table 14-1 presents the number of duplicate assays carried out over the years, the mean grade of original assays and the mean grade of duplicate assays.

In general, duplicate assays are carried out every 20 samples. Scott Wilson RPA compared duplicate assays with original assays, as shown in Figures 26-1 to 26-9 (Appendix 2). The correlation between original assays and duplicate assays is generally very good, over 99% for all ranges of grades, no matter when and where the assays were done.

TABLE 14-1 QA/QC PROGRAM – DUPLICATE ASSAYS
Aurizon Mines Ltd. – Casa Berardi Mine

Year	Original Laboratory	Number of Duplicates	Mean Grade of Original Assays Au g/t	Mean Grade of Duplicates Assays Au g/t	Difference %
2004	SGS	630	3.352	3.393	1.22
2005	SGS	771	0.713	0.708	0.66
2006	Mine	473	6.081	6.192	1.82
	SGS	287	1.206	1.200	-0.51
	Swastika	172	18.684	18.612	-0.39
	Techni-Lab	335	5.125	5.106	-0.37
2007	Mine	347	6.340	6.509	2.67
	Techni-Lab	4	2.168	2.053	-5.31
2008	Mine	186	8.325	8.360	0.42
	Lab-expert	140	18.623	18.593	-0.16

ASSAYING OF STANDARDS

During the drilling programs, Aurizon submitted to the laboratories several types of CRMs for assaying in order to check for laboratory accuracy. Accuracy is defined as a difference between a measured value and a true value or expected value, and represents an estimate of a random error.

Since 2004, at least fifteen different standards have been used. Table 14-2 lists those standards with their nominal values plus 95% confidence limits, as well as the laboratory they were assayed at. In the database provided to Scott Wilson RPA, a total of 2,310 standards were assayed between 2004 and 2008.

The CRM low and high values range within ±2% of the true value, which is considered to be a fairly narrow range. Considering the proportion of assay results that fall between low and high certified values, which sometimes is rather low, the accuracy of the standard populations that were assayed may appear to be not very good. In general, the mean grade of standard assays is within ±8% of the nominal values for

sample populations exceeding 50 assays. In Scott Wilson RPA's opinion, the difference of ±8% is acceptable for commercial laboratories in the case of a gold deposit.

Standard assays were plotted against time to visualize their distribution relative to the nominal values and to the 95% confidence limits. Graphs for which sample populations were greater than 50 assays are presented in Figures 26-10 to 26-27 (Appendix 2). In general, standard assays are comparatively well distributed relative to the nominal values, with the exception of a few suspect values whose presence could be explained by the nugget effect and/or the lack of pulp homogenization at the time of bagging or assaying.

Scott Wilson RPA is of opinion that the assaying of standards is acceptable.

TABLE 14-2 QA/QC PROGRAM - CERTIFIED REFERENCE MATERIALS
Aurizon Mines Ltd. – Casa Berardi Mine

Standard #	Nominal Value + 95% Confidence Limit	Laboratory	Year	Number of Assays	Average	Difference %
6Pa	1.65 ± 0.04	Mine	2004 2005	6	1.37	-17.1
6Pb	1.422 ± 0.026	Mine	2004 2005	115	1.44	1.5
7Pa	3.00 ± 0.06	SGS	2004 2005	127	2.96	-1.3
10Pb	7.15 ± 0.11	Mine	2008	74	6.95	-2.5
15Pa	1.02 ± 0.02	Lab-Expert	2008	16	1.22	19.5
		Mine	2007 2008	191	1.02	0.2
15Pb	1.06 ± 0.02	Mine	2007	2	0.95	-10.4
18Pa	3.36 ± 0.05	Mine	2006 2007	150	3.45	2.8
		SGS	2004 2005 2006	162	3.17	-5.6
		Swastika	2006	27	3.63	7.9
		Techni-Lab	2006	78	3.30	-1.8
18Pb	3.63 ± 0.03	Lab-Expert	2008	3	3.79	4.5
		Mine	2007 2008	127	3.54	-2.6

Standard #	Nominal Value + 95% Confidence Limit	Laboratory	Year	Number of Assays	Average	Difference %
50P	0.727 ± 0.021	SGS	2004 2005 2006	231	0.76	4.1
		Swastika	2006	7	0.72	-0.6
		Techni-Lab	2006	51	0.77	6.5
51P	0.430 ± 0.013	Mine	2007	227	0.46	8.0
		Techni-Lab	2006	16	0.52	21.8
52P	0.183 ± 0.007	Mine	2007	1	0.44	140.4
		SGS	2005 2006	3	0.22	18.4
		Swastika	2006	1	0.21	12.9
		Techni-Lab	2006	3	0.20	9.3
61D	4.76± 0.07	Mine	2008	67	4.64	2.4
61Pa	4.46± 0.08	SGS	2004 2005	35	4.07	-8.8
62Pa	9.64± 0.14	Lab-Expert	2008	1	9.38	-2.7
		Mine	2006 2007 2008	231	9.33	-3.2
		SGS	2004 2005 2006	146	9.36	-2.9
		Swastika	2006	23	9.61	-0.3
		Techni-Lab	2006	93	9.14	-5.2
62Pb	11.33 ± 0.17	Mine	2007	10	9.46	-16.5
		SGS	2004 2005	86	10.47	-7.6
Total				**2,310**		

ORIGINAL VERSUS CHECK ASSAYS – PULPS #1

Approximately 10% of original pulps (Pulp #1) are sent for re-assay at ALS Chemex laboratory in Val d'Or. Samples with grades above 1 g/t Au are selected. Sample numbers for re-assays are the same as original assays. All the laboratories used fire assay with Atomic Absorption Spectrometry (AAS) or Gravimetric finish.

Pulps from original assays (Pulp #1) were carried out at SGS, Swastika, Techni-Lab and mine laboratories. Comparison between original assays and check assays is provided in Tables 14-3 and 14-4 as well as in Figures 26-28 to 26-40 (Appendix 2). Table 14-3 shows the number of assays from original laboratories and the mean grades of original and check assays and Table 14-4 presents the comparison at different grade ranges.

A comparison of original assays from Techni-Lab and the mine laboratory with the check assays at ALS Chemex shows that the mean grade of ALS Chemex assays is generally higher than the mean grades of original assays, especially when original assays are from the mine laboratory. In the latter case, ALS Chemex is approximately 10% higher and variability (the dispersion of data along the correlation line) is relatively important. The correlation between the mine laboratory and ALS Chemex is below 0.90 in the 0 to 50 g/t range: 0.80 in 2006, 0.89 in 2007, and 0.80 in 2008. When all data are considered, the correlation between the mine laboratory and ALS Chemex is slightly better: 0.90 in 2006, 0.81 in 2007, and 0.93 in 2008.

Scott Wilson RPA also carried out an exercise where 50% of the check assays were removed from the 2008 population samples. The mean grades and correlations were compared to the original population (Table 14-4 (bottom), Figures 26-38 and 26-40). Although only 50% of the check assay population was used, the mean grades at different grade ranges and the overall correlation improved and less variability was observed on each side of the correlation line.

Although the total population of Swastika samples is relatively limited, it provides the best correlation with ALS Chemex, for all grade ranges.

TABLE 14-3 QA/QC PROGRAM – CHECK ASSAYS – PULP #1

Aurizon Mines Ltd. – Casa Berardi Mine

Year	Original Laboratory	Number of Assays	Mean Grade of Original Assays Au g/t	Mean Grade of Check Assays Au g/t	Difference %
2006	Mine	1,111	11.65	12.67	8.7
	SGS	418	4.61	4.56	-1.2
	Swastika	133	26.11	25.92	-0.7
	Techni-Lab	693	15.68	16.66	6.3
2007	Mine	1,176	14.39	16.16	12.3
2008	Mine	583	19.51	21.42	9.8
Total		**4,114**	**13.98**	**15.18**	**8.6**

TABLE 14-4 QA/QC PROGRAM – CHECK ASSAYS – PULP #1 – GRADE RANGES
Aurizon Mines Ltd. – Casa Berardi Mine

Year - Lab	Grade Ranges g/t	Number of Assays	Mean Grade of Original Assays g/t	Mean Grade of Check Assays g/t	Difference %
2006 - Mine	0 < Au < 25	980	6.21	7.08	13.9
	25 < Au < 50	86	35.34	38.28	8.3
	Au > 50	45	84.81	85.39	0.7
	Total	**1,111**	**11.65**	**12.67**	**8.7**
2006 - SGS	0 < Au < 25	411	3.75	3.66	-2.3
	25 < Au < 50	5	39.00	37.56	-3.7
	Au > 50	2	96.70	106.50	10.1
	Total	**418**	**4.61**	**4.56**	**-1.2**
2006 - Swastika	0 < Au < 25	91	10.06	10.17	1.0
	25 < Au < 50	25	36.53	36.56	0.1
	Au > 50	17	96.66	94.56	-2.2
	Total	**133**	**26.11**	**25.92**	**-0.7**
2006 – Techni-Lab	0 < Au < 25	570	8.16	8.88	8.8
	25 < Au < 50	78	34.75	36.13	4.0
	Au > 50	45	77.14	80.87	4.8
	Total	**693**	**15.68**	**16.66**	**6.3**
2007 – Mine	0 < Au < 25	1,011	8.92	9.88	10.7
	25 < Au < 50	116	33.42	36.94	10.5
	Au > 50	49	82.16	96.51	17.5
	Total	**1,176**	**14.39**	**16.16**	**12.3**
2008 – Mine	0 < Au < 25	454	9.51	10.77	13.2
	25 < Au < 50	81	33.38	36.78	10.2
	Au > 50	48	90.64	96.25	6.2
	Total	**583**	**19.51**	**21.42**	**9.8**
2008 – Mine 50% of Check Assay Population	0 < Au < 25	227	9.48	10.18	7.4
	25 < Au < 50	41	33.44	36.41	8.9
	Au > 50	24	92.61	95.67	3.3
	Total	**292**	**19.68**	**20.89**	**6.2**

ORIGINAL VS. CHECK ASSAYS – PULPS #1 VS. PULPS #2

Approximately 5% of original rejects are sent for re-assay at ALS Chemex laboratory in Val d'Or. Sample numbers for re-assays are the same as original assays. Samples with grade above 1 g/t are selected. A second pulp was prepared from original rejects (Pulp #2).

A comparison between Pulps #1 and Pulps #2 is presented in Tables 14-4 and in Figures 26-41 to 26-43 (Appendix 2). The mean grade of ALS Chemex assays (Pulps #2) is generally higher than the mean grades of original assays (Pulps #1). In 2006 and 2008, the difference between the mine laboratory and ALS Chemex was very low, less than 5%, while in 2007 the difference was higher. This is essentially explained by a high discrepancy in one sample: 103.13 g/t (mine lab) vs. 326 g/t (ALS Chemex). If this sample is excluded, the difference is 12.6% for the 2007 pulps and 5.8% for the 2006 and 2008 samples. The correlation between the mine laboratory and ALS Chemex was very good in 2008 (0.98)

TABLE 14-5 QA/QC PROGRAM – CHECK ASSAYS – PULP #1 VS. PULP #2
Aurizon Mines Ltd. – Casa Berardi Mine

Year	Original Laboratory	Number of Assays	Mean Grade of Original Assays Au g/t	Mean Grade of Check Assays Au g/t	Difference %
2006	Mine	85	23.70	24.83	4.8
	Techni-Lab	13	28.24	34.22	21.2
2007	Mine	38	18.35	26.18	42.7
2008	Mine	48	14.83	15.26	2.9
	SGS	6	5.26	4.66	-11.5
	Lab-Expert	1	6.96	5.62	19.3
2006-2008	Mine	171	20.02	22.44	12.1
Total		**191**			

QA/QC – CONCLUSIONS

Aurizon has done tremendous work to develop its QA/QC programs and database over the years. Scott Wilson RPA considers the overall correlation between original

assays and check assays to be generally good in all check assay programs. Scott Wilson RPA notes that the graphs indicate high variability of gold in the mining grade range, no matter which laboratory, primary or secondary, performed the assays and no matter how many samples were submitted for check assays. The precision defined from a set of duplicate analyses, regardless of the true value, is relatively typical of this type of nuggety gold mineralization. Based on the graphs included in this section, Scott Wilson RPA concludes that grade reconciliation between mine and mill will be carried out over a relatively long time period (several months to one year) and will require many samples in order to compare mine and mill results.

Based on the graphs and tables above, Scott Wilson RPA is of opinion that the amount of check assays of Pulps #1 can be reduced from 10% to 5%.

Scott Wilson RPA considers Aurizon's QA/QC program to be acceptable and has no reason to believe that the results could have negatively impacted on the accuracy and reliability of the Mineral Resource estimates. Scott Wilson RPA considers the mine laboratory to be reliable.

15 ADJACENT PROPERTIES

The Casa Berardi property borders on five other claims, which collectively account for two kilometres of its 92.5 km boundary. All but one holder of the mining rights contiguous with the Aurizon property have not changed the status of staked claims to map designated claims pursuant to the amendments to the Quebec Mining Act.

At the western limit of the property, Virginia Gold Mines Inc. (Virginia) owns the Dieppe property, which follows the Casa Berardi Fault for 15 km. Virginia also controls a smaller, two square kilometre block enclosed within the Aurizon property, which is located three kilometres west of the deposit in the same geological context. This block contains mineralization similar to that at the deposit. The rest of the Dieppe property has been explored and systematically drilled by previous owners.

Other adjacent properties widely spaced and covering variable areas are located at the southern limit of the Aurizon property. From west to east they are:

- Tony Perron, prospector.
- Antoro Resources Inc. owns a claims package directly south of the West Mine.
- Explorer Alliance Corporation owns a 13 km^2 block immediately south of the Casa Berardi deposit.
- Lake Shore Gold Inc. (Lake Shore). During the third quarter of 2007, Lake Shore entered into a joint venture agreement with Aurizon for the Casa Berardi Exploration Property, which covers a 30 km strike length of the Casa Berardi deformation zone. The Casa Berardi Exploration Property consists of 227 claims located east and west of the Casa Berardi Mine and covers an area of 11,594 ha. A significant drilling program for the property was carried out in 2008. Best results were:
    - Hole CE-08-03: 8.58 Au g/t over 10.4 m, including 13.03 Au g/t over 6.45 m and including 51.33 Au g/t over 0.65 m.
    - Hole CE-08-07 : 8.64 Au g/t over 2.4 m, including 28.82 Au g/t over 0.65 m.
    - Hole CE-08-11: 6.84 Au g/t over 3.1 m, including 13.80 Au g/t over 0.3 m.
- Gold Vessel property (47 km^2) in the Casa Berardi deformation corridor extension, owned by Iamgold Corporation (85%) and Gold Vessel Resources Inc. (15%)

Other properties in the vicinity of the mine are:

- Cogitore Resources Inc.'s Estrades massive sulphide deposit, located 20 km east (561,000 tonnes of NI 43-101 compliant indicated resources at an average grade of 0.72% Cu, 10.25% Zn, 0.94% Pb, 5.22 g/t Au and 174 g/t Ag.

- Iamgold's Gemini project located four kilometres south with historical resources (non-NI 43-101 compliant).
    - B Zone: 1.3 million tonnes at 8.3% Zn (volcanogenic polymetallic massive sulphides lenses).
    - A Zone: 3.1 million tonnes grading 1.1 g/t Au (auriferous massive sulphides).
    - 130 Zone: 3.0 m at 0.46% Zn, 2.02% Cu, 35.3 g/t Ag and 2.90g/t Au in felsic volcanics (hole 130).
    - 51 Zone: 6.0 m at 9.5 g/t Au near a major fault with associated strong carbonatization of the country rocks.

16 MINERAL PROCESSING AND METALLURGICAL TESTING

The Casa Berardi ore processing plant originally commenced production in September 1988. Production was suspended in September 1997. During this initial production period, the plant processed 3.5 million tonnes of ore with an average grade of 7.1 g/t Au and an average mill gold recovery of 87%. A total of 688,400 oz Au were recovered.

Aurizon re-started production in early November 2006, achieving commercial production as of May 1, 2007. Table 16-1 lists Aurizon production by year.

TABLE 16-1 CASA BERARDI ANNUAL PRODUCTION
Aurizon Mines Ltd. – Casa Berardi Mine

Year	Tonnes	Grade (g/t Au)	Ounces Recovered	Recovery (%)
2006	68,481	8.6	17,731	93.9
2007	545,258	9.8	159,469	93.0
2008	654,397	8.2	158,830	92.5
Total	**1,268,136**	**8.9**	**336,030**	**92.7**

Based on the current Life of Mine (LOM) plan, the mill facilities will process 1,800 tpd (640,000 to 690,000 tonnes per year) of underground ore for 2009 to 2011, followed by two years at 2,300 tpd (850,000 tonnes per year), using open pit ore to supplement underground feed. LOM projected mill recoveries are 92.7% for 113 and Lower Inter Zones, based on recent history, and 87% to 88% for other zones, based on results from the original operation.

METALLURGICAL TESTWORK

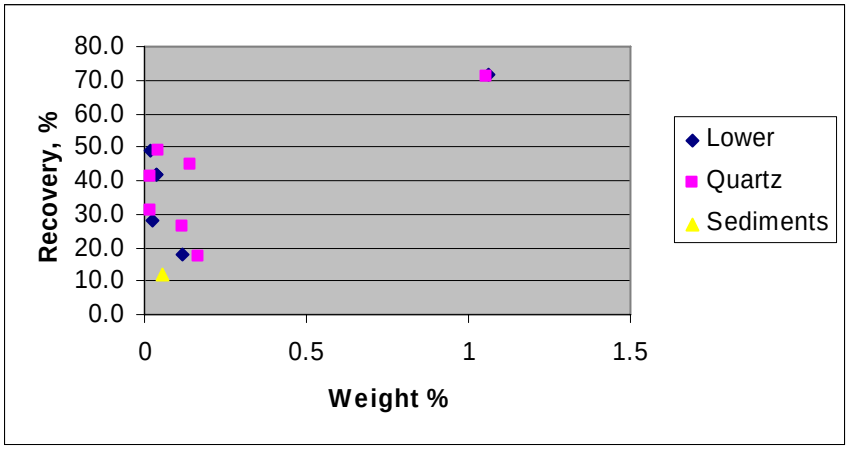
Prior to re-starting operations at Casa Berardi, Aurizon conducted metallurgical testwork at SGS Lakefield Research Limited (Lakefield) during 2003 and 2004, to develop process design criteria for the Feasibility Study. The work was oriented toward the use of the existing mill for processing.

Aurizon identified three primary ore types and selected drill core samples by ore type and grade for testwork. In addition, bulk samples of the three types were taken for grindability tests. The three ore types are designated "Lower Inter", "Quartz" (found throughout 113 Zone), and "Sediments" (found in the upper portion of 113 Zone). Testwork was undertaken on both the individual samples and on a blend of the three.

Considerable testwork was conducted to establish the "maximum" recovery of gold by gravity means (GRG) for the three ore types. The GRG content was determined to be 79% for Quartz, 80% for Lower Inter, and 44% for Sediments. Simulations based on the results of these tests using the planned grinding area flowsheet and ore makeup yielded gravity recovery of gold ranging from 50% to 55%.

Gravity recovery tests were undertaken as part of the cyanidation testwork program on the three ore types, and the results are summarized in Figure 16-1.

FIGURE 16-1 GRAVITY GOLD RECOVERY



Quartz and Lower Inter ore types behave similarly, and a gravity gold recovery of approximately 40% at a weight recovery of 0.04% is expected. Sediments respond poorly to gravity concentration, and a recovery of only 10% is expected.

Intensive cyanidation tests were conducted on the products from gravity concentration for the three ores. Cyanide dosage ranged from 207 kg/t to 226 kg/t, and gold extractions ranged from 93% for Sediments to over 98% for Lower Inter and Quartz.

Direct cyanidation and parallel carbon-in-leach (CIL) tests showed that all ore types contain active carbon. The potential losses of gold due to preg-robbing ranged from 3.4% for Quartz to 10.5% for Sediments. Thus, the current Casa Berardi flowsheet, which incorporates CIL processing, is appropriate for all of the ore types of the deposit.

The projected CIL extractions used in the Feasibility Study for the three ore types are shown in Table 16-2. In this table, extraction of gravity recovered gold is assumed at 98% for Quartz and Lower Inter ores and 93% for Sediments.

TABLE 16-2 GOLD EXTRACTION SUMMARY
Aurizon Mines Ltd. – Casa Berardi Mine

Ore Type	Head Grade g/t	Gravity Recovery %	Overall Extraction %
Quartz above 690	8.3	40	93.5
Quartz below 690	12.9	40	95.5
Lower Inter	6.0	40	93.5
Sediments	4.5	10	74.5

Cyanide destruction testwork using the INCO SO_2 process was conducted on slurries of each ore type. Treated effluents of less than 1 mg/L of CN_{WAD} were readily obtained.

EAST MINE TESTWORK

In 2006, metallurgical testwork was undertaken under the supervision of Geostat, to confirm historical recovery results from the East Mine. Three samples were taken from each of ten crushed and pulverized lots of drill core. A composite sample was prepared from the rejects. Head assays ranged from 2 g/t Au to 14 g/t Au, with the composite grading 5.1 g/t Au.

Cyanidation tests carried out on each lot resulted in significantly variable recovery, from 73% to 98%, with an arithmetic average of 87.1% for all 20 tests. This relatively low level of recovery could be explained by the absorbent ("preg-robbing") characteristic of graphite, visible in the ore. The average recovery value was used for Geostat and BBA cut-off grade calculation and open pit planning.

PROCESS DESCRIPTION

A simplified flowsheet (Figure 16-2) illustrates the process summarized below.

Ore is hauled by truck from the West Mine headframe complex to the crusher dump pocket, which is equipped with a static grizzly and a rock breaker to break any oversize material. A reciprocating feeder under the dump pocket meters the ore into a jaw crusher.

The ore is crushed to approximately 5.5" (140 mm) at a rate of 226 tonnes per hour. A conveyor feeds the crushed ore into a 3,000 tonne capacity ore bin. The bin provides approximately 32 hours surge capacity for the mill. Ore is removed from the bin by four feeders and discharged onto the semi-autogenous (SAG) mill feed conveyor. This conveyor is equipped with a weigh scale to monitor and control the ore supply to the SAG mill.

The ore is fed into a 5.5 m diameter by 2.7 m long SAG mill driven by a 1,500 hp motor. The SAG mill operates in closed circuit with a sizing screen. The screen oversize material is returned to the SAG mill for further reduction, and the screen undersize is sent to the primary cyclone pump box feeding a 26-inch diameter primary cyclone. The primary cyclone overflow discharges into the secondary cyclone pump box feeding eight 10-inch secondary cyclones. Both primary and secondary cyclone underflows are returned for further grinding to the 4.0 m diameter by 5.3 m long ball mill driven by a 1,750 hp motor.

A fraction of the primary cyclone underflow is diverted and equally split to two parallel gravity circuits. Each circuit consists of a vibrating screen and a Knelson gravity concentrator. The screen oversize from each circuit reports back to the ball mill, and the screen undersize feeds a Knelson concentrator. The two concentrator tail streams report to the secondary cyclone feed pump box, and the gravity concentrates are leached in an intensive cyanidation reactor (ILR). The pregnant solution from the ILR unit reports to the electrowinning circuit for gold recovery, and the tail reports to the #1 CIL tank.

The secondary cyclone overflow passes over a trash screen to remove any debris before proceeding to the CIL circuit. The screen undersize is pumped to a 34 m diameter conventional thickener. Overflow from the thickener proceeds to a grinding circuit process water storage tank. Thickener underflow, at 45% solids density, is pumped to the first CIL tank.

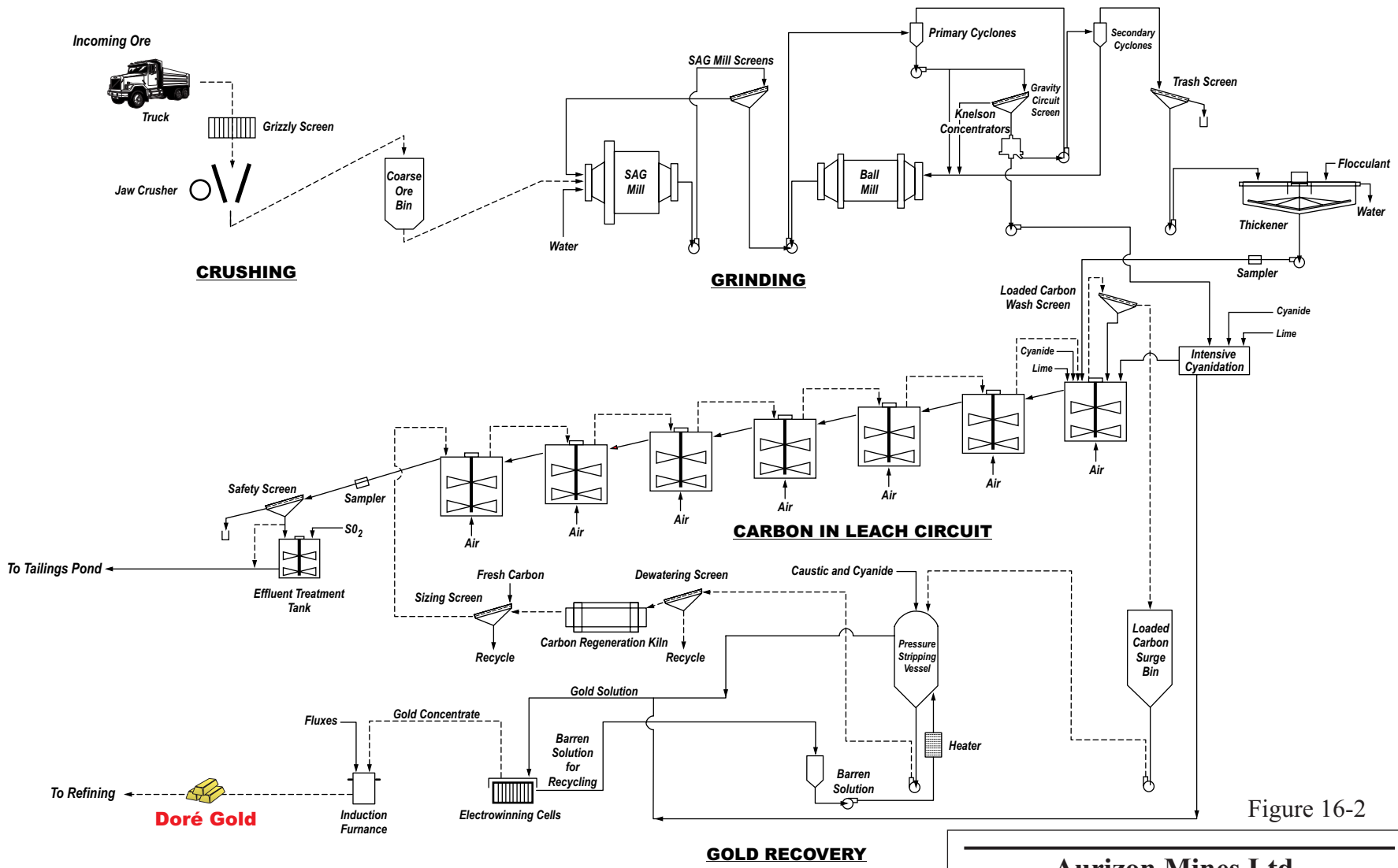


Figure 16-2

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Simplified Process Flowsheet

January 2009

Source: Aurizon Mines Ltd., 2008.

The #1 CIL tank overflows into the #2 CIL tank and subsequently through the #3, #4, #5, #6, and #7 CIL tanks. Overflow from the #7 CIL tank feeds a carbon safety screen to collect any fugitive carbon. Oversize from the safety screen is collected in a collection bin and recycled back to the CIL circuit. The safety screen underflow is discharged into the effluent treatment tank for cyanide destruction or by-pass to the tailings pump box. The tailings pump box pumps the material to the tailings pond.

Samplers cut representative CIL feed and tailings samples. Process air is added to each CIL tank. Cyanide solution is added to the first CIL tank as required.

Regenerated and fresh carbon is supplied by batch to the #7 CIL tank and advanced from tank to tank counter current to the slurry flow. Loaded carbon from the #1 CIL tank is pumped to a loaded carbon wash screen to remove any residual cyanide solution. Oversize carbon from the loaded carbon wash screen flows by gravity to a loaded carbon surge bin. The loaded carbon screen undersize returns to the # 1 or #2 CIL tank.

Loaded carbon from the surge bin is transferred to the stripping vessel. Hot barren solution is pumped through the stripping vessel to remove the gold from the carbon. The solution exiting the top of the stripping vessel is defined as a pregnant solution containing gold. To maintain the required volume and strength of the barren solution entering the stripping vessel, caustic and cyanide are added as required.

After stripping, the carbon is transferred to a regeneration circuit where organic contaminants are removed from the carbon by heat in a carbon regeneration kiln. Carbon is discharged from the kiln into a quench tank. Quenched carbon is educted to the sizing screen. Fresh carbon from an attrition tank is also fed to the sizing screen.

Regenerated carbon is pumped to the #7 CIL tank to maintain the required carbon loading in the CIL circuit.

Pregnant solution from the CIL circuit, along with pregnant solution from the ILR unit, is fed to two electrowinning cells for gold removal. The solution exiting the

electrowinning cells is returned to the process. The gold extracted from the solution is deposited on cathode plates. The gold is removed from the plates, filtered, and smelted in an induction furnace. The refined gold is poured into gold bullion moulds to form "doré" bars. These bars are shipped to a refiner for further upgrading.

17 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

MINERAL RESOURCES

SUMMARY

Mineral Resource estimates for the Mine are summarized in Table 17-1. Total Measured and Indicated Resources, which include the portion of undiluted resources that have been converted into Mineral Reserves, are estimated at 8,262,000 tonnes at 7.33 g/t Au containing 1,946,000 gold ounces. Inferred Resources total 4,339,000 tonnes at 6.60 g/t Au for 920,200 gold ounces.

Mineral Resources are classified based on the density of drill hole data and the continuity of the auriferous zones. The classification complies with the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves dated December 11, 2005. The classification of Mineral Resources at Casa Berardi is guided by the drill hole spacing, which ranges from 15 m to 50 m, and by the ranges of variograms, which are between 10 m to 50 m. It also takes into consideration the distance of drill hole composites to block centres.

A polygon was created around blocks that were estimated based on drill hole composites with an average maximum distance to block centres of 25 m. The resources were classified as follows:

- Measured Resources: blocks inside the polygon + local development that confirmed the continuity of mineralization.
- Indicated Resources: blocks inside the polygon.
- Inferred Resources: blocks outside the polygon.

Each block of the model was therefore classified as a Measured, Indicated or Inferred Resource.

Figures showing the Mineral Resources are found in Appendix 4.

TABLE 17-1 MINERAL RESOURCES INCLUSIVE OF MINERAL RESERVES

Aurizon Mines Ltd. – Casa Berardi Mine

Classification Location - Zone	Tonnes	Au g/t	Ounces
Measured			
West Mine - 113	772,000	10.03	249,000
West Mine – North West	110,000	6.55	23,200
East Mine - Crown Pillar	649,000	4.09	85,300
East Mine - Underground	299,000	6.84	65,800
Total Measured	**1,829,000**	**7.20**	**423,200**
Indicated			
West Mine - South West	365,000	4.80	56,400
West Mine - Lower Inter	939,000	10.45	315,700
West Mine - Inter	124,000	4.43	17,700
West Mine - 109	60,000	6.28	12,200
West Mine - 111	84,000	5.81	15,600
West Mine - 113	1,039,000	10.45	349,000
West Mine - 115	139,000	14.54	64,900
Principal - 117S	17,000	8.24	4,500
Principal - 118	230,000	7.04	52,000
Principal - Crown Pillar	1,785,000	6.19	355,300
Principal - Underground	837,000	6.38	171,700
East Mine - Crown Pillar	589,000	3.20	60,600
East Mine - Underground	138,000	8.20	36,400
Low Grade Development	87,000	3.90	10,900
Total Indicated	**6,433,000**	**7.36**	**1,522,800**
Total Meas. + Ind.	**8,262,000**	**7.33**	**1,946,000**
Inferred			
West Mine - Lower Inter	43,000	5.62	7,800
West Mine - 104	115,000	6.62	24,500
Principal - 118	854,000	6.64	182,500
Principal - 123S	714,000	9.42	216,300
Principal - Crown Pillar	841,000	5.97	161,500
Principal - Underground	836,000	5.97	160,500

Classification Location - Zone	Tonnes	Au g/t	Ounces
East Mine - Crown Pillar	310,000	3.02	30,100
East Mine - Underground	156,000	9.10	45,600
East Mine - Cherty	225,000	6.80	49,300
East Mine - 160	243,000	5.40	42,200
Total Inferred	**4,339,000**	**6.60**	**920,200**

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at cut-off grades of:
   - 4 g/t Au for the West Mine, Principal Mine and East Mine.
   - 3 g/t Au for South West, Inter and 104 zones in the West Mine. Those zones were estimated by Aurizon in 2000 using 2D polygons on longitudinal sections and reviewed by RPA in 2005.
   - 1.30 g/t Au for the East Mine – Open Pit (Geostat, 2008).
3. Mineral Resources are estimated using an average long-term gold price of US$750 per ounce, and a US$/C$ exchange rate of 1:1.10.
4. Minimum mining widths of two to three metres were used.
5. Mineral Resources are inclusive of Mineral Reserves.
6. Totals may not represent the sum of the parts due to rounding.

Except for Inter and South West zones, which are 2D polygonal estimates prepared by TVX and Aurizon, and the East Mine Crown Pillar, which was estimated by Geostat, the resource estimates for the different mineralized zones at Casa Berardi have been carried out by Scott Wilson RPA, assisted by mine staff, using block model grade interpolation techniques. The current Mineral Resource estimate is based on the mine drill hole database and geological interpretation results. In Scott Wilson RPA's opinion, the estimates are valid and representative of the geological context.

Table 17-2 lists the Mineral Resources that are exclusive of Mineral Reserves (remaining Mineral Resources) as at December 31, 2008 vs. December 31, 2007. Gains and losses are essentially explained by:

a. Geological re-interpretation of mineralized zones after drilling programs (113 Zone, East Mine Crown Pillar).

b. Geological re-interpretation of mineralized zones and conversion of the 2D polygonal model to a 3D block model (109, 115, 117S, Principal Mine).

c. Conversion of Inferred into Indicated or Indicated into Measured.

d. Conversion of Mineral Resources into Mineral Reserves.

e. Conversion of Mineral Resources to Mineral Reserves after pre-feasibility studies carried out (East Mine Crown Pillar and East Mine Underground).

f. Mining depletion (113 Zone, North West, Lower Inter).

g. Subtraction of low grade resources (< 4g/t).

Main differences from 2007 to 2008 are:

- Measured Resources – Increase of 429,000 tonnes containing 60,000 gold ounces:
  - 113 Zone: +160,000 tonnes: (a, c, d, f).
  - North-West: +42,000 tonnes (c)
  - East Mine Crown Pillar: +310,000 tonnes (a, c, e).
  - East Mine Underground: -83,000 tonnes (e – McIsaac, 2008).

- Indicated Resources –Increase of 920,000 tonnes containing 217,000 gold ounces
  - 113 Zone: -499,000 tonnes (a, c, d, f, g).
  - South West Zone: -279,000 tonnes (d, g)
  - Principal Mine Crown Pillar: +1,446,000 tonnes (b, c)
  - Principal Mine Underground: +522,000 tonnes (b, c)
  - East Mine Crown Pillar: -270,000 tonnes (a, c, d, e – BBA, 2008)
  - East Mine Underground: -48,000 tonnes (e - McIsaac, 2008).

- Inferred Resources – Decrease of 1,145,000 tonnes containing 295,000 gold ounces
  - Principal Mine Crown Pillar: -805,000 (b, c)
  - Principal Mine Underground: -480,000 tonnes (b, c)
  - East Mine Crown Pillar: +140,000 tonnes (a, c, d, e – BBA, 2008)

TABLE 17-2 MINERAL RESOURCES EXCLUSIVE OF MINERAL RESERVES

Aurizon Mines Ltd. – Casa Berardi Mine

Classification Location - Zone	2008			2007			Gain (Loss)	
	Tonnes (000)	Au g/t	Ounces (000)	Tonnes (000)	Au g/t	Ounces (000)	Tonnes (000)	Ounces (000)
Measured								
West Mine - 113	160	7.93	41				160	41
West Mine – North West	42	6.48	9				42	9
East Mine - Crown Pillar	310	3.11	31				310	31
East Mine - Underground	216	6.55	46	299	6.84	66	-83	-20
Total Measured	**728**	**5.39**	**126**	**299**	**6.84**	**66**	**429**	**60**
Indicated								
West Mine - South West	300	4.66	45	579	4.59	85	-279	-40
West Mine – North West				24	4.19	3	-24	-3
West Mine - Lower Inter	122	6.04	24	103	19.86	66	20	-42
West Mine - Inter	124	4.43	18	124	4.43	18	0	0
West Mine - 109	0	0.00	0	19	11.19	7	-19	-7
West Mine - 111	52	5.24	9	52	5.24	9	0	0
West Mine - 113	182	5.24	31	681	3.89	85	-499	-54
West Mine - 115	112	14.68	53	24	15.28	12	88	41
Principal - 117S	0	0.00	0	18	8.99	5	-18	-5
Principal - 118	230	7.04	52	230	7.04	52	0	0
Principal - Crown Pillar	1,785	6.19	355	339	5.51	60	1,446	295
Principal - Underground	837	6.38	172	316	7.01	71	522	101
East Mine - Crown Pillar	399	2.63	34	667	4.03	86	-268	-53
East Mine - Underground	90	6.27	18	138	8.20	36	-48	-18
Total Indicated	**4,234**	**5.95**	**810**	**3,314**	**5.60**	**596**	**920**	**214**
Total Mea. + Ind.	**4,962**	**5.87**	**936**	**3,613**	**5.70**	**662**	**1,349**	**274**
Inferred								
West Mine - Lower Inter	43	5.62	8	43	5.62	8	0	0
West Mine - 104	115	6.62	25	115	6.62	25	0	0
Principal - 118	854	6.64	183	854	6.64	183	0	0
Principal - 123S	714	9.42	216	714	9.42	216	0	0
Principal - Crown Pillar	841	5.97	162	1,647	6.43	340	-805	-179
Principal - Underground	836	5.97	161	1,316	6.50	275	-480	-114

Classification Location - Zone	2008			2007			Gain (Loss)	
	Tonnes (000)	Au g/t	Ounces (000)	Tonnes (000)	Au g/t	Ounces (000)	Tonnes (000)	Ounces (000)
East Mine - Crown Pillar	310	3.02	30	170	5.74	31	140	-1
East Mine - Underground	156	9.10	46	156	9.10	46	0	0
East Mine - Cherty	225	6.80	49	225	6.80	49	0	0
East Mine - 160	243	5.40	42	243	5.40	42	0	0
Total Inferred	**4,339**	**6.60**	**920**	**5,484**	**6.89**	**1,215**	**-1,145**	**-295**

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at cut-off grades of:
   - 4 g/t Au for West Mine, Principal Mine and East Mine.
   - 3 g/t Au for South West, Inter and 104 zones in the West Mine. Those zones were estimated by Aurizon in 2000 using 2D polygons on longitudinal sections and reviewed by RPA in 2005.
   - 1.30 g/t Au for the East Mine – Open Pit (Geostat, 2008).
3. Mineral Resources are estimated using an average long-term gold price of US$750 per ounce, and a US$/C$ exchange rate of 1:1.10.
4. Minimum mining widths of two to three metres were used.
5. Mineral Resources are exclusive of Mineral Reserves.
6. Totals may not represent the sum of the parts due to rounding.

DATABASE

The current resource estimate is based on data provided by Aurizon, which have been obtained during the various drilling programs since the initial discovery in 1981. The database includes survey, assay, and lithological data, and was created by merging files from various sources (Aurizon, Inco Gold, and TVX). Scott Wilson RPA has conducted many spot checks and concludes that the database is well maintained. Errors found were diligently corrected. The database structure is presented in Table 17-3:

TABLE 17-3 DATABASE STRUCTURE
Aurizon Mines Ltd. – Casa Berardi Mine

Table	Main Fields
Collars	Hole Name, Easting, Northing, Elevation, Azimuth, Dip, Length, Hole Type, Date Started, Date Finished, Logged By, Target
Deviations	Hole Name, Depth, Azimuth, Dip, Test Type
Lithologies	Hole Name, From, Main-Sub Unit Level, To, Rock Type, Description
RQD	Hole Name, From, To, Length, Length>100mm, RQD calculation
Assays	Hole Name, From, To, Length, Sample Number, Or_Tra (gold assays), Density

DENSITY DETERMINATION

PRE 1997

Historically, TVX used a density of 2.77 t/m^3 for Mineral Reserve estimation. The same density factor was also utilized in the mill operation.

METHODOLOGY OF DENSITY DETERMINATIONS ON DRILL CORE

Density determinations on drill core have been carried out on pieces of whole core prior to crushing for assaying. Methodology used was weight dry/weight wet. As rocks at Casa Berardi are non-porous, no wax coating was applied to core samples for density determinations.

1999-2000

In 1999-2000, Aurizon performed new tests to verify the validity of the density data. In the first series of tests, two bulk samples were collected from the mineralized zones underground. The samples included 60% material from Lower Inter Zone, 20% from South West Zone, and 20% from North West Zone, and were sent to Laboratoire LTM Inc., and Lakefield. The densities determined by the laboratories were 2.94 t/m^3 and 2.84 t/m^3, respectively. These results were different from what had historically been used at the mine.

Aurizon retained Techni-Lab to undertake density determination tests on 33 diamond drill core samples available from exploration and definition drilling. The density values obtained varied from 2.64 t/m^3 to 2.89 t/m^3, with an arithmetic mean of 2.77 t/m^3. CANMET performed density determination on one bulk sample taken from underground workings for the paste backfill study. This sample returned a bulk density factor of 2.74 t/m^3.

In 2000, Aurizon also performed density determinations on drill core samples from the Principal Zone. In total, 24 drill core samples from nine holes in zones 24-1, 24-2, 25-4, 25-8, and 27-1 were taken for the density test. The average density for the various zones ranged from 2.83 t/m^3 (zones 24-1 and 24-2) to 3.01 t/m^3 (Zone 25-8, in the iron formation).

2002-2003

During the 2002-2003 drilling program, Aurizon began routine acquisition of specific gravity data for the samples taken for assaying, as well as samples collected at an interval of 25 m from representative lithological units.

These samples were taken within zones 117, 123 and the Sulph-D Zone (now part of Zone 118). The density determination results are shown in Table 17-4.

TABLE 17-4 2002-2003 DENSITY DETERMINATIONS - ZONES 117-123 AND SULPH-D
Aurizon Mines Ltd. – Casa Berardi Mine

Rock Type	Density Measurement	Number of Tests
Volcanic	2.92	148
Quartz Veins and stockwork	2.70	54
Sedimentary Rocks	2.77	200
Sulphide-rich unit	3.60	9
Fault	2.76	10
Other	-	4
Total		**425**

2004 – ZONE 113

In 2004, during the drilling program, Aurizon retained SGS in Rouyn-Noranda to undertake density determination tests on drill core samples from the upper part of 113 Zone. A total of 629 measurements were done, with 95% of values ranging between 2.50 t/m^3 and 3.00 t/m^3.

Table 17-5 presents the results by rock type. On average, the density varies from 2.67 t/m^3 for quartz veins to 2.85 t/m^3 for schist, however, as the majority of the ore in this zone lies within quartz veins (>90% of the resources) and wacke (<10%), an average density of 2.70 t/m^3 was assumed to be more representative of the upper part of 113 Zone.

TABLE 17-5 2004 DENSITY DETERMINATION – 113 ZONE UPPER PART
Aurizon Mines Ltd. – Casa Berardi Mine

Rock Type	Density Measurement	Number of Tests
Schist	2.85	15
Quartz Veins	2.67	349
Wacke	2.79	80
Conglomerate	2.79	47
Mudrock	2.75	80
Volcanite	2.81	58
Total		**629**

Although fewer density determinations were carried out in the lower part of 113 Zone, Scott Wilson RPA (RPA in 2005) concluded that there was no reason to believe that densities for the upper and lower parts of 113 Zone were different, as there was no geological difference between the two parts.

In 2004, during the testwork program supervised by Met-Chem, specific gravity tests were performed on the samples processed at Lakefield. Thirty-two pails of samples comprising eight individual samples from the Casa Berardi deposit were sent to Lakefield. The samples represented three major ore types:

- Sediments (lI3S)
  - 113S1: 5 pails
  - 113S2: 4 pails
- Lower Inter (L)
  - LWI-1: 3 pails
  - LWI-2: 4 pails
  - LWI-3: 4 pails
- Quartz (I13Q)
  - 113Q-1: 4 pails
  - 113Q-2: 4 pails
  - 113Q-3: 4 pails

The suffix numbers (1, 2 and 3) represented increasing ore grade.

Three large bulk samples (Vrac) were also received for the grindability testwork.

Pail samples were combined into composites (comp) for some of the tests. Densities for composite samples and bulk samples were as follows:

- 113S-Comp: 2.87, 113-Bulk: 2.84
- LWI-Comp: 2.70, LWI-Bulk: 2.57
- 113-Q-Comp: 2.72, 113-Bulk: 2.68

Lakefield concluded that the average values were 2.74 t/m^3 for the bulk sample and 2.80 t/m^3 for the core sample composite, with the arithmetic mean of density values from all the laboratory testwork being 2.78 t/m^3. This value is close to the historical density used by TVX during the mine operation.

2006

In 2006, Aurizon carried out an extensive definition program on the Lower Inter Zone, however, no density determinations were carried out on drill core despite Scott Wilson RPA's recommendations in the October 2005 NI 43-101 report. Scott Wilson RPA recommends that Aurizon carry out density determinations on the Lower Inter core that is still available.

DENSITY FACTORS USED IN THE RESOURCE ESTIMATION

Table 17-6 presents the density factors that are currently used in the resource estimation.

TABLE 17-6 DENSITY USED FOR MINERAL RESOURCE ESTIMATION

Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Density (t/m^3)
West Mine	
Lower Inter HG Core	2.77
Lower Inter LG Core	2.77
Inter	2.77
North-West	2.77
South-West	2.77
104	2.77
109	2.77
111	2.77
113	2.70
115	2.75
117S	2.70
Principal Mine	
118-1	2.71
118-2	2.85
118-3	2.71
118-4	2.71
123	2.77
22_06_01	2.90
22_06_02	2.90
24_01	2.90
24_02	2.90
24_03_01	2.90
24_03_02	2.90
24_04	2.90
25_04	2.90
25_08_01	2.90
25_08_02	2.90
25_08_03	2.90
25_08_04	2.90
25_08_06	2.90
26_05_01	2.90

Zone	Density (t/m^3)
26_05_02	2.90
27_01_01	2.90
27_01_02	2.90
27_01_03	2.90
East Mine	
148-1	2.77
148-2	2.77
148-3	2.77
148-4	2.77
148-5	2.77
148-6	2.77
148-7	2.77
160	2.77
Cherty	2.77

In December 2008, Aurizon provided Scott Wilson RPA with a file of density determinations that were extracted from the Gemcom assay table. The file contains density determinations for 113, 115, 118 and Principal zones. Table 17-7 summarizes the database of density determinations.

TABLE 17-7 2008 DENSITY DETERMINATIONS IN THE DATABASE
Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Number of Determinations	Average	Minimum	Maximum
113	947	2.74	2.46	3.78
115	70	2.76	2.62	2.99
118	203	2.81	2.53	3.69
Principal	29	2.83	2.64	3.03

Scott Wilson RPA recommends revisiting density for 113 Zone in order to determine whether or not to use the updated mean. Since 2004, a density of 2.70 t/m^3 has been used in 113 Zone. Scott Wilson RPA also recommends that the assay table be revisited to ensure all density determinations have been entered. Scott Wilson RPA is of the opinion

that a density of 2.77 t/m^3 should be used for lenses on which no density determinations have been done, but which have similar geology.

GEOLOGICAL INTERPRETATION

Aurizon carried out the geological interpretation and correlation of lenses on 1:500 scale vertical sections spaced at 12.5 m, 20 m, 25 m, or 50 m. Drill hole spacing ranges from 10 m to 25 m. In general, the drill hole spacing is sufficiently dense to confidently interpret the quartz vein systems from point to point and section to section. Aurizon used raw assays for geological interpretation. The lenses were projected on various levels to verify their continuity and to check the interpretations. Adjustments on sections and plans were made when necessary, in order to have a consistent interpretation. In Scott Wilson RPA's opinion, Aurizon has made a substantial effort in delineating the mineralization associated with alteration, sulphide mineralization, quartz veining, etc.

Average grades of drill hole intercepts were calculated by combining individual assays and were used to construct 3D solids on mineralization.

Chip samples from development headings were used only in the East Mine. Chip samples of other sectors are not yet entered in the database. Scott Wilson RPA recommends entering chip samples in the assay database and using them for geological interpretation and solid modelling as well as in block model grade estimation. This would also help in the mine-mill grade reconciliation, especially on a stope by stope basis.

LOWER INTER ZONE

The definition drilling program carried out during 2007 has significantly improved the knowledge of the lens and has permitted to outline a rich core in the Lower Inter Zone. The interpretation of that core, despite the presence of the Lower Inter and Casa Berardi faults which are located on the mining hanging wall, has resulted in an overall higher grade in comparison to Mineral Resource estimates that was carried out in 2005. The geology staff created two mineralized envelopes (Figures 28-1 and 28-2, Appendix 4):

- A high grade core based on a 4 g/t Au cut-off, namely LI_ECON.
- An outer low grade envelope based on a 1 g/t Au cut-off, namely LI_BT (BT = basse teneur = low grade).

Scott Wilson RPA reviewed cross-sections and considers the geological interpretation done by Aurizon to be representative of the available data.

113 ZONE

The mineralized envelope was interpreted on both sections generally spaced at 15 m, and plan views. The geology staff created one envelope based on the 4.0 g/t Au cut-off; however, some lower grade areas were incorporated for the sake of continuity. A longitudinal section is presented in Figure 28-3, Appendix 4).

PRINCIPAL MINE ZONES

The Principal Zone area is located between the West Mine and the East Mine from Section 12,200 E to 12,800 E. To date, a total of 25 mineralized zones have been modelled at the Principal Zone (Figures 28-4 to 28-26, Appendix 4).

EAST MINE UNDERGROUND

In 2007, the underground portion of the East Mine was re-intepreted by Aurizon. Several mineralized zones which present an en-echelon pattern were interpreted, namely, 148-1, 148-2, 148-3, 148-4, 148-5, 148-6, and 148-7. Grade estimation was carried out from 3D solids of unmined sectors which were created between the 100 and 350 levels (Figures 28-27 to 28-30, Appendix 4). Drill hole samples as well as development samples were used for grade interpolation.

The North, 160E, and Cherty zones were estimated by TVX in 1996, at a cut-off grade of 4.31 g/t Au. Zone 160E is located approximately 400 m to the North East of the East Mine shaft, between sections 15,700 E and 16,500 E and extends from surface to the 300 m level. The Cherty Zone is located approximately 30 m to the north of the Casa Berardi Fault, between sections 15,650 E and 15,950 E. Aurizon re-evaluated the zones in 2000 and classified them as Inferred Resources. Scott Wilson RPA agrees to this classification, as it is based on relatively sparse data.

EAST MINE CROWN PILLAR

The East Mine has been mined out from the 65 m to 550 m levels. The two main mineralized veins close to the Casa Berardi Fault are open at depth and laterally, and have not been mined above the 65 m level. Aurizon conducted definition drilling programs to evaluate the resource potential of the Crown Pillar and defined resources sufficient to consider open pit mining.

MINIMUM WIDTH

Historical resource estimates used different minimum mining widths, varying between two and three metres. Since Aurizon acquired the property, all zones that have their Mineral Resource estimated by block modelling have been interpreted using a three metre minimum width. Scott Wilson RPA has not seen many drill hole intercepts which would be interpreted and calculated based on a minimum width. The width of most of the blocks exceeds the minimum width.

CUT-OFF GRADE

Several cut-off grades have been used for resource estimation, depending on zone and time. A cut-off of 4.0 g/t, slightly below the break-even operating cut-off of 4.4 g/t Au, has been used for all zones that have their Mineral Resource estimated by block modelling. Table 17-8 presents the cut-off grades used in the past and current resource estimations.

TABLE 17-8 CUT-OFF GRADES FOR RESOURCE ESTIMATION
Aurizon Mines Ltd. – Casa Berardi Mine

Period	Cut-off grade g/t Au	Zone
Scott Wilson RPA/Aurizon 2007-2008	4.00	West Mine East Mine Underground Principale Mine Underground
Scott Wilson RPA 2008	0.84	Principale Mine: Crown pillar open pit
BBA 2008	1.19	East Mine: Crown pillar open pit
Geostat 2005 Geostat 2007	1.30	East Mine: Crown pillar open pit
Aurizon FS 2000	3.00	South-West, Inter, 104. Those zones were estimated by 2D polygons on longitudinal sections and reviewed by RPA in 2005.
TVX 1996	4.31	East Mine: Zone 160E, Cherty. Those zones were estimated by 2D polygons on longitudinal sections and reviewed by RPA in 2005.

Scott Wilson RPA calculated the cut-off grade by using the following parameters:

- Gold price: US$750/oz;
- Exchange rate: C$1.10/$US;
- Mill recovery: 92% (2009 budget);
- Total operating costs: $108 (2009 budget).

The resulting cut-off grade was calculated as shown below:

- Gold price: US$750/oz x CDN$1.10/US$1.00 = $ 825/oz.
- Revenue per unit gold: $825 ÷ 31.1035 g/oz = $26.52 x 92% = $24.40/g.
- Cut-off grade = Operating costs / revenue = $108/t / $24.50/g = 4.4 g/t Au.

BBA used a 1.19 g/t Au cut-off grade when considering open pit mining at the East Mine. Scott Wilson RPA considers this cut-off to be reasonable and appropriate.

CAPPING OF HIGH GRADE VALUES

Grade capping was carried out to minimize the impact of very high grade assays on the resource estimate. Each zone that represented part of the present estimate was treated

differently and used a different high grade capping value. Statistical distributions of original assays within the mineralized envelopes were plotted in the form of histograms and the distribution of assays was plotted on a log-normal distribution plot where a long tail of high-grade values is observed. Capping factors were determined from those histograms and also from statistical reports for gold.

Capping factors were applied to raw assays prior to compositing. This approach is used to prevent the high-grade assays from being smeared over two composites. Table 17-9 presents the capping factors used in the various estimates. Histograms are found in Appendix 3.

TABLE 17-9 CAPPING FACTORS
Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Capping Factor – Au g/t	Basis of Factor Determination and Source
West Mine		
Lower Inter HG core	120	Histograms and Statistical report – Scott Wilson RPA
Lower Inter LG core	30	Histograms and Statistical report – Scott Wilson RPA
104	31	Mean + 2 std dev – Aurizon 2000
Inter	18.7	Mean + 2 std dev – Aurizon 2000
North West	50	Histograms and Statistical report – Scott Wilson RPA
South West	18.5	Mean + 2 std dev – Aurizon 2000
109	65	Histograms and Statistical report – Scott Wilson RPA
111	30	Histograms and Statistical report – Scott Wilson RPA
113	175	Histograms and Statistical report – Scott Wilson RPA
115	60	Histograms and Statistical report – Scott Wilson RPA
117S	40	Histograms and Statistical report – Scott Wilson RPA
Principal Mine		
118-1	30	Histograms and Statistical report – Scott Wilson RPA
118-2	30	Histograms and Statistical report – Scott Wilson RPA
118-3	30	Histograms and Statistical report – Scott Wilson RPA
118-4	20	Histograms and Statistical report – Scott Wilson RPA

Zone	Capping Factor – Au g/t	Basis of Factor Determination and Source
123	50	Histograms and Statistical report – Scott Wilson RPA
22_06_01	15	Histograms and Statistical report – Scott Wilson RPA
22_06_02	15	Histograms and Statistical report – Scott Wilson RPA
24_01	16	Histograms and Statistical report – Scott Wilson RPA
24_02	25	Histograms and Statistical report – Scott Wilson RPA
24_03_01	20	Histograms and Statistical report – Scott Wilson RPA
24_03_02	10	Histograms and Statistical report – Scott Wilson RPA
24_04	10	Histograms and Statistical report – Scott Wilson RPA
25_04	30	Histograms and Statistical report – Scott Wilson RPA
25_08_01	50	Histograms and Statistical report – Scott Wilson RPA
25_08_02	50	Histograms and Statistical report – Scott Wilson RPA
25_08_03	50	Histograms and Statistical report – Scott Wilson RPA
25_08_04	50	Histograms and Statistical report – Scott Wilson RPA
25_08_06	50	Histograms and Statistical report – Scott Wilson RPA
26_05_01	25	Histograms and Statistical report – Scott Wilson RPA
26_05_02	25	Histograms and Statistical report – Scott Wilson RPA
27_01_01	55	Histograms and Statistical report – Scott Wilson RPA
27_01_02	55	Histograms and Statistical report – Scott Wilson RPA
27_01_03	55	Histograms and Statistical report – Scott Wilson RPA
25_08_01 Chips & Test Holes	18	Histograms and Statistical report – Scott Wilson RPA
25_08_02 Chips & Test Holes	18	Histograms and Statistical report – Scott Wilson RPA
East Mine		
148-1	50	Histograms and Statistical report – Scott Wilson RPA
148-2	50	Histograms and Statistical report – Scott Wilson RPA
148-3	50	Histograms and Statistical report – Scott Wilson RPA
148-4	50	Histograms and Statistical report – Scott Wilson RPA
148-5	50	Histograms and Statistical report – Scott Wilson RPA
148-6	50	Histograms and Statistical report – Scott Wilson RPA
148-7	50	Histograms and Statistical report – Scott Wilson RPA
160	31	TVX
Cherty	31	TVX
East Mine – Crown Pillar open pit	No capping	Geostat

Scott Wilson RPA agrees with the capping factors based on the mean of assays plus two standard deviations, which were used by Aurizon in 2000 for polygonal resource estimates. Scott Wilson RPA considers these capping factors to be appropriate and conservative.

RESOURCE METHODOLOGIES

Mineral Resources at Casa Berardi have been determined by using different methodologies:

- 2D models (polygons on cross-sections and longitudinal sections)
- 3D block models

2D MODELS

Most of the 2D polygonal estimates that had been carried out by TVX or Aurizon before 2005 have been re-interpreted and converted to 3D block model estimates. There are only a few 2D polygonal estimates that have not been yet re-evaluated:

- West Mine: Inter, South West, 104
- East Mine: 160E, Cherty.

For resource estimation by the conventional polygonal method, individual vertical longitudinal sections were produced for each lens. Polygons were created on vertical sections around drill hole intercepts with grades above the cut-off grade. Polygon limits were usually extrapolated to halfway between holes where a line between two holes was drawn by joining midpoints of the hanging wall and footwall of the mineralized intersection. Polygon areas were calculated on vertical cross-sections in AutoCAD. Volumes were calculated by multiplying block area by block width, which were measured on the vertical longitudinal section. Tonnage was calculated by multiplying area by density.

Average grades of drill hole intercepts were calculated by combining individual assays from one hole or, in some cases, from more than one hole. Chip samples from development headings and sludge samples from test holes were used when available.

The influence of diamond drill hole intercepts was defined on vertical sections using the mid-distance rule.

Scott Wilson RPA reviewed cross-sections and longitudinal sections, and finds the 2D calculations to be well done and conservative. The mid-distance approach is well respected, and extrapolation of the mineralization beyond holes is not exaggerated.

3D MODELS

Since 2005, a tremendous effort was undertaken by Aurizon to move from 2D polygonal models to 3D block models. The geological interpretation on sections and plans was used to construct 3D solids which were filled with blocks of irregular dimensions, usually 2.5 m (east-west) x 1.25 m (north-south) x 5.0 m (elevation).

Grade Interpolation

The grade of each block is estimated from the surrounding drill hole assays that are located inside the solids. The drill hole assays are previously converted into composites of an equal length (one-metre composites). Usually, a minimum of two and a maximum of twelve composites are used for grade estimation. The block grade is estimated by averaging the grade of the composites found within a search ellipsoid which is oriented in space and has a fixed dimension, with lengths usually different along the X-Y-Z axes. In most cases, the inverse distance squared technique (ID^2) was used to weight the composites in order to obtain the block grade. Scott Wilson RPA also recommends using a different interpolation technique, such as kriging, for comparison. Kriging estimates should also be validated in the tonnage and grade reconciliation process.

Volume and Tonnage Calculation

Tonnage of each block is represented as volume which is calculated from a block dimension (x,y,z) multiplied by a constant density. Block volumes are calculated from partial blocks on envelope boundaries. This technique is known as "needling" in the Gemcom volumetric process. Needling differentiates the proportion of each solid as it intersects the blocks of a block model, providing weighted tonnage and grade estimates for each rock type. Gemcom software samples the rock codes, grades, and densities. It

also samples the data along the path of each needle, and then interpolates the volumes and reserves. Gemcom can needle in any direction.

Tonnage is the result of volume calculation multiplied by fixed density, which is generally different from one zone to another.

Grade and Volume Calculation for Mine Planning Purposes

Because the block models are not updated on a regular basis or as needed with the latest information, the stope grades are estimated using the nearest neighbour method for all of the stopes for mine planning and some of the stopes for Mineral Reserve reporting purpose. In 2008, all of the stopes that were in the mine plan and 22% of the stopes (103/471 stopes) representing approximately 30% of the tonnes reported in the Mineral Reserves, were estimated that way. Volumes are estimated from 3D solids in Gemcom.

To obtain the grade of a particular stope, only drill hole intercepts that are found within that stope are used. Scott Wilson RPA recommends that this grade interpolation method be disregarded, considering all the effort taken since 2005 to transfer to Gemcom block modelling, in which the grade of each block is obtained by interpolation of surrounding drill hole samples (composites), no matter where the composite is located, inside or outside a stope. Grade interpolation based on composites should be used not only for long term Mineral Resource estimation but on a day-to-day basis. Scott Wilson RPA recommends proper training to overcome this situation.

VARIOGRAPHY

Variography has been used to determine search ellipsoid orientations and dimensions in the Mineral Resource estimates. Directional variograms were generated in increments of 30º azimuth and 15º dip. Downhole variograms were also plotted. Table 17-10 summarizes the dimensions and orientations of search ellipsoids.

TABLE 17-10 BLOCK MODELLING AND INTERPOLATION PARAMETERS

Aurizon Mines Ltd. – Casa Berardi Mine

Zones	Search Ellipsoids Orientation (Rotation) Long, Intermediate and Short Axis
West Mine North-West (Composite Length: 1.25 m)	Rotation: ZXZ (25º, -80º, 90º) Range XYZ: 25m, 25m, 10m
Lower Inter - High Grade Core (Composite Length: 1.0 m) Lower Inter - Low Grade Shell (Composite Length: 1.0 m)	No rotation Range XYZ: 30m, 30m, 30m
109 (Composite Length: 1.0 m)	Rotation: ZXZ (0º, 25º,0º) Range XYZ: 35m, 35m, 10m
111 (Composite Length: 1.25 m)	Domain: East Rotation: ZXZ (-15º,-85º,90º) Range XYZ: 35m, 35m, 10m Domain: Center Rotation: ZXZ (0º,-85º,0º) Range XYZ: 35m, 35m, 10m Domain West Rotation: ZXZ (15º,-85º,90º) Range XYZ: 35m, 35m, 10m
113 (Composite Length: 1.0 m)	Domain: East Down Rotation: ZXZ (0º, 90º,0º) Range XYZ: 35m, 35m, 10m Domain: East Down2 Rotation: ZXZ (15º, 60º,0º) Range XYZ: 35m, 35m, 10m Domain: East Top Rotation: ZXZ (0º, 80º,0º) Range XYZ: 35m, 35m, 10m Domain: West Down Rotation: ZXZ (-20º, 90º,0º) Range XYZ: 35m, 35m, 10m Domain: West Top Rotation: ZXZ (-20º, 80º,0º) Range XYZ: 35m, 35m, 10m
115	No rotation Range XYZ: 35m, 35m, 10m
117S (Composite Length: 1.0 m)	Rotation: ZXZ (-12, 90º,-65º) Range XYZ: 50m, 50m, 10m

Zones	Search Ellipsoids Orientation (Rotation) Long, Intermediate and Short Axis
Principal Mine	
118-1 (formerly 118-A) (Composite Length: 1.0 m)	Domain: 1 Rotation: ZXZ (0º, 85º,90º) Range XYZ: 50m, 50m, 10m Domain: 2 Rotation: ZXZ (0º,75º,50º) Range XYZ: 50m, 50m, 10m Domain: 3 Rotation: ZXZ (-20º,85º,50º) Range XYZ: 50m, 50m, 10m
118-2 (formerly 118-Mylonite) (Composite Length: 1.25 m)	Rotation: ZXZ (0º, 80º,90º) Range XYZ: 50m, 50m, 10m
118-3 (formerly 118-B) (Composite Length: 1.25 m)	Domain: 1 Rotation: ZXZ (0º,85º,90º) Range XYZ: 50m, 50m, 10m Domain: 2 Rotation: ZXZ (0º,-85º,90º) Range XYZ: 50m, 50m, 10m
118-4 (extension of 118-1) (Composite Length: 1.0 m)	Domain: 1 Rotation: ZXZ (0º,90º,90º) Range XYZ: 50m, 50m, 10m Domain: 2 Rotation: ZXZ (5º,70º,90º) Range XYZ: 50m, 50m, 10m Domain: 3 Rotation: ZXZ (0º,75º,90º) Range XYZ: 50m, 50m, 10m Domain: 4 Rotation: ZXZ (10º,90º,90º) Range XYZ: 50m, 50m, 10m
123-1 (Composite Length: 1.0 m)	Rotation: ZYZ (90º,-42º,-45º) Range XYZ: 100m, 75m, 25m
123-2 (Composite Length: 1.0 m)	Rotation: ZYZ (90º,-60º,-45º) Range XYZ: 100m, 75m, 25m
123-3 (Composite Length: 1.0 m)	Rotation: ZYZ (90º,-65º,-45º) Range XYZ: 100m, 75m, 25m

Zones	Search Ellipsoids Orientation (Rotation) Long, Intermediate and Short Axis
22_06_01 22_06_02 24_01 24_02 24_03_01 24_03_02 24_04 25_04 25_08_01 25_08_02 25_08_03 25_08_04 25_08_06 26_05_01 26_05_02 27_01_01 27_01_02 27_01_03	No rotation Range XYZ: 50m, 50m, 50m
East Mine	
148-1 148-2 148-3 148-4 148-5 148-6 148-7 148-8	Domain: Top Rotation: ZXZ (5º, 85º,90º) Range XYZ: 35m, 35m, 10m Domain Down: X (35 m), Y (35 m), Z (10 m) Rotation: ZXZ (5º, -85º,90º) Range XYZ: 35m, 35m, 10m

Downhole variography indicates a moderate nugget effect, varying from 30% to 60% of the sill. The range for one-metre composites is relatively low, from two metres to ten metres, which is considered to be 'normal' for this type of a deposit (Figure 17-1). Based on 3D variography, the best grade continuity of mineralization appears to be along dip and along strike (Figure 17-2, 17-3, and 17-4).

FIGURE 17-1 DOWNHOLE VARIOGRAM – 113 ZONE

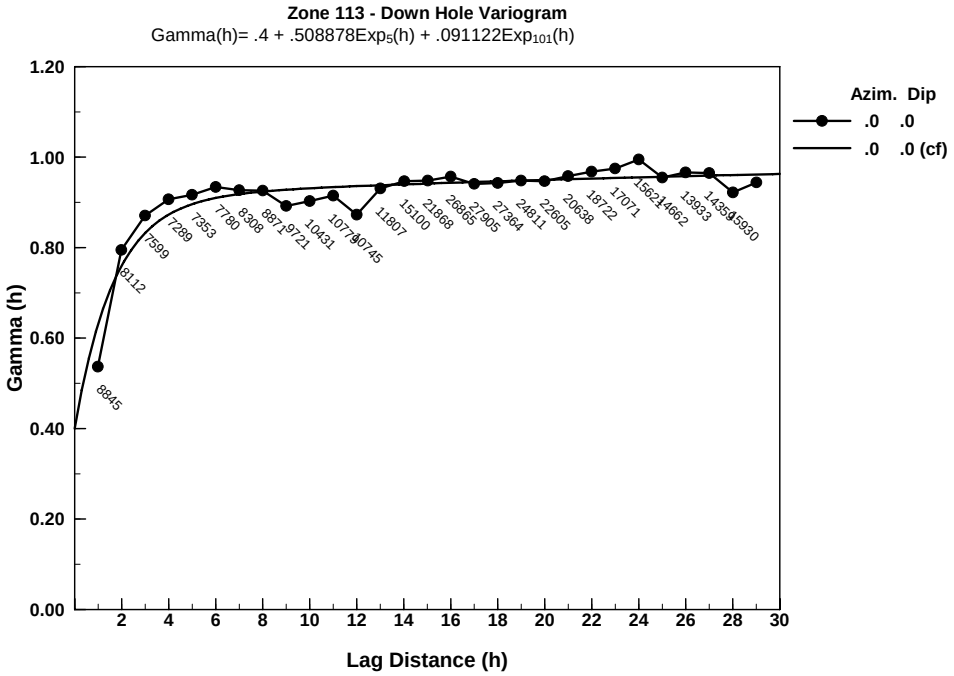


FIGURE 17-2 3D VARIOGRAMS – 113 ZONE – DIP 0º

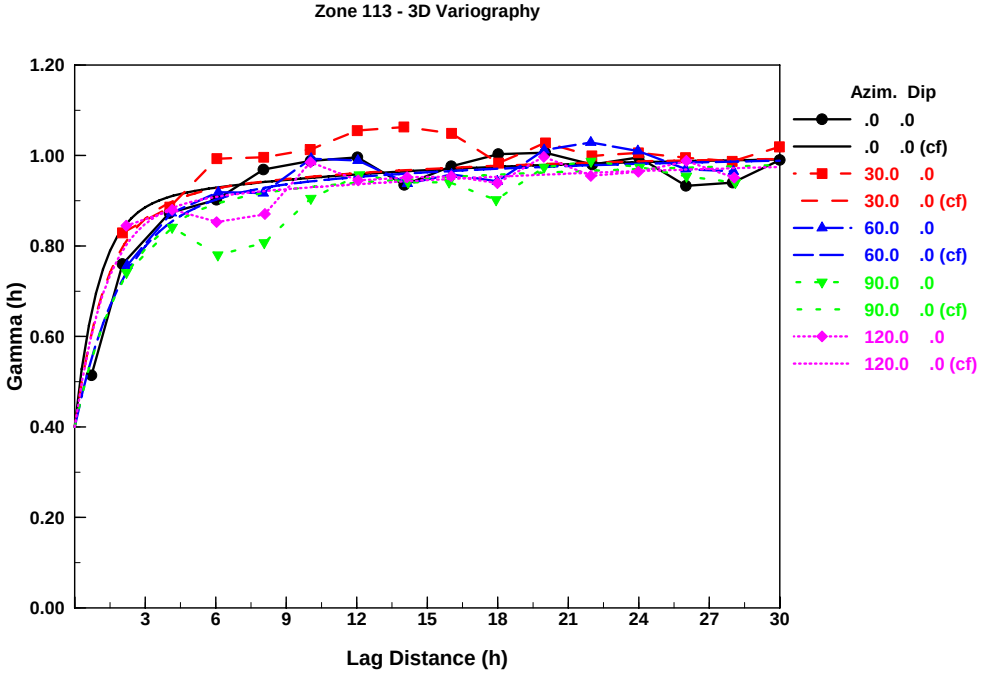


FIGURE 17-3 3D VARIOGRAMS – 113 ZONE – DIP -30º

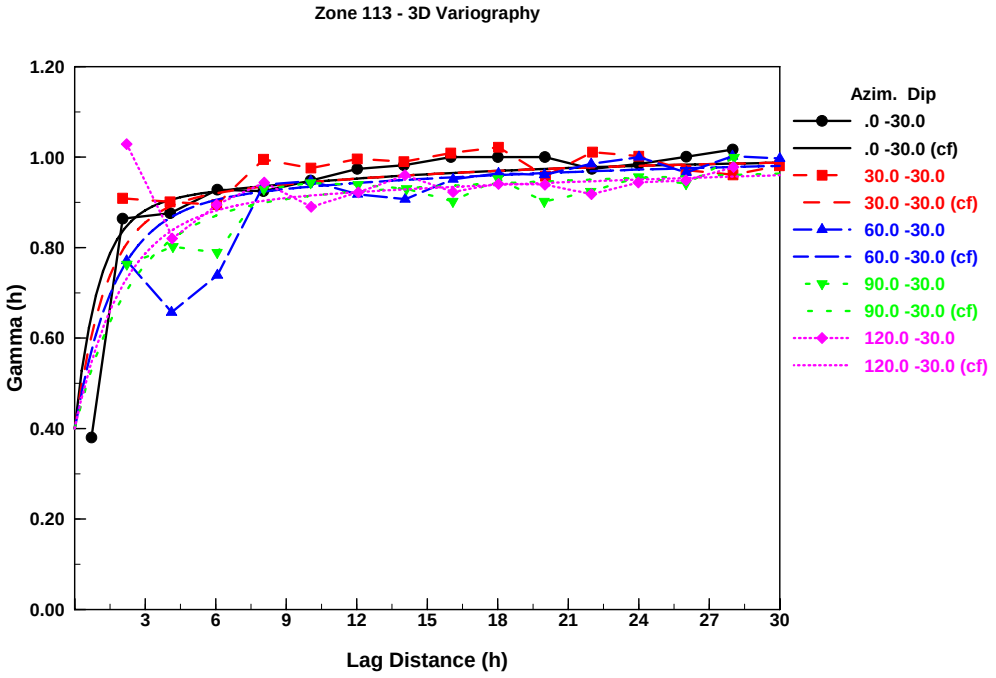
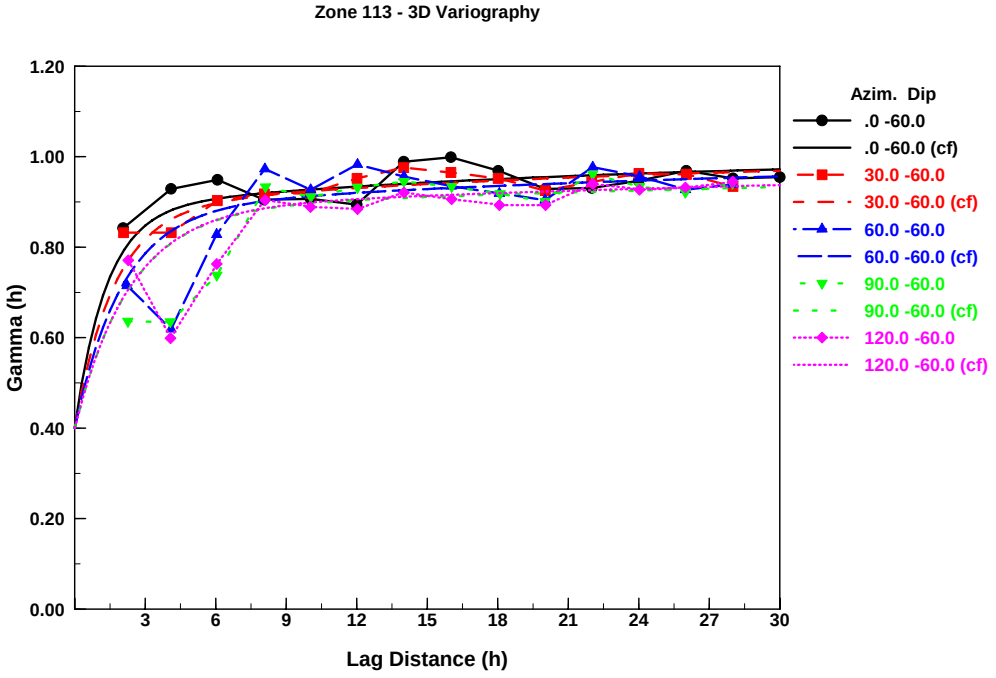


FIGURE 17-4 3D VARIOGRAMS – 113 ZONE – DIP -60º



MINERAL RESOURCES – EAST MINE CROWN PILLAR

Geostat carried out Mineral Resource estimates in 2007 and 2008 using kriging. Two-metre composites along drill holes were used for block grade estimation. Block

dimensions were two metres (east-west) by two metres (north-south) by five metres (elevation). Based on variography Geostat determined that the ranges of eight metres, five metres and four metres represent an effective range of influence of 24 m down dip, 15 m along N75°E direction, and 12 m across dip.

Scott Wilson RPA agrees with Geostat's reasoning that capping values do not have to be applied for the East Mine Crown Pillar open pit. Geostat concluded: '*…the high grades do not significantly deviate from the lognormal law curve. This does not indicate the pertinence of cutting the high values'*. To determine the necessity of capping values, Geostat considered '*anomalous the situation where more than 10% of the gold contained in the high values is found in less than 1% of the whole set of composites.'*

Scott Wilson RPA is of the opinion that changing the current capping factors will have a relatively little effect on the overall grade of the resources and reserves. The effects should be considered in a sensitivity analysis of the overall reserve grade.

Scott Wilson RPA briefly reviewed Geostat's methods and parameters, and considers the Mineral Resources of the East Mine Crown Pillar appropriate.

The estimated resources are NI 43-101 compliant and the classification criteria are based on proximity to composites. Two different search ellipsoids were used to determine the resource classification. Table 17-11 presents the Geostat classification for the East Mine Crown Pillar.

TABLE 17-11 MINERAL RESOURCE CLASSIFICATION – EAST MINE CROWN PILLAR

Aurizon Mines Ltd. – Casa Berardi Mine

Category	Search ellipses (oriented following the veins)	Minimum number of composites	Maximum number of composites per hole
Measured	12.5m, 12.5m, 10m	2	1
Indicated	25m, 25m, 10m	2	1
	12.5, 12.5, 10m	2	2
Inferred	Inside the mineralized envelope, neither measured nor indicated		

In 2006, Geostat determined the cut-off grade at 1.3 g/t Au, based on the parameters outlined in Table 17-12.

TABLE 17-12 ECONOMIC INPUTS – EAST MINE CROWN PILLAR

Aurizon Mines Ltd. - Casa Berardi Mine

Parameter	Value
Revenue	
Gold Price (US$/oz) - (C$/oz)	424 - (605)
Exchange Rate (C$/US$)	0.70
Metallurgical Recovery	87%
Operating Costs	
Overburden Mining ($/t moved)	1.85
Ore Mining ($/t moved)	4.94
Waste Mining ($/ moved)	3.78
Milling ($/t milled)	13.80

MINERAL RESOURCES – PRINCIPAL MINE CROWN PILLAR

A total of 25 mineralized zones have been modelled at the Principal Zone. Because the mineralized system extends towards the overburden-rock interface and the mineralized zones are close enough to each other to allow open pit mining, the modelling used a loose 1.0 g/t Au threshold. Scott Wilson RPA has evaluated open pit potential which included evaluation of parameters and operating costs, and subsequent open pit optimization in Whittle at various gold prices.

WHITTLE PARAMETERS

The report entitled "Prefeasibility Study for the East Mine Crown Pillar Gold Project (Casa Berardi)" by BBA, dated October 2007, was used as the basis for developing several of the optimization parameters.

BLOCK SIZE

The current block size is 1.25 m north-south by 2.5 m east-west by 5.0 m vertical. To make blocks more representative of a selective mining unit (SMU) for an open pit operation, the block model was re-blocked in Whittle to form cubes with dimensions of 5.0 m in each direction.

DILUTION

The block model is composed of full blocks and is not constrained by the mineralized wireframes. Instead, blocks are classified as ore if these wireframes encompass at least 50% of the block. Dilution is accounted by the re-blocking process which combines ore and waste blocks to the defined SMU block size.

PIT SLOPES

The Principal Zone is covered by approximately 45 m of overburden, which is composed of a thin layer of peat and thicker horizons of silt and glacial till. The host rock is of volcanic and sedimentary origin. As per the BBA study, overall pit slopes of 24º and 55º were used for the overburden and host rock, respectively.

ECONOMIC CRITERIA

Table 17-13 outlines the economic inputs used for the Whittle optimization process.

TABLE 17-13 ECONOMIC INPUTS – PRINCIPAL MINE CROWN PILLAR
Aurizon Mines Ltd. - Casa Berardi Mine

Parameter	Value
Revenue	
Gold Price (US$/oz)	750
Exchange Rate (C$/US$)	1.05
Metallurgical Recovery	87%
Operating Costs	
Overburden Mining ($/t moved)	1.75
Ore Mining ($/t moved)	3.85
Waste Mining ($/t moved)	3.76
Process and G&A ($/t milled)	18.61

Metal price and exchange rate, which are similar to those used in the Mineral Resource estimate, were assigned by Scott Wilson RPA.

Metallurgical recovery, as described in the BBA study, is based on a series of 20 cyanidation tests. The tests showed a large variability in recoveries, ranging from 73% to 98%. The arithmetic average of 87% is used by Aurizon for mine planning purposes, and Scott Wilson RPA has adopted this recovery for pit optimization.

Operating cost inputs in Whittle were derived from the 2008 LOM Plan budget for the East Mine Pillar. The BBA study outlines operating costs based on contractor prices from 2007, which are approximately 10% lower than those in the LOMP budget. Scott Wilson RPA notes that the mining and process costs are based on production rates of approximately 29,000 tpd for overburden stripping and 6,200 tpd for rock mining (ore and waste) after pre-stripping.

RESULTS

Table 17-14 outlines the results of the open pit optimization at various revenue factors. Pit optimizations were evaluated at the base price, with sensitivities at ±10% and

±20%. Additional scenarios were evaluated at the trailing three-year gold price of US$690 per ounce and an upside price of US$1,000 per ounce.

TABLE 17-14 WHITTLE RESULTS – PRINCIPAL MINE CROWN PILLAR
Aurizon Mines Ltd. - Casa Berardi Mine

Revenue Factor	Metal Price (US$/oz)	Ore ('000 t)	Waste ('000 t)	Grade (g/t)	Stripping Ratio
0.80	600	2,430	41,760	6.29	17.2
0.90	675	2,550	43,820	6.17	17.2
1.00	**750**	**2,610**	**44,950**	**6.13**	**17.2**
1.10	825	2,710	47,210	6.05	17.4
1.20	900	2,950	51,790	5.82	17.6
0.50	375	1,610	27,970	6.63	17.4
0.92	690	2,560	43,950	6.16	17.1
1.33	1,000	3,400	63,280	5.52	18.6

As indicated by the high stripping ratio, a large quantity of waste will need to be removed over the mine life. Waste mining and ore grades can be optimized in earlier years of the operation by phasing the pit. Scott Wilson RPA evaluated the potential to achieve this by running an optimization at a revenue factor of 0.50.

CONCLUSIONS

At a gold price of US$750 per ounce, the optimized pit for the Principal Zone yields total ore production of 2.6 million tonnes at 6.13 g/t Au, which captures approximately 80% of the mineable resource base. The pit averages approximately 180 m in depth, and reaches a maximum depth of 220 m.

RECOMMENDATIONS

Scott Wilson RPA recommends that a lower-grade mineralized envelope be developed. While the average grade of the open pit would decrease, overall pit economics would become more favourable. In addition, the stripping ratio would be reduced.

Production scenarios should be explored to better develop the operating cost assumptions. The costs used in the current analysis are based on a production rate of approximately 880 tpd. At the current milling capacity of 2,200 tpd at Casa Berardi, the open pit could support approximately 3.4 years of production as a stand-alone operation. Depending on the mill feed split between open pit and underground production, the operating costs could potentially be lowered to improve pit economics.

With open pit grades similar to underground feed grades at Casa Berardi, it may be more economic to mine the deeper portions of the deposit using underground methods. A trade-off study should be completed to evaluate the potential to mine the deposit using both types of mining, and determine the elevation where methods change from open pit to underground.

MINERAL RESERVES

Underground Mineral Reserves are estimated for 113 Zone, Lower Inter Zone, and a number of smaller zones. Open Pit Mineral Reserves are estimated for the East Mine Crown Pillar. These portions of the total Mineral Resources have the best potential for economic extraction due to size, grade, and proximity to existing workings and infrastructure.

Mineral Reserves are classified based on the transfer of Measured Resources to Proven Reserves, and Indicated Resources to Probable Reserves. Inferred Resources are not used in the reserve estimation.

TABLE 17-15 MINERAL RESERVES SUMMARY

Aurizon Mines Ltd. – Casa Berardi Mine

Area	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground	Proven	880,000	8.18	231,400
Underground	Probable	2,321,000	8.62	643,400
Open Pit	Proven	407,000	4.16	54,400
Open Pit	Probable	228,000	3.66	26,800
Total	**Proven & Probable**	3,836,000	7.75	956,000

Notes:
1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at a cut-off grade of 4.4 g/t Au for underground, and 1.2 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US$750 per ounce and a US$/C$ exchange rate of 1:1.10.
4. A minimum mining width of three metres was used.
5. Bulk density is 2.70 t/m^3 for 113 Zone, and 2.77 t/m^3 for other zones.

ESTIMATION METHODOLOGY - UNDERGROUND

Mineral Reserves were estimated for a longhole open stoping mining method without pillars, mined in a primary-secondary sequence. Stopes are backfilled after mining using cemented rock fill or unconsolidated waste rock.

Reserve estimations were based on 3D block models for all zones except the South West Zone; the few remaining zones that were estimated using 2D polygonal methods are not included in Mineral Reserves.

TABLE 17-16 UNDERGROUND MINERAL RESERVES BY ZONE

Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground				
113	Proven	709,000	8.73	199,200
North West	Proven	83,000	5.43	14,400
East Mine	Proven	88,000	6.27	17,800
113	Probable	993,000	9.35	298,400
Lower Inter	Probable	953,000	8.91	273,000
South West	Probable	72,000	4.64	10,700
109	Probable	68,000	5.38	11,700
111	Probable	37,000	5.44	6,400
115	Probable	30,000	11.75	11,400
117S	Probable	19,000	6.96	4,300
East Mine	Probable	63,000	8.20	16,500
Low-Grade Dev.	Probable	87,000	3.90	10,900
Total		3,201,000	8.50	874,800

Notes:
1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at a cut-off grade of 4.4 g/t Au for underground.
3. Mineral Reserves are estimated using an average long-term gold price of US$750 per ounce and a US$/C$ exchange rate of 1:1.10.
4. A minimum mining width of three metres was used.
5. Bulk density is 2.70 t/m^3 for 113 Zone, and 2.77 t/m^3 for other zones.

For 113 Zone, the 4 g/t Au resource envelope was divided into standard stope dimensions: 20 m vertically and 15 m along strike (see Section 19, Additional Requirements for Production Properties, for more detail). Hanging wall and footwall limits were delineated by the mineralized wireframe envelope. Each stope was forecast for tonnes and grade, including ore development inside the stope outline. Dilution and extraction factors were applied by stope (discussed in detail below). A high proportion of 113 Zone Mineral Resources were converted to Mineral Reserves.

Lower Inter, 111, 115, and 117 Zone reserves were estimated in a manner similar to that of 113 Zone. A 4 g/t Au resource wireframe was used to set stope boundaries.

Mineral Reserves for South West and North West Zones were estimated from previously published reserves and from mine plans prepared by Aurizon.

Stope layouts in the South West Zone were originally done at a cut-off grade of 3 g/t Au. Grade estimation has been carried out using a 2D polygonal model. Only the highest-grade stopes in this marginal zone were selected for inclusion in Mineral Reserves. Many lower-grade stopes in this zone remain outside Mineral Reserves.

Taking advantage of existing development in the North West Zone, different standard stope dimensions were used. Stopes 25 m high and 12.5 m along strike were evaluated for profit margin in the same way as 113 Zone. A high proportion of North West Zone Mineral Resources were converted to Mineral Reserves.

The East Mine underground reserves are based on a plan to re-establish access to old workings, and mine pillars and levels left behind during previous operations. Stope sizes are not standardized. Mining methods include longhole stoping where access can be attained for both top and bottom cuts, and cut and fill methods where only undercuts are accessible. Approximately one-third of the East Mine resource ounces have been converted to reserves, with the remainder tied up in areas with ground stability problems, or in stopes at or below cut-off grade.

Low-grade development ore is sourced from level development plans, occurring outside stope outlines. This development is required for stope access, therefore an incremental cut-off grade has been applied to represent the grade-control decision (send to ore pass or waste pass) that will occur for each round.

DILUTION & EXTRACTION

Internal dilution is defined as material below the cut-off grade included within a mining block. It represents areas below 4 g/t Au that were included within resource envelopes for the sake of continuity. It also includes areas within stope outlines, but outside the resource envelopes – for reasons of mining geometry such as obtaining a

favourable angle on the footwall. Internal dilution is intended to be mined with the ore, and is included within stope forecasts.

External dilution is defined as unwanted and uneconomic material coming from the periphery of a mining block. It includes material sloughing from the hanging wall or footwall, and from exposures of backfill in adjacent stopes. In this report, dilution percentage refers to external dilution, calculated as:

Dilution % = (waste tonnes / ore tonnes) x 100.

In 113 Zone, stope outlines were, by definition, inside the 4 g/t Au resource envelope, so internal dilution was automatically included in stope forecasts from the block model. External dilution from the hanging wall and footwall was initially estimated based on results from numerical modelling of in situ stresses and stope dimensions, and has since been adjusted based on operating experience, largely in 113 Zone. The average thickness of material expected to fail is 2.0 m, or 1,620 tonnes per stope, based on standard dimensions. The amount of dilution was reduced for stopes of smaller dimensions on the fringes of the zone, and increased for stopes with unfavourable geometry. On a percentage basis, with stopes ranging from 3.0 m to 20 m in thickness, hangingwall/footwall dilution can range from 10% to 66%, and averages 19%.

For the Lower Inter Zone, hanging wall/footwall dilution was calculated in a manner similar to that of 113 Zone. Due to the shallower dip of the south limb of the Lower Inter Zone, stope hanging walls are proportionately longer than the vertical height. A factor was calculated to account for this, increasing the dilution to 2,025 tonnes per stope.

Hanging wall/footwall dilution was calculated on a percentage basis for the smaller West Mine zones:

- South West Zone – 20%
- North West Zone – 18%
- 109 Zone – 15% to 18%
- 111 Zone – 25%

- 115 Zone – 18%
- 117S Zone – 18%

For the East Mine, hanging wall/footwall dilution was applied based on the two-metre thickness, as for 113 Zone. That thickness was applied to the stope dimensions for each East Mine stope. In some cases, for the smaller cut and fill stopes, the thickness was reduced.

A review of drill hole and block model grades immediately outside stope outlines indicated that ore boundaries are generally gradational, ranging from 0.5 g/t Au to 1.0 g/t Au at stope boundaries, instead of sharply cut. A grade of 0.5 g/t Au has been applied to hanging wall/footwall dilution in all zones.

Backfill dilution at zero grade was calculated by percentage for all zones. Based on standard stope dimensions of 15 m strike length and 20 m height, a side wall sloughage of 0.3 m is proportional to 2% of undiluted tonnage. Mucking floor dilution of 0.5 m, applied only to sills of unconsolidated waste fill, corresponds to 2.5% of undiluted tonnage. Each stope was assigned a backfill dilution percentage based on number of walls of fill and type of mucking floor. For the majority of the reserves, primary stopes had no backfill dilution applied, and secondary stopes had 4% backfill dilution applied (two fill walls). North West Zone percentages were slightly different due to different standard stope dimensions (12.5 m wide, 25 m high).

A summary of dilution by zone is presented in Table 17-17:

TABLE 17-17 DILUTION
Aurizon Mines Ltd. – Casa Berardi Mine

Zone	Dilution
113	19%
Lower Inter	26%
East Mine	31%
South West	20%
North West	20%
109	18%
111	26%
115	19%
117S	20%
Average	21%

Mining extraction factors were applied to stopes in all zones, based on operating experience. Primary stopes have an extraction forecast of 90%, and secondary stopes 95%. Timely application of backfill, and other measures to control hanging wall deterioration are key to achieving high extraction rates in this pillarless mining scenario.

For the East Mine, extraction factors of 90% for longhole stopes and 85% for cut and fill stopes were applied. These lower extraction rates are an allowance for ground problems due to nearby mined-out areas.

CUT-OFF GRADE

Individual stopes were evaluated using a cut-off grade of 4.4 g/t Au, after dilution and extraction factors were applied. The cut-off grade was determined as detailed above. In Scott Wilson RPA's opinion, the cut-off grade is reasonable, however, it is recommended that some changes to the calculation be considered:

- Use LOM underground mining, processing, and G&A costs, rather than budget costs for the current year. Mineral Reserves cover the full LOM, and the costs should match.

- Include underground development capital costs in the cut-off grade calculation. It is particularly important to consider these costs when

evaluating small zones, which typically require greater amounts of development per tonne of reserves.

- Evaluate mill operating data to establish grade-recovery relationships.

ESTIMATION METHODOLOGY – OPEN PIT

East Mine open pit reserves are contained in the crown pillar left behind by previous mining. BBA estimated open pit reserves in October 2007, and updated the estimate in November 2008, after an in-fill drilling campaign was completed. BBA's work has been based on block models by Geostat.

An updated pit optimization was run by BBA, followed by open pit design. Pit optimization parameters and design criteria are discussed in Section 19, Additional Requirements for Production Properties.

Mineral Reserves were estimated by totalling all material within the designed pit above a pit discard cut-off grade of 1.2 g/t Au, calculated from the following inputs:

- Processing cost of $13.80 per tonne ore
- G&A cost of $3.51 per tonne ore
- Metallurgical recovery of 87%
- Gold price of C$605 per ounce
- Dilution of 20%

Scott Wilson RPA notes that most of the cut-off grade inputs date back to BBA's original work, and recommends that they be updated to reflect current values. Using current values, the pit discard cut-off grade would be 1.6 g/t Au. In Scott Wilson RPA's opinion, applying this cut-off grade within the current pit design would result in little material difference.

COMPARISON TO PREVIOUS ESTIMATES

A summary of the previous Mineral Reserve estimate, dated December 31, 2007, is compared to the current Mineral Reserve estimate in Table 17-18:

TABLE 17-18 MINERAL RESERVE COMPARISON
Aurizon Mines Ltd. – Casa Berardi Mine

	Dec. 31, 2007 Reserves		Dec. 31, 2008 Reserves	
Zone	**Tonnes**	**Grade (g/t Au)**	**Tonnes**	**Grade (g/t Au)**
113	1,623,000	10.47	1,702,000	9.09
Lower Inter	857,000	9.50	953,000	8.91
East Mine UG	-	-	151,000	7.08
East Mine OP	290,000	4.82	635,000	3.98
North West	116,000	6.10	83,000	5.43
South West	5,000	5.80	72,000	4.64
109	43,000	6.80	68,000	5.38
111	28,000	5.60	37,000	5.44
115	37,000	12.00	30,000	11.75
117S	-	-	19,000	6.96
Low-Grade Dev.	89,000	3.90	87,000	3.90
Total	3,087,000	9.25	3,836,000	7.75

The majority of the gains are in the East Mine, although it is of note that reserves were successfully replaced in 113 Zone, where the bulk of the mining took place during 2008.

TONNAGE AND GRADE RECONCILATION: MINERAL RESERVES VS. MILL

Tonnage and grade reconciliation between Mineral Reserves and mill production was carried out on a stope by stope basis. In 2008, ore came from 59 stopes from 113 Zone, five stopes from North West Zone, and development headings. Mineral Reserve estimates for those stopes and development ore total 651,362 tonnes at an average grade of 8.56 g/t Au. Reconciled 2008 mill production totalled 654,397 tonnes at an average grade of 8.16 g/t Au. Reserves to Mill ratios were 0.995 and 1.049 for tonnes and grade, respectively, which Scott Wilson RPA considers reasonable and acceptable. The reconciliation results indicate that block model grades are quite reliable over a six-month period (Figures 17-7 and 17-8). The tonnage Reserves to Mill ratio increased constantly during the first half of the year.

On a stope by stope basis, tonnage and grade reconciliation are relatively variable (Figures 17-6 and 17-7). The reserve grade of stope 113-690-285, which was estimated by the nearest neighbour method, is high enough to skew reconciliation results. Excluding this stope, the Reserves to Mill grade ratio on a cumulative basis would be much better.

FIGURE 17-5 TONNAGE RECONCILIATION – RESERVES VS. MILL

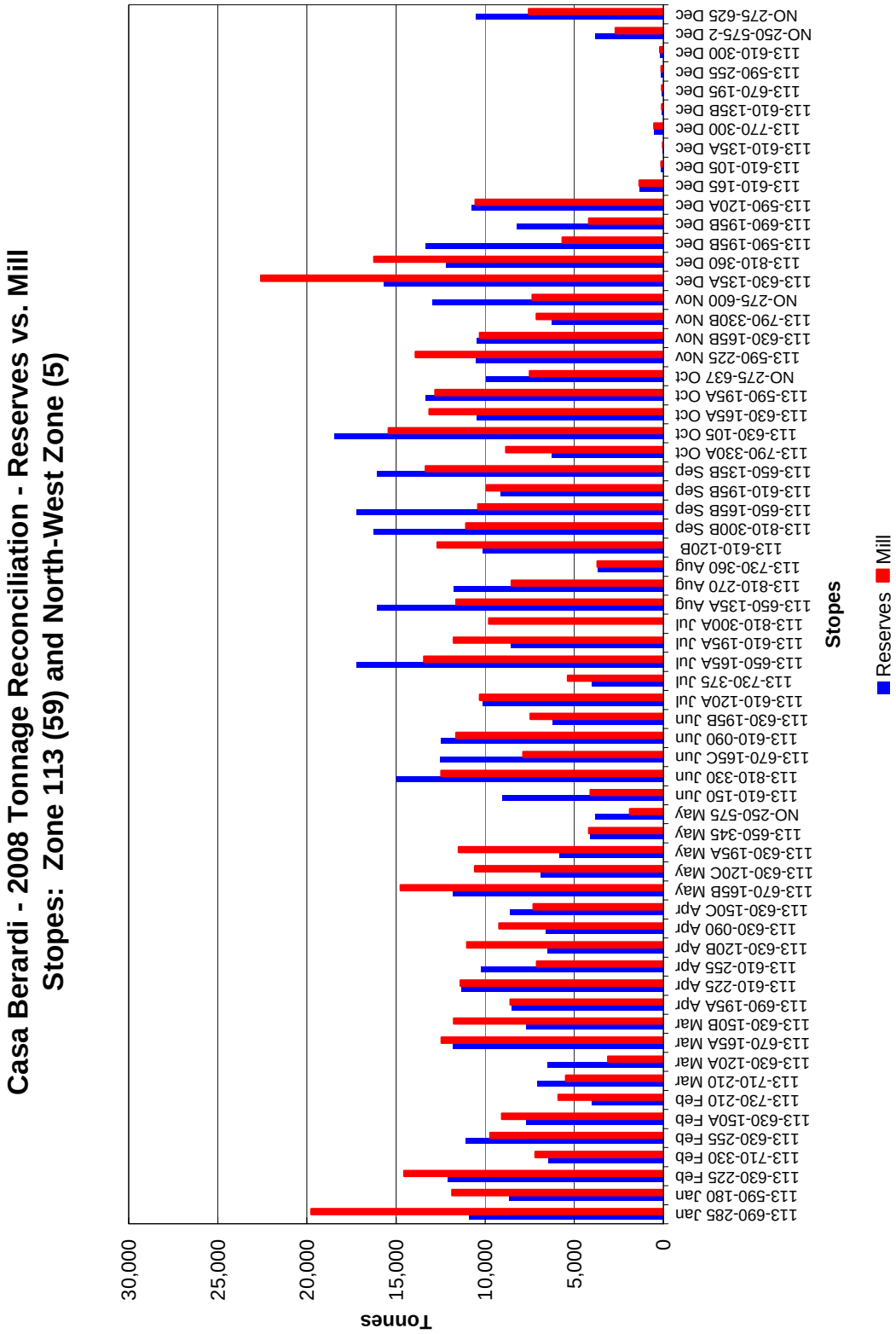


FIGURE 17-6 GRADE RECONCILIATION – RESERVES VS. MILL

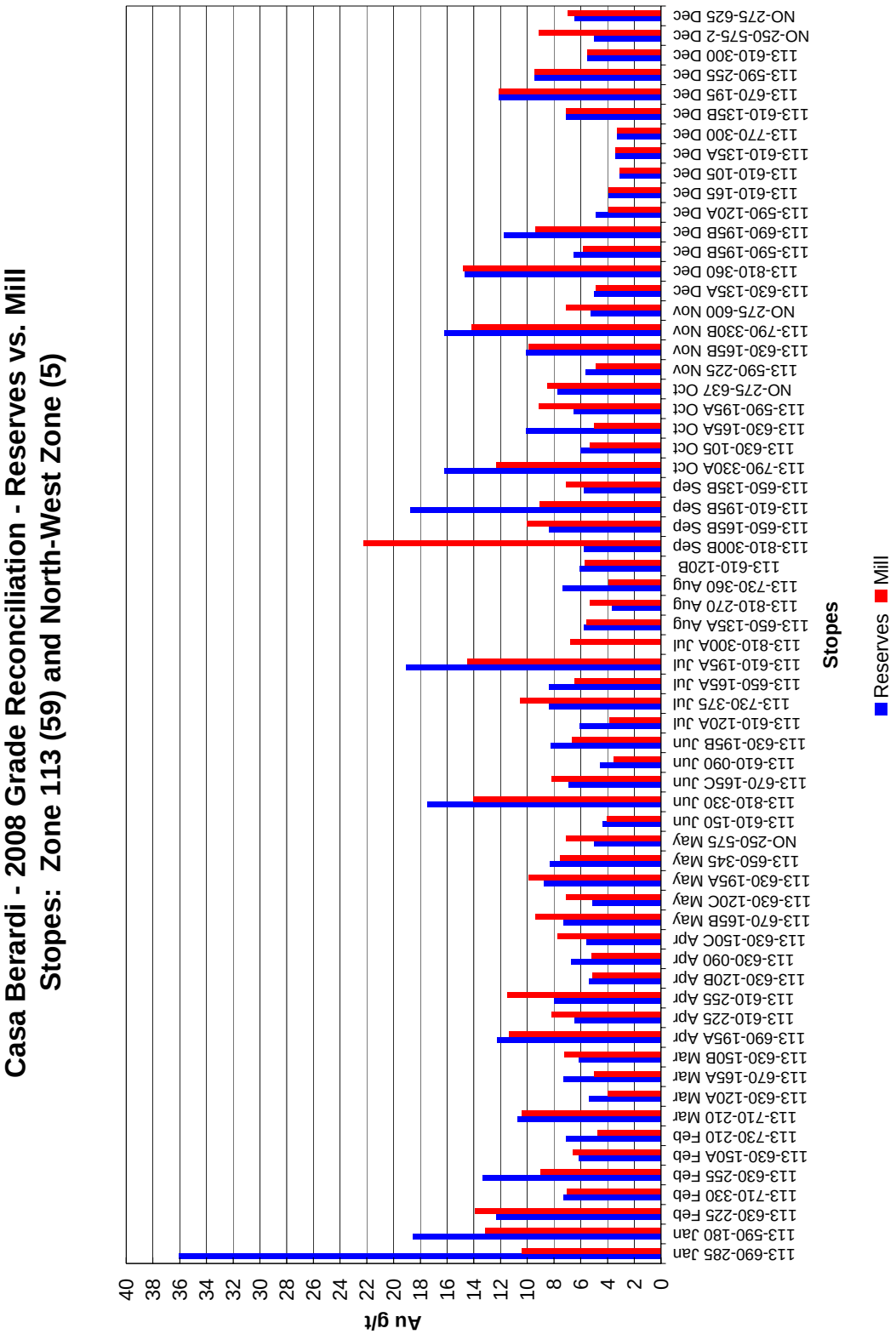


FIGURE 17-7 RESERVES/MILL RATIO - TONNES

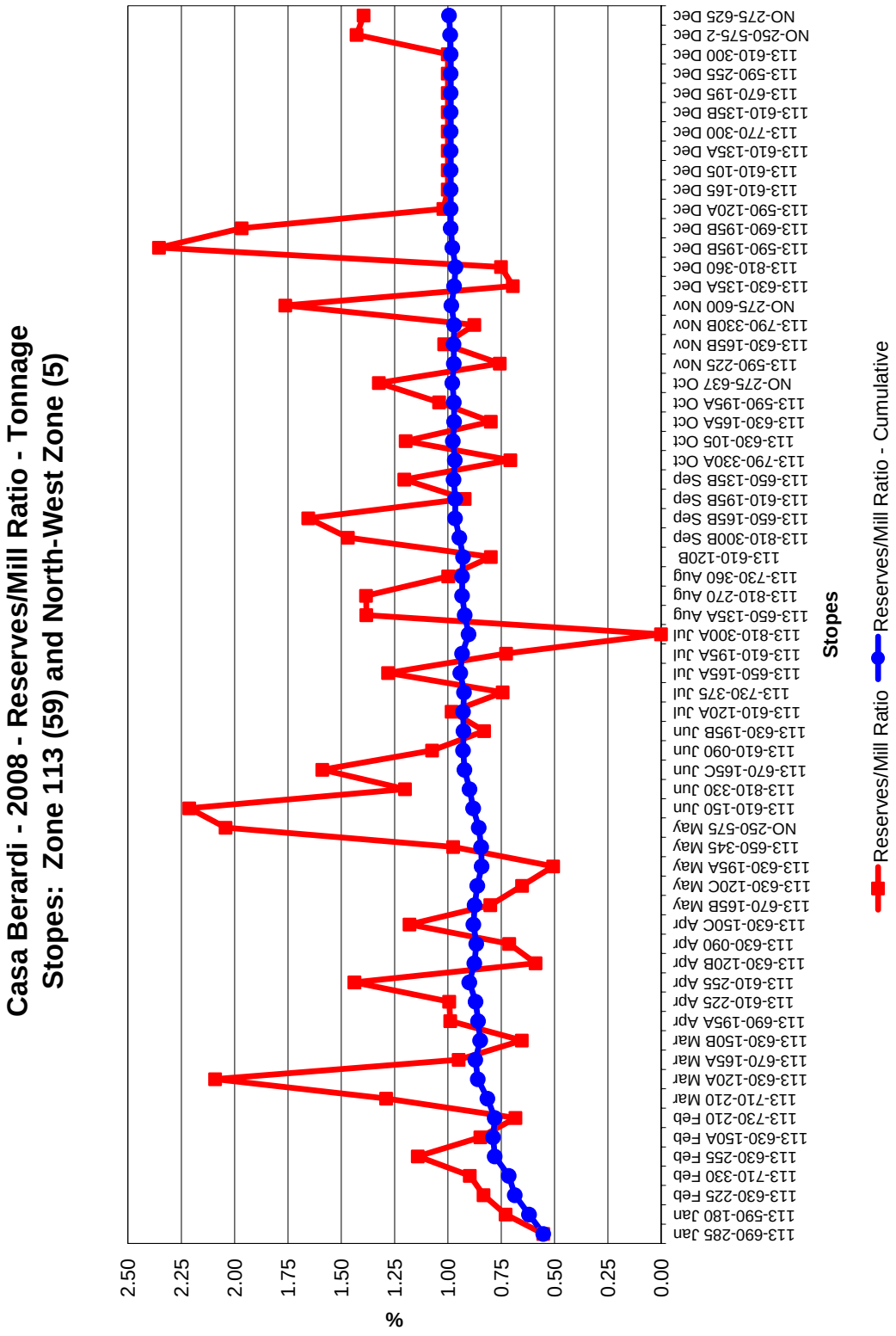
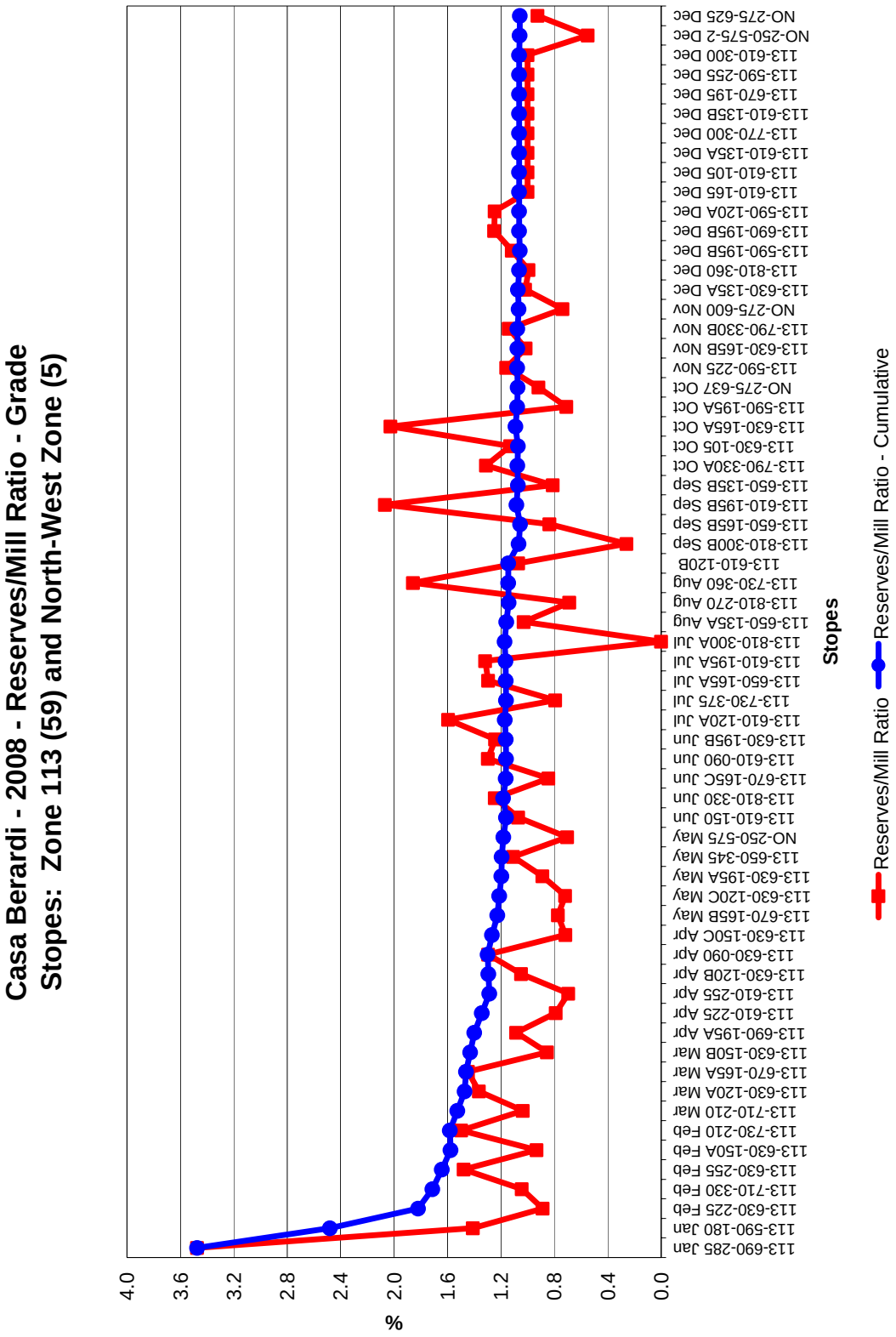


FIGURE 17-8 RESERVES/MILL RATIO – GRADE



18 OTHER RELEVANT DATA AND INFORMATION

The authors of this report are not aware of any additional information required to prevent this report from being misleading.

19 ADDITIONAL REQUIREMENTS FOR PRODUCTION PROPERTIES

MINING OPERATIONS - UNDERGROUND

Prior to Aurizon's operations, the Casa Berardi underground mine operated from 1988 to 1997, producing approximately 3.5 Mt of ore from two sites, the West Mine and the East Mine. The mineral deposits cover a distance of more than 5.0 km.

Both mining sites were developed as trackless operations, with all material transported to surface via ramp. The maximum depth was 400 m, which was considered to be the economic limit for ramp haulage to surface. In 1995, a track drift and a shaft were completed to connect both mines.

In 2006, Aurizon developed the West Mine, sinking a shaft to the 790 m level, and completing ramp and level development to access mining zones. Production began in November 2006. A total of 1.3 million tonnes have been processed to date, primarily from 113 Zone.

MINE DESIGN CRITERIA

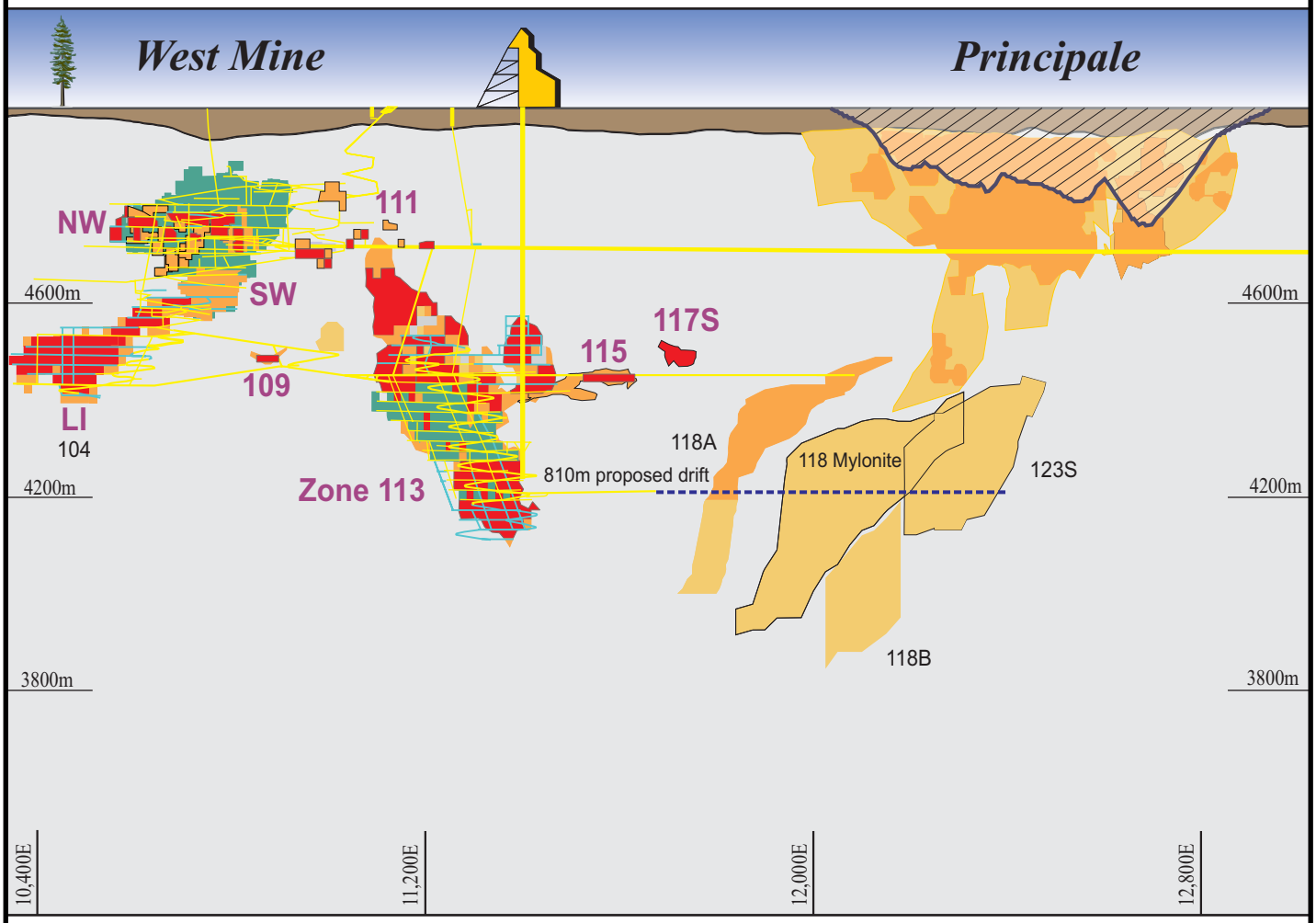
The mine design and planning processes are governed by best practices and guided by past mining experience at the West and East mines. The following main design criteria were selected by Aurizon for the design of the underground mine:

- Ore and waste density of 2.70 t/m^3 for 113 Zone.
- Ore and waste density of 2.77 t/m^3 for the other zones.
- Cut-off grade: 4 g/t.
- Production rate: 1,800 tpd of ore.
- Aurizon production crew schedule: two ten-hour shifts, seven days per week, 365 days per year. Rotation: seven days on, seven days off.

- Contractor development crew schedule: two ten-hour shifts, seven days per week, 365 days per year. Rotation: seven days on, seven days off.
- Mill schedule: two 12-hour shifts, seven days per week, 365 days per year. Rotation: three days on, two days off.
- Ramp and shaft access to 113 Zone; ramp and level connections to the other zones.
- Ramp dimensions: 4.5 m wide x 4.0 m high.
- Vertical shaft sunk to the 790 m level.
- Shaft dimensions: circular — 5.50 m diameter.
- Sublevel spacing: 20 m.
- Standard stope dimensions: 20 m high, 15 m strike-length, up to 20 m thick.
- Haulage drift dimensions: 4.2 m wide x 4.0 m high.
- Ore/waste pass dimensions: circular — 2.40 m diameter.
- Ventilation raise dimensions: circular — 3.35 m diameter.

MINING METHOD

Current reserves at Casa Berardi comprise eight zones at the West Mine (Figure 19-1), spread over a moderate horizontal distance from each other and located at different elevations, plus open pit and underground areas at the East Mine. The 113 Zone, Lower Inter Zone, and East Mine comprise the bulk of the deposit tonnage. The zones are of varying thickness, ranging from over 50 m to less than three metres, which is the minimum mining width. Most of the hanging walls are subvertical (55º to 85º) and exhibit similar wall characteristics with the exception of the Lower Inter Zone, which in a number of places has relatively shallow hanging wall configurations (less than 45º).



Legend:

- *Proven & Probable Reserves*
- *Measured & Indicated Resources*
- *Inferred Resources*
- *Past Production*
- *Existing Infrastructure*
- *Proposed Development*

0 100 200 300 400 500
Metres

Figure 19-1

Aurizon Mines Ltd.

Casa Berardi Property
Northwestern Québec, Canada
West Mine Longitudinal Section

January 2009

Source: Aurizon Mines Ltd., 2008.

The mining method selection process took into consideration the physical characteristics of the lenses and was based on geotechnical and economic criteria. Safety aspects and mining experience gained during the previous operating period at the East and West mines played an important role in the selection process. Other important elements considered were maximization of the deposit yield and sustainability of production targets.

A transverse blasthole open stoping mining method was selected for the Casa Berardi Mine to provide the desired production rate. Timely supply of both cemented and unconsolidated backfill plays a crucial role in controlling dilution and maintaining a short stoping cycle. This mining method satisfies all of the geotechnical requirements and constraints and, as a non-entry mining method, has proven to be safe and reliable in similar operations.

A very small part of the Mineral Reserves is planned for longitudinal sequencing, limited to the fringes of the small zones. Longitudinal methods have the advantage of lower waste development requirements, however, there is much less flexibility in sequencing and in access, should ground instabilities occur. These limitations have led Aurizon to reduce the planned use of longitudinal mining methods.

TRANSVERSE METHOD

The transverse mining method is used in areas with wide mineralization (10 m wide or more) and good access from nearby development. In thicker areas (greater than 20 m), stopes are subdivided into smaller panels and mined in sequence from the hanging wall to the footwall.

Stopes are nominally 15 m long by 20 m high (floor to floor), oriented in a transverse manner to the strike of the ore, and alternating in a primary and secondary extraction sequence (Figure 19-2). Overcut and undercut drifts are driven to provide access to the top and bottom of the stope. Cable bolts are installed in the hanging wall. Ring drilling takes place from the overcut drift, using a production 75 mm top hammer longhole drill. 42-inch diameter raise bore holes are used to create a free face into which the blastholes

break. The drill pattern is designed to contour the stope geometry by using pre-shearing blasting techniques to control wall sloughing and dilution.

After blasting, the broken ore is removed from the stope through the undercut drift, using a remote-controlled scooptram, and hauled to an ore pass. When mining is completed, the stope is backfilled from the overcut, with cemented rock fill for primary stopes, and with unconsolidated waste rock for secondary stopes. Stope sequencing generally proceeds from the bottom of a zone to the top.

The transverse method allows a variety of mining activities to take place in a series of closely grouped primary and secondary stopes at the same time. The stopes are in different stages of the cycle, from production drilling, blasting, and mucking through to the final backfill placement.

Full utilization of this method requires at least four production sublevels to be fully developed and operational in order to avoid production bottlenecks. To allow time for the cemented backfill to cure, the primary stopes are mined at least two lifts ahead of the secondary stopes.

An example level plan from the Lower Inter Zone is provided in Figure 19-3.

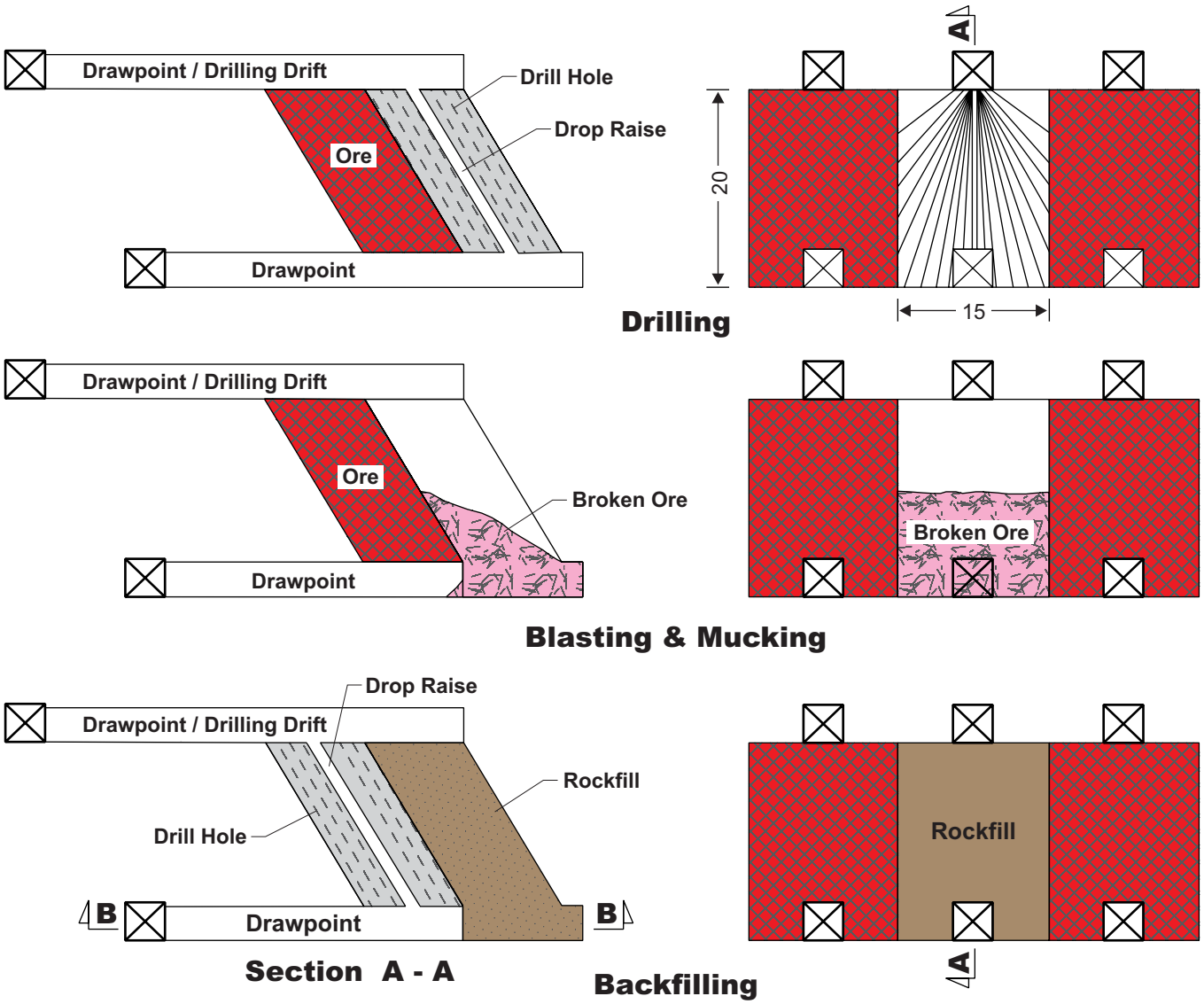


Figure 19-2

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Transverse Mining Method

January 2009

Source: Met-Chem FS, 2005.

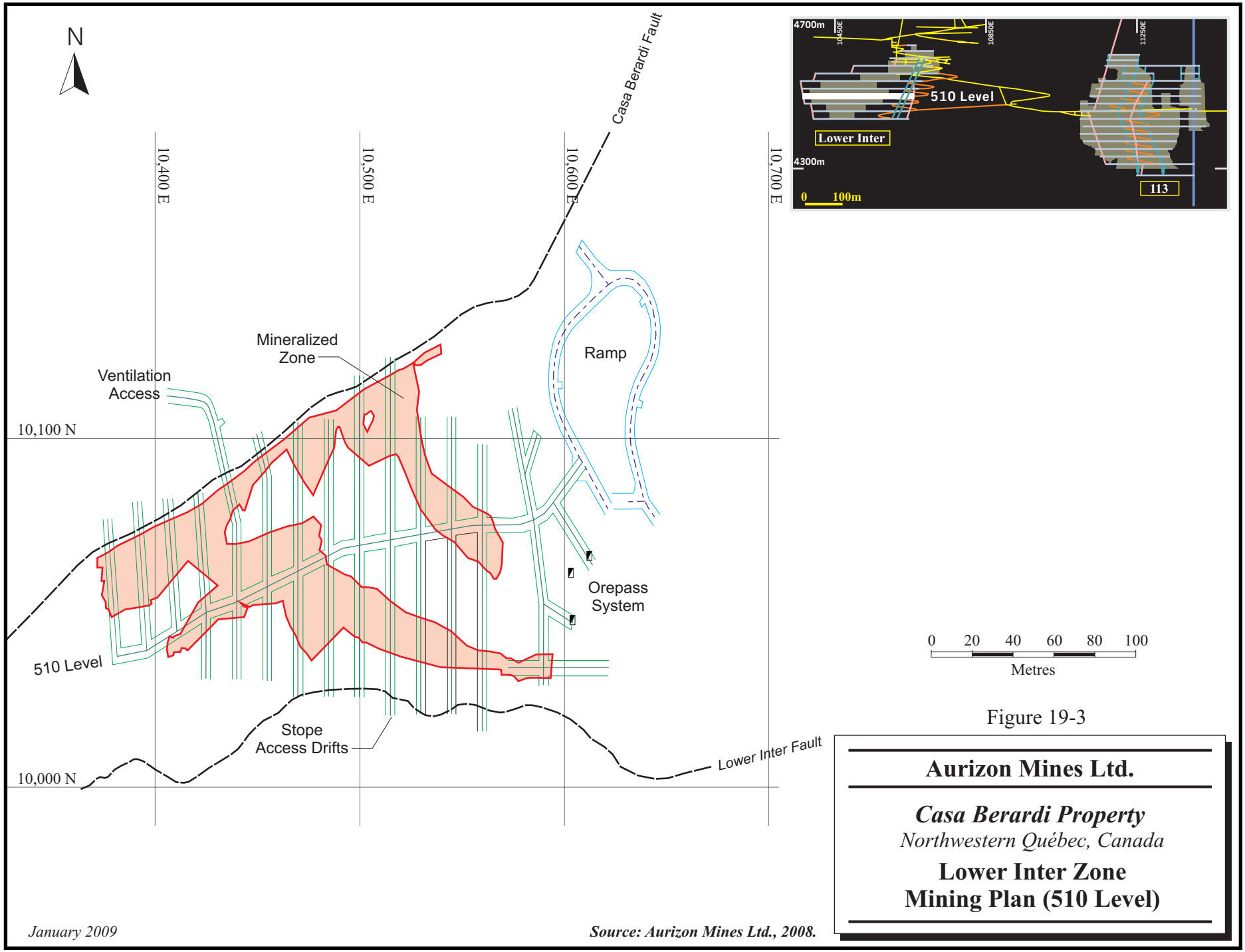


Figure 19-3

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Lower Inter Zone Mining Plan (510 Level)

January 2009

Source: Aurizon Mines Ltd., 2008.

LONGITUDINAL METHOD

The blasthole longitudinal mining method will be used in areas with narrow mineralization, or long distances from development infrastructure. Oriented along strike, longitudinal stoping is initiated at the end of a selected area and then retreated back towards the access. Once a stope is mined, it is backfilled with cemented rock fill until the fill reaches the overcut drift; the back half of the void, which will not be exposed by subsequent mining, is then tight-filled with unconsolidated waste.

Development requirements for the longitudinal method are lower than those for the transverse method, as accesses are within the ore on each level, and serve as overcuts and drawpoints for subsequent stopes. Productivity per level, however, is much lower, as only one stope can be active at a time.

GROUND STABILITY

A history of ground instability and related incidents during pre-Aurizon operations points to the importance of addressing rock mechanics issues for mining at Casa Berardi:

- 1992 - crown pillar collapse. A cave-in occurred at the top of a stope in the South West Zone of the West Mine, and was followed by surface subsidence, causing a breach in the mine water pond. A hydrostatic pillar was established by cementing accesses to the area.

- 1992 – crown pillar collapse. An East Mine stope was mined out, but not backfilled. Left unmonitored for several months, the stope back unravelled gradually along the Casa Berardi Fault towards surface. Eventually, large amounts of overburden material collapsed underground. A hydrostatic pillar was established by driving transverse cuts from the hanging wall to the footwall, 17 m below the stope, and backfilling with concrete (referred to as the Dynatec plug).

- 1994 – fatality. In the Inter Zone (West Mine), a large wedge fell from the back.

- 1995 – fatality. Scaling incident in the East Mine.

- 1997 – stope failure. Another East Mine stope, 11 m under the Dynatec plug, unravelled due to delays in backfilling. The caving progressed upwards to the Dynatec plug, which failed, allowing the unravelling to continue up through the previous problem stope, re-activating the surface subsidence area. Following this incident, access to the East Mine was sealed off with a

hydrostatic bulk head (since removed) and operations were confined to the West Mine.

For some time following the above incidents, 20 m to 40 m longitudinal stopes were mined with a one-metre skin of rock left between the open stope and the fault (the desired final hanging wall limit). Once a stope had been mined out, the one-metre skin was left to gradually collapse, to be recovered later. Unravelling of these open stopes proved to be greater than one metre, and after a number of ground collapses resulting in scooptram losses, this approach was abandoned.

GROUND CONDITIONS

Ground instability is mainly restricted to the Casa Berardi fault system, where graphitic fault rocks comprise the hanging wall of the ore zones. The rock environment south of the Casa Berardi Fault is composed of relatively weak sediments with a frequent occurrence of schistose and graphitic rocks exhibiting weak contacts. It is prone to develop wedge forms, due to frequent unstable joint formations, flat-lying gouge, or graphite-filled joints above mine openings.

Generally, the rock types that comprise the Lower Inter and 113 Zones vary from massive to fractured and heavily deformed in areas where the mineralization occurs along or near the main structural discontinuities.

GROUND TESTING AND ANALYSIS

Prior to the start of operations, Aurizon carried out line mapping of structural data, RQD estimation, rock mass classification, and laboratory testing of rock properties (uniaxial and triaxial strength tests).

In situ stress measurements fall within the lower range of the regional trends measured in other hard rock mines of the Abitibi District.

The ground conditions in the 113 and Lower Inter zones are described as “good” using the RMR system and as “fair” using the Q system. According to observations, the

ground conditions in the West Mine are more blocky and jointed than those in the East Mine.

CHANGE IN OPERATING PRACTICES

Aurizon has carried out the following measures to address concerns related to safety and stability of mine openings:

- Reduced open stope time to a minimum - mucking out is followed immediately by backfilling. During previous operations, the seasonal sand fill plant was plagued by supply problems. Currently, the cemented rock fill (CRF) plant operates year-round, experiencing no delays in supplying backfill to the mine.

- Reduced stope size and hanging wall exposure. Stope size selection has been determined by geomechanical modelling (15 m strike length, 20 m high, and up to 20 m thick), and is significantly smaller than past practice (up to 40 m strike lengths, and 25 m to 30 m heights).

- Application of tight fill. The stope sequence is from the bottom towards the top of each zone, leaving no voids.

- Water control and drainage measures have been undertaken to avoid water infiltration into the fault system. A network of drainage holes outside the ore zones has been established. Low rates of water inflow to underground workings confirm the effectiveness of the system.

- Located permanent infrastructure in more stable ground. The mine infrastructure is located in massive volcanic rocks, north of the Casa Berardi Fault.

- Access to the level above the drilling base is maintained, to allow measures to stop unravelling by cementing or backfilling if such is required.

- Where underground excavations intersect major structures, screen and shotcrete is applied, and, if required, reinforcement with cable bolts.

In Scott Wilson RPA's opinion, the ground support measures to maintain drift stability are in accordance with commonly accepted practice for the ground conditions. The selected typical stope size and sublevel spacing are conservative and help in maintaining hanging wall stability and minimizing dilution. Stope hanging walls and footwalls have a provision for cablebolting to prevent them from unravelling and causing ground or dilution problems.

Since Aurizon re-opened the mine, ground control incidents have been minor for the most part, mainly involving sloughing in the graphitic fault at various locations. One incident in January 2006 involved an unravelling stope back, when backfill was delayed due to commissioning problems at the CRF plant. In that case and other, smaller incidents, sloughing has been controlled through application of shotcrete, or by backfilling with cemented rockfill from levels above. Minor sloughing incidents have been on the decline, due to changes in development techniques near the graphitic fault.

UNDERGROUND DEVELOPMENT

Development openings have been sized to meet the requirements of safety and regulation standards, to accommodate selected mining equipment, and to meet the ventilation network requirements.

- Ramp dimensions: 4.5 m wide x 4.0 m high;
- Haulage drift dimensions: 4.2 m wide x 4.0 m high.

GROUND SUPPORT

To secure a continuous and safe production cycle, strict ground control measures are applied systematically to ensure safe workplaces, limit dilution and overbreak, and stabilize weak rock masses, particularly in the vicinity of the main fault zones.

The following ground control measures are applied:

- Cable bolting: Drifts and stopes located less than 10 m from a major fault are cable bolted to provide long term ground stability.
- Shotcrete: Drifts crossing a major fault and stopes in the end zones of the main orebody are shotcreted from five metres before the fault through to two metres beyond it.
- Backfill is placed in stopes as soon as they are ready, and cemented fill is left to cure for a period of at least 30 days before exposure.

Mine personnel identify potentially unstable joints as they are exposed, and install an appropriate support system to stabilize the worst combinations of joints that could form wedges. The current ground support approach, when driving through faulted ground, is

to install rebar or swellex (depending on the ground characteristics) on a regular pattern and screen the back and shoulders of the openings. There is a provision to shotcrete potentially unstable zones and to install cable bolts, if necessary.

BACKFILL

Backfill is required for maximum ore extraction and for maintaining the stability of the stope walls during the mining process. Maximization of ore extraction and stoping productivities requires that primary stopes be backfilled with a consolidated fill strong enough to stand up to blasting and exposure. Secondary stopes require unconsolidated fill to contribute to regional stability.

Timely backfilling of mined-out stopes is key to the success of the operation. Before Aurizon re-started operations, the existing sand fill plant was modified to produce cement slurry, for cemented rock fill. The plant produces cement slurry in batches, which is transferred to distribution tanks underground via a series of boreholes and lateral piping. Rock for the backfill comes from underground development waste, surface stockpiles, and, later in the mine life, open pit waste on surface. Transport of the rock fill to the stopes is by means of LHDs or trucks.

BACKFILL DESIGN

The application of cemented rock fill for filling mined-out stopes considered the following requirements:

- Free Standing Height – maximum fill exposures will be 20 m high and 15 m long.
- Regional Stiffness – reduce wall closure due to structural unravelling and induced stress concentration in abutment structures.
- Resistance to Blast Damage – minimize blasting-induced backfill dilution.
- Flexibility – change design mix for high-cement applications such as backfill plugs, bulkheads, or stopes that will be exposed from below.

During the mining sequence, each primary stope is filled with cemented rock fill. Longitudinal and large (>17,000 tonnes) secondary stopes are partially filled with cemented rock fill. Remaining voids are filled with unconsolidated waste rock. The

specification, or design mix, of the cemented rock fill was determined based on the required uniaxial compressive strength (UCS). This strength is achieved by a cemented rock fill mixture containing approximately 4% to 6% binder content by weight.

SYSTEM CAPACITY

The system must have capacity to fill 100% of the voids created by mining operations, however, since backfill operations cannot commence until a stope is empty and prepared for backfill placement, they cannot be regarded as continuous and delays may be encountered in starting stope backfilling. Therefore, when estimating the capacity of a backfill system, a factor must be applied to allow for these delays. This factor is known as the backfill/stope availability factor.

In the FS, a factor of 25% was used to estimate the required backfill system capacity. Table 19-1 shows the factors required for the backfill operations.

TABLE 19-1 BACKFILL PLANT OPERATION PARAMETERS
Aurizon Mines Ltd. – Casa Berardi Mine

Parameter	Value	Units of measurement
Production rate	1,800	tpd
Void created by mining	860	m^3/day
Effective dry bulk density of rockfill in the stope	1.85	t/m^3
Backfill to ore replacement ratio	67%	% ore tonnes
Average backfill requirement per day	1,206	dry tpd
Stope availability factor	25	%
Minimum planned backfill tonnes per day	1,508	dry tpd
Allowance for shift-changes etc	4	hours/day
Planned average backfilling hours per day	20	hr/day
Overall backfill system availability	95	%
Minimum required backfill rate	63	dry tph

Aurizon reports that, since the plant was commissioned, very few delays due to plant capacity limitations have occurred.

SOURCE MATERIAL

Waste rock for backfill is currently provided from development waste, and current surface stockpiles. Consumption of this material will outstrip replenishment from mine development, and by 2011, another source will be required as a supplement.

Open pit mining at the East Mine is scheduled to begin in 2011, and may provide waste rock suitable for backfill. Alternatively, a quarry located east of the mill & administration building can supply any shortfall in required waste.

Total backfill requirements amount to 2,100,000 tonnes of waste rock. Sources are detailed in Table 19-2.

TABLE 19-2 BACKFILL REQUIREMENTS AND SOURCES
Aurizon Mines Ltd. – Casa Berardi Mine

Fill	Tonnage
Cemented Rock Fill Required	1,115,000
Waste Fill Required	985,000
Total	**2,100,000**
Sources	
Surface stockpile June 2005	200,000
Shaft Sinking	224,000
U/G Development	1,173,000
Surface Pit	503,000
Total	**2,100,000**

MINE EQUIPMENT

A fleet of underground mine equipment was included in the sale when Aurizon acquired the mine in 1998. A certain number of units were sold, the rest were either refurbished for use or put in storage.

A list of the equipment currently in operation at Casa Berardi Mine is provided in Table 19-3.

Table 19-3 Mine Equipment List
Aurizon Mines Ltd. - Casa Berardi Mine

Compagnie	Type d'équipement	Numéro	Marque du moteur	Modèle	Force HP
Aurizon	Boom truck Getman 640	# 401	Deutz	F6L 912W	82
Aurizon	Boom truck JS-600	#6016	DDEC	Série 50	250
Aurizon	Camion (MT-413)	#410	Deutz	F8L-413FW	185
Aurizon	Camion cable	# 405	Deutz	F6L 912W	82
Aurizon	Camion Wagner (mt-426)	# 209	Deutz	F12L-413/FW	277
Aurizon	Camion Wagner (MT-430)	# 204	DDEC	Série 60/12,7 L	350
Aurizon	Camion Wagner (MT-430)	# 207	DDEC	Série 60/12,7 L	350
Aurizon	Camion Wagner (MT-430)	# 210	DDEC	Série 60/12,7 L	350
Aurizon	Camion Wagner (MT-430)	# 211	DDEC	Série 60/12,7 L	350
Aurizon	Chargeuse EJC-210	# 513	Détroit	Série 50	250
Aurizon	Chargeuse EJC-210	# 510	Deutz	F10L 413FW	231
Aurizon	Chargeuse EJC-210	# 511	Deutz	F10L 413FW	231
Aurizon	Chargeuse JS-350 (3½verges)	# 311	Deutz	F8L-413FW	185
Aurizon	Chargeuse JS600	# 508	Détroit	Série 50	250
Aurizon	Chargeuse JS600	# 509	Détroit	Série 50	250
Aurizon	Chargeuse ST-1020	# 512	Détroit	Série 50	250
Aurizon	Chargeuse ST-1030		Cummins	QSL-9	250
Aurizon	Ciseaux Getman 640	# 402	Deutz	F6L 912W	82
Aurizon	Ciseaux Getman 640	# 414	Deutz	F6L 912W	82
Aurizon	Ciseaux Getman 640	# 417	Deutz	F6L 912W	82
Aurizon	Getman (Boom truck)	# 404	Deutz	F6L 912W	82
Aurizon	Getman (Transporteur)	# 403	Deutz	F6L 912W	82
Aurizon	Jumbo Altas Copco	#425	Deutz	F4L 912W	57
Aurizon	Niveleuse	# 903	Caterpillar	3304 PCTA	125
Aurizon	Toyota (6 units)	#170		HZJ 79	127
Aurizon	Tracteur Agco-Allis (5 units)	# 180		GT-65A	65
Aurizon	Tracteur Kubota 5030 (3 units)	# 155	Kubota	F2802-DIA	50
C-MAC	Chargeuse ST-3.5		Cummins	FR91598	193
C-MAC	Simba	#302	Deutz	F4L 912W	57
C-MAC	Toyota			HZJ 79	127
C-MAC	Tracteur Kubota 4240DT		Kubota	V2203ME2	42
DMC	Tracteur Kubota 4240DT		Kubota	V2203ME2	42
DMC	Tracteur Kubota M6800		Kubota	V3300E	68
Dumas	Camion (MT-426)	#8298	DDEC	Série 60/11.3 L	325
Dumas	Camion (MT-426)	?	DDEC	Série 60/11.3 L	325
Dumas	Chargeuse JS-350 (3½verges)	#9331	Deutz	F8L-413FW	185
Dumas	Chargeuse ST-1010	#9611	Détroit	Série 50	250
Dumas	Chargeuse ST-1010	#9631	Détroit	Série 50	250
Dumas	Chargeuse ST-1010	#9628	Détroit	Série 50	250
Dumas	Ciseaux	#3602	Deutz	F6L 912W	82
Dumas	Ciseaux	#3611	Deutz	F6L 912W	82
Dumas	Ciseaux	#3695	Deutz	F6L 912W	82
Dumas	Ciseaux	#3426	Deutz	F6L 912W	82
Dumas	Ciseaux	#3428	Deutz	F6L 912W	82
Dumas	Ciseaux de développement	#3699	Deutz	F6L 912W	82
Dumas	Ciseaux de développement	#3603	Deutz	F6L 912W	82
Dumas	Jumbo 1 boom	#7109	Deutz	F3L 912W	41
Dumas	Jumbo 2 booms	#7232	Deutz	BF4-M1013C	150
Dumas	Jumbo 2 booms	#7231	Deutz	F6L 912W	82
Dumas	Jumbo 2 booms	#7224	Deutz	F5L 912W	68
Dumas	Shortcrete Sprayer	#2301	marcotte	F6L 912W	82
Dumas	Toyota	#7920		HZJ 79	127
Dumas	Tracteur Ford	#1511	Iveco		75
Dumas	Tracteur Ford	#1512	Iveco		75
Orbit	Toyota			HZJ 79	127

Underground equipment is operated by contractors, chiefly Dumas Contracting Ltd. (Dumas), and C-MAC-THYSSEN Mining Contractor Inc. (C-MAC). Dumas supplies mobile equipment for development of ramps, drifts, and raises. Production equipment and scooptrams for development are supplied by Aurizon, as is auxiliary/service equipment, used to provide ground support and services to the contractors.

MINE INFRASTRUCTURE

Mine infrastructure is located in two main areas – production and ventilation shafts, contractor camp, shops, waste and ore dumps, and ramp portal located at the West Mine; and mill & administration building, crusher, production shaft (not currently in use), warehouse, and shops at the East Mine. Figures 19-4 and 19-5 illustrate each location.

WEST MINE SHAFT

Prior to re-starting operations, Aurizon sunk a new shaft at the West Mine. The positioning of the shaft collar was based on geotechnical considerations including the quality of the rock mass, the overburden thickness, and the settings of major faults. The shaft is positioned outside the faults and beyond the zone of stress influence due to mining. The shaft design provides for future shaft deepening, which may be required if resources below the 890 m level prove to be economical.

The shaft is designed to be circular in shape, 5.5 m in diameter. The 42 m deep concrete shaft collar was anchored in bedrock. Shaft stations are located at the 280 m, 550 m, and 690 m levels. The skip loading station is at the 720 m level and the bottom of the shaft is at the 760 m level.

The shaft is concrete-lined to support the rock and anchor the steel structure that divides the shaft into four compartments. Two compartments are allocated for the 11 tonne skips, each with a cage at the top. The third compartment is for a service cage for men and material transportation. The fourth compartment consists of a manway and a service area for pipes and electrical cables. The headframe is of conventional steel construction, 54 m high, incorporating a skip dump arrangement with ore and waste storage bins. The ore bin is 1,200 tonnes and the waste bin is 370 tonnes capacity.

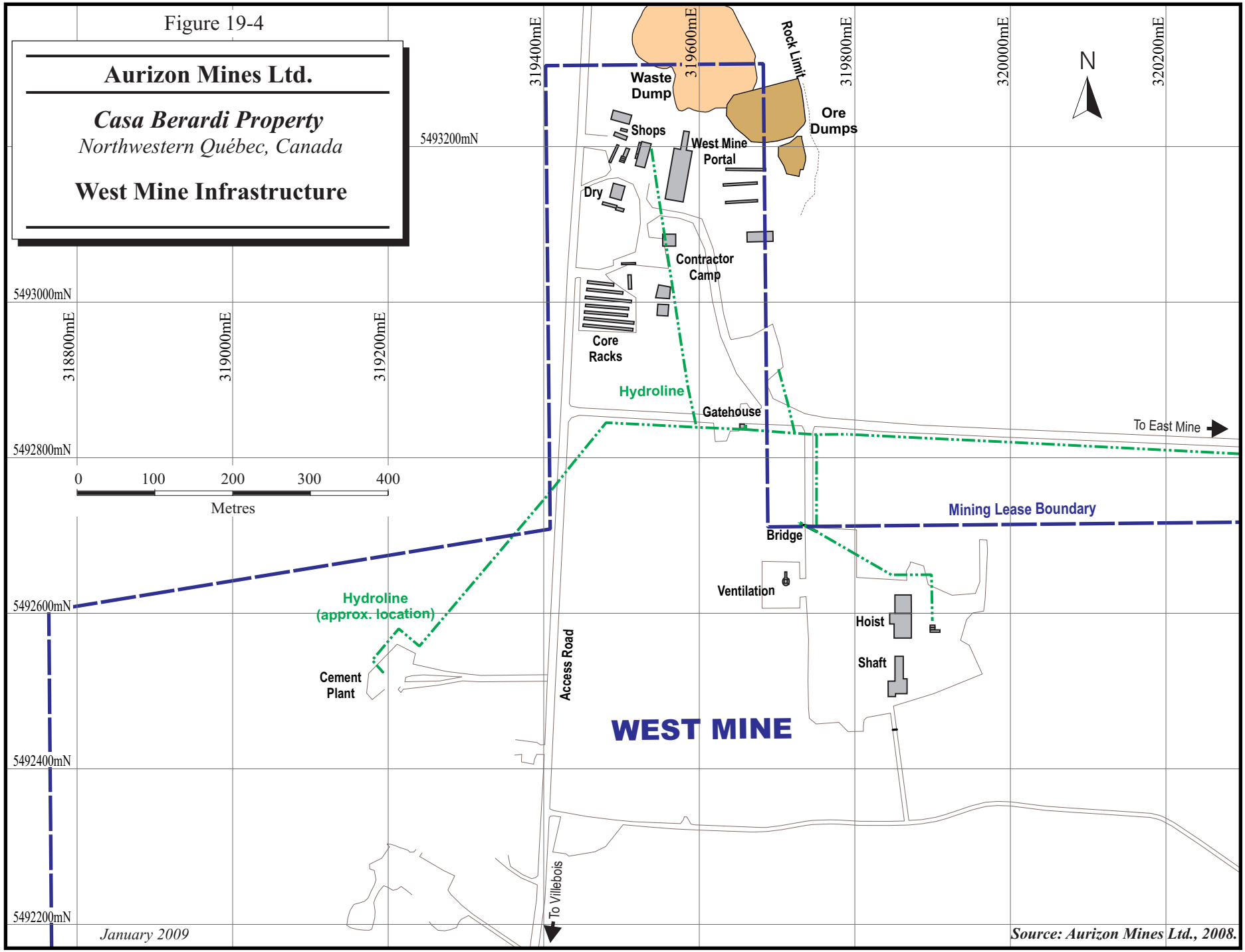
Figure 19-4

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

West Mine Infrastructure

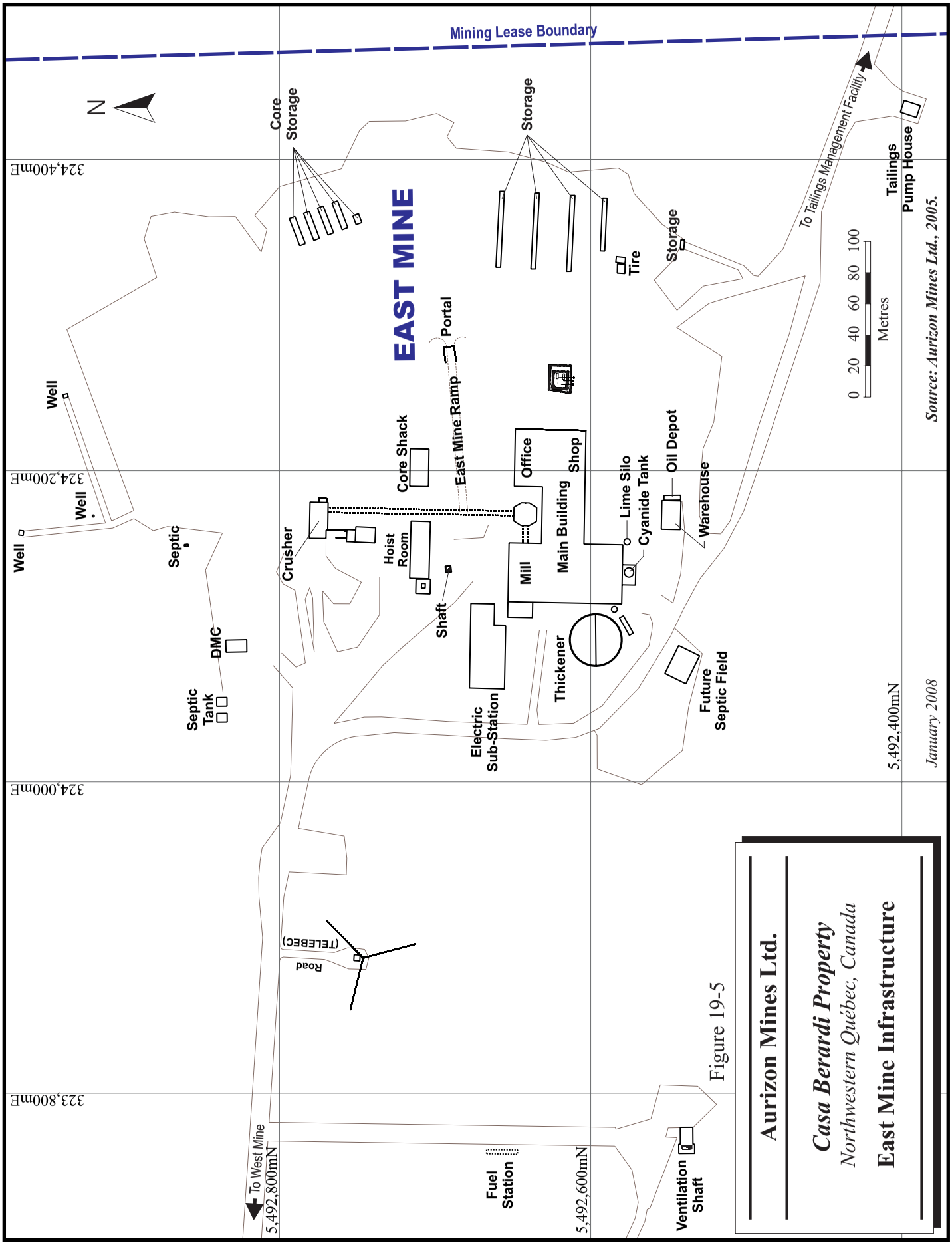


January 2009

Source: Aurizon Mines Ltd., 2008.

SCOTT WILSON RPA

www.scottwilson.com


Mining Lease Boundary
N
EAST MINE
Core Storage
Storage
Storage
Tire
Portal
East Mine Ramp
Core Shack
Office
Shop
Main Building
Mill
Lime Silo
Cyanide Tank
Oil Depot
Warehouse
Crusher
Hoist Room
Shaft
Well
Well
Well
Septic
DMC
Septic Tank
Electric Sub-Station
Thickener
Future Septic Field
To Tailings Management Facility
Tailings Pump House
Ventilation Shaft
Fuel Station
Road (TELEBEC)
To West Mine
5,492,800mN
5,492,600mN
5,492,400mN
324,400mE
324,200mE
324,000mE
323,800mE
0 20 40 60 80 100
Metres
Source: Aurizon Mines Ltd., 2005.
January 2008
Figure 19-5
Aurizon Mines Ltd.
Casa Berardi Property
Northwestern Québec, Canada
East Mine Infrastructure

ORE AND WASTE PASS SYSTEMS

The ore and waste pass systems were sized and located according to the production requirements of the 113 and Lower Inter zones to handle ore and waste from production and development areas. Ore and waste passes are circular, 2.4 m diameter. The Lower Inter Zone ore and waste pass system terminates on the 570 m level, where ore and waste will be transferred by truck to the 113 Zone ore and waste handling system. The ore and waste pass systems in 113 Zone terminates at a chute on the 690 m level, where material is transferred by truck to a rock-breaker-grizzly. The grizzly discharge goes through a surge bin into the 720 m level loading pocket of the shaft, and is hoisted to surface.

Ore and waste is transported to their respective dumps by LHD. Oversize material is moved to a suitable location for secondary blasting.

Ore and waste from other zones will be handled by truck and transported to 113 Zone ore and waste passes.

VENTILATION

The ventilation network design was based on physical mine configurations and accounted for the size of production, installed horse power on diesel equipment, number of people, and simultaneous activities underground. The ventilation network incorporates the existing facilities of the West Mine and takes into account the system in place at the East Mine.

The main ventilation raises for mine air distribution system are 3.35 m in diameter, excavated by a raise climber (Alimak) from the lower levels of each zone and connected with main airways. Raise ventilation access drifts (up to 10 m long) are excavated on each level/sublevel during raise development and connected to the main haulage drifts when required. A ventilation schematic circuit is presented in Figure 19-6.

The mine requires 330 m^3/s (655,000 cfm) at its full production capacity. The ventilation network installations at the mine consist of:

- The West Mine Fresh Air Raise intake system. This system has four 150 hp fans, which achieve 260,000 cfm airflow. The operating static pressure is 8.5 inches of water.

- A new, high pressure, ventilation system is installed at the portal of the West Mine. This system consists of two fans in parallel to deliver 395,000 cfm of fresh air. The fan station is equipped with a salvaged mine air heating system from the East Mine. The operating static pressure is 12 to 13 inches of water.

- An air lock system in the West Mine ramp entrance.

- New shaft head frame collar (ventilation exhaust).

- A number of airflow regulators, booster fans, and ventilation raises.

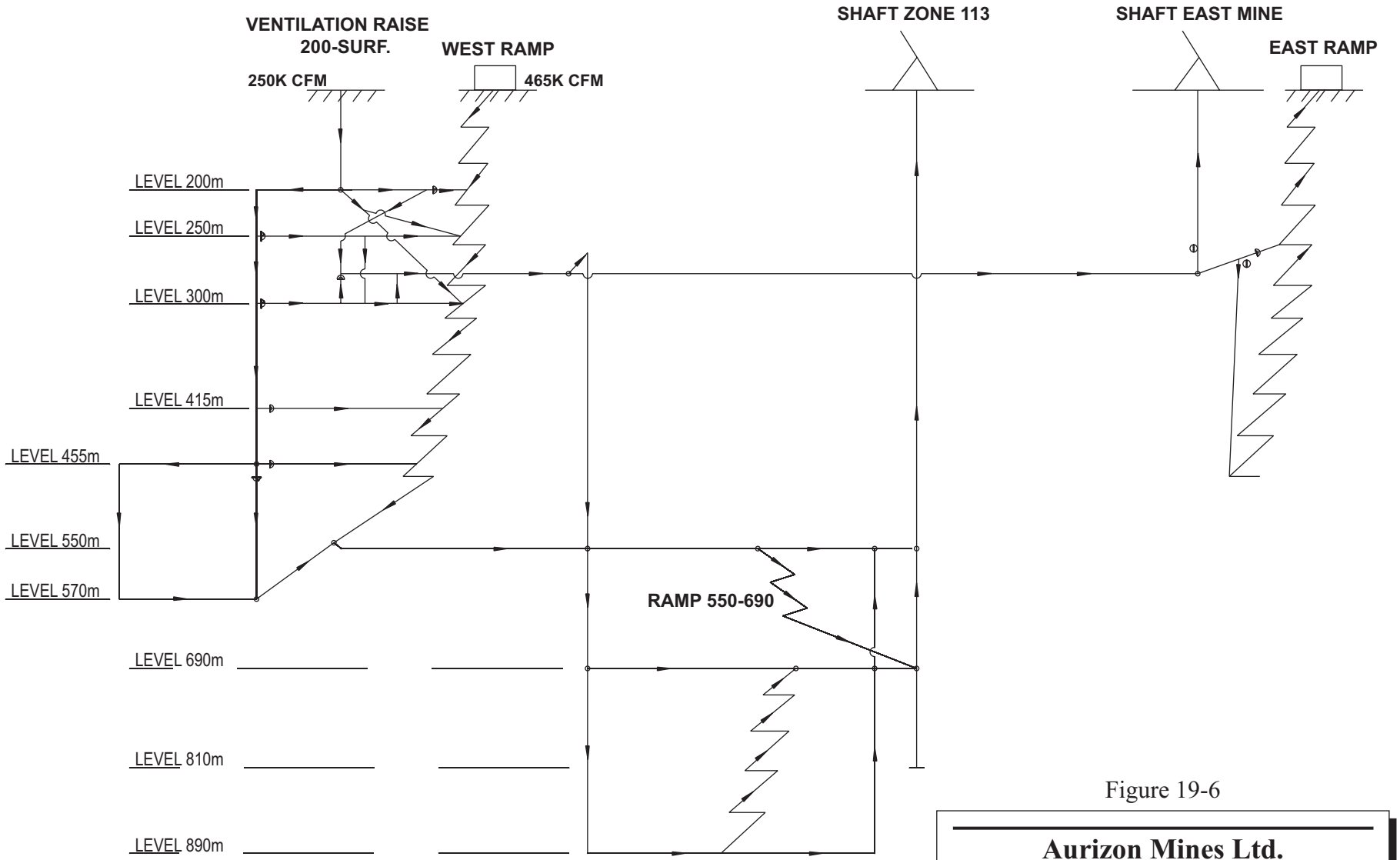


Figure 19-6

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

Ventilation Schematic

January 2009

Source: Aurizon Mines Ltd., 2008.

MAINTENANCE FACILITIES

The main fixed equipment, either on surface or underground, such as the hoist, compressors, ventilators, GEHO pumps, and the cement plant, are covered by an integrated preventive maintenance program provided by the equipment suppliers. Daily maintenance and parts replacement are done on site. Major equipment overhaul is conducted by outside specialized maintenance shops. Contractors are responsible for maintaining their own equipment.

The maintenance of mobile equipment used on surface and underground is done in the existing surface building located near the mill at the East Mine. This building includes a maintenance shop, warehouse, offices, change room, and a communications system. The existing surface shop is well equipped (compressed air, lifting equipment, cranes, and welding facilities) and large enough to accommodate equipment employed at the site. The warehouse is located nearby and facilitates the delivery of parts and materials for maintenance and repairs. Spare tires are stored on a nearby pad. The change room and sanitation facilities are located on the second floor of the building.

Most of the mining equipment is on a rental/purchase basis with a maintenance plan provided by the suppliers. Minor repairs on mining equipment are conducted underground. For major repairs, the contractor uses a surface garage located at the West Mine portal.

POWER

Power is supplied to site by a 120 kV line from the town of Normetal (55 km). A 120 kV / 25 kV transformer is installed in the main substation, located at the East Mine site. The West Mine is supplied by a 25 kV line.

A power distribution network covers the West Mine portal main ventilation fan, the headframe, hoist, shaft collar, the compressor buildings, and 1,000 kVA underground substations in 113 and Lower Inter zones.

Underground power distribution in 113 Zone is supplied via cables installed in the shaft. The Lower Inter Zone is supplied by an existing power cable in the ramp, which will be extended as required.

MINING OPERATIONS – OPEN PIT

East Mine open pit reserves are contained in the crown pillar left behind by previous mining. BBA estimated open pit reserves in October 2007, and updated the estimate in November 2008, after an in-fill drilling campaign was completed. BBA's work has been based on block models by Geostat.

OPEN PIT OPTIMIZATION

The block size in the Geostat model is 2 m by 2 m x 5 m (high). Previously mined underground stopes were excluded from the model. BBA ran pit optimizations on Measured and Indicated Resources in 2007 and 2008, using the following inputs:

- Ore mining cost of $4.38 per tonne
- Waste mining cost of $3.29 per tonne
- Overburden mining cost of $1.57 per tonne
- Processing cost of $13.80 per tonne ore
- G&A cost of $3.51 per tonne ore
- Metallurgical recovery of 87%
- Gold price of C$605 per ounce
- Global pit slope angle of 35º

Budget costs were obtained in 2007 from Construction Norascon Inc., a local open pit mining contractor, and from Aurizon's operating experience (processing and G&A). Recovery was obtained from testwork overseen by Geostat, which confirmed historical results for the East Mine. Pit slope angles were taken from a geotechnical report by Journeaux Bédard & Assoc. Inc. (JBA). The overall pit slope angle of 35° was used in the pit optimization only and includes allowances for a final ramp, an in-pit drainage ditch and final pit slope arrangement.

The pit optimization inputs resulted in a pit discard cut-off grade of 1.2 g/t Au. The resulting optimized pit shell was used to guide detailed open pit design.

OPEN PIT DESIGN

The pit design, shown in Figure 19-7, allows for changing slope angles in different materials. Drill holes have shown that the overburden at the East Mine is made up of three distinct elements: a peat and organics layer, a silt layer, and a glacial till. The bedrock surface varies significantly across the site, and is the lowest directly above the Casa Berardi Fault. Along the alignment of the fault, the bedrock forms a valley which varies from approximately 40 m below surface at the west end of the site to 50 m below surface at the east end. On either side of the fault, the bedrock elevation is higher, rising to 20 m below surface on the south side.

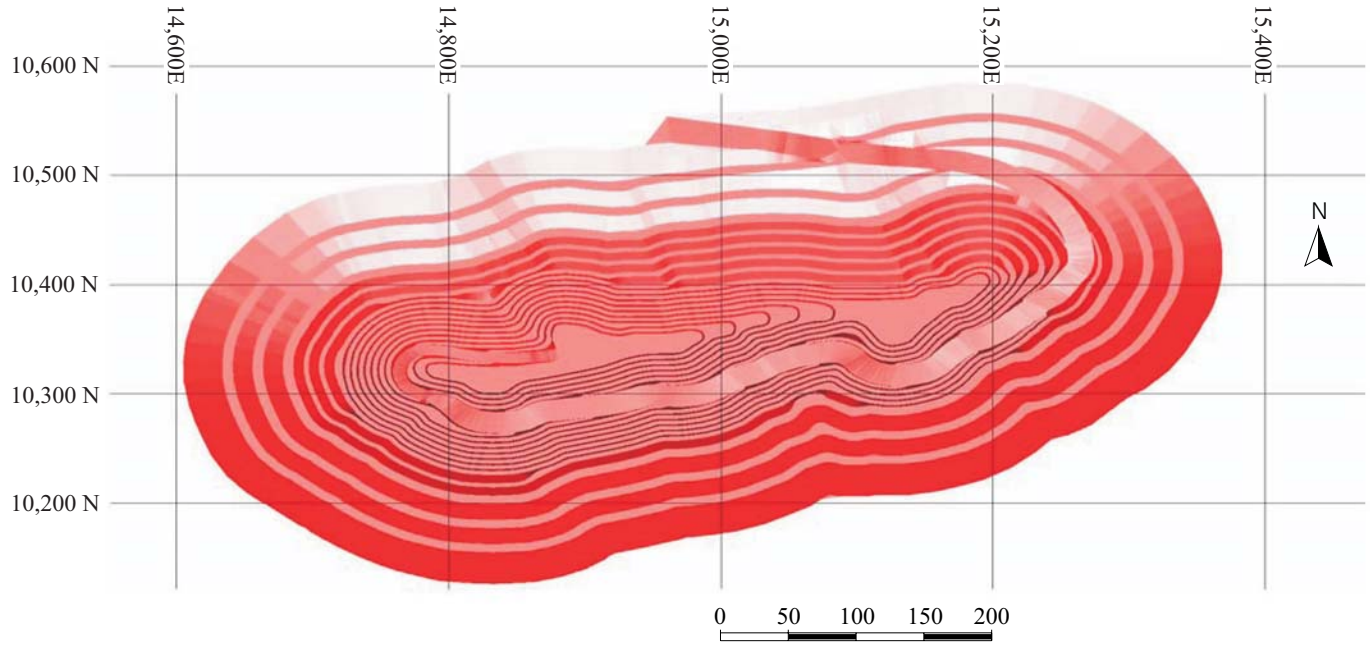
The peat layer has a thickness varying from 1.5 m to 3.3 m. The silt layer has a thickness varying from 1.5 m to 28 m. The glacial till layer varies in thickness over the site. In the area above the fault, the till is 20 m to 32 m thick. To the south of the fault, where the bedrock elevation is higher, the till is one metre to seven metres thick.

The JBA study recommends the following pit slope configuration:

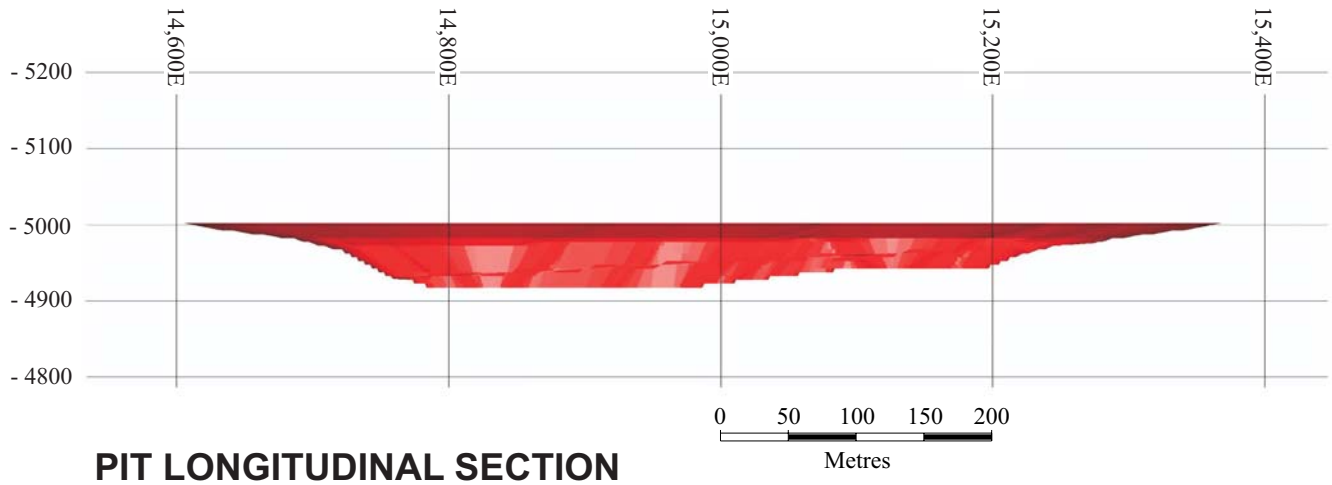
- 6 m with 2.5H:1V slope
- 8 m berm
- 8 m with 3.5H:1V slope
- 8 m berm
- The remaining peat/silt with 2.5H:1V slope
- The till layer with an overall slope angle of 24º
- The waste rock with an overall slope angle of 55º

Additional pit design criteria used by BBA includes the following:

- Bench Height – 5 m
- Till Face Angle - 35º, Berm Width – 4 m
- Rock Face Angle - 75º, Berm Width – 2.2 m
- Access Ramp at 10% grade, 20 m width (two lanes) or 10 m width (one lane)



PIT SURFACE PLAN



PIT LONGITUDINAL SECTION

Figure 19-7

Aurizon Mines Ltd.

Casa Berardi Property

Northwestern Québec, Canada

East Mine Open Pit

January 2009

Source: BBA, 2008.

MINING METHOD

The East Mine crown pillar ore will be mined using conventional open pit mining methods based on a truck/shovel operation, with mining equipment operated and maintained by a contractor. The overburden material will be hauled to the silt disposal and to the till disposal areas near the pit. The run-of-mine ore will be drilled, blasted and loaded by hydraulic shovels, and delivered by trucks to the stockpile located near the primary crusher, approximately 500 m from the pit, while the waste will be stored 500 m away, at the waste dump. In subsequent years, the waste will be used as backfill material in the West underground mine.

RESERVE ESTIMATION

In their initial work, BBA reviewed some typical benches to evaluate an appropriate dilution factor. Assuming a five-metre wide minimum for each cut, BBA applied an additional 0.65 m on either side, giving a result of 22% dilution. Dilution of 20%, at zero grade, was applied to the total Measured and Indicated Resources above cut-off within the designed pit, to arrive at the Mineral Reserve estimate.

East Mine open pit reserves total 635,000 tonnes, at a grade of 3.98 g/t Au. Overburden stripping requirements total 13.8 million tonnes, and waste rock totals 3.1 million tonnes, for a global strip ratio of 27:1.

RECOMMENDATIONS

Scott Wilson RPA considers the East Mine open pit reserve estimate to be reasonable and acceptable, however, the following changes to the estimation method are recommended:

- Dilution: change the block size in the block model to reflect the selective mining unit (SMU) rather than evaluating minimum cut widths and applying an external dilution percentage.

- Input Parameters: pit optimization and cut-off grade inputs date back to 2007 or earlier, and should be updated to reflect current values.

In Scott Wilson RPA's opinion, increased costs and possible increases in dilution would be balanced by a significant increase in the gold price.

LIFE OF MINE PLAN

The mine and mill complex were designed to produce and process 803,000 tonnes of ore per year at a rate of 2,200 tpd. Difficult ground conditions and bottlenecks in stope preparation currently limit underground production to 650,000 to 690,000 tonnes per year (1,800 tpd). The current LOM plan forecasts a return to 2,200+ tpd in 2011, using open pit ore from the East Mine to supplement mill feed from underground.

The LOM plan totals 3.8 million tonnes of ore grading 7.8 g/t Au, to be mined over five years (2009 to 2013) from 113 Zone, Lower Inter Zone, and six smaller West Mine zones, plus open pit and underground production from the East Mine.

A summary of the LOM plan is provided in Table 19-4.

Development was compiled by zone, measured from mine plans, and scheduled monthly for 2009, and quarterly thereafter. Development requirements average 20 m/day for the next three years, then decline rapidly, as most accesses and infrastructure will be completed.

Production was compiled by stope, and scheduled quarterly by zone. The majority of the production tonnage will come from 113 and Lower Inter zones, together making up 85% of underground reserves.

Stope sequencing is driven by production needs. Primary stopes on the same sublevel can be active simultaneously and mining will proceed upwards more or less at the same time. Two lifts after primary stope upward advancement, the secondary stopes can follow, respecting the fill curing time in the primary stopes. Geomechanical considerations impact the stope sequence to a certain degree, as confinement must be maintained in the relatively low-stress environment.

TABLE 19-4 LOM PRODUCTION SCHEDULE
Aurizon Mines Ltd. - Casa Berardi Mine

	TOTAL	2009	2010	2011	2012	2013
113 Zone Ore 370 to 690						
Tpd	1,032,361	845	500	500	500	482
Au g/t	6.80	5.83	5.93	6.44	6.78	9.81
Mill recovery %		92.7%	92.7%	92.7%	92.7%	92.7%
113 Zone Ore 750 to 890						
Tpd	669,888	311	400	400	400	323
Au g/t	12.62	11.75	10.44	13.37	12.93	14.85
Mill recovery %		92.7%	92.7%	92.7%	92.7%	92.7%
Lower Inter Zone Ore						
Tpd	953,101	465	650	650	500	345
Au g/t	8.91	9.97	8.86	7.63	9.33	9.35
Mill recovery %		92.7%	92.7%	92.7%	92.7%	92.7%
North West Zone Ore						
Tpd	82,657	170	56	0	0	0
Au g/t	5.43	5.23	6.04	0.00	0.00	0.00
Mill recovery %		87.7%	87.7%	0.0%	0.0%	0.0%
109 Zone Ore						
Tpd	67,611	5	181	0	0	0
Au g/t	5.38	4.50	5.40	0.00	0.00	0.00
Mill recovery %		87.7%	87.7%	0.0%	0.0%	0.0%
115 Zone Ore						
Tpd	30,192	0	38	44	0	0
Au g/t	11.75	0.00	11.75	11.75	0.00	0.00
Mill recovery %		0.0%	92.7%	92.7%	0.0%	0.0%
111 Zone Ore						
Tpd	36,730	0	0	101	0	0
Au g/t	5.44	0.00	0.00	5.44	0.00	0.00
Mill recovery %		0.0%	0.0%	87.7%	0.0%	0.0%
117 Zone Ore						
Tpd	19,199	0	0	8	45	0
Au g/t	6.96	0.00	0.00	6.96	6.96	0.00
Mill recovery %		0.0%	0.0%	92.7%	92.7%	0.0%
South-West Zone						
Tpd	72,037	0	0	0	197	0
Au g/t	4.64	0.00	0.00	0.00	4.64	0.00
Mill recovery %		0.0%	0.0%	0.0%	87.7%	0.0%
Low-Grade Development Ore						
Tpd	86,700	0	59	59	59	59
Au g/t	3.90	0.00	3.90	3.90	3.90	3.90
Mill recovery %		0.0%	89.0%	89.0%	89.0%	89.0%
East Mine Underground						
Tpd	150,784	0	0	0	99	313
Au g/t	7.08	0.00	0.00	0.00	5.99	7.42
Mill recovery %		0.0%	0.0%	0.0%	87.0%	87.0%
East Mine Open Pit						
Tpd	634,960	0	0	425	632	681
Au g/t	3.98	0.00	0.00	3.59	4.18	4.04
Mill recovery %		0.0%	0.0%	87.0%	87.0%	87.0%
Underground Mill Feed	**3,201,260**	**655,593**	**687,905**	**643,200**	**658,920**	**555,643**
Gold grade - Gr. / Tonne	8.50	7.87	7.91	8.45	8.49	10.05
Mill recovery %	92.0%	92.2%	92.0%	92.3%	91.7%	91.4%
Open Pit Mill Feed	**634,960**	**0**	**0**	**155,116**	**186,540**	**293,303**
Gold grade - Gr. / Tonne	3.98	0.00	0.00	3.59	4.13	4.09
Mill recovery %	87.0%	0.0%	0.0%	87.0%	87.0%	87.0%
Mill Feed	**3,836,220**	**655,593**	**687,905**	**798,316**	**845,460**	**848,946**
Gold grade - Gr. / Tonne	7.75	7.87	7.91	7.50	7.53	7.99
Mill recovery %	91.1%	92.2%	92.0%	91.3%	90.7%	89.9%
Recovered Gold - ozs	**871,382**	**152,934**	**160,776**	**175,756**	**185,482**	**196,067**
Net Payable Gold production - ozs	**870,511**	**152,781**	**160,615**	**175,581**	**185,297**	**195,871**

EXTRACTION SEQUENCE

The average size of 113 Zone production stopes is 9,000 tonnes to 10,000 tonnes. The full production cycle for a typical stope, from the start of production drilling to the completion of backfilling, lasts less then one month, followed by 30 days curing time for stopes with cemented rock fill. Ore production comes from two to three zones at the same time, with one to two stopes available for mucking. Fifteen to twenty stopes at a time will be active in the preparation stages of the production cycle, ranging from development, secondary support and slot raise boring and production drilling.

ENVIRONMENTAL CONSIDERATIONS

The following section addresses key points related to environmental control and waste disposal at the mine. The primary mine waste produced at the site will be tailings and waste rock.

TAILINGS

The site includes an existing tailings pond with three tailings cells, a polishing pond for settling iron arsenate precipitates, and a process water pond. The system has undergone regulatory review and permitting for the historic Casa Berardi Mine, and permits remain in place for use in mine water management and operation of the tailings basin.

The fill plan for the cells in the existing tailings pond and the method of tailings storage were revised in 2006. At the present time, the cell capacity allows the storage of tailings up to December 2010. Other studies are currently underway to reassess the capacity of existing storage cells and to determine when an extension of the tailings will be necessary. This information will be available in early 2009.

Studies are currently underway to optimize the treatment of arsenic by ferric sulphate precipitation, and for a more thorough characterization of the tailings, as requested by the government bodies as part of an update to the restoration plan.

WASTE ROCK

Waste rock is stored on surface and its characterization in 2008 showed that it is not acid generating. The Casa Berardi site has a certificate of authorization for the storage of waste rock on surface. Based upon the large demand for rock fill at the site, all underground waste rock is expected to be disposed of underground as backfill for mining operations.

OTHER WASTES

All other wastes produced at the site will be disposed of in accordance with regulatory requirements and should not be of short or long term concern.

WATER MANAGEMENT/WATER USE/EFFLUENT TREATMENT

Primary issues with water include minimization of fresh water use with water recycle/reuse, cyanide management and control, effluent treatment to meet Canada Metal Mining Effluent Regulations (MMER) and Quebec Directive 019 limits, and toxicity control. The proposed water management issues are briefly discussed below.

WATER USE

The primary source of water for the site is the reclaim water from the process water pond. Fresh water use at the mill is limited and represents a minimal percentage of the mill discharge. Where practical, all fresh water drainage into the tailings ponds has been diverted away from the basins to minimize contamination of clean surface drainage.

MINE WATER MANAGEMENT

Mine water pumped from the mine dewatering systems contains elevated levels of suspended solids and arsenic. Other metals such as Cu, Pb, Ni, and Zn are typically at concentrations well below effluent standards. Residual nutrients from explosives are also present (ammonia and nitrate from use of ANFO). Mine water is treated with ferric sulphate to precipitate arsenic and is discharged into Cell #2 for settling.

Since the restart of operations, the final effluent has not presented toxicity to rainbow trout. However, the final effluent presented toxicity to daphnia on one occasion. A high

level of ammonia could be involved. The toxicity associated with the ammonia can be controlled by adjusting pH.

TAILING WATER MANAGEMENT

Tailings slurry may contain elevated levels of cyanide, cyanide metal complexes, cyanide degradation products (CNO, CNS, and NH_3), and arsenic. The primary concerns with discharge are elevated levels of these constituents, which could exceed effluent standard and/or cause effluent toxicity. Aurizon has implemented the SO_2/Air process for cyanide destruction in the slurry discharge before release to the tailings pond. Ferric sulphate is added to the discharge of the tailings pond cells and of the polishing pond. This effectively eliminates soluble arsenic, cyanide, and cyanide metal complexes from the discharge. The SO_2/Air process does produce elevated levels of CNO. This compound is not likely to be present at toxic levels, however, as the compound naturally degrades in the tailings pond, and ammonia is formed. Storage of the water in the tailings ponds, polishing pond, and process water pond assists in nitrification of the water to reduce ammonia levels. The primary issue with elevated levels of ammonia is toxicity. This can usually be controlled through aging of the effluent and pH adjustment to lower levels to reduce the levels of the un-ionized ammonia in the discharge (the toxic form of ammonia).

Regulations require monthly monitoring of acute toxicity during periods of discharge of final effluent.

ENVIRONMENTAL EFFECTS OF TREATED EFFLUENT

Casa Berardi Mine has completed the first cycle of the follow-up Environment Effect Monitoring (EEM) study. Environment Canada predicts six cycles to confirm whether the effluent has an effect on the environment. An effluent may have an effect on the environment even if it meets the standards.

The final effluent from Casa Berardi empties into the Kaakakosig Creek. The average flow of the creek is 0.32 m^3/s, or 1,152 m^3/h. The flow of the final effluent discharge period varies between 1,200 m^3/h and 3,000 m^3/h.

COMPLIANCE WITH CANADIAN AND WORLD BANK STANDARDS

Aurizon is committed to operating in compliance with all regulations and standards of good practice for environmental, health and safety, including the voluntary Equator Principles (guidelines for managing environmental and social issues in project finance lending, developed by leading financial institutions and based on the environmental and social standards of the IFC).

In this regard, Aurizon has developed and approved corporate policies for environment, health, and safety practices (including 12 Principles for Sustainable Development in the corporate mission statement), and has prepared a detailed management plan in an effort to continuously improve their environment, health, and safety performance. Aurizon has hired experienced environmental and health and safety co-ordinators who have been given the responsibility of implementing the policies and management plans.

The design of the mine to meet current standards and the implementation of the proposed environmental and health and safety practices assures that the mine is prepared to meet future challenges. The proposed design is flexible and allows for modifications to improve performance where necessary. Potential future changes could include items, such as:

- Reduction to allowable levels of contaminants in the effluent discharge. In this regard, the mine has applied a state-of-the-art system using SO_2/Air for cyanide control and iron precipitation for arsenic control (the contaminants of primary concern). The system of in-mill treatment for cyanide virtually assures low levels of cyanide, however, should additional removal be necessary in future, treatment at the polishing pond could be added. For arsenic, removal of soluble arsenic from the tailings pond occurs at the discharge of the tailings pond cells and at the exit of the polishing pond.

- Impacts on the effluent receiver. The next rounds of environmental impact follow-up studies will confirm if the effluent has an effect or not on the receiving environment.

SOCIOECONOMIC IMPACTS

The Abitibi region is a well-known mining region, with mining being a key economic activity. The region has a wealth of trained miners and redevelopment of the mine has

been seen by most residents as a positive activity providing employment and tax revenue for the region. There are no First Nations issues related to the mine operation.

FUTURE COSTS FROM REGULATORY CHANGE AND CURRENT REGULATIONS

REGULATORY CHANGE

There are no known regulatory changes that are likely to have a material impact on the operations. The effluent standards under the federal Metal Mine Effluent Regulations were recently updated.

At present, the criteria to respect are those of the MMER and the former Directive 019, namely a limit for arsenic of 0.5 ppm in the final effluent. The results for the summer of 2008 and studies in progress suggest that the mine will be able to meet the new Directive 019 standard of 0.2 ppm to the final effluent.

OTHER POTENTIAL COSTS AND LIABILITIES

There are a number of areas where costs may increase, including:

- Supplementary tailings cell requirements are under evaluation. See Section Environmental Considerations – Tailings.
- A potential requirement for the construction of a new pipeline to discharge effluent to a larger receiver. To be confirmed with the next cycle of studies monitoring the effects on the environment.
- Additional mine closure costs would include:
  - Reclamation of a potential new tailings cell (noted above)
  - A provision for interim treatment of the tailings discharge after closure to reduce arsenic levels to <0.2 mg/L.
  - The restoration plan is currently being updated and studies and work will be required to validate the type of coverage necessary.

STATUS OF ENVIRONMENTAL PERMITS

All permits necessary to re-start the Casa Berardi site were obtained.

- Mining Act (R.S.Q., chapter M-13.1),
- Environment Quality Act (R.S.Q., c. Q-2),

- Forest Act (R.S.Q., chapter F-4.1).

EXISTING PERMITS

All necessary regulatory permits required for the operation of the former Casa Berardi Mine were transferred to Aurizon. These include:

East Mine:

- Authorization certificate issued on December 23, 1992, under section 22 of the *Environment Quality Act (R.S.Q., c. Q-2)* to TVX Gold Inc. and Golden Knight Resources Inc. for the extraction and processing of ore at the Casa Berardi site;

- Modification of the authorization certificate issued on February 19, 1998, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. December 23 1992, for the extraction and processing of ore on the Casa Berardi site;

- Assignment of authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. December 23, 1992, and amended on February 19, 1998, for the extraction and processing of ore on the Casa Berardi site;

- Modification of the authorization certificate issued on September 10, 2001, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on December 23, 1992, as amended on February 19, 1998, and assigned on September 14, 1998, to Aurizon Mines Ltd. for the extraction and processing of ore on the Casa Berardi site;

- Modification of the authorization certificate issued on September 14, 2006, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on December 23, 1992, as amended on February 19, 1998, and assigned on September 14, 1998, to Aurizon Mines Ltd. for the extraction and processing of ore on the Casa Berardi site;

- Modification of the authorization certificate issued on December 19, 2007, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on December 23, 1992, as amended on February 19, 1998, and assigned on September 14, 1998, to Aurizon Mines Ltd. for the extraction and processing of ore on the Casa Berardi site;

- Authorization certificate issued on February 19, 1990, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines for the diversion of the Kaakakosig Creek, Casa Berardi East;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines on February 19, 1990, for the diversion of the Kaakakosig Creek, Casa Berardi East;

- Authorization certificate issued on January 18, 1991, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines for the construction and use of a storage area for hazardous waste;

- Assignment of the authorization certificate issued on June 19, 1992, to TVX Gold Inc. and Golden Knight Resources Inc., concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines on January 18, 1991, for the construction and use of a storage area for hazardous waste;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd., concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines on January 18, 1991, for the construction and use of a storage area for hazardous waste;

- Authorization certificate issued on August 7, 1995, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. for the operation of a borrow pit for clay;

- Assignment of authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. on August 7, 1995, for the operation of a borrow pit for clay;

- Authorization certificate issued on August 7, 1995, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. for the operation of a quarry;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. on August 7, 1995, for the operation of a quarry;

- Authorization certificate issued on September 18, 1995, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines for the operation of a borrow pit for clay;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines on September 18, 1995, for the operation of a borrow pit for clay;

- Authorization certificate issued on November 6, 1995, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines for the operation of a cement and concrete plant;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Casa Berardi Mines on November 6, 1995, for the operation of a cement and concrete plant;

- Authorization issued on November 10, 2004, under section 32 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for installation of two pipelines (fire and water supply to the mine) from the Koababikawi Creek;

- Authorization issued on July 4, 2005, under section 32 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the construction of a water intake and installation of a fire pumping station at No Name Lake;

- Modification of the permit issued on September 22, 2005, for the permit issued under section 32 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. on July 4, 2005, for the construction of a water intake and installation of a fire pumping station at No Name Lake;

- Authorization issued on April 7, 2008, under Article 48 of the Environment Quality Act (RSQ, c. Q-2) Aurizon Mines Ltd. to install a dust filter and wet collector.

West Mine:

- Authorization certificate issued on July 2, 1992, under section 22 of the Environment Quality Act (R.S.Q., c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. for the operation of Casa Berardi Mine West;

- Assignment of the authorization certificate issued on September 14, 1998, to Aurizon Mines Ltd. concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on July 2, 1992, for the operation of Casa Berardi Mine West;

- Modification of the authorization certificate issued on October 27, 2000, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on July 2, 1992, and assigned on September 14, 1998, to Aurizon Mines Ltd. for the operation of Casa Berardi Mine West;

- Modification of the authorization certificate issued on February 21, 2001, concerning the authorization certificate issued under section 22 of the Environment Quality Act (RSQ, c. Q-2) to TVX Gold Inc. and Golden Knight Resources Inc. on July 2, 1992, assigned on September 14, 1998, to Aurizon Mines Ltd., and as amended on October 27, 2000, for the operation of Casa Berardi Mine West;

- Authorization certificate issued on January 26, 2006, under Article 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the construction of a 25 kV power line in a peat bog;

- Authorization certificate issued on August 15, 2006, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for waste water treatment, Casa Berardi;

- Authorization certificate issued on July 20, 2007, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the construction of a road in a peat bog;

- Authorization certificate issued on October 17, 2007, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the installation of an oil / water separator at the West Mine;

- Authorization certificate issued on June 26, 2008, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the operation of an oil / water separator at the East Mine;

- Authorization certificate issued on April 9, 2008, under section 22 of the Environment Quality Act (RSQ, c. Q-2) to Aurizon Mines Ltd. for the construction of an exploration access road.

In addition to these permits and approvals, Aurizon has also obtained environmental permits which include:

- Ministry of Natural Resources – Permit for fuel storage, Permit no 439564-5 issued 05/05/2005, expires 30/06/09.

- Lease for the waste stockpile of the West Mine having a surface area of five hectares and renewable on October 14 of each year. Valid until 14/10/09.

- Lease for the tailings storage area having a surface area of 431,867 ha and renewable on June 1 of each year. Valid until May 31, 2009.

- Non-exclusive lease #10752 for the exploitation of sand and gravel. Renewable March 31 of each year. Valid until March 31, 2009.

- Mining lease #768 renewable in April of each year. Valid until May 8, 2009.

- Mining lease #833 renewable in December of each year. Valid until December 17, 2009.

ADDITIONAL ENVIRONMENTAL APPROVALS REQUIRED

All new permits for the mine are being prepared under the direction of the on-site environmental coordinator. Given the mining history at Casa Berardi and the good standards of practice proposed by Aurizon, there should not be significant impediments to obtaining any necessary permits. New permit requirements include:

- Certificate for the industrial waste water reduction systems (presently being written).
- As required by federal Metal Mining Effluent Regulation, Environment Effect Monitoring study should be conducted. (In progress, the 1st cycle study is complete).

MINE CLOSURE

Aurizon is presently in the process of completing an update to its restoration plan. The mine closure plan includes:

- Decommissioning of the surface infrastructure;
- Dismantling of all surface structures, with sale/recycling of assets and disposal of wastes;
- Grading and vegetation of all disturbed areas;
- Capping/sealing of all mine access points in accordance with regulatory standards;
- Grading of the tailings dykes followed by direct vegetation of the tailings dams;
- Removal of the fresh water diversion works.

The original closure plan was submitted and approved in 2000. An update of the restoration plan was submitted in January 2006. Following requests from the Ministry of Natural Resources and the Ministry of Sustainable Development Environment and Parks, studies are underway.

The total estimated cost for the existing mine closure plan and the obligations for financial assurance to the government of Quebec are summarized in Table 19-5. The total site reclamation cost from the plan is $1,210,000. The Ministry of Natural Resources requires a financial guarantee for 70% of the restoration cost which is paid in

instalment as shown in Table 19-5 to a maximum of $847,000. Closure costs will be updated and submitted to the Ministry of Natural Resources in 2009, as part of the updated closure plan.

TABLE 19-5 CURRENT CLOSURE COSTS AND OBLIGATIONS
Aurizon Mines Ltd. – Casa Berardi Mine

Date	Restoration $	Guarantee Total, $	%	Payment, $			Comments
				Obligation	Completed	Cumulative	
2000	792,857	555,000					
2001	792,857	555,000					
2002	833,571	583,000	2,0		11,100	11,100	Addition of a 5 ha waste pile
2003	833,571	583,000	6,1		36,154	47,254	
2004	833,571	583,000	10,2		59,517	106,771	
2005	1,210,000	847,000	0,0	0		106,771	2005 Feasibility revision
2006	1,210,000	847,000	3,5	29,609		136,380	
2007	1,210,000	847,000	10,5	88,827		225,208	
2008	1,210,000	847,000	17,5	148,046		373,254	
2009	1,210,000	847,000	24,5	207,264		580,518	
2010	1,210,000	847,000	31,5	266,482		847,000	

CAPITAL AND OPERATING COST ESTIMATES

LOM capital costs of $76.9 million, summarized in Table 19-6, include contractor mine development, mine infrastructure, open pit costs, equipment costs, tailings management, repayment of government loans, and mine reclamation & closure costs.

Mine development costs are calculated using unit rates from the contract with Dumas, together with the LOM development schedule. Mine infrastructure capital includes stationary equipment for refuge stations, fuel bays, ventilation installations, etc. Open pit costs include mobilization of the open pit contractor, overburden stripping, and deferred operating costs (relating to quantities of open pit ore that are stockpiled, rather than

processed immediately). Equipment costs include electrical and mobile equipment replacement requirements. Tailings management costs include an estimate for expansion. Loan repayments cover reimbursement of an Aurizon loan issued prior to the re-opening of the Mine.

TABLE 19-6 LOM CAPITAL COSTS
Aurizon Mines Ltd. – Casa Berardi Mine

	Cost in $ millions					
Item	**2009**	**2010**	**2011**	**2012**	**2013**	**Total**
UG Mine Development	13.0	7.3	11.7	6.8	0.9	39.7
Mining Infrastructure	2.3	1.3	1.3	1.2	0.4	6.5
Open Pit	-	0.4	13.4	1.3	0.1	15.1
Deferred Open Pit Costs	-	-	-	2.3	-	2.3
Offices	0.2	0.3	0.2	0.1	-	0.8
Equipment	4.2	0.4	-	-	-	4.6
Tailings Management	0.3	5.0	-	-	-	5.3
Loan Repayments	0.6	0.6	0.8	-	-	2.0
Reclamation & Closure	0.2	0.3	-	-	-	0.5
Total	**20.8**	**15.6**	**27.4**	**11.7**	**1.3**	**76.9**

In Scott Wilson RPA's opinion, underground mine development capital should be considered when calculating Mineral Reserve cut-off grades, as the cost of access development may have a considerable impact on smaller zones.

OPERATING COST ESTIMATE

Operating costs, averaging $77 million per year, are presented in Table 18-10:

TABLE 19-7 UNIT OPERATING COSTS
Aurizon Mines Ltd. – Casa Berardi Mine

Item	Units	LOMP Average
Underground Mining	$/t ug ore	82.68
Open Pit Mining	$/t moved	5.82
	$/t op ore	34.49
Mining - Average	$/t milled	74.70
Mill	$/t milled	19.72
Administration	$/t milled	6.55
Total	$/t milled	100.97

Underground mining costs include definition drilling, stope preparation, mining, and services. Definition drilling was estimated using a unit rate of $1.80 per tonne of reserves. Stope preparation costs include excavation from the level access into the stope, cablebolting and slot raiseboring. Mining costs cover drilling, blasting, mucking, haulage, hoisting, and backfill (cemented rock fill and unconsolidated waste fill). Most Mine Production costs were estimated on a variable basis, e.g., per tonne mined in each zone, per metre drilled, per tonne of backfill, etc.

Service costs include Underground, Mechanical & Electrical, Surface, and Technical Services. Underground services include supervision and service crew labour costs, pumping costs, and diesel costs. Mechanical & Electrical services include maintenance labour, parts, and materials, as well as mine electricity. Surface services include labour, surface ore haulage (shaft to mill), propane for mine air heaters, and road & building maintenance. Technical services include geology, grade control, engineering, and surveying. Most service costs were estimated on a fixed rate basis, e.g., dollars per year.

Mill costs include labour, mechanical maintenance supplies, reagents, steel (grinding media and liners), and electricity. Mill consumables were estimated on a variable basis (per tonne milled) and other costs on a fixed basis. Environmental costs are included in the mill total.

Administration costs include labour and general expenses for Management, Administration, Human Resources, Health & Safety, and Purchasing departments. Administration costs were estimated on a fixed basis.

MANPOWER

The current manpower for the Casa Berardi Mine-Mill complex is summarized in Table 19-8. The table includes staff and hourly employees. It includes the contractor workforce required for mine development, diamond drilling, quarrying, open pit mining, and site security.

TABLE 19-8 WORKFORCE SUMMARY
Aurizon Mines Ltd. – Casa Berardi Mine

Department	Staff	Hourly	Total
Mine	5	241	246
Mill	6	28	34
Maintenance	8	94	102
Technical Services	28	3	31
Admin (Mgt, HR, Safety, Purchasing)	19	6	25
Total	66	372	438

ECONOMIC ANALYSIS

A pre-tax Cash Flow Projection has been generated from the Life of Mine production schedule and capital and operating cost estimates, and is summarized in Table 19-9. A summary of the key criteria is provided below.

ECONOMIC CRITERIA

PRODUCTION

- Five year mine life (2009-2013)
- 1,800 tonnes per day mining from underground.
- 500 tonnes per day supplemental ore from open pit mining (2011-2013).
- Mill recovery by zone, as indicated by testwork, averaging 91%.

- Gold at refinery 99.9% payable.
- Exchange rate US$1.00 = C$1.1.
- Metal price: US$750 per ounce gold.
- Net Revenue includes doré refining, transport, and insurance costs.

COSTS

- Mine life capital totals $76.9 million.
- Average operating cost over the mine life is $101 per tonne milled.

TABLE 19-9 PRE-TAX CASH FLOW MODEL
Aurizon Mines Ltd. - Casa Berardi Mine

			2009	2010	2011	2012	2013	TOTAL
PRODUCTION	Underground	Tonnes	655,593	687,905	643,200	658,920	555,643	3,201,260
		Grade	7.87	7.91	8.45	8.49	10.05	8.50
	Open Pit	Tonnes	-	-	155,116	186,540	293,303	634,960
		Grade	-	-	3.59	4.13	4.09	3.98
	Overburden	Tonnes	-	-	6,720,680	4,766,536	2,356,459	13,843,676
	Waste	Tonnes	-	-	726,945	1,162,691	1,237,300	3,126,936
		Strip Ratio			48.01	31.79	12.25	26.73
	Mill Feed	Tonnes	655,593	687,905	798,316	845,460	848,946	3,836,220
		Grade	7.87	7.91	7.50	7.53	7.99	7.75
REVENUE	Contained Gold	ounces	165,847	174,843	192,584	204,555	218,171	956,001
	Mill Recovery	%	92.2%	92.0%	91.3%	90.7%	89.9%	91.1%
	Recovered Gold	ounces	152,934	160,776	175,756	185,482	196,067	871,015
	Payable	%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
	Payable Gold	ounces	152,781	160,615	175,581	185,297	195,871	870,144
	Payable Silver	ounces	30,556	32,123	35,116	37,059	39,174	174,029
	Exchange Rate	US$/C$	1.10	1.10	1.10	1.10	1.10	1.10
	Gold Price	US$/oz	750	750	750	750	750	750
	Silver Price	US$/oz	10	10	10	10	10	10
	Gross Revenue	$'000s	126,380	132,861	145,240	153,277	162,025	719,783
	Refining, Transport, Ins.	$'000s	178	198	216	228	241	1,061
	Net Revenue	$'000s	126,202	132,663	145,024	153,050	161,784	718,723
		$/tonne	193	193	182	181	191	187
OPERATING COSTS	Mining - Underground	$'000s	52,377	55,794	55,295	54,738	46,467	264,671
	Mining - Open Pit	$'000s	-	-	5,456	9,618	6,823	21,897
	Processing	$'000s	13,423	13,951	15,603	16,308	16,360	75,645
	G&A	$'000s	4,955	5,040	5,040	5,040	5,040	25,115
	Total	$'000s	70,755	74,785	81,394	85,704	74,690	387,328
	Mining - Underground	$/t ug ore	79.89	81.11	85.97	83.07	83.63	82.68
	Mining - Open Pit	$/t moved	-	-	6.19	7.13	4.46	5.82
	Mining - Open Pit	$/t op ore	-	-	35.17	51.56	23.26	34.49
	Mining - Average	$/t milled	79.89	81.11	76.10	76.12	62.77	74.70
	Processing	$/t milled	20.47	20.28	19.54	19.29	19.27	19.72
	G&A	$/t milled	7.56	7.33	6.31	5.96	5.94	6.55
	Total	$/t milled	107.93	108.71	101.96	101.37	87.98	100.97
	Operating Cash Flow	$'000s	55,447	57,879	63,630	67,345	87,094	331,395
CAPITAL COSTS	UG Development	$'000s	12,996	7,346	11,724	6,755	858	39,679
	Mining Infrastructure	$'000s	2,313	1,286	1,285	1,231	408	6,522
	Open Pit	$'000s	-	396	13,414	3,582	84	17,477
	Equipment	$'000s	4,398	721	214	107	-	5,439
	Tailings	$'000s	260	5,000	-	-	-	5,260
	Payments and Bonding	$'000s	821	884	773	-	-	2,478
	Total	$'000s	20,788	15,633	27,409	11,675	1,349	76,855
CASH FLOW	Net Cash Flow	$'000s	34,659	42,246	36,221	55,670	85,745	254,540
	Cumulative	$'000s	34,659	76,904	113,125	168,795	254,540	
	Total Cash Cost	US$/oz	419	421	419	418	345	403
	Capital Cost	US$/oz	124	88	142	57	6	80
	Total Production Cost	US$/oz	543	510	561	476	351	483
	Net Present Value	$'000s	5.0%	215,598				
		$'000s	7.5%	199,365				

CASH FLOW ANALYSIS

Considering the Casa Berardi Mine on a stand-alone basis, the undiscounted pre-tax cash flow totals $255 million over the mine life. Net Present Value (NPV) at a 5% discount rate is $216 million.

The Total Cash Cost is US$403 per ounce of gold. The mine life capital unit cost is US$80 per ounce, for a Total Production Cost of US$483 per ounce of gold. Average annual gold production over the LOM is 174,000 ounces per year.

At the current (February 6, 2009) gold price of US$913 per ounce, and C$/US$ exchange rate of 0.75, the undiscounted pre-tax cash flow totals $530 million, and the NPV at a 5% discount rate is $453 million.

The U.S. Securities & Exchange Commission requires that Mineral Reserves be evaluated at three-year trailing average metal prices. The three-year trailing average gold price is US$737 per ounce. At that price, the undiscounted pre-tax cash flow totals $242 million over the mine life, and the NPV at a 5% discount rate is $205 million.

SENSITIVITY

Key economic risks were examined by running cash flow sensitivities:

- Gold price
- Exchange rate
- Head Grade
- Operating costs
- Capital costs

NPV sensitivity over the base case has been calculated for -20% to +20% variations. The sensitivities are shown in Figure 19-8 and Table 19-10.

FIGURE 19-8 SENSITIVITY ANALYSIS

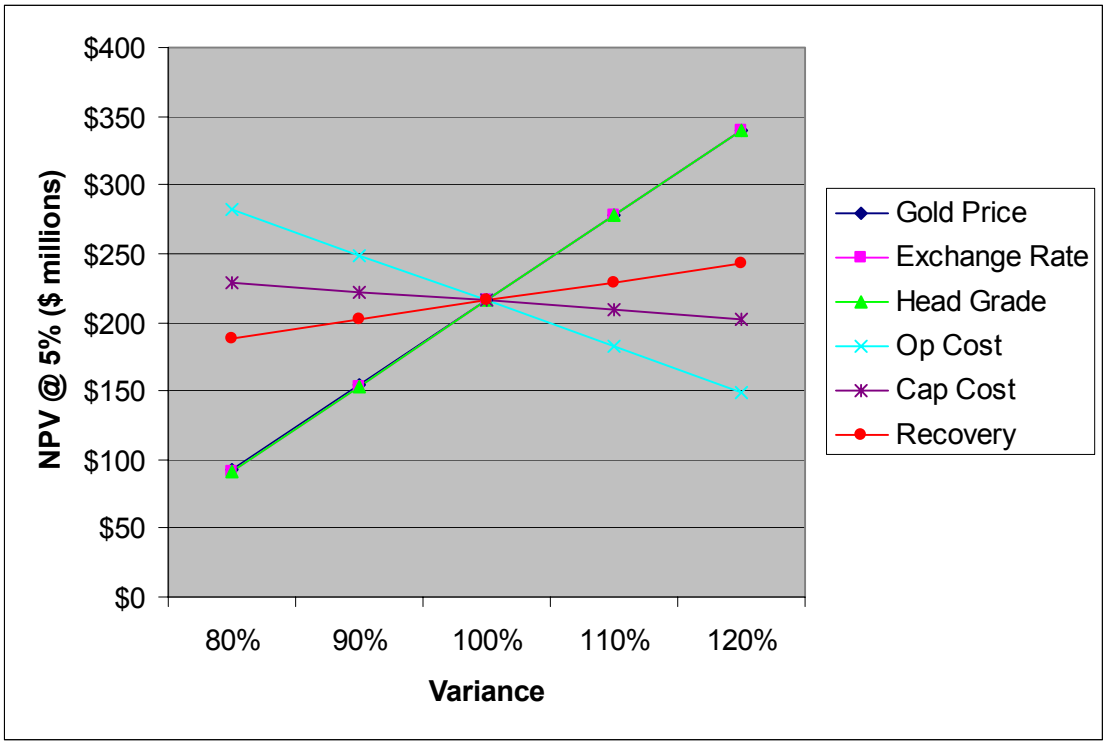


TABLE 19-10 SENSITIVITY ANALYSES

Aurizon Mines Ltd. – Casa Berardi Project

Parameter Variables	Units	-20%	-10%	Base	+10%	+20%
Gold Price	US$/oz	600	675	750	825	900
Exchange Rate	US$/C$	0.88	0.99	1.10	1.21	1.32
Head Grade	g/t	6.20	6.98	7.75	8.53	9.30
Operating Cost	US$/t	81	91	101	111	121
Capital Cost	$ millions	61	69	77	85	92
Recovery	%	87%	89%	91%	93%	95%

NPV@5%	Units	-20%	-10%	Base	+10%	+20%
Gold Price	$ millions	92	154	216	277	339
Exchange Rate	$ millions	92	154	216	278	339
Head Grade	$ millions	92	154	216	278	339
Operating Cost	$ millions	283	249	216	182	149
Capital Cost	$ millions	229	222	216	209	202
Recovery	$ millions	188	202	216	229	243

Gold price, exchange rate, and head grade impact the cash flow in the same proportion, as they affect revenues in the same way.

The Project is most sensitive to external economic criteria related to the gold price (spot price and C$:US$ exchange rate). Changes in the Canadian dollar will have a direct impact, since costs are almost entirely in C$ and revenues are in US$.

20 INTERPRETATION AND CONCLUSIONS

In Scott Wilson RPA's opinion, the Casa Berardi Mine has been developed and operated by Aurizon in a reasonable and professional manner. Mineral Reserves as of December 31, 2008, are summarized in the following table:

TABLE 20-1 MINERAL RESERVES SUMMARY

Aurizon Mines Ltd. – Casa Berardi Mine

Area	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground	Proven	880,000	8.18	231,400
Underground	Probable	2,321,000	8.62	643,400
Open Pit	Proven	407,000	4.16	54,400
Open Pit	Probable	228,000	3.66	26,800
Total	**Proven & Probable**	3,836,000	7.75	956,000

Notes:
1. CIM definitions were followed for Mineral Reserves.
2. Mineral Reserves are estimated at a cut-off grade of 4.4 g/t Au for underground, and 1.2 g/t Au for open pit.
3. Mineral Reserves are estimated using an average long-term gold price of US$750 per ounce and a US$/C$ exchange rate of 1:1.10.
4. A minimum mining width of three metres was used.
5. Bulk density is 2.70 t/m^3 for 113 Zone, and 2.77 t/m^3 for other zones.

Mineral Resources, exclusive (in addition to) reserves summarized above, as of December 31, 2008, are summarized in the following table:

TABLE 20-2 MINERAL RESOURCES SUMMARY

Aurizon Mines Ltd. – Casa Berardi Mine

Area	Category	Tonnes	Grade (g/t Au)	Contained Ounces
Underground	Measured	418,000	7.07	95,000
	Indicated	2,050,000	6.38	421,000
	Inferred	3,188,000	7.11	728,000
Open Pit	Measured	310,000	3.11	31,000
	Indicated	2,184,000	5.54	389,000
	Inferred	1,151,000	5.18	192,000
Total	**Measured & Indicated**	4,962,000	5.87	936,000
Total	**Inferred**	4,339,000	6.60	920,000

Notes:
1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated at cut-off grades of:
   - 4 g/t Au for the West Mine, Principal Mine and East Mine
   - 3 g/t Au for South West, Inter and 104 zones in the West Mine. Those zones were estimated by Aurizon in 2000 using 2D polygons on longitudinal sections and reviewed by RPA in 2005.
   - 1.30 g/t Au for East Mine – Open Pit (Geostat, 2008)
3. Mineral Resources are estimated using an average long-term gold price of US$750 per ounce, and a US$/C$ exchange rate of 1:1.10.
4. Minimum mining widths of two to three metres were used.
5. Mineral Resources are exclusive of Mineral Reserves.
6. Totals may not represent the sum of the parts due to rounding.

In Scott Wilson RPA's opinion, there is good potential for further conversion of Mineral Resources to Mineral Reserves. Scott Wilson RPA recommends that resources considered for conversion to reserves should continue to be estimated using parameters and methodology similar to those used for the current reserves.

Over the last three years, Aurizon has completed extensive work in all of the geological aspects of the mine: geological interpretation, developing QA/QC programs, integration of the Gemcom software and training, and 3D solid modelling and 3D block model grade interpolation. Aurizon has enjoyed good success in generating new resources, and converting resources to reserves.

Mill production results reconcile well with Mineral Reserve estimates.

Ground control problems experienced in previous operations have been addressed by measures included in current operating procedures. Stability of mine development has been increased by locating the major infrastructure on the north side of the Casa Berardi Fault, and by applying ground support in accordance with commonly accepted practice for the anticipated conditions. Stope stability has been enhanced by the use of a smaller typical stope size, conservative sublevel spacing, and application of cemented rock fill.

Mill recovery increases from past experience are due to more consistent feed rates, the addition of intensive cyanidation, reduced levels of "preg-robbing" graphite, and increased gravity circuit capacity.

21 RECOMMENDATIONS

Scott Wilson RPA's recommendations are as follows:

GEOLOGIST DEDICATED FULL TIME TO GEMCOM

A geologist must be dedicated full time to Gemcom and to database management, to ensure consistency throughout the process of geological interpretation, solid modelling, and integration/validation of data in the Mineral Resource and Mineral Reserve estimation process. A geologist with Gemcom skills must carry out or supervise the following activities:

- Interpretation and modelling of the multiple mineralized zones
- Regular block model updates for mine planning, budget purposes and mineral resource updates
- 3D modelling of excavations (development and stopes, planned and mined-out)
- Management of the definition drilling, exploration drilling and QA/QC databases.

GEOLOGICAL INTERPRETATION AND SOLID MODELLING

Scott Wilson RPA reviewed cross-sections, longitudinal sections, and plan views of different zones, and found the interpretation of the mineralization to be generally well done. Scott Wilson RPA, however, is of the opinion that the mineralized outline, especially in 113 Zone, is locally too generous and includes low grade material on the walls or locally conforming to stope design constraints rather than to geology. Scott Wilson RPA recommends that senior geology staff approve geological interpretation before solid modelling is undertaken.

GEMCOM DATABASE CLEAN-UP

The Gemcom database should be cleaned up in order to maintain only one drill hole database. To date, there are nine drill holes database, namely DrillHoleA, Drillholes, Exploration, MineEst, MineOuest, MinePrinc, transfert, Travail, and TravailExplo. Only the Drillholes database should be kept and updated.

CHIP SAMPLES IN GEMCOM DATABASE

To date, chip samples from development headings have been used only in the East Mine. Chip samples of other sectors should be entered in the database and be used for geological interpretation and solid modelling, as well as in block model grade estimation. This would also help in the mine-mill grade reconciliation, especially on a stope by stope basis.

GRADE AND VOLUME CALCULATION FOR MINE PLANNING AND MINERAL RESERVE REPORTING

Because the block models are not updated on a regular basis, or as needed, with the latest information, the stope grades are estimated using the nearest neighbour method for all of the stopes for mine planning and some of the stopes for Mineral Reserve reporting. In 2008, all of the stopes that were in the mine plan and 22% (103/471 stopes) of the stopes that were reported in the Mineral Reserves were estimated that way. Volumes are estimated from 3D solids in Gemcom.

To obtain the grade of a particular stope, only drill hole intercepts that are found within that stope are used, instead of using all surrounding drill hole samples (composites), no matter where the composite is located, inside or outside a stope. Scott Wilson RPA recommends that the nearest neighbour grade interpolation method be discontinued, and a regularly-updated Gemcom block model be used. Grade interpolation based on composites should be used not only for long term Mineral Resource estimation but on a day-to-day basis.

CAVITY MONITORING SURVEYS OF MINED-OUT STOPES INTO GEMCOM DATABASE

Volumes of mined-out stopes are evaluated from a cavity monitoring survey (CMS) system by the geology department; however, these solids have not yet been imported into Gemcom. Integration of CMS information into Gemcom would allow calculating tonnes and grades of mined-out excavations and the grade of dilution from the block model. This should also facilitate the mine-mill reconciliation process.

BLOCK MODEL PARAMETERS

In order to diminish the size of block model data and to accelerate data processing, block dimensions could be increased. Percent models should be tested, especially in the Principal Mine where multiple lenses are close to each other. Kriging should also be tested for grade interpolation and compared to the presently used inverse distance squared method.

DENSITY DETERMINATIONS

LOWER INTER

In 2006, Aurizon carried out an extensive definition drilling program on the Lower Inter Zone, however, no density determinations were carried out on drill core. Scott Wilson RPA recommends that density determinations be carried out on any Lower Inter drill core that is still available.

113 ZONE

Scott Wilson RPA recommends revisiting density in the case of 113 Zone in order to use the latest information. In 2004, a total of 629 measurements were completed, with 95% of values ranging between 2.50 t/m^3 and 3.00 t/m^3. On average, the density varied from 2.67 t/m^3 for quartz veins to 2.85 t/m^3 for schist, however, as the majority of the ore in this zone lies within quartz veins (>90% of the resources) and wacke (<10%), an average density of 2.70 t/m^3 was assumed to be representative of 113 Zone.

Despite density determinations aforementioned, Aurizon provided Scott Wilson RPA in December 2008 with a file of density determinations that were extracted from the Gemcom assay table. The mean density of the 947 determinations provided is 2.74 t/m^3 while to date, a density of 2.70 t/m^3 has been used for Mineral Resource estimation.

DATA ENTRY

Scott Wilson RPA is of the opinion that the assay table should be revisited to ensure all density determinations have been entered.

RQD MEASUREMENTS

Since Aurizon acquired the property, RQD measurements and core recovery measurements have been carried out in all surface and underground holes prior to logging. In general, RQD measurements have been carried out over three metre lengths, with shorter lengths used in areas of bad ground. More recently, RQD measurements have been carried out over much longer lengths, five metres to 15 m. Approximately 84% of the RQD database consists of lengths of three metres or shorter. Scott Wilson RPA recommends keeping the general length of measurements to three metres, as it corresponds to the drill rod lengths. This will allow better hole to hole interpretations of areas of good and poor RQD values.

QUALITY CONTROL/QUALITY ASSURANCE PROGRAM

MINE LABORATORY

The mine lab has its own QA/QC program, including the analysis of one blank sample, one standard, and one duplicate in every 24 samples. The results of blank and standard assays and types are not indicated in the assay certificates provided to the geology department. Scott Wilson RPA recommends the results of blanks and standards be shown on the assay certificates.

The compilation of blanks and standards is carried out by the lab chief analyst. This compilation is not provided to the geology department. Scott Wilson RPA recommends that the lab provide this compilation to the geology department.

PULPS #1 FOR CHECK ASSAY

Based on the QA/QC graphs and tables, Scott Wilson RPA is of the opinion that the amount of check assays of Pulps #1 can be reduced from 10% to 5%.

QA/QC DATABASE

Numerous macros and queries that were created before 2007 make the database confusing. It is difficult to determine which tables are relevant, and which need to be updated or deleted. Several macros that were created in the past should be updated or deleted. More work is required to make the database more user friendly.

CUT-OFF GRADE DETERMINATION – UNDERGROUND RESERVES

In Scott Wilson RPA's opinion, the cut-off grade is reasonable, however, it is recommended that some changes to the calculation be considered:

- Use LOM underground mining, processing, and G&A costs, rather than budget costs for the current year. Mineral Reserves cover the full LOM, and the costs should match.

- Include underground development capital costs in the cut-off grade calculation. It is particularly important to consider these costs when evaluating small zones, which typically require greater amounts of development per tonne of reserves.

- Evaluate mill operating data to establish grade-recovery relationships.

EAST MINE OPEN PIT RESERVE ESTIMATION

Scott Wilson RPA considers the East Mine open pit reserve estimate to be reasonable and acceptable, however, the following changes to the estimation method are recommended:

- Dilution: change the block size in the block model to reflect the selective mining unit (SMU) rather than evaluating minimum cut widths and applying an external dilution percentage.

- Input Parameters: pit optimization and cut-off grade inputs date back to 2007 or earlier, and should be updated to reflect current values.

In Scott Wilson RPA's opinion, increased costs and possible increases in dilution resulting from these recommendations would be balanced by a significant increase in the gold price.

PRINCIPAL MINE CROWN PILLAR – OPEN PIT POTENTIAL

Based on pit optimization which indicates that part of the Principal Mine zones could be extracted from surface, Scott Wilson RPA recommends that a lower-grade mineralized envelope be developed. While the average grade of the open pit would decrease, overall pit economics would become more favourable. In addition, the stripping ratio would be reduced.

Production scenarios should be explored to better develop the operating cost assumptions. The costs used in the current analysis are based on a production rate of approximately 880 tpd. At the current milling capacity of 2,200 tpd at Casa Berardi, the open pit could support approximately 3.4 years of production as a stand-alone operation. Depending on the mill feed split between open pit and underground production, the operating costs could potentially be lowered to improve pit economics.

With open pit grades similar to underground feed grades at Casa Berardi, it may be more economic to mine the deeper portions of the deposit using underground methods. A trade-off study should be completed to evaluate the potential to mine the deposit using both types of mining, and determine the elevation where methods change from open pit to underground.

22 REFERENCES

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Geostat System International Inc. (February 2005): Resources and Reserves Assessment of the East Mine Pillar, Casa Berardi Complex.

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Scott Wilson Roscoe Postle Associates Inc. (December 2007): Mise à Jour des Ressources de la Mine Est (Sous-Terre) – Rapport Préliminaire.b Internal report.

Scott Wilson Roscoe Postle Associates Inc. (September 2008): Whitttle Analysis of the Principal Zone. Internal report.

23 SIGNATURE PAGE

This report titled "Technical Report on the Casa Berardi Mine, Northwestern Quebec, Canada", prepared for Aurizon Mines Ltd. and dated February 9, 2009, was prepared and signed by the following authors:

(Signed and Sealed)

Dated at Toronto, Ontario
February 9, 2009

Bernard Salmon, Ing.
Consulting Geological Engineer
Scott Wilson RPA

(Signed and Sealed)

Dated at Toronto, Ontario
February 9, 2009

Jason J. Cox, P. Eng.
Senior Mining Engineer
Scott Wilson RPA

24 CERTIFICATE OF QUALIFICATIONS

BERNARD SALMON

I, Bernard Salmon, Eng., as an author of this report entitled "Technical Report on the Casa Berardi Mine, Northwestern Quebec, Canada" prepared for Aurizon Mines Ltd. and dated February 9, 2009, do hereby certify that:

1. I am Consulting Geological Engineer with Scott Wilson Roscoe Postle Associates Inc. (Scott Wilson RPA). My office address is 170 Principale Avenue, Rouyn-Noranda, Québec, J9X 4P7.

2. I am a graduate of École Polytechnique, Montreal, Québec, Canada, in 1982 with a Bachelor of Science (Applied) in Geological Engineering.

3. I am registered as an Engineer in the Province of Québec (#36831) and I am designated as a Consulting Geological Engineer. I have worked as a geological engineer for a total of 25 years since my graduation. My relevant experience for the purpose of the Technical Report is:
   - Mining geologist, Falconbridge Copper Corp., Opemiska Mine, 1982 to 1987.
   - Chief geologist, Minnova Inc., Ansil Mine, 1987-1992
   - Chief-Geologist and Technical Superintendent, Inmet Mining Inc., Troilus Mine, 1992-1997.
   - Chief-Geologist, Aur Resources Inc., Louvicourt Mine, 1997-2005.
   - Consulting Geological Engineer with Scott Wilson RPA from 2005 to present.

4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

5. I visited the Casa Berardi property at many times in 2007 and 2008 to assist the geology staff in their mineral resource updates.

6. I am responsible for overall preparation of the Technical Report.

7. I am independent of the Issuer applying the test set out in Part 1.4 of National Instrument 43-101.

8. As an independent consultant, I was involved in the 2005 Feasibility Study for the property that is the subject of the Technical Report, and audited Mineral Reserves for 2006 and 2007.

9. I have read National Instrument 43-101, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

10. To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 9th day of February, 2009.

(Signed and Sealed)

Bernard Salmon, Ing.
Consulting Geological Engineer
Scott Wilson Roscoe Postle Associates Inc.

JASON J. COX

I, Jason Cox, P.Eng., as an author of this report entitled "Technical Report on the Casa Berardi Mine, Northwestern Quebec, Canada" prepared for Aurizon Mines Ltd. and dated February 9, 2008, do hereby certify that:

1. I am a Senior Mining Engineer with Scott Wilson Roscoe Postle Associates Inc. of Suite 501, 55 University Ave Toronto, ON, M5J 2H7.

2. I am a graduate of the Queen's University, Kingston, Ontario, Canada, in 1996 with a Bachelor of Science degree in Mining Engineering.

3. I am registered as a Professional Engineer in the Province of Ontario (Reg.# 90487158). I have worked as a Mining Engineer for a total of 12 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Review and report as a consultant on more than a dozen mining operations and projects around the world for due diligence and regulatory requirements
    - Planning Engineer to Senior Mine Engineer at three North American mines
    - Contract Co-ordinator for underground construction at an American mine

4. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI43-101.

5. I visited the Casa Berardi Mine most recently on September 29 to October 1, 2008.

6. I am responsible for parts of Sections 1 to 6, 17 (Mineral Reserves), 20, and 21; and all of Sections 16 and 19 of the Technical Report.

7. I am independent of the Issuer applying the tests set out in section 1.4 of National Instrument 43-101.

8. As an independent consultant, I was involved in the 2005 Feasibility Study for the property that is the subject of the Technical Report, and audited Mineral Reserves for 2006 and 2007.

9. I have read National Instrument 43-101F1, and the Technical Report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.

10. To the best of my knowledge, information, and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Dated this 9th day of February 2009.

(Signed and Sealed)
Jason Cox, P.Eng.
Senior Mining Engineer
Scott Wilson Roscoe Postle Associates Inc.