2008 Mineral Resource Update for the Rosemont Project
Pima County, Arizona, USA

Date:  December 4, 2008

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3 SUMMARY

This technical report was prepared in support of a press release made by Augusta Resource Corporation on October 23, 2008, in which new mineral resource estimates were announced. The updated mineral resource estimates presented herein incorporate sample assays received for an additional 30 drill holes, of which 20 were drilled during the 2008 campaign and 10 were previously unsampled geotechnical holes. Augusta geologists revised the lithology interpretations to account for new drilling information and have added a small “mixed” (i.e., transitional) zone in a localized area between oxide and sulfide mineralization. At the time of this writing, an update to the Rosemont feasibility study is in progress and a new technical report is due to be filed on or before January 2, 2009, in which updated mineral reserve estimates, development plans and recommendations will be presented.

The Rosemont copper-molybdenum-silver deposit is located in Pima County, Arizona, USA approximately 30 miles (50 km) southeast of the city of Tucson, Arizona. Augusta Resource Corporation (Augusta) has recently completed a 20-hole, 17,522 feet (5,341 meters) diamond drilling program on the deposit for resource in-fill and expansion purposes. In addition, 10 previously unsampled geotechnical holes were sampled for a total of 6,176 feet (1,882 meters). In 2006, Augusta completed a 40-hole, 68,727 feet (20,948 meters) diamond drilling program on the deposit, consisting of resource, geotechnical, and metallurgical holes. In 2005, Augusta carried out a 15-hole, 27,402 feet (8,352 meters) diamond drilling program. The results of all three of these drilling and sampling campaigns have been integrated with approximately 210,000 feet (64,000 m) of previous drilling, conducted by other companies prior to Augusta’s involvement, to estimate the mineral resources presented in this report. This report provides for an updated mineral resource statement from that of the previous WLRC Technical Report dated April 26, 2007.

The Rosemont Deposit is the principal known area of mineralization on the Rosemont Property, a group of patented mining claims, unpatented mining claims and fee land that in aggregate total approximately 15,000 acres (6,070 hectares). Augusta completed the purchase of the Rosemont Property in 2006, subject to a 3% Net Smelter Return (NSR) royalty.

The Rosemont Deposit is a typical representative of the porphyry copper class of deposits. Similar to many of other southwestern USA deposits in this class, Rosemont consists of broad-scale skarn mineralization developed in Paleozoic-aged carbonate sedimentary rocks in and adjacent to their contact with quartz-latite or quartz-monzonite porphyry intrusive rocks. The deposit has been extensively drilled using diamond core holes.

A block grade model of the Rosemont Deposit was constructed using MEDSystem® software using a geologic model developed in Gemcom® by Augusta personnel and contract geologists. Statistical studies were conducted to identify outliers to the distribution of assays and to estimate the ranges of influence for block grade estimation. Block grade estimations were conducted by rock type using 50-ft composited data and ordinary kriging interpolation methods. Blocks were also classified into measured, indicated and inferred resources in a manner that conforms to
Updated measured and indicated mineral resource estimates for the Rosemont Deposit are summarized in Tables 3.1 and 3.2, respectively. The combined measured and indicated mineral resource estimates are presented in Table 3.3. Inferred mineral resource estimates are shown in Table 3.4. Imperial units are used in these estimations, where tons refer to short tons (2000 lbs). For comparison with the previous mineral resource estimates by WLRC (2007 and 2006), copper equivalent (CuEqv) values are based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.

Table 3.1
Rosemont Deposit – Measured Mineral Resources

<table>
<thead>
<tr>
<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
<th>lbs CuEqv* (millions)</th>
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* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.
### Table 3.2
**Rosemont Deposit – Indicated Mineral Resources**

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<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
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* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.

### Table 3.3
**Rosemont Deposit – Combined Measured and Indicated Mineral Resources**

<table>
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<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
<th>lbs CuEqv* (millions)</th>
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* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.
Augusta’s recent drilling campaign at the Rosemont deposit has increased both the quantity and confidence level of the estimated mineral resources above a 0.20% Cu cutoff, which presently total about 562 million tons of measured and indicated combined-mixed-plus-sulfide mineral resources grading 0.50% Cu, 0.015% Mo and 0.12 opt Ag. An additional 180 million tons of inferred combined-mixed-plus-sulfide mineral resources are estimated at a grade of 0.44% Cu, 0.008% Mo and 0.06 opt Ag using the same cutoff. Mineral resources that are not mineral reserves do not have demonstrated economic viability.

The 2008 drilling and sampling has significantly increased the oxide mineral resources above a 0.10% Cu cutoff by almost 29 million tons (+39%). At this cutoff, measured and indicated oxide mineral resources are estimated at over 103 million tons grading 0.20% Cu. An additional 30 million tons of inferred oxide mineral resources are estimated at a grade of 0.24% Cu using a 0.10% Cu cutoff.

### Table 3.4
Rosemont Deposit – Inferred Mineral Resources

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<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
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* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.
INTRODUCTION

4.1 Background Information

This technical report has been prepared for Augusta Resource Corporation (Augusta) to present the results of new mineral resource estimates for the Rosemont Deposit that were prepared under the direction of WLR Consulting, Inc. The resource estimates were based on the drillhole results from recent diamond drilling programs carried out by Augusta, as well as the drillhole results of previous exploration and mining companies. The resource estimate was prepared in accordance with Canadian National Instrument 43-101 (NI 43-101) and uses resource terminology as defined by the Canadian Institute Of Mining, Metallurgy, and Petroleum (CIM).

Information regarding the historical background and geology has come primarily from published reports (Anzalone – 1995, Wardrop – 2005) and internal reports (Augusta – 2007). Past engineering reports produced by Pincock, Allen & Holt, Inc. (1977) and The Winters Company (1997) provided information regarding previous resource estimates and metallurgical test work. Legal property information has come from information compiled by land specialists (Daniel Mead, Darling Environmental & Surveying) for Augusta. Most of the assay work for previous owner drilling was performed by in-house laboratories (laboratories at the operating mines of Banner, Anaconda and Anamax), with a number of checks performed by the independent commercial laboratories of Hawley & Hawley and Skyline Laboratories in Tucson. Augusta drillhole information is stored at the Augusta offices in Denver, Colorado. The assays from Augusta’s drilling program were performed by Skyline Laboratories in Tucson, a locally recognized and accredited analytical facility.

The report has been prepared under the direction of Mr. William L. Rose, an independent Qualified Person and Principal Mining Engineer of WLR Consulting Inc. in Lakewood, Colorado, who visited the site on August 9, 2005 to review the Augusta drilling program and takes overall responsibility for the preparation of this technical report. Mr. Donald Elkin, Principal Geological Engineer of Mine Reserves Associates, Inc., verified the drillhole database, conducted statistical analyses of the drillhole data, constructed a block model of the Rosemont deposit and assigned resource classification codes to the model. Mr. Mark G. Stevens, Augusta Chief Project Geologist, has been on site numerous times and compiled the drill hole data files and assisted in developing the geologic interpretations. Mr. Shea Clark Smith, an independent Qualified Person from Minerals Exploration & Environmental Geochemistry in Reno, Nevada, conducted QA/QC assessment of analytical work. Mr. Tom Drielick, a metallurgist with M3 Engineering & Technology Corporation, has visited the project site during the course of the ongoing metallurgical test work. Ms. Kathy Arnold, Augusta Environmental Director, has also visited the project site numerous times with regard to the ongoing environmental and permitting work for the project. Mr. William L. Rose, Mr. Mark G. Stevens, and Mr. Tom Drielick have taken the responsibility as Qualified Persons for the relevant parts of the report as stated in the included Qualified Person certificates (see Section 24).
4.2 Units of Measurement and Abbreviations

Unless otherwise specified, all units of measurement in this report are Imperial and all costs and/or prices are expressed in United States dollars. Tons refer to short dry tons (2000 pounds). Company abbreviations include:

Anaconda - Anaconda Mining Company
Anamax - Anamax Mining Company
ASARCO - American Smelting and Refining Company
Augusta - August Resource Corporation
Banner - Banner Mining Company
HRI - Hazen Research, Inc
M3 - M3 Engineering & Technology Corporation
MSRDI Mountain States Research and Development, Inc.
PAH - Pincock, Allen & Holt, Inc.
Rosemont - Rosemont Copper Company, a wholly-owned subsidiary of Augusta
SGS - SGS-Lakefield or SGS-MinnovEX divisions
Skyline - Skyline Assayers and Laboratories, Inc.
Stantec - Stantec Inc.
Wardrop - Wardrop Consultants
WGI - Washington Group International
Winters - The Winters Company
WLRC - WLR Consulting, Inc.

Other commonly used acronyms and abbreviations include:

AA - atomic absorption spectrometry
Au - gold
Ag - silver
Cu - copper
CuEqv - copper equivalent
ft - foot or feet
ft³ - cubic feet
g - grams
g/t - grams per tonne (metric)
lb - pound
lbs - pounds
kg - kilogram
km - kilometer or kilometers
ktons - tons x 1000
kWh - kilowatt hour
m - meter or meters
ml - milliliter
Mo - molybdenum
NSR - Net Smelter Return
opt - troy ounces per ton (gold or silver)
oz - troy ounce (gold or silver)
oz/ton - troy ounces per ton (gold or silver)
ppm - parts per million
ton - short ton (2000 lbs)
tonne - metric tonne (1000 kg or 2204.6 pounds)
XRF - x-ray fluorescence
5 RELIANCE ON OTHER EXPERTS

WLR Consulting, Inc. (WLRC) has relied on the data and information from Augusta Resource Corporation personnel regarding property descriptions and land ownership, the status of patented and unpatented claims and fee lands, and the status of permitting and environmental compliance issues. Augusta’s land information comes from 2006 property purchase legal documents and has been subject to further validation contracted by Augusta, including a mining claim specialist, Daniel Mead of Tucson, Arizona, and by registered mining claim surveyors at Darling Environmental & Surveying, Ltd. of Tucson, Arizona. WLRC notes that these professionals are recognized land specialists and believes that this work can be relied upon to be correct.

WLRC has relied on the expertise of Mr. Donald C. Elkin, Principal Geological Engineer for Mine Reserves Associates, Inc. Mr. Elkin performed data verification, drill hole and composite statistics and variography studies, deposit modeling, block grade interpolations and resource classification work (Section 19) under the direction of WLRC. Mr. Elkin has extensive experience in his field, but does not meet all of the requirements to be considered a Qualified Person under Canadian NI 43-101. He is a recognized professional in resource estimation and WLRC believes that his work can be relied upon to be correct.

WLRC has relied on the expertise of Ms. Kathy Arnold, P.E. and Environmental Director for Augusta Resource Corporation, who has reviewed and updated the environmental and permitting requirements outlined in Section 6.3. WLRC believes that her work can be relied upon to be correct.

WLRC has also relied on the expertise of Mr. Shea Clark Smith, P.G., of Mineral Exploration Geochemistry in Reno, Nevada. Mr. Smith has reviewed and updated the sample quality assurance information in Section 15.5. WLRC believes that his work can be relied upon to be correct.
6 PROPERTY DESCRIPTION AND LOCATION

6.1 Location

The Rosemont Property consists of a group of patented mining claims, unpatented mining claims and fee land that cover most of both the Rosemont Mining District and the adjacent Helvetia Mining District. The Rosemont Property is located approximately 30 miles (50 km) southeast of Tucson, Pima County, Arizona (see Figure 6-1). The Rosemont Property geographical coordinates are approximately 31° 50’N and 110° 45’W.

6.2 Land Tenure

The present land position is a combination of fee land, patented mine claims, and unpatented mine and mill site claims. Taken together, the land position is sufficient to allow mining of the open pit, processing of ore, storage of tailings, disposal of waste rock, and operation of milling equipment. These lands are accessible under the provisions of the Mining Law of 1872, subject to obtaining approval from the US Forest Service after completion of an Environmental Impact Statement (EIS) process. The EIS process includes interagency consultation on endangered species and cultural resources. The use of the project surface rights will require obtaining a number of federal, state, and local permits and approvals, which is now in progress.

The core of the Rosemont Property consists of 132 patented lode claims that in total encompass an area of 1969 acres (797 hectares) as shown in Figure 6-2. A contiguous package of 949 unpatented lode mining claims with an aggregate area of more than 12,000 acres (4,860 hectares) surrounds the core of patented claims. Associated with the property are 10 blocks of fee land consisting of a number of individual parcels that enclose a total of 911 acres (369 hectares). Most of the unpatented claims were staked on Federal land administered by the United States Forest Service, but a limited number of claims in the northeast portion of the property are on Federal land administered by the Bureau of Land Management. The area covered by the patented claims, unpatented claims and fee lands totals approximately 15,000 acres (6,070 hectares).

Surveyed brass caps on short pipes cemented into the ground mark the patented mining claim corners. Cairns and wooden posts mark the unpatented claim corners, end lines and discovery monuments, most of which have been surveyed. The fee lands are located by legal description recorded at the Pima County Recorders Office.

The patented lode claims and fee land parcels have no expiration date and are subject to annual property taxes amounting to a total of approximately ten thousand U.S. dollars. The unpatented lode claims also have no expiration and are maintained through the payment of annual maintenance fees of US$125.00 per claim, for a total of approximately one hundred twenty thousand U.S. dollars, payable to the Bureau of Land Management.

A 3% Net Smelter Return
(NSR) royalty applies to the patented claims, the bulk of the unpatented claims, and some of the fee land. On March 31, 2006, Augusta completed the purchase of a 100% interest in the property for a total of US$20.8M and continues to maintain the property in good standing.

Augusta retained the legal firm of Fennemore Craig to handle the legal transfer of the Rosemont Property. Augusta’s land information has come from 2006 property purchase legal documents and has been subject to further validation contracted by Augusta, including a mining claim specialist, Daniel Mead of Tucson, Arizona, and registered mining claim surveyors at Darling Environmental & Surveying, Ltd. of Tucson, Arizona. Darling Environmental & Surveying, Ltd. has conducted an extensive field and office review of the patented and unpatented claims. Fennemore Craig has continued to have legal involvement with the property lands.

6.3 Environmental

As an advanced exploration development property, Rosemont is up to date and compliant with all its environmental obligations and as such there are no material environmental liabilities.

The Rosemont Ranch Lands were surveyed in 2003 for environmental liabilities as part of a land transaction. At that time, the environmental liabilities were characterized as minimal, and were determined to not be material to the land transaction. Specific issues reviewed included mine adits, shafts, exploration holes and limited mine waste rock from prior production. Areas of potential liability included a modest amount of annual monitoring and maintenance to repair or replace fencing and drainage around mine openings and residual waste products.

Should the property reach a stage of commercial viability in the future, the Company will be required to comply with the following federal, state and local regulations prior to entering commercial production:

Federal Mine Plan Approvals


Environmental Impact Statement

The land required for mining the open pit is privately held. Adjacent public land will be required for milling, utility corridors, access roads, waste rock and tailing disposal, and other incidental operations. Acquiring the right to use and occupy several thousand acres of this public land will require completion of an Environmental Impact Statement.
Completion of an EIS for Rosemont operations will include public scoping, community involvement, technical analysis, field data collection and reporting, endangered species consultation as needed, public notice and comment periods, and publication of the Draft EIS and the Final EIS, culminating in a Record of Decision.

**Threatened and Endangered Species Review**

The U. S. Fish and Wildlife Service and Arizona Game and Fish Department maintain lists of Special Status Species; threatened, endangered, proposed endangered, candidate, and conservation agreement species. Mine plans will be subject to review for avoidance or mitigation of impacts to protected species.

**Aquifer Protection Permit**

Arizona Department of Environmental Quality (ADEQ) requires that potentially discharging facilities are subject to environmental review under the Aquifer Protection Permit Program. This process must demonstrate that discharging facilities will not cause an exceedance of aquifer water quality standards. In addition to this technical demonstration, groundwater quality monitoring will be required during operations and through mine closure. A detailed closure plan is required to show how water quality will be protected after mine operations are completed.

**Air Permits**

Any Augusta mining operations must obtain an air quality control permit from the Pima County Department of Environmental Quality. The permit will contain provisions for emission control equipment or practices, recordkeeping and reporting procedures and monitoring.

**Water Quality and Stormwater Permits**

Stormwater discharge permits and Stormwater Pollution Prevention Plans will be required for any open pit mining operation.

**Army Corps 404 Permit**

Three major washes and several tributaries will require crossings of jurisdictional waters to access the site. Other washes and ravines will be affected by mine pit and waste areas. The total sum of the jurisdictional area for Section 404 will require that Rosemont obtain an individual permit from the US Army Corps of Engineers.

**Certificate of Environmental Compliance (CEC)**

Although not issued directly to Augusta, the power requirements for the Rosemont project will require approval from the Arizona Corporation Commission through the CEC process. The approvals will be issued to Tucson Electric Power Company and must be in place before the permanent power line is constructed.
Arizona Department of Transportation (ADOT) Access Road Approvals

To improve the road access from the existing state highway, Augusta must follow the ADOT permit process for review and approval of construction along an existing scenic highway.

Mine Reclamation and Closure Plans and Financial Assurance

Mine closure plans are required as part of the Federal Mine Plan of Operations as well as by the Arizona State Mine Inspector and the Arizona State Department of Environmental Quality. The State Mine Inspector Reclamation Plan requires a detailed plan showing what post-mining land uses will be possible on the mined out lands, and must include a program for achieving those post-mining land uses. ADEQ requirements are discussed above regarding aquifer permits. Federal and state reclamation and closure plans require a financial assurance instrument to demonstrate financial ability to complete the reclamation program as described in the closure plans. There are interagency agreements to allow for each agency to recognize the financial assurance held by other agencies, so that duplicate bonding is not required.

Cultural Resources

All lands required for mine construction and operation will require clearance for cultural resources. The process includes field survey for locating cultural resource sites, and testing of sites determined to be significant.

Local Permits and Approvals

Several local agencies may be involved in the process through Pima County Development Services. These agencies regulate floodplain encroachments, drainage improvements in washes, grading land clearing for roadways and erosion control and impacts to water quality in streams. Mining is exempt from local zoning ordinances, therefore the impacts of these reviews should not affect the overall permit schedule.

Impact of Permitting Process on Rosemont Project

The time to complete the permit application and review process can be affected by potential public controversy, difficult or unresolved technical issues, legal challenges, changes in operating plans, or unforeseen environmental impacts that are not readily mitigated.

At the end of the environmental review process, the responsible official from each agency must sign a permit, issue a Record of Decision (ROD) or provide some other form of documentation approving, denying, or modifying the permit application. Typically, the approving permit document authorizes a specific project component, and may include a list of conditions and permit requirements that mitigate or minimize the environmental issues determined to be significant in the review analysis. These conditions can affect project schedule, economics, and feasibility.
ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Rosemont Property occupies flat to mountainous topography in the north-eastern and north-western flanks of the Santa Rita Mountains at a surface elevation ranging from 6,290 to 4,000 feet (1,900-1,200 meters) above sea level. The area is considered part of the Basin and Range physiographic province characterized by high mountain ranges adjacent to alluvial filled basins.

The eastern portion of the property is easily reached from the city of Tucson by traveling Interstate Highway I-10 approximately 25 miles (40 km) east to its intersection with Arizona State Highway 83. Approximately 11 miles (18 km) south along Highway 83, the road crosses the eastern side of the Rosemont Property. From Highway 83, a number of improved dirt roads access various locations on the property. The western portion of the property is reached from Tucson by following Interstate Highway I-19 south about 20 miles (30 km) to the town of Sahuarita, then east 10-15 miles (20 km) along the improved gravel Santa Rita road to the Rosemont property.

Weather presents no significant difficulties to mining operations in the area. The semi-arid climate, typical of the Arizona-Sonoran Desert, produces an average of about 8 inches (20 cm) annual rainfall, mostly during the late summer and winter months. Temperatures range from about 25°F to 115°F (-4°C to 45°C). The resulting vegetation ranges from mesquite and grasses in the lower elevations to oak, pine and juniper in the mountains.

Sufficient mining personnel are available within commuting distance of the site. Tucson, Arizona is a city in excess of 500,000 people and has a well known history of mining in the area. The proximity of the property to the metropolitan Tucson area allows for the convenient transportation of workers, equipment and supplies to the site using established road ways.

Power is available from existing high voltage lines that pass within a few miles of the site, although project requirements and line capacities are in the process of being detailed. Adequate water rights have been purchased and will be piped to the site, as sufficient water is not available on the site at this time. Approval of utility corridors and pipelines will be required, permitting for which is currently in progress.
8 HISTORY

The early history and production from the Rosemont Property has been described in Anzalone (1995), as well as by Augusta (2007) from which that following summarization is taken.

Sporadic prospecting reportedly began in the middle 1800s in the northwestern portion of the Property and subsequently extended into the eastern part. In 1880, both the Helvetia Mining District (to the west) and the Rosemont Mining District (to the east) were established. Production from mines on both sides of the northern Santa Rita Mountains area supported the construction and operation of the Columbia Smelter at Helvetia on the west side of the Santa Rita Mountains and the Rosemont Smelter in the Rosemont Mining District on the east side of the Santa Rita Mountains. Copper production ceased in 1951 after the production of about 227,300 tons of ore containing 17,290,000 pounds of copper, 1,097,980 pounds of zinc and 180,760 ounces of silver. An unknown, but minor portion of the production came from the Rosemont Deposit.

Since shutdown in 1951, the area stretching from Peach-Elgin (on the northwest, see Figure 6-2) to Rosemont (on the southeast) has seen a progression of exploration campaigns. Churn drilling at Peach-Elgin deposit in 1955 and 1956 by Lewisohn Copper Company began the definition of that deposit. Drilling in 1956 by American Exploration and Mining Company initiated exploration of the Broadtop Butte prospect. Banner Mining Co. had acquired most of the claims in the area by the late 1950s and drilled the discovery hole into the Rosemont deposit.

Anaconda Mining Company acquired the property in 1963 and carried out a major exploration program that identified Rosemont as a major porphyry copper deposit and advanced the Broadtop Butte and Peach-Elgin prospects. In 1973, Anaconda joined with Amax in the Anamax partnership that continued until 1986 when Anamax sold the Rosemont – Peach-Elgin property to a real estate company during the corporate dissolution of Anaconda. By the end of the Anaconda-Anamax programs, exploration drilling totaled in excess of 297,321 feet (90,623 meters), of which approximately 195,000 feet (59,500 meters) define the Rosemont deposit. The results of these programs are described in Wardrop (2005).

In 1964, Anaconda produced a geological resource estimate for the Peach-Elgin deposit that was based on assays from 67 churn and diamond drill holes. After calculation of that resource, Anaconda and Asarco drilled approximately 140 additional diamond drill holes, but did not update the 1964 estimate. The estimated resources are briefly summarized in Section 17 (Adjacent Properties) of this report.

In 1977, Anamax commissioned Pincock, Allen & Holt, Inc. (PAH) to calculate a resource for the Rosemont Deposit. The resulting calculation estimated a geological resource of about 445 million tons at an average grade of 0.54% Cu using a cut off grade of 0.20% Cu. The methodology has been described in Wardrop (2005), which is available on SEDAR. Augusta Resource Corporation has not done the work necessary to verify the classification of this
resource and is not treating the resource figure as a NI 43-101 defined resource verified by a Qualified Person and, therefore, the resource figures should not be relied upon by investors.

Anamax carried out a resource estimate for the Broadtop Butte deposit in 1979 that was based on approximately 18 widely-spaced diamond drillholes. The resources for this deposit are also summarized in Section 17 (Adjacent Properties) of this report.

ASARCO purchased the property in 1988, renewed exploration of the Peach-Elgin deposit and initiated engineering studies on Rosemont. ASARCO drilling on Rosemont was limited to 12 diamond drillholes. ASARCO sold the entire property to real estate interests in 2004, shortly before the ASARCO takeover by Grupo Mexico S.A. de C.V.

ASARCO generated a resource estimate of the Rosemont Deposit that was incorporated into a 1997 consulting report by The Winters Company that comprised an “order of magnitude” mining study of the deposit. The resulting “mineable resource” totaled nearly 341 million tons at an average grade of 0.64% Cu. The results and methodology have also been described in Wardrop (2005). Augusta Resource Corporation has not done the work necessary to verify the classification of this resource and is not treating the above resource figure as a NI 43-101 defined resource verified by a Qualified Person and, therefore, the resource figures should not be relied upon by investors.

Augusta Resource Corporation became interested in the Rosemont Property in 2005 and began a program to confirm the results from previous work. Augusta completed the purchase of the property in March 2006. In 2005, Augusta completed a Phase I drilling program consisting of 15 core holes. Based on the new Augusta and previous Anaconda drilling, WLR Consulting, Inc. in conjunction with Mine Reserve Associates, Inc. prepared a mineral resource estimate that was presented in an April 21, 2006 report entitled Mineral Resource Estimate Revised Technical Report For The Rosemont Deposit, Pima County, Arizona, USA.

Based on the encouraging results of that program, Augusta continued with a Phase II drilling program in 2006 that consisted of 40 core holes for resource definition, metallurgical, and geotechnical purposes. Additional drill holes were incorporated into a resource estimate update that was announced in a March 16, 2007 press release, which was documented in an April 26, 2007 report entitled 2007 Mineral Resource Estimate Update for the Rosemont Project, Pima County, Arizona, USA, by WLR Consulting, Inc.

Augusta initiated a feasibility study with M3 Engineering & Technology Corporation of Tucson, Arizona in the middle of 2006, which was completed in August 2007. The findings were presented in an August 2007 report entitled Rosemont Copper Project Feasibility Study, which documents the Rosemont Mineral Reserves.

As part of a post-feasibility update, Augusta conducted further drilling in 2008. Twenty core holes were drilled to further define the northwestern part of the deposit. In addition, 10 previously drilled geotechnical holes from Augusta’s 2006 drilling campaign were sampled and analyzed. This additional drilling and sampling data was incorporated into a resource estimate
that was announced in an October 23, 2008 press release, documentation for which is provided by this Technical Report.
9 GEOLOGICAL SETTING

The regional, local and property geology of the Rosemont deposit is described by Anzalone (1995), Wardrop (2005), and by Augusta (2007), from which that following summarization is taken.

At Rosemont, Precambrian meta-sedimentary and intrusive rocks form the regional basement beneath a Paleozoic sedimentary sequence of limestone, quartzite, and siltstone. Paleozoic limestone units are the predominant host rocks for the copper mineralization. Structurally overlying these older units are Mesozoic clastic units, including conglomerates, sandstones, and siltstones. Some andesitic volcanic beds occur within the Mesozoic sedimentary section.

Regionally, the Mesozoic and early Cenozoic Laramide Orogeny was marked by compressional tectonism accompanied by extensive calc-alkaline magmatism. The regional compressional forces caused folding and thrust, transverse and reverse faulting. Coeval magmatism, recorded in voluminous batholithic and smaller intrusions and their associated volcanic equivalents, was responsible for the generation of the porphyry copper deposits of the region. At Rosemont, mineralizing quartz monzonite and quartz latite intruded into a package of Precambrian intrusive rocks and Paleozoic and Mesozoic sedimentary rocks at the intersection of regional basement structures.

Tertiary extensional tectonism followed the Laramide Orogeny, accompanied by voluminous felsic volcanism. Steeply- to shallowly-dipping normal faults became active during this time, most likely including rotational listric faulting. At Rosemont, it appears that Tertiary faulting has significantly segmented the original deposit, juxtaposing mineralized and unmineralized rocks. The extensional tectonics culminated in the large-scale block faulting that produced the present Basin and Range Province physiography.

A generalized geologic map of the Rosemont Property is presented in Figure 9-1. Figure 9-2 shows a stratigraphic column of the Rosemont District. Faulting has generally divided the deposit into three generalized structural blocks. The north-trending Backbone Fault separates Precambrian granodiorite and Lower Paleozoic quartzite to the west from younger Paleozoic limestone units to the east. The subhorizontal Flat Fault places Paleozoic limestone (minor) and Mesozoic sedimentary rocks over the top of the older Paleozoic units. In addition, partially consolidated gravel of Tertiary age fills a paleochannel on the south side of the deposit area. To the north and east are significant thicknesses of Tertiary volcanioclastic material.

To the north of the Rosemont deposit, the Broadtop Butte deposit is associated with related fault systems. The Copper World Mine deposit is located to the northwest of Broadtop Butte, situated in a complexly faulted block of Paleozoic rocks. Further to the northwest, the Peach-Elgin deposit occurs in a structural block floored by a low-angle fault and may represent the upper part of the Copper World mineralization.
10 DEPOSIT TYPES

The Rosemont Deposit consists of skarn-hosted copper-molybdenum-silver mineralization related to quartz-monzonite porphyry intrusions. Genetically, it is a style of porphyry copper deposit, although intrusive rocks are volumetrically minor within the resource area. The skarns formed as the result of thermal and metasomatic alteration of Paleozoic carbonate and to a lesser extent Mesozoic clastic rocks.

Mineralization is mostly in the form of primary (hypogene) copper-molybdenum-silver sulfides, found in stockwork veinlets and disseminated in the altered host rock. Some oxidized copper mineralization is also present in the upper portion of the deposit. The oxidized mineralization is primarily hosted in Mesozoic rocks, but is also found in Paleozoic rocks where those outcrop or are near-surface on the west side of the Rosemont Deposit. The oxidized mineralization occurs as mixed copper oxide and copper carbonate minerals. Minor amounts of enriched, supergene chalcocite and associated native copper mineralization are found in and beneath the oxidized mineralization.

The Twin Buttes Mine, operated by Anaconda and later by Cyprus, was developed on an analogous deposit located about 20 miles (32 kilometers) to the west of Rosemont. The Twin Buttes mine was in production from 1969 to 1994. In addition, the ASARCO Mission Mine, also located about 20 miles (32 kilometers) to the west of Rosemont, has some common geologic characteristics.
11 MINERALIZATION

The Rosemont Deposit contains copper-molybdenum-silver primarily hosted in an east-dipping package of Paleozoic-age sedimentary rocks. Two horizontal plans and a vertical cross section of the geology of the Rosemont Deposit are shown in Figures 11-1, 11-2 and 11-3. Drilling has identified a significant mineral resource 3,500 feet (1,100 meters) in diameter that extends to a depth of at least 2,000 feet (600 meters) below the surface. The steeply east-dipping Backbone Fault offsets the mineralization, with limited mineralization occurring to the west of it. To the south, the mineralization appears to weaken and eventually die out. Mineralization in the Paleozoic rocks continues to the north amid complex faulting and to the east beneath increasingly-thick Mesozoic cover, to the present limits of drilling. The subhorizontal Flat Fault separates the strongly mineralized Paleozoic sequence from overlying, weakly-mineralized Mesozoic and lesser Paleozoic rocks. Oxide copper and chalcocite mineralization occurs widely in the Mesozoic-age rocks.

The main Paleozoic host rocks include, from oldest to youngest, the Escabrosa Limestone, Horquilla Limestone, Earp Formation, Colina Limestone, and Epitaph Formation. The Horquilla Limestone is the most significant, accounting for almost half of the mineralized sulfide material. Significant mineralization also occurs in the Earp Formation and in the Colina Limestone, while relatively minor mineralization is found in other Paleozoic units.

The Mesozoic host rocks consist predominantly of arkosic siltstones, sandstones, and conglomerate. Within the arkose is a local andesite unit that ranges from a few tens of feet to several hundred feet thick. Near the base of the arkose is the Glance Conglomerate, a limestone-cobble conglomerate.

The mineralization is primarily in garnet-diopside (with minor magnetite) skarn that formed in the Paleozoic rocks as a result the intrusion of quartz latite to quartz monzonite porphyry. Marble was developed in the more pure carbonate rocks, while the more siliceous, silty rocks were converted to hornfels. Bornite-chalcopyrite-molybdenite mineralization occurs as veinlets and disseminations in the garnet-diopside skarn and associated marble and hornfels, accompanied by quartz, amphibole, serpentine and chlorite alteration. Quartz latite to quartz monzonite intrusive rocks host strong quartz-sericite-pyrite mineralization with minor chalcopyrite, molybdenite and bornite. Where the mineralized package of Paleozoic rocks and quartz-latite intrusives outcrops on the western side of the deposit, near surface weathering and oxidation has produced disseminated and fracture-controlled copper oxide minerals.

Weakly-mineralized to unmineralized Paleozoic limestone and Mesozoic siltstone, sandstone, conglomerate and andesite comprise the near-surface portion over most of the deposit area, separated from underlying, better-mineralized Paleozoic rocks by the subhorizontal Flat Fault. The highly-variable, but relatively minor, mineralization above the Flat Fault is typically oxidized and supergene chalcocite is locally present. Oxidized and supergene copper mineralization above the Flat Fault appear to be especially well-developed in the andesitic rocks.
Silver occurs in minor, but economically significant quantities in the primary sulfide mineralization in the Paleozoic sequence. The silver is associated with the copper mineralization. The gold content of the deposit is generally very low, but contributes to a by-product credit.
12 EXPLORATION

Prospecting began in the Rosemont and Helvetia Mining Districts sometime in the middle 1800s and by the 1880s copper production is recorded, which continued sporadically until 1951. By the late 1950s exploration drilling had resulted in the discovery of the Rosemont Deposit. A succession of major mining companies subsequently conducted exploratory drilling of the Rosemont Deposit and other deposits of the region.

Additional information regarding exploration and evaluations performed on the Rosemont Deposit is presented in Sections 8 (History) and 13 (Drilling).
13 DRILLING

Extensive drilling has been conducted at the Rosemont Deposit by several successive property owners. The most recent drilling was by Augusta, with prior drilling campaigns completed by Banner Mining Company, The Anaconda Company, Anamax and ASARCO. Augusta’s drilling was focused on infill drilling the pre-existing drill hole pattern, thereby expanding and increasing the confidence in the database for the current NI 43-101 compliant resource estimate. Table 13-1 summarizes the drill holes used in the current resource estimate.

Table 13.1
Rosemont Deposit Drilling Summary

<table>
<thead>
<tr>
<th>Company</th>
<th>Time Period</th>
<th>Drill Holes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Feet</td>
</tr>
<tr>
<td>Banner</td>
<td>1950s-1963</td>
<td>3</td>
</tr>
<tr>
<td>Anaconda</td>
<td>1963-1973</td>
<td>113</td>
</tr>
<tr>
<td>Anamax</td>
<td>1973-1986</td>
<td>52</td>
</tr>
<tr>
<td>ASARCO</td>
<td>1988-2004</td>
<td>11</td>
</tr>
<tr>
<td>Augusta</td>
<td>2005-2008</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>254</td>
<td>323,875</td>
</tr>
</tbody>
</table>

The drill holes utilized in the database were all drilled using diamond drilling (coring) methods. In some cases the tops of the older holes were drilled using a rock bit to set the collar; in other cases the upper parts of older holes were drilled with rotary drilling, switching switched to core drilling before intercepting mineralization. A map showing the location of the drill holes used in the resource calculation is provided in Figure 13-1, along with a general outline of the Rosemont deposit limits. Exploration holes drilled using rotary or older “churn” drill holes were excluded from the resource database.

In all of the drilling campaigns, efforts were consistently made to obtain representative samples by drilling larger N (1.9 inch diameter) and H (2.5 inch diameter) size core. Core recoveries were generally good (typically in the range of 86-93%), lending confidence that quality samples were obtained. All of the Rosemont drilling was been conducted on east-west lines that are approximately 200 feet apart. Currently, the average spacing of drill holes along these lines average about 250 feet.

Most of the Anaconda, Anamax and ASARCO drill core was still available on site or was obtained by Augusta and brought back to the Rosemont property, where it was rigorously relogged by Augusta personnel to be geologically consistent with the current Augusta drill hole logging. Along with relogging, this core was also resampled for additional geochemical analyses as described in the sampling section (Section 14).
13.1 **Banner Mining Company Drilling**

The first significant core drilling campaign on the Rosemont Property was by the Banner Mining Company, beginning in about 1961. Banner completed mostly shallow diamond drill holes, many of which were subsequently deepened by Anaconda. Three drill holes included in the resource database were shallow holes started by the Banner Mining Company that were significantly deepened during subsequent Anaconda drilling programs. These holes have a combined length of 4,226 feet.

13.2 **The Anaconda Company Drilling**

Anaconda took over Banner’s Rosemont holdings around 1963 and conducted exploration at the Rosemont Deposit and in adjacent mineralized areas. Between the years of 1963 and 1973 they completed 113 diamond drill holes at Rosemont for a total of 136,728 feet. These holes were primarily drilled vertically. Down-hole surveys were conducted during drilling or immediately following drill hole completion for selected holes. Drill hole collars were surveyed by company surveyors. Anaconda drilled approximately 85 percent of the larger N-sized core (1.9 inch diameter) and 15 percent of the smaller B-sized core (1.4 inch diameter). Overall core recovery was more than 85 percent.

Exploration subsequently transferred to the Anamax Mining Company (an Anaconda-AMAX joint venture) around 1973, which continued the extensive diamond drilling and analytical work until 1986. Anamax completed 52 core holes for a total of 54,350 feet. These holes were almost exclusively drilled as angle holes inclined -45° to -55° to the west, approximately perpendicular to the east-dipping, Paleozoic, metasedimentary host rocks. Down-hole surveys were conducted during drilling or immediately following drill hole completion for the majority of the holes. Drill hole collars were surveyed by company surveyors. Anamax drilled approximately 80 percent N-sized core (1.9 inch diameter) and 20 percent B-sized core (1.4 inch diameter), with an overall core recovery of more than 88 percent.

During drilling, the core was placed in standard cardboard core boxes by the drillers, with wooden blocks marking the beginning and ending footages of core runs. Core boxes were labeled with the drill hole number, footage interval and other information by the drillers.

13.3 **ASARCO Mining Company Drilling**

ASARCO acquired the Rosemont Property in 1988 and conducted exploration until 2004, completing 11 vertical drill holes for a total of 14,695 feet in the deposit area (a 12th hole was drilled to the east of the deposit). Data was available from eight of the ASARCO core holes and was incorporated into Augusta’s resource database. Down-hole survey data, if taken, was not available for the ASARCO holes. Drill hole collars were surveyed by company surveyors. The size of core collected by ASARCO was predominantly N-sized (1.9 inch diameter). Core
recovery information was not available but Augusta relogging indicated it to generally be good, similar to that of other drilling campaigns.

ASARCO sold the Rosemont property in 2004 to real estate interests.

13.4 **Augusta Drilling**

Augusta has conducted diamond drilling in three campaigns, the first starting in the second half of 2005 and continuing into early 2006 (Phase I), the second starting in mid 2006 and continuing into early 2007 (Phase II), and the third starting in December 2007 and continuing to July 2008 (2008 Drilling). In total, Augusta has completed 75 core holes for a total of 113,876 (98,717 meters). Of these, 57 drill holes were planned as resource holes to infill where previous drilling had left gaps in the classification of measured or indicated mineral resources, with 3 being exploration holes outside of the potential pit area. The remaining 15 Augusta core holes were drilled in support of geotechnical (13) or metallurgical (2) studies. The relevant geotechnical hole intercepts were sampled and analyzed as part of the 2008 work.

Augusta drill holes were rock-bitted through overburden, then drilled with larger HQ-sized core as deeply as possible and finished with NQ-sized core (1.9 inch diameter) when a reduction in core size was required by ground conditions. Most of the holes were oriented vertically, although a few of the holes were inclined in order to intercept target blocks from reasonably accessible drill locations. Layne-Christensen and/or Boart Longyear were the drilling contractors. All drill holes were surveyed down-hole with a Reflex EZ-Shot survey instrument that measured inclination/dip and azimuth direction, with readings generally taken every 100 feet down the hole during 2008 and every 500 feet down the hole during 2005 and 2006. Phase I drill hole collar locations were surveyed by Putt Surveying of Tucson, Arizona, while Phase II and 2008 drilling locations were measured by Darling Environmental & Surveying. Augusta drill core was approximately 63 percent N-sized (1.9 inch diameter) and about 36 percent being larger H-sized (2.5 inch diameter), with less than 1 percent being smaller B-sized (1.4 inch diameter). Augusta’s overall core recovery was approximately 95 percent.

During drilling, the core was placed in standard cardboard core boxes by the drillers, with wooden blocks that marked the footages of core runs. Core boxes were labeled with the drill hole number, footage range and other information by the drillers.
14  SAMPLING METHOD AND APPROACH

The Rosemont resource database is based on core samples recovered from diamond drill holes. The drill core from mineralized intervals was generally sampled continuously down the hole, at a nominal five-foot sample length. In taking a sample, the core is generally halved (split) along the long axis, taking care to evenly distribute veinlets and other small-scale mineralized features, where present, into both halves of the core.

14.1 Banner, Anaconda and Anamax Sampling

The Banner, Anaconda and Anamax sampling is discussed as a group because the sampling took place as part of a more-or-less continuous program. The analytical data in the resource database for the three Banner drill holes came from the Anaconda laboratory, as most of the length of these holes came from subsequent Anaconda drilling that significantly deepened these holes. The exploration transition from Anaconda to Anamax (Anaconda-Amax Joint Venture) drilling did not appear to immediately utilize a different laboratory or techniques.

In analyzing the Banner, Anaconda and Anamax drill core, the geochemical suite was determined by whether an interval retained its primary sulfide mineralization or had been oxidized. Core with primary sulfide mineralization above trace levels was comprehensively analyzed for total copper and molybdenum. For some intervals, lead and zinc metal concentrations were analyzed where indicated by mineralogy, but that was not common. Relatively late in the program, particularly in the Anamax drill core, silver analysis was routinely included in the sulfide zone, especially for well-mineralized intervals. Oxide zone drill core with visible copper oxide mineralization (chrysocolla, cuprite, copper wad, etc.) was analyzed for acid-soluble copper in addition to total copper, and molybdenum was excluded or only intermittently analyzed in the oxide zone core.

The core was sampled at geologic intervals, based on changes in mineralization and alteration, that generally ranged from one to six feet in length and averaged about five feet in length. In poorly mineralized intervals, analytical samples were collected only intermittently, typically with one five-foot sample collected every 20 to 30 feet, to characterize the rock as having low to no grade values.

The core was first logged to record the core run intervals and percent recovery, along with lithology, structure, alteration and mineralization. After sampling intervals were assigned, the core was split with a mechanical splitter along its long axis, and one-half of the core was retained in the original core box. Sample preparation during the Banner, Anaconda and Anamax programs was conducted by employees of those companies. Other details of the sampling process are not well known, but since this work was carried out by major copper companies for their internal use, it is believed that they used the standard industry practices for that time.
14.2 **ASARCO Sampling**

The ASARCO drill core was routinely analyzed for total copper, acid-soluble copper and molybdenum. Oxide zone core does not appear to have been analyzed differently than the sulfide-bearing core. The core was sampled with preference towards a 10-ft sample length, but, as for the Banner, Anaconda and Anamax core, the geologists appear to have had considerable latitude in choosing longer or shorter intervals. In some poorly-mineralized intervals, it appears that only one analysis was run for intervals exceeding 100 feet in length, although that is rare. The ASARCO drill core was apparently logged and sampled in much the same style as is described above for the Banner, Anaconda and Anamax core.

14.3 **Augusta Sampling**

**Augusta Core**

Sampling of new Augusta drill holes took place at the Rosemont Ranch sampling facility for the 2005 Phase I and the 2006 Phase II drilling programs. The 2008 drill hole sampling took place at the Hidden Valley Ranch sampling facility. Core drilled for the resource database by Augusta Resource (2005-2008) was analyzed using a geochemical suite that varied depending on whether or not the core retained its primary sulfide mineralization or had been oxidized, similar to the approach described above for Anaconda. In the oxidized zone, the core was routinely analyzed for total and acid-soluble copper. Sulfide zone core was analyzed for total copper, molybdenum and silver. Some of the earlier core was also analyzed for gold, although that was discontinued late in 2006 when the gold content had been adequately characterized and the cost of additional gold analyses was no longer considered warranted.

Augusta core was sampled at even five-foot intervals, except where massive copper or molybdenum veining, structures or lithologic breaks warranted special investigation through the selection of shorter intervals. Sample intervals would return to footages evenly divisible by five as soon as possible thereafter.

Geotechnically oriented Rock Quality Data (RQD) logging was performed on all core drilled by Augusta to systematically quantify core recovery, rock quality, fracture frequency, core hardness, joint condition, large-scale joint expression and down-hole water conditions. Then experienced exploration geologists familiar with the project lithologies logged the rock type, alteration, mineralization, and structure evident in the core. After logging, the geologist assigned and marked the sample intervals and cut-lines directly on the core and on the core box interior with a black marker. Each sample was given a unique, sequenced sample number with the footage noted in a sample tag booklet and on a paper copy. The drill core boxes were then photographed with a digital camera.

The core was split by cutting it in half with a diamond rock saw. All cuts were carefully planned and marked on the core by the logging geologist to evenly divide mineralization between the two halves of the core. All core cutting was done with water using no additives and the sawed drill
core was placed directly back in the core box to dry before sampling. When dried, the left-hand half of the split core was placed in bags labeled according to the sequenced paper sample tags, with a sample tag also placed inside the bag. The plastic bags were then sealed with adhesive tape, leaving the sample number visible.

**Banner, Anaconda, Anamax and ASARCO Core Resampling**

Augusta also sampled available core drilled by Anaconda, Anamax, and ASARCO to fill-in missing analytical information and to validate the older analyses. Resampling of older pre-Augusta drill holes took place at the Hidden Valley Ranch sampling facility in 2006. Oxide zone intervals were resampled and analyzed for both total and acid-soluble copper in cases where total copper was estimated to be >0.1% Cu, but which had not yet been analyzed. All sulfide zone drill core from within the deposit area that had not been analyzed for both total copper and molybdenum were sampled and analyzed to provide complete, continuous copper and molybdenum data.

In addition to infilling the missing copper and molybdenum analyses in the sulfide zone, all of the available Banner, Anaconda, Anamax and ASARCO core that, on average, contained greater than 0.2% Cu over a 50-foot continuous length was resampled and analyzed for silver and sometimes gold, both of which were usually absent from the previous analytical work. Gold analyses were discontinued late in 2006 after the gold mineralization was sufficiently characterized, as described above for the Augusta-drilled core.

Whenever possible, the sample intervals for additional analyses conformed to the original sample intervals as determined from the historic core logs and analytical results. Augusta required all samples to be seven feet or shorter. Where previously only intermittent samples had been collected (i.e., a five-ft sample every 20-30 feet), original intervals were divided into multiple new sample intervals of approximately five feet in length, preserving the starting and ending footages of the original sample intervals. Another circumstance that required deviation from the original sample intervals was when core was missing – either lost or previously taken for metallurgical work. In such cases, Augusta sample intervals were aligned to reflect the missing core intervals.

Augusta geologists identified intervals requiring additional (infill) analyses by referring to the previously logged mineral and analyzed geochemical content of the core. Whenever possible the sample intervals for additional analyses conformed to the original sample intervals as determined from the historic core logs and analytical results. New Augusta assays were assigned unique, sequenced sample numbers from sample tag books. Intervals and corresponding sample numbers were recorded in an Excel-based computer file. For the purposes of silver (and for a time gold) grade determinations, the new sample intervals were combined into length-weighted 50-ft composite samples before analysis, reducing the total number of samples. This compositing was performed on pulp samples at the analytical laboratory using relative weight contributions for each component sample calculated by Augusta geologists.
After sample intervals and sequential sample numbers were assigned for the core to be re-analyzed, the core boxes were carefully photographed using a digital camera. Photos were inspected and archived before samples were collected. The assigned intervals were then measured and collected by sampling technicians, taking the entire remaining core with the exception of some small, representative archive samples. The individual samples were placed in plastic sample bags marked with the new sample number. The paper sample tags from the sample book in which drill hole identification and sample interval had previously been recorded were placed in the bag with the core.
15 SAMPLE PREPARATION, ANALYSIS AND SECURITY

15.1 Sample Handling and Security

Sample handling during the Banner, Anaconda, Anamax, and ASARCO programs was conducted by employees of those companies, for which some of the protocol records are limited. Augusta notes that these were major mining companies conducting work for their internal use. It is assumed that professional care was taken in the handling of samples by these company employees and no evidence to the contrary has been found.

For the new Augusta drilling program, the drilling contractors kept the core in a secure area next to the drill rig before delivering it to the Rosemont Ranch (2005, 2006) or Hidden Valley (2008) sampling facility, approximately three miles from the drilling area. Resampling of old pre-Augusta core occurred at the Hidden Valley Ranch sampling facility during 2006.

At the Rosemont Ranch facility in 2005 and 2006 and subsequently at Hidden Valley in 2008, samples were logged, marked, cut and placed in sample bags by geologists and helpers contracted by Augusta. At the Hidden Valley facility in 2006, samples were marked to conform to the original sample intervals and placed in sample bags by geologists and helpers contracted by Augusta. At both locations, the samples were kept in a locked storage unit on site until they could be transported to the analytical laboratory in Tucson. The logging and sampling areas were kept under closed-circuit video surveillance to provide a record of the personnel that had accessed the logging and sampling areas. Additional security was afforded by ranch personnel that oversaw the premises at night. No core handling or core security issues were experienced during the drilling or sampling program.

Locked sample boxes were picked up by Skyline employees, who officially took custody of the samples at the two sampling facilities, which were set up on the Rosemont Property. After completion of the laboratory work, the pulp samples and coarse rejects were returned to site for long-term storage and possible future use.

15.2 Banner, Anaconda and Anamax Sample Preparation and Analysis

The Banner, Anaconda and Anamax sampling is discussed as a group because the sampling took place as part of a more-or-less continuous program. The analytical data in the resource database for the three Banner drill holes came from the Anaconda laboratory, as most of the length of these holes came from subsequent Anaconda drilling that significantly deepened these holes. The exploration transition from Anaconda to Anamax (Anaconda-Amex Joint Venture) drilling did not appear to utilize a different laboratory or analytical techniques.

Geochemical analyses for the Banner, Anaconda and Anamax core were conducted in-house at Anaconda and Anamax laboratories. The following information was obtained from Mr. Dale
Wood, Anaconda Chief Chemist in meetings and telephone conversations on November 28, 2005 and January 21, 2006. Copper and molybdenum were determined by wet chemical analyses and by x-ray fluorescence (XRF) methods, using analytical procedures that were industry standard for the 1960s and 1970s. Crushing and grinding reduced all pulp samples to minus 100 mesh size, with constant screen size testing. Pulp samples for the wet chemical method were brought into solution by hot acid digestion on a shaker table with hydrochloric acid, nitric acid and perchlorate acid added to the boiling solution followed by a few drops of hydrofluoric acid. Analyses for molybdenum were by the colorimetric iodine titration method. Copper analyses were done by the colorimetric phenolphthalein titration method. The XRF analytical technique consisted of either a quick screening method by compressing a pulp sample on mylar film and placing it under the x-ray beam or, alternatively, adding cellulite to the pulp sample, pressing it into a ring and then placing under the x-ray beam. Samples with XRF-determined grades above 0.2% Cu and 0.02% Mo were selected for wet chemical analyses.

15.3 ASARCO Sample Preparation and Analysis

The ASARCO geochemical analyses that Augusta obtained from ASARCO were conducted by Skyline Analytical Laboratory, Tucson, Arizona. Skyline was a large, certified, commercial laboratory that utilized industry-standard analytical techniques; therefore these data obtained for the ASARCO core are considered reliable. No detailed descriptions of Skyline’s sample preparation and analytical methods during those years are available at this time.

15.4 Augusta Sample Preparation and Analysis

Geochemical analyses for Augusta-drilled core and for the Augusta resampling of the Anaconda, Anamax, and ASARCO core were primarily performed by Skyline Assayers and Laboratories (Skyline) in Tucson, Arizona. During 2005, Skyline was formally known as Actlabs-Skyline and had been owned by ACTLABS (Ancaster, ON, Canada) since 1997. Skyline became independent of ACTLABS in January, 2006. Skyline is accredited in international quality standards through ISO/IEC 17025, with CAN-P-1579 for specific registered tests through the Standards Council of Canada. Augusta had both primary and secondary (duplicates) analyses done at Skyline in 2006 and 2007. ALS Chemex (Vancouver, BC, Canada) was used by the project for duplicate checks sample analyses in 2005. ALS Chemex has accreditation through ISO 9001:2000 in North America.

At Skyline, the entire sample was crushed using a TM Terminator to produce a greater than 80% pass 10-mesh product. Samples were blended and divided using a two-stage riffle splitter, from which a 300-400 gram split was pulverized to a 90% passing 150-mesh product using a TM Max 2 Pulverizer. Wash gravel and sand were used by Skyline to clean the crushers after each batch of samples were processed. Pulverizers were cleaned after each batch of samples and/or after each sample if the material adhered to inside walls of the grinding vessel. Coarse reject and pulp material was saved and returned to Augusta.
For the determination of total copper and molybdenum, Skyline digests 0.2000 to 0.2300 grams of the sample with 10.0 milliliters (ml) of hydrochloric acid, 3.0 ml nitric acid and 1.0 ml perchloric acid at 250° C, in a 200-ml phosphoric acid flask. When the only remaining acid present is perchloric acid and the volume of the liquid in the flask is less than 1 ml, the solution is allowed to cool. About 25 ml demineralized water and 10.0 ml hydrochloric acid is then added and the solution is gently boiled for 10-20 minutes. The flask is again cooled to room temperature and the contents are diluted with demineralized water and shaken well to mix. Copper and molybdenum content are determined by atomic absorption, with reference to standards made up in 5% hydrochloric acid.

Acid soluble copper is determined by leaching one gram of pulverized sample in 10% sulfuric acid solution for one hour. The copper content of the resulting solution is determined by atomic absorption.

For the determination of silver, Skyline digests 0.25 grams of sample with 0.5 ml nitric acid and 1.5 ml hydrochloric acid in a disposable, 18-mm x 150-mm borosilicate glass test tube. After agitation and the cessation of any effervescence due to carbonates, the test tubes are placed in a test tube rack in a hot water bath that is maintained between 90 °C and 95 °C, where digestion continues for 90 minutes. After cooling to room temperature the contents are diluted to 10 ml with demineralized water and again agitated to mix well. The solutions are then read by atomic absorption for silver.

15.5 Quality Assurance and Quality Control Protocol

General

The Quality Assurance and Quality Control (QA/QC) protocols in place during the Anaconda, Anamax and ASARCO exploration programs are not documented in records available to Augusta, although all the available evidence shows that they took great care in sample handling and storage, and that the laboratories analyzing the geochemical samples used industry standard practices (see Section 14).

Augusta adopted a systematic QA/QC protocol to support its analytical laboratory results. QA/QC oversight was provided initially by Kenneth A. Lovstrom, Geochemist, and was subsequently continued by Shea Clark Smith, Geochemist, who assumed guidance for QA/QC after January 10, 2006 to the present. The QA/QC procedures used by Augusta consisted of the routine use of standards, blanks, as well as repeat analysis of pulps.

1. Standards were submitted with a frequency of one per 20 samples for the 2005, 2006, and 2008 drilling campaigns.

2. Blank samples were submitted with a frequency of one per 40 samples for the 2005, 2006, and 2008 drilling campaigns.
3. Marble preparation blanks were submitted for the 2005 and 2006 drilling campaigns, as needed following select high-grade sample intervals, as a check of the subsequent cleanliness of the preparation equipment. This was implemented in the middle of the Augusta Phase II drilling program. This material was presumed to be, but was not, certifiably blank. These were not included for the 2008 drilling campaign samples.

4. Duplicate pulp reanalysis was conducted for the 2006 and 2008 drilling campaigns, with 600 and 121 duplicate pulps, respectively, resubmitted to Skyline. Each batch of 16 pulps was accompanied by a copper standard, a molybdenum standard, a silver standard and a blank. In addition, each batch included the laboratory’s own internal standards. This check served to evaluate the repeatability of the sample values.

In addition to Augusta’s QA/QC work, Skyline had their own internal control procedures that included standards and repeat analyses. Augusta’s primary laboratory data reports contained internal laboratory quality control data. For each laboratory job, an original, certified report(s) was sent to Augusta and has been filed with each drill hole.

Quality control results for 2005 drilling campaign, including drill holes AR-2000 through AR-2014, were discussed in a previous mineral resource report (WLRC, 2006). Quality control results for the 2006 drilling campaign, including drill holes AR-2015 through AR-2043, as well as Augusta fill-in sampling of older Anaconda core, were also discussed in a previous mineral resource report (WLRC, 2007). The following update focuses on the quality control results for the new 2008 Augusta drill holes.

**Standard Reference Materials (External Laboratory Standards)**

The suite of standard reference materials (SRMs) for the 2008 drilling included five SRMs that were used in the previous 2006 analytical work, incorporating a range of copper, molybdenum and silver concentrations that approximate the range of metal concentrations encountered in Rosemont drilling. These included: R4-A, R4-B, R4-C, R4-E, and R4-G. The R4-suite was prepared at MEG Labs (Carson City, NV) from naturally mineralized rock that had been collected at the Rosemont Project area. Round robin assays were compiled from a minimum of 25 samples of each SRM that had been sent to five or more laboratories. MEG Labs has certified the R4-suite of standards. Statistical analysis by MEG, based on round robin analysis of the standard material, has provided a mean grade, as well as +/- 2 standard deviations (95% confidence interval) acceptable limits.

There is a good match between the SRMs used and the average economic metal concentration in the drill samples. As such, the SRM grades are appropriate for the grade of the material being sampled for copper, molybdenum, and silver. A total of 196 standard samples were run within the analytical sequence for copper (not all of these had molybdenum or silver analyses).

Copper analysis performed well, with only 2 standards out of 196 being outside of the mean +/- 2 standard deviation limit (95% confidence interval). When these samples were later rerun by the laboratory, they returned with values within acceptable limits. When rerunning standards,
the routine practice was to also run the samples that occurred before and after the standard in the analytical sequence. These before/after samples returned with values similar to the initial values, indicating that the actual sample analyses were repeatable and dependable, and that the difference in the standard grades was due to statistically normal variability.

Molybdenum analysis performed reasonably, with 18 standards out of 179 being outside of the mean +/- 2 standard deviation limit (95% confidence interval). When these samples were later rerun by the laboratory, 16 returned with values within acceptable limits and 2 that were not. The before/after samples returned with values similar to the initial values, even for the 2 rerun standards that were still out of limit. This indicates that the analyses for the actual samples were repeatable and dependable, and that statistically normal variability in the standard is attributed to the difference.

Silver analysis performed well, with 3 standards out of 110 being outside of the mean +/- 2 standard deviation limit. When these samples were later rerun by the laboratory, they returned with similar values. The before/after samples also returned with values similar to the initial values. The high degree of repeatability for both the reanalysis of standards and samples indicates these data to be reliable.

As was the case for the previous sample analysis work, the performance of the standard reference materials in the analytical stream was acceptable for the three economic metals under consideration.

**Internal Laboratory Standards**

The laboratory personnel internally included their own standard samples in the analytical sequence. These standards showed good repeatability of the analyses at or close to the certified values for copper, molybdenum and silver.

**Blanks**

Materials that contain metal concentrations at or below the analytical limits of detection (blanks) were also submitted with the 2008 drill cuttings and SRMs to monitor the limit of detection concentrations of Cu, Mo and Ag at the assay lab. This was similar to blank material as was used in the previous drilling campaign.

A total of 93 blank samples were run within the analytical sequence for copper (not all of these had molybdenum or silver analyses). These consisted of quartz sand, identified as MEG S108002X blanks. Statistical analysis by MEG, based on round robin analysis demonstrated the absence of metallic elements.

Copper analysis performed well, with only 2 blanks out of 93 being slightly above the analytical threshold limit (0.01%). When these blanks were later rerun by the laboratory, they returned with acceptable values below analytical threshold limits. When rerunning blanks, the routine practice was to also run the samples that occurred immediately before and after the standard in
the analytical sequence. These before/after samples returned with values similar to the initial values indicating that the drill hole samples themselves were repeatable and dependable.

Molybdenum analysis performed reasonably, with only 8 blanks out of 84 being slightly above the analytical threshold limit (0.001%). When these blanks were later rerun by the laboratory, 4 returned with acceptable values below analytical threshold limits. Three samples returned with values still above the analytical threshold limits (1 remaining blank was inadvertently not rerun). The before/after samples returned with values similar to the initial values indicating that the drill hole samples were repeatable and dependable.

Silver analysis performed modestly, with 26 blanks out of 52 being slightly above the analytical threshold limit (0.1 g/t or 0.00292 opt). When these blanks were later rerun by the laboratory, 8 returned with acceptable values below analytical threshold limits. Fifteen samples returned with values still above the analytical threshold limits (3 remaining blanks were inadvertently not rerun or had insufficient pulp for rerunning). The before/after samples returned with values generally similar to the initial ones indicating general sample repeatability. Silver values for blanks, particularly in the 0.1 g/t (0.00292 opt) to 0.5 g/t (0.0146 opt) range, show some inconsistent results, part of which was checked further by a program of repeat analyses as discussed below.

Check Assays (Second Pulp Analysis)

Duplicate pulps were generated for 121 samples and a repeat analysis performed as a check of the original analytical values. Duplicate pulps were collected over time and were all run at the end of the sampling program. These pulps were run in batches of 16, accompanied by copper, molybdenum and silver standards, as well as a blank. In addition, each batch included the laboratories own internal standards.

Copper check analyses compares well with the original values. Of the 121 samples, 112 duplicate check analyses were within +/- 10 percent of the original values or 93 percent of the data. Most of the checks were less than 5 percent different and for those with differences did not indicate a bias. One data point reflects an apparent mixed up duplicate pulp sample.

Molybdenum check analyses compare reasonably with the original values. Molybdenum is present at relatively small levels, with the differences not indicating a bias. Again, the same data point mentioned above is present, reflecting an apparent sample mix up.

Silver check analyses compare reasonably with the original values. Silver is also present at relatively small levels, showing some variability, especially in the 0.1 g/t (0.00292 opt) to 0.5 g/t (0.0146 opt) range. It is important to note that the silver variability did not show any sort of preferential bias.

The external standards run in the duplicate pulp sample analytical sequence all returned values within acceptable limits. The external blanks came back with no values for copper or molybdenum. A few of the blanks returned silver values just slightly above analytical detection levels.
limits, just as was observed with the blanks that were contained within the routine sampling program.

**Summary**

The analytical quality assessment/quality control program demonstrated that the copper, molybdenum and silver grade values returned by Skyline were reliable for resource estimation work. The quality control results found for the 2008 drill samples were similar to those found in the previous drilling and analytical campaigns. Because of the relatively low levels of silver being measured, some variability was observed; however, there was no obvious grade bias. It is noted that copper accounts for approximately 80% of the mineral valuation, while molybdenum accounts for 15% and silver accounts for about 5%.
Augusta took a number of steps to verify the results of earlier exploration results by other companies. Augusta’s own work was conducted with appropriate sampling handling and QA/QC measures to ensure that resulting data were reasonable. Quality control measures for sample assaying are described in detail in Section 15.

A number of checks were made to appraise the validity of the data entry in the database after the completion the 2005, 2006 and 2008 drilling programs. A visual inspection was conducted comparing a random sampling of the values shown on the original assay certificates to those listed in the database files to check for data entry errors. For the 2005 drilling, fifty-two individual drill holes were inspected, representing approximately 14% of the total database up to that time. The sampling included some data from each of the drilling campaigns conducted by Anaconda, Anamax and Augusta. As no assay value errors were found, the data entry error rate for the group sampled was zero. Computer editing techniques were also employed as an additional check to search for out-of-range values, duplicate entries and depth from-to inconsistencies. One collar location elevation bust was found and corrected. No other errors were encountered.

Augusta’s 2006 drilling campaign added 25 new resource drill holes to the database. A similar program to check assay certificates against entered values in the database was conducted. Seven of the new drill holes, representing approximately 28% of the total, were checked. One transposition error in a Cu value was found and one error involving an assay standard value replacing a Cu value was noted. Also, two from-to footage errors were also found. No other problems were found, and the errors were corrected in the database. The error rate for this sampled group was 0.20%.

During 2008 another 20 holes were drilled and 10 previously unsampled geotechnical holes from 2006 were sampled. Assay certificates for portions of 5 drill holes were checked against the drill hole database, representing 232 sample intervals, or approximately 6% of the new drill hole sample intervals, with no errors found.

WLRC is satisfied that the drill hole database is representative of the deposit. WLRC has not conducted any of its own sampling, as this was not deemed necessary.
The Peach-Elgin, Broadtop Butte and Copper World Mine deposits occur within 1.5-2.5 miles to the north and northwest of the Rosemont Deposit. These deposits consist of similar types of mineralization along related structural trends and are within the property package acquired by Augusta. The following summarizes the historical resource estimates for two of these deposits for informational purposes only. None of the resources estimates presented below are included in the Rosemont mineral resource estimates presented in Section 19.

In 1964, Anaconda produced a geological resource estimate for the Peach-Elgin deposit that identified 13,700,000 tons of sulfide material averaging 0.78% Cu and 9,700,000 tons of oxide material averaging 0.72% Cu. The estimate was based on assays from 67 churn and diamond drillholes. After calculation of that resource, Anaconda and Asarco drilled approximately 140 additional diamond drillholes, but did not update the 1964 estimate. The methodology of the 1964 estimate did not conform to modern NI 43-101 requirements but, as it was made by a reputable major copper company, it is taken as a fairly reliable estimate to be viewed in an historical context.

Augusta Resource Corporation has not done the work necessary to verify the classification of this resource and is not treating the above resource figures as a NI 43-101 defined resource verified by a Qualified Person and, therefore, the resource figures should not be relied upon by investors.

Anamax carried out a resource estimate for the Broadtop Butte deposit in 1979. That estimate, based on approximately 18 widely-spaced (200-500 feet, or 60-150 meters) diamond drillholes, was 8,800,000 tons at an average grade of 0.77% Cu and 0.037% Mo. The estimate was made by a reputable major copper company and on that basis it is taken as a fairly reliable estimate to be viewed in an historical context.

Augusta Resource Corporation has not done the work necessary to verify the classification of this resource and is not treating the above resource figure as a NI 43-101 defined resource verified by a Qualified Person and, therefore, the resource figures should not be relied upon by investors.

There are no historical or modern resource estimates for the Copper World Mine area.
18 MINERAL PROCESSING AND METALLURGICAL TESTING

The following discussion of mineral processing and metallurgical testing has been taken from the Rosemont Copper Project Feasibility Study completed by M3 Engineering & Technology Corp. in August 2007 and updated for test work completed since its publication.

18.1 Metallurgical Testing

The earliest existing records of metallurgical testing are from the period 1974-1975, at which time grinding and flotation tests were performed. In the first half of 2006 through the completion of the Feasibility Study in August 2007, Augusta conducted test work to provide a better understanding of the metallurgy of the Rosemont deposit and design criteria for the design of a process facility. Subsequent test work has been conducted by Augusta up to the present time, the results for which are not yet complete and will be documented in a Feasibility Study Update technical report due to be filed on or before January 2, 2009.

The copper sulfide ore contains two main types of copper mineralization: chalcopyrite and bornite/chalcocite. There are three major and several minor lithological units within which the two types of sulfide mineralization occur:

- Horquilla
- Earp
- Colina
- Other including Epitaph, Escabrosa, Abrigo

Two samples of ground Horquilla sulfide ore were examined by detailed mineralogical modal analysis. The result of this analysis indicates that there is a large difference in copper mineralogy within the Horquilla rock type. Silver appears to be associated mainly with the copper sulfide minerals as is minor gold. Molybdenite, MoS₂, is the only molybdenum mineral of economic interest.

The copper oxide mineralization is principally chrysocolla, tenorite, malachite and azurite. Oxide resources are distributed in three major rock units as follows:

- Arkose
- Porphyrhy – quartz monzonite (QMP) or quartz latite (QLP)
- Andesite

For the most part, core samples from exploration drilling were used for metallurgical testing. Split core samples were used for most of the comminution and some leach tests, while coarse rejects were used for flotation testing. Whole core was used for some tests including the JK
Drop-weight and impact crushing tests. Bulk surface samples were also taken for some of the column leach tests.

A fragmentation study was performed to predict the size distribution of ROM ore. The fragmentation study indicates that the ROM ore fed to the primary crusher will have a “Best Estimate” 80% passing size ($P_{80}$) of about 30 inches, a size distribution readily handled by a gyratory ($60'' \times 110''$) crusher.

The comminution test program consisted of:

- JK Drop-Weight an Abrasion Test
- MinnovEX SAG Power Index Test (SPI)
- MacPherson Autogenous Grindability Test
- Bond Low-Energy Impact (Crushing) Test
- Bond Rod Mill Work Index Test
- Bond Ball Mill Work Index Test
- Bond Abrasion Test
- Specific Gravity Determination

Grinding mill sizing parameters were provided to mill manufacturers for use in their mill sizing methods. The mill sizing parameters are shown in Table 18.1.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$C_{Wi}$</td>
<td>4.90</td>
</tr>
<tr>
<td>$R_{Wi}$</td>
<td>12.40</td>
</tr>
<tr>
<td>$B_{Wi}$</td>
<td>11.40</td>
</tr>
<tr>
<td>Tonnage</td>
<td>3,400 tph</td>
</tr>
<tr>
<td>SAG Mill Feed Size</td>
<td>18,000 µ</td>
</tr>
<tr>
<td>Transfer Size</td>
<td>3,000 µ</td>
</tr>
<tr>
<td>Ball Mill Product Size</td>
<td>105 µ</td>
</tr>
</tbody>
</table>

Flotation test work was performed during the years 1974-1975 and 2006-2007. The tests included bench-scale rougher-scavenger and cleaner tests and rougher variability tests. Based on the test results the flotation conditions were indicated to be as follows:

- Primary grinding to $P_{80}=105\mu$
- Rougher flotation $pH= 9.7$ to $10.8$
- AP-8944 and SIBX collectors
- Regrind to $P_{80}= 74\mu$
- One stage of cleaner flotation
The rougher flotation variability tests examined the effect of grind size, ore grade, ore mineralogy and ore depth on metal recovery. The result of the variability tests indicated that there is not a strong correlation between head grade, copper mineralogy (as determined by logging) and mining level and copper recovery in the samples tested. Previous early-stage testing determined that the degree of sample oxidation was the most significant factor in the metallurgical response.

The result of the variability tests indicated that the grind size has an effect on both copper recovery and rougher concentrate grade. The mineralogical modal analyses indicate that the chalcopyrite liberates at a coarser size, between 150 and 75µ, than do the bornite and chalcocite. The moly begins to liberate from the gangue between 150 and 75µ, but remains locked to a significant degree with gangue to about 22µ.

In the variability tests, only about 10 percent of the samples gave molybdenum recovery of 75% or higher, indicating that the variability test conditions were probably not optimum for moly recovery. Normally a molybdenum recovery of about 80 percent can be expected with a typical southern Arizona copper rougher concentrate. The result of sorting the variability test result for molybdenum recovery and ore elevation indicates no correlation between these variables.

Copper-molybdenum and molybdenum cleaner flotation tests indicate that the Rosemont sulfide ores should respond well to widely used and proven techniques. Reagent screening tests were performed that indicated recovery from the rock type composites could be improved by reagent selection. The estimated recovery from the test work was 84 percent for the copper, 56 percent for the molybdenum and 78 percent for the silver.

Column leach tests were performed at a -1 inch particle size distribution on three composite oxide ore samples. The samples used in the test work were arkose, quartz latite porphyry and andesite rock units. The copper minerals in the samples were: chrysocolla, tenorite, malachite, azurite, chalcocite, covellite, and minor chalcopyrite and bornite. The results of these tests indicate copper recovery for arkose to be 41.2% and net acid consumption to be 20.3 lbs acid per lb of copper, for quartz latite porphyry 60.5% and 2.2 lbs/lb, and for andesite 53.1% and 10.2 lbs per lb.

Additional oxide column leach tests were performed on arkose, quartz latite porphyry, and andesite ore samples. Column tests were run on the andesite and quartz latite porphyry ore samples at particle sizes of -1, -2 and -4 inch. Column tests were run on the arkose ore sample at particle sizes of -1 and -2 inch. The column leach test at -4 inch on the arkose sample was not run since the as-received sample was nearly all -2 inch. Tests were performed at various irrigation rates and two tests were cured before leaching. The results of these tests indicate that at a -4 inch particle size distribution, the copper recovery for arkose can be predicted to be 75% and acid consumption to be 50 lbs acid per ton of ore leached, for quartz latite porphyry 70% and 10 lbs/ton, and for andesite 70% and 60 lbs per ton. The average recovery of the leach and SX-EW plant is expected to be 65 percent for the life of mine.
18.2 Mineral Processing

Both sulfide and oxide copper ore will be processed. Sulfide ore will be transported from the mine to the concentrator facility by off-highway haulage trucks. Oxide ore will be transported from the mine to a run of mine heap leaching facility by off-highway haulage trucks. Copper concentrate produced at the concentrator facility will be loaded into highway haul trucks and transported to a concentrate smelter and metal refinery. Molybdenum concentrate produced at the concentrator facility will be bagged and loaded onto trucks for shipment to market. Oxide ore will be leached with acidic solution and the leach solution will be processed using solvent extraction electrowinning (SX-EW) technology to produce high purity cathode copper plates. The copper cathodes will be loaded onto trucks for shipment to market.

The process selected for recovering the copper and molybdenite minerals can be classified as “conventional”. The sulfide ore will be crushed and ground to a fine size and processed through mineral flotation circuits. The following items summarize the process operations required for sulfide ore:

- Size reduction of the sulfide ore by using a primary gyratory crusher to reduce the ore from run of mine (ROM) to minus 6 inches.

- Stockpiling primary crushed ore in a coarse ore storage building and then reclaiming by feeders and conveyor belt.

- Size reduction of the ore in a semi-autogenous (SAG) mill - ball mill grinding circuit prior to processing in a flotation circuit. The SAG mill will operate in closed circuit with a trommel screen and a pebble crushing circuit. The ball mills will operate in closed circuit with hydrocyclones.

- The flotation circuit will consist of copper and molybdenum flotation circuits. The copper and molybdenum minerals will be concentrated into a bulk copper/molybdenite concentrate. The molybdenite mineral will then be separated from the copper minerals in a molybdenite flotation circuit. The bulk (copper-moly) flotation circuit will consist of rougher flotation, concentrate regrind, cleaner flotation and cleaner scavenger flotation circuits. The molybdenite flotation circuit will consist of copper-moly concentrate thickener, molybdenite rougher flotation, rougher cleaner flotation, concentrate regrind, second cleaner flotation and third cleaner flotation circuits.

- Final copper concentrate will be thickened, filtered, and loaded in trucks for shipment. Final molybdenite concentrate will be filtered, dried and packaged into shipping containers for shipment.

- Flotation tailing will be thickened, filtered, transported by a conveyor system and dry stacked in a tailing impoundment area at the mill site.
The process selected for the recovery of copper from the oxide ore can be classified as “conventional”. The oxide ore will be heap leached and the copper recovered from the leach solution using solvent extraction – electrowinning technology.

ROM ore will be trucked from the mine to the leaching area. The ore will be stacked on the leach pad and irrigated with an acidified leach solution (raffinate). The leach solution will percolate through the leach pile and dissolve soluble copper from the ore before being directed along the impermeable leach pad liner system to the solution collection system. The copper bearing solution called pregnant leach solution, or PLS, will be treated in the solvent extraction electrowinning (SX-EW) circuit.

Copper contained in the PLS (aqueous phase) will be extracted from the aqueous phase solution by contact with organic reagents carried in an organic solution (organic phase) in the solvent extraction circuit. Copper transferred to the organic phase will be stripped from the organic solution by contact with an aqueous solution (aqueous phase), acidic electrolyte solution (lean electrolyte) that will have circulated through the electrowinning cells in the electrowinning circuit. This transfer of copper enriches the electrolyte solution to form the rich electrolyte. The rich electrolyte will be returned to the electrowinning cells for copper electrowinning onto stainless steel cathode blanks. Copper loaded on the stainless steel blanks will be harvested from the electrowinning cells on a weekly schedule. Copper will be removed from the stainless steel blanks by processing through a stripping machine. Copper plates produced by this process, LME Grade A, will be weighed and bundled into 2 to 3 ton packages for shipment to market.

The solvent extraction plant will consist of one train of mixer-settler tanks. The train will have two stages of extraction in series and one stage of stripping. The electrowinning circuit tankhouse will contain twenty-four electrowinning cells.
19 MINERAL RESOURCE ESTIMATES

Updated mineral resource estimates for the Rosemont Deposit are presented in this report to support a press release made on October 23, 2008. The new mineral resource estimates include additional sample assays taken from 20 new drill holes and from 10 geotechnical holes that were previously unsampled. At the time of this writing, an update to the Rosemont feasibility study is in progress and a new technical report is due to be filed on or before January 2, 2009, in which mineral reserve estimates will be presented.

A three-dimensional (3D) block model of the Rosemont Deposit was constructed and mineral resources were estimated using Mintec’s MineSight® mining software package. The subsections that follow describe the parameters and methodology for this work.

19.1 Model Extents

The mine coordinate system is based on UTM NAD 83 standards. The UTM NAD 83 Zone 12 coordinates in metric values were converted to Imperial units (i.e., feet). Block dimensions of 50 ft by 50 ft by 50 ft were selected as appropriate to adequately model the deposit geology and to also reflect the proposed mining bench height for the project. Table 19.1 summarizes the limits of the 3D block model expressed in mine coordinates. The current model covers the same area as the previous 2007 model.

<table>
<thead>
<tr>
<th>Direction</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Block Size (ft)</th>
<th>No. of Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>X (East)</td>
<td>1,710,000</td>
<td>1,722,000</td>
<td>50</td>
<td>240</td>
</tr>
<tr>
<td>Y (North)</td>
<td>11,550,000</td>
<td>11,560,000</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Z (Elevation)</td>
<td>2,500</td>
<td>6,500</td>
<td>50</td>
<td>80</td>
</tr>
</tbody>
</table>

19.2 Surface Topography

The topographic data for the project area was captured from an aerial survey flown by Cooper Aerial Surveys Company of Tucson, Arizona in the summer of 2006. The vertical datum is based on the NAVD 88 standard. Cooper provided electronic files with elevation data on 10-foot contour intervals covering the project area.

The topographic surface elevations were then loaded into 2D surface and 3D block model files in MEDSystem®. A block model variable stores the percentage of each block below topography.
19.3 **Drill Hole Database**

The Rosemont Deposit drill hole database contains collar locations, down-hole deviation surveys, sample assay results and geological information from several recent drilling programs by Augusta Resources and from a series of exploration drilling campaigns conducted by a number of companies in the past (see Table 13.1). This mineral resource update includes sample assay information from 30 additional drill holes. Ten of the holes were drilled primarily for geotechnical information but have since been sampled and assayed. The remaining 20 new holes tested areas of extended mineralization and provided some in-fill information. In all, 249 resource drill holes now comprise the drillhole database contained within the area used for grade modeling. Some holes drilled for metallurgical information were used for geologic modeling purposes. The drilling programs included a good mix of vertical and inclined holes designed to test both the shallower stratigraphic units and the high angle structures. The majority of the holes were drilled using diamond core, although a small number of holes, less than five percent, were started by open-hole rotary techniques, but the mineralized zones were drilled with core.

Stored in the drill hole database used for grade modeling are 56,499 individual sample values representing approximately 323,800 feet (98,700 meters) of drilling. Each sample interval record contains values for Cu, Mo and Ag. Intervals in the upper parts of the drill holes were also commonly assayed for recoverable oxide Cu.

During the period from 1964 to 1983, Rosemont samples analyzed by the Anaconda and Anamax labs were processed via a first-pass x-ray method to screen out low grade or waste samples. Sample values greater than 0.2% Cu and 0.02% Mo were then re-assayed by wet chemical techniques. Values for both methods are entered in the database; however, the question previously arose as to the suitability of the lower XRF assay values for grade estimation in the model. A statistical study was conducted to determine the correlation coefficient between XRF and wet chemical values for both Cu and Mo. The study shows excellent agreement with correlation coefficients of 0.944 for Cu and 0.874 for Mo (see Figures 19-1 and 19-2 in Section 26). These results indicate that the lower grade XRF values would be valid for use in grade estimation in the model.

A number of checks were made to appraise the validity of the data entry in the database. A visual inspection was conducted comparing a random sampling of the values shown on the original assay certificates to those listed in the database files to check for data entry errors. Fifty two individual drill holes were inspected in March 2006, representing approximately 14% of the total database up to that time. The sampling included some data from each of the drilling campaigns conducted by Anaconda, Anamax and Augusta. As no assay value errors were found, the data entry error rate for the group sampled was zero. Computer editing techniques were also employed as an additional check to search for out-of-range values, duplicate entries and depth from-to inconsistencies. One collar location elevation bust was found and corrected. No other errors were encountered. Augusta’s 2006 drilling campaign added 25 new resource drill holes to the database. A similar program to check assay certificates against entered values in the database was conducted. Seven of the new drill holes, representing approximately 28% of the total, were checked. One transposition error in a Cu value was found and one error involving an assay
standard value replacing a Cu value was noted. Also, two from-to footage errors were also found. No other problems were found, and the errors were corrected in the database. The error rate for this sampled group was 0.20%. In September 2008 a validity check of a random sampling of assay intervals from five of the new thirty drill holes added in 2008 was conducted. Approximately 6% of the assay intervals were checked with no errors encountered.

A major Ag sampling and assaying program was undertaken in 2006. Limited Ag assaying had been done in the past and the intent of this program was to provide sufficient new sample values to allow Ag grade estimation in the model. Approximately 20% of the drill hole database was checked for Ag data entry problems. No errors were found in the final database compilation.

A statistical study was re-done based on the updated database which included the 30 additional drill holes. Included in the study were frequency distribution histograms for each rock type and lognormal cumulative probability graphs for Cu, Mo and Ag for the deposit as a whole (see Figures 19-3, 19-4 and 19-5 in Section 26). As one might expect, the addition of samples from only 30 holes had minimal effect on the overall statistics for the deposit. High grade outliers are common in skarn-type deposits and the Rosemont Deposit is no exception. Inspection of the cumulative probability graph for all Cu assays shows an inflection point in the curve at approximately 10% Cu. The high grade outlier portion of the population above the 10% Cu threshold accounts for approximately 0.20% of the total population, but, if left unadjusted, would bias the model grade estimation upward. For that reason, the Cu assays were capped at 10.0% Cu. A similar situation existed with Ag and a cap was applied at 3.0 ounces per ton. The cumulative probability plot of Mo grades exhibits a better behaved population, with no high grade outlier segment; consequently, no Mo grade capping adjustments were made.

19.4 Geologic Model

The geologic model of the deposit was re-visited and some minor revisions to fault positions and lithologic contacts were made based on information from the recent drilling campaign. Three new lithologic units have been added to the model (Martin West, Epitaph North and Tertiary Gravel). In all, 19 individual lithology types were delineated (see Table 19.2 in Section 19.10). Material not defined in the model was assigned a code of 20.

Previous geologic models identified only oxide and sulfide mineralization. The newly revised model includes interpreted boundaries for oxide, mixed (i.e., transitional) and sulfide zones. Most of the mixed zone was previously considered to be sulfides.

The 3-D model was checked visually on computer screens and by plotting and reviewing model level plans. Problem areas from the block tagging algorithm were noted and adjustments/corrections were made.
19.5 **Mineralization Controls**

In this deposit, all of the rock types are mineralized to some degree. Some lithologies are significantly better hosts due to favorable protolith composition and/or close relationship to feeder structures.

19.6 **Compositing of Drill Hole Data and Statistics**

The drill hole sample assay intervals were weight averaged to 50-foot composites on even level intervals to approximate a potential mining bench height. Geological rock type unit codes were added to the composites by back-assignment from model blocks. All further statistical analyses and model grade estimation were based on these composite data. Frequency distribution histograms and cumulative probability plots were again generated for the individual rock types using the Cu, Mo and Ag composite grades. Coefficients of variation for of all rock types were 1.21 for Cu, 0.97 for Mo and 1.24 for Ag. These values are very much in line with what one would expect in this type of deposit.

19.7 **Variography**

Variograms were re-calculated to determine if the additional 30 holes had caused a change in the continuity directions and ranges of mineralization. Again, each rock type was reviewed separately, but definitive variograms could not be developed for many of the rock types because not enough composite data points were available. This was especially true for Mo composite variograms. Ultimately, all the individual rock type composites were grouped to provide variograms (see Figures 19-6, 19-7 and 19-8) from which parameters could be selected for the block grade estimation equations. A spherical model was fit to each of the experimental variograms and the following parameters were selected:

<table>
<thead>
<tr>
<th></th>
<th>Cu</th>
<th>Mo</th>
<th>Ag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nugget=</td>
<td>0.00326</td>
<td>0.00009</td>
<td>0.00592</td>
</tr>
<tr>
<td>Sill=</td>
<td>0.15194</td>
<td>0.00035</td>
<td>0.01998</td>
</tr>
<tr>
<td>Range=</td>
<td>264 ft (80 m)</td>
<td>251 ft (76 m)</td>
<td>254 ft (77 m)</td>
</tr>
</tbody>
</table>

The model parameters obtained in this current study were identical to those obtained from the previous 2007 drill hole database (excluding the new 30 holes) and no revisions to the mineralization continuity directions or ranges were required. The general orientations of the primary direction variograms for Cu and Ag were at azimuths of approximately 110-130° and a dips of -40° to -45°. This is consistent with the measured dip angles of the sedimentary rock formations. The secondary direction follows the general strike of the beds at azimuths of 10-30° with a northerly plunge of 0° to -20°. No clear preferential directions could be determined for Mo, so an omni-directional variogram was selected.
19.8 Block Grade Interpolations

Ordinary kriging was selected as the interpolation method to estimate model block grades because of the low coefficients of variation exhibited by the Cu, Mo and Ag composite grade populations. The search ellipse alignment and ranges used in the interpolation process were oriented to reflect the mineralized trends and continuity ranges detected in the variogram analysis. The primary direction for Cu is 110° azimuth, -45° dip, with a range of 264 feet (80 m), and the secondary direction is 10° azimuth, 20° plunge, with a range of 227 feet (69 m). Mo used a circular, omni-directional search radius of 251 feet (76 m). The primary direction for Ag is 130° azimuth, -40° dip, with a range of 254 feet (77 m). The secondary direction for Ag interpolation is 30° azimuth, 0° plunge, with a range of 232 feet (71 m). The Z search direction was held to 110 feet (34 m) in all cases.

A maximum of nine and a minimum of two composites, with only three composites allowed from any one drill hole, were used in the calculation of any one block grade. The majority of the rock units were interpolated independently so as to maintain the integrity of the individual formations. However, because of similar grade populations and lithologies, the Horquilla Limestone and Earp Formations were grouped and interpolated together. Oxidation boundaries (i.e., oxide, mixed and sulfide zones) were also respected by independently interpolating block grades in separate passes for each zone.

For purposes of projecting grades for inferred blocks, a second-pass grade interpolation was made with a 350-ft search distance. This was applied only to blocks that did not receive a grade assignment using the above search parameters.

19.9 Resource Classification

Resources were classified into measured, indicated and inferred categories following Canadian NI 43-101 compliant standards. The category assignments are based on composite to block distances and the number of composites used in the kriging calculations. A block was designated as measured if it was within 75 feet (22.9 m), roughly 30 percent of the variogram range, and was estimated by at least three drill holes. A block was considered to be indicated if it was within the variogram range of 260 feet (79.2 m) and was estimated by at least two drill holes, or was within 75 feet and less than three drill holes were used for estimation. A block was designated as inferred if it was greater than 260 feet from any drill hole or did not meet the minimum number of drill holes required for the indicated classification.

19.10 Material Densities

Table 19.2 lists the bulk tonnage factors that were assigned in the block model according to rock type. A default tonnage factor of 12.00 ft^3/ton was used where no lithology codes exist.
Table 19.2
Rock Types and Bulk Tonnage Factors

<table>
<thead>
<tr>
<th>Rock/Formation Description</th>
<th>Rock Code</th>
<th>Tonnage Factor (feet³/ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overburden, unconsolidated</td>
<td>1</td>
<td>13.72</td>
</tr>
<tr>
<td>Epitaph Formation</td>
<td>2</td>
<td>12.11</td>
</tr>
<tr>
<td>Colina Limestone</td>
<td>3</td>
<td>11.69</td>
</tr>
<tr>
<td>Earp Formation</td>
<td>4</td>
<td>11.73</td>
</tr>
<tr>
<td>Horquilla Limestone</td>
<td>5</td>
<td>11.18</td>
</tr>
<tr>
<td>Escabrosa Limestone</td>
<td>6</td>
<td>11.56</td>
</tr>
<tr>
<td>Martin Formation</td>
<td>7</td>
<td>11.98</td>
</tr>
<tr>
<td>Quartz Monzonite Porphyry</td>
<td>8</td>
<td>12.31</td>
</tr>
<tr>
<td>Mesozoic Andesite</td>
<td>9</td>
<td>11.53</td>
</tr>
<tr>
<td>Willow Canyon Arkose</td>
<td>10</td>
<td>12.08</td>
</tr>
<tr>
<td>Glance Conglomerate/Ls</td>
<td>11</td>
<td>11.68</td>
</tr>
<tr>
<td>Scherrer Formation</td>
<td>12</td>
<td>12.00</td>
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<tr>
<td>Abrigo Formation</td>
<td>13</td>
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<tr>
<td>Concha Limestone</td>
<td>14</td>
<td>12.11</td>
</tr>
<tr>
<td>Bolsa Quartzite</td>
<td>15</td>
<td>11.91</td>
</tr>
<tr>
<td>Precambrian Granite</td>
<td>16</td>
<td>11.91</td>
</tr>
<tr>
<td>Epitaph North</td>
<td>17</td>
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</tr>
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<td>Martin West</td>
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<td>11.98</td>
</tr>
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<tr>
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<td>12.00</td>
</tr>
<tr>
<td>Tertiary Gravel</td>
<td>21</td>
<td>13.72</td>
</tr>
</tbody>
</table>

19.11 Mineral Resource Estimate

The mineral resource estimation work was performed by or under the direction of Mr. William Rose, P.E., WLRC’s Principal Mining Engineer and an independent Qualified Person under the standards set forth by Canadian National Instrument 43-101 (Mr. Rose’s qualifications are described in Section 24). The mineral resource estimates were based on the above described deposit model and bulk tonnage factors, and were constrained by a floating cone pit shell based on a copper price of $3.50/lb, a molybdenum price of $35.00/lb and a silver price of $14.00/oz.

Measured and indicated mineral resource estimates for the Rosemont Deposit are summarized in Tables 19.3 and 19.4, respectively. The combined measured and indicated mineral resource estimates are presented in Table 19.5. Inferred mineral resource estimates are shown in Table 19.6. The mineral resource estimates contained herein are effective as of October 22, 2008. Imperial units are used in these estimates, where tons refer to short tons (2000 lbs). Cu refers to copper, Mo refers to molybdenum and Ag refers to silver. For comparison with previous mineral resource estimates (WLRC, April 21, 2006 and WLRC, April 26, 2007), copper equivalent
(CuEqv) values are based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.

### Table 19.3
Rosemont Deposit – **Measured** Mineral Resources

<table>
<thead>
<tr>
<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
<th>lbs CuEqv* (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxides:</strong></td>
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</tr>
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<td>0.10</td>
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<td>-</td>
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<td></td>
</tr>
<tr>
<td>0.15</td>
<td>4,900</td>
<td>0.65</td>
<td>0.007</td>
<td>0.08</td>
<td>0.78</td>
<td>64</td>
<td>0.7</td>
<td>0.4</td>
<td>76</td>
</tr>
<tr>
<td>0.20</td>
<td>4,800</td>
<td>0.66</td>
<td>0.007</td>
<td>0.08</td>
<td>0.79</td>
<td>64</td>
<td>0.7</td>
<td>0.4</td>
<td>76</td>
</tr>
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<td>4,700</td>
<td>0.67</td>
<td>0.007</td>
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<td>4,500</td>
<td>0.69</td>
<td>0.007</td>
<td>0.08</td>
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<td>62</td>
<td>0.6</td>
<td>0.4</td>
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<td><strong>Sulfides:</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0.016</td>
<td>0.14</td>
<td>0.78</td>
<td>1,330</td>
<td>42.3</td>
<td>18.4</td>
<td>2,060</td>
</tr>
<tr>
<td>0.20</td>
<td>119,100</td>
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<td>0.016</td>
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<td>0.82</td>
<td>1,280</td>
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</tr>
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<td>1,170</td>
<td>32.7</td>
<td>15.6</td>
<td>1,750</td>
</tr>
</tbody>
</table>

* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.

### Table 19.4
Rosemont Deposit – **Indicated** Mineral Resources

<table>
<thead>
<tr>
<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
<th>lbs CuEqv* (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oxides:</strong></td>
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<td><strong>Mixed:</strong></td>
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<td></td>
</tr>
<tr>
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<td>0.49</td>
<td>0.005</td>
<td>0.05</td>
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<td>334</td>
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<td>0.005</td>
<td>0.05</td>
<td>0.58</td>
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<td><strong>Sulfides:</strong></td>
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<td>52.0</td>
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<td>97.7</td>
<td>42.1</td>
<td>5,120</td>
</tr>
</tbody>
</table>

* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.
Table 19.5
Rosemont Deposit – Combined Measured and Indicated Mineral Resources

<table>
<thead>
<tr>
<th>Material / Cutoff (%) Cu</th>
<th>Ktons</th>
<th>% Cu</th>
<th>% Mo</th>
<th>Ag Oz/ton</th>
<th>% CuEqv*</th>
<th>lbs Cu (millions)</th>
<th>lbs Mo (millions)</th>
<th>oz Ag (millions)</th>
<th>lbs CuEqv* (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxides:</td>
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<td></td>
<td></td>
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<tr>
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<td>0.05</td>
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<td>0.60</td>
<td>398</td>
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<td>1.9</td>
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<tr>
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<td>0.005</td>
<td>0.05</td>
<td>0.61</td>
<td>0.25</td>
<td>0.61</td>
<td>396</td>
<td>4.0</td>
<td>1.9</td>
</tr>
<tr>
<td>0.25 36,900</td>
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<td>0.005</td>
<td>0.05</td>
<td>0.62</td>
<td>0.30</td>
<td>0.62</td>
<td>389</td>
<td>3.9</td>
<td>1.9</td>
</tr>
<tr>
<td>0.30 33,900</td>
<td>0.55</td>
<td>0.005</td>
<td>0.05</td>
<td>0.64</td>
<td>-</td>
<td>-</td>
<td>373</td>
<td>3.5</td>
<td>1.8</td>
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<tr>
<td>Sulfides:</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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</tr>
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<td>0.76</td>
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<td>0.25 458,100</td>
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<td>0.30</td>
<td>0.86</td>
<td>4,600</td>
<td>130.4</td>
<td>57.7</td>
</tr>
</tbody>
</table>

* Equivalency based on prices of $1.25/lb Cu, $18.00/lb Mo and $8.50/oz Ag, with no applied recovery factors.

Oxide, mixed and sulfide mineral resources have been segregated in the above estimates as the average grades between these material types are significantly different. Moreover, if the project is developed, oxide, mixed and sulfide ore will likely be treated by different processing methods, with different costs, recoveries and cutoff grades. Mineral resources that are not mineral...
reserves do not have demonstrated economic viability. No estimate of mineral reserves is presented in this report.

It should be noted that there is environmental and political opposition to the development of the Rosemont open pit copper mining project. The right to mine and extract the mineral resources will be subject to obtaining permits and approvals from federal and state agencies. There are well documented procedures in place related to obtaining these environmental and permitting approvals, which are subject to background data gathering, technical application preparation, agency review, public review and specified administrative procedures.

In August of 2007, ASARCO filed a lawsuit against Augusta Resource Corporation and others alleging that an unfair sale of the Rosemont property had taken place in 2004. The lawsuit is presently in the discovery stage and no estimate is available as to when a judgment may be rendered. Augusta believes the case is without merit and will prevail in this legal action.

Rosemont Deposit mineral resources are on mostly patented and some unpatented lands owned by Augusta Resource Corporation. Notwithstanding the existence of a 3% NSR mineral royalty, the ASARCO litigation and the existence of environmental and political groups opposing the development of the project as noted above, the estimates of mineral resources are not affected by any other known legal, title, taxation, socio-economic, marketing, political or other relevant issues.

The estimates of mineral resources will not be materially affected by mining, metallurgical, infrastructure or other relevant technical factors. The metallurgical characteristics of the Rosemont mineral resource are substantially similar to other deposits successfully mined and processed in the area. The greater Tucson area has seen the development of numerous large-scale open pit copper mines, and has an experienced labor force and well developed infrastructure to support a new mining project.

19.12 Additional Mineral Resource Potential

Previous work by Anaconda, Anamax, and ASARCO found significant areas of mineralization to the north and northeast of the Rosemont Deposit on the Rosemont Property. These deposit areas at Broadtop Butte, Copper World and Peach-Elgin are characterized by similar styles of mineralization and occur along related structural zones to that of the Rosemont Deposit. Historic drilling intercepted significant copper grades in often widely spaced holes, constituting encouraging targets for further exploration.
20 OTHER RELEVANT DATA AND INFORMATION

WLRC is not aware of other relevant data or information regarding the Rosemont Project.
21  INTERPRETATION AND CONCLUSIONS

Augusta’s 2008 drilling campaign at the Rosemont Deposit has increased both the quantity and confidence level of the estimated mineral resources as compared to previous estimates by WLRC (2007). As mixed (i.e., transitional) mineral resources have been differentiated in this new estimate, which were previously identified as sulfide, comparisons with older projections must combine mixed and sulfide mineral resources.

Estimated measured and indicated combined-mixed-plus-sulfide mineral resources above a 0.20% Cu cutoff have increased by 19 million tons (+3.5%), to a total of 562 million tons grading 0.50% Cu, 0.015% Mo and 0.12 opt Ag. Contained metal for measured and indicated combined-mixed-plus-sulfide mineral resources at this cutoff is estimated at about 5.6 billion pounds of copper, 164 million pounds of molybdenum and nearly 69 million troy ounces of silver. An additional 180 million tons of inferred combined-mixed-plus-sulfide mineral resources are estimated at a grade of 0.44% Cu, 0.008% Mo and 0.06 opt Ag, using the same cutoff.

The 2008 drilling has significantly increased the oxide mineral resources above a 0.10% Cu cutoff by almost 29 million tons (+39%). At this cutoff, measured and indicated oxide mineral resources are estimated at over 103 million tons grading 0.20% Cu. Contained metal for measured and indicated oxide mineral resources is estimated at 417 million pounds of copper, an increase of 120 million pounds over the 2007 estimate. An additional 30 million tons of inferred oxide mineral resources are estimated at a grade of 0.24% Cu, using a 0.10% Cu cutoff.

Augusta’s press release of October 23, 2008, combined mixed plus sulfide mineral resource estimates using copper cutoffs of 0.25% for mixed resources and 0.20% for sulfides. At these cutoffs, measured and indicated combined-mixed-plus-sulfide mineral resources have increased nearly 18 million tons (+3.2%) over the 2007 measured and indicated sulfide mineral resource estimates at a 0.20% Cu cutoff. At the 0.25% and 0.20% Cu cutoffs for mixed and sulfides, respectively, measured and indicated combined-mixed-plus-sulfide mineral resources are estimated at 561 million tons grading 0.50% Cu, 0.015% Mo and 0.12 opt Ag.
22  RECOMMENDATIONS

At the time of this writing, an update to the Rosemont feasibility study is in progress and a new technical report is due to be filed on or before January 2, 2009, in which updated mineral reserve estimates, development plans and recommendations will be presented. Consequently, no recommendations or cost estimates are offered in this Technical Report.
REFERENCES


9. The Winters Company, October 1997, Rosemont project validation order of magnitude study, Private report for ASARCO.


24 DATE AND SIGNATURES

The effective date of this report is December 4, 2008.

The principal author and Qualified Person for this Technical Report is Mr. William L. Rose, P.E., of WLR Consulting, Inc. Other contributing authors to this report are Mr. Mark G. Stevens, C.P.G., of Augusta Resource Corporation; Mr. Shea Clark Smith, P.G., of Mineral Exploration Geochemistry; Mr. Thomas L. Drielick, P.E., of M3 Engineering and Technology Corporation; and Ms. Kathy Arnold, Augusta Resource Corporation. Mr. William L. Rose, Mr. Mark G. Stevens, and Mr. Tom Drielick have taken the responsibility as Qualified Persons for the relevant parts of the report as stated in the following certificates.
CERTIFICATE of QUALIFIED PERSON

I, William L. Rose, P.E., do hereby certify that:

1. I am currently employed as Principal Mining Engineer by:

   WLR Consulting, Inc.
   9386 West Iowa Avenue
   Lakewood, Colorado 80232-6441
   U.S.A.

2. I graduated with a Bachelor of Science degree in Mining Engineering from the Colorado School of Mines in 1977.

3. I am a:
   • Registered Professional Engineer in the State of Colorado (No. 19296)
   • Registered Professional Engineer in the State of Arizona (No. 15055)
   • Registered Member of the Society for Mining, Metallurgy and Exploration, Inc. (no. 2762350RM)

4. I have worked as a mining engineer for 31 years since my graduation from college.

5. 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.


7. I have had prior involvement with the property that is the subject of the Technical Report. I have completed prior mineral resource estimates and technical reports during April 2007, February-April 2006 and participated in the Preliminary Assessment evaluation that was completed in June 2006. I have visited the subject property on August 9, 2005.

8. As of the date of this certificate, 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.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 4th day of December 2008.

(signed by) “William L. Rose” (sealed)

Signature of Qualified Person

William L. Rose
Print Name of Qualified Person
CERTIFICATE of QUALIFIED PERSON

I, Mark G. Stevens, Certified Professional Geologist, do hereby certify that:

1. I am currently employed as Vice President, Exploration by:

   Augusta Resource Corporation
   4500 Cherry Creek South Drive
   Denver, Colorado 80246
   U.S.A.

2. I graduated with a Master of Science degree in Geology from University of Utah in 1981 and with a Bachelor's degree in Geology from Colorado State University in 1977.

3. I am a:
   - Certified Professional Geologist by American Institute of Professional Geologist, CPG-08388
   - Professional Geologist by the Wyoming Board of Professional Geologists, PG-651
   - Licensed Geologist by the Washington State Department of Licensing, LG-477.
   - Member of the Society for Mining, Metallurgy and Exploration, Inc.; Society of Economic Geologists and Arizona Geological Society

4. I have worked as a geologist for 27 years since my graduation from college.

5. 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.


7. I have had prior involvement with the property that is the subject of the Technical Report in my role as Chief Project Geologist for Augusta, which owns the Rosemont Project. I have visited the subject property repeatedly since August, 2006.
8. As of the date of this certificate, 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.

9. As an employee of Augusta, I am not independent of the issuer according to the guidelines set out in Section 1.4 of National Instrument 43-101.

10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 4th day of December 2008.

(signed by) “Mark G. Stevens” (sealed)

Signature of Qualified Person

Mark G. Stevens
Print Name of Qualified Person
CERTIFICATE of QUALIFIED PERSON

I, Thomas L. Drielick, P.E., do hereby certify that:

1. I am currently employed as Sr. Vice President by:

   M3 Engineering & Technology Corporation
   2440 West Ruthrauff Rd.
   Tucson, Arizona 85705
   U.S.A.

2. I am a graduate of Michigan Technological University and received a Bachelor of Science degree in Metallurgical Engineering in 1970. I am also a graduate of Southern Illinois University and received an M.B.A. degree in 1973.

3. I am a:
   - Registered Professional Engineer in the State of Arizona (No. 22958)
   - Registered Professional Engineer in the State of Michigan (No. 6201055633)
   - Member in good standing of the Society for Mining, Metallurgy and Exploration, Inc. (No. 850920)

4. I have practiced metallurgical and mineral processing engineering and project management for 37 years. I have worked for mining and exploration companies for 18 years and for M3 Engineering and Technology Corporation for 19 years.

5. 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.


8. As of the date of this certificate, 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.


10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 4th day of December 2008.

(signed by) “Thomas L. Drielick” (sealed)

Signature of Qualified Person

Thomas L. Drielick
Print Name of Qualified Person
25 ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES

This section is not applicable for this mineral resource estimate. At the time of this writing, an update to the Rosemont feasibility study is in progress and a new technical report is due to be filed on or before January 2, 2009, in which updated mineral reserve estimates and development plans will be presented.
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Rosemont Deposit Location Map
Figure 6-2
Rosemont Property Land Tenure

Diagram showing the land tenure of the Rosemont property with various mining claims and deposits.
Figure 9-1
Rosemont Property Generalized Geologic Map

## Rosemont District Stratigraphic Column

<table>
<thead>
<tr>
<th>Formation</th>
<th>Thickness (ft)</th>
<th>Section</th>
<th>Lithology</th>
<th>Skarn/Alteration</th>
<th>Mineralization</th>
<th>Relative Copper Content</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Gravel &amp; sand &amp; partially</td>
<td>Quartz monzonite porphyry to quartz latite porphyry intrusive (66.7-56.3 my). Assoc. Int. breccia.</td>
<td>Not altered, Not mineralized.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>conglomerated pelite (il).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Glance Conglomerate</em> (11) 0-1500</td>
<td>Limestone conglomerate with clasts of eroded older Paleozoic or Precambrian sediments. Locally underlain by &quot;Upper Peterdina Limestone&quot;.</td>
<td>Weak to locally moderately altered. Local calc-silicate alteration.</td>
<td>Mineralized locally (very).</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Rimrover Fm.</em> (18) 0-300</td>
<td>Skarniferous limestone, dolomite and quartz sandstone.</td>
<td>Sericite-magnetite.</td>
<td>Minor mineralization.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Corona Limestone</em> (11) 0-1500</td>
<td>Limestone and quartz sandstone.</td>
<td>Sericite-magnetite.</td>
<td>Secondary Cu and minor sulfides in BT (banded tuff) area.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Exeter Fm.</em> (12) 350-720</td>
<td>Limestone and dolomite, interbedded arkosic sandstone, siltstone and conglomerate.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Ephrata Fm.</em> (13) 1000</td>
<td>Limestone, dolomite and marl.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Chinua Limestone</em> (13) 1000</td>
<td>Limestone, dolomite and marl.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Lacabretta Limestone</em> (18) 350</td>
<td>Dark, thick-bedded dolomitic limestone, Fossiliferous.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Alberta Formation</em> (19) 100</td>
<td>Thrombolites, sedimentary structures, minor shale.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Garden Formation</em> (20) 500</td>
<td>Thick-bedded to massive limestone, chert.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Pleistocene</em> (21) 400</td>
<td>Thick-bedded dolomite, massive limestone.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Bonanza Formation</em> (22) 700-500</td>
<td>Massive to ashy, massive chert.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>Carroll Formation</em> (23) 400</td>
<td>Course-grained, thick-bedded quartzite.</td>
<td>Sericite-magnetite.</td>
<td>Sericite-magnetite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: Stratigraphic column is based on H. Daniels, Professional Paper Y-9565 (1992), and may exceed thicknesses found locally at the Rosemont Deposit. Skarn/Alteration and Mineralization from Delton and others, Augustite Resource Internal report, 2007. Copper values = 1. Unassigned thicknesses = 17.
Figure 11-1
Rosemont Deposit Geologic Plan Map
4500 Ft Elevation
Figure 11-2
Rosemont Deposit Geologic Plan Map
3500 Ft Elevation
Figure 11-3
Rosemont Deposit Geologic Cross Section
At 11,554,225 N (looking north)
Figure 19-1
XRF-Wet Assay Correlation Plot for Cu

Y = 0.679 * X + 0.084
COR. COEF = 0.944

<table>
<thead>
<tr>
<th>X - MEAN</th>
<th>MIN</th>
<th>NO.</th>
<th>STD DEV</th>
<th>MAX</th>
<th>C.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.492</td>
<td>0.000</td>
<td>9009</td>
<td>0.926</td>
<td>24.700</td>
<td>1.882</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Y - MEAN</th>
<th>MIN</th>
<th>NO.</th>
<th>STD DEV</th>
<th>MAX</th>
<th>C.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.417</td>
<td>0.000</td>
<td>9009</td>
<td>0.665</td>
<td>14.700</td>
<td>1.594</td>
</tr>
</tbody>
</table>
Figure 19-2
XRF-Wet Assay Correlation Plot for Mo

\[
Y = 0.881 \times X + 0.012
\]
CORR. COEF = 0.874

<table>
<thead>
<tr>
<th></th>
<th>X - MEAN</th>
<th>MIN</th>
<th>NO.</th>
<th>STD DEV</th>
<th>MAX</th>
<th>C.V.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN</td>
<td>0.043</td>
<td>0.000</td>
<td>2015</td>
<td>0.075</td>
<td>1.590</td>
<td>1.745</td>
</tr>
<tr>
<td>STD</td>
<td>0.043</td>
<td>0.000</td>
<td>2015</td>
<td>0.076</td>
<td>1.260</td>
<td>1.526</td>
</tr>
</tbody>
</table>
Figure 19-3
Lognormal Cumulative Probability Plot for Cu

** PROBABILITY DISTRIBUTION PLOT OF TCU **

<table>
<thead>
<tr>
<th>ITEM</th>
<th>TCU</th>
<th>NATURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>48421</td>
<td>48421</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.363</td>
<td>MEAN</td>
</tr>
<tr>
<td>MINIMUM</td>
<td>0.010</td>
<td>MINIMUM</td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>10.000</td>
<td>MAXIMUM</td>
</tr>
<tr>
<td>VARIANCE</td>
<td>0.394</td>
<td>VARIANCE</td>
</tr>
<tr>
<td>ST.DEV.</td>
<td>0.628</td>
<td>ST.DEV.</td>
</tr>
</tbody>
</table>

TCU ASSAY INTERVALS - ALL ROCK TYPES
Figure 19-4
Lognormal Cumulative Probability Plot for Mo

** PROBABILITY DISTRIBUTION PLOT OF Mo **

<table>
<thead>
<tr>
<th>ITEM</th>
<th>Mo</th>
<th>Natural</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>38156</td>
<td>38156</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.015</td>
<td>-4.922</td>
</tr>
<tr>
<td>MINIMUM</td>
<td>0.001</td>
<td>-6.908</td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>2.660</td>
<td>0.978</td>
</tr>
<tr>
<td>VARIANCE</td>
<td>0.001</td>
<td>1.272</td>
</tr>
<tr>
<td>ST.DEV.</td>
<td>0.038</td>
<td>1.128</td>
</tr>
</tbody>
</table>

Mo ASSAY INTERVALS - ALL ROCK TYPES
Figure 19-5
Lognormal Cumulative Probability Plot for Ag

** PROBABILITY DISTRIBUTION PLOT OF AG **

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AG</th>
<th>NATURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUMBER</td>
<td>30124</td>
<td>30124</td>
</tr>
<tr>
<td>MEAN</td>
<td>0.148</td>
<td>-2.582</td>
</tr>
<tr>
<td>MINIMUM</td>
<td>0.003</td>
<td>-5.809</td>
</tr>
<tr>
<td>MAXIMUM</td>
<td>3.000</td>
<td>1.099</td>
</tr>
<tr>
<td>VARIANCE</td>
<td>0.050</td>
<td>1.474</td>
</tr>
<tr>
<td>ST.DEV.</td>
<td>0.225</td>
<td>1.214</td>
</tr>
</tbody>
</table>

AG ASSAY INTERVALS - ALL ROCK TYPES
**Figure 19-6**

Variogram of 50-Ft Composited Cu Values

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.31123</td>
</tr>
<tr>
<td>Log Mean</td>
<td>-1.96049</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.37358</td>
</tr>
<tr>
<td>Log Std. Dev.</td>
<td>1.44176</td>
</tr>
<tr>
<td>No.</td>
<td>4394</td>
</tr>
<tr>
<td>C.V.</td>
<td>1.20</td>
</tr>
<tr>
<td>Nugget</td>
<td>0.00326</td>
</tr>
<tr>
<td>Sill</td>
<td>0.15194</td>
</tr>
<tr>
<td>Range</td>
<td>266.3</td>
</tr>
</tbody>
</table>

**Graph Details:**
- TCU Assay Interval - All Rock Types
- Distance: 147, 295.2, 442.8, 590.4, 738.0
Figure 19-7
Variogram of 50-Ft Composited Mo Values

\[
\begin{align*}
\text{MEAN} &= 0.01803 \\
\text{STD. DEV.} &= 0.01669 \\
\text{NO.} &= 2402 \\
\log \text{ MEAN} &= -4.20735 \\
\log \text{ STD. DEV.} &= 0.54331 \\
\text{C.V.} &= 0.93
\end{align*}
\]

\[
\begin{align*}
\text{NUGGET} &= 0.00009 \\
\text{SILL} &= 0.00035 \\
\text{RANGE} &= 251.2
\end{align*}
\]
Figure 19-8
Variogram of 50-Ft Composited Ag Values

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN</td>
<td>0.13055</td>
</tr>
<tr>
<td>STD. DEV.</td>
<td>0.14258</td>
</tr>
<tr>
<td>NO.</td>
<td>2695</td>
</tr>
<tr>
<td>LOG MEAN</td>
<td>-2.52037</td>
</tr>
<tr>
<td>LOG STDV</td>
<td>1.03343</td>
</tr>
<tr>
<td>C.V.</td>
<td>1.09</td>
</tr>
<tr>
<td>NUGGET</td>
<td>0.00592</td>
</tr>
<tr>
<td>SILL</td>
<td>0.01998</td>
</tr>
<tr>
<td>RANGE</td>
<td>253.6</td>
</tr>
</tbody>
</table>

**Graph Details:**
- **Horizontal Window (HORZ WIN):** 30.00
- **Vertical Window (VERT WIN):** 15.00
- **Angle:** 130° - 40°

**Distance (AG Primary Direction):**
- 147.7, 295.4, 443.1, 590.8, 738.5