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ARCHITECTURE
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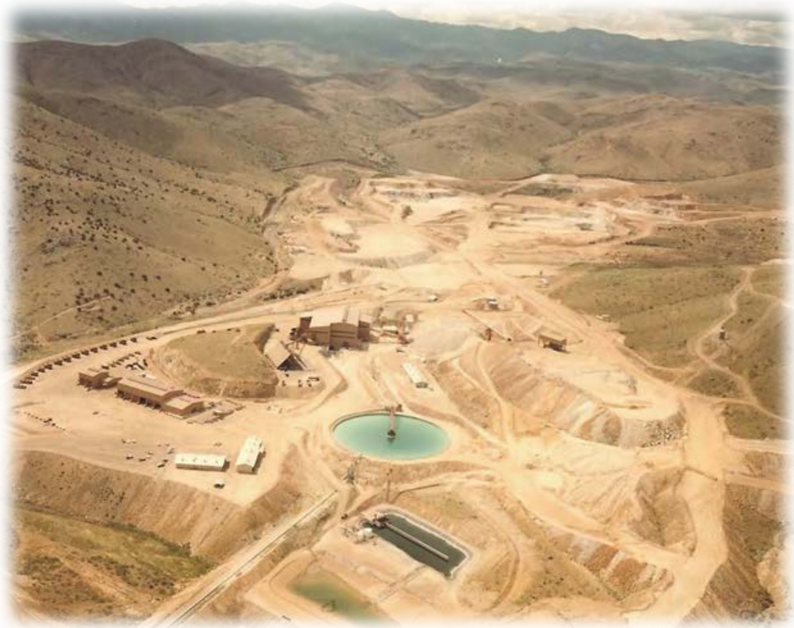
CONSTRUCTION MANAGEMENT

Copper Flat Project



Form 43-101F1 Technical Report

Mineral Resource Statement

New Mexico, USA

REVISION 0
Prepared For:

THEMAC RESOURCES

DATE AND SIGNATURES PAGE

See Appendix A, Mineral Resource Statement Contributors and Professional Qualifications, for certificates of qualified persons. These certificates are considered the date and signature of this report in accordance with Form 43-101F1.

This report is current as of 23 January 2012.

COPPER FLAT PROJECT

FORM 43-101F1 TECHNICAL REPORT

MINERAL RESOURCE STATEMENT

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1 SUMMARY

M3 Engineering & Technology Corporation (M3) in conjunction with Independent Mining Consultants (IMC) have been commissioned by THEMAC Resources Group Limited (THEMAC Resources) to prepare a Mineral Resource Statement for the Copper Flat copper-molybdenum project (Copper Flat or the Project) that is compliant with the Canadian Securities Administrators (CSA) National Instrument 43-101 (NI 43-101).

1.1 PROPERTY DESCRIPTION AND LOCATION

Copper Flat is a porphyry copper/molybdenum deposit located in the Las Animas Mining District in South Central New Mexico, in Sierra County located approximately 150 miles (mi) south of Albuquerque, New Mexico and approximately 20 miles southwest of Truth or Consequences, New Mexico (straight-line distances). Access from Truth or Consequences is by 24 miles of paved highway and 3 miles of all-weather gravel road.

In 1982, Quintana Minerals Corporation (Quintana Minerals) brought the property into production, as an open pit mine with a mill and concentrator (rated at 15,000 short tons per day [st/d]). The mine was in production for three and a half months, but operations were halted when copper prices declined. The property was placed on care and maintenance until 1986 at which point all the buildings and equipment were removed and sold. However, considerable foundations and other infrastructure remain on site.

1.2 OWNERSHIP

The Copper Flat Project includes 26 patented mining claims and 213 unpatented mining claims (184 lode claims and 29 placer claims), 9 unpatented millsites, and 16 fee land parcels, totaling approximately 4,241.19 acres in contiguous and noncontiguous land parcels and claim blocks. In 2009, New Mexico Copper Corporation (NMCC), a wholly owned subsidiary of THEMAC Resources Group, obtained an exclusive option from the prior owners to acquire the Copper Flat properties.

NMCC obtained its exclusive option in an Option and Purchase Agreement effective July 23, 2009 with the prior property owners. To exercise its option, NMCC paid the prior owners a total of $10,000,000 in installments pursuant to the Option and Purchase Agreement, with the final payment being made in May 2011. NMCC now owns all properties covered by the Option and Purchase Agreement, as amended.

1.3 GEOLOGY AND MINERALIZATION

Copper Flat is a porphyry copper-molybdenum deposit hosted by a quartz monzonite stock within an andesitic volcanic complex. The Cretaceous (75 million years ago [Ma]) Copper Flat quartz monzonite hosts mineralization dominated by pyrite and chalcopyrite with subsidiary molybdenite. The mineralization is focused along northeast- and northwest-trending faults, the intersection of which is associated with the host intrusive.

Sulfide mineralization is present as veinlets and disseminations in the quartz monzonite, but is strongest in a breccia pipe that is centrally located within the stock and elongated in the northwest-southeast direction. The sulfide mineralization first formed in narrow veinlets and as disseminations in the quartz monzonite with weakly developed sericitic alteration. This stage of mineralization was followed by the formation of the breccia pipe with the introduction of pyrite, chalcopyrite, and molybdenite with strong potassic alteration. The total sulfide content ranges from 1 percent (by volume) in the eastern part of the breccia pipe and the surrounding CFQM to 5 percent in the CFQM to the south and west. Sulfide content is highly variable within the breccia, with portions containing as much as 20 percent sulfide minerals.

The breccia pipe consists of rotated fragments of quartz monzonite and appears to be caused by autobrecciation resulting from retrograde boiling. Two types of breccia have been identified as distinguishable units based on the dominant mineral filling the matrix between clasts. The breccia types are referred to as biotite breccia and feldspar breccia.

Molybdenite occurs occasionally in quartz veins or as thin coatings on fractures. Minor sphalerite and galena are present in both carbonate and quartz veinlets in the CFQM stock. Preliminary 2011 evaluations of the mineralization at Copper Flat indicate that copper mineralization concentrates and trends along the N50°W structural influences, whereas the molybdenum, gold and silver appear to favor a N10°-20°E trend.

1.4 EXPLORATION AND DRILLING

Copper Flat is an advanced development project that was in production for only a few months in the early 1980's. As such, most of the exploration completed since that time has been the addition of diamond drilling to confirm, expand, and better understand the deposit. NMCC personnel have completed detailed surface mapping of all exposures within the old pit, drainage cuts, and surface exposure during the last two years. Some surface sampling has been completed to improve the understanding of the precious metal distribution outside of the main ore zone. Expansion of the copper resource could occur with further drilling. This exploration would occur at depth below the bottom of the planned open pit or horizontally into the walls of the pit in the east-northeast direction and to the south quarter of the pit.

The Copper Flat deposit has been drilled over several iterations from 1952 through 2011. The majority of the drilling was completed in the late 1970's and early 1980's by Inspiration and Quintana Minerals.

Additional drilling is planned for early 2012 to keep the project advancing. The drilling will include recommendations from this report as well as additional requests from senior management. Planned drilling includes twinning holes for confirmation of historic drilling results, infill and step out drilling, and deep drilling to test for depth extension of the breccia pipe. Additional drilling to further evaluate pit slope stability is also planned.

1.5 SAMPLE ANALYSES AND DATA VERIFICATION

The majority of the database available of Copper Flat sample results was developed by Quintana during the 1970's and 1980's. Recent drilling by NMCC has been added to the data base to both confirm and expand the historic information. Sample results for diamond core drilling conducted by Inspiration and Quintana appear to be acceptable, though the documentation may not meet current standards. Quintana adopted a rigorous sample preparation procedure when early checks on reproducibility were not acceptable.

Recent drilling by Mercator Gold and NMCC follow industry-standard sampling preparation, handling, and documentation procedures. Sample analyses are conducted by Skyline Assayers & Laboratory in Tucson, Arizona using industry-standard procedures. Quality assurance and quality control procedures include inserting blanks, standards, and duplicates it the sample shipments and conducting check assays at the rate of 5 percent. Historical data was compiled from electronic and paper records and combined with results from the 2009 to 2011 drilling results by Independent Mining Consultants to form the basis for the resource estimation.

Evaluation of the database as assembled for this study concludes that it is reliable for the purposes of estimating mineral resources. Some questionable historic data items have been removed from the data base. Statistical analysis of 601 sample pulps re-assayed during the evaluation confirmed that assays for both copper and molybdenum were within the 95 percent confidence interval. Re-assays of an additional 495 samples indicated good correlation for copper and molybdenum but a low bias in historical results for gold and silver. As many pulps as possible were reanalyzed for gold and silver, but an estimated 7.2 percent of the gold assays and 15.2 percent of the silver assays used in the resource calculation were from the low-biased historical data. The results of the blanks, standards, and field duplicate analysis indicate that the drilling completed from 2009 through 2011 can be used for development of mineral resources. In addition, the recent data can be compared to historic results when samples from each time period are located close to one another.

1.6 METALLURGICAL TESTING

M3 conducted a thorough review of the metallurgical testing conducted to date on the Copper Flat ores and concluded that there are no adverse processing factors that require any extraordinary process engineering or deleterious elements in the ore, and that the ore is of medium hardness, amenable to copper/moly flotation, gives products that thicken and filter readily and will produce saleable copper and moly concentrates. Testing reviewed included comminution, flotation, concentrate dewatering, and tailing dewatering. M3 concluded that additional testing was necessary for the feasibility study to demonstrate recovery of byproducts and optimize the design of the processing plant. Samples of drill core recovered from 2009 to 2011 will be used for the following.

- Samples from several depths will be tested for comminution parameters to ensure proper design of the crushing and grinding circuit because previous samples appeared to be ore at relatively shallow depths.

- Reagents from several manufacturers will be tested to identify the reagents and dosages necessary to produce high grade concentrates at the lowest cost.
- Locked cycle flotation tests will be conducted to ascertain optimum conditions for process design and equipment selection
- Testing will be conducted on copper-moly concentrate to guide development of a concentration process for producing a saleable molybdenum product.
- Solid/liquid separation tests on flotation products (concentrate and tailings) will be conducted to develop a general set of data for design of thickening and filtering equipment to dewater the samples prior to final disposition or further processing.
- Samples with relatively high concentrations of gold will be processed and examined to evaluate modifications to the process that would increase recovery of gold in the concentrate.

M3 evaluated historical metallurgical test data, pilot plant recoveries, and actual recoveries from the Quintana operation in 1982 to estimate metal recoveries. The data were reviewed with respect to representativeness and for the presence of deleterious elements. The review concluded that the following recoveries are reasonably obtainable for Years 1 through 5: copper, 90.5 percent; molybdenum, 62 percent; silver, 90 percent; and gold, 50 percent or more. Estimation of recoveries in later years awaits the results of additional testing that is in progress.

1.7 MINERAL PROCESSING

A conceptual process flowsheet was developed for processing 17,500 st/d of ore with an overall availability factor of 92.5 percent. The process flowsheet is very similar to the one developed by Quintana. The present process design incorporates modern equipment where applicable. For example, larger flotation cells have been selected for the rougher flotation, bulk cleaner flotation uses column cells, and vertical mills replaced horizontal regrind mills. Designs incorporated in this study are considered standard mining industry practice.

1.8 MINERAL RESOURCE ESTIMATES

The mineral resource was developed from a computerized block model that was based on the drill hole database and geologic interpretation assembled for the Copper Flat deposit. The block size was set at 50 feet by 50 feet with a 25-foot bench height. Block grade estimation was based on the database of diamond drillhole samples composited on 25-foot intervals. The block grades were estimated for copper, molybdenum, gold, and silver into the quartz monzonite and coarse crystalline porphyry units. The breccia zones codes did not modify or limit the block grade estimation. The indicator grade boundaries were assigned within the quartz monzonite and coarse crystalline porphyry units using a one stage indicator kriging procedure. The grade boundaries were respected as hard boundaries during the grade estimation for copper and molybdenum. Estimation of gold and silver with the reduced data set results in a reasonable global estimate for both metals. However, the local estimate will be relatively poor because the data set is not complete and does not cover the outside edges of the deposit.

Classification was assigned in conformance with NI43-101 and the standards and guidelines. The data verification work has determined that the historic drill data can be used along with the new holes completed by NMCC to estimate mineral resources.

The mineral resource was based on the application of the floating cone algorithm to the block model to establish the component of the deposit that has "reasonable prospects of economic extraction". The mineral resources are therefore contained within a computer-generated open pit geometry. Cutoff grades are presented in terms of Net Smelter Return (NSR) which reflects the combined benefit of producing copper, moly, gold, and silver. NSR values are calculated by taking the grade of each metal in percent (%) or troy ounces per ton (oz/t) by the projected price modified by recovery, payment terms, and deductions.

NSR =	Cu (%) x ($2.90-0.30) x 0.88 x 0.963 x 20 +	Copper Contribution
	Mo (%) x ($15.75-0.60) x 0.55 x 0.997 x 20 +	Moly Contribution
	Au (troz/t) x ($1150.00-3.50) x 0.50 x 0.963 +	Gold Contribution
	Ag (oz/t) x ($20.00-0.60) x 0.90 x 0.933	Silver Contribution

The cutoff grade reflects the estimated cost to process the ore plus site G&A cost which total $7.25/ton.

The following table provides the results of the resource estimation in terms of tonnages of measured, indicated, and inferred resources with grades and contained metal for copper, molybdenum, gold, and silver.

Table 1-1: NMCC, Copper Flat Project – Mineral Resources (22 November 2011)

Classification	Cutoff Grade NSR/Ton	Tonnage and Grade					Contained Metal			
		Ktons	Copper %	Moly %	Gold Oz/ton	Silver Oz/ton	Copper Lbs x 1000	Moly Lbs x 1000	Gold ozs x1000	Silver ozs x 1000
Measured	$7.25	41,236	0.33	0.011	0.003	0.07	272,158	9,072	124	2,887
Indicated	$7.25	152,861	0.24	0.007	0.002	0.04	733,733	21,401	306	6,114
Meas + Ind		194,097	0.26	0.008	0.002	0.05	1,005,891	30,473	430	9,001
Inferred	$7.25	8,206	0.23	0.004	0.000	0.01	37,748	656	0	82

Notes:

Mineral Resources are contained within a floating cone pit geometry at prices below:
Metal Prices:
$2.90 Copper, $15.75 Moly $1150 Gold, $20.00 Silver
Ktons means 1000 short tons. Short tons = 2000 lbs
Copper and Molybdenum grades are percent of dry weight
Gold and Silver are reported in Troy ounces / short ton
Gold and silver assays are not available at the outer edges of the deposit,
so the inferred grades for gold and silver are shown at zero or near zero values.

1.9 MINERAL RESERVE ESTIMATES

There is no mineral reserve at Copper Flat at this time. NMCC is in the process of drilling, evaluating, and planning to potentially develop a mineral reserve in the future.

1.10 MINING METHODS

The Copper Flat project is being approached as a conventional hard rock open pit operation, typical of other copper porphyry deposits in the Southwestern U.S. Initial estimates of ore production to the mill are around 17,500 st/d (6,388 ktons/yr). Based on that ore rate, a reasonable estimate of total material movement to sustain release would be in the range of 36,300 st/d.

To achieve that production rate, bench heights are currently planned to be 25 feet high. Drilling could be completed with two rotary blast hole rigs with 45,000-pound pull down capacity and 6.5-in diameter blast holes. The blasted rock could be loaded into 100-ton haul trucks with 14-cu yd front end loaders.

Mine plans and equipment calculations are currently in progress.

1.11 RECOVERY METHODS

The process for recovering copper and molybdenum (moly) minerals from the Copper Flat ore is very likely to be similar to the one used successfully by Quintana in the 1980s with certain upgrades to reflect the current state-of-the-art in mineral process technology. The process will likely consist of crushing and grinding to a fine size, flotation to concentrate sulfide particles, regrinding and cleaning to develop copper and moly concentrates, thickening and filtering concentrates, and disposal of tailings in a lined surface impoundment.

1.12 INFRASTRUCTURE

Significant infrastructure upgrades are necessary for operation of the Copper Flat project including road improvements, power lines, and water supply. Road improvements include adding turn lanes on Highway 152 for the mine access road, paving the access road, and relocating approximately 3,000 feet of the access road that is within the new tailings footprint. The Quintana 115 kV power line and Caballo substation need to be refurbished and a new power line installed between the mine and fresh water supply wellfield. The fresh water supply system needs to be refurbished with groundwater pumps, pumping stations, and water line improvements.

1.13 ENVIRONMENTAL AND PERMITTING

Environmental and socioeconomic baseline studies were completed as part of the effort to reopen the Copper Flat Mine in the late 1990's. Studies are being undertaken in accordance with state and federal standards of data acquisition, quality assurance and reporting. Data from past studies have been incorporated and otherwise updated by newly completed and on-going studies.

1.13.1 Environmental Studies

Several environmental studies have recently been submitted to the New Mexico Environment Department (NMED) and other State agencies. A Stage I Abatement Plan (Intera, 2011) was submitted in March 2011 and amended (John Shomaker & Associates, 2011) in October 2011 to summarize known groundwater proposal impacts and await NMED approval. A Sampling and Analysis Plan was submitted in September 2010 to New Mexico Mining and Minerals Division (MMD) to guide sampling, analyses, and data collection for a Baseline Data Report, which is due to be completed in February 2012. In addition, studies of groundwater and surface water are being conducted at the pit lake, seepage along Las Animas and Percha Creeks, wells between the creeks and the mine production wells, as well as air quality and meteorological data to support State and federal environmental requirements.

NMCC is developing mitigation strategies to incorporate into the New Mexico mine and reclamation permit and for the federal Environmental Impact Statement (EIS) required under the National Environmental Policy Act (NEPA). The primary issues that are being addressed are mitigation of water quality issues with regard to the lake that will form in the mine pit after mining is completed, acid rock drainage, acid rock drainage that may result from stormwater percolating through the waste rock, and groundwater impacts down gradient from the tailing storage facility from the previous operation of the mine.

1.13.2 Tailings and Waste Management

This report documents a mineral resource statement for the copper flat project. Thus Section 1.13.2 does not apply at this time. A prefeasibility study of the Copper Flat project is currently underway, and this section will be addressed as a part of the prefeasibility report.

1.13.3 Permit Status and Bonding

Permitting requirements and current status of the permitting process for the Copper Flat Project are provided in the following table.

Table 1-2: Major Permitting and Approvals for Copper Flat

Permit/Approval	Granting Agency
Federal	
Approval of Plan of Operations	U.S. Bureau of Land Management (BLM)
National Dredge and Fill Permit (Section 404)	U.S. Army Corp of Engineers (USACE)
FCC License	Federal Communications Commission (FCC)

MSHA Registration	Mining Safety and Health Administration (MSHA)
National Pollution Discharge Elimination System (NPDES), 'Including Stormwater Discharge Note: May not be required	U.S. Environmental Protection Agency (EPA)
Explosives Permit	Bureau of Alcohol, Tobacco, and Firearms (BATF)
Endangered Species Surveys	U.S. Fish and Wildlife Service
State	
Mining Permit	New Mexico Energy, Mineral and Natural Resources Department (NMEMNRD)-Mining Act Reclamation Bureau
Mine Registration	NMEMNRD – Mine Registration Reporting, and Safeguarding Program – Mine Registration
Permit to Construct (Air Quality)	New Mexico Environment Department -Air Quality Bureau
Permit to Operate (Air Quality)	New Mexico Environment Department -Air Quality Bureau
Permit to Appropriate Water	New Mexico State Engineer's Office
Permits for Dam Construction and Operations	New Mexico State Engineer's Office
Approval to Operate a Sanitary Landfill	New Mexico Environment Department -Solid Waste Bureau
Liquid Waste System Discharge Permit	New Mexico Environment Department -Groundwater Bureau
Groundwater Discharge Permit	New Mexico Environment Department -Groundwater Bureau (DP-001)
Cultural Resources Clearance Surveys	New Mexico Department of Cultural Affairs -Historic Preservation Division
Endangered Plant Species Surveys	Natural Heritage New Mexico
Endangered Wildlife Species Surveys	New Mexico Department of Game and Fish

The only permit remaining from the Quintana mining activities is the New Mexico Environment Department's (NMED) Groundwater Discharge Permit, which is currently inactive pending a review of the updated Groundwater Discharge Permit Application submitted by NMCC on March 31, 2011 to the NMED. The updated Groundwater Permit Application was deemed administratively complete on May 13, 2011. However, before the Groundwater Discharge Permit will be re-activated, NMCC must address environmental liabilities that include groundwater impacts associated with the Quintana tailings storage facility (TSF), water quality in the existing pit lake, potential impacts of acid rock drainage, and potential impacts of wildlife exposure to the pit lake. NMCC is actively pursuing a Stage 1 Abatement Plan Proposal submitted to the NMED on March 31, 2011 and amended by NMCC in October 2011 at the request of NMED. Once the Stage 1 Abatement Plan is approved, monitoring activities will begin to address and mitigate the NMED's environmental concerns.

NMCC submitted a Mine Plan of Operations (MPO) to the BLM, which has been determined by the BLM as containing the information required by the statute (43 CFR 3809.401) as documented in a certified letter to NMCC dated August 1, 2011. This initiates the NEPA environmental impact analysis required before the MPO can be approved. NMCC is currently rigorously advancing this process.

NMCC has initiated the MMD mine permit process as of January 2010 with a baseline data collection program per MMD requirements. NMCC has been collecting baseline data under Sampling and Analysis Plan reviewed and commented on by the MMD, the NMED, the New Mexico Office of the State Engineer (OSE), and the New Mexico State Historic Preservation Office (SHPO). NMCC is completing the baseline studies and has targeted January 2012 to deliver the Baseline Data Collection Report to the MMD.

Also in the first quarter of 2012, NMCC will submit to the MMD the Mine Permit Application Package, which will include the detailed mine and reclamation designs. These mine and reclamation designs will be based on the prefeasibility study information. NMCC has coordinated an Inter-agency agreement which will allow for the federal NEPA EIS to satisfy the MMD's requirement for an Environmental Evaluation, which increases the efficiency of the both the federal NEPA environmental impact analysis and the New Mexico MMD environmental evaluation.

As part of the MMD baseline data collection program, NMCC has been collecting on-site meteorological and air quality data, which will provide the input for the air quality modeling required by the NMED Air Quality Bureau. NMCC has completed the required one year of pre-mine climate and air quality monitoring and is advancing the air quality permit process.

NMCC also has secured via purchase or contract the required water rights to operate the mine. The possession of these water rights significantly simplifies NMCC's requirements to the OSE with respect any permits to appropriate water for the beneficial use of the mining activities.

Based on the results of the baseline studies, no endangered plant or wildlife species have been identified inside the permit boundary. Also as a result of the baseline studies, cultural resources have been identified within the mine permit boundary, some may be eligible for the National

Registry of Historic Places. If this is confirmed by the pending archeologist's reports, then NMCC will comply with the SHPO requirements for cultural resource documentation and data recovery.

The MMD, NMED, and U.S. Bureau of Land Management (BLM) have requirements for both exploration and mine reclamation bonds. NMCC currently has an exploration reclamation bond held jointly between the MMD and the BLM, which will be released upon completion of NMCC's exploration activities and completion and approval of all required reclamation activities. For the mining activities, typically the state and federal agencies (MMD, NMED and BLM) will require a reclamation bond to be held jointly. The NMED responsibilities are to steward any short- and long-term water issues, should they occur. Since the project involves public lands, the BLM will also require a reclamation bond. In New Mexico, it is typical to have a mining reclamation bond held by the MMD, the NMED, and the BLM jointly for the convenience of the mine operator. Joint held reclamation bonding avoids a separate bond requirement for each responsible agency.

1.13.4 Socioeconomics and Community

A socioeconomic study of the Copper Flat Mine project is underway with expected completion in the first quarter 2012.

1.13.5 Mine Closure and Reclamation

Reclamation of disturbed areas caused by the project will be in compliance with federal and state regulations. Under the Federal Land Policy Management Act, the BLM is responsible for preventing undue or unnecessary degradation of federal BLM lands which may result from operations authorized by the mining regulations (43 CFR 3809). The Mining Act Reclamation Program was created under the New Mexico Mining Act of 1993 to regulate hardrock mining and reclamation activities, and requires the preparation of a reclamation plan for submittal and approval by the New Mexico Energy, Minerals and Natural Resources Department and NMED. Closure of the tailing facility must comply with requirements of the New Mexico State Engineers office.

The reclamation close out plan will be developed with state and federal agency input and coordination. Closure and reclamation activities will be carried out concurrent with mine operations wherever possible, and final closure and reclamation measures will be implemented at the time of mine closure. The objectives of the Copper Flat reclamation program will be to minimize erosion damage, protect the quality of surface and ground water resources, establish surface soil conditions most conducive to regeneration of a stable plant community, revegetate disturbed areas, stabilize plant communities, maintain public safety by stabilizing, removing, or fencing land forms which could constitute a public hazard, and meet or exceed state and federal reclamation regulations.

Surface facilities, equipment and buildings related to the mining project will be removed, foundations will be removed and/or covered as required, and the site facilities will be restored to self-sustaining plant communities similar to those that are currently present on-site and on adjacent undisturbed lands. For the purposes of reclamation planning, reclamation units include the open pit, waste rock piles, TSF, plant site facilities, infrastructure and ancillary facilities, and haulage and access roads. The topography, slopes and aspects of the disturbed and reclaimed areas will be developed to blend in with the present, existing physiographic forms of the Copper Flat area, as feasible.

1.14 CAPITAL AND OPERATING COST ESTIMATES

This report documents a mineral resources statement for the Copper Flat project. Thus Section 1.14 does not apply at this time. A prefeasibility study of the Copper Flat project is currently underway, and section will be addressed as part of the prefeasibility report.

1.15 CONCLUSIONS AND RECOMMENDATIONS

It is acknowledged that a significant amount of development level work including metallurgical testing has been completed for this project. The objectives for the THEMAC management team should be focused on advancing the Project with the completion of the prefeasibility study that is currently in progress.

1.15.1 Conclusions

The resource model developed for this report meets or exceeds CIM reporting standards. It is believed that the quality and quantity of the data used to develop the resource model is sufficient and the methodology used to prepare the resource model is correct. Consequently, it is believed that the resource model will be a reasonable predictor of the copper and molybdenum grades and tonnages specified in this report.

The comprehensive metallurgical tests that were conducted on the Copper Flat reserve more than thirty years ago. The flow sheet of the previous 1982 Quintana Minerals concentrator is essentially still valid. Also, it can be concluded from the results of the CSMRI pilot plant tests and the operation of the Quintana concentrator for three and-a-half months in 1982, there are no deleterious elements in the Copper Flat ore or adverse processing factors that require any extraordinary process engineering. The ore is of medium hardness, amenable to copper/moly flotation, gives products that thicken and filter readily, and will produce saleable copper and moly concentrates. The conceptual process flow sheet and processing design developed as part of this study is considered “Standard” practice in the mining industry. Access to electrical power and water necessary to sustain the operation is believed to be reasonable and achievable. The land position with the exception of 300 acres of property that lies within the permit boundary is viable and adequate for the operation as specified in this report. (As discussed in 4.7, negotiations are in progress with the current owner as well as assessment of alternatives that will make this land purchase unnecessary.)

1.15.2 Risks

The following risk aspects are noted:

- Market risks associated with base metal and precious metal mining projects always exist.
- Certain agreements regarding the land position with the land owner of 300 acres of property located within the permit boundary have not been finalized and could potentially result in relatively minor complications. These are likely to be resolved satisfactorily in the course of ongoing negotiations and/or an alternative project plan that makes this land unnecessary for a viable operation.
- Field assessments of various components of the previous infrastructure were carried out to a reasonable level. In most cases, at least 20 percent of the structures were accessed and evaluated for re-use. However, 100 percent of each structure was not evaluated. It is possible that certain items (for example, portions of the water pipeline from the wells to the property that was not inspected) could be in need of unanticipated repair, upgrading or replacement.

1.15.3 Opportunities

The following opportunity aspects are noted:

- Upside market potential associated with base metal and precious metal pricing exists. Additional drilling of the reserve and resource with the following objectives:
  - An increase in the amount of gold and silver assay values in the reserve model, particularly in the area defined as Phase 3 of the mine plan, will add value to the project. As actual gold and silver grades replace zero values in the block model in these fringe areas, the overall amount of gold and silver contained in the reserve will increase.
  - Additional step-out drilling and drilling at depth could increase the reserve estimate.

1.15.4 Recommendations

1.15.4.1 Mining and Modeling

The following recommendations should be considered by NMCC regarding mining and modeling:

- Assay all available historic pulps for gold and silver. Gold and silver are under sampled within the deposit and assaying all the existing pulps would be an inexpensive way to improve the estimate of precious metals.

- Twinning a drillhole a few feet from one of the historic holes that contain high grade might confirm the historic assays would provide additional comfort that results from the older holes can be relied upon to support measured resources.

- Once the twin results are available, the focus of future resource definition drilling can be established. If the old holes are highly reliable, new holes can focus on step out rather than data in-fill.

- Additional diamond drillholes holes have been completed by NMCC since the cut-off date for this report. That information should be added to the data base and the block model updated and nearest neighbor analysis between NMCC and historic drilling should be updated.

- Geologic interpretation of rock type and structure should be continued to improve the definitions of rock and structure thereby improving grade estimation and prediction of process response.

- NMCC data entry team should continue entry of original assay information from drill logs, particularly the Quintana results.

- Future mine plans should consider alternative access patterns and widths for mine haul roads to reduce the initial stripping requirements and/or release slightly higher grade ore in the early years.

1.15.4.2 Metallurgy

Additional testing to demonstrate recovery of by-products and optimize the design of the processing plant is beneficial.

- Comminution tests should be conducted on samples at several depths in all types of ore to ensure proper design of the crushing and grinding circuit and provide reliable information on ore hardness and abrasion characteristics to optimize metal production.
- Reagents from several manufacturers should be tested to identify the reagents and dosages necessary to produce high grade concentrates at the lowest cost.
- Locked-cycle flotation tests should be conducted with selected reagents to ascertain optimum conditions for process design and equipment selection.
- Large stage production of copper-moly bulk concentrate should be conducted to run tests to confirm that the concentration of a saleable molybdenum product is achievable. This test has the potential of demonstrating the overall copper and molybdenum recoveries achievable.
- Conduct tailing disposal trade-off studies to select the most cost effective to present to the authorities in the permitting application.
- Conduct mineralogical studies to identify the occurrences and association characteristics of the gold losses through flotation. There is a potential that the study can identify the metallurgical process that would increase recovery of gold in the concentrate.

1.15.4.3 Environmental and Social

The permit application must contain considerable detail both on the nature and impacts of the proposed operation and on the background and capability of the mine owners and operators. Studies are currently being performed, and will be undertaken in accordance with state and federal standards of data acquisition, quality assurance and reporting.

A review of pre-existing environmental baseline studies (gap analysis) completed from 1994 through 1999 is being performed to ascertain the utility of past studies in contributing to current study requirements.

NMCC has prepared a new Plan of Operations for the BLM, and has recently initiated the NEPA EIS approval process, as this has been identified as the critical path item for project permitting. The notice of intent to prepare an EIS for the Copper Flat Project was published in the federal register January 9, 2012.

Supplemental geochemical characterization work is in progress by NMCC to assess the acid rock drainage potential. The testing will be conducted in accordance with the recently released Bureau of Land Management Instruction Memorandum NV-2010-014.

Permit requirements should be reviewed and updated as the Project advances through the EIS and permitting process.

2 INTRODUCTION

2.1 PURPOSE

M3 Engineering & Technology Corporation (M3) in conjunction with Independent Mining Consultants (IMC) has been commissioned by THEMAC Resources Group Limited (THEMAC Resources) to prepare a Mineral Resource Statement for the Copper Flat copper-molybdenum project (Copper Flat or the Project). The Copper Flat is located in South Central New Mexico, near the town of Hillsboro, approximately 150 miles (mi) south of Albuquerque, and approximately 20 miles southwest of Truth or Consequences (straight-line distances).

This report has been prepared in accordance with the guidelines provided in NI 43-101 Standards of Disclosure for Mineral Projects, and conforms to Form 43-101F1 for technical reports. The Resource and Reserves definitions are as set forth in the Appendix to Companion Policy 43-101CP, CIM – Definitions Adopted by CIM Council, June 30, 2011. NMCC may use this Mineral Resource Statement for any lawful purpose to which it is suited. The intent of this report is to provide the reader with a comprehensive understanding of the Copper Flat mineral resources, and to provide recommendations for future work programs to advance the Project.

2.2 SOURCES OF INFORMATION

The sources of information include data and reports supplied by NMCC personnel, and documents referenced in Section 27. M3 used its experience to determine if the information from previous reports was suitable for inclusion in this report and adjusted information that required amending. Revisions to previous data were based on research, recalculations and information from other projects. The level of detail utilized was appropriate for this level of study.

This Mineral Resource Statement is based on information collected by IMC and M3 during the site visits. In addition, a number of meetings were conducted between M3, IMC, and NMCC. This Mineral Resource Statement is based on the following sources of information:

- Personal inspection of the Copper Flat site and surrounding area;
- Technical information provided to M3 by NMCC through various reports;
- Information provided to M3 by IMC related to resource model generation;
- Technical and economic information subsequently developed by M3 and associated consultants; and
- Additional information obtained from public domain sources.

The information contained in this report is based on documentation believed to be reliable. The recommendations and conclusions stated in this report are based on information provided to IMC and M3.

2.3 LIST OF QUALIFIED PERSONS

The individuals who have provided input to this Mineral Resource Statement have extensive experience in the mining industry and are members in good standing of appropriate professional institutions. John Marek, P.E. (IMC), is the Qualified Person (QP) for the geological, exploration, drilling, sample analysis, data verification, resource and reserve estimation, and mining methods and costs (Sections 7-12, 14-16, and 26). Thomas Drielick, Principal Metallurgist (M3), is the QP for the mineral processing and, metallurgical testing, (Section 13). J. Steven Raugust, CPG (NMCC), is the QP for environmental studies and permitting, (Section 20). The Certificates are provided in Appendix A.

The following authors were responsible for the sections as listed in Table 2-1.

Table 2-1: List of Qualified Persons

Author	Company	Designation	Section Responsibility
John Marek	IMC	P.E., P. Eng.	7, 8, 9, 10, 11, 12, 14, 15, 16, 21.2, 26.1
Thomas L. Drielick	M3 Eng	P.E.	13, (M3 drawings)
J. Steven Raugust	NMCC	CPG	20

2.4 SITE VISIT & PERSONAL INSPECTIONS

Site visits were made by various personnel involved in this preparing this report. M3 personnel participated in a site visit on October 25, 2011 including Jim Bogan, Roger Rivers, Stephen Slaby, Rick Zimmerman, and Justin Meislin and were accompanied by Ed Fidler, Ann Carpenter, and Rich Hasler from NMCC. During the site visit, M3 inspection included the access road, previous mill site area, waste dumps, uncovered portions of former mill site structures, and sample storage facilities.

John Marek and Yvette Gengler of IMC visited the Copper Flat project September 7-8, 2011. The storage facilities for drill core were visited, and historic pulp data were reviewed. During that visit IMC observed the following procedures in progress:

- Diamond Drilling
- Core Photography
- Core Geotechnical Logging
- Core Geologic Logging
- Core Sawing for Sample Shipment
- Sample Handling and Labeling Procedures

The visit provided familiarity with the local terrain and site conditions for mine and waste storage design. Observation of the primary rock types in pit wall exposure and in core with guidance from the Copper Flat site geologists was also accomplished by IMC personnel. Additional data regarding drillhole locations, orientations, and logging information was gathered during the visit that was integrated into the data base for determination of mineral resources.

2.5 TERMS OF REFERENCE AND UNITS OF MEASURE

This Mineral Resource Statement is intended for the use of NMCC for the further development and advancement of Copper Flat towards the Prefeasibility Study stage. It provides a mineral resource estimate, a classification of resources in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) classification system.

Imperial units (actually American System) of measurement are used in this report. Abbreviations are given in Section 2.5.4. All monetary values are in U.S. dollars ($) unless otherwise noted.

2.5.1 Mineral Resources

The mineral resources and mineral reserves have been classified according to the “CIM Standards on Mineral Resources and Reserves: Definitions and Guidelines” (June 2011). Accordingly, the Resources have been classified as Measured, Indicated or Inferred. Reserves, when developed, are classified as Proven, and Probable based on the Measured and Indicated Resources as defined below.

A Mineral Resource is a concentration or occurrence of natural, solid, inorganic or fossilized organic material in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes.

An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough to confirm both geological and grade continuity.

2.5.2 Mineral Reserves

A Mineral Reserve is the economically mineable part of a Measured or Indicated Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified. A Mineral Reserve includes diluting materials and allowances for losses that may occur when the material is mined.

A 'Probable Mineral Reserve' is the economically mineable part of an Indicated, and in some circumstances a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction can be justified.

A 'Proven Mineral Reserve' is the economically mineable part of a Measured Mineral Resource demonstrated by at least a Preliminary Feasibility Study. This Study must include adequate information on mining, processing, metallurgical, economic, and other relevant factors that demonstrate, at the time of reporting, that economic extraction is justified.

2.5.3 Glossary

Term	**Definition**
Assay	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cut-off Grade (CoG)	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Footwall	The underlying side of an orebody or stope.
Gangue	Non-valuable components of the ore.
Grade	The measure of concentration of gold within mineralized rock.
Hanging wall	The overlying side of an orebody, fault, or slope.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Hydrocyclone	A process whereby material is graded according to size by exploiting centrifugal forces of particulate materials.
Igneous	Primary crystalline rock formed by the solidification of magma.
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.

Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Lithological	Geological description pertaining to different rock types.
LoM Plans	Life-of-Mine plans.
LRP	Long Range Plan.
Material Properties	Mine properties.
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mineral/Mining Lease	A lease area for which mineral rights are held.
Mining Assets	The Material Properties and Significant Exploration Properties.
Ongoing Capital	Capital estimates of a routine nature, which is necessary for sustaining operations.
Ore Reserve	See Mineral Reserve.
Pillar	Rock left behind to help support the excavations in an underground mine.
RoM	Run-of-Mine.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Shaft	An opening cut downwards from the surface for transporting personnel, equipment, supplies, ore and waste.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Stope	Underground void created by mining.
Stratigraphy	The study of stratified rocks in terms of time and space.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulfide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening	The process of concentrating solid particles in suspension.
Total Expenditure	All expenditures including those of an operating and capital nature.
Variogram	A statistical representation of the characteristics (usually grade).

2.5.4 Abbreviations

Abbreviation	Unit or Term
A	Ampere
AA	atomic absorption
a/m^2	amperes per square meter
ANFO	ammonium nitrate fuel oil
Ag	Silver
ARD	acid rock drainage
Au	Gold
AuEq	gold equivalent grade
bft^3	billion cubic feet (feet)
BLM	US Department of the Interior, Bureau of Land Management
°C	degrees Centigrade
CoG	cut-off grade
cm	Centimeter
cm^2	square centimeter
cm^3	cubic centimeter
cfm	cubic feet per minute
CRec	core recovery
Cu	Copper
°	degree (degrees)
dia.	Diameter

EA	Environmental Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
FA	fire assay
famsl	feet above mean sea level
ft	foot (feet)
ft^2	square foot (feet)
ft^3	cubic foot (feet)
ft^3/st	cubic foot (feet) per short ton
g	Gram
gal	Gallon
g/L	gram per liter
g-mol	gram-mole
gpm	gallons per minute
g/st	grams per short ton
Ha	Hectares
HDPE	Height Density Polyethylene
hp	Horsepower
ICP	induced couple plasma
ID2	inverse-distance squared
ID3	inverse-distance cubed
ILS	Intermediate Leach Solution
in	Inch
kg	Kilograms
km	Kilometer
km^2	square kilometer
koz	thousand troy ounces
kst	thousand short tons
kst/d	thousand short tons per day
kst/y	thousand short tons per year
kV	Kilovolt
kW	Kilowatt
kWh	kilowatt-hour
kWh/st	kilowatt-hour per short ton
L	Liter
L/sec	liters per second
Lb	Pound
LHD	Long-Haul Dump truck
LLDDP	Linear Low Density Polyethylene Plastic
LoM	Life-of-Mine
M	Meter
Ma	Million years ago
m^2	square meter
m^3	cubic meter
mg/L	milligrams/liter
mi	Mile
mi^2	Square mile
Mlbs	million pounds
mm	Millimeter
mm^2	square millimeter
mm^3	cubic millimeter
MME	Mine & Mill Engineering

MMD	New Mexico Dept. of Energy, Minerals and Nat. Res. - Mining and Minerals Division
Mo	Molybdenum
Moz	million troy ounces
MSHA	Mine Safety and Health Administration
Mst	million short tons
Mst/y	million short tons per year
MW	million watts
MVA	Megavolt Ampere
m.y.	million years
NEPA	National Environmental Policy Act of 1969 (as Ammended)
NGO	non-governmental organization
NMDOT	New Mexico Department of Transportation
NMED	New Mexico Environment Department
NI 43-101	Canadian National Instrument 43-101
oz	troy ounce
oz/s	troy ounce per short ton
%	Percent
PLS	Pregnant Leach Solution
PMF	probable maximum flood
POO	Plan of Operations
ppb	parts per billion
ppm	parts per million
psi	pounds per square inch
QA/QC	Quality Assurance/Quality Control
RC	rotary circulation drilling
RoM	Run-of-Mine
RQD	Rock Quality Description
SEC	U.S. Securities & Exchange Commission
sec	Second
SG	specific gravity
st	short ton (2,000 pounds)
t	tonne (metric ton) (2,204.6 pounds)
st/h	short tons per hour
st/d	short tons per day
st/y	short tons per year
TSF	tailings storage facility
TSP	total suspended particulates
µ	micron or microns, micrometer or micrometers
V	Volts
VFD	variable frequency drive
W	Watt
XRD	x-ray diffraction
Y	Year
yd^2	square yard
yd^3	cubic yard

3 RELIANCE ON OTHER EXPERTS

The opinions of IMC and M3 contained herein are based on information provided by NMCC throughout the course of its design and evaluation and reflects technical and economic conditions at the time of writing. Economic conditions can change rapidly with fluctuations in the world economy. Consequently, actual results may be significantly more or less favorable than presented herein.

This report includes technical information that may require subsequent calculations to derive sub-totals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, M3 does not consider them to be material to the report.

The authors have relied on NMCC personnel regarding property descriptions and ownership details.

4 PROPERTY DESCRIPTION AND LOCATION

The Copper Flat Project is a copper/molybdenum porphyry deposit located in Sierra County, South Central New Mexico. In 1982, Quintana Minerals Corporation (Quintana Minerals) brought the property into production as an open pit mine with a mill and concentrator (rated at 15,000 short tons per day [st/d]). The mine was in production for three and a half months, but operations were halted when copper prices declined. The property was placed on care and maintenance until 1986 at which point all the buildings and equipment were removed and sold. However, considerable foundations and other infrastructure remain on site.

4.1 LOCATION

Copper Flat is located in the Las Animas Mining District in South Central New Mexico, in Sierra County. The center of the mineralization is at approximately 32.970300°N latitude, 107.533527°W longitude. The Project is approximately 150 miles south of Albuquerque, New Mexico and approximately 20 miles southwest of Truth or Consequences, New Mexico (straight line distances). Access from Truth or Consequences is by 24 miles of paved highway and 3 miles of all-weather gravel road. The Project location is shown in Figure 4-1.

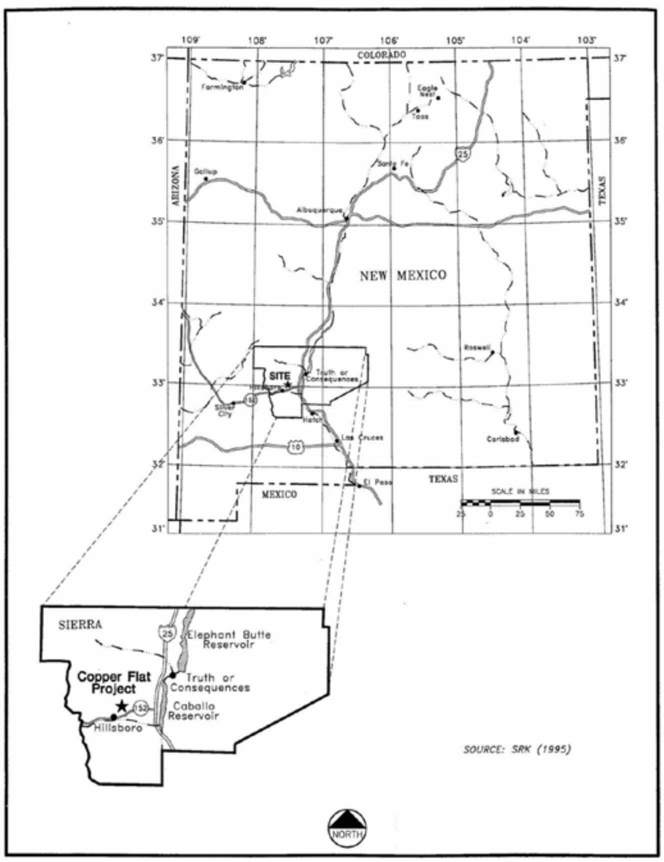


Figure 4-1: Project Location Map

The property is located between the communities of Caballo and Hillsboro, north of New Mexico State Highway 152. The property is south of Animas Peak, and in Sections 30 and 31, Township 15 South, Range 5 West; Sections 30 and 31, Township 15 South, Range 6 West; Sections 23-27 and 34-36, Township 15 South, Range 7 West; Section 6, Township 16 South, Range 6 West; and Section 2, Township 16 South, Range 7 West; all of the New Mexico Principal Meridian. The property is within the Hillsboro 15' USGS quadrangle.

4.2 MINERAL TENURE

Per New Mexico law, the owner of unpatented mining claims in the state must file a *Notice of Intention to Hold* with the County Clerk of the county in which the claims were located each year prior to December 31. The recording for the fee for a *Notice of Intention to Hold* is based on the number of entries to the county recording index; for each unpatented mining claim, such entries include (1) the name of the claim owner, (2) the name of each claim and/or " The Public," and (3) a land description. Fees are $25 for the first 10 entries and $25 for each additional 10 entries or portion thereof.

The recording fee for NMCC's *Notice of Intention to Hold* for the year ending December 31, 2011 (which has been filed) was $575. Patented claims and other fee lands are subject to county and state property taxes, payable annually.

The Project includes 26 patented mining claims and 213 unpatented mining claims (184 lode claims and 29 placer claims), 9 unpatented millsites, and 16 fee land parcels, totaling approximately 4,241.19 acres in contiguous and noncontiguous land parcels and claim blocks.

- Total permit area: 1,954.1 acres
- Mineral lands (unpatented mining claims, patented mining claims and fee lands) controlled by NMCC within permit area: 1,733.85 acres. Difference between total permit area and NMCC-controlled lands within permits area is due to lands owned by a private party.
- Surface lands controlled by NMCC within permit area: 1,654.2 acres. Difference between total permit area and NMCC-controlled lands within permit area is due to lands owned by a private party.
- Area of mining claims staked on Stock Raising Homestead and other lands wherein the surface is owned by a private party, but the minerals are controlled by NMCC via mining claims (both inside and outside permit boundary): 250.57 acres
- Total area of all mining claims and fee lands controlled by NMCC (both inside and outside permit area – entire project): 4,241.19 acres
- Total area of all mining claims and fee lands controlled by NMCC (outside of permit area): 1,834.27 acres.
- Difference between total area of all NMCC-controlled lands (4,241.19 acres) and NMCC- Controlled lands outside of permit area (1,834.27 acres) equals 2,388.82 acres. Difference between 2,388.82 acres and mineral lands controlled by NMCC within permit

area (1,733.85 acres) equals 654.97 acres. This discrepancy is due to overlapping of various NMCC-Controlled lode and placer claims (i.e., same ground is covered by two or more NMCC-Controlled lode or placer claims- the actual amount of NMCC-controlled mineral lands within the permit area is 1,733.85 acres).

Fee lands vary in acreage from parcel to parcel. All listed properties are owned by NMCC, purchased in most cases form Hydro Resources Corporation (Hydro Resources), CU Flat, LLC (Cu Flat), and GCM, Inc. (GCM)) pursuant to the *Option and Purchase Agreement* described below. Appendix B contains a complete list of claims, millsites, and fee lands owned by NMCC. Within the claim block and fee lands located inside the permit boundary are two contiguous patented lode claims and four contiguous parcels of other fee lands owned by a third party. Approximately 30 of the 213 unpatented mining claims were located on lands patented under the federal Stock Raising Homestead Act, whereby NMCC owns the claims and right to explore for develop and mine minerals and the surface is owned by another non-governmental party.

Unpatented claims located before 2009 and the unpatented millsites were staked using compass and chain traverses and later surveyed. Unpatented claims located in 2009 and thereafter were staked using a Trimble GPS ground station and a handheld GPS. All fee lands were surveyed by licensed surveyors at various times during the Project's history, primarily in the 1970s and early 1980s. During late 2010 and in 2011, a licensed surveyor obtained data on all existing land survey points (to the extent they could be found on the ground) using modern high-tech equipment, including Trimble GPS ground stations. The attached map was created using this point data. Any missing points were extrapolated from pertinent documents, including mining claim location notices, deeds, U.S. mineral surveys and other surveys.

The United States has reserved by federal statute any oil, gas, coal, and certain other nonmetallic minerals not subject to the location of mining claims from the unpatented mining claims located after 1955 that are included in the Project. These reservations do not affect any of the patented claims or any of the unpatented claims located before 1955 over and around the mineral deposit. Figure 4-2 shows land status in the permit area and Figure 4-3 shows the millsite claims located east of the permit area and used for water wells.

4.3 LOCATION OF MINERALIZATION

Mineralization is contained within patented and unpatented claims controlled by NMCC under the agreements discussed in Section 4.2. The deposit area is within a roughly circular block of andesitic volcanic rocks about 4 miles in diameter. These andesitic rocks have been intruded by a quartz monzonite porphyry stock (Copper Flat quartz monzonite). The porphyry copper mineralization is contained within the Copper Flat porphyry stock and breccia pipe. Higher grade material is contained within the mineralized breccia pipe (1,300 feet (ft) x 600 ft, and over 1,000 feet in depth). The pipe is a continuous zone of mineralization composed of altered quartz monzonite porphyry, breccias in a matrix of quartz, biotite, potassium feldspar, and sulfides. The deposit consists entirely of hypogene copper mineralization, with nearly all of the copper occurring as chalcopyrite.

4.4 ROYALTIES, AGREEMENTS AND ENCUMBRANCES

In 2009, NMCC obtained from Hydro Resources, Cu Flat, and GCM the exclusive option described below to acquire their Copper Flat properties, which consisted of the following:

- The surface and mineral estates in 26 patented mining claims.
- The surface and mineral estates in 16 parcels of other fee land.
- Mining rights in 174 unpatented mining claims.
- Surface rights in nine unpatented millsites.

NMCC obtained its exclusive option in an *Option and Purchase Agreement* effective July 23, 2009 with Hydro Resources, Cu Flat, and GCM, which owned the properties. The *Option and Purchase Agreement* was amended five times through a First Amendment effective January 20, 2010, a Second Amendment effective April 1, 2010, a Third Amendment and Supplemental Memorandum effective May 28, 2010, a Fourth Amendment effective August 2, 2010, and a Fifth Amendment effective September 30, 2010. To exercise its option, NMCC paid Hydro Resources and GCM a total of $10,000,000 in installments pursuant to the *Option and Purchase Agreement,* with the final payment being made in May 2011, and now owns all properties covered by the *Option and Purchase Agreement,* as amended.

Following exercise and after it obtains all federal and state permits required for commercial operation of the Copper Flat Mine, NMCC is required by the *Option and Purchase Agreement* to pay advance royalties to Hydro Resources and GCM each calendar quarter until the aggregate amount of advance royalty and net smelter return royalty payments by NMCC exceeds $10 million. If the average daily Comex spot copper price during the calendar quarter for which the advance royalty is paid is less than $2.00/pound (adjusted upward or downward on the basis of changes to the Implicit Price Deflator for Gross Domestic Product) , the advance royalty for that quarter will be $50,000. If the average daily Comex spot copper price during the calendar quarter is $2.00/pound or more (as so adjusted), the advance royalty for that quarter will be $112,500. NMCC is also required each calendar quarter to pay a 3.25 percent net smelter return royalty (as defined in the *Option and Purchase Agreement)* to Hydro Resources and GCM on mineral products produced from the Copper Flat properties. Advance royalty payments are deductible from net smelter return royalty payments otherwise due. NMCC's obligation to pay advance royalty and net smelter return royalty obligations will end when the aggregate amount of such royalties paid exceeds $10 million.

Additionally, the Chance, Feeder, Xmas and Extension patented claims acquired from Hydro Resources, Cu Flat, and GCM are subject to a 5 percent net smelter return royalty owned by a third party. Because the estimated mineral value of these claims is not significant, the probability is small that minerals will be produced from these claims on which the royalty will be due.

The Copper Flat properties are not subject to any other royalties, payment obligations, or other agreement, encumbrances, or back-in rights.

4.5 ENVIRONMENTAL LIABILITIES

The site was developed and operated by Quintana Minerals in 1982 and subsequently closed with some environmental issues unresolved. NMCC has prepared and submitted a Stage I Abatement Plan Proposal for the New Mexico Environment Department (NMED) to address the following known environmental liabilities:

1. A localized plume of dissolved solids from the existing unlined tailings storage facility (TSF) exceeds New Mexico groundwater standards. The Stage 1 Abatement Plan will add additional groundwater sampling to the four quarterly sampling events NMCC has conducted in the area of this plume as part baseline data studies conducted in 2010 and 2011. In addition, the Stage 1 Abatement Plan Proposal has considered and included data from earlier efforts to permit the mine in the 1990s.
2. Water quality samples from the existing pit lake exhibit concentrations above New Mexico groundwater standards for a number of constituents of concern (sulfate, total dissolved solids, chloride, manganese and uranium). NMCC has also performed pit lake studies including bathymetry, field parameter trends and four quarters of sampling of the pit lake water quality as part of the baseline studies conducted in 2010 and 2011. The Stage 1 Abatement Plan will utilize this data and other historical pit lake water quality data dating back to its formation in 1982.
3. Potential for groundwater impacts caused by acid rock drainage (ARD) from the existing exposed waste rock has been identified as a concern. NMCC is conducting an extensive site wide geochemistry program that includes both static and dynamic ARD testing towards developing predictive geochemical modeling to quantify the mine’s potential to generate ARD. These studies were initiated in 2010 and are on-going. In addition, data from earlier geochemical studies in the 1990s will also be utilized leading to a robust geochemical characterization program.
4. Potential impacts to wildlife may be caused by exposure to the existing pit lake. Baseline studies conducted by NMCC in 2010 and 2011 will aid in understanding these potential impacts.

The Stage I Abatement Plan Proposal is under revision by the NMED.

4.6 PERMITTING

Table 4-1 presents the typical major permits for a new mining activity in New Mexico that has a combination of private and public lands, in this case lands managed by the U.S. Bureau of Land Management (BLM).

Table 4-1: Major Permits and Approvals Required for the Copper Flat Project

Permit/Approval	Granting Agency
Federal	
Approval of Plan of Operations	U.S. Bureau of Land Management (BLM)
National Dredge and Fill Permit (Section 404)	U.S. Army Corp of Engineers (USACE)
FCC License	Federal Communications Commission (FCC)
MSHA Registration	Mining Safety and Health Administration (MSHA)
National Pollution Discharge Elimination System (NPDES), 'Including Stormwater Discharge	U.S. Environmental Protection Agency (EPA)
Explosives Permit	Bureau of Alcohol, Tobacco, and Firearms (BATF)
Endangered Species Surveys	U.S. Fish and Wildlife Service
State	
Mining Permit	New Mexico Energy, Mineral and Natural Resources Department (NMEMNRD)-Mining Act Reclamation Bureau
Mine Registration	NMEMNRD – Mine Registration Reporting, and Safeguarding Program – Mine Registration
Permit to Construct (Air Quality)	New Mexico Environment Department -Air Quality Bureau
Permit to Operate (Air Quality)	New Mexico Environment Department -Air Quality Bureau
Permit to Appropriate Water	New Mexico State Engineer's Office
Permits for Dam Construction and Operations	New Mexico State Engineer's Office
Approval to Operate a Sanitary Landfill	New Mexico Environment Department -Solid Waste Bueau
Liquid Waste System Discharge Permit	New Mexico Environment Department -Groundwater Bureau
Groundwater Discharge Permit	New Mexico Environment Department -Groundwater Bureau (DP-001)
Cultural Resources Clearance Surveys	New Mexico Department of Cultural Affairs -Historic Preservation Division
Endangered Plant Species Surveys	Natural Heritage New Mexico
Endangered Wildlife Species Surveys	New Mexico Department of Game and Fish

Only one remaining permit from the 1982 Quintana Minerals mining activities remains in place, which is the NMED's Groundwater Discharge Permit. All other mining and environmental permits from the 1982 Quintana Mine have expired or have been closed due to lack of activity. NMCC is in the process of obtaining new permits.

The Groundwater Discharge Permit is currently inactive pending a review of the updated Groundwater Discharge Permit Application submitted by NMCC on March 31, 2011 to the NMED. The updated Groundwater Permit Application Permit was deemed administratively complete on May 13, 2011. However, before the Groundwater Discharge Permit will be re-activated, NMCC must address the environmental liabilities discussed in Section 4.4. NMCC is actively addressing these requirements through a Stage 1 Abatement Plan Proposal submitted to the NMED on March 31, 2011. Additional information was requested by the NMED, which was provided by NMCC. Once the Stage 1 Abatement Plan is approved by the NMED, monitoring activities will be commenced towards addressing and mitigating the NMED's environmental concerns.

NMCC submitted a Mine Plan of Operations (MPO) to the BLM, which has been determined by the BLM as containing the information required by the statute 43 CFR 3809.401 as documented in a certified letter to NMCC dated August 1, 2011. This initiates the National Environmental Policy Act (NEPA) environmental impact analysis required before the MPO can be approved. NMCC is currently rigorously advancing this process.

NMCC has initiated the New Mexico Mining and Minerals Division (MMD) mine permit process as of January 2010 with a baseline data collection program per MMD requirements. NMCC has been collecting baseline data under Sampling and Analysis Plan reviewed and commented on by the MMD, the NMED, the New Mexico Office of the State Engineer (OSE), and the New Mexico State Historic Preservation Office (SHPO). NMCC is completing the baseline studies and has targeted January 2012 to deliver the Baseline Data Collection Report to the MMD.

Also in the first quarter of 2012, NMCC will submit to the MMD the Mine Permit Application Package, which will include the detailed mine and reclamation designs. These mine and reclamation designs will be based on the prefeasibility study information. NMCC has coordinated an Inter-agency agreement which will allow for the federal NEPA Environmental Impact Statement (EIS) to satisfy the MMD's requirement for an Environmental Evaluation, which increases the efficiency of the both the federal NEPA environmental impact analysis and the New Mexico MMD environmental evaluation.

As part of the MMD baseline data collection program, NMCC has been collecting on-site meteorological and air quality data, which will provide the input for the air quality modeling required by the NMED Air Quality Bureau. NMCC has completed the required one year of pre-mine climate and air quality monitoring and is advancing the air quality permit process.

NMCC also has secured via purchase or contract the required water rights to operate the mine. The possession of these water rights significantly simplifies NMCC's requirements to the OSE with respect any permits to appropriate water for the beneficial use of the mining activities.

Based on the results of the baseline studies, no endangered plant or wildlife species have been identified inside the permit boundary. Also as a result of the baseline studies, cultural resources have been identified within the mine permit boundary, some may be eligible for the National Registry of Historic Places. If this is confirmed by the pending archeologist's reports, then NMCC will comply with the SHPO requirements for cultural resource documentation and data recovery.

4.6.1 Compliance Evaluation

The Copper Flat property is considered to be currently in good regulatory standing with respect to responding to environmental concerns. At least one year of baseline data collection has been completed and, for certain media, nearly two years. Once the NMED approves the Stage I Abatement Plan (Intera, 2011) proposed and amended (John Shomaker & Associates, 2011) by NMCC, ongoing air, water, and environmental monitoring and data collection will be required to thoroughly evaluate the environmental issues and apply appropriate mitigation strategies. Geochemical and hydrologic modeling will also be required to support the regulatory permits, which are anticipated within the next 18 to 24 months.

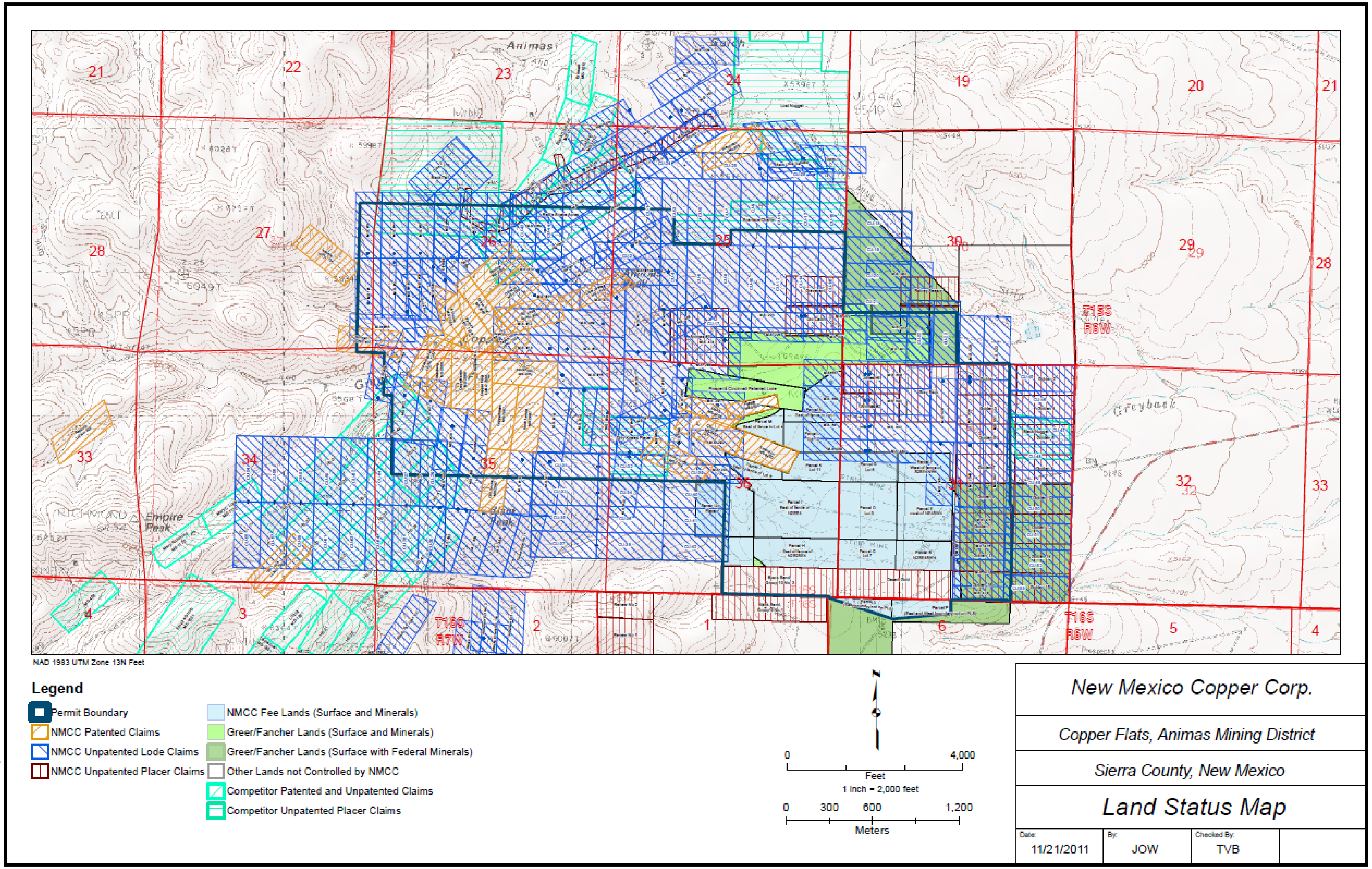


Figure 4-2: Land Status Map

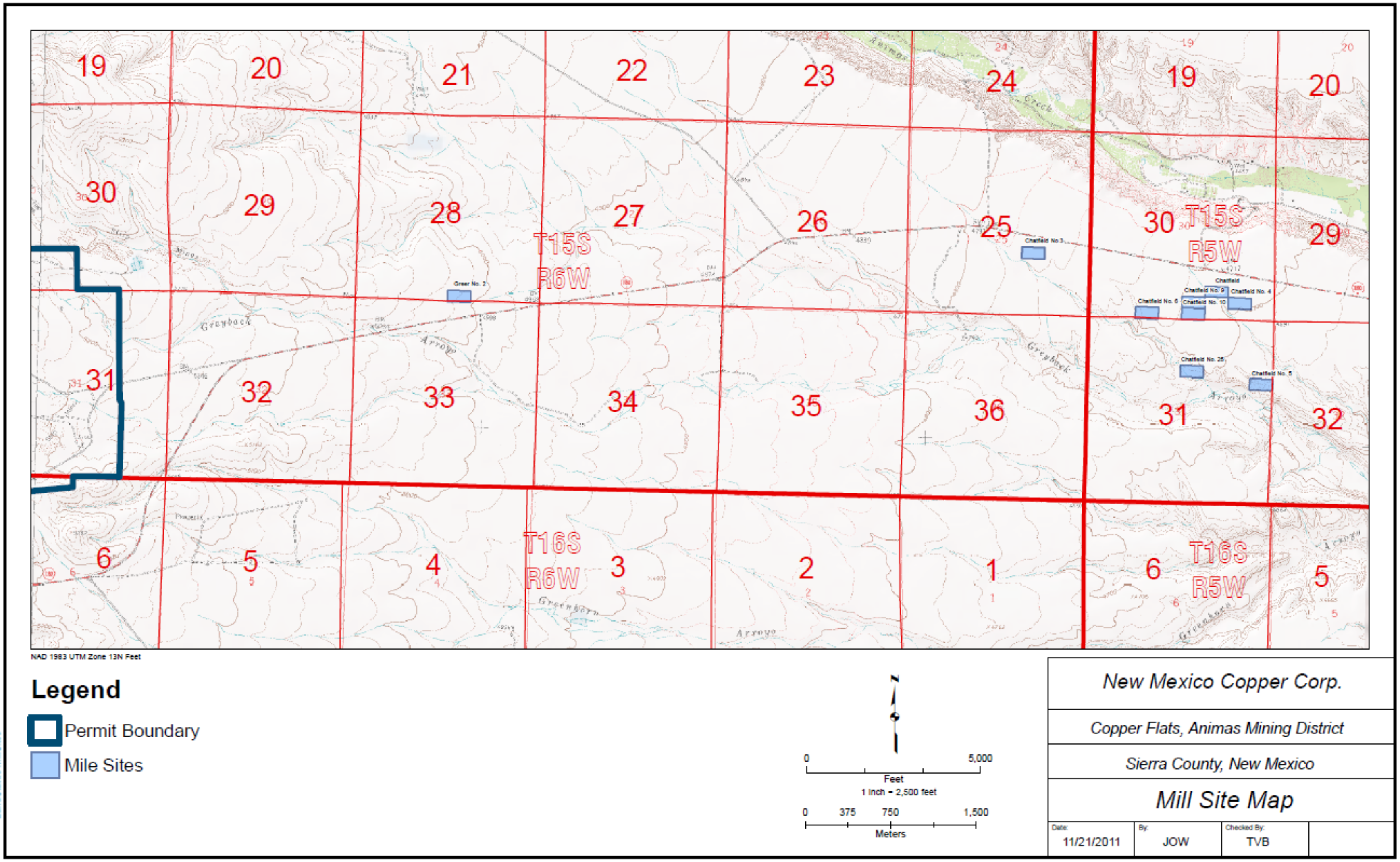


Figure 4-3: Noncontiguous Mill Site Map

4.7 OTHER FACTORS AND RISKS

NMCC is conducting detailed surveys and assessments of roughly 300 acres of property inside the permit boundary owned by another private party. NMCC has approached this owner concerning the purchase of the property, but as of the date of this document has yet to secure this property. If for whatever circumstance, NMCC cannot secure this property, engineering alternatives are also being evaluated to avoid the need for the property.

NMCC is also re-establishing all of the access to facilities that are on BLM lands including water pipelines, water production wells, and water monitoring wells via right-of way applications and subsequent right-of way grants. To date, NMCC has received right-of-way grants to access and use one production well and 10 monitoring wells located on BLM administered lands. Right-of way applications for the remaining water extraction and monitoring wells and the water pipeline connecting the water production wells to the mine have all been submitted with right-of-way grant approvals expected in the second quarter of 2012.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The property lies in the arid semi-desert country of south-central New Mexico in the foothills of the Black Range. The Black Mountains rise to elevations of above 9,000 feet about 25 miles west of the site. This project site lies within the Las Animas Hills.

Elevations generally range from about 5,200 feet on the southeast side of the property (TSF area), to around 5,700 feet on the northwest side of the property. The highest elevation locally is Animas Peak (on the north side of the property) at about 6,160 feet.

Elevation, precipitation, soil types, and surface grade and aspect influence vegetation distribution within the area. The dominant types of vegetation include desert grassland, creosote bush, and juniper woodland (in drainages and slope toes).

5.1 ACCESSIBILITY

The travelling distance from Albuquerque to Truth or Consequences is about 150 miles driving south on Interstate Highway 25 (I-25). Access to the site from Truth or Consequences is by 24 miles of paved highway (two-lane) plus a final 3 miles of all-weather gravel road.

5.2 LOCAL RESOURCES AND EXISTING INFRASTRUCTURE

Sierra County is a rural county. Historically, this region of New Mexico was mainly an agricultural, ranching and tourism community, with a mining history.

The town of Hillsboro is located about 3 to 4 miles away to the southwest of the site, and Truth or Consequences (year round population just over 8,000) is about 20 miles to the northwest. Hillsboro is a small community of artists, writers and ranchers with a post office, fire department, library, and a few motels, restaurants and stores. Truth or Consequences is the seat of Sierra County and the center of county infrastructures including hotels, hospitals, schools, and other public services.

There are municipal airports at Truth or Consequences and Las Cruces, but main commercial flight traffic utilizes the Albuquerque airport. The Truth or Consequences Municipal Airport is located 6 miles north of the city.

5.2.1 Access Road and Transportation

Access from the site is by 3 miles of all-weather gravel road and 10 miles of paved highway (State Highway 152) east to I-25, near Caballo Reservoir. The 10 miles to I-25 is mainly a straight and relatively flat road (and does not include any sharp turns or significantly adverse grades). I-25 is the primary north-south highway.

5.2.2 Power Supply

Sierra Electric Co-op provides electric power in the county. A 115 kV power line to the mine site stills exists, which comes from a substation 13 miles to the East at Caballo Reservoir, and presently supplies power to Hillsboro. The original mine site power setup included a 20 MVA transformer to step down the power to 4.16 kV. In 2011, NMCC authorized T&D services, a New Mexico power engineering consulting firm to provide a detailed estimate of the cost to re-establish power to the mine site via the 115 kV power line.

5.2.3 Water Supply

A well field controlled by NMCC is located approximately 8 miles to the East of the Mine. The well field consists of four wells, which are capped. A 20-inch diameter pipeline runs from the well field (parallel to Highway 152) to the mine site. A portion of this pipeline was inspected in 2011 by a qualified consulting firm and was determined to be in serviceable condition pending some refurbishment work and repairs. The same consulting firm developed a detailed cost estimate for refurbishing the pipeline as well as the re-establishment of two booster stations to deliver water to the mine site.

At the time Hydro Resources re-acquired the Copper Flat Property (2001), it received a conveyance of 1,019 acre-feet/year (ac-ft/yr) of declared water rights. As of May 18, 2011, NMCC made its final payment to Hydro Resources and associated vendor, which included the Copper Flat Property and the associated 1,019 ac-ft/yr of declared water rights. This 1,019 ac-ft/yr of water rights is distributed over nine points of diversions inside or near the mine. NMCC has under contract an additional 6,462 ac-ft/yr of declared water rights from a local third party. These declared water rights are associated with the four productions wells in the production well field and six supplemental mine wells distributed between the mine and the production well field. NMCC has one final payment to secure these water rights that is contingent on NMCC obtaining the mine permit from the New Mexico Mines and Minerals Division.

Table 5-1 summarizes the water sources and water rights available for the proposed mining operation.

Table 5-1: Well with Water Rights, Copper Flat

LRG #	Common Name	Current Water Right Owner	Land Status	Well Status (current)	Water Right (Acre-Ft/Yr)
4652	PW-1	Frost & Gray	BLM	usable	6462
4652-S-1	PW-2	Frost & Gray	BLM	usable	
4652-S-2	PW-3	Frost & Gray	BLM	usable	
4652-S-3	PW-4	Frost & Gray	BLM	usable	
4652-S-4	GWQ-8	Hydro	BLM	not usable	439
4652-S-5	McCravey-Greyback	Hydro	Private	usable	
4652-S-6	GWQ-2	Hydro	Private	usable	
4652-S-7	Irwin Well; 15.6.31.431	Hydro	Private	usable	
4652-S-8	Office Well, GWQ-7	Hydro	Private	usable	
4652-S-9	GWQ-9, South inspiration	Hydro	BLM	usable	121
4652-S-10	GWQ-1, North Inspiration	Hydro	BLM	not usable	242
4652-S-11	MW-1	Frost & Gray	Private	usable	Included in the 6462 above
4652-S-12	MW-2	Frost & Gray; Fancher	BLM	usable	Included in the 6462 above
4652-S-13	MW-4	Frost & Gray; Fancher	BLM	usable	Included in the 6462 above
4652-S-14	MW-5	Frost & Gray	BLM	usable	Included in the 6462 above
4652-S-15	MW-6	Frost & Gray; Harvey Chatfield	BLM	usable	Included in the 6462 above
4652-S-16	MW-8	Frost & Gray	BLM	usable	Included in the 6462 above
4652-S-17	Pit Lake	Hydro	Private	usable	120
4654	Deloris Well	Hydro	BLM	not usable	97
				Totals	7481

*Hydro Resources totals based on April 22, 2010 Memorandum from John Shomaker and Associates to Mark Adams, Esq. Frost and Gray Totals based on the State Engineer Amendment of Declarations of Ownership of Underground Water Right dated Sep 24, 2010.

5.2.4 Buildings and Ancillary Facilities

There are no buildings currently on the site, apart from a small viewing structure and a sample storage building. A state and federally approved water diversion channel exists around the mine site area.

Typical mine and mill infrastructure will be will be considered for the mine site, some of which may utilize previous foundations.

5.2.5 Construction Camp Site

It is anticipated that there will not be a construction camp facility on the property during the period of mine construction. Also, no on-site camp is planned for the mine operations as the mine workforce would likely live in existing surrounding communities.

5.2.6 Tailings Storage Area

An existing 370-acre TSF remains from the Quintana operation.

5.2.7 Waste Disposal Area

Mine waste disposal for the Quintana operation was available on the flanks of Animas Peak. There is no reason to believe that the same areas cannot be used for the project.

5.2.8 Manpower

Sufficient human resources are available for operation of the property. Abundant experienced mining personnel exist in the Silver City area.

5.3 CLIMATE AND LENGTH OF OPERATING SEASON

The regional climate is high desert, and is generally hot with a July average of 76°F (maximum 107°F), and January average of 39°F (record minimum 1°F). The area is generally dry with about 13in of average annual precipitation, which occurs mostly as rainfall during July to September. Winters are cold and dry. Snowfall is possible from October through April, but more typically occurring between December and February. The average annual total is 8 inches of snowfall. Prevailing wind direction is predominantly from the west, and secondarily from the north, and generally average 10 to 15 miles per hour (mph). Wind speeds in excess of 50 mph may occur as major storms pass through the area.

5.4 PHYSIOGRAPHY AND VEGETATION

The Copper Flat Property is located in the Las Animas Hills, which occur along the western edge of the Rio Grande Valley. The Rio Grande Valley is approximately 30 miles wide and trends north-south. The Rio Grande river flows north-south along the eastern edge of the valley, and is about 14 miles east of the site, where it flows into the Caballo Reservoir.

Much of the proposed mine area has been disturbed by previous mining activities including the initial open pit, waste dumps, stockpile area, former plant area, and past TSF.

The project area lies within the Mexican Highlands section of the Basin and Range Physiographic Province and exhibits plant communities dominated by desert grassland, creosote bush, and juniper woodlands (BLM, 1999). Desert grassland is predominant and is characterized by a dominant herbaceous layer consisting of grasses and forbs with scattered shrubs. The creosote bush community lies mostly east of the TSF and is characterized by a dominant overstory of creosote bush and tarbush with an understory of grasses and forbs. The juniper woodland community is located along streams and slopes. It consists of a dominant overstory of juniper with an understory of forbs and grasses.

The portion of the project area disturbed by previous mining is estimated at 63 percent (BLM, 1999). Ground cover in previously disturbed portions of the project area is estimated at approximately 4 percent. The former mill site has the highest percentage of ground cover of the disturbed areas with approximately 19 percent cover.

6 HISTORY

The first recorded production of placer and lode gold from the Hillsboro Mining District (the District), New Mexico occurred in 1877. The District is also referred to as the Las Animas Mining District. Over 285,000 oz of placer and lode gold, valued at $8.5 million, was produced over the next 100 years. Most of the gold and silver production came from underground and placer operations, located in and around the Copper Flat area (Harley, 1934; Segerstrom et al., 1975; Dunn, 1982, 1984).

Gold was initially recovered using arrastras (stone grinding) and then by stamp mills in the district prior to 1881. A tent city named Gold Dust was founded in 1881 in the district and was home to numerous prospectors looking for placer gold deposits. A 10-stamp mill operated at the Bobtail mine on the Snake vein from about 1881 to 1884 and had a capacity of 20 to 25 st/d. Placer deposits in Snake Gulch located southwest of the Project were also mined using hydraulic mining methods. Mills operated at the Richmond (1890-1892), Bonanza (1890-1910), Ready Pay/Porter (1898-1913), Snake (1910), and Wicks mines. The copper-matte smelter (capacity 30 st/d) in the town of Hillsboro was built in 1892 and operated until it was closed in the early 1900's. The Stenburg copper mine, located at the Project, was in operation between 1911 and 1931. Small-scale copper and precious metals mining took place in the district up until 1941 (Harley, 1934; Segerstrom et al., 1975; Dunn, 1982, 1984; Raugust, 2003).

Underground development was primarily focused on the Bigelow and Jackpot vein systems. The U.S. government's War Production Limitation Board, L-208, closed the last documented underground activity in 1942. Historic placer workings occupy almost every stream channel radiating from the Copper Flat intrusive center. Minor placer mining activity continues today conducted primarily by local prospecting clubs and weekenders (Segerstrom et al., 1975; Dunn, 1982, 1984).

6.1 OWNERSHIP

Prior to 1952, the Project was held by various owners. Newmont Mining Company (Newmont) explored the District for copper in 1952, followed by Hilltop Mining, Bear Creek Mining Company (BCMC), and Inspiration Development Company (Inspiration). Hilltop Mining worked in the area prior to BCMC, which was involved with the Project between 1958 and 1959. Inspiration acquired the Project in 1967 and leased it to Quintana Minerals in 1974 (Segerstrom et al., 1975; Dunn, 1982, 1984).

In 1979, Quintana Minerals formed a partnership with Phibro Minerals Enterprises, Inc. forming the Copper Flat Partnership, which was financed by Canadian Imperial Bank of Commerce located in Toronto, Ontario, Canada. Under this partnership, Quintana Minerals was the operator (Segerstrom et al., 1975; Dunn, 1982, 1984).

In August 1987, Inspiration leased its mining claims to Hydro Resources with the option to purchase, which was finalized by 1989. In 1989, Rio Gold optioned Copper Flat from Hydro Resources.

The Copper Flat Partnership, which at this time included Copper Flat Mining Co. Ltd, a subsidiary of Rio Gold, maintained control of the Project and held the property until 1993 when Gold Express optioned the Project. Gold Express acquired Copper Flat from Rio Gold with the intent of placing the property into production employing the 1982 design parameters. The following year, in June 1994, Alta Gold acquired the option on the Project from Gold Express. Alta Gold held the Project until its bankruptcy in 1999.

The property reverted back to Hydro Resources in 2001, in conjunction with Cu Flat and GCM (collectively the vendors) who presently own the Copper Flat property.

In July 2009, NMCC acquired an exclusive option over the Copper Flat property from the vendors. In May 2011, NMCC made the final payment on the exclusion option and now owns the property in total.

6.2 HISTORIC EXPLORATION AND DEVELOPMENT

In 1952, Newmont initiated the first modern exploration program for porphyry copper mineralization in the district. This included 3,369 feet of drilling in six angle holes in the central quartz monzonite (Kuellmer, 1955). The results were not encouraging enough for Newmont to continue. The Newmont drill and assay data is recorded and is available. BCMC followed in 1958-59 and drilled 9,346 feet in 20 widely spaced core holes. BCMC was testing for an enrichment blanket of secondary copper, which was not found. The BCMC drill and assay data is still available (Dunn, 1984).

Inspiration continued porphyry copper exploration starting in the late 1960's. By 1973, Inspiration had completed 30 core drillholes. Employing this drilling and the second splits from the BCMC data, Inspiration calculated a minable resource of 66 Mst with an average grade of 0.45 percent copper. Inspiration purchased the patented claims, performed metallurgical work, and completed two water wells on the property (Dunn, 1984).

Inspiration leased the property to Quintana Minerals in 1974. By late 1975, Quintana Minerals had drilled 141 holes using five rigs, drilling around the clock. Quintana Minerals' exploration program lead to a comprehensive mine development program which included extensive metallurgical work, underground drifting, bulk sampling, and drillhole composite testing) all performed by Colorado School of Mines Research Center. Quintana Minerals' program included detailed geologic investigations into the relationship between the breccia pipe and the quartz monzonite host rocks, as well as the relationship between host rocks and mineralization. In late 1976, the Project was placed on hold awaiting an improvement in metals prices.

In the first half of 1979, the Project was reactivated due to higher copper prices. Processing methods were reviewed and semi-autogenous grinding (SAG), and copper-molybdenum flotation separation became the basis for subsequent design work. In January 1980 a decision was made to develop the mine. Quintana Minerals' production history is discussed under Section 6.4, Production History.

In 1989, Hydro Resources of Albuquerque, New Mexico, acquired the Copper Flat property from Inspiration, along with all royalties. Hydro Resources maintains a considerable archive of information related to the Project dating back to Inspiration's involvement in the Project. This includes over 14,000 sample pulps and skeleton core from the Quintana drilling programs.

Rio Gold and Tenneco Minerals (Tenneco) drilled six large-diameter reverse circulation drillholes in 1990 and Tenneco left without further interest. Gold Express optioned the property in 1993, but performed no exploration or development.

Alta Gold then acquired the property from Gold Express in June 1994, and went as far as obtaining a draft final EIS for the Project issued in March 1999, but went bankrupt (due to financial problems with other assets) before any permits were issued.

Hydro Resources reacquired all the properties in 2001 (having previously temporarily owned the property), along with all royalties.

During late 2009, 2010, and 2011, NMCC conducted sample verification programs that included pulp reject analysis and drilling. These recent activities are discussed in Sections 10 and 12 respectively.

6.3 HISTORIC RESERVE ESTIMATES AND AUDITS

The historical mineral resource and reserve estimates presented in this report are based on exploration and development activities, which started in the 1960's. Historic resource estimates do not comply with the CIM terminology under NI 43-101 guidelines, and the reader is cautioned that these estimates are not mineral resources or mineral reserves as defined by NI 43-101(2002), and should not be relied upon.

The Copper Flat history of published ore reserve estimates and reserve audits begins with Inspiration Development in 1974. Prior to Dunn-Behre Dolbear's (DBD) reserve audit in 1993 for Gold Express, four previous reserve estimates were made for Copper Flat. This included Western Knapp Engineers (WKE) in 1976 for Quintana Minerals, Pincock, Allen & Holt (PAH) in 1980 and 1989 for Quintana Minerals, and Rio Gold and N.A. Degerstrom Inc. (NAD) who completed a mine plan in 1991 for Gold Express (Dunn-Behre Dolbear, 1993). Reserve comparisons are made on the most significant calculations in Table 6-1.

Table 6-1: Historical Mine Reserve Estimates Comparison for Copper Flat

	WKE (1976)	**PAH (1989)**	**NAD(1991)**
Cut-off-Grade (% Cu)	0.25	Variable	0.23
Tons (st) Ore (1,000)	59,897	60,720	59,119
Tons (st) Waste (1,000)	102,672	60,588	60,164
Stripping Ratio	1.71:1	0.71:1	1.02:1
Ore Grade (% Cu)	0.43	0.425	0.425
Ore Grade (% Mo)	0.013	0.012	N/C

*From Dunn Behre Dolbear, 1993, Table 7.1
**Historic resource and reserve estimates do not comply with the CIM terminology under Canadian Securities Administrators NI 43-101 guidelines. The reader is cautioned that these estimates are not mineral resources or mineral reserves and should not be relied upon.

6.4 HISTORIC PRODUCTION

Quintana Minerals prepared an Environmental Assessment report for state and federal agencies in 1975, and by mid-1976, an independent engineering firm Western Knapp Engineering (WKE) had prepared a formal Feasibility report. Final engineering was started with power contracts signed, when copper prices slumped and the open pit mining project was shelved in early 1977. With the recovery of metal prices in 1979, Quintana Minerals re-evaluated the economic viability of the Project, and authorized a new formal detailed engineering study. By this time, the value of the molybdenum, gold, and silver affected the mine economics.

Quintana Minerals formed a 70/30 percent partnership with Phibro Mineral Enterprises in late 1979, with Quintana Minerals as the operator. Financing was arranged through the Canadian Imperial Bank of Commerce (CIBC), and construction was started in June of 1980 under the Copper Flat Partnership. The mineable reserves at that time were 60 Mst grading 0.42 percent copper and 0.012 percent molybdenum, plus credits in gold and silver.

Wright Engineers of Vancouver, B.C., Canada, were responsible for design engineering while W-J Engineers of San Bruno, California, were responsible for detailed engineering. M.M. Sundt Construction Company of Tucson, AZ, was the construction contractor. Quintana Minerals assumed responsibility for overall project management.

Figure 6-1 shows the Copper Flat mine of Quintana Minerals, in a photo taken in 1982. The photo shows the pre-stripped open pit in the background, as it is today. The then state-of-the-art milling facility is in the middle with mining equipment shops on the left, tailings thickener in the lower middle (tailings out of sight to lower left), crushing facilities on the right of mill, waste rock dumps out of sight on the right, and beyond the pit.

In mid-March 1982 after a $112 million capital investment, the Copper Flat open pit copper mine began full production at a rated capacity 15,000 st/d, a waste to ore ratio of 1.8:1, and a cut-off grade of 0.25 percent copper. After just 3.5 months of production, the mine shut down on June 30, 1982, due to extremely low copper prices ($0.70/lb) and extremely high interest rates on the CIBC loan. The mine produced 1.48 Mst of ore recovering 7.4 Mlbs of copper, 2,301 oz of gold, and 55,966 oz of silver during the period. Table 6-2 shows the production.

Table 6-2: Quintana Minerals, Inc. Mine Production at Copper Flat

	Actual	Planned
Tons Ore (st) Mined	1,478,047	1,892,387
Tons Waste (st) Mined	3,098,330	3,361,478
Grade, Copper (%)	0.448	0.433
Grade, Molybdenum (%)	0.0088	0.013
From Dunn Behre Dolbear, 1993, Table 7.1		

The Copper Flat mine passed its project stabilization with CIBC during this initial mining period before going into receivership. By late 1985, the surface facilities equipment were sold to the Ok Tedi mine in Papua New Guinea, and the site was reclaimed by CIBC as formally approved by state and federal requirements. The structural foundations, power lines, water wells, and in-ground infrastructure were left in-place.

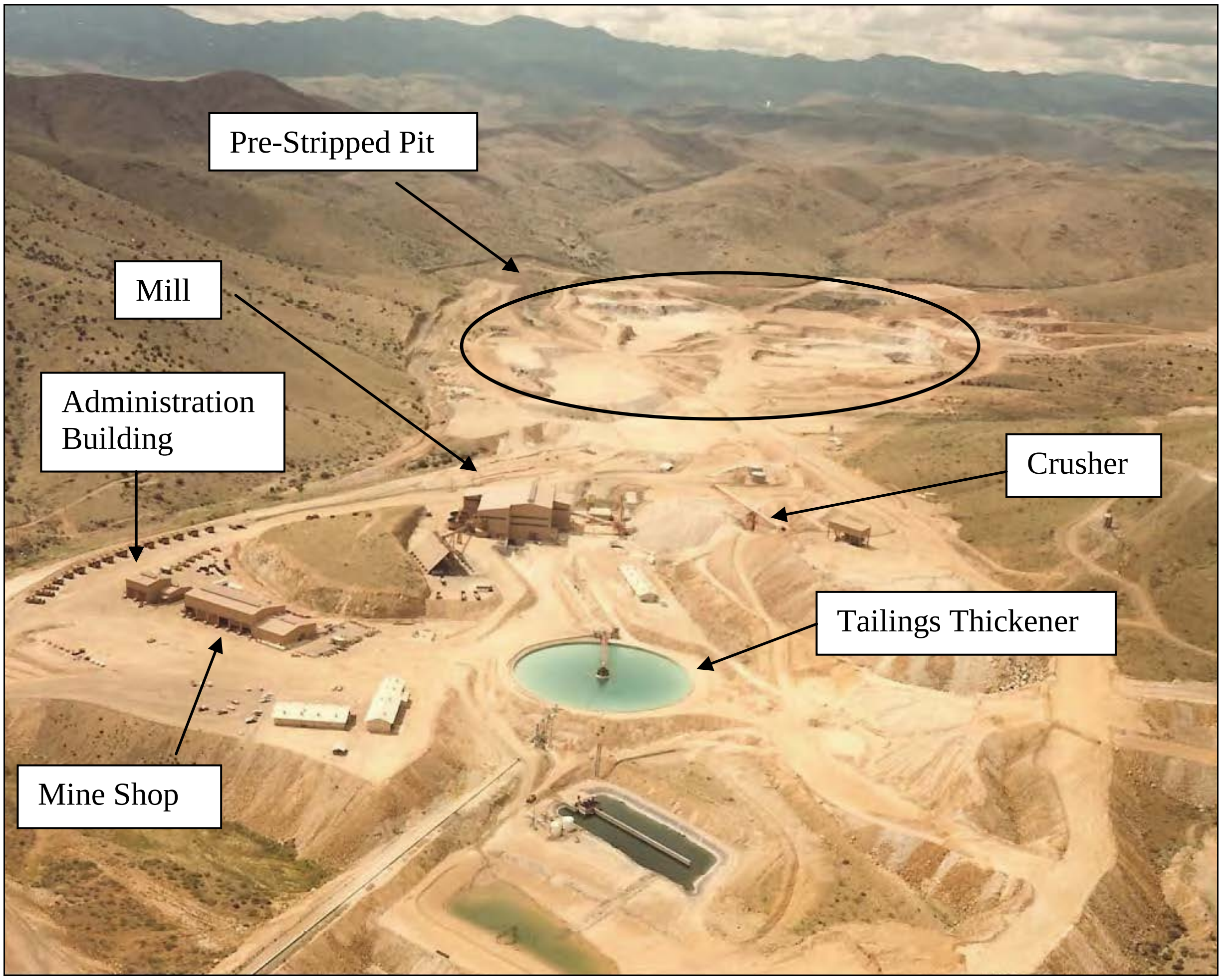


Figure 6-1: Copper Flat Mine in 1982

7 GEOLOGICAL SETTING AND MINERALIZATION

Copper Flat is a copper-molybdenum deposit on the western margin of the Rio Grande Rift. The deposit is hosted by a small quartz monzonite stock that exhibits a porphyritic texture. The stock intrudes a mass of andesitic volcanic rocks that cover an area approximately 4 miles in diameter.

7.1 REGIONAL GEOLOGY

The Copper Flat Mine lies within the Mexican Highlands portion of the Basin and Range Physiographic Province. It is located in the Hillsboro Mining District in Las Animas Hills, which are part of the Animas Uplift, a horst on the western edge of the Rio Grande valley. The Animas Uplift is separated from the Rio Grande by nearly 20 miles of Santa Fe Group alluvial sediments, referred to as the Palomas Basin of the Rio Grande valley. To the west of the Animas Uplift is the Warm Springs valley, a graben that parallels the Rio Grande valley. Further west, the Black Mountains form the backbone of the Continental Divide, rising to about 9,000 feet above sea level. The surface geology of the Copper Flat region is shown in Figure 7-1.

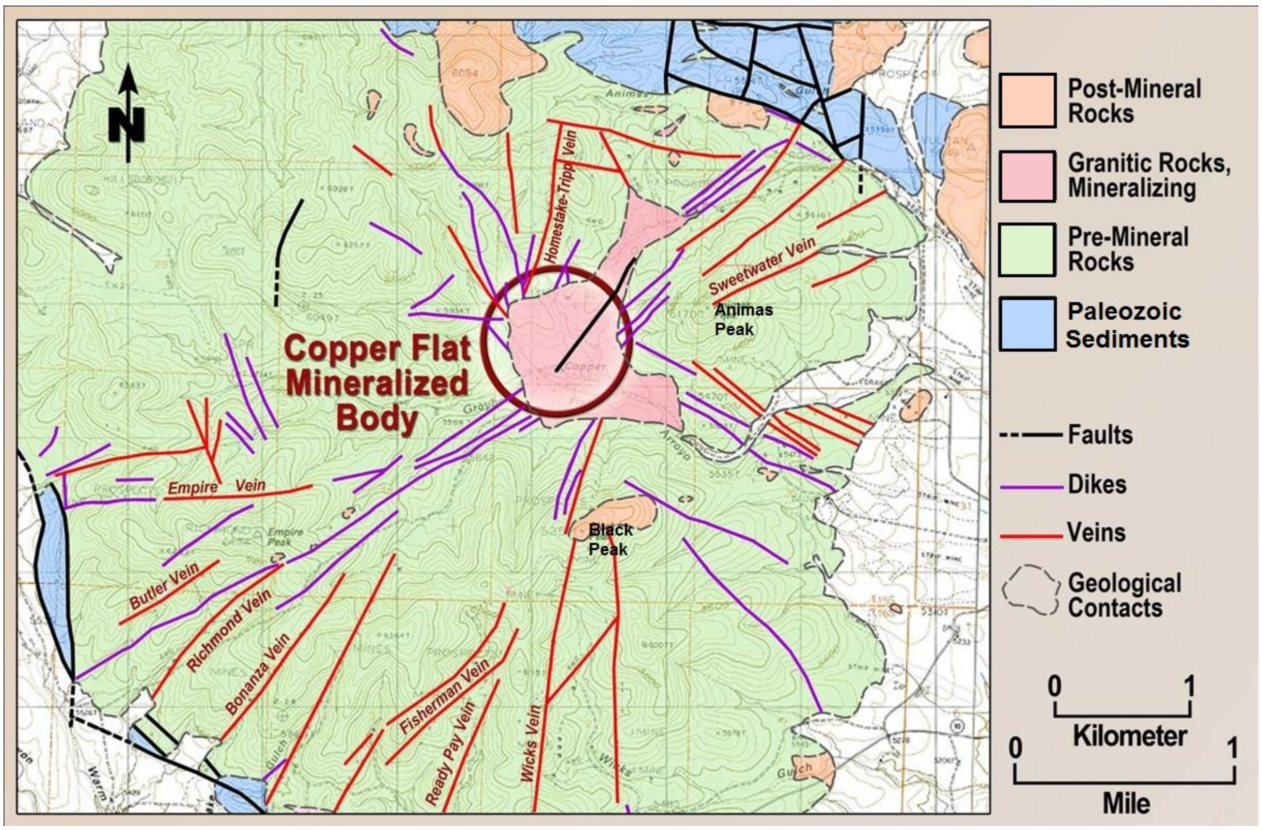


Figure 7-1: Regional Geology of Copper Flat Project Altered from P. Dunn (1982)

Basement rocks in the area consist of Precambrian granite and Paleozoic and Mesozoic sandstones, shales, limestones, and evaporites. Sedimentary units that crop out within the Animas Uplift include the Ordovician Montoya Limestone, the Silurian Fusselman Dolomite, and the Devonian Percha Shale. The Cretaceous-age Laramide orogeny, which was characterized by the intrusion of magma associated with the subduction of the Farallon plate beneath the North American plate, affected this region between 75 and 50 million years ago (Ma). Volcanic activity during the late Cretaceous and Tertiary periods resulted in localized flows, dikes, and intrusive bodies, some of which were associated with the development of the nearby Tertiary Emory and Good Sight-Cedar Hills caulderas. Later basaltic flows resulted from the tectonic activity associated with the formation of the Rio Grande rift. Tertiary and Quaternary alluvial sediments of the Santa Fe Group and more recent valley fill overlie the older Paleozoic and Mesozoic units in the area.

7.2 LOCAL GEOLOGY

The district geology is modified from Raugust (2003) and McLemore et al., (2003). The predominant geologic feature of the Hillsboro mining district is the Cretaceous Copper Flat andesite. The Hillsboro mining district comprises the Animas Hills, a low range formed by the Animas Hills horst at the western edge of the Rio Grande rift. Faults that bound the Animas Hills horst are related to the tectonic activity of the Miocene-age Rio Grande Rift (Dunn, 1982). In spite of its close proximity, there is no known connection between the Rio Grande rift and the Copper Flat volcanic/intrusive complex. The Copper Flat volcanic/intrusive complex has been interpreted as an eroded stratovolcano based on the presence of agglomerate and flow band textures in some of the andesites (Richards, 2003).

Two quartz monzonite stocks, the Copper Flat Quartz Monzonite (CFQM) and the Warm Springs Quartz Monzonite (WSQM), intrude the core of the volcanic complex. The CFQM stock has a surface expression of approximately 0.4mi^2 and has been dated by the argon-argon ($^{40}Ar/^{39}Ar$) techniques to be 74.93 ±0.66 million years old (McLemore et al., 2000). The surrounding andesites also have been dated using argon-argon techniques to be 75.4 ±3.5 million years old (McLemore et al., 2000). The barren WSQM was emplaced after the period of mineralization, but is still related to the other igneous rocks. Hedlund (1974) reported a K-Ar age date of 73.4 million years from biotite concentrate taken from drill core.

7.3 GEOLOGY OF THE COPPER FLAT OREBODY

The dominant geologic feature of the Animas Hills and Hillsboro district is the Copper Flat stratovolcano, a circular body of Cretaceous andesite that is 4 miles in diameter (Figure 7-1). The andesite is generally fine-grained with phenocrysts of plagioclase (andesine) and amphibole in a groundmass of plagioclase and potassium feldspar and rare quartz. Some agglomerates or flow breccias are locally present, but the andesite is generally massive. Magnetite is a common association with the mafic phenocrysts, and accessory apatite is found in nearly every thin section.

The center of the stratovolcano was eroded to form a topographic low; the total depth of erosion is uncertain. To the east of the site, this andesite body is in fault contact with Santa Fe Group sediments, which are at least 2,000 feet thick in the immediate area of Copper Flat and thickening to the east. Near-vertical faults characterize the contacts on the remaining perimeter of the andesite body; these faults juxtapose the andesite with Paleozoic sedimentary rocks. Drill holes indicate the andesite is more than 3,000 feet thick. This feature, combined with the concentric fault pattern, indicate that the local geology represents a deeply eroded Cretaceous-age volcanic complex. Figure 7-2 is a simplified map of lithology on surface. Figure 7-3 is an east west cross section that illustrates the rock type geometries at depth.

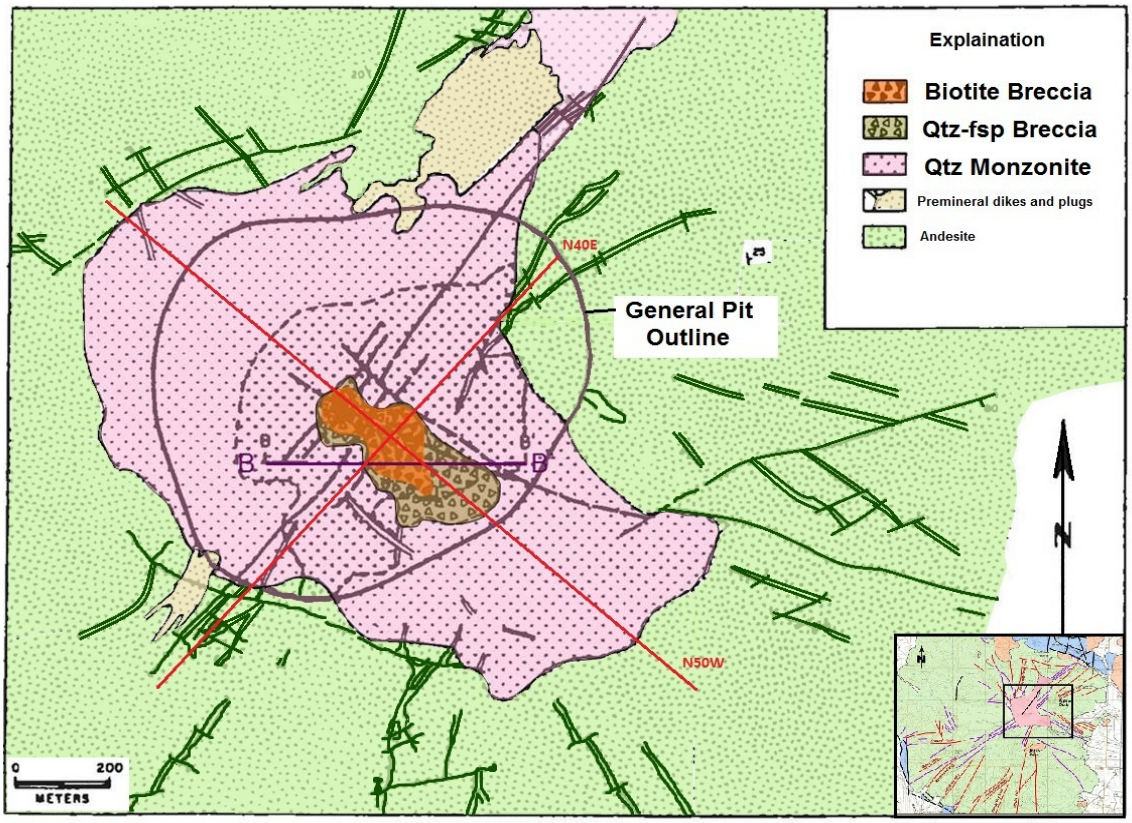


Figure 7-2: Geology of the Copper Flat Mine, Dunn, 1982

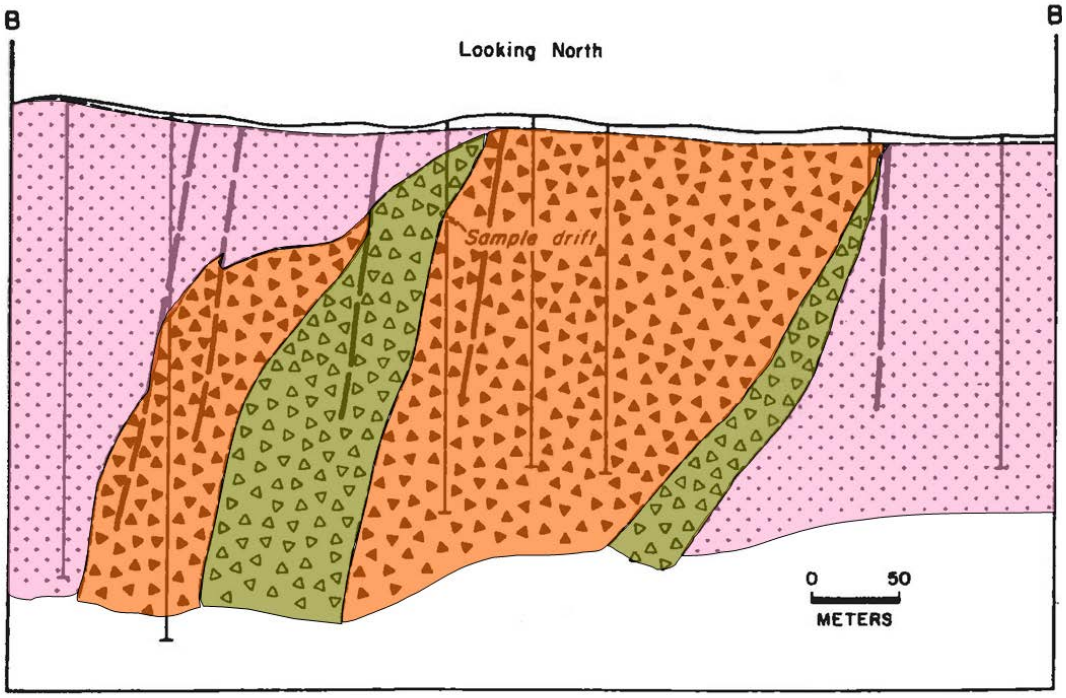


Figure 7-3: East-West Section Looking North, Dunn, 1982

7.3.1 Lithology

The core of the volcanic complex is a Cretaceous-age quartz monzonite stock that intruded into the center of the andesite body at the intersection of two principle structures that trend approximately N50°W and N20°E. The CFQM) is an irregular-shaped stock underlying a surface area of approximately 0.25 square miles and has been dated to approximately 75 Ma. The monzonite crops out in only a few isolated areas, and the andesite at these contacts shows no obvious signs of contact metamorphism. The CFQM is a medium- to coarse-grained, holocrystalline porphyry composed primarily of potassium feldspar, plagioclase, hornblende, and biotite; trace amounts of magnetite, apatite, zircon, and rutile are also present, along with localized mineralized zones containing pyrite, chalcopyrite, and molybdenite. About 15 percent of the monzonite is quartz, which occurs both as small phenocrysts and as part of the groundmass; however, quartz is absent in some parts of the stock.

Numerous dikes, mostly latite, radiate from the CFQM stock, some nearly a mile in length. Most of the dikes trend to the northeast or northwest and represent late stage differentiation of the CFQM stock. Immediately south of the quartz monzonite, the andesite is coarse-grained, perhaps indicating a shallow intrusive phase. An irregular mass of andesite breccia along the northwestern contact of the quartz monzonite contains potassium feldspar phenocrysts and andesitic rock fragments in a matrix of sericite with minor quartz. This may represent a pyroclastic unit. Magnetite, chlorite, epidote, and accessory apatite are also present in the andesite breccia.

7.3.2 Structure

Three principal structural zones are present at the Site and surrounding area, the most prominent of which is a northeast-striking fault that trends N 20°-40°E that includes the Hunter and parallel faults. In addition, west-northwest striking zones of structural weakness (N50°-70°W) are marked by the Patten and Greer faults, and east-northeast striking zones are marked by the Olympia and Lewellyn faults. All faults have a near-vertical dip; the Hunter fault system dips 80°W, the Patten dips approximately 70°S-80°S, and both the Olympia and Lewellyn fault systems dip between 80°S and 90°S. These three major fault zones appear to have been established prior to the emplacement of the CFQM and controlled subsequent igneous events and mineralization.

The CFQM emplacement is largely controlled by the three structural zones. The southern contact parallels and is cut by the Greer fault, although the contact is cut by the fault, and the southeastern and northwestern contacts are roughly parallel to the Olympia and Lewellyn faults, respectively. The CFQM stock is principally elongated along the Patten fault, as well as along the Hunter fault system. Whether there was movement along the fault zones before the emplacement of the stock has not been determined.

Although latite dikes strike in all the three principal fracture directions, most of the dikes strike northeast. A narrow zone of fault gouge commonly occurs along the contact between the dikes and the andesite, with the mineralization post-dating fault movement (Harley, 1934). The northeast fault zones contain a high proportion of wet gouge, often with no recognizable rock fragments. Underground exposures of the Hunter fault zone (in previously existing mine workings) material has the same consistency as wet concrete and has been observed to flow in underground headings. However, the material in the east-northeast fault zones contains only highly broken rock and little obvious gouge. The width of the fault zones in both systems varies along strike from less than a foot to nearly 25 feet in the Patten fault east of the Project. Despite intense brecciation, the total displacement along the faults does not appear to exceed a few tens of feet. At the western edge of the Site, a younger porphyritic dike was emplaced in a fault that had offset an early latite dike, indicating that fault movement occurred during the time that dikes were being emplaced.

Post-dike movement is evident in all the three principal fault zones, and both the Hunter and Patten fault systems show signs of definite post-mineral movement. Fault movement has smeared sulfide deposits and offset the breccia pipe as well as the zones within the breccia pipe. Post-mineral movement along faults has resulted in wide, strongly brecciated fault zones. Some of the post-mineral dikes have been emplaced within these fault zones.

NMCC has mapped the pit area and diversion cuts in detail at 1 inch equals 40 feet (1:480) and has examined the pre- and post-mineral stress orientations in the andesites and CFQM. Findings indicate no significant difference in the stress fields before and after mineralization.

7.3.3 Mineralization

Copper occurs almost exclusively as chalcopyrite with minor amounts of chalcocite and copper oxide minerals. The supergene enrichment typical of many porphyry copper deposits in the Southwest is virtually non-existent at Copper Flat. During the early mining days, a 20- to 50-feet leached oxide zone existed over the ore body, but this material was stripped during the mining activities that occurred in the early 1980s. Most of the remaining ore is unoxidized and consists primarily of chalcopyrite and pyrite with some molybdenite and traces of galena and sphalerite. Appreciable amounts of silver and gold are also present.

The sulfide mineralization first formed in narrow veinlets and as disseminations in the quartz monzonite with weakly developed sericitic alteration. This stage of mineralization was followed by the formation of the breccia pipe with the introduction of pyrite, chalcopyrite, and molybdenite with strong potassic alteration.

The breccia consists largely of fragments of mineralized CFQM, with locally abundant mineralized latite where dikes exposed in the CFQM projected into the brecciated zone. Andesite occurs only as mixed fragments partially in contact with intrusive CFQM and appears to represent the brecciation of andesite xenoliths in the CFQM. The matrix contains varying proportions of quartz, biotite (phlogopite), potassium feldspar, pyrite, and chalcopyrite, with magnetite, molybdenite, fluorite, anhydrite, and calcite locally common. Apatite is a common accessory mineral. Much of the quartz-feldspar matrix has a pegmatitic texture. Breccia fragments are rimmed with either biotite or potassium feldspar, and the quartz and sulfide minerals have generally formed in the center of the matrix.

The total sulfide content ranges from 1 percent (by volume) in the eastern part of the breccia pipe and the surrounding CFQM to 5 percent in the CFQM to the south and west. Sulfide content is highly variable within the breccia, with portions containing as much as 20 percent sulfide minerals. Sulfide mineralization is concentrated in the CFQM and breccia pipe, and drops significantly at the andesite contact. Minor pyrite mineralization extends into the andesite along the pre-mineral dikes.

Molybdenite occurs occasionally in quartz veins or as thin coatings on fractures. Minor sphalerite and galena are present in both carbonate and quartz veinlets in the CFQM stock. Preliminary 2011 evaluations of the mineralization at Copper Flat indicate that copper mineralization concentrates and trends along the N50°W structural influences, whereas the molybdenum, gold and silver appear to favor a N10°-20°E trend.

8 DEPOSIT TYPES

Copper Flat is a porphyry deposit that is approximately 1,500 by 2,000 feet in plan that occurs in the center of a small quartz monzonite stock. That stock intruded a circular block of andesite that is about 4 miles in diameter. The porphyry includes a large hydrothermal breccia pipe that is about 1,400 feet long and 500 feet wide.

Copper Flat has been categorized as an alkalic copper-gold mineralized breccia pipe, surrounded by and genetically-linked to an alkalic porphyry system. The deposit is situated along the eastern edge of the Cretaceous Arizona-Sonora-New Mexico porphyry copper belt and along with Tyrone, New Mexico, forms a linear mineralized feature known as the Santa Rita lineament (SRK, 2010; McLemore et al., 2000).

Analogous deposits include Terrane Metal's Mount Milligan, British Colombia deposit and the Continental breccia pipe located in the Central Mining district of New Mexico (SRK, 2010).

Lowell (1988) was the first to suggest that the Hillsboro district was a gold-rich porphyry system type that develops in alkaline igneous settings. In 1992, Jones described metal zoning associated with gold-rich porphyry systems that is directly applicable to the Copper Flat deposit and the Hillsboro mining district. In addition, McLemore et al., (2000) and McLemore (2001) documented chemical characteristics that identify the Copper Flat deposit as an alkalic copper-gold system.

Mineralization at the Copper Flat is hosted primarily in a breccia pipe and is interpreted to have been deposited at the time of pipe formation. Breccia pipe mineralization is approximately one-third of the resource, but represents one-half of the contained copper and molybdenum.

The absence of rock flour or gouge in the matrix suggests that brecciation was not the result of tectonic movement. The apparent lack of appreciable movement between the fragments and the gradational contact between true breccia and the zone of stockwork veining preclude any explosive mechanism for the brecciation. The mechanism for the formation of the Copper Flat mineralized breccia pipe that appears most compatible with the above observations is autobrecciation resulting from retrograde boiling. This occurs when the pressure of the mineralizing hydrothermal fluid exceeds the confining pressure (Phillips, 1973). Expansion and brecciation caused by retrograde boiling within consolidated rock form breccia with the following characteristics that are observed at the Project:

- The breccia consists of zones of rotated fragments with no appreciable displacement. (The zones of true breccia are enclosed within a body of stockwork or crackle breccia where no movement of the fragments has occurred);
- The most intense brecciation occurs near the top of the breccia pipe, where the difference between the vapor pressure of the hydrothermal fluid and the confining pressure was greatest;
- The amount of brecciation decreases with depth due to increased confining pressure;

- Horizontal expansion is greatest parallel to the least-stress direction resulting in an elongate body oriented in the same direction; and

- Retrograde boiling and subsequent expansion and fracturing initially had to occur beneath a cover of unfractured rock; when the fracturing reached the surface, the vapor pressure was released and brecciation ceased. At the Project, unbrecciated quartz monzonite still overlies much of the breccia, and the dip of the upper contact suggests that the breccia has only been unroofed by recent erosion.

Unlike most deposits in the southwestern U.S. there is very little supergene enrichment. Mineralization is primarily hypogene. The Copper Flat deposit does not show the symmetrical and telescoped zoning of alteration types that is considered typical of most porphyry copper deposits. Alteration includes, potassic, two separate episodes of sericitic and propylitic, but on a smaller scale than other more “typical” porphyry systems. The geology of Copper Flat indicates that the hypogene mineralization and alteration, including the formation of the breccia pipe, was the result of the final crystallization of the CFQM melt and related dikes.

9 EXPLORATION

Copper Flat is an advanced development project that was in production for only a few months in the early 1980's. As such, most of the exploration completed since that time has been the addition of diamond drilling to confirm, expand, and better understand the deposit. The current and historic drilling will be discussed in Section 10.

NMCC personnel have completed detailed surface mapping of all exposures within the old pit, drainage cuts, and surface exposure during the last two years. Some surface sampling has been completed to improve the understanding of the precious metal distribution outside of the main ore zone.

Expansion of the copper resource could occur with further drilling. This exploration would occur at depth below the bottom of the planned open pit or horizontally into the walls of the pit in the east-northeast direction and to the south quarter of the pit. NMCC management and senior consultants are evaluating this exploration.

10 DRILLING

The Copper Flat deposit has been drilled over several iterations from 1952 through 2011. The majority of the drilling was completed in the late 1970's and early 1980's.

Drilling was first initiated at Copper Flat in the 1950's by Newmont mining. Previous technical reports indicate that Bear Creek mining also completed 20 holes in the late 1950's. The assay information from the 1950's programs are not in the current drillhole data base that is being used for mineral resources.

The majority of the drilling at Copper Flat was core completed between 1968 and 1978 by Inspiration and Quintana Minerals. During 1989 through 1991, Rio Gold and Tenneco drilled 6 large diameter RC holes but did not pursue the project. The Rio Gold assay results are not in the active Copper Flat data base.

The table below summarizes the drill programs completed on the project where there is data available for the determination of mineral resources. All of the drilling summarized below is diamond core drilling.

Table 10-1: Copper Flat Drill Data, Available for Determination of Resources

Company	Dates	Drill holes	IMC comments	Elements Asayed	IMC Summary
Inspiration Consolidated	1967-1-973	CF-1 to CF-20	20 drill holes, 4 with no assay CF-14,CF-15,CF-20 and CF-5	Totcu (%) Moly (%)	769 assay intervals, 9,350 ft of drilling
Inspiration Development	1968-1971	IDC-1to IDC-29	31 drill holes, 4 holes no assay IDC-20, -29,-30,-31	totcu (%) moly (%) gold(opt) silver (opt)	3,290 assay intervals, 27,183 ft of drilling
Quintana Minerals	1974-1978	H Series	134 drill holes total, 129 w/total copper, 21 holes assayed for gold and silver	Totcu (%) Moly (%) Gold(opt) Silver (opt)	9,709 assay intervals, 97,210 ft of drilling
TheMac Resources	2009-2011	CF Series	14 Holes at this time	Totcu (%) Moly (%) Gold(ppb) Silver (ppm)	1781 assay intervals, 12,029 ft of drilling

Figure 10-1 illustrates the drillholes on site. Note: by NMCC is shown in red. Drill holes shown in red were drilled in 2009-2011.

Drilling is being planned for the first quarter of 2012, to keep the project advancing. The drilling will include recommendations from this report as well as additional requests from senior management. Under review are possible twin holes to further confirm historic drilling and assays; infill drilling in areas that the 2009-2011 drilling did not; step out drilling testing for higher grade extensions laterally; deep drilling (two 2,000-foot holes) to test for deep extensions of the breccia pipe core; geothech drillholes (CNI directed) to further the pit slope stability studies; and other possible engineering-related studies. Drill hole locations are pending discussions with IMC, CNI, and NMCC management.

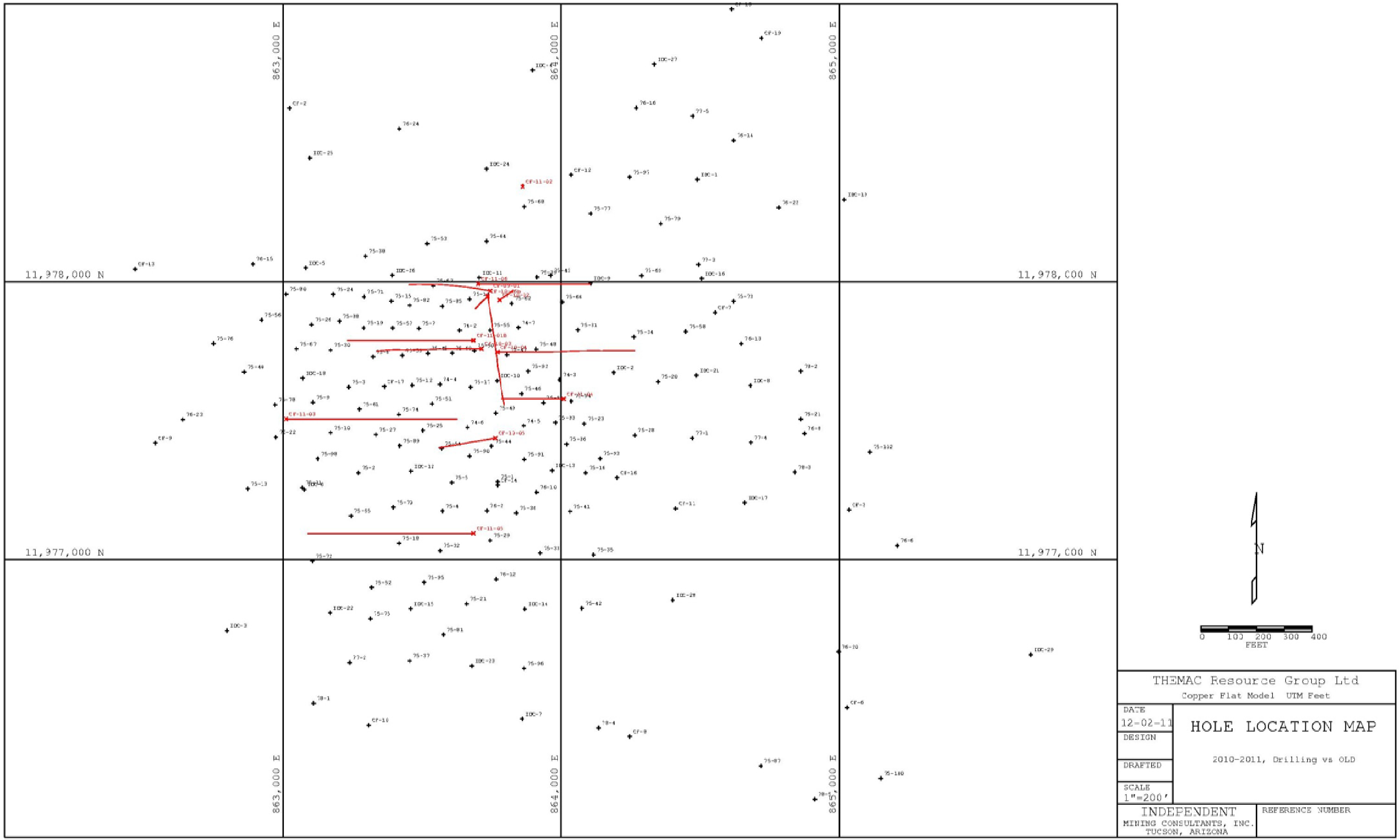


Figure 10-1: Copper Flat Drill Holes with Data

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

The majority of the data base that is available for Copper Flat was developed by Quintana during the 1970's and 1980's. Recent drilling by NMCC has been added to the data base to both confirm and expand the historic information.

This section will present the sample preparation procedures for 1) the historic procedures applied by Quintana based on historic documents, and 2) the procedures currently being applied by NMCC.

The procedures that were applied by IMC to assemble the working data base for development of mineral resources will be summarized at the end of this section.

The recent drillholes that have been completed by NMCC were used to confirm the historic drilling when the new holes were located close to historic data. That confirmation process will be discussed in Section 12 regarding data verification.

IMC and John Marek (QP) holds the opinion that the sample preparation, analysis, and security of the data base is reliable based on the result of the comparison between historic and modern data and site review of the modern procedures that are being followed

11.1 SAMPLING METHOD AND APPROACH

Historic sampling methods, approach and drilling security are not well documented at the Project. The majority of data used in the current resource is from drilling conducted prior to 1982.

11.1.1 Historic Sample Preparation

The historic procedures applied by Quintana were document by Peter Dunn in the 1992 Mining Engineers Handbook. This section will paraphrase that information.

The historic drilling by Inspiration and Quintana was diamond core drilling. Most of the Quintana holes were NX diameter. Drilling prior to 1975 utilized standard techniques of splitting the core and preparing ½ core for assay. Core recoveries were reported to range between 88 percent and 96 percent depending on the program and a later incentive bonus for core recovery.

During 1975, Quintana completed a comparison between the assay of both halves of split core. Dunn reports that the results were not satisfactory, so the sample preparation procedure was modified and a sample preparation facility was built on site. About 30 holes had been completed by the time the issue was identified and nearly 2,000 samples were re-prepared and re-assayed to correct the problems with the initial data. The modified procedure crushed the sample to a finer size before sample splitting.

The final sample preparation procedures applied by Quintana was:

1) The entire core (about 36 lbs) was crushed to ½ inch before being split
2) A 1/8th split was taken within a Jones splitter.
3) The split was crushed to 10 mesh before being split again.
4) The resulting split was about 2 lbs, which was pulverized to -100 mesh.
5) Of the -100 mesh pulp, about ½ pound was selected for assay.

Other documentation from Dunn in 1984 was reported by SRK in their earlier technical report on Copper Flat. That report states that the sample was crushed to 0.2 inch and split 3 times by riffle splitter to obtained a 1/8th split prior to crushing to 10 mesh.

Samples were assayed for total copper and moly. Near surface samples were also assayed for non-sulfide copper. Dunn states that samples were sent to Tucson for assay. At that time, the two commercial labs in Tucson were Skyline Labs, and Jacob's Assay Labs. Certifications on the labs at that time are not known. Standards that were made from Copper Flat material were sent with each assay shipment. Assay checks were completed, but the extent and procedures were not reported.

Many of the details of the historic sample and assay procedures are not known. Therefore, the recent drilling (2009-2011) becomes important to verify the historic drill and assay results.

11.1.2 Drilling Procedures

Mercator Gold started drilling in late 2009 which continued into 2010, both NQ and HQ diameter core holes depending on drilling conditions. A second program by NMCC was completed during 2011 mainly with HQ diameter core holes, only having to reduce to NQ diameter on one hole. The core handling and sampling procedures that were followed during these 2009-2010 and 2011 drilling campaigns are summarized below.

1) Core is boxed at the drill rig by the drill contractor and labeled with drill depth and drill run intervals. Core is transported to the on-site logging facility by NMCC employees.
2) Photos are taken of the whole core.
3) The core is laid out in the core logging facility where geotechnical and geologic logging is completed by NMCC geology staff. Sample intervals are marked by the geologist. Sample intervals are a minimum of 5 feet and a maximum of 10 feet long. The calculated average is 6.7 ft.
4) The core is diamond sawn and ½ of the core is packaged for shipment to the Skyline labs. The other ½ is retained in the permanent core storage.
5) Sample transport to the laboratory is provided by Skyline Assayers & Laboratory in Tucson, Arizona.

Skyline Assayers & Laboratory (Skyline) receives the samples and logs them into their LIMS system for tracking and reporting. Skyline is ISO/IEC 170215 Certified. Sample preparation procedures are as follows:

1) Samples are oven dried at 255°-240° F for 8 to 24 hours
2) Samples are tagged and bar coded
3) Samples are crushed to 75 percent passing 10 mesh
4) Samples are homogenized by splitting three times in a riffle splitter, and then recombined for a final split of about 250 gm. The reject is stored for future reference.
5) The 250 gm sample is pulverized to 95 percent passing 150 mesh

Assay procedures are as follows at Skyline:

1) Copper and moly are analyzed using inductively-coupled plasma (ICP) methods. Typically multi-element ICP is ordered. Some 2010 copper assays were analyzed using atomic absorption spectrophotometry (AA) methods.
2) Gold is assayed by Fire assay methods with an AA finish. (FA-1)
3) Silver is analyzed by AA following digestion with Aqua Regia. (FA-8)

Quality Assurance/ Quality Control (QA/QC) procedures by NMCC are as follows:

1) Blank samples are inserted 1 out of every 20 samples
2) Standards are inserted 1 out of every 20 samples
3) Field duplicates are shipped 1 out of 20 samples. Field duplicates are a second split of the other ½ of the split core as a check on sample preparation.
4) Check assays are conducted on 5 percent of the samples. The selected check lab is ALS Chemex in Sparks, Nevada.

Analysis of the blanks, standards, and field duplicates are discussed in Section 12. Check assays were not available to IMC at the time of this writing.

11.1.3 Drill Hole Collar Surveys

The historic coordinate system for the Copper Flat project was a local mine grid in English units that was established in the 1970's. Recent work at site began to take advantage of GPS survey to locate samples and drillholes. Some of that work was completed using UTM metric units.

NMCC has now established a standard coordinate system for the project based on the UTM NAD83 system converted to feet. NMCC contracted Earl Watts of Geodetic Analysis, LLC in 2011 to check the field survey of many drill collars and convert the mine grid and other coordinate information to the standard project system of UTM NAD83 feet.

IMC spot checked the resulting final coordinate system by plotting the drillhole locations on a paper map from the UTM NAD83 Feet coordinates that were provided. A historic map of drill coordinates in mine grid was also prepared at the same scale. The two maps were compared against each other and topographic information. The two maps located all drillholes in the proper position relative to each other.

From this point forward, the block model, mine plan and project evaluation will be in the established project coordinate system.

11.1.4 Assembly of Database

As noted earlier, the available drillhole information is a collection of historic and recently completed drill data. Some historic pulps were re-assayed and utilized when available.

NMCC was able to find 34 original paper drill logs for drillholes that were drilled by Inspiration and Inspiration development. Within those logs there were assays for copper, moly, gold, and silver. IMC and NMCC staff entered that data and compared it to the historic digital data base that was acquired by NMCC upon acquisition of the property.

The paper logs are not identical to the electronic data base because the 34 holes all predate 1975 and are likely the holes that were re-prepared and re-assayed as described earlier in this section.

Statistical comparisons between the paper logs and the historic digital data base did not show a bias but did indicate a moderately higher variance within the paper log data than the digital data. This would be consistent with the reasoning behind the re-preparation process reported by Dunn.

However, there were more assays available in the paper logs for those 34 holes than in the digital data base. The digital data contained un-populated intervals that were populated within the paper logs. This amounts to about 1680 additional copper assays, 63 additional moly assays, and about 420 gold and silver assays. As a result of the IMC comparison between paper logs and the digital data base, the paper log assays were added to the data base when the digital data was not available.

The historic electronic data base that was provided by NMCC to IMC was the starting basis for assembly of the working data base. IMC assembly variables were added to the data base for each metal and initialized to a code for “no assay” for each of the metals: copper, moly, gold, and silver. The assembly variables were populated by the priorities outline below.

The assembly priority for each of the metals was:

1) Historic digital assay data
2) If the digital assays were not valued, the paper log entries from 34 of the drillholes were used in addition to the digital values.
3) 2009 – 2011 assays from the drilling were added.
4) If SRK re-assays were available for the metal, they replaced the historic assay data.

The re-assay completed by NMCC during 2010 for copper and moly were not used as they were obtained too late in the model assembly process. However, comparisons between NMCC re-assays and the historic data base were reliable as summarized in Section 12.

12 DATA VERIFICATION

The drillhole data base for Copper Flat has been in existence since the 1980's. Previous work in 2009-2010, NMCC and their contractors completed a number of verifications steps to develop some confidence in the historic data. During 2011, NMCC drilled additional holes on site with two purposes in mind: 1) provide additional confirmation of the historic drilling, and 2) test for extensions to the mineralization.

This section presents an independent verification of the data base by IMC and John Marek (Qualified Person for this chapter). Previous work will be drawn upon and analyzed along with more recent drill results.

In summary, IMC and John Marek (QP) hold the opinion that the data base as assembled for this study is reliable for the purposes of estimating mineral resources. In assembling the data set for determination of mineral resources, some questionable historic data items have been removed from the data base.

The basic steps that will be discussed in this section are:

1) Re-assay of historic pulps by NMCC to confirm historic data.
2) Re-assay of historic pulps by SRK and NMCC to confirm historic data.
3) Verification of NMCC internal QAQC procedures and the results of those procedures.
4) Comparison of NMCC drilling completed in late 2009-2010 and 2011 versus the historic drilling on a nearest neighbor basis.
5) Corrections and modifications to the data set applied by IMC prior to determination of mineral resources.

12.1 PULP RE-ASSAYS BY NMCC

During 2009 and 2010, NMCC selected pulps from the available stored pulps on site for re-assay. These samples were sent to Skyline Assayers in Tucson, Arizona for analysis. IMC obtained 601 of these pulps assay results which had values for both copper and moly.

This work focused on the complete re-assay of several drillholes. Later work guided by contractor SRK applied a more statistical approach to the selection of the pulps.

This initial re-assay work by NMCC was of significant value because complete re-assay of several holes provides some comfort that the grade boundaries and grade ranges that exist in the historic data were replicated during this re-assay process.

The statistical analysis of these 601 pulp re-assays provided a sound confirmation of the original historic data set. Hypothesis tests applied to both copper and moly passed with 95 percent confidence.

Figure 12-1 and Figure 12-2 summarize the results of the XY plots for copper and moly. This re-assay information was not used in the final data base only because it arrived too late to be included.

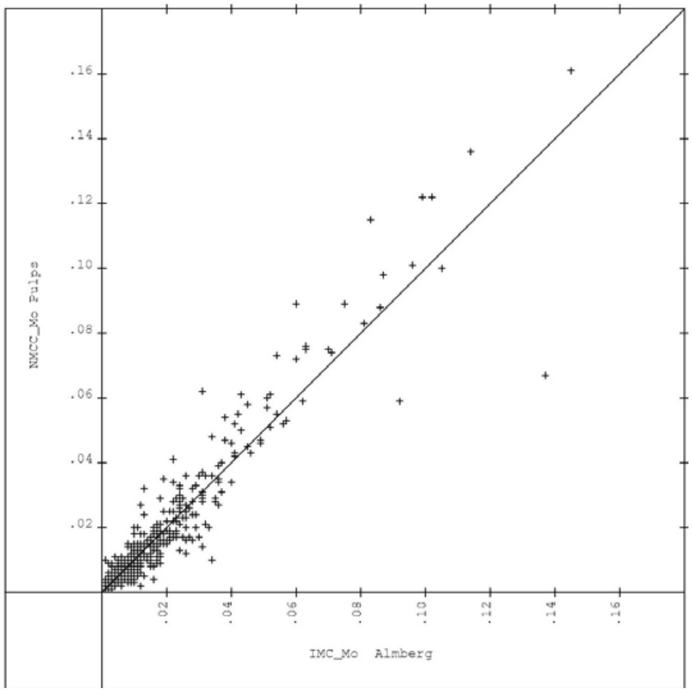


Figure 12-1: Pulp Reassays (NMCC vs. Historic Assay) – Copper

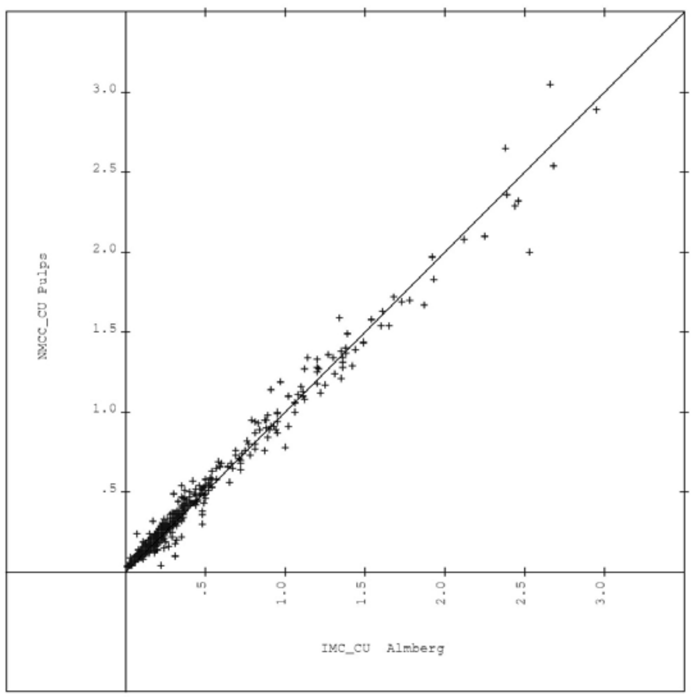


Figure 12-2: Pulp Re-assays (NMCC vs. Historic Assay) – Molybdenum

12.2 PULP RE-ASSAYS BY SRK AND NMCC

During 2010, a second set of pulps was pulled from the historic pulp library for additional verification of the historic data and assay. During this effort, SRK acting as a contractor to NMCC selected the intervals for re-assay in an effort to provide good spacial coverage and a representative distribution of the project grades.

This second set of pulp re-assays was also submitted to Skyline in Tucson for assay.

In addition to copper and moly, gold and silver were also assayed during this program.

IMC completed statistical hypothesis tests on the re-assays versus the historic assays. The results are summarized below:

Metal	Pairs	Historic Mean	Re-assay Mean	Hypothesis Test Results
Copper	495	0.263%	0.268%	Pass
Moly	495	0.009%	0.009%	Pass
Gold	361	0.005 oz/t	0.007 oz/t	Fail
Silver	763	0.096 oz/t	0.127 oz/t	Fail

The re-assay results are positive for copper and moly and provide confidence in the use of historic copper and moly values. The results for gold and silver indicate that the historic information is low biased and would contribute to a conservatively low estimate for gold and silver.

Understanding the results for gold and silver prompted NMCC in 2011 to complete additional re-assays of historic pulps for gold and silver in an effort to replace as much of the old data as reasonably possible.

When the overall data base was assembled, IMC utilized the historic data base as a last resort for gold and silver if no other more recent assay data was available. As a result, 7.2 percent of the gold assays and 15.2 percent of the silver assays in the final resource data base are from the historic data set. This information was included even though it is low biased as it does provide additional assay coverage for gold and silver which are under sampled relative to copper and moly.

For copper and moly, the re-assay information was also used in preference to the original historic data base so that 495 re-assay values were utilized in the data base.

Figure 12-3 and Figure 12-4 summarize the re-assay results for the SRK monitored pulp check.

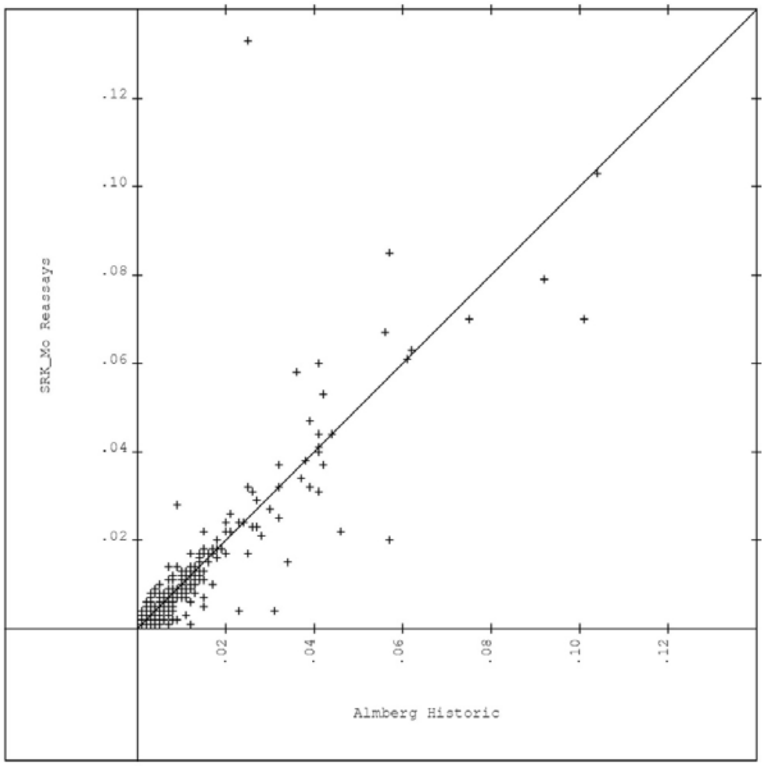


Figure 12-3: Pulp Re-assays (NMCC -SRK vs. Historic) – Copper

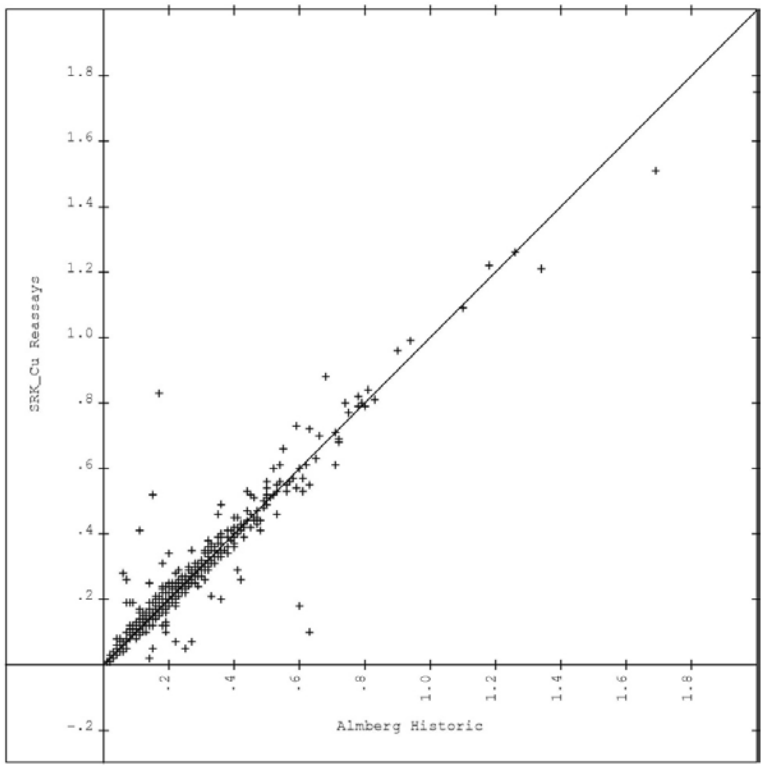


Figure 12-4: Pulp Re-assays (NMCC -SRK vs. Historic) – Moly

12.3 NMCC QA/QC

The drilling completed by NMCC during 2010 and 2011 utilized industry standard procedures for QA/QC. This section will address the results of that QA/QC analysis. Given positive results from this QA/QC effort, the confidence in the drilling programs (2009-2011) can be established. Once that is established, the new drilling can be used to verify the historic information on a nearest neighbor basis.

The QA/QC procedures that were applied from 2009 through 2011 were as follows:

1) Blanks are inserted approximately 1 out of 20 samples submitted to the lab.

2) Standards are submitted on a 1 out of 20 basis as blind samples to the lab.

3) Field Duplicates are based on the second half of sawn core. These are submitted to the lab as a check on sample preparation. A “slab” of core is retained in the core tray rather than use the entire remaining split.

4) Independent check assays are planned on a 1 in 20 basis for shipment to ALS Chemex in Sparks, Nevada.

At the time of this writing, IMC had not received the results of the independent check assays for the 2011 drilling. However the results of blank, standard, and field duplicate submissions were available and were analyzed as described below:

12.3.1 Blanks

IMC received a total of 30 blanks for 2010 and 61 blanks results for 2011. The results of all submitted blanks were acceptable. The following summarizes the results

	Number of Blanks	Highest Value
Copper	91	0.01% (1 value)
Moly	91	0.004% (2 value)
Gold	91	0.0006 oz/ton
Silver	91	0.0146 oz/ton

The highest copper, gold, and silver blanks are all significantly smaller than the planned head grades or cutoff grades. The two values for moly of 0.004 percent are near the average deposit value for moly. The threshold assay for reporting of moly is 0.0005 percent. Many blanks reported as 0.001 percent. Two blanks that appear high out of 91 is an acceptable level, but careful review of the blanks and standards is warranted due to the low overall tenor of the molybdenum at Copper Flat

12.3.2 Standards

Standards were submitted as pulps within the split core sample submissions to the Skyline assay lab. Standards were obtained from WCM minerals as certified values.

There are 91 standards for copper, moly, and silver in the data provided for 2010 and 2011. The submission rate is slightly higher than 1 in 20 as there are 1770 total samples for the same time period. IMC has not found the gold standards results for 2010. However, there are 62 gold standards results reported for 2011.

Figure 12-5 summarizes the results of the standards submissions for 2010 and 2011. The gold graph represents 2011 only. The X axis illustrates the accepted value of the standards and the Y axis represents the results reported from the Skyline lab. The graphs indicate that there is no bias in the standards reports and there were no instances of sample swapping. Variability is slightly higher with the high grade samples which is the standard response and is expected.

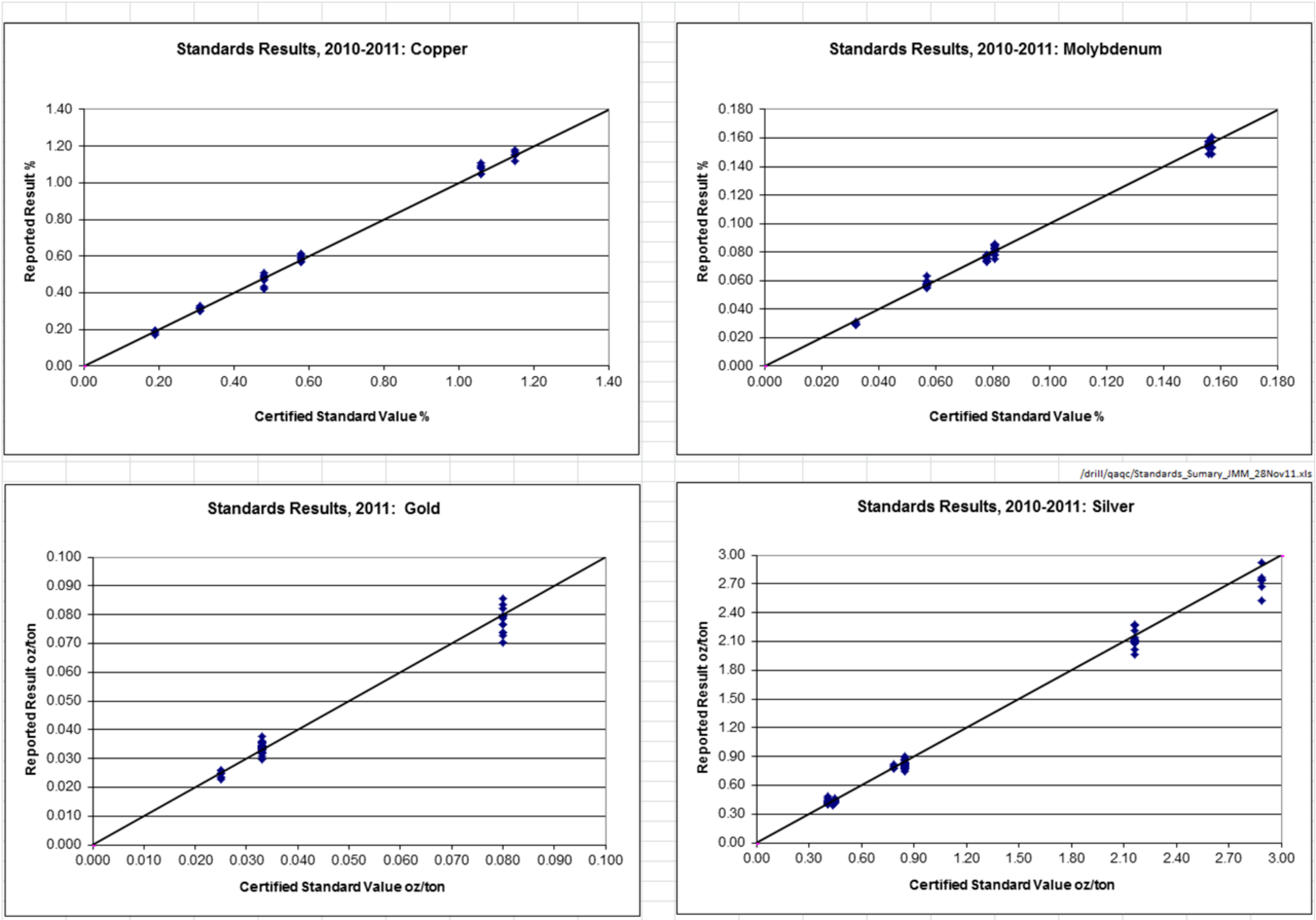


Figure 12-5: Standards Results for NMCC 2010 and 2011 Drilling

12.3.3 Field Duplicates

Field duplicates are sawn splits from remaining half core that are sent for parallel sample preparation and assay. Their purposes are to confirm that the sample preparation process is reliable and unbiased. NMCC submitted 80 field duplicates in 2010 and 61 in 2011. IMC verified the results of 2010 and 2011 independently.

"Student's T" tests were completed on all four metal results for both years. The results indicate that both the original assays and the field duplicates could have come from the same population with 95 percent confidence for both 2010 and 2011 efforts.

Figure 12-6 and Figure 12-7 summarize the X-Y plots of the original sample results versus the field duplicates on the Y axis. Although there is some scatter in the plots, there does not appear to be a particular bias in the duplicate assay results.

12.3.4 NMCC QA/QC Summary

The results of blanks, standards, and field duplicate analyses indicate that the drilling completed by NMCC from 2009 to 2011 can be used for development of mineral resources. The new data can also be compared to historic drilling results when samples of each era are located close to one another.

Section 12.4 will address the comparison of historic drilling versus recent NMCC drilling on a nearest neighbor basis.

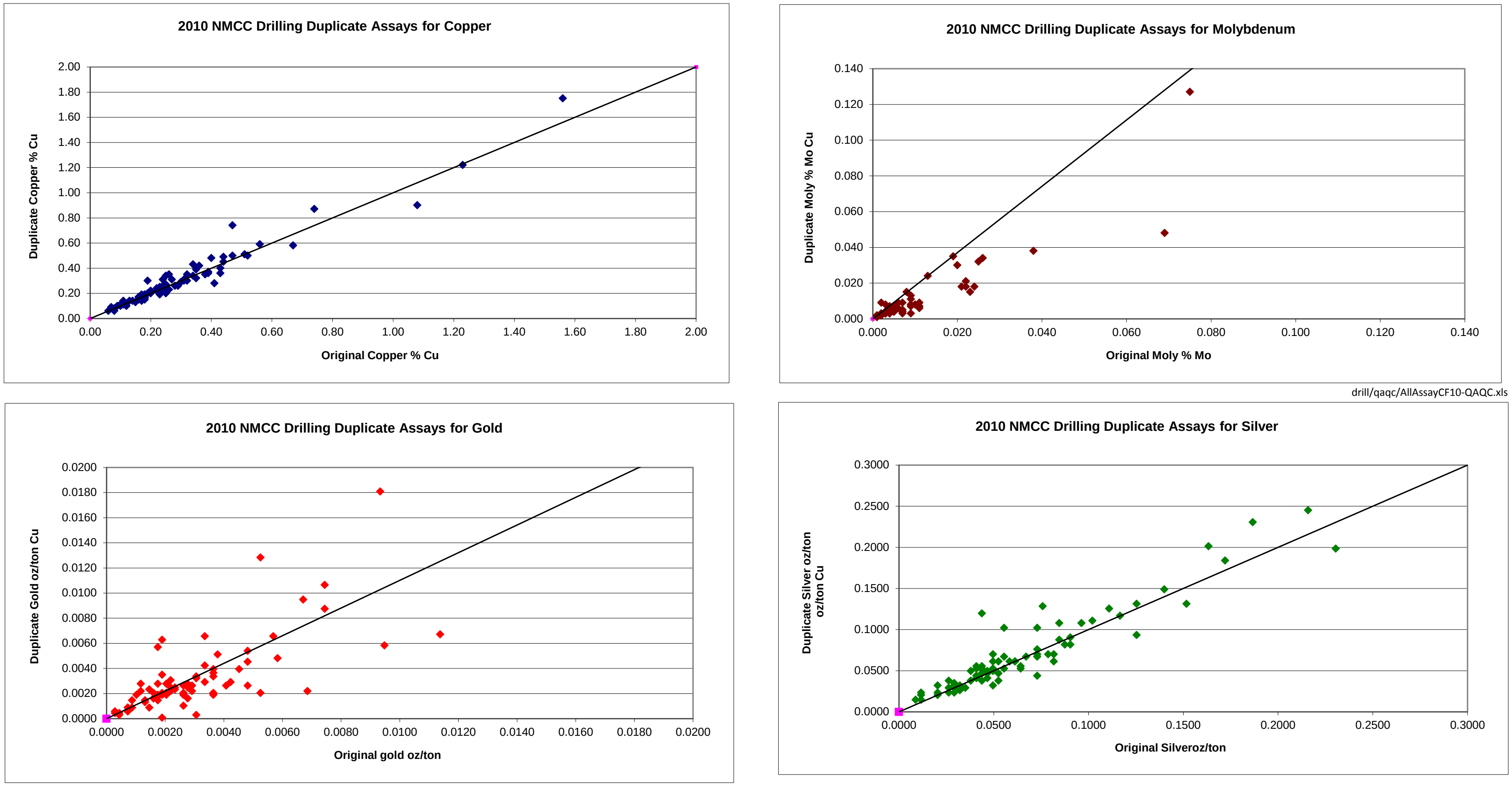


Figure 12-6: Field Duplicate Assay Results for 2010

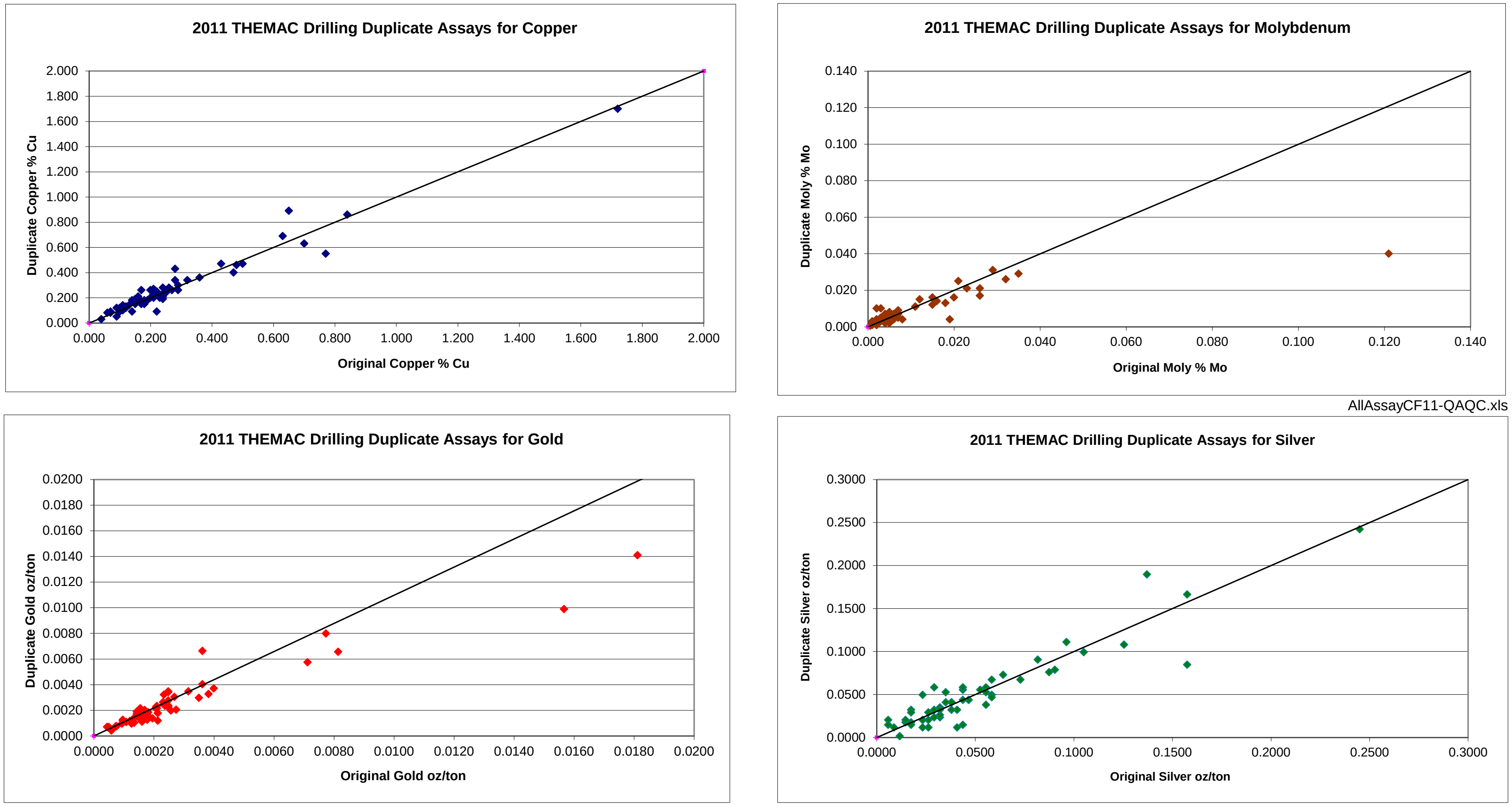


Figure 12-7: Field Duplicate Assay Results for 2011

12.4 HISTORIC DRILLING VS NMCC DRILLING

The new drilling completed during two recent drilling campaigns, one in late 2009-early 2010 and the other in 2011 was intended to confirm the known mineralization, add confidence to the resource estimate, and where possible probe the edges of mineralization for potential expansions. Within the following discussion, the term "new" holes means drilling from 2009-2010 and 2011. "Old" holes mean the historic data base prior to this new drilling and comprised primarily of Quintana drillholes.

Several of the new drillholes were planned to "scissor" old drillholes, meaning that they cross the old holes at an angle and are not necessary twin holes. They do however; twin a number of old drilling intervals with new drilling.

IMC paired the new drilling and old drilling on a nearest neighbor basis. The drillhole data was first composited to 25-foot down-hole (length) composites as summarized Section 14. The comparison was completed between old and new composites that were at spacings of 25, 50, 75, and 100 feet. All of the discussion in this section will focus on the pairs of data that are 50 feet apart.

Figure 12-8 illustrates the results of pairing new vs. old drilling for copper with a maximum spacing between composites of 50 feet (one model block). The new composite value is on the X axis and the nearby paired old composite value is on the Y axis. One will immediately note that there are eight high values above 1.5 percent copper in the old data that are not reflected in the new drillhole data.

More detailed investigation showed that the eight high composites are contained within two old drillholes numbered: 75-14 and 75-8. This result was initially caused for some concern because the new holes did not see the high grade.

The following observations were noted.

1) Old drillholes 75-14 and 75-8 were logged from photographs and the intervals in question were logged as intermittent breccia and quartz monzonite.

2) The new paired drillholes CF-10-06b and CF-11-04 were carefully logged in the core tray and both holes were logged as quartz monzonite with no breccia noted in these intervals.

3) The pulps from the entire drillhole 75-8 have been re-assayed by NMCC in 2010. The pulp re-assays closely match the original high grade assays and easily pass the T-statistic hypothesis tests.

4) Removing the eight high values from consideration results in 141 data pairs that show no bias and comfortably pass the hypothesis tests as being from the same population.

The above points indicate one of two options: 1) the old drillhole pulp preparation was high biased in selected locations or 2) the boundaries between brecciated high grade and nearby low grade can be abrupt.

The historic description of sample preparation by Quintana does not raise any issues regarding sample preparation bias. In addition, it is difficult to bias copper assays as compared to other metals.

Historic writing by the Quintana staff indicates the grade variability occurs in the breccia zones. The change in logged rock type between brecciated and non-brecciated rock within 25 to 50 feet is the likely explanation for the new holes not seeing the same high grade.

The above comparisons and observations have contributed to the mineral resource procedures whereby high-grade zones are separated from surrounding low-grade, and high-value composites receive limited search radius as it appears that high-grade zones can be of limited extent.

The same situation occurs in the other metals (moly, gold, silver) in the same places as identified in the copper discussion above.

Table 12-1 summarizes the nearest neighbor results before and after removal of high-grade composite values from the old data set. The results further support the limitation of high-grade area impact from both old and new drilling during the estimation of mineral resources.

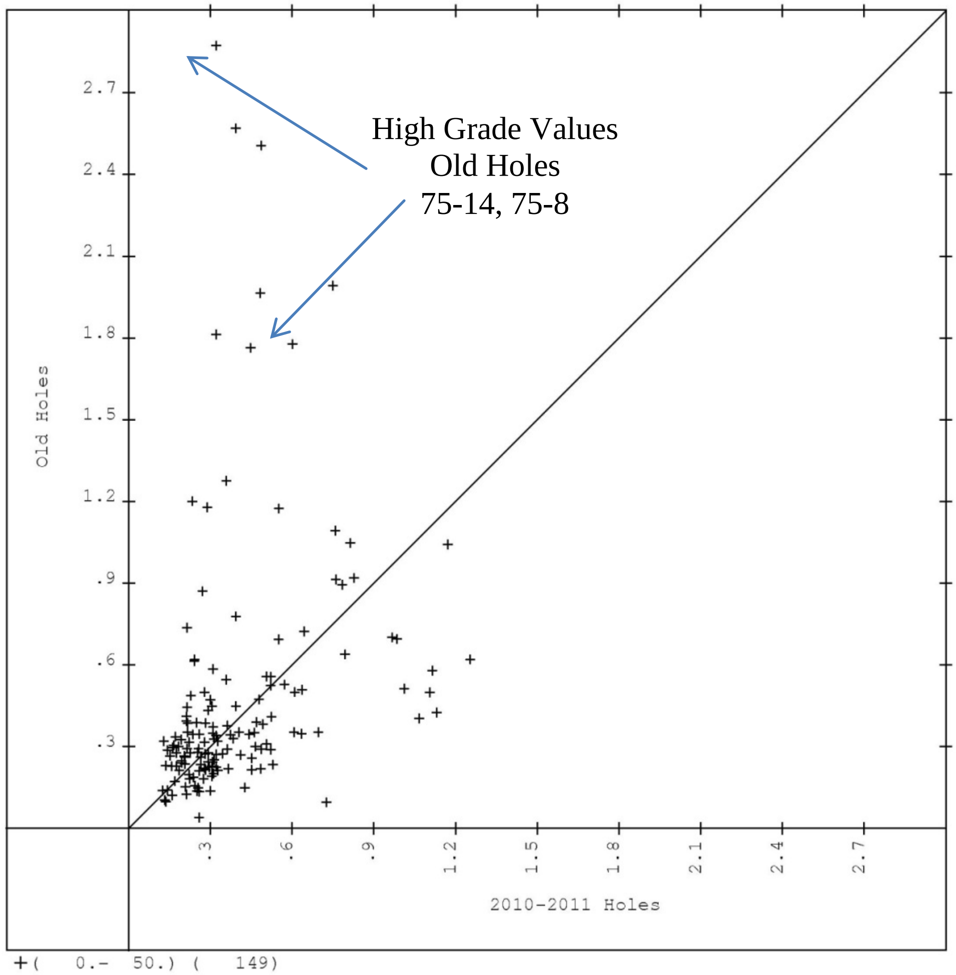


Figure 12-8: Nearest Neighbor Comparison of New vs Old Holes for Copper (Samples are 25-foot composites, Grades are in % Total Copper)

Table 12-1: Nearest Neighbor Comparison – 2010 and 2011 NMCC Drilling vs. Historic Drilling – 25 foot Down Hole Composites Spaced 50 feet Apart

Metal	New vs Old, No Grade Limits				New vs Old, Remove Old High Grades				
	Number of Pairs	2010-2011 Mean	Historic Mean	Hypothesis Test Summary	Remove Old HG Above	Number of Pairs	2010-2011 Mean	Historic Mean	Hypothesis Test Summary
Copper %	149	0.392	0.484	Fail	1.50%	141	0.387	0.389	Pass
Moly %	135	0.017	0.020	Pass	0.090%	128	0.015	0.015	Pass
Gold oz/ton	62	0.003	0.006	Fail	0.010 oz/ton	48	0.003	0.004	Pass
Silver oz/ton	66	0.090	0.131	Fail	0.25 oz/ton	56	0.081	0.093	Pass

Hypothesis Tests include: T-statistic on Means, Paired T
Impact of High Grade values in old drilling within 50 ft is illustrated.

12.5 DATA CORRECTIONS

Two corrections were applied to the historic data base by IMC prior to the development of mineral resource estimates. Those are discussed as follows:

12.5.1 2009-2011 Down Hole Surveys

Down hole surveys were requested to be completed by the drilling contractors on all of the 2009 through 2011 drillholes. Reviews of the 2011 down hole survey data by IMC indicated substantial discrepancies in the data including 180° reversals and 90° turns in the drillholes within one sampling interval.

Discussions with the site geologist and reviews of the original set up orientations of the drillholes proved that the down-hole surveys should not be trusted during the 2011 time period.

Further reviews of the 2009-2010 drilling noted that the first down-hole survey in every hole varied from the set up bearing by about 9°. IMC understands that the down-hole tools use a magnetic compass and the magnetic declination at Copper Flat is 9°. It appears that the drill contractor did not adjust for the local magnetic declination and some users did not know how to operate instrument.

As a result, IMC set all of the drillhole bearings for 2009 through 2011 drilling equal to the set up bearing established by and confirmed by the site geologists. Changes in down-hole plunge from the down hole surveys were allowed to be used as they were likely a simple gravimetric device that required no correction or interpretation.

The IMC correction would have little or no impact on the first several hundred feet of a drillhole. As the holes approach 1,000 feet in depth, there could be changes in hole location that could move the samples as much as 50 feet. It is recommended that all future drilling be down-hole surveyed using gyroscopic procedures that are field checked as they are completed.

12.5.2 Underground Drift Data

The historic data base contained the channel assays from four underground drifts that had been driven to obtain metallurgical samples, sometime in the past. Reviews of maps and sections indicated that these drift samples appeared high valued compared to the nearby diamond drillhole data.

IMC completed a nearest neighbor comparison of the drift data versus nearby diamond drilling and found the drift channel data to be substantially high biased relative to drilling.

As a result of this outcome, the channel data was removed from the data set and not used for the development of mineral resources or mineral reserves.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The Copper Flat deposit is a porphyry type deposit occurring in a small quartz monzonite porphyry stock that has intruded the center of a circular andesite plug. The primary copper mineral is chalcopyrite. By-product values are contained in molybdenum, gold, and silver. Historically, bench-scale and pilot-plant scale testing was undertaken to develop design data and a commercial plant which was to produce copper and molybdenite concentrates.

13.1 DESCRIPTION OF THE METALLURGICAL TEST PROGRAM

M3 reviewed metallurgical testing conducted to date for the Copper Flat Project and made recommendations for additional test work necessary for a Feasibility Study that is planned for 2012. Metallurgical testing was conducted for Quintana Minerals Corporation (Quintana) prior to the development and operation of the mine in 1982. M3 reviewed the work conducted for Quintana and other entities interested in reopening the mine subsequent to its closure that same year.

The objective of the review is to identify additional testing that may be desirable to accomplish three primary goals. The first is to demonstrate the feasibility of recovering copper and byproducts including molybdenum, silver, and gold from the Copper Flat ore. The second is to provide information with which to properly design the process equipment to optimize recovery and minimize capital and operating costs. The third is to identify the character of the gold in the deposit in order to maximize its recovery in the concentrating process.

Metallurgical tests conducted on Copper Flat ore samples from the mid-seventies to date were reviewed by M3 to identify the areas that need more testing for the Prefeasibility and Feasibility studies.

The tests areas reviewed were:

- Comminution
- Flotation
- Concentrate Dewatering
- Tailing Dewatering

13.1.1 Comminution

The comminution tests reviewed were:

1. Ball mill grindability tests in “Process Development and Pilot Plant Operations for Treatment of the Copper Flat Deposit,” Colorado School of Mines Research Institute (CSMRI), July 12,1976
2. Koppers Company Grinding Data, Appendix IV in “Flotation Investigation – Hillsboro Ore Samples,” Pincock, Allen & Holt, Inc. (PAH), December 1979
3. “Sampling and Scale-Up of SAG Tests,” by Milton Hood, Fred Pena, J.T. Avelar & Jack Bailey, undated

4. "Results of Pendulum Testing of Two Copper Flats Ore Samples" Contract Support Services, Inc., November 10, 1992
5. "Comminution Testing, Final Report," Hazen Research, Inc. (Hazen), June 23, 2011
6. "Final Report for Bond Abrasion Tests" Hazen Research, Inc. (Hazen), August 11, 2011

The comminution test results for the Ball Mill Work Index and JK Drop-Weight Test conducted on the two ore types, quartz monzonite (QM) and breccia, are presented in Table 13-1.

Table 13-1: Comminution Test Results

	SAG/Autogenous Mill Parameters from Drop-Weight Tests					Work Index
Test I.D.	**Ore Type**	**A**	**b**	**A x b**	**t_a**	**BW_i, kWh/t**
1	QM					14.66
1	Breccia					13.09
3	QM/Breccia					15.57
4	QM	52.09	0.49	25.5	0.27	
4	Breccia	39.76	0.98	39.0	0.31	
5	QM	58.9	1.03	60.7	0.71	15.8
5	Breccia	60.3	1.81	109.1	1.39	15.1

It was concluded that the Hazen Research tests results were more reliable since they gave results that coincided with the average power requirements for the actual plant operating data.

There was no direct measure of the abrasion index which is used in estimating steel ball consumption, which is a big factor in the estimation of operating costs. Hazen Research, Inc. was therefore asked, in August 2011, to conduct the Bond Abrasion Index test to measure the abrasion index. An average abrasion index (A_i) of 0.2756 was obtained for the quartz monzonite and breccia samples. Abrasion results for the two ore samples are presented in Table 13-2.

Table 13-2: Wear Rates for Porphyry Sample (A_i = 0.2755)

Equipment	Equations (A_i > 0.021)	Wear Rate (lb/kWh)
Wet Rod Mill	Rods = $0.35(A_i - 0.020)^{0.2}$ Liner = $0.35(A_i - 0.015)^{0.3}$	= 0.2664 = 0.0234
Wet Ball Mill (overflow and grate discharge)	Balls = $0.35(A_i - 0.015)^{0.33}$ Liner = $0.026(A_i - 0.020)^{0.2}$	= 0.2245 = 0.0174
Dry Ball Mill (grate discharge, $A_i < 0.22$)	Balls = $0.05A_i^{0.5}$ Liner = $0.005A_i^{0.5}$	= 0.0262 = 0.0026
Crushers (gyratory, jaw, cone)	Liner = $(A_{i\,+}\,0.22)/11$	= 0.0450
Roller Crushers	Rod Shell= $(0.1A_i)^{0.67}$	= 0.911

Table 13-3: Wear Rates for Breccia Sample (A_i = 0.2756)

Equipment	Equations (A_i > 0.021)	Wear Rate (lb/kWh)
Wet Rod Mill	Rods = $0.35(A_i - 0.020)^{0.2}$ Liner = $0.35(A_i - 0.015)^{0.3}$	= 0.2664 = 0.0234
Wet Ball Mill (overflow and grate discharge)	Balls = $0.35(A_i - 0.015)^{0.33}$ Liner = $0.026(A_i - 0.020)^{0.2}$	= 0.2246 =0.0174
Dry Ball Mill (grate discharge, $A_i < 0.22$)	Balls = $0.05A_i^{0.5}$ Liner = $0.005A_i^{0.5}$	= 0.0262 = 0.0026
Crushers (gyratory, jaw, cone)	Liner = $(A_{i\,+}\,0.22)/11$	=0.0451
Roller Crushers	Rod Shell= $(0.1A_i)^{0.67}$	=0.911

13.1.2 Flotation

The flotation tests reviewed were:

1. ”Molybdenite Circuit Testwork – Copper Flat – Hillsboro Project,” by Fred H. Lightner, May 1976
2. “Recovery of Precious Metals From the Copper Flats Copper Deposit,” CSMRI, June 23,1976
3. “Process Development and Pilot Plant Operations for Treatment of the Copper Flats Deposit,” CSMRI, July 12, 1976
4. “Review of Selected Metallurgical Test Information – Copper Flat Project,” PAH, July 9, 1979

5. "Statistical Evaluation of Pilot Plant Metallurgical Information," PAH, July 23, 1979
6. "Flotation Investigation – Hillsboro Ore Samples," PAH, December, 1979
7. "Preliminary Results of Flotation Tests: Grind vs. Recovery," Robert Shantz, July 30, 1981
8. "Pyrite and Chalcopyrite Content of QMC Materials," by Robert Shantz, August 27, 1981
9. "Preliminary Metallurgical Investigation (Flotation) – Copper Flats Project" by METCON Research Inc., December 15,1993

Extensive flotation testing has been conducted on the Copper Flat ore samples mainly by the CSMRI and PAH from which a process flow sheet was designed for the treatment of the Copper Flat deposit.

In 1976, CSMRI began the flotation testing to determine optimum grind size, reagent screening and dosage tests, and locked-cycle tests to select flotation sequence and times. The results of these tests were used to design a pilot plant operation for the treatment of the Copper Flat deposit.

The results of the pilot plant investigation demonstrated that the Copper Flat ore responded well to the conventional copper-moly flotation process. Approximately 92.5 percent of the copper and 81.2 percent of the molybdenum were recovered into a high-grade copper-moly bulk concentrate with a 30 percent copper grade. Results of the molybdenite circuit tests showed that molybdenite was easily rejected from the concentrate and upgraded to a marketable product containing more than 53 percent molybdenum with an overall moly recovery 62 percent achievable.

CSMRI concluded that no extraordinary process engineering should be encountered in the design of the Copper Flat concentrator. The ore proved to be of medium hardness, and the products thickened and filtered readily.

In July 1979, PAH reviewed metallurgical test information and conducted statistical evaluation of the Pilot Plant metallurgical information on the Copper Flat Project for Quintana. The review of metallurgical information by PAH revealed that all possible avenues which could result in the decrease of capital cost for the concentrator were not completely investigated. The following modifications were proposed by PAH:

- A semi-autogenous grinding flow sheet to be employed to handle ore bodies having clay interspersed in various ore horizons
- Use of Aerofloat 238 and potassium amyl xanthate (Z-6), which resulted in excellent recoveries of copper, molybdenite, and precious metals to rougher and cleaner sulfide concentrates.
- The dextrin depression method to be changed to accommodate industrially accepted reagent schemes (i.e., no roasting)
- Sedimentation and filtration data needed careful evaluation since the unit area requirements of less than 2.5 square feet per ton per day for concentrate was not appropriate.

The modified process flowsheet suggested by PAH consisted of crushing and grinding ore followed by bulk copper-moly rougher flotation. The bulk rougher flotation concentrate was reground and subjected to two stages of cleaner flotation. The cleaner concentrate was sent to a copper-moly separation circuit using a standard scheme of depressing copper with NaHS and floating molybdenite. The flotation tailing from the copper-moly separation circuit was the final copper concentrate assaying 28% copper. The rougher molybdenite concentrate was reground and cleaned to produce a saleable product.

PAH developed regression equations representing the relationship between pairs of independent and dependent variables. At feed size distribution range between 52 and 61 percent minus 200 mesh (75 microns) the overall copper recovery range between 91.4 and 93.5 percent with molybdenum recovery to a copper-moly concentrate of 80 percent can be consistently achieved.

13.1.3 PAH Tests Review

PAH conducted flotation investigation on Hillsboro ore samples at Koppers Company, Inc., York, Pennsylvania for three separate studies:

- Production of a molybdenite concentrate
- Precious metal balance
- Flotation amenability of semi-autogenously ground ore

Multiple rougher flotation tests followed by regrinding of the rougher flotation concentrate and re-cleaning to produce a combined copper-moly sulfide concentrate. This material was then subjected to molybdenum separation by depression of copper minerals using sodium hydrosulfide. The concentrate thus produced was subjected to a multiplicity of analytical techniques to determine impurity levels and precious metal content.

For the precious metal balance, flotation test was conducted to produce a bulk copper-molybdenum rougher concentrate, a pyrite concentrate and high magnetite product from a low intensity magnetic separation of the rougher tails. All the products generated were assayed for copper, molybdenum, gold, and silver to ascertain elemental associations particularly in regard to precious metals.

A series of flotation tests were conducted in which the feed material was varied between conventionally crushed and ground and material produced by semi-autogenous techniques. Rougher flotation tests were conducted on sequentially produced ore samples. These materials were then assayed for copper and molybdenum to determine the influence, if any, of the method of size reduction.

The molybdenite concentrate used in this investigation assayed a maximum of 20 percent molybdenum even after eight cleaning stages. Contamination with coal at the Koppers Company installation is suspected to have occurred leading to poor moly concentrate grade. The test however proved that lead does not concentrate with molybdenite and that precious metals associated with copper minerals and do not concentrate with molybdenite.

Inspection of the test involving precious metal distribution in the flotation products indicates that precious metal tends to be associated with copper-moly rougher concentrate and not a pyrite concentrate. Precious metals levels in the pyrite concentrate were below the initial deductible levels specified by most smelter schedules. In addition precious metals do not appear to be associated with the magnetic fraction of the tailings.

The study revealed that the method of size reduction does not have a statistically significant influence upon copper or molybdenum recovery to a rougher concentrate. Recoveries are more strongly influenced by feed grade than any other variable studied.

13.1.4 Dewatering Tests

The dewatering tests were:

1. Exhibit 6 of the Appendix in "Process Development and Pilot Plant Operations for Treatment of the Copper Flats Deposit," CSMRI, July 12, 1976
2. "Thickened Tailings Disposal System, Copper Flat Project," E. I. Robinsky Associates Limited, August 23, 1996

Settling tests were conducted by CSMRI in 1976, where the sizes of the tails thickener and concentrate thickener and filters were determined. It is obvious from the results and the size of the tailings thickener (350 feet in diameter) that the prevailing thickener design has changed drastically since few recent projects have space available to install these extremely large conventional thickeners. PAH also had doubts about the filter area value obtained by these tests. It was therefore decided that it was necessary to conduct fresh tests for the sizing of the all thickeners and filters for the project. A composite sample was generated from drilled core sample rejects and sent to METCON Research to generate flotation concentrate and tails for solid liquid separation tests. Pocock Industrial, Inc. of Salt Lake City, Utah conducted solid/liquid separation tests consisting of:

- sample characterization and particle size analysis
- flocculant screening
- gravity sedimentation
- pulp rheology
- pressure filtration and vacuum filtration

The executive summary of the Pocock's report is presented below:

Solids-Liquid separation (SLS) tests were conducted on Combined Flotation Tails and Flotation Concentrate materials for the Copper Flat Project. The purpose for conducting the test work was to generate data for each of the samples as a basis to design and size SLS equipment. The samples were prepared by KD Engineering & METCON Research in Tucson Arizona, and delivered to Pocock Industrial for testing in slurry form. All SLS testing was conducted by Pocock Industrial at our laboratory facility located in Salt Lake City, Utah during September and October of 2011 at pH levels in the range of 9.0 to 9.9. Decant process water from the appropriate individual material was used to make any required dilutions during SLS testing.

Complete test data sheets, figures, and correlations referenced in this report are located in the Appendix, immediately following the written portion of this report. A brief summary of some of the equipment sizing criteria and recommendations gleaned from the testing program follows:

- Results of particle size analysis on the tested samples indicated that 80 percent of the particles (P_{80}) were passing 126 microns for the combined flotation tails material, and 39 microns for the flotation concentrate material. Size fractions of 30.09 percent passing 25 microns (500 mesh) for the tails material and 62.85 percent passing 25 microns for the concentrate material were also observed.

- The flocculant product selected from screening tests for best performance was Hychem AF 303, a medium to high molecular weight 7 percent charge density anionic polyacrylamide. Overflow clarity was seen to be satisfactory at tested pH levels in the range of 9.0 to 9.9, but could be improved at slightly elevated pH (adjusted with lime addition). For the combined flotation tails material, overflow suspended solids in the recommended design range for a high rate thickener is anticipated at 200 to 400 ppm at 9.9 pH (Appendix C). However, clarity could be improved to 100 ppm or less with slight elevation in pH to 10.5 range with lime addition if desired.

- The minimum flocculant dose anticipated varied by individual sample and thickener type or application desired, but was in the overall range of 20 to 40 g/t in the tested pH range of 9.0 to 9.9. Flocculant should be made-up initially at a solution concentration of 1 to 2 g/l with clean process water, and diluted to 0.1 to 0.2 g/l with thickener overflow just prior to contact with the feed pulp at or below the maximum optimal solids concentration ranges given in this report for best performance. Actual flocculant dose requirements in the plant can vary significantly with pH, particle size, feed solids concentration, efficiency of the flocculant-pulp contacting scheme incorporated, and/or overflow clarity requirements.

- It is important to note that two types of thickening tests were performed in this report, static tests for conventional type thickener design, and dynamic tests for high rate type thickener design. The design/manufacturing engineer should use the static thickening test results (unit area basis) for conventional thickener design only, and the dynamic thickening test results (hydraulic net feed loading basis) for high rate thickeners depending on which type of unit is preferred for the application.

- Results of static (conventional) thickening tests indicated optimal feed solids concentration in the maximum range of 20 to 25 percent for the tails and concentrate materials for conventional type thickeners to maintain sufficient settling velocities for minimum unit area equipment sizing basis recommended herein. For conventional thickener sizing, minimum recommended unit area design basis is 0.170 to 0.280 m^2/t/d for the tails material, and 0.155 to 0.120 m^2/t/d for the concentrate material.

- Results of dynamic (high-rate) thickening tests indicated optimal feed solids concentration in the overall maximum range of 15 to 20 percent for the tails and concentrate materials for high rate-type thickeners to maintain sufficient settling velocities for minimum hydraulic equipment sizing basis recommended herein. Dynamic thickening tests conducted on the samples indicated a hydraulic net feed loading rate design basis in the maximum range of 4.5 to 5.5 $m^3/m^2 \cdot hr$ for the Tails material, and 3.5 to 4.5 $m^3/m^2 \cdot hr$ for the concentrate material for optimal performance. Note: All thickening design basis given assume that maximum feed solids and minimum flocculant dose recommendations given in this report are followed.

- For this application, given the settling rates achieved and the optimal feed dilution requirements, a high rate-type thickener is recommended for the combined flotation tails material. Although, for the flotation concentrate material either a conventional or high rate-type unit could be used, ultimately, the choice of thickener type for either material should be made based on footprint desired, operator attentiveness, or other cost factors associated with the project. Thickener rake mechanisms should be heavy duty, sufficient to handle the high anticipated thickened density and weight of the compacted material based on rheological characteristics of the materials given in this report.

- Pulp viscosity data were collected on thickened tails and concentrate materials using two different types of viscometer equipment. The first was a FANN (Model 35A) viscometer fitted with rotor & bob attachment having the proper shear gap distance for the material, and the second was a Haake (Model 550) equipped with a vane attachment. The differing types of equipment were used in this case in order to provide data on both sheared and un-sheared underflow pulp for comparison. This type of testing is important in thickening applications where the environment is relatively static for the solids after they have been contacted with flocculant, and as the flocculant structure formation can have a significant "jelling" impact on the rheology data prior to being removed from the thickener. Hence, it is highly desirable to accurately define the maximum yield stress associated with the un-sheared settled solids bed for torque specification and pumping considerations.

- As seen from the Haake viscosity data on the materials, the totally un- sheared yield stress from the vane instrument were significantly higher than the sheared or mildly sheared yield stress. This result indicates that actual maximum underflow density could be somewhat lower than that predicted from the fully sheared rheology profile depending on the extent of shear imparted by the rake mechanism (following an actual curve somewhere between the un-sheared and full sheared rheology profiles shown in overall viscosity plots given in Figures 17b, and 18b in the Appendix C). Specialized equipment and engineering are generally required if achieving underflow densities higher than the recommended ranges shown above are desired for the material.

- Given on all aspects of rheology test data, the overall maximum underflow density range for the Tails material is 60 to 65 percent (but this could be limited to 60 to 62 percent with rake torque considerations based on un-sheared data). Likewise, the overall maximum underflow density range for the Concentrate material is 61 to 66 percent (but this could be limited to 61 to 63 percent with rake torque considerations based on un-sheared data)

- Pressure filter testing for the tails material based on a tonnage throughput of 17,180 Mst/d indicates a minimum sizing requirement of 665 chambers for a horizontal recess plate type press (with 2300 x 2500 mm plates, and 15 mm recess (30 mm full chamber)) with no cake wash. Given these parameters three Diemme GHT P/19 filter presses would be required with a maximum capacity of 234 chambers each. Filter cake moisture for the Tails material given reasonable dry time of 3 minutes for air blow was in range of 14.4 percent. However, if cake wash is desired for this material, filter sizing requirements could increase significantly. See Automatic Pressure Filter Sizing Summary Tables 14a and 14b in Appendix C, and pressure filter report discussion section below for further details.

- Pressure filter testing for the Concentrate material based on a tonnage throughput of 450 Mst/d indicates a minimum sizing requirement of 77 chambers for a horizontal recess plate type press (with 1000 mm plates, and 25 mm recess (50 mm full chamber)) with no cake wash. Given these parameters one Diemme ME P/6.78 filter press would be required with a maximum capacity of 101 chambers. Filter cake moisture for the Tails material given reasonable dry time of 4 minutes for air blow was in range of 12.0 percent. However, if cake wash is desired for this material, filter sizing requirements or filter size could increase significantly. See Automatic Pressure Filter Sizing Summary Tables 15a and 15b in Appendix C, and pressure filter report discussion section below for further details.

- For this application filter presses from a number of manufacturers could be suitable, however, based on our experience we recommend a Diemme type filter press for this particular application to reduce the number of filter frames required for economic considerations. Whereas for most other manufacturers more filter press frames would likely be required in the same area size range due to significantly lower maximum chamber limitations (usually in range of 60 maximum chambers per filter). The Diemme is also one of the most durable on the market, and has a very high success ratio for similar applications.

- Results of vacuum filtration tests conducted on the Concentrate material indicated maximum achievable production rates in the range of 341 kg/m^2-hr with no excess flocculant used for filter aid (16.4 percent discharge cake moisture), and 454 kg/m^2-hr with 60-g/MT of filter aid used (20.4 percent discharge cake moisture). The production rates achieved for the Flotation Concentrate material, both with and without filtration aid, are borderline for economic considerations. Generally a production rate of at least 300 kg/m^2-hr is considered a lower limit for economics with respect to vacuum belt filtration.

13.1.5 M3 Recommendations

After the review of the metallurgical tests on the Copper Flat Project, M3 recommends additional testing in anticipation of a feasibility study to demonstrate recovery of byproducts and optimize the design of the processing plant.

- Drill core samples will be selected to provide the testing laboratories samples of the ore with which to test its properties and characteristics.

- Samples will be tested for comminution parameters at several depths in all types of ore identified in the deposit to ensure proper design of the crushing and grinding circuit.

- Reagents from several manufacturers will be tested to identify the reagents and dosages necessary to produce high grade concentrates at the lowest cost.

- Locked cycle flotation tests will be conducted to ascertain optimum conditions for process design and equipment selection

- Testing will be conducted to produce enough concentrate to conduct tests for concentration of a saleable molybdenum product.

- Solid/liquid separation tests on flotation products (concentrate and tailings) will be conducted to develop a general set of data for design of thickening and filtering equipment to dewater the samples prior to final disposal or further processing.

- Samples with relatively high concentrations of gold will be processed and examined to evaluate modifications to the process that would increase recovery of gold in the concentrate. The gold study test work will be able to answer questions as to whether gold in the tails can be recovered with gravity separation or is encapsulated in gangue and therefore not recoverable.

13.2 BASIS FOR RECOVERY ESTIMATES

In 1976 CSMRI started the flotation tests from scratch with tests to determine optimum grind size, reagent screening and dosage tests, and locked-cycle tests to select flotation sequence and times. The results of these tests were used to design a Pilot Plant operation for the treatment of the Copper Flats deposit.

The results of the Pilot Plant investigation demonstrated that the Copper Flats ore responded well to the conventional copper-moly flotation process. Approximately 92.5 percent of the copper and 81.2 percent of the molybdenum was recovered into a high-grade Cu-Mo bulk concentrate with a 30 percent copper grade. Results of the molybdenite circuit tests showed that molybdenite was easily rejected from the concentrate and upgraded to a marketable product containing more than 53 percent molybdenum with expected overall moly recovery of 62 percent.

The process employed to obtain the above results consisted of grinding the ores to approximately 96 percent minus 65 mesh (250 microns or a P_{80} of about 140 microns) followed by flotation at pH of 11 with dithiophosphate and xanthate collectors. The rougher concentrate was reground to approximately 90 percent minus 325 mesh (44 microns or a P_{80} of about 53 microns) and then upgraded in two stages of cleaner flotation. The molybdenite was depressed from the bulk second cleaner concentrate with dextrin (a starch), and the low-grade molybdenite product was roasted at 600 ^{o}F to destroy the dextrin and impede the flotation of unwanted copper minerals.

The roasted product was refloated twice, reground, and then subjected to five additional stages of cleaner flotation to yield a high-grade molybdenum byproduct. CSMRI concluded that no extraordinary process engineering should be encountered in the design of the Copper Flats concentrator. The ore proved to be of medium hardness, and the products thickened and filtered readily.

In July 1979, PAH reviewed metallurgical test information and conducted a statistical evaluation of the Pilot Plant metallurgical information on the Copper Flat Project for Quintana. After the review of metallurgical information, PAH proposed modifications to decrease capital cost for the concentrator and improve recoveries of copper, molybdenite, and precious metals to rougher and cleaner sulfide concentrates.

PAH developed regression equations representing the relationship between pairs of independent and dependent variables. At feed size distribution range between 52 and 61 percent minus 200 mesh (75 microns) the overall copper recovery range between 91.4 and 93.5 percent with molybdenum recovery to a copper-moly concentrate of 80 percent can be consistently achieved at expected overall moly recovery of 62 percent.

13.3 REPRESENTATIVENESS OF TESTING AND CHARACTERIZATION

Process development to determine concentrator unit operations and to set design criteria for the unit operations has been done by Colorado School of Mines Research Institute and reviewed by Pincock, Allen and Holt, Inc. M3 has reviewed the data supplied by CSMRI and PAH and has relied on it to develop the process design criteria used for the design of the process facilities. The metallurgical testing program has followed industry accepted practices and is believed to be technically sound and representative for the deposit, although there can be no guarantee that all mineralogical assemblages have been tested. In addition, results obtained by testing ore samples may not always be representative of results obtained from production scale processing of the whole ore deposit. M3 has extrapolated the design criteria included in this document from test results. These preliminary design criteria may change as more computer simulation, results of recommended laboratory testing, or plant performance testing becomes available.

Colorado School of Mines Research Institute's bench-scale and pilot froth flotation test data from samples of sulfide ore has shown that 92.5 percent copper recovery at a concentrate grade of 30 percent copper from feed grades between 0.30 and 0.60 percent copper is achievable. This was confirmed by the results of regression equations developed by PAH that the overall copper recovery range between 91.4 and 93.5 percent with molybdenum recovery to a copper-moly concentrate of 80 percent can be consistently achieved.

13.4 PROCESSING FACTORS AND DELETERIOUS ELEMENTS

Although comprehensive metallurgical tests were conducted on the Copper Flat ore more than thirty years ago, the methodology and conclusions are technically feasible and the flow sheet of the previous 1982 mill is essentially still valid. Quintana Minerals designed and built the concentrator in 1982 with the rated capacity of 15,000 st/d with copper recovery reaching 88 percent in June 1982. The molybdenum circuit operated for only a short time in 1982 producing a 46 percent moly concentrate without the final cleaning stage. With a longer operating period, the plant could have achieved a saleable molybdenum concentrate product (>50 percent moly) at an overall plant recovery of 62 percent. This is consistent with plant practices and recoveries for similar by-product operations.

However, advances in equipment manufacturing technology, process control technology as well as reagent research in the last thirty years mean that the details in the flow sheet being proposed by M3 will be different from 1982 Quintana plant. It is therefore prudent to conduct metallurgical tests recommended by M3 to take advantage of the technological advances achieved in the last thirty years.

CSMRI has already conducted a pilot plant test and produced saleable molybdenum concentrate by floating copper and depressing molybdenum (weight ratio Cu:Mo = 35:1), so there is no reason to doubt that saleable moly concentrate can be produced using the modern flow sheet being used in the mining industry. It can be concluded from the results of the CSMRI pilot plant tests and the operation of the Quintana Minerals concentrator in 1982, that there are no adverse processing factors that require any extraordinary process engineering or deleterious elements in the Copper Flat ore. The ore is of medium hardness, amenable to copper/moly flotation, gives products that thicken and filter readily and will produce saleable copper and moly concentrates.

Table 13-4: Estimated Metal Extraction Rates

Estimated Metal Extraction Rates				
	Copper Flat Ore Metal Recoveries -%			
Composite Ore ID	Copper	Molybdenum	Silver	Gold
Year 1 thru. 5	90.5	62	90	>50
Year 6 and up*	TBD	TBD	TBD	TBD
*Tests with ore representing production from 6 years and up to be started soon.				

13.5 CONCEPTUAL PROCESS FLOWSHEET

The conceptual process flowsheet was developed for processing 17,500 st/d of ore with an overall availability factor of 92.5 percent. The basis for the flowsheet and the capital and operating cost are given in Table 13-5. The simplified process flowsheet is given in Figure 13-1. The process flowsheet is very similar to the one developed by Quintana. The major equipment is also the same as originally installed by Quintana. The present flowsheet design incorporates modern equipment where applicable. For example, larger flotation cells have been selected for the rougher flotation, bulk cleaner flotation cells are column cells and vertical mills replaced the regrind mills. The design incorporated in this study is considered “Standard” practice in the mining industry.

Table 13-5: Design Parameters for the Conceptual Process Flowsheet

Item	Amount
Tonnage/day	17,500
Availability	92.5%
Tons/hr	788
Feed Grade	
% Cu	0.36% Cu
% Mo	0.012%Mo
Oz/ton Au	0.003 oz/t Au
Oz/ton Ag	0.08 oz/t Ag
Cu Concentrate Grade	
% Cu	28
Mo Concentrate Grade	
% Mo	>50
Concentrate Tonnage/day	
Cu	224
Mo	3.1
Cu Recovery %	
Cu	90.5
Mo	62
Au	>50
Ag	90

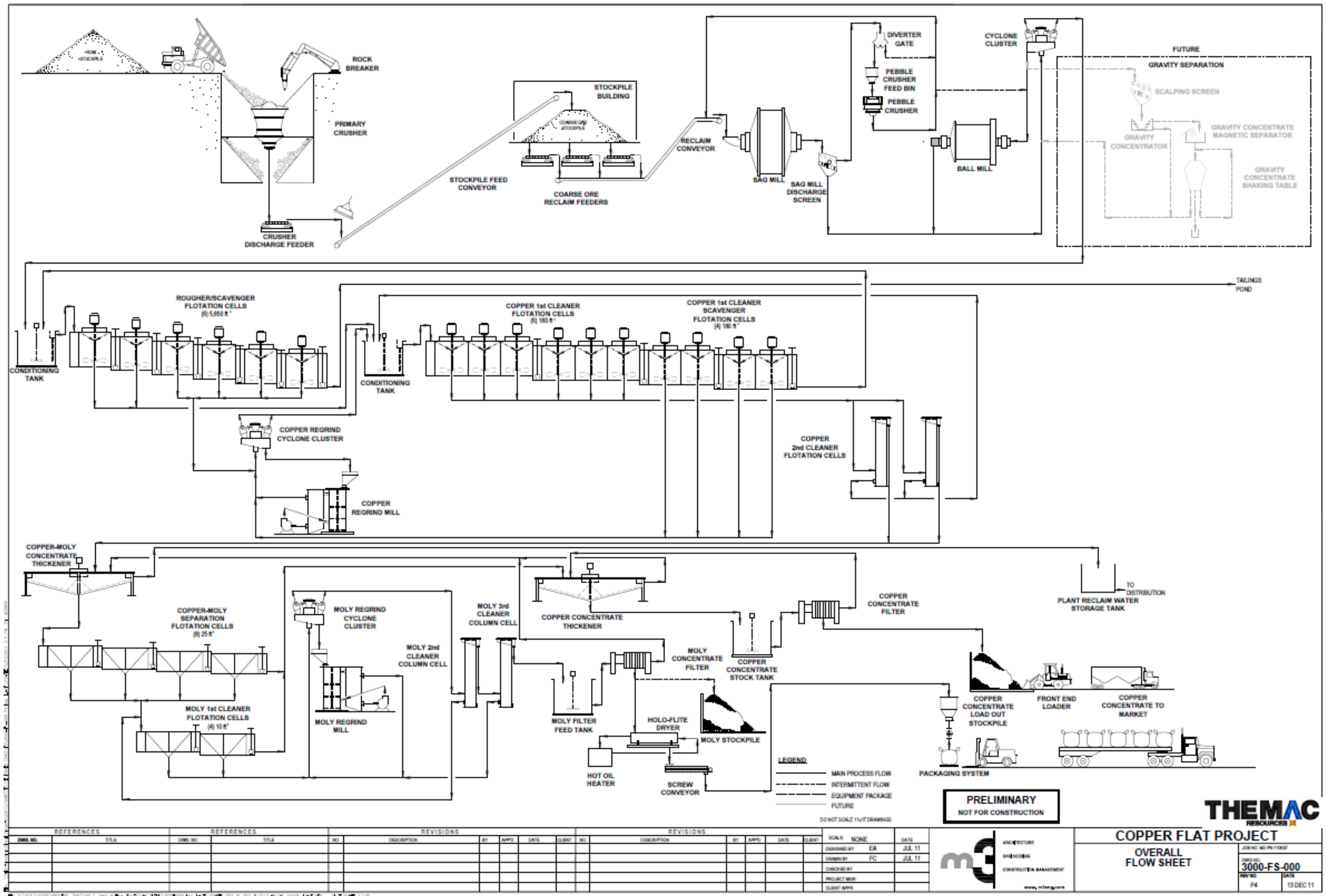


Figure 13-1: Conceptual Process Flowsheet for Cu-Mo Flotation Plant

14 MINERAL RESOURCE ESTIMATES

The mineral resource was developed from a computer based block model that was based on the drillhole data base and geologic interpretation assembled for the Copper Flat deposit.

The block model assembly and the component of the model that represents the mineral resource will be discussed in this section.

The component of the mineralization that meets the mineral resource requirements for "reasonable prospects of economic extraction" was based on the floating cone pit guidance algorithm. The results of that work are summarized at the end of this section.

14.1 BLOCK MODEL

14.1.1 Model Location

The block model was assembled in the UTM NAD83 coordinate system converted to "feet". This was established as the standard data location and mine planning grid for the project. Table 14-1 summarizes the block size and model location.

Table 14-1: Copper Flat Model – Block Corners

Copper Flat Model - Block Corners				
	Southwest	Northwest	Northeast	Southeast
Easting	861,000.0	861,000.0	866,500.0	866,500.0
Northing	11,975,000.0	11,980,500.0	11,980,500.0	11,975,000.0
Elevation Range		4,000.0	6,125.0	
Model Rotation	None			
		Colums	Rows	Levels
Size		110	110	85
Block Size		50 x 50 x 25 ft	Bench Ht = 25 ft	

The limited bench height is unusual for a copper porphyry. However, the planned production rate does not require large loading units. The 25-foot bench height was selected as a reasonable value for production loading by front end loaders of the 12 to 15 cubic yard capacity.

The central portion of the deposit is drilled with spacing of 100 to 150 feet. The selection of the 50-foot horizontal block size corresponds to ½ to ⅓ of the drilling spacing. Roughly 3½ model blocks will be mined every day.

14.1.2 Drill Hole Data

As discussed in previous sections, IMC removed the underground channel samples from the data base prior to grade estimation because they appear to be high biased relative to the surrounding diamond drilling. Both historic diamond drilling, and the new holes drilled by NMCC have been combined for use in block grade estimation.

The drillhole assay data was composited to 25-foot down-hole (length) intervals. Individual assays were capped prior to compositing. The cap values are summarized below:

Assay Cap Values:

Copper	3.00%
Molybdenum	0.500%
Gold	0.040 oz/ton
Silver	0.700 oz/ton

The cap levels were established based on the review of cumulative frequency plots.

Table 14-2 summarizes the assay data after capping and the composite data that was applied prior to grade estimation.

Table 14-2: Copper Flat Drill Hole Data

Copper Flat Drill Hole Data				
Metal	Assys		25 ft Composites	
	Number	Mean	Number	Mean
Copper %	15,817	0.262	5,395	0.276
Molybdenum &	13,896	0.010	4,989	0.010
Gold, oz/ton	5,042	0.003	1,355	0.004
Silver, oz/ton	5,668	0.076	1,611	0.085

The drift sampling that exists within the historic data base was not used in the block grade estimation process. Comparisons between the drift data and the nearby drillholes indicate that the drifts are high biased relative to the diamond drilling. The counts presented above reflect the drillhole data that was used in the assembly of the block model.

14.1.3 Model Geology

Geologic interpretation of the major lithologic units was completed by NMCC personnel and verified by IMC. That information was digitized on section, transferred to plan, and assigned to the block model.

The initial interpretation addressed the major rock types of:

	Model Code
Quartz Monzonite	7
Coarse Crystalline Porphyry	14
Andesite	6

An approximation of the two major breccia types was developed based on original interpretations completed during the early 1980's by Quintana staff. They produced a surface map with outlines of the biotite breccia and feldspar breccia. IMC digitized that map and assigned those outlines downward through the deposit with a plunge of 75° to the southwest.

The same shape was maintained on each bench, but offset to reflect the best current understanding of the regional plunge.

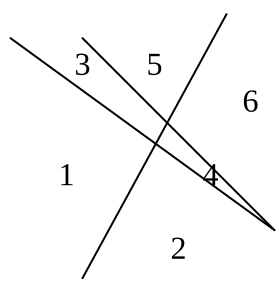
The breccia codes were:

	Model Code
Biotite Breccia	10
Feldspar Breccia	30

Structural blocks were also interpreted by NMCC personnel and assigned to the block model by IMC. The regional blocks were the Hunter, Patton, and Patton Splay

The Hunter strikes SW-NE and the others strike NW-SE. The following diagram illustrates the codes assigned to the model.

Structural Codes 1 through 6 as summarized below:



IMC completed nearest neighbor analysis across the lithology boundaries in the model with the result that all but the andesite can be combined for grade estimation. Andesite is effectively barren and block grades were not assigned in the andesite.

More detailed analysis of the breccia boundaries would likely result in population boundaries. However the approximate boundaries available at the time of this model did not define the grade distribution. Consequently, IMC utilized an indicator grade contouring procedure to confine the high grade populations for both copper and moly.

Nearest neighbor analysis was also applied to the structural codes in the block model. The resulting structures do not define population boundaries. There is little doubt that the Patton and Patton Splay faults may control the location of high grade mineralization, but the interpreted faults do not define hard boundaries that need to be respected during grade estimation.

14.1.4 Variography and Grade Boundaries

Variograms were completed within the major population boundary of the combined quartz monzonite (QM) and coarse crystalline porphyry (CCP). Grade boundaries were investigated within the combined unit with cumulative frequency plots.

The cumulative frequency population plots applied to the 25-foot composites for copper and moly resulted in the selection of 0.40 percent copper and 0.070 percent moly to reflect higher grade populations within the QM-CCP rock unit. Generally those grade boundaries correlate with the logged occurrence of breccia, particularly the biotite breccia. However, since the geology logging data is incomplete for much of the historic data and some of the old core has been logged from slides, the rock unit designation is not always complete or reliable. As a result, the assay value was used as the best and simplest representation of the presence of high or low grade.

A few illustrative variograms are provided on Figure 14-1 and Figure 14-2 for copper and moly indicators. Grade variograms were similar in search and orientation to the indicator variograms that are presented.

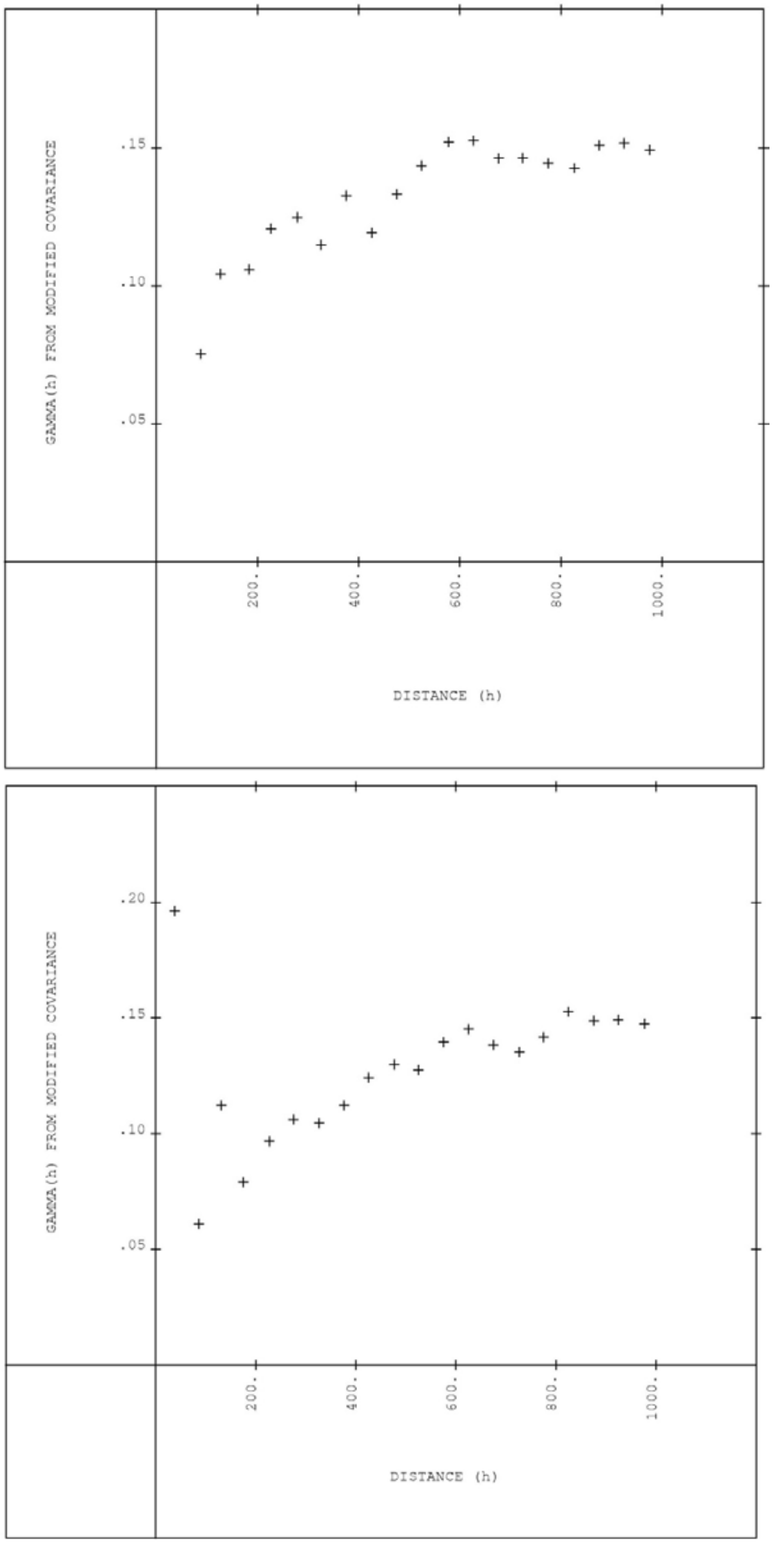
In summary, the orientation for copper mineralization appears to be predominately northwest-southeast, paralleling the Patton fault and Patton Splay. Molybdenum, gold, and silver appear to align northeast-southwest, paralleling the Hunter fault.

Variogram ranges up to 600 feet could be interpreted from the various plots that were completed. However, maximum ranges of 400 feet were selected to be in line with other copper-moly porphyry systems and to allow for better local estimation.

In all cases, vertical variograms showed good continuity and long ranges of influence. This is a typical response for deposits with predominately vertical drilling and represents an unavoidable spacial bias in the data collection process.

Review of geologic and assay cross sections often indicate abrupt grade changes between high values and low values as supported by the observed indicator discriminators. As a result, the vertical search was limited to 100 feet and the maximum number of composites from any drillhole was set at three. This limits the vertical averaging or smearing of grades in the deposit and results in better local estimation for mine planning guidance.

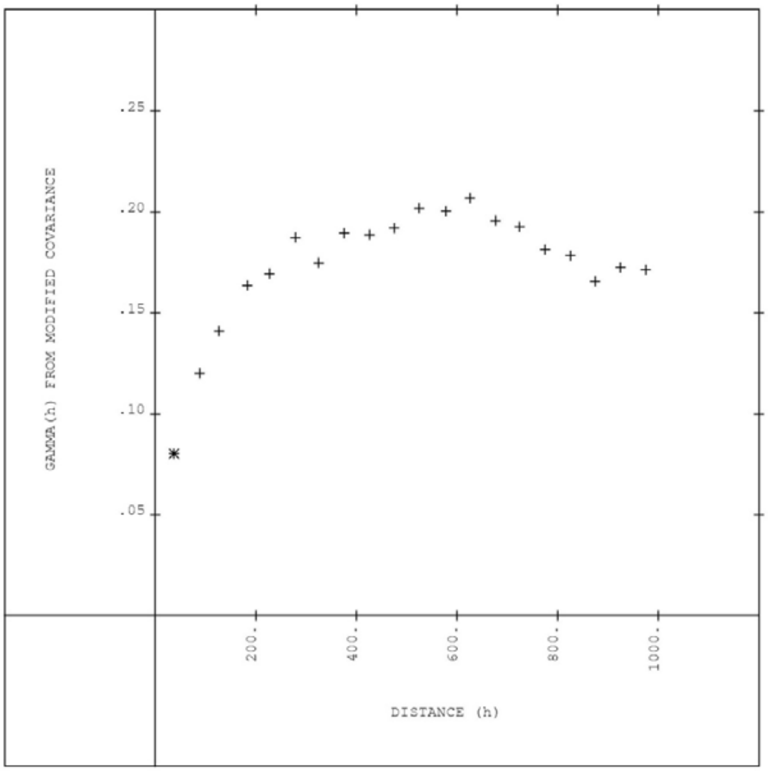
The resulting grade estimation procedures and kriging parameters are presented in the next sub-section.



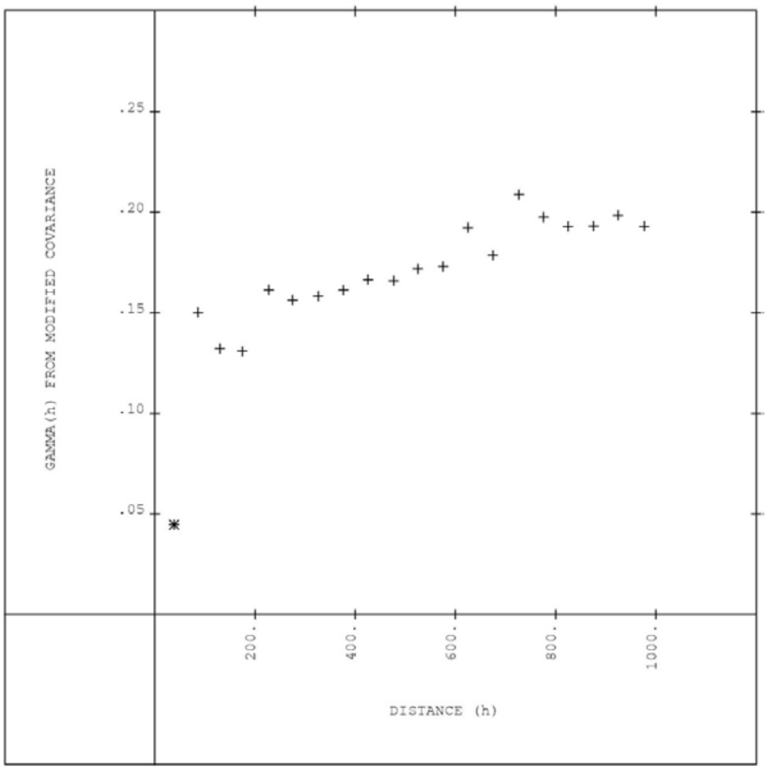
310° Bearing
Horizontal

40° Bearing
Horizontal

Figure 14-1: Copper Indicator Variogram – 0.40 percent Discriminator – Gamma(h) from Modified Covariance



310° Bearing
Horizontal



40° Bearing
Horizontal

Figure 14-2: Moly Indicator Variogram – 0.012 percent Discriminator – Gamma(h) from Modified Covariance

14.1.5 Block Grade Estimation

The block grades were estimated for copper, molybdenum, gold, and silver into the quartz monzonite and coarse crystalline porphyry units. The breccia zones codes did not modify or limit the block grade estimation. No grade assignment was made within the andesite and the boundary between the andesite and the other rock types was treated as a hard boundary.

The quartz monzonite and coarse crystalline porphyry boundary was treated as a soft boundary.

Grade boundaries were used in the estimation of copper and molybdenum. The grade boundaries were based on an indicator kriging procedure with discriminators of 0.40 percent total copper and 0.012 percent moly. Gold and silver were assigned by ordinary linear kriging.

The indicator grade boundaries were assigned within the quartz monzonite and coarse crystalline porphyry units using a one stage indicator kriging procedure. The indicator procedures are summarized on Table 14-3.

Once the indicator fraction (probability) was assigned to the blocks, the blocks were coded on a 50 percent probability basis. Blocks with greater than a 0.5 fraction were coded as “inside the grade zone = 1” and those less than 0.5 were coded as “outside the grade zone = 0”. The composites were then back assigned the codes from the blocks that contained the composite. Consequently, both the composites and the blocks were coded as inside or outside of the grade boundary.

The grade boundaries were respected as hard boundaries during the grade estimation for copper and moly. Table 14-4 summarizes the grade estimation parameters. Ordinary linear kriging was used to assign grades to copper and moly both inside and outside of the respective grade boundaries.

A search limit was applied to the high grade component on all of the grade estimates. Horizontal indicator variograms were completed over a range of increasing grade discriminators. When a discriminator was identified where the variogram became all sill, that value was search limited with 50 feet applied.

Gold and silver are under sampled relative to copper and moly. Variography indicates that the orientation for gold and silver tend to parallel the orientation for molybdenum. Estimation of gold and silver with the reduced data set results in a reasonable global estimate for both metals. However, the local estimate will be relatively poor because the data set is not complete and does not cover the outside edges of the deposit. The central core is relatively well sampled.

The capping of the few outlier high grades discussed earlier in this section was an important step to limit the potential for local over estimation in gold and silver.

Table 14-3: Indicator Kriging Parameters – Copper Flat Block Grade Estimation

Metal	Discriminator Grade %	Orientations, Bearing			Range and Search in Feet			Nugget	Total
		Primary	Secondary	Tertiary	Primary	Secondary	Vertical		Sill C+Co
Copper	0.40	310	40	Vertical	400	300	100	0.10	1.00
Moly	0.012	40	130	Vertical	400	300	100	0.10	1.00

Maximum = 10, Minimum = 2, Maximum per Hole = 3

Table 14-4: Grade Kriging Parameters – Copper Flat Block Grade Estimation

Metal	Orientations, Bearing			Range and Search in Feet			Nugget	Total	High Grade Limit	
	Primary	Secondary	Tertiary	Primary	Secondary	Vertical		Sill C+Co	Value	Limit Ft
Copper	310	40	Vertical	400	300	100	0.10	1.00	1.20%	50
Moly	40	130	Vertical	400	300	100	0.10	1.00	0.070%	50
Gold	40	130	Vertical	400	300	100	0.10	1.00	0.007 oz/t	50
Silver	40	130	Vertical	400	300	100	0.10	1.00	0.25 oz/t	50

Maximum = 10, Minimum = 2, Maximum per Hole = 3
Grade Estimation Respected Nearest Block Indicator Codes for Copper and Moly
Grade Procedures for Copper and Moly identical inside and outside of indicator zones.

14.1.6 Density Assignment

Rock density information was collected during the 2009-2010 drill program. Whole core samples (101) were sent to Skyline during the spring of 2010 for bulk density determination. Samples were weighed in air then submerged in water and weighed. They were then dried, and process repeated so that the amount of water absorbed could be determined.

IMC sorted the data by the logged rock type and calculated the average density of the rock units that were tested. There were 55 samples that were coded as some form of breccia, and 29 samples that were quartz monzonite. The remaining 17 samples could not receive a rock type coding. However the density of the 29 QM samples and the remaining 17 samples without rock code were identical.

Based on these test results, the following dry densities were assigned to the model.

Biotite Breccia	2.67 Specific Gravity	12.01 cu ft/ton
Quartz Monzonite	2.61 Specific Gravity	12.29 cu ft/ton

All other rock units were assigned the same density dry as the quartz monzonite.

14.1.7 Classification

Classification was assigned in conformance with NI43-101 and the standards and guidelines from the CIM. The data verification work has determined that the historic drill data can be used along with the new holes completed by NMCC to estimate mineral resources and mineral reserves. However, due to the lack of geologic information in many of the historic drillholes, IMC has limited the determination of measured to require the presence of NMCC drilling completed from 2009 through 2011.

The procedure applied by IMC was a two-step process. At first, all drilling information was used to estimate block grades and an initial determination of measured, indicated, and inferred was established based on the Kriged Standard Deviation (KSD = Square root of kriged variance) and the number of composites used to estimate the block.

A second stage required that at least three of 2009-2011 drillholes be used in the grade estimation process for the block to be considered measured. This assured that measured material was surrounded by recent 2009-2011 drilling.

The classification is based on the estimation of copper grade and is summarized as follows:

Procedure	Classification and Code
If Copper or Moly was estimated	Inferred = 3
If Copper KSD < = 1.00 and Number of composites > = 4.0	Indicated = 2
If Copper KSD <= 0.60 and Number of composites = 10 And Number of NMCC composites >=7	Measured = 1

14.2 MINERAL RESOURCE

The mineral resource was based on the application of the floating cone algorithm to the block model to establish the component of the deposit that has "reasonable prospects of economic extraction". The mineral resources are therefore contained within a computer-generated open pit geometry.

Table 14-5 summarizes the economic input parameters that were applied to the floating cone. Inferred mineralization was allowed to contribute economic benefit to establish the open pit cone geometries that was used for mineral resource determination.

Table 14-5: Copper Flat Floating Cone Input

Copper Flat Floating Cone Input

Mining Cost				
Mine Opex Cost			$1.45	/ton material
Sustaining Capital			$0.15	/ton material
Total, Before Haul Imcrement			$1.60	/ton material
Haul Incrment per bench below		5475	$0.025	/bench of depth
Processing Cost				
	Process Cost		$6.40	/ton ore
	G&A		$0.85	/ton ore
	Total per ton ore		$7.25	/ton ore
Process Recovery				
	Copper		88%	
	Moly		55%	
	Gold		50%	
	Silver		90%	
Smelting and Refining Terms				
Assume 27% con grade, $80+$35/ton + 0.08/lb				
	Cost / Lb Cu		$0.30	/lb copper
	Smelter Recov		96.3%	1% deduct at 27%
	Moly Roast + Trans		$0.60	/lb Moly
	Roast Recovery		99.7%	
	Golf Refining		$3.50	/oz Gold
	Silver Refining		$0.60	/oz Silver
Metal Prices for Base Case				
	Copper		$ 2.90	/lb
	Moly		$ 15.75	/lb
	Gold		$ 1,150.00	/troy oz
	Silver		$ 20.00	/troy oz
Slope angles, CNI Interramps Less 2 Degrees for Roads				
	Side of the Pit in Degrees			Degrees
	0 to 50	Northeast		36
	50 to 180	Southeast		43
	180 to 270	Southwest		40
	270 to 360	Northwest		36

Table 14-6 summarizes the total mineral resources that include the mineral reserve.

The qualified person for the estimation of the mineral resource was John Marek of Independent Mining Consultants, Inc. The mineral resource will be modified as more drilling is completed and as more detailed process recovery information becomes available. Metal price changes could materially change the estimated mineral resources in either a positive or negative way.

At this time, there are no unique situations relative to environmental or socio-economic conditions that would put the Copper Flat mineral resource at a higher level of risk than any other North American development resource.

The cutoff grades are presented in terms of Net Smelter Return (NSR) which reflects the combined benefit of producing copper, moly, gold, and silver. NSR values are calculated by taking the grade of each metal in percent (%) or troy ounces per ton (oz/t) by the projected price modified by recovery, payment terms, and deductions.

NSR =	Cu (%) x ($2.90-0.30) x 0.88 x 0.963 x 20 +	Copper Contribution
	Mo (%) x ($15.75-0.60) x 0.55 x 0.997 x 20 +	Moly Contribution
	Au (troz/t) x ($1150.00-3.50) x 0.50 x 0.963 +	Gold Contribution
	Ag (oz/t) x ($20.00-0.60) x 0.90 x 0.933	Silver Contribution

The cutoff grade reflects the estimated cost to process the ore plus site G&A cost which total $7.25/ton.

Table 14-6: NMCC, Copper Flat Project – Mineral Resources (22 November 2011)

Classification	Cutoff Grade NSR/Ton	Tonnage and Grade					Contained Metal			
		Ktons	Copper %	Moly %	Gold Oz/ton	Silver Oz/ton	Copper Lbs x 1000	Moly Lbs x 1000	Gold ozs x1000	Silver ozs x 1000
Measured	$7.25	41,236	0.33	0.011	0.003	0.07	272,158	9,072	124	2,887
Indicated	$7.25	152,861	0.24	0.007	0.002	0.04	733,733	21,401	306	6,114
Meas + Ind		194,097	0.26	0.008	0.002	0.05	1,005,891	30,473	430	9,001
Inferred	$7.25	8,206	0.23	0.004	0.000	0.01	37,748	656	0	82

Notes:

Mineral Resources are contained within a floating cone pit geometry at prices listed in text.
Ktons means 1000 short tons. Short tons = 2000 lbs
Copper and Molybdenum grades are percent of dry weight
Gold and Silver are reported in Troy ounces / short ton
Gold and silver assays are not available at the outer edges of the deposit,
so the inferred grades for gold and silver are shown at zero or near zero values.

Metal Prices:
$2.90 Copper, $15.75 Moly $1150 Gold, $20.00 Silver

15 MINERAL RESERVE ESTIMATES

There is no mineral reserve at Copper Flat at this time. NMCC is in the process of drilling, evaluating, and planning to potentially develop a mineral reserve in the future.

16 MINING METHODS

The Copper Flat project is being approached as a conventional hard rock open pit operation, typical of other copper porphyry deposits in the Southwestern U.S. Initial estimates of ore production to the mill are approximately 17,500 st/d (6,388 ktons/yr). Based on that ore rate, a reasonable estimate of total material movement to sustain release would be in the range of 36,300 st/d.

To achieve that production rate, bench heights are currently planned to be 25 feet high. Drilling could be completed with two rotary blast hole rigs with 45,000 pound pull down capacity and 6.5 in diameter blast holes. The blasted rock could be loaded into 100 ton haul trucks with 14 cu yd front end loaders.

Mine plans and equipment calculations are currently in progress.

17 RECOVERY METHODS

The process for recovering copper and molybdenum (moly) minerals from the Copper Flat ore is very similar to the one used successfully by Quintana in the 1980s with certain upgrades to reflect the current stat-of-the-art in mineral process technology. The process consists of crushing and grinding to a fine size, flotation to concrete sulfide particles, regrinding and cleaning to develop copper and moly concentrates, thickening and filtering concentrates, and disposal of tailing in a lined surface impoundment.

A prefeasibility study of the Copper Flat project is currently underway, and recovery methods will be addressed as part of the prefeasibility report.

18 PROJECT INFRASTRUCTURE

Significant infrastructure upgrades are necessary for operation of the Copper Flat project including road improvements, power lines, and water supply. Road improvements include adding turn lanes on Highway 152 for the mine access road, paving the access road, and relocating approximately 3,000 feet of the access road that is within the new tailings footprint. The Quintana 115 kV power line and Caballo substation need to be refurbished and a new power line installed between the mine and fresh water supply wellfield. The fresh water supply system needs to be refurbished with groundwater pumps, pumping stations, and water line improvements.

19 MARKET STUDIES AND CONTRACTS

Copper Flat is not currently in production and has no operational sales contracts in place at this time. Should the project go into production, smelter agreements for the treatment and refining of copper and molybdenum concentrates (including recovery of gold and silver) will be put into place.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Environmental and socio-economic baseline studies were completed as part of the previous attempt to reopen the Copper Flat Mine in the late 1990's. Studies are being undertaken in accordance with state and federal standards of data acquisition, quality assurance and reporting. Data from past studies have been incorporated and otherwise updated by newly completed and on-going studies.

20.1 ENVIRONMENTAL STUDIES AND POTENTIAL IMPACTS

NMCC is working on a few minor and localized environmental concerns at the Property; however, there are no known environmental issues that could materially impact NMCC's ability to extract the mineral resources or reserves at the site.

Environmental studies at the site include the following.

- Stage I Abatement Plan Proposal (March 2011) and Stage I Abatement Plan Proposal Amendment (John Shomaker & Associates, 2011), were both prepared for the New Mexico Environment Department (NMED) and written to summarize known groundwater impacts at the site. These documents propose monitoring and abatement plans to address known and potential groundwater impacts in the future and are subject to NMED approval.
- A Sampling and Analysis Plan (SAP) (September 2010) was prepared for the New Mexico Mining and Minerals Division. The SAP describes data to be collected including proposed sampling methodology and frequency, data sources, and sampling locations to document existing resource conditions within the permit boundary in support of the required Baseline Data Report (discussed below).
- A Baseline Data Report (BDR) (scheduled Draft completion: February 2012) is being prepared for the New Mexico Mining and Minerals Division. The BDR summarized at least 12 months of data collection at the site and in the region including: vegetation, wildlife, topsoil, geology, surface water and groundwater, historic cultural properties, and air quality and meteorological data.

In support of both State and federal EIS requirements, and in addition to baseline data collection for the reports above, groundwater and surface water data are being collected through

- Evaluation of the pit lake water quality, elevation, surrounding groundwater, and aquifer characteristics.

- Seepage studies along Las Animas and Percha Creeks.

- A flowing well study along Las Animas Creek and Percha Creeks and in between the two drainages.

- A proposed aquifer pumping test conducted in two of the mine site production wells with observation equipment in the other two production wells and in significant locations along Animas Creek

- Collection of air quality and meteorological data for the site and surrounding areas, including precipitation and evaporation data.

These additional groundwater and surface water data will be used to calibrate a numerical hydrologic-hydrogeologic model of the site and surrounding area to provide a quantitative framework in which to evaluate the effects of project development. This model is anticipated to be completed in the fourth quarter of 2012.

20.1.1 Hydrogeology

The regional and mine site groundwater conditions have been established through an existing network of strategically located groundwater monitoring wells. Additional groundwater studies are being performed to update the previous groundwater database and models for the site. Groundwater samples from selected monitoring wells have been and continue to be analyzed for water quality.

20.1.1.1 Overview

The site is located in the Lower Rio Grande Underground Water Basin (LRGB), which extends from Elephant Butte Dam to the Texas border near El Paso. The LRGB was declared by the NM State Engineer in September 1980 and thus the underground waters of the LRGB are administered by the State Engineer. Groundwater in the LRGB generally flows from the highlands on either side of the basin through bedrock and valley alluvium to the center of the basin and to the Rio Grande.

Three major hydrogeologic zones define the site area and its immediate surroundings (Figure 20-1, after Shomaker [2011]).

1. The Animas Uplift, in which the ore body is located

2. The graben located east of the Black Range and west of the Animas Uplift

3. The Palomas Basin, a sediment-filled basin east of the Animas Uplift in which the mine supply wells are located

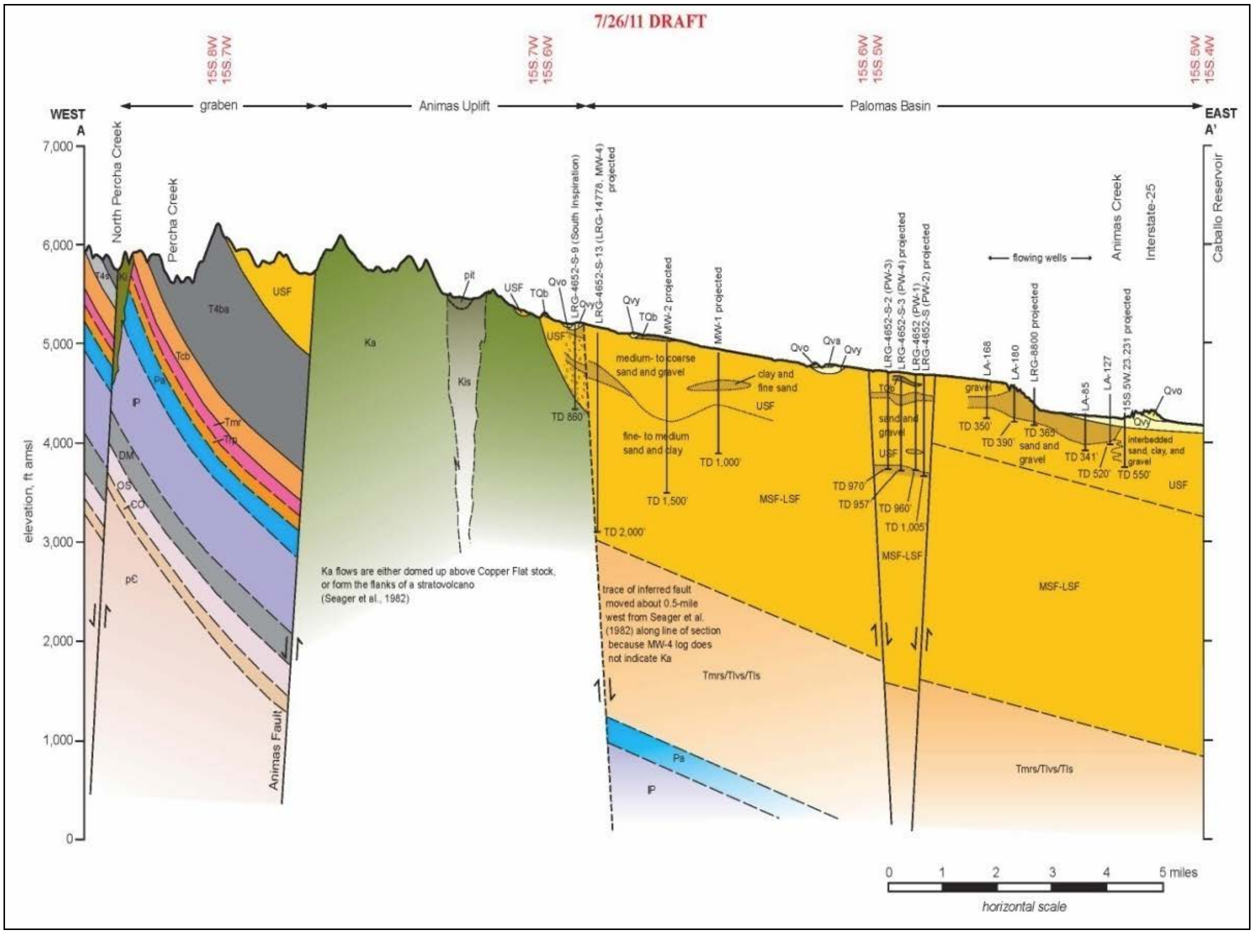


Figure 20-1: Hydrogeologic Zones, West-to-East Cross-Section

The Animas Uplift contains the Copper Flat open pit, excavated in 1982 by Quintana Minerals, which NMCC proposes to expand. The main part of the other Project facilities, including existing waste rock and TSF would be located on the Animas Uplift. The graben between Black Range and the Animas Uplift drains to the Warm Springs valley west and south of the Copper Flat Mine property. The Palomas (geologic) Basin lies within the LRGB east of the Copper Flat Mine property. The Project water-supply wells are located within the basin on a mesa south of Animas Creek and approximately 8 miles east of the Copper Flat Mine. Parts of the waste rock and tailings storage facilities would also be located overlying the western margin of the Palomas Basin.

20.1.1.2 Geology

The geologic description is adapted from Shomaker (1993), who cites Harley (1934), Hedlund (1975), Dunn (1982), and Seager et al (1982). The geologic map of the study area is shown as Figure 20-2 (from Shomaker 2011). The three major geologic subdivisions of the Animas Uplift, the graben east of the Black Range, and the Palomas Basin are described briefly below.

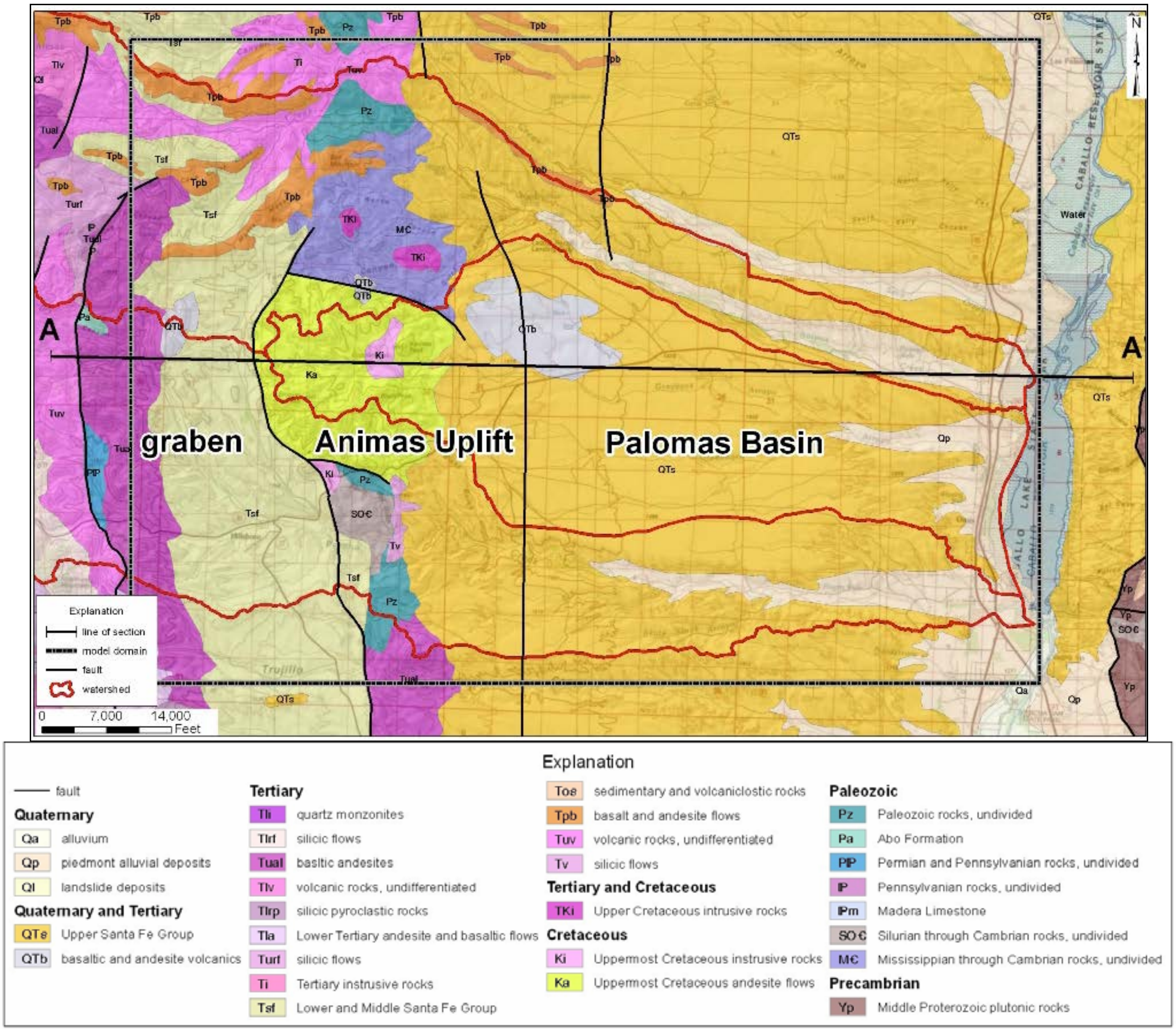


Figure 20-2: Geologic Map of Study Area

Animas Uplift

The Animas Uplift is an upthrown block bounded by north-south trending faults, ranging from less than 2 to about 4 miles wide. The Copper Flat ore body is located within a nearly circular remnant of a Cretaceous andesite volcano about 4 miles in diameter that is part of the Animas Uplift. The hills surrounding Copper Flat consist of Cretaceous andesite flows, breccias, and volcaniclastic rocks that were erupted from the volcano (McLemore, 2001; Raugust and McLemore, 2004).

West of the Animas Uplift, between it and the Black Range, lies a half-graben in which Tertiary alluvial fan deposits, sandstones and mudstones of the Santa Fe Group overlie Tertiary volcanic rocks and Paleozoic sedimentary rocks.

Palomas Basin

The Palomas Basin is a sediment-filled structural trough, part of the Rio Grande rift system. The principal water-bearing sediments of the Palomas Basin are (1) alluvial-fan deposits, and fluvial sands and gravels of the Santa Fe Group, and (2) alluvium in the inner valleys of the Rio Grande and principal tributaries.

Groundwater

There are three hydrogeologic units within the Copper Flat Mine site area:

1. Alluvium along Greyback Arroyo
2. Santa Fe Group Sediments
3. Andesite and monzonitic porphyry rocks of the Animas Uplift

The principal water-bearing sediments of the Palomas Basin are (1) alluvial-fan deposits, and fluvial sands and gravels of the Santa Fe Group, and (2) saturated alluvium in the principal drainages. Alluvium is found east of the Copper Flat Mine in Greyback arroyo, and primarily consists of sand and gravel. Thickness of the alluvium ranges between 5 and 50 feet. Alluvium may be locally and seasonally saturated north of the tailings storage facility (TSF), and down gradient of the waste rock facilities.

The sediments of the Santa Fe Group are stratified; contain a wide variety of grain sizes, and in general dip to the east. This distribution of fine-grained sand and clay and of coarser sand and gravel is reflected in the logs of wells in the TSF area. The Santa Fe Group Sediments are over 300 feet thick beneath the TSF.

The hills surrounding Copper Flat, referred to as the Hillsboro Hills, consist of Cretaceous andesite flows, breccias, and volcaniclastic rocks that were erupted from an andesite volcano (McLemore, 2001; Raugust and McLemore, 2004). The andesite is a near circular body approximately 4 miles in diameter and over 3,000 feet in depth (Dunn, 1982). The Copper Flat quartz monzonite porphyry intruded the vent of the volcano, and then dikes and mineralized veins intruded the monzonite porphyry, radiating outwards from the porphyry into fault and fracture zones in the andesite. The porphyry copper deposit is a low-grade deposit that is concentrated within a breccia pipe in the Copper Flat quartz monzonite stock and contains copper sulfide and very minor oxide minerals. The permeability of the andesite is extremely low, whereas the permeability of the monzonite rocks averages 0.1 feet/day due to localized secondary porosity from fracturing.

The direction of groundwater flow is from west to east, except in the vicinity of the Copper Flat pit lake where a hydrologic sink exists due to evaporative losses. Depth to water varies significantly due to topography. Monitoring wells surrounding the pit lake and waste rock piles in the immediate vicinity of the pit typically have a depth to water of 40 to 80 feet. Depth to water beneath the TSF ranges between 5 and 50 feet. There is a north to south trending fault approximately 800 feet east of the TSF causing abrupt changes in depth to water, and which may act as a barrier to groundwater flow.

20.1.2 Environmental Management and Monitoring (Environmental Management Plans)

Development and operation of the mine and associated access roads will affect a range of terrestrial habitat types and wildlife species. Mining operations, through the plant emissions and potential for fugitive dust from various operations, may also affect the quality of air at the mine site and surrounding locations.

NMCC is developing preliminary mitigation strategies as part of the New Mexico mine and reclamation permit and EIS processes. At a minimum, the following management plans will likely include:

- Access road management plan, including traffic management and safety on access roads and construction site, and maintenance
- Waste rock and tailings plan
- ARD prediction and prevention management plan
- Water management plan
- Air emissions and fugitive dust management plan
- Noise management plan
- Materials handling and management plan
- Soil management plan
- Erosion control and sediment control plan
- Vegetation management plan
- Wildlife management plan
- Spill contingency and emergency response plan
- Domestic and industrial waste management plan
- Archaeological and heritage site protection plan
- Stormwater Pollution Prevention Plan (SWPPP)

Detailed mitigation strategies that satisfy regulatory requirements are being developed during the advancing engineering and permitting (state and federal) phases and processes.

20.1.3 Summary of Relevant Environmental Issues

The proposed Copper Flat Mine project currently has several key environmental issues identified, and will likely face some additional issues during the permitting and authorization process. These include the pit lake, acid rock drainage, and historic tailing seepage, discussed below.

20.1.3.1 Pit Lake

Following closure of the Copper Flat project, a pit lake will form. While additional studies and predictive modeling of the possible future pit lake are currently being prepared by NMCC, previous studies conducted during the last permitting attempt provided the following conclusions about the Copper Flat pit.

- The mineralization at Copper Flat is classified as being of the porphyry copper-type. However, unlike most porphyry copper deposits, sulfide content is very low, calcite is a common accessory mineral, and no supergene enrichment zone or substantial gossan cap are present.
- Historic laboratory test results indicate the rate of net acid generation is slow, and at least initially, net alkalinity exceeds net acid generation. Available buffering capacity may be provided through mineral-water reactions and groundwater recharge. Additional sampling, analyses and evaluations are being added to the historic tests, and will be included in pit lake studies being advanced by Shomaker and Associates.
- Groundwater in the Copper Flat area has a neutral pH and excess alkalinity. Groundwater quality is generally good and has only a few exceedances of existing standards. Groundwater quality is predicted to be neutral pH, low in metals, and high sulfate in the vicinity of the pit, with local groundwater flows toward the pit lake.
- Pit lake chemistry has varied with time and is currently neutral to mildly alkaline pH with increasing sulfate concentrations. Change in water chemistry over time indicates that it is reaching gypsum saturation.
- The post-closure pit water quality is likely to be similar to the current pit water quality with slightly higher salinity. Geochemical modeling is on-going and will be utilized to confirm these pit lake projections.

20.1.3.2 Acid Rock Drainage

The future waste rock will be composed primarily of weakly mineralized quartz monzonite, and minor amounts of andesite rocks and a coarsely crystalline porphyry (CCP) unit. Historic analyses and evaluations of the acid base accounting (ABA) and net acid generation (NAG) tests indicate a net acid generating potential. However, field observations conducted in 1994 indicated that little oxidation and acid generation had occurred at the site, despite exposure of waste rock and pit walls, since mining operations were suspended in 1982. Observed conditions are likely influenced by the arid conditions of the site. Mineralogical observations also suggest that the sulfides occur in a crystalline form that is less susceptible to oxidation.

NMCC is currently evaluating the historical geochemistry information and conducting additional geochemical studies to augment and advance the knowledge and understanding of the ARD situations at Copper Flat. NMCC is reviewing the historic values, adding to these analyses with additional sampling to augment and update these historic interpretations. Through the state and federal permitting processes that are on-going at Copper Flat, all the data will be utilized and analyzed to guide operational management and mitigation of waste rock piles and TSF to ensure long-term physical and geochemical stability during operations and post closure. On-going geochemical studies and modeling are being conducted to assist in mitigation designs, if necessary.

20.1.3.3 Historic Tailings Seepage

Groundwater monitoring downgradient of the TSF has indicated the presence of elevated concentrations of some constituents (TDS and sulfate), suggesting water from the existing, unlined impoundment has seeped into the local aquifer. A Stage 1 Abatement Plan Proposal has been submitted (March 31, 2011) as part of the Discharge Permit (DP-001) application and is under review by the NMED.

20.2 TAILING DISPOSAL AND WASTE MANAGEMENT

The Quintana operation used a TSF southeast of the plant site. It is reasonable to assume that this area can be reused for tailings from the proposed project. A prefeasibility study is currently underway, and tailings disposal and waste management will be addressed as part of the prefeasibility report.

20.3 PERMIT STATUS AND BONDING

The Copper Flat Project permitting requirements and current status of the permitting process is described in Section 4.6 of this study. All, except one, of the mining and environmental permits held by Quintana Minerals have either expired or been closed due to lack of activity. Only one permit is still open, which is the NMED Groundwater Discharge Permit, although it is inactive pending review of the updated Groundwater Discharge Permit Application and resolution of the NMEDs environmental concerns as described in Section 4.5.

The MMD, NMED, and BLM have requirements for both exploration and mine reclamation bonds. NMCC currently has an exploration reclamation bond held jointly between the MMD and the BLM, which will be released upon completion of NMCC's exploration activities and completion and approval of all required reclamation activities. For the mining activities, typically the state and federal agencies (MMD, NMED and BLM) will require a reclamation bond to be held jointly. The NMED responsibilities are to steward any short- and long-term water issues, should they occur. Since the project involves public lands, the BLM will also require a reclamation bond. In New Mexico, it is typical to have a mining reclamation bond held by the MMD, the NMED, and the BLM jointly for the convenience of the mine operator. Joint held reclamation bonding avoids a separate bond requirement for each responsible agency.

20.4 SOCIOECONOMICS AND COMMUNITY

The Arrowhead Center at New Mexico State University was contracted in September 2011 to complete a socioeconomic study of the Copper Flat Mine project in Sierra County. A final product and report is expected in the first quarter of 2012. Preliminary summaries and evaluations have been utilized in this Prefeasibility Study report.

20.5 MINE CLOSURE AND RECLAMATION

Reclamation of disturbed areas caused by the project will be in compliance with federal and state regulations. Under the Federal Land Policy Management Act (FLPMA), the BLM is responsible for preventing undue or unnecessary degradation of federal BLM lands which may result from operations authorized by the mining regulations (43 CFR 3809). The Mining Act Reclamation Program (MARP) was created under the New Mexico Mining Act of 1993 to regulate hardrock mining reclamation activities, and requires the preparation of a reclamation plan for submittal and approval by the MMD and NMED. Closure of the TSF must comply with requirements of the OSE.

As proposed, the current project will be developed, operated and closed with the objective of leaving the property in a condition that will mitigate potential environmental impacts and restore the land to an agreed to land use and capability. The reclamation plan will be developed with state and federal agency input and coordination. Closure and reclamation activities will be carried out concurrent with mine operations wherever possible, and final closure and reclamation measures will be implemented at the time of mine closure.

20.5.1 Reclamation Objectives

The objectives of the Copper Flat reclamation program will be as follows:

- Minimize erosion damage through careful control of surface water runoff, involving the use of contouring, water bars and riprap where needed.
- Protect the quality of surface and ground water resources by minimizing pollutant formation, and on-site containment of any unavoidable toxicity problems.
- Establish surface soil conditions most conducive to regeneration of a stable plant community through stripping, stockpiling, and reapplication of alluvial or soil material where feasible.
- Revegetate disturbed areas with a diverse mixture of plant species, in order to establish long-term productive plant communities compatible with planned future uses.

- Stabilize plant communities with the use of accepted conservation practices.
- Maintain public safety by stabilizing, removing, or fencing land forms which could constitute a public hazard.
- Meet or exceed state and federal reclamation regulations.

Surface facilities, equipment and buildings related to the mining project will be removed, foundations will be removed and/or covered as required, and the site facilities will be restored to self-sustaining plant communities similar to those that are currently present on-site and on adjacent undisturbed lands. The topography, slopes and aspects of the disturbed and reclaimed areas will be developed to blend in with the present, existing physiographic forms of the Copper Flat area, as feasible.

20.5.2 Reclamation Units

For the purposes of reclamation planning the Copper Flat project has been broken down into the following key reclamation units:

- Open pit
- Waste rock piles
- TSF
- Plant site facilities
- Infrastructure and ancillary facilities
- Haul/access roads

21 CAPITAL AND OPERATING COSTS

This report documents a mineral resource statement for the Copper Flat project. Thus Sections 21 and 22 do not apply at this time. A prefeasibility study of the Copper Flat project is currently underway, which will include a discussion of capital and operating costs and present an economic analysis for the Project.

22 ECONOMIC ANALYSIS

This report documents a mineral resource statement for the Copper Flat project. Thus Sections 21 and 22 do not apply at this time. A prefeasibility study of the Copper Flat project is currently underway, which will include a discussion of capital and operating costs and present an economic analysis for the Project.

23 ADJACENT PROPERTIES

Adjacent lands include federal, state and private property. Federal lands are administered by the BLM. In addition, there are several placer claims held by clubs for recreational collecting, which represent surface mineral concentrations.

While there are other styles of mineralization immediately adjacent, such as gold-silver high grade veins and historic polymetallic replacement deposits, there are no currently identified adjacent properties within 25 miles that have porphyry copper mineralization similar to that of the Project.

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data and information that is not already contained within this Technical Report.

25 INTERPRETATION AND CONCLUSIONS

25.1 INTRODUCTION

It is acknowledged that a significant amount of development level work including metallurgical testing has been completed for this project. The objectives for the THEMAC management team should be focused on advancing the Project with the completion of the prefeasibility study that is currently in progress.

25.2 CONCLUSIONS

The resource model developed for this report meets or exceeds CIM reporting standards. It is believed that the quality and quantity of the data used to develop the resource model is sufficient and the methodology used to prepare the resource model is correct. Consequently, it is believed that the resource model will be a reasonable predictor of the copper and molybdenum grades and tonnages specified in this report.

The comprehensive metallurgical tests that were conducted on the Copper Flat reserve more than thirty years ago. The flow sheet of the previous 1982 Quintana Minerals concentrator is essentially still valid. Also, it can be concluded from the results of the CSMRI pilot plant tests and the operation of the Quintana concentrator for three and-a-half months in 1982, there are no deleterious elements in the Copper Flat ore or adverse processing factors that require any extraordinary process engineering. The ore is of medium hardness, amenable to copper/moly flotation, gives products that thicken and filter readily, and will produce saleable copper and moly concentrates. The conceptual process flow sheet and processing design developed as part of this study is considered "Standard" practice in the mining industry. Access to electrical power and water necessary to sustain the operation is believed to be reasonable and achievable. The land position with the exception of 300 acres of property that lies within the permit boundary is viable and adequate for the operation as specified in this report. (As discussed in 4.7, negotiations are in progress with the current owner as well as assessment of alternatives that will make this land purchase unnecessary.)

25.3 RISKS

The following risk aspects are noted:

- Market risks associated with base metal and precious metal mining projects always exist.
- Certain agreements regarding the land position with the land owner of 300 acres of property located within the permit boundary have not been finalized and could potentially result in relatively minor complications. These are likely to be resolved satisfactorily in the course of ongoing negotiations and/or an alternative project plan that makes this land unnecessary for a viable operation.
- Field assessments of various components of the previous infrastructure were carried out to a reasonable level. In most cases, at least 20 percent of the structures were accessed and evaluated for re-use. However, 100 percent of each structure was not evaluated. It is possible that certain items (for example, portions of the water pipeline from the wells to

the property that was not inspected) could be in need of unanticipated repair, upgrading or replacement.

25.4 OPPORTUNITIES

The following opportunity aspects are noted:

- Upside market potential associated with base metal and precious metal pricing exists.
- Additional drilling of the reserve and resource with the following objectives:
    - An increase in the amount of gold and silver assay values in the reserve model, particularly in the area defined as Phase 3 of the mine plan, will add value to the project. As actual gold and silver grades replace zero values in the block model in these fringe areas, the overall amount of gold and silver contained in the reserve will increase.
    - Additional step-out drilling and drilling at depth could increase the reserve estimate.

26 RECOMMENDATIONS

26.1 RECOMMENDATIONS, MINING AND MODELING

The following recommendations should be considered by NMCC regarding mining and modeling:

- Assay all available historic pulps for gold and silver. Pulps that can be reliably located and correlated to a drillhole and drill interval should be re-assayed. Gold and silver are under sampled within the deposit and assaying all the existing pulps would be an inexpensive way to improve the estimate of precious metals. Once the pulps have been located and transferred to the lab, the incremental cost of re-assay for copper and moly in addition to gold and silver, would be a low cost confirmation of the deposit that should be considered.

- Consider drilling a twin drillhole a few feet from one of the historic holes that contain high grade. The current "scissor" holes that cross nearby historic holes did not confirm the high grade intervals. Minimizing the separation between the hole locations and confirming the historic assays would provide additional comfort that the old holes can be relied upon to support measured resources.

- Once the twin results are available, the focus of future resource definition drilling can be established. If the old holes are highly reliable, new holes can focus on step out rather than data in-fill.

- Additional diamond drillholes holes have been completed by NMCC since the cut-off date for this report. That information should be added to the data base and the block model updated. The nearest neighbor analysis between NMCC and historic drilling should be updated.

- Geologic interpretation of rock type and structure should be continued. Improved definitions of rock and structure could improve grade estimation and prediction of process response.

- NMCC data entry team should continue entry of original assay information from drill logs, particularly the Quintana period holes.

- Future mine plans should consider alternative access patterns for mine haul roads. Moving the haul road to descend along the south wall may reduce the initial stripping requirements and/or release slightly higher grade ore in the early years. Haul road widths should be reconsidered with the anticipated equipment fleet.

26.2 METALLURGY

It was observed after the review of the metallurgical tests on the Copper Flat Project by M3 that additional testing for the feasibility study to demonstrate recovery of byproducts and optimize the design of the processing plant would be beneficial. While the information supporting the recoveries from previous metallurgical tests is appropriate for estimation purposes at this Prefeasibility stage of project development, additional test work will be required to improve confidence in the effectiveness of the conceptual process flowsheet. The following metallurgical tests are therefore recommended:

- Comminution tests should be conducted on samples at several depths in all types of ore identified in the deposit to ensure proper design of the crushing and grinding circuit. These tests can provide reliable information on ore hardness and abrasion characteristics which can be used to design mine production schedule to optimize metal production.

- Reagents from several manufacturers should be tested to identify the reagents and dosages necessary to produce high grade concentrates at the lowest cost. This has the potential of finding reagents that will be effective under lower pH conditions which will reduce the amount of lime needed.

- Locked cycle flotation tests should be conducted with selected reagents to ascertain optimum conditions for process design and equipment selection.

- Large stage production of copper-moly bulk concentrate should be conducted to run tests to confirm that the concentration of a saleable molybdenum product is achievable. This test has the potential of demonstrating the overall copper and molybdenum recoveries achievable.

- Conduct tailing disposal trade-off studies to select the most cost effective to present to the authorities in the permitting application.

- Conduct mineralogical studies to identify the occurrences and association characteristics of the gold losses through flotation. There is a potential that the study can identify the metallurgical process that would increase recovery of gold in the concentrate.

26.3 ENVIRONMENTAL AND SOCIAL

26.3.1 Environmental and Permitting Recommendations

The permit application must contain considerable detail both on the nature and impacts of the proposed operation and on the background and capability of the mine owners and operators.

Comprehensive environmental and socioeconomic baseline studies were completed as part of the previous attempt to reopen the Copper Flat Mine in the late 1990's. However, due to the age of these studies, additional baseline updates will be required for both the state and federal permitting processes. Supplemental studies are currently being performed, and will be undertaken in accordance with state and federal standards of data acquisition, quality assurance and reporting. A full year of data is required for some study topics to provide the basis for modeling seasonal effects.

A review of preexisting environmental baseline studies (gap analysis) completed from 1994 through 1999 is being undertaken to ascertain the utility of past studies in contributing to current study requirements.

NMCC has prepared a new Plan of Operations for the BLM, and has initiated the NEPA approval process, as this has been identified as the critical path item for project permitting. No other permit applications have been initiated at this time.

Supplemental geochemical characterization work has been initiated by NMCC as part of the current investigation of the site. Addition testing is being performed in accordance with the recently released Nevada Bureau of Land Management Instruction Memorandum NV-2010-014 (NBLM, 2010).

The Copper Flat Project will require various state and federal authorizations, licenses and permits to operate the Project. The previously completed and ongoing technical studies and environmental baseline assessments will form the basis of the applications. The permit requirements will be reviewed and updated as the Project advances through the EIS and permitting process.

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APPENDIX A: MINERAL RESOURCE STATEMENT CONTRIBUTORS AND PROFESSIONAL QUALIFICATIONS

INDEPENDENT
MINING CONSULTANTS, INC.

3560 E. Gas Road
Tucson, Arizona 85714 USA
Tel: (520) 294-9861 Fax: (520) 294-9865
jmarek@imctucson.com

February 2, 2012

To: Ontario Security Commission, as Principal Regulator

And To: Alberta Securities Commission
British Columbia Securities Commission
Saskatchewan Financial Services Commission
The Manitoba Securities Commission
Autorite des marches financiers
New Brunswick Securities Commission
Prince Edward Island Securities Office
Securities Commission of Newfoundland and Labrador
Registrar of Securities, Yukon Territory
Registrar of Securities, Northwest Territories
Registrar of Securities, Nunavut

Re: THEMAC Resources Group Limited

I, John M. Marek, P.E., do hereby consent to the public filing by THEMAC Resources Group Limited of the Technical Report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement," dated January 23, 2012, by M3 Engineering & Technology Corporation, with the above securities regulatory authorities. Additionally, I consent to the use of extracts or summaries from the Technical Report.

I also certify that I have read the Technical Report and that it fairly and accurately represents the information that I am responsible for.

Dated this 2nd day of February, 2012.

Sincerely,

John M. Marek, P.E.
President
Independent Mining Consultants

CERTIFICATE OF QUALIFIED PERSON

I, John M. Marek P.E. do hereby certify that:

a) I am currently employed as the President and a Senior Mining Engineer by:

Independent Mining Consultants, Inc.
3560 E. Gas Road
Tucson, Arizona, USA 85714

b) This certificate is part of the report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement", dated 23 January 2012.

c) I graduated with the following degrees from the Colorado School of Mines
Bachelors of Science, Mineral Engineering – Physics 1974
Masters of Science, Mining Engineering 1976

I am a Registered Professional Mining Engineer in the State of Arizona USA
Registration # 12772
I am a Registered Professional Engineer in the State of Colorado USA
Registration # 16191

I am a Registered Member of the American Institute of Mining and Metallurgical Engineers, Society of Mining Engineers

I have worked as a mining engineer, geoscientist, and reserve estimation specialist for more than 35 years. I have managed drill programs, overseen sampling programs, and interpreted geologic occurrences in both precious metals and base metals for numerous projects over that time frame. My advanced training at the university included geostatistics and I have built upon that initial training as a resource modeler and reserve estimation specialist in base and precious metals for my entire career. I have acted as the Qualified Person on these topics for numerous Technical Reports.

My work experience includes mine planning, equipment selection, mine cost estimation and mine feasibility studies for base and precious metals projects world wide for over 35 years.

d) I visited the Copper Flat property on September 7 – 8, 2011.

e) I am responsible for the following sections of the report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement", dated 23 January 2012: 7, 8, 9, 10, 11, 12, 14, 15, 16, and 26.1.

f) I am independent of THEMAC Resources Group Limited applying the tests in Section 1.5 of National Instrument 43-101.

g) Independent Mining Consultants, Inc. has not worked on this project prior to this report. John M. Marek worked briefly on the project as a junior engineer during the early 1980's while employed at different company.

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

i) As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated: January 23, 2012.

John M. Marek
Registered Member of the American Institute of Mining and Metallurgical Engineers, Society of Mining Engineers

Thomas L. Drielick, P.E.
M3 Engineering & Technology Corporation
2051 W. Sunset Road, Ste. 101
Tucson, Arizona. 85704
Telephone: 520-293-1488

CONSENT OF QUALIFIED PERSON

TO: All securities regulatory authorities

I, Thomas L. Drielick, P.E., do hereby consent to the public filing by THEMAC Resources Group, Limited of the Technical Report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement," dated January 23, 2012, by M3 Engineering & Technology Corporation, with the above securities regulatory authorities. Additionally, I consent to the use of extracts or summaries from the Technical Report.

I also certify that I have read the Technical Report and that it fairly and accurately represents the information that I am responsible for.

Dated this 2nd day of February, 2012.

Signature of Qualified Person

Thomas L. Drielick
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
   2051 W. Sunset Road, Ste. 101
   Tucson, Arizona 85704
   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 41 years. I have worked for mining and exploration companies for 18 years and for M3 Engineering & Technology Corporation for 23 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.

6. I am responsible for the preparation of Section 13 "Mineral Processing and Metallurgical Testing", of the technical report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement" dated January 23, 2012 (the "Technical Report").

7. I have not visited nor had prior involvement with the property that is the subject of the Technical Report.

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 required to be disclosed to make the report not misleading.

9. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101 of Copper Flat.

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 for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 26th day of January, 2012.

Signature of Qualified Person

Thomas L. Drielick
Print name of Qualified Person

THEMAC RESOURCES

Jon Steven Raugust, CPG
THEMAC Resources, Copper Flat Mine
2425 San Pedro Drive, NE, Suite 100
Albuquerque, New Mexico 87110
Telephone 505-881-1353

CONSENT OF QUALIFIED PERSON

To: All securities regulatory authorities

I, Jon Steven Raugust, CPG, do hereby consent to public filing by THEMAC Resources Group Limited of the Technical Report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resources Statement," dated January 23, 2012, by M3 Engineering and Technology Corporation, with the above securities regulatory authorities. Additionally, I consent to the use of extracts or summaries of the Technical Report.

I also certify that I have read the Technical Report and it fairly and accurately represents the information that I am responsible for.

Dated the 2nd day of February, 2012

____
Signature of Qualified Person

Jon Steven Raugust
Print Name of Qualified Person

CERTIFICATE of QUALIFIED PERSON

I, Jon Steven Raugust, CPG, do hereby certify that:

1. I am currently employed as Permitting Manager – Engineering by:

   THEMAC Resources, Copper Flat Mine
   2425 San Pedro Drive, NE, Suite 100
   Albuquerque, New Mexico 87110
   USA

2. This Certificate applies to the report "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement" which has an effective date of January 23, 2012.

3. I am a graduate of Humboldt State University in California where I earned a Bachelor of Arts degree in Geology in 1984. I am also a graduate of the New Mexico Institute of Mining and Technology where I earned a Master of Science degree in Mineral Engineering in 2003.

   I am a:

   - I am a Certified Professional Geologist (CPG) in accordance with the American Institute of Professional Geologists (AIPG) (No. 8586)
   - I am a member in good standing of the Society of Mining, Metallurgy, and Exploration (SME)
   - I am a member in good standing of the Association of Environmental and Engineering Geologists (AEG)

   I have practiced as a geologist or engineering geologist for 25 years. Two years in the oil industry managing seismic data and plotting geophysical maps, 14 years in the environmental industry as an applied hydrogeologist and environmental engineer, and 9 years in the mining industry practicing mine reclamation and closure, hydrology, geochemistry, geotechnical engineering, and mine permitting

   I have read the definition of the "Qualified Person" set out in the National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional organization (as defined by NI 43-101) and past work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

4. I have visited the site numerous times for a variety of purposes and durations; however, the most recent being January 17, 2012. That duration of that particular visit was one day.

5. I am responsible for the preparation of Section 20, "Environmental Studies, Permitting, and Social or Community Impact" and Sections 1.13 and 4.6, which are referenced and add detail to Section 20. These sections are part of the technical report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement" dated January 23, 2012.

6. I am not independent of the issuer as I am an employee of THEMAC Resources, Copper Flat Mine. However, I am very familiar with the contents of Section 20 and would have been the source of information for Section 20 had the section been prepared by an independent author.

7. I have had prior involvement to the property independent of my employment with THEMAC Resources, Copper Flat Mine as the property was the subject of my Master's degree project report, which is now a publically available document published by the New Mexico Bureau of Geology and Mineral Resources in Socorro, New Mexico.

8. I have read the NI 43-101 and Section 20 and the referenced Sections 1.13 and 4.6 of this report and concur that it has been prepared in compliance with this Instrument.

9. I concur that as of January 23, 2012 and to the best of my knowledge, information, and belief, that Section 20 including Sections 1.13 and 4.6 of the report titled "Copper Flat Project, Form 43-101F1 Technical Report, Mineral Resource Statement" requires all scientific and technical information that is required to be disclosed to make the technical report not misleading, with one exception in that mine reclamation and closure costs have not been included as this particular report is a mineral resource statement and cost information is not applicable.

Dated this 25th day of January, 2012

Signature of Qualified Person

Jon Steven Raugust
Print name of Qualified Person

APPENDIX B: MINING CLAIMS

EXHIBIT A

to Notice of Intention to Hold dated August 16, 2011 by New Mexico Copper Corporation, Sierra County, New Mexico

Claim name	Book	Page	BLM Serial Number	Type	Sequence preservation
Olympia (amended)	I	217	NMMC 60057	Lode	1
Gluck Auf	I	327	NMMC 60058	Lode	2
Taurus	J	682	NMMC 60059	Lode	3
Hercules	K	231	NMMC 60060	Lode	4
El Oro No. 3	P	52	NMMC 60063	Lode	5
Saint Louis Republic	I	80	NMMC 60069	Lode	6
Dolores, aka Delores	27	269	NMMC 60070	Lode	7
Highland No. 1	T	405	NMMC 60071	Lode	8
Highland No. 2	T	405	NMMC 60072	Lode	9
Highland No. 3	T	406	NMMC 60073	Lode	10
The Wellington	T	406	NMMC 60074	Lode	11
Three Boys No. 1	T	176	NMMC 60080	Lode	12
Blue Moon (amended)	34	277	NMMC 60081	Lode	13
The Leone	Y	478	NMMC 60082	Lode	14
Dolores Placer (amended)	36	96	NMMC 60083	Placer	15
Jones Hill Placer	27	212	NMMC 60084	Placer	16
Duke No. 1	40	23	NMMC 60085	Lode	17
Duke No. 2	40	24	NMMC 60086	Lode	18
Graveyard Placer	29	424	NMMC 60021	Placer	19
Old Cabin Placer	29	420	NMMC 60022	Placer	20
Rainey Season Placer	33	163	NMMC 60027	Placer	21
Desert Gold Placer	R	359	NMMC 60043	Placer	22
Gray Back Placer	R	554	NMMC 60044	Placer	23
Black Sand Group 9 No. 1 Placer (amended)	46	173	NMMC 60045	Placer	24
Black Sand Group 10 No. 3 Placer (amended)	46	185	NMMC 60046	Placer	25
Surprise No. 1 Lode	48	13	NMMC 60052	Lode	26
Surprise No. 2 Lode	48	103	NMMC 60053	Lode	27
Dutch-1 Lode	48	556	NMMC 60054	Lode	28
Dutch-2 Lode	48	558	NMMC 60055	Lode	29
Dutch-3 Lode	48	557	NMMC 60056	Lode	30
Renew No. 1	58	622	NMMC 106464	Placer	31
Renew No. 2	58	623	NMMC 106465	Placer	32
M.S. #1	34	146	NMMC 60093	Lode	33
M.S. #2	34	146	NMMC 60094	Lode	34
M.S. #3	34	147	NMMC 60095	Lode	35
M.S. #4	34	147	NMMC 60096	Lode	36
M.S. #5	34	148	NMMC 60097	Lode	37
M.S. #6	34	148	NMMC 60098	Lode	38
M.S. #8	34	149	NMMC 60099	Lode	39
M.S. #10	34	150	NMMC 60101	Lode	40
M.S. #11	34	151	NMMC 60102	Lode	41
M.S. #12 (amended)	34	262	NMMC 60103	Lode	42

M.S. #13 (amended)	34	262	NMMC	60104	Lode	43
M.S. #14	34	152	NMMC	60105	Lode	44
M.S. #15	34	153	NMMC	60106	Lode	45
M.S. #16	34	153	NMMC	60107	Lode	46
M.S. #17	34	154	NMMC	60108	Lode	47
M.S. #18	34	154	NMMC	60109	Lode	48
M.S. #20	34	155	NMMC	60110	Lode	49
M.S. #21	34	156	NMMC	60111	Lode	50
M.S. #22	34	156	NMMC	60112	Lode	51
M.S. #23	34	157	NMMC	60113	Lode	52
M.S. #25	34	158	NMMC	60114	Lode	53
M.S. #26	34	158	NMMC	60115	Lode	54
M.S. #29	34	160	NMMC	60118	Lode	55
M.S. #33	34	162	NMMC	60122	Lode	56
M.S. #38	34	164	NMMC	60123	Lode	57
M.S. #48 (amended)	34	278	NMMC	60129	Lode	58
M.S. #49	34	168	NMMC	60130	Lode	59
M.S. #53 (amended)	34	278	NMMC	60131	Lode	60
M.S. #102	34	176	NMMC	60138	Lode	61
M.S. #104 (amended)	34	276	NMMC	60139	Lode	62
M.S. #105 (amended)	34	276	NMMC	60140	Lode	63
M.S. #106	34	277	NMMC	60141	Lode	64
M.S. #107	34	178	NMMC	60142	Lode	65
M.S. 222 (amended)	41	897	NMMC	60170	Lode	66
M.S. 223 (amended)	41	898	NMMC	60171	Lode	67
M.S. 224 (amended)	41	899	NMMC	60172	Lode	68
M.S. 225 (amended)	41	900	NMMC	60173	Lode	69
M.S. 228 (amended)	42	105	NMMC	60176	Lode	70
M.S. 264 (amended)	42	115	NMMC	60194	Lode	71
M.S. 282 (amended)	42	731	NMMC	60210	Lode	72
M.S. 288 (amended)	42	126	NMMC	60216	Lode	73
M.S. 289 (amended)	42	127	NMMC	60217	Lode	74
M.S. 290 (amended)	41	553	NMMC	60218	Lode	75
M.S. 291 (amended)	41	901	NMMC	60219	Lode	76
M.S. 292 (amended)	41	902	NMMC	60220	Lode	77
M.S. 293 (amended)	42	737	NMMC	60221	Lode	78
M.S. 316 (amended)	42	748	NMMC	60240	Lode	79
M.S. 320 (amended)	42	751	NMMC	60244	Lode	80
M.S. 322 (amended)	42	753	NMMC	60246	Lode	81
M.S. 329 (amended)	42	759	NMMC	60253	Lode	82
M.S. 330 (amended)	42	760	NMMC	60254	Lode	83
M.S. 331 (amended)	42	761	NMMC	60255	Lode	84
M.S. 337 (amended)	41	782	NMMC	60261	Lode	85
M.S. 338 (amended)	41	783	NMMC	60262	Lode	86
M.S. 339 (amended)	41	784	NMMC	60263	Lode	87
M.S. 340 (amended)	41	785	NMMC	60264	Lode	88

EXHIBIT A

to Notice of Intention to Hold dated August 16, 2011 by New Mexico Copper Corporation, Sierra County, New Mexico

M.S. 341 (amended)	41	786	NMMC	60265	Lode	89
M.S. 342 (amended)	41	787	NMMC	60266	Lode	90
M.S. 345 (amended)	42	136	NMMC	60267	Lode	91
M.S. 346 (amended)	42	137	NMMC	60268	Lode	92
M.S. 347 (amended)	42	138	NMMC	60269	Lode	93
M.S. 438 (amended)	41	564	NMMC	60312	Lode	94
M.S. 439	41	606	NMMC	60313	Lode	95
M.S. 440	41	607	NMMC	60314	Lode	96
M.S. 441	41	714	NMMC	60315	Lode	97
M.S. 452	45	353	NMMC	60318	Lode	98
M.S. 453	45	354	NMMC	60319	Lode	99
M.S. 454	45	355	NMMC	60320	Lode	100
M.S. 455	45	356	NMMC	60321	Lode	101
M.S. 456	45	357	NMMC	60322	Lode	102
M.S. 458	45	359	NMMC	60324	Lode	103
M.S. 460	45	361	NMMC	60326	Lode	104
M.S. 461	45	362	NMMC	60327	Lode	105
M.S. 462	45	363	NMMC	60328	Lode	106
M.S. 463	45	364	NMMC	60329	Lode	107
M.S. 464	45	365	NMMC	60330	Lode	108
M.S. 465	45	366	NMMC	60331	Lode	109
M.S. 467	45	368	NMMC	60333	Lode	110
M.S. 468	45	369	NMMC	60334	Lode	111
M.S. 469	45	370	NMMC	60335	Lode	112
M.S. 470	45	371	NMMC	60336	Lode	113
M.S. 471	45	372	NMMC	60337	Lode	114
M.S. 472	45	373	NMMC	60338	Lode	115
M.S. 473	45	374	NMMC	60339	Lode	116
M.S. 474	45	375	NMMC	60340	Lode	117
M.S. 475	71	1927	NMMC	163361	Lode	118
M.S. 476	71	1928	NMMC	163362	Lode	119
M.S. 477	71	1929	NMMC	163363	Lode	120
M.S. 478	71	1930	NMMC	163364	Lode	121
Animas #1 Placer	45	443	NMMC	60341	Placer	122
Animas #2 Placer	45	444	NMMC	60342	Placer	123
The Betsy Ross	R	93	NMMC	60344	Lode	124
Wicks Extension No. 1	R	100	NMMC	60346	Lode	125
Anderson Extension No. 2	R	93	NMMC	60348	Lode	126
Crescent 101	41	358	NMMC	60349	Lode	127
Wicks Extension 100	41	359	NMMC	60350	Lode	128
Betsy Ross 101	41	360	NMMC	60351	Lode	129
Portland 101	41	361	NMMC	60352	Lode	130
Ready Pay Apex 100	41	362	NMMC	60353	Lode	131
Anderson Extension 101	41	363	NMMC	60354	Lode	132
Greer No. 2	47	611	NMMC	72821	Millsite	133
Chatfield	47	521	NMMC	72822	Millsite	134

Chatfield No. 3	47	523	NMMC 72823	Millsite	135
Chatfield No. 4	47	762	NMMC 72824	Millsite	136
Chatfield No. 5	47	763	NMMC 72825	Millsite	137
Chatfield No. 6	47	764	NMMC 72826	Millsite	138
Chatfield No. 9	53	521	NMMC 81353	Millsite	139
Chatfield No. 10	53	522	NMMC 81354	Millsite	140
Chatfield No. 25	56	689	NMMC 100695	Millsite	141
Golden 1	117	4001	NMMC 190838	Placer	142
Golden 2	117	4003	NMMC 190839	Placer	143
Golden 3	117	4005	NMMC 190840	Placer	144
Golden 4	117	4007	NMMC 190841	Placer	145
Golden 5	117	4009	NMMC 190842	Placer	146
Golden 6	117	4011	NMMC 190843	Placer	147
Golden 7	117	4013	NMMC 190844	Placer	148
Golden 8	117	4015	NMMC 190845	Placer	149
Golden 9	117	4579	NMMC 191032	Placer	150
Golden 10	117	4581	NMMC 191039	Placer	151
Golden 11	117	4583	NMMC 191033	Placer	152
Golden 12	117	4585	NMMC 191034	Placer	153
Golden 13	117	4587	NMMC 191035	Placer	154
Golden 14	117	4589	NMMC 191036	Placer	155
Golden 15	117	4591	NMMC 191037	Placer	156
Golden 16	117	4593	NMMC 191038	Placer	157
CU 1	116	902	NMMC 189246	Lode	158
CU 2	116	903	NMMC 189247	Lode	159
CU 3	116	904	NMMC 189248	Lode	160
CU 4	116	905	NMMC 189249	Lode	161
CU 5	116	906	NMMC 189250	Lode	162
CU 6	116	907	NMMC 189251	Lode	163
CU 7	116	908	NMMC 189252	Lode	164
CU 8	116	909	NMMC 189253	Lode	165
CU 9	116	910	NMMC 189254	Lode	166
CU 10	116	911	NMMC 189255	Lode	167
CU 11	116	912	NMMC 189256	Lode	168
CU 12	116	913	NMMC 189257	Lode	169
CU 13	116	914	NMMC 189258	Lode	170
CU 14	116	915	NMMC 189259	Lode	171
CU 15	116	916	NMMC 189260	Lode	172
CU 16	116	917	NMMC 189261	Lode	173
CU 17	116	918	NMMC 189262	Lode	174
CU 18 (amended)	116	3011	NMMC 189263	Lode	175
CU 19 (amended)	116	3012	NMMC 189264	Lode	176
CU 20 (amended)	116	3013	NMMC 189265	Lode	177
CU 21 (amended)	116	3014	NMMC 189266	Lode	178
CU 22	116	923	NMMC 189267	Lode	179
CU 23	116	924	NMMC 189268	Lode	180

EXHIBIT A

to Notice of Intention to Hold dated August 16, 2011 by New Mexico Copper Corporation, Sierra County, New Mexico

CU 24	116	925	NMMC	189269	Lode	181
CU 25	116	926	NMMC	189270	Lode	182
CU 26	116	927	NMMC	189271	Lode	183
CU 27	116	928	NMMC	189272	Lode	184
CU 28	116	929	NMMC	189273	Lode	185
CU 29	116	930	NMMC	189274	Lode	186
CU 30	116	931	NMMC	189275	Lode	187
CU 31	116	932	NMMC	189276	Lode	188
CU 32	116	933	NMMC	189277	Lode	189
CU 33	116	934	NMMC	189278	Lode	190
CU 34	116	935	NMMC	189279	Lode	191
CU 35	116	936	NMMC	189280	Lode	192
CU 36	116	937	NMMC	189281	Lode	193
CU 37	116	938	NMMC	189282	Lode	194
CU 38	116	939	NMMC	189283	Lode	195
CU 39	116	940	NMMC	189284	Lode	196
CU 40	116	941	NMMC	189285	Lode	197
CU 41	116	942	NMMC	189286	Lode	198
CU 42	116	943	NMMC	189287	Lode	199
CU 43	116	944	NMMC	189288	Lode	200
CU 44	116	945	NMMC	189289	Lode	201
CU 45	118	392	NMMC	191058	Lode	202
CU 46	118	395	NMMC	191059	Lode	203
CU 47	118	398	NMMC	191060	Lode	204
CU 48	118	401	NMMC	191061	Lode	205
CU 49	118	404	NMMC	191062	Lode	206
CU 50	118	407	NMMC	191063	Lode	207
CU 51	118	410	NMMC	191064	Lode	208
CU 52	118	413	NMMC	191065	Lode	209
CU 53	118	416	NMMC	191066	Lode	210
CU 54	118	1115	NMMC	191076	Lode	211
CU 55	118	1118	NMMC	191077	Lode	212
CU 56	118	1121	NMMC	191078	Lode	213
CU 57	118	1124	NMMC	191079	Lode	214
CU 58	118	1127	NMMC	191080	Lode	215
CU 59	118	1130	NMMC	191081	Lode	216
CU 60	118	1133	NMMC	191082	Lode	217
CU 61	118	1136	NMMC	191083	Lode	218
CU 62	118	1139	NMMC	191084	Lode	219
CU 63	118	1142	NMMC	191085	Lode	220
CU 64	118	1145	NMMC	191086	Lode	221
CU 65	118	1148	NMMC	191087	Lode	222

End of claim list 222 claims

Claim Name	Mineral Survey
Feeder	M.S. 943C
Chance	M.S. 945A
Xmas	M.S. 945B
Extension	M.S. 945D
Smokey Jones	M.S. 1024
Little Jewess	M.S. 1715
Wisconsin	Lot No. 805
Copper King	Lot No. 733A
Ventura	Lot No. 733B
Castle Hill	Lot No. 733C
Copperopolis	Lot No. 736
"83"	Lot No. 806
Soudan	Lot No. 807
Sternberg	M.S. 2066
Allhutten	M.S. 2066
Craze Martin	M.S. 2066
Coppenhagen	M.S. 2067
Carl Sextus	M.S. 2067
Union Leader	M.S. 2067
Stockholm	M.S. 2067
Grass Flat	M.S. 2068
Sandow	M.S. 2068
Old Mac	M.S. 2068
"85"	Lot No. 735
Republic	Lot No. 808
Isabella	Lot No. 734

Township 15 South, Range 7 West

Section 36:	Part of Lot 1 (Parcel N)
	Part of Lot 4 (Parcel M)
	Part of Lot 6 (Parcel J)
	Lot 10 (Parcel L)
	Lot 11 (Parcel K)
	Part of N½SE¼ (Parcel I)
	Part of N½S½SE¼ (Parcel H)

Township 15 South, Range 6 West

Section 31:	Lot 3 (Parcel D)
	Lot 6 (Parcel G)
	Lot 7 (Parcel C)
	Part of NE¼SW ¼ (Parcel E)
	N½SE¼SW¼ (Parcel B)
	Part of S½SE¼NW¼ (Parcel F)
	Part of SE1/4 (Parcel A)

Township 16 South, Range 6 West

Section 6:	Part of Lot 3 (Parcel P)
	Part of Lot 4 (Parcel O)