

NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA

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1 Summary (Item 3)

This section provides a summary of the Canadian National Instrument 43-101 Preliminary Economic Assessment Technical Report for the Florence Project.

The Florence Project is an advanced-stage oxide copper project located in central Arizona and controlled 100 percent by Curis Resources Ltd. (Curis). The Florence Project is a shallowly buried porphyry copper deposit that is amenable to in-situ copper recovery (ISCR) and solvent extraction-electrowinning (SX/EW) copper production. The Florence copper deposit represents a substantial copper resource that warrants further investigation and economic analysis by Curis, and advancement through feasibility study with the goal of ISCR copper production.

The Florence copper deposit has an estimated Measured plus Indicated mineral resource of oxide material in bedrock of 429.5 million tons grading 0.331 percent total copper (TCu) for a contained 2.84 billion pounds Cu, and an additional 92.8 million tons of Inferred resource grading 0.267 %TCu for an additional 496 million contained pounds Cu (Table 1-1).

SRK has evaluated project data and estimated the in-situ resources stated in Table 1-1 as current resources compliant with Canadian Mining, Metallurgy and Petroleum (CIM) definitions of resource classifications sufficient for NI 43-101 reporting. Historical efforts in the 1990s by a previous property owner developed project information sufficient to achieve pre-feasibility level study as an ISCR project. SRK, in conjunction with Curis have re-evaluated the Florence Project data, with current technology and cost estimates in a Preliminary Economic Assessment or scoping level study. The conceptual study envisions application of industry-standard ISCR wellfield injection and recovery technology for the in-situ extraction of oxide copper, and a solvent extraction and electrowinning (SX/EW) copper recovery plant to produce cathode copper.

SRK has completed this Preliminary Economic Assessment as a study of the potential ISCR mineability of the project, utilizing industry standard criteria for Scoping Level studies, which is normally at ± 30 percent on costing estimates. For the Florence Project, a number of the capital and operating cost areas within this study document are much better defined in terms of accuracy, (pre-feasibility level) in particular the process facilities, and wellfield development. The resulting project costs are estimated with better accuracy (± 10 to 20 percent) than a normal scoping level study (± 30 percent), which also allows for contingency cost estimates (5 to 15 percent) to be lower than for typical scoping level studies (20 to 30 percent).

The results of this Preliminary Assessment indicate that ISCR development of the Florence Project offers the potential for positive economics based upon the information available at this time.

The base case economic analysis results indicate an after-tax NPV of US\$359.8 million at a 7.5 percent discount rate with an IRR of 30 percent. Payback will be early in production Year 4 in a projected 19-year mine-life. The economics are based on a base case of US\$2.50/lb Cu long-term copper price and a design production rate of 76.5 Mlb Cu/yr. Direct operating costs are estimated at US\$0.680/lb-Cu; total operating costs including property taxes are US\$0.704/lb-Cu. Total capital costs are estimated at US\$682.1 million, consisting of initial capital costs (Capex) of US\$237.8 million, and ongoing sustaining capital over the life of operations of US\$444.3 million.

1.1 Property Description and Location

The Florence Project hosts a shallowly buried porphyry copper deposit located in Pinal County, Arizona. The deposit contains a Measured plus Indicated mineral resource of oxide material in bedrock of 429.5

million tons grading 0.331 percent total copper (%TCu) for a contained 2.84 billion pounds copper (Table 1-1). The project was discovered in 1970 and underwent extensive exploration drilling and evaluation for development during the 1970s by Continental Oil Company (Conoco). During the 1990s, the project was acquired by Magma Copper Company, which was then acquired by BHP Copper Inc. (BHP Copper or BHP) in 1996. The project was taken to a pre-feasibility-study level by BHP as a proposed in-situ copper leach and recovery operation. Curis Resources (Arizona) Inc. (Curis), formerly called U1 Resources Inc. and a wholly owned subsidiary of Curis Resources Ltd., acquired a 100 percent interest in the project on February 24, 2010, and is working to reactivate the project toward eventual ISCR copper production. Curis is a Nevada corporation that is registered to do business in Arizona.

The Florence property is situated in southern Arizona, in the Sonoran Desert portion of the Basin and Range Lowlands physiographic province. The project area is adjacent to a prominent hill known as Poston Butte that rises about 250 feet above the surrounding flat terrain. The elevation in the project area is in the range of 1,475 to 1,490 feet above mean sea level. The regional slope to the land is generally southward. The Gila River flows east to west, parallel to the southern boundary of the Florence property. The project area spans sections 26, 27, 28, 33, 34, and 35 of Township 4 South, Range 9 East. The area of the mineral resources inside the current permit boundary that is amenable to in-situ copper recovery is approximately 216 acres and is located in the S½ of section 28 and the N½N½ of section 33. A portion of the mineral rights for this area (101 acres) is on State Trust Lands of Arizona (N½S½ of section 28, described as Arizona State Mineral Lease 11-26500). An additional 75.1 acres has been identified outside the current permit area that is amenable to ISCR extraction; 25.7 acres of this potential expansion area is on State Trust Land.

The property is located within the limits of the Town of Florence approximately 2.5 miles northwest of the town center. The property site facilities address is 1575 West Hunt Highway, Florence, Arizona 85132. The approximate latitude and longitude of the former ISCR pilot test facilities at the site are 33° 02' 49.07" North and 111° 25' 47.84" West. The land that is not part of the 160-acre State Mineral Lease 11-26500 is part of the Merrill Ranch Master Planned Community. Curis is currently in discussions with the Town of Florence to amend the General Plan and zoning to the extent necessary to allow for ISR production.

1.2 Ownership

Curis, a wholly owned subsidiary of Curis Resources Ltd., owns the surface rights and all of the mineral rights of some 1,181.59.1 acres of patented land. In addition, Curis is the lessee under Arizona State Mineral Lease 11-26500.

1.3 Geology and Mineralization

The Florence deposit formed approximately 62 million years ago when numerous dike swarms of Laramide granodiorite porphyry intruded Precambrian quartz monzonite near Poston Butte. The dike swarms were fed at depth by a large intrusive mass. Hydrothermal solutions associated with the intrusive dikes altered the host rock and deposited copper and iron sulfide minerals in disseminations and thin veinlets in the strongly faulted and fractured rocks. Hydrothermal alteration and copper mineralization is most intense along the edges and flanks of the dike swarms and intrusive mass (BHP, 1997a).

Mid-Tertiary Basin and Range extensional faults subsequently elevated and isolated much of the Florence deposit as a horst block. The two largest bounding faults, the Sidewinder and Party Line, cut off mineralization in some areas. These two faults are actually fault zones, the thicknesses of which are difficult to determine because of heavy fracturing in the hanging wall of each. Vertical offsets along the Sidewinder and Party Line faults may exceed 1,000 feet.

The horst block and the downthrown fault blocks were exposed to weathering and erosion. The center of the deposit was eventually eroded to a gently undulating surface. Coarse, poorly bedded conglomerate from the surrounding mountains filled the basin west of the Florence deposit and began to cover the eroded top of the horst block. River sand, silt, and gravel buried the entire deposit to a depth of approximately 375 feet. During this period of erosion and deposition, calcareous silty mud and clay layers were deposited in shallow basins that extended over the region. This clay layer, which occurs approximately 60 to 100 feet above the top of bedrock, is 20 to 40 feet thick and acts as an aquitard, preventing groundwater in aquifers above and below the layer from mixing.

The main hypogene sulfide minerals are chalcopyrite, pyrite, and molybdenite with minor chalcocite and covellite. Trace bornite, galena, and sphalerite are occasionally noted. Molybdenite occurs as discrete grains or as a film on fracture surfaces; the average molybdenum grade is 0.008 percent. Pyrite is usually subordinate to chalcopyrite (ratios of 1:1 to 1:3), and both are found in veinlets and as disseminated grains; they commonly occur in quartz $\pm$ biotite veins rimmed by orthoclase and sericite. Supergene chalcocite coats pyrite and chalcocite and dusts fracture surfaces. The supergene chalcocite blanket is very thin and irregular (zero to 50 feet); in most instances, the transition from the leachable copper silicates and oxides to the sulfide zone (relatively non-leachable) is quite abrupt.

Mineralization in the oxide zone consists primarily of chrysocolla with lesser “copper wad,” tenorite, cuprite, native copper, and trace azurite and brochantite. The majority of the copper occurs as chrysocolla in veins and fracture fillings, while the remainder occurs as copper-bearing clays in fracture fillings and former plagioclase sites. A master’s thesis completed on the fracture-controlled mineralogy within the Florence deposit indicates that copper resides in the octahedral site of clays and is not adsorbed onto the surface (Davis, 1997). The “copper wad” appears to be an amorphous mix of manganese, iron, and copper oxides that occurs as dendrites, spots, and irregular coatings on fracture surfaces. Cuprite occurs locally smeared out along goethite/hematite-coated fracture surfaces; the chalcotrichite variety of cuprite is also present on fractures or vugs, sometimes inter-grown with native copper crystals. The thickness of the oxidized zone ranges from 100 to 1,000 feet with an average thickness of 400 feet.

A calculation of the TCu grade by oxidation type for all assays within the Florence drillhole database shows that the oxide mineralization is similar, but enriched, relative to that of the primary sulfide mineralization. The overall average grade of the oxide and sulfide mineralization is approximately 0.36 %TCu and 0.27 %TCu, respectively. Nason and others (1983) attribute the similarity in grade to the low overall sulfide content and the low pyrite-to-chalcopyrite ratio. An extensive leached cap, 150 to 350 feet thick, in the western center of the deposit indicates that the original pyrite to chalcopyrite ratio was higher in local areas. Locally, the oxide grade is twice as high as the underlying sulfide grade. Copper mineralization is enriched in quartz monzonite host rock, relative to the intrusive granodiorite porphyry dikes (average grade of 0.38 %TCu versus 0.27 %TCu).

1.4 Exploration History

Exploration in the Florence area in the 1960s for a porphyry copper deposit was conducted by a number of companies such as ASARCO who identified favorable mineralogical signatures such as “live limonite and copper silicate mineralization in surface outcrops on the western flank of Poston Butte (SRK, 2010). The deposit was delineated to the extent known today by Continental Oil Company (Conoco) who drilled 686 holes in the deposit and surrounding area from 1969 through 1975. Conoco also drove underground workings on the property in the early 1970s to obtain bulk samples. Metallurgical testing of the recovered material (vat leaching and milling/flotation/concentration) was performed using a small pilot plant built on the property.

The project originally envisioned by Conoco included: (1) an oxide open pit delivering ore to vat leaching facilities followed by SX/EW treatment, and (2) extraction of the underlying sulfide ore, with the ore delivered to a concentrator followed by smelting and refining. The low price of copper in the mid 1970s and the relatively large capital investment that would be required ultimately forced Conoco to cease active exploration. The property remained idle for nearly two decades thereafter.

Magma Copper Company acquired the property from Conoco in July 1992 and initiated a pre-feasibility study in January 1993 that was completed in January 1995. The study focused on identifying the most appropriate mining method for developing the oxide portion of the deposit. The methods evaluated were: (1) open pit mining followed by heap leaching, and (2) in-situ copper recovery or ISCR mining followed by SX/EW to produce copper cathode. The results of the pre-feasibility study indicated that the most economical method of mining the Florence copper deposit would be by means of well-to-well in-situ recovery, followed by SX/EW.

In January 1996, Broken Hill Proprietary Company Limited of Australia acquired Magma and created BHP Copper Inc. at the completion of the acquisition. A feasibility study, started by Magma in January 1995, continued through the acquisition phase. BHP used the Magma study in support of its own pre-feasibility studies. BHP completed geology, hydrogeology, metallurgy, hydrochemistry studies, a resource estimation, and environmental permitting activities. Pre-feasibility level engineering design plans for in-situ recovery and processing facilities were completed. BHP had also obtained the major permits required for ISCR testing and production. In 1998, BHP initiated, but did not complete, a multi-month, field-optimization in-situ recovery test to gather copper-extraction and other technical data for final feasibility. The study indicated that ISCR extraction, followed by SX/EW processing, is the optimal method to develop the Florence deposit.

In 2001, BHP sold the property that hosted the Florence deposit to Florence Copper, Inc., a subsidiary of Merrill Ranch Investment LLC, a U.S.-based property development and investment firm. Although Florence Copper did not advance the Florence project towards development, between 1999 and 2009 they did monitor site water quality on a quarterly basis and fulfilled required reporting as per permit conditions to the Arizona Department of Environmental Quality (ADEQ). This allowed the major operating permits issued by ADEQ and Environmental Protection Agency (EPA) to remain in good standing during this time. Florence Copper also posted a US\$1.06 million closure and reclamation bond with ADEQ to cover potential future reclamation and closure costs for the site. This bond has since been replaced by equivalent financial assurance posted by Curis Resources Ltd.

Curis began an evaluation of the existing data and mineral resources in 2009 and initiated a Preliminary Economic Assessment (PEA) study in 2010. This work will supplement the start of a new production test facility in and completion of a feasibility study for the project during 2011. The intent of the boards of directors and management of Curis Resources Ltd. is to advance the Florence Project toward ISCR production.

1.5 Mineral Resources

SRK performed a review of the drillhole database compiled by BHP, the resource estimation reports prepared by predecessor companies, and the BHP resource block model, and completed an audit of the BHP resource estimation methodology (SRK, 2010). SRK modified the estimation methodology slightly in terms of search radii (reduced search distances so as not to over smooth grade), and also adjusted the criteria for assigning classification of Measured, Indicated and Inferred resources, in accordance with current industry standards.

SRK reports current in-situ resources as shown in Table 1-1, at a 0.05 %TCu cutoff grade. The historic mining cutoff grade used by BHP in its 1997 pre-feasibility study was 0.15%TCu. Based on current copper prices and a preliminary review of current project parameters, SRK believes that resources reported at a 0.05 percent cutoff have a reasonable expectation of potential economic viability. For an ISCR project, actual mining cutoff grade is a complex determination that includes the thickness of the ore zone, depth to bedrock, cost of acid, the recovery rate by mineral types, the pregnant leach solution (PLS) concentrate grade, and cycle times. SRK-reported resources are compliant with CIM resource classifications, and are sufficient for NI 43-101 reporting. All oxide resources, combined Measured plus Indicated and Inferred classifications, at various cutoff grades, are listed in Section 17 of this report and demonstrate that the total resources do not significantly change from the 0.05%TCu cutoff to the 0.15%TCu cutoff.

Table 1-1 Current Florence Project In-Situ Mineral Resources (SRK, 2010)

All Oxide in Bedrock at 0.05 %TCu cutoff			
Class	Mtons	%TCu Grade	Mlb Cu
Measured	296.395	0.354	2,100
Indicated	133.091	0.278	741
M+I	429.486	0.331	2,841
Inferred	92.752	0.267	496

Note: All oxide includes the copper oxide zone, and the iron-oxide leached cap zone. Contained metal values assume 100 percent metallurgical recoveries. The tonnage factor is 12.5 ft³/ton.

Section 17 on Mineral Resources defines the resource modeling and grade estimation parameters used by SRK for resource reporting. Also stated in Section 17 are tabulations at the 0.05 %TCu cutoff by the following global categories for historical reference:

- **All oxide in bedrock** (including iron-oxide leached cap and copper oxide zone);
- All oxide (as defined above) below the bedrock exclusion zone (top 40 ft of bedrock for which only partial leaching of rock is anticipated due to geometries of anticipated fluid flow from injection/recovery wells); and
- All oxide (as defined above) below the bedrock exclusion zone and within the current permit boundary.

SRK reported all oxide mineralization in bedrock as the current resource for the Florence Project as Curis is currently considering the project only as an ISCR operation. Sulfide mineralization is not considered potentially recoverable by ISCR methods.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. This Preliminary Economic Assessment is preliminary in nature, and uses mineral resources. It includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this preliminary assessment will be realized. This preliminary assessment includes Inferred resources (15 percent of total resources) that are assumed will be converted to Indicated or Measured resources upon additional definition drilling. The Inferred resources are primarily located on the lateral edges of the copper deposit. Until that additional drilling is completed, as wellfield delineation drilling, there is no certainty these Inferred resources will be upgraded in classification to be considered as potentially economically producible.

1.6 Proposed Development and Operations

Low copper prices prevented development of the project in the 1970s by Conoco and in late 1990s by BHP. The Florence Project was advanced by BHP to the stage of pre-feasibility level study, which included a comprehensive and successful Federal and State project permitting exercise that led to the granting of the operating permits for the project in 1997. Historical project data are available and in the possession of Curis. The existing site development consists of a site administration building with offices, power and communications lines, laydown yard, graded dirt roads, and a core storage building. Infrastructure related to BHP's ISCR pilot test include shuttered wells with flow meters/controllers, pressure transducers and other wellhead equipment, fiber-optic communications to the control trailer, a high-density polyethylene (HDPE) lined solution pond that has remained in use with water and sediment contained within it, and a tank farm to store water, sulfuric acid, raffinate, and caustic soda.

1.6.1 Hydrogeology of the Deposit

Extensive site characterization work has been previously performed on the water quality and aquifer properties of the deposit area. This includes baseline water quality analyses and aquifer testing to establish hydraulic conductivity and other physical properties of the bedrock and basin-fill formations. A sub-regional numerical flow model was previously prepared and is being updated. These hydrogeological investigations were sufficient to characterize the site for environmental permitting purposes and to prepare a life-of-operations production plan and copper extraction model.

1.6.2 Metallurgy and ISCR Recovery

Metallurgical test work has been performed by previous owners on representative rock and mineralization types at various copper grade ranges under a variety of test conditions. Based on various assumptions about the deposit and extraction method¹, a recovery curve was prepared by a geochemical modeling consultant to BHP that indicated 85 percent of the acid soluble copper (ASCu) resource would be extracted over a 5-year period, and 90 percent recovery would occur over 6-year period; this is equivalent to approximately 47 to 51 percent of the total copper (TCu) resources. SRK reviewed the available metallurgical column and field test work, site characteristics, and previous modeling, and incorporated the metallurgical recovery factors into the current production plan. The ISCR copper extraction method is estimated to allow recovery of approximately 49 percent of the total contained copper identified as mineral resources over a 6-year recovery period. The estimates of total copper recovery and the rate of copper recovery will be confirmed and refined when a field test is initiated and completed by Curis.

1.6.3 Wellfield Design and the ISCR Production Plan

Based on the existing project data, and input from Curis and independent consultants working for Curis, SRK has developed a conceptual ISCR wellfield production plan and schedule for life-of-operations development, and has prepared an estimate of associated development and production costs. A basis of design for well construction has been developed to satisfy environmental and production objectives. Pumping rates for the recovery wells are assumed to be 3 percent greater than those in injection wells to maintain inward hydraulic gradient and comply with permit conditions. The development schedule incorporates pre-development, development, reclamation, and well closure activities. The wellfield arrangement assumes a staggered line drive pattern of repeating "5-spot" cells with a distance of 100 feet from recovery well to recovery well and a distance of 71 feet from each injection well to the nearest

¹ Assumptions were based on average characteristics of the deposit (chrysocolla/other copper silicates; oxide zone thickness of 400 feet; ratio of ASCu:TCu was 67 percent), metallurgical test results from BHP Column Test 2 (representative material with an average grade of 0.38 %TCu), and operational cell distance of 100 feet.

recovery well. The wellfield design incorporates mineral resources within the current permit area and additional resources identified by SRK that are outside of but adjacent to the current permit. The life of productions is estimated to be more than 19 years using current assumptions. Rinsing and reclamation will begin in Year 7 on a “close-as-you-go” basis and will conclude in Year 21. Decommissioning of the remaining wells and other site closure activities will follow thereafter.

1.6.4 SX/EW Copper Production

Based on the production schedule and estimated copper recovery from metallurgical test data, an average of 76.5 million pounds of copper can be recovered annually by ISCR wellfield methods. SRK has used industry available information to appropriately size and cost a SX/EW copper recovery plant to be constructed on the property for planned cathode copper production as a saleable product. The SX/EW plant will process approximately 11,000 gpm of copper-bearing solutions on an annual basis. Acid consumption is estimated to be 5 lbs acid/lb copper. Excess bleed and water extracted during the rinsing phase will be neutralized to produce a water quality that will meet permit requirements.

1.6.5 Environmental

BHP obtained major permits required for ISCR testing and production in 1997, which are transferable to Curis. Federal, state, and local environmental permits will be required for the reactivation of the project. Curis is in the process of preparing applications to ADEQ and EPA requesting the permit transfers and amendments required for full operations. Curis is following a “significant amendment” process for the primary State approval which relates to an Aquifer Protection Permit (APP). In conjunction with this, Curis is following a process with the EPA known as “revoke and re-issue” for an Underground Injection Control (UIC) permit. In both cases, Curis is building on and improving the original BHP development plan and permit conditions to facilitate a timely completion of the permit amendment process. It is expected that the State amendment and EPA re-issuance process will take between 9 and 12 months following submission of a complete application. Curis is planning to have this documentation submitted to the State and Federal agencies in early December 2010.

A key consideration for this project is and will continue to be the protection of groundwater quality during and after ISCR operations. Water quality at the site has been monitored continuously for more than 14 years including prior to, during and after an ISCR pilot test carried out by BHP in 1998. During this time, monitoring data has confirmed both the ability to maintain hydraulic control during the pilot test and protect groundwater quality during and after operations.

Public consultation will be required as part of the permitting process. Curis has initiated a comprehensive public outreach and engagement program which has included full time community relations staff in Florence, a community office and a number of internet based communications initiatives.

1.7 Preliminary Economic Assessment

SRK has completed this Preliminary Economic Assessment as a study of the potential ISCR copper extraction of the project, utilizing industry standard criteria for Scoping Level studies. In considering this, it should be recognized that a number of the capital cost areas within this study document are much better defined in terms of accuracy (pre-feasibility level) – in particular the process facilities, wellfield drilling and in-hole components, and surface facilities. In terms of operating costs, the process facilities are again at a much great accuracy, whereas the wellfield operating costs are more variable. It is also recognized that given the amount, timing and scope of the wellfield drilling requirements a substantial discount is expected to be obtained during the bidding process. The resulting projects cost are estimated with better accuracy (± 10 to 20 percent) than a normal scoping level study (± 30 percent), which also allows for

contingency cost estimates (5 to 15 percent) to be lower than for typical scoping level studies (20 to 30 percent).

The base case economic analysis results based on CIM-compliant mineral resources indicate a life-of-operation production of 1.24 billion lbs copper. The analysis results show an after-tax Net Present Value (NPV) of US\$359.8 million at a 7.5 percent discount rate with an IRR of 30 percent. Payback will be in production Year 4 in a projected 19-year production life. The economics are based on a base case of US\$2.50/lb Cu long-term copper price and a design production rate of 76.5 Mlbs Cu/yr. Direct operating costs are estimated at US\$0.680/lb-Cu; total operating costs including property taxes are US\$0.704/lb-Cu. Total capital costs are estimated at US\$682.1 million, consisting of initial capital costs of US\$237.8 million, and ongoing capital over the life of operations of US\$444.3 million. A provision was made for salvage value for recycled well and wellhead equipment. The project results assume a 42-percent effective total tax rate and a 6.3 percent royalty rate. The base case project economics for this Preliminary Economic Assessment at a long-term copper price of \$2.50/lb positive.

The results of the technical economic model are presented in Table 1-2.

Table 1-2 Technical economic summary

Description	Units	Value Base Case \$2.50/lb-Cu Price	\$/lb-Cu	\$2.75/lb-Cu Value	\$3.00/lb-Cu Value
Production					
Copper	klbs	1,236,149	-	1,236,149	1,236,149
Market Price	US\$/lb	\$2.50	-	\$2.75	\$3.00
Gross Revenue	US\$000s	\$3,090,372	\$2.500	\$3,399,410	\$3,708,447
Royalty	US\$000s	(\$195,415)	(\$0.158)	(\$218,838)	(\$242,260)
Transportation	US\$000s	(\$55,627)	(\$0.045)	(\$55,627)	(\$55,627)
Gross Income	US\$000s	\$2,839,331	\$2.297	\$3,124,945	\$3,410,560
<u>Operating Costs</u>					
Production	US\$000s	\$525,327	\$0.425	\$525,327	\$525,327
SX/EW	US\$000s	\$264,482	\$0.214	\$264,482	\$264,482
G&A	US\$000s	\$50,219	\$0.041	\$50,219	\$50,219
Property Taxes	US\$000s	\$30,184	\$0.024	\$30,184	\$30,184
Total Operating Cost	US\$000s	\$870,211	\$0.704	\$870,211	\$870,211
Operating Margin	US\$000s	\$1,969,119	\$1.593	\$2,254,734	\$2,540,348
<u>Taxes</u>					
Severance Tax	US\$000s	(\$25,449)	(\$0.021)	(\$28,988)	(\$32,551)
City of Florence Tax	US\$000s	(\$2,839)	(\$0.002)	(\$3,125)	(\$3,411)
Income Tax	US\$000s	(\$441,594)	(\$0.357)	(\$532,565)	(\$624,317)
<u>Project Capital</u>					
Production	US\$000s	\$499,262	-	\$499,262	\$499,262
SX/EW	US\$000s	\$158,714	-	\$158,714	\$158,714
Infrastructure	US\$000s	\$10,137	-	\$10,137	\$10,137
Owner Costs	US\$000s	\$13,950	-	\$13,950	\$13,950
Total Capital Costs	US\$000s	\$682,062	-	\$682,062	\$682,062
Initial	US\$000s	\$237,776	-	\$237,776	\$237,776
Ongoing	US\$000s	\$444,286	-	\$444,286	\$444,286
Cash Flow	US\$000s	\$817,175	-	\$1,007,994	\$1,198,007
IRR		30%	-	35%	39%
NPV 7.5%		359,830	-	455,069	550,055

Source: SRK, 2010; all monetary values are in US dollars.

1.8 Conclusions and Recommendations

The Florence copper deposit represents an undeveloped, medium-sized porphyry copper deposit that previously was studied to pre-feasibility level for ISCR and SX/EW copper production. The project has the potential for rapid reactivation to a production test facility (PTF) and feasibility level status by current industry standards. The project historical record is intact and in the possession of Curis, and will allow for review and updating of engineering studies for the advancement of the project.

SRK reports current and CIM-compliant mineral resources as shown in Table 1-1 at a 0.05 %TCu cutoff grade, and represent an estimated 2.8 billion pounds of contained copper as in-situ oxide resources in the

measured plus indicated classification categories, with an additional 0.5 billion pounds of contained copper (15 percent) estimated in inferred mineral resources.

SRK has completed a Scoping Study conceptual review for an ISCR operation, completed a life-of-operation wellfield production schedule, compiled estimated capital and operating costs for the wellfield, reviewed prior pre-feasibility level designs for an SX/EW plant, updated associated capital and operating costs, and incorporated all project activities and costs into a technical economic model.

The results of the technical economic model suggest the project can generate an average of 76.5 million pounds of copper cathode production annually, with a NPV (7.5) of US\$359.8 million and a 30 percent IRR. The positive results of the completed technical economic model provide sufficient justification for moving to the next work program. The results of this Preliminary Assessment indicate that ISCR development of the Florence Project offers the potential for positive economics based upon the information available at this time.

Industry Standards for projects with positive Scoping Study results is to recommend proceeding to a pre-feasibility level study. For ISCR projects, this would normally involve a pilot-scale recovery facility (production test facility (PTF)) with construction and operation of a test injection and recovery wellfield. This would be operated for a period of time sufficient to develop a recovery curve to accurately predict extraction rate and ultimate total amount of recoverable copper. Data derived from the PTF are used to define production parameters is a pre-feasibility or feasibility level study to justify a full production decision. For the Florence Project, these steps are recommended, not as separate steps, rather as stages in the continuous process of moving the project forward toward full ISCR production and SX/EW copper recovery. The Florence Project can advance in this manner because there has been sufficient historical work that has already characterized the groundwater hydrological confinement sufficient to have achieved the Underground Injection Control (UIC) permit from regulators. This permit is currently in the process of re-activation.

Plans for moving forward at the Florence Project are therefore presented as the steps and costs necessary to achieve full production in the staged approach that Curis has implemented. The Curis plan is shown below in Table 1-1as a Phase I and Phase II program and budget.

Table 1-3 Phase I and Phase II program and budget

Phase	Work Program	Estimated Cost (US\$)	Time to complete
Phase I-a	Environmental/permitting; hydrology; PTF wellfield design; process engineering, design, and construction details for PTF	\$10.8 million	Approx. 12 months
Phase I-b	Production Test: PTF construction, operation, data collection and evaluation.	\$14.0 million	12 months
Phase II-a	Project Evaluation: Feasibility study including engineering, metallurgy, environmental and socio-economic,	\$6.8 million	9 months
Phase II-b	Project Execution: Design, construction, start-up of production (Technical economic initial capital cost in years -1 and -2)	\$237.8 million	3 years

Source: Curis, 2010; all monetary values are in US dollars.

The phased approach will allow for flexibility and smooth transition between the phases, with for instance some aspects of the feasibility study (Phase II-a) possible to complete during the Phase I-b Production Test. SRK concurs with this approach and recommends the Phase I program be pursued. The results of the Phase I program will determine the scope of the Phase II program. Further discussion and details of the Phase I and Phase II programs and budgets are presented in Section 21 of this report.

2 Introduction (Item 4)

This section describes for whom the technical report was prepared and the purpose of the report (Section 2.1), the qualifications and responsibilities of SRK personnel (Section 2.2), the personal inspection of the property and data files (Section 2.3), and the sources of information and data contained in the report (Section 2.4).

2.1 Terms of Reference and Purpose of the Report

Curis Resources Ltd. and PCI-1 Capital Corp. have engaged SRK to prepare this technical report in support of Curis becoming a public company. SRK is reporting CIM compliant resources and the results of a Preliminary Economic Assessment in a NI 43-101 technical report for the Florence Project, in support of Curis becoming a public company by way of a reverse takeover transaction. Curis and PCI-1 engaged SRK to complete a scoping level study and Preliminary Economic Assessment NI 43-101 Technical Report, this document, in support of their ongoing efforts to move the Florence Project toward development and production.

Pursuant to the reverse takeover transaction, among other things, Curis Resources Ltd. and a subsidiary of PCI-1 Capital Corp. will merge and PCI-1 Capital Corp. will issue 32,600,001 new shares in its capital to the shareholders of Curis Resources Ltd. in exchange for all of the issued and outstanding shares of Curis Resources Ltd. The transaction will serve as PCI-1 Capital Corp.'s Qualifying Transaction under TSX Venture Exchange policies. Upon completion of the Qualifying Transaction, the business of Curis Resources Ltd. will be the business of PCI-1 Capital Corp., and the name of PCI-1 Capital Corp. will be changed to "Curis Resources Ltd."

SRK prepared this Technical Report in accordance with industry accepted CIM Best Practices and Reporting Guidelines, the revised regulations in NI 43-101 (Standards of Disclosure For Mineral Projects) and Companion Policy 43-101CP of the Canadian Securities Administrators, and CIM Definition Standards for Mineral Resources and Mineral Reserves (December 11, 2005).

This technical report provides a discussion of the scoping level studies undertaken, including a review of deposit metallurgical characteristics, development of conceptual wellfield design and an ISCR production plan (mine plan), review of SX/EW plant design criteria for copper production, review of associated capital and operating cost estimates, and preparation of a technical economic model of the conceptual project economic viability.

2.2 Qualifications of Consultants

The personal inspection of the Florence Project property and data files was performed by the following SRK personnel: Each of the authors are Qualified Persons that are independent of Curis Resources Ltd. and PCI-1 Capital Corp. per requirements of Section 1.4 of NI 43-101.

Qualified Persons

Allan V. Moran, R.G., C.P.G.

Allan Moran is a Principal Geologist with SRK, with 37 years experience in exploration, exploration management, and project evaluations, including 7 years direct experience with precious and base metals, and uranium exploration methodologies and evaluation of metal deposits for resource estimation and project development. He is a Qualified Person for this Technical Report, and responsible for all sections of the report.

Corolla K Hoag, R.G., C.P.G.

Corolla Hoag is a Principal Geologist with SRK with 24 years of experience in exploration, mine development, environmental permitting, and mine reclamation including 6 years of direct experience with evaluations and operations of two in-situ and two “in-place” copper leach projects and operations in Arizona. She conducted an on-site review of the property and a detailed review of the Florence property files. She was an employee of Magma Copper Company/BHP Copper Inc. working as a senior geologist and environmental coordinator at the Florence Project from March 1995 to October 1999 when the BHP pre-feasibility studies and permitting activities were performed. Ms. Hoag is an Arizona-registered geologist and “Qualified Person” as defined by NI 43-101, and is a co-author responsible for all sections of this report.

Terry McNulty, DSc. Met, P.E.

Terry McNulty is a process engineer with more than 43 years experience in mineral processing hydrometallurgy. He conducted an on-site review of the property. Dr. McNulty is a Colorado-registered engineer and co-author of selected sections of this report, in particular parts of Section 19.1 relating to metallurgy and the SX/EW plant.

Russell White, R.G.

Russell White is an Associate Resource Geologist with SRK with 25 years of experience in mining geology and resource estimation. Mr. White is a Washington-registered geologist and a Qualified Person. He conducted an audit of the mineral resources for the Florence Project, and is responsible for the estimate of Mineral Resources presented in Section 17.

Contributors

The following persons provided consulting input to Curis and SRK in support of the scoping level studies described in section 19 of this report:

- John T. Kline: Consultant to SRK – ISCR operations, production plan, metallurgy review, wellfield and SX/EW plant review;
- Steve Axen, P.E.: Consultant to Curis – Well construction design and costs, ISCR extraction, and wellfield design;
- Stephen Hildebrand: Consultant to Curis – ISCR operations and wellfield design and costs;
- Mark Vancas: Consultant to Curis – Metallurgy, SX/EW processing, Plant capital and operating costs; and
- Loretta Ford: Curis Resources Ltd – Curis information on lands and permitting (Section 4), and compilation of edits to all sections.

2.3 Site Visits

Ms. Hoag inspected the Florence Property several times between January 14, 2010 and June 15, 2010. Mr. Moran visited the site on June 15, 2010. Dr. McNulty and Mr. Russ White have not visited the site.

The site visits consisted of examining the following:

- Secured office building to inspect the document library, core logging area, pulp storage area, and offices;
- Reports, maps, and chemical and assay analyses filed in the office building;
- Former chemistry laboratory and other ancillary facilities;
- Secured core storage building, the master core-location list, and selected drill core stored therein;

- Areas adjacent to the office and core-storage building;
- Mineralization and fracture mineralogy seen in selected representative core samples;
- Two Hohokam cultural sites consisting of remnants of pit houses,
- Pilot ISCR wellfield;
- Large chemical storage tanks (tank farm) and water impoundment, both secured with a locked chain link fence; and
- Monitor wells near the pilot ISCR wellfield.

2.4 Sources of Information

This report is based on the following information:

- Personal inspection of the project and surrounding areas;
- Updated land ownership and other information provided by Curis;
- Digital drillhole assay databases, resource model files, images, AutoCAD maps, design plans, and unpublished reports provided to SRK by Curis and former BHP employees;
- Site characterization data, design documents, annual status reports, environmental permit applications, and compliance monitoring reports submitted to regulatory agencies;
- Additional information obtained from public domain sources; and
- Personal knowledge of the property by former Magma/BHP Copper Florence employees including: John Kline, general manager, Corolla Hoag, senior geologist and Stephen Hildebrand, former engineer at Magma/BHP San Manuel Operations.

The data and information contained in this NI 43-101 Technical Report are based on documentation believed to be reliable, some of which is taken directly from the BHP pre-feasibility report (1997a, b, c, d, e) unpublished, internal reports by Magma Copper and Conoco, and unpublished application documentation prepared by Brown and Caldwell (1996d) and submitted to regulatory agencies. The recommendations and conclusions stated in this report are based solely on information compiled by SRK, provided to SRK by Curis, and from current and/or historical literature, reports, and other information gleaned from the public domain.

The geological and drillhole database, interpretations, and the QA/QC information used by SRK for resource estimation are based on historical information developed by Conoco, Magma Copper Company, and BHP. These contributions are included throughout this report without specific reference.

The authors and SRK Consulting (U.S.) Inc are not insiders, associates, or affiliates of Curis Resources Ltd or PCI-1 Capital Corp. The results of this Technical Report are not dependent upon any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings between Curis Resources Ltd. or PCI-1 Capital Corp. and the authors or SRK Consulting (U.S.) Inc. SRK will be paid a fee for its work in accordance with normal professional consulting practice.

The authors' statements and conclusions in this report are based upon the information at the time of the property visits and later discussions with Curis. It is to be expected that new data and test results may change some interpretations, conclusions, and recommendations going forward.

This report includes technical information, which requires subsequent calculations to derive subtotals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently can introduce a margin of error. Where these rounding errors occur, SRK does not consider them material.

3 Reliance on Other Experts (Item 5)

The authors, as Qualified Persons, have examined the historical data for the Florence property provided by Curis, and have relied upon that basic data to support the statements and opinions presented in this Technical Report. The historical data, such as original field mapping, cross sections, level plans, and detailed project reports prepared by Conoco, Magma Copper Company, and BHP Copper Inc., are now part of the project data files in possession of Curis. Curis has not conducted independent tests or drilling on the property. SRK has collected some core samples for assay confirmation.

In the opinion of the authors, the Florence historical data are present in sufficient detail to prepare this report and are generally correlative, credible, and verifiable. The project data are a reasonable representation of the Florence Property. Any statements in this report related to deficiency of information are directed at information that, in the opinion of the authors, has been lost during transfer of property files, or is information that is recommended by SRK to be acquired.

The authors have relied upon the work of others to describe the current status of the property and to provide the basis for cost estimates for significant components of the life-of-operations economic model. Table 3-1 provides documents the contributions of others and relevant report sections.

Table 3-1 Other Experts for current work program and relevant report section

Report Section	Expert	Area of Reliance
4 Property Description and Location	Curis Resources	Land tenure and land title
4.5.2 Environmental Permits	Loretta Ford, Curis Resources	Current status of environmental permits
19.1.1 Overview of Planned Facilities	Fluor Daniel Wright, Vancouver, B.C., Canada (now Fluor Canada)	Prepared the 1996 preliminary engineering design for the processing plant and pond facilities and the 1998 capital cost estimate reviewed and updated by SRK.
19.2.3 Well Construction Design	Steve Axen, P.E., Ray W. Huff & Associates	Basis of well design and costs.
19.2.4 Cell Pattern and Wellfield Design	Stephen Hildebrand, CRC Mining & Pumping Innovations, Tucson, Arizona, Consultant to Curis	Prepared estimate of mechanical and electrical costs for life-of-operations wellfield
19.6 Taxes and Royalties	Bernard Tan, Curis Resources	Current status of taxes and royalties
20.1 Project Opportunity	Michael McPhie, Curis Resources	Prepared a summary of project opportunities; reviewed and modified by SRK
20.2 Project Risks	Michael McPhie, Curis Resources	Prepared summary of project risks; reviewed and modified by SRK
21.1 Recommended Work Programs	Curis Resources	Prepared summary and cost estimate for future work programs; reviewed by SRK

4 Property Description and Location (Item 6)

This section describes the property and the property location.

4.1 Property Location

The Florence ISCR project is located in the Poston Butte metallic mineral district within the limits of the town of Florence in Pinal County, Arizona (Figure 4-1) (see Map 18 in Keith and others, 1983). Via U.S. Highway 10, the project is approximately 70 miles north-northwest of Tucson, Arizona and 65 miles southeast of Phoenix, Arizona.

The project area is within the Sonoran Desert portion of the Basin and Range physiographic province, southwest of the Globe-Miami porphyry copper mining district. This trend of porphyry copper deposits falls within the trace of the Ray lineament. The Ray Lineament trends west-southwest through the Florence Project area and parallels the Pinal Schist-Oracle Granite contact. At Florence, the lineament intersects a pre-existing Precambrian diabase dike swarm that strikes N. 10–30° W. (Conoco, 1976).

Figure 4-2 is the land ownership map prepared by an Arizona-registered land surveyor and Figure 4-3 is an aerial photograph showing the project site and facilities, access roads, land ownership and mineral lease boundaries, Aquifer Protection Permit area, the Town of Florence. The project office building has coordinates of 33° 03' 07" North latitude and 111° 24' 33" West longitude and is located within the limits of the Town of Florence.

4.2 Mineral Titles

Curis owns the surface rights and all of the mineral rights of some 1,182.59 acres of patented land in the area containing the deposit (Figure 4-2). Curis' holdings span portions of sections 26, 27, 28, 33, 34, and 35 of Township 4 South, Range 9 East. The resource area covers approximately 216 acres in the S½ of section 28 and the N½N½ of section 33. A portion of the surface and mineral rights (approximately 159.5 acres) is on State Trust Lands of Arizona (N½S½ of section 28, described as Arizona State Mineral Lease 11-26500), which has been assigned to Curis.

4.3 Location of Mineralization

The mineralization defined as the Florence property is primarily within the cadastral location of T. 4 S., R. 9 E., sections 28 and 33 of the Gila and Salt River Base Line and Meridian. The mineralized area is depicted with respect to the property boundary by the location of Aquifer Protection Permit area shown on Figure 4-3.

4.4 Royalties, Agreements and Encumbrances

The land included within the Arizona State Mineral Lease 11-26500 is subject to a mineral royalty payable to the State of Arizona. It consists of a percentage of the gross value of the minerals produced, which percentage cannot be less than 2 percent nor more than 8 percent according to a "Copper Index Price" within copper price parameters between 84.8 cents per pound on the low end and 161.0 cents per pound on the high end and adjusted by mine cost inflation or deflation. The current Arizona State Mineral Lease expires on December 13, 2013 and is renewable.

A 3 percent "Net Returns" royalty applicable to the entire property is payable to Conoco Inc. This royalty is subordinate to royalties paid to third parties, but even where such royalties exist, the royalty created will not be less than 2 percent of "Net Returns." "Net Returns" is defined as the "Gross Value" received

by the grantor less all expenses incurred by the grantor with respect to such minerals after they leave the property.

A 2.5 percent “Net Profits Interest” royalty applicable to the entire property excluding the land included within the Arizona State Mineral Lease 11-26500, is payable to BHP Copper Inc. “Net Profits” is defined as net proceeds and revenues received from the sale of product plus insurance proceeds, government grants and tax refunds, less all exploration, development and operating costs.

4.5 Environmental Liabilities and Permitting

The following sections briefly summarize the requirements and restrictions of the major environmental permits governing operations at the Florence ISCR mine. The permits are listed in Table 4-1. Several life-of-operation permits are transferable to new owners. Some permits have expired and are in the process of being reactivated. It is outside the scope of this report to review the status of all applicable agreements and permits.

4.5.1 Environmental Liabilities

Integrated control and monitoring systems are required to ensure compliance with requirements of permits and regulations. The injection and recovery wells and related surface facilities have been designed to minimize risk from spilled solutions. Major pipelines have been designed with liners to contain spills. Storm water catchments and process impoundments should be designed at a minimum to protect against the maximum probable rain event in 24 hours. The impoundment designs must meet or exceed the Best Available Demonstrated Control Technology (BADCT) guidelines published by ADEQ, (2004). The water impoundment installed for the pilot leach test was engineered to meet BADCT requirements; it is double-lined to prevent leakage and contains a leak-detection and collection system between the liners.

The well design and solution control mechanisms were tested by BHP in 1997 and found to meet the Underground Injection Control (UIC) permit requirements. The solution control mechanisms are the greatest potential source of environmental risk for the project. Injection and recovery wells and sophisticated, computerized flow controls are required to facilitate pumping of the estimated 10,000 gallons per minute (631 l/sec) of solution into the deposit-area. The maintenance of hydraulic control (an inward groundwater gradient surrounding the injection zone) and the supporting water balance during operations is essential to preventing ISCR solutions from migrating beyond the permitted injection zone and to maintaining compliance with the conditions of the Aquifer Protection Permit (APP) issued by ADEQ and the UIC permit issued by the United States Environmental Protection Agency (EPA). Long-term liabilities primarily relate to the ability to restore the groundwater after the ISCR process. The monitoring of groundwater quality in the field test area demonstrated that the trace metals and sulfate could be rinsed to required regulatory levels without adding chemical rinsing amendments but additional review of post-operations water quality analyses is warranted. Laboratory tests indicate that restoration can be accomplished on a cost-effective and timely basis.

4.5.2 Environmental Permits

Federal, state, and local environmental permits will be required for the reactivation of the project. BHP obtained the major permits required for ISCR testing and production. Curis is in the process of preparing applications to ADEQ and EPA requesting the amendment and transfer to Curis of the APP and the UIC permit, respectively. These applications are intended to be submitted to support full operations and be submitted later this year. The transfer of the Air Quality Permit and Groundwater Withdrawal Permit to Curis has been completed successfully. All of the permits for the project are described in subsequent

sections of this report. Expanded closure and post-closure cost estimates and financial assurance as required by the APP and UIC regulations will also be submitted.

4.5.2.1 Aquifer Protection Permit

The Aquifer Protection Permit is the primary permit for the project required by ADEQ. It requires engineered or other site-specific controls to minimize degradation to groundwater, detailed monitoring and reporting, compliance with water quality standards at the points-of-compliance during operation and post-closure, contingency plans, and financial assurance to fund all stages of closure and post-closure activities. ADEQ issued APP No. P-101704 to BHP on June 9, 1997. The permit is valid for the life of the project and is transferable with proper notification to ADEQ and demonstration of financial assurance by the new owner. The APP covers the in-situ wellfield, impoundments, and plant facilities. All design aspects previously presented to ADEQ meet or exceed the Arizona Best Available Demonstrated Control Technology (BADCT) guidelines (ADEQ, 2004).

Thirty-one point-of-compliance (POC) monitor wells have been installed and are arrayed around the future wellfield to monitor the groundwater in the UIC permit boundary area. The majority of the POC wells are situated downgradient of the in-situ wellfield and future surface facilities. Replacement POC monitor wells may be required if the permit boundary is expanded to incorporate additional mineral resources into the production plan. The POC wells are clustered and screened to monitor the groundwater aquifers at various elevations in the upper and lower basin fill units or overburden units, as described in Section 7.2, and in the oxide zone, as also described in Section 7.2. Twelve months of ambient groundwater data for a wide array of analytes were collected at each of the POC wells and the resulting data were used to establish alert levels (ALs) and aquifer quality limits (AQLs). The APP and UIC permits require samples from the POC wells to be collected and analyzed quarterly for seven indicator parameters including pH, electrical conductivity, temperature, fluoride, magnesium, sulfate, and total dissolved solids. The APP and UIC permits also require samples from the POC wells to be collected and analyzed biennially for an extensive suite of common ions, radiochemicals, process-related organics, and metals. Both permits establish contingency plan requirements including verification and reporting requirements that are to be followed if an AL, AQL or other permit limit is exceeded.

The APP establishes controls for surface facilities and requires that injection and production wells (also referred to as “recovery wells”) be installed and operated in accordance with UIC permit requirements. Both the APP and the UIC permit specify conditions that are designed to minimize the potential for ISCR solutions to migrate out of the injection zone and into the surrounding aquifer. The ISCR system must operate with an inward hydraulic gradient. The net-positive water balance must be maintained by ensuring that the volume of PLS pumped from the injection zone is sufficiently greater than raffinate injected into the zone.

To ensure that the inward gradient is maintained, water levels in four observation wells along the perimeter of the injection zone are compared with water levels in the nearest recovery wells. Both permits require the activation of the contingency plan if, during any 24-hour period, the volume of PLS pumped from the injection zone is equal to or less than the volume of raffinate injected into the injection zone. The permit also states conditions for protection from floods and storm events. Well closure procedures begin within 90 days of the end of active production life. Groundwater monitoring is required quarterly for 2 years after closure and then annually for 28 years thereafter.

The APP permit requires daily and weekly monitoring of plant facilities and impoundments for leakage and other operational malfunctions. The contingency plan is required to be activated whenever conditions exceeding action levels are observed. Process solution assays of the impoundments (raffinate, PLS, run-off, and water) are required on a quarterly basis initially and then once every three years. Quarterly

reports to ADEQ document the facility inspections, hydraulic control compliance, and the groundwater sampling results. Financial assurance documents may be required to be submitted annually. The permit can be amended if needed following guidelines issued by ADEQ; a “significant” amendment is required to reduce monitoring constituents or the frequency of monitoring.

BHP deferred construction of components required for commercial operation and eventually sold the mine site to Florence Copper, Inc., a subsidiary of Merrill Ranch Investments LLC, in December 2001. BHP did install 21 test wells and supporting surface facilities (a water impoundment, a tank farm and associated pipelines) in 1997 to conduct a 90-day hydraulic control test that the APP and the UIC permit both required to be successfully completed before commercial operations could commence. The wells and surface facilities were required to be installed and operated under the same criteria and with the same monitoring and reporting requirements as would apply to a commercial-scale facility. The test was successfully concluded in February 1998 and rinsing of the injection zone began promptly thereafter. Rinsing continued until 2004 when tests indicated that the water quality had been restored to a quality equal to the AWQS or to pre-mining background levels.

The 21 test wells, the water impoundment, the tank farm and associated piping (collectively referred to as the “existing test facility”) are still in place. Curis has had the water impoundment inspected and upgraded by an independent firm. The tank farm and associated pipelines are in the process of being tested and upgraded. Curis proposes to install new wells during the lead up to production and is developing plans for inspecting and testing some of the 21 existing wells in order to evaluate durability of the design and materials of well construction design used in 1997.

On March 18, 2010, Curis submitted to ADEQ a request for the transfer of the APP. Curis submitted a letter of credit in the amount of \$1,066,000 to serve as replacement for the letter of credit in the same amount that was submitted by Florence Copper in December 2001 when the permit was transferred from BHP to Florence Copper. The 2001 letter of credit primarily covered the estimated cost of closure of the 31 POC wells, the existing test facility, and 59 miscellaneous wells.

Curis is now proceeding with the preparation and submission of an application for a Significant Amendment to the APP to support the full development of the Florence Copper Project. This application will consider the full scope of the project from engineering design, through operations to closure of the facility. As part of this, the entire project life cycle will need to be considered in detail including developing new estimates for closure and bonding. ADEQ, the regulatory agency charged with the responsibility of reviewing the APP amendment application, has a defined and legislated review timeline that typically spans between nine and 12 months to complete. The process involves a detailed technical and engineering review of the permit application along with a structured public consultation process.

4.5.2.2 Aquifer Exemption and Underground Injection Control Permit

The EPA Underground Injection Control (UIC) regulations related to in-situ mining are part of the Safe Drinking Water Act and are designed to allow the extraction of mineral resources while protecting sources of drinking water. The Florence ISCR wells require permitting as Class III wells. No Class III UIC permit can be obtained unless the facility receives an “aquifer exemption” from EPA. The aquifer exemption and a Class III UIC permit (EPA permit AZ396000001) were granted to BHP on May 1, 1997. The UIC permit was issued for the approximate 15-year life of the project and the 30-year post-closure period. The permit is reviewed every 5 years and is transferable to the new owner upon sale of the property with proper notification and financial assurance.

Although the APP requirements cover surface facilities as well as injection and recovery wells, the UIC permit requirements address only the injection and recovery wells and related controls required to protect

groundwater quality outside the aquifer exemption area during operations, closure and post-closure. Post-closure groundwater quality must be kept at levels equal to or less than the maximum contaminant levels (MCLs) established at 40 Code of Federal Regulations (CFR) 141, or to pre-development background concentrations if the pre-development concentrations are higher than the MCLs, and to restore groundwater quality in the aquifer exemption area to the same standards during and following closure. The UIC permit is based on regulations in 40 CFR 144 and 146. The permit includes well construction, integrity testing, and monitoring requirements; groundwater monitoring requirements; operating and closure criteria for production blocks and for wells within the production blocks; contingency plan requirements, post-closure monitoring requirements, and closure and post-closure financial assurance requirements.

An environmental impact study (EIS) was not required under UIC regulations, but several information requirements of the UIC permitting process mirror a typical EIS process. The EPA was required to consult with U.S. Fish and Wildlife under Section 7 of the Endangered Species Act.

A survey, coordinated with Arizona Game and Fish, was also conducted under the Endangered Species Act. A survey of the areas around the proposed wellfield and plant facilities found no species listed on the endangered or threatened list. BHP agreed to install tortoise fencing to prevent Sonoran Desert Tortoises from entering the water impoundment that was constructed for the pilot ISCR test. BHP also agreed to monitor the ponds for migratory birds and to report any bird mortalities. If problems arose with bird landings, BHP was required to submit a contingency plan to address this issue. Curis will review and update BHP plans before construction required for commercial operations will begin. No impact is anticipated with the existing facilities because the water impoundment has been fully fenced.

Under UIC regulations, the operation must comply with the National Historic Preservation Act (NHPA). An intensive survey was conducted over the entire area planned for the wellfield and plant facilities. Fifty-six sites were found to be “eligible”, “non-eligible”, or “undetermined” for listing on the National Register of Historic Places (NRHP). BHP then developed a Cultural Resource Management Plan (CRMP) in consultation with EPA, the State Historic Preservation Office (SHPO), and consulting tribes that would cover the mine for the life of operations; this CRMP included development of a Programmatic Agreement to streamline future compliance with Section 106 of NHPA. A Burial Agreement was also prepared in consultation with the Arizona State Museum, and five consulting tribes to handle any human remains discovered during excavation. This was prepared pursuant to A.R.S. 41-865. The Burial agreement was signed on May 22, 1996 by the Arizona State Museum, the Gila River Indian Community, and BHP. The Programmatic Agreement was issued on August 30, 1995 and finalized on February 22, 1996 and was signed by the Gila River Indian Community, EPA Region IX, SHPO, the Advisory Council on Historic Preservation, and BHP. The CRMP was approved by all signatories in January 1997.

Between 1995 and 1997, consultants working on behalf of BHP, excavated approximately 900 trenches (typically 1 m wide by 1.5 m deep by 10 m long) in the proposed plant, wellfield, and impoundment areas to evaluate site eligibility, further characterize specific sites, and mitigate adverse effects at two sites. To date, two NRHP-eligible sites have been mitigated within the permit area.

On February 25, 2010, Curis submitted a letter and appropriate documentation to EPA requesting the transfer of the UIC permit. Curis is now in the process of preparing and submitting relevant technical, engineering and environmental information to support the EPA’s review of a revised development and operations plan for the Florence Copper Project. The EPA has indicated by way of a letter dated August 6, 2010 to Curis that EPA will be revoking and reissuing the UIC permit for the Florence Copper Project owing to the amount of time that has lapsed since the original permit was granted to BHP and the need to consider a revised development plan for the project that Curis will be submitting.

The APP and UIC permit applications will be reviewed cooperatively by ADEQ and EPA. It is expected by Curis that a similar timeline for granting of the UIC permit (9 to 12 months) will be followed. This review period follows submission of a complete application, which is expected by the end of 2010.

4.5.2.3 Other Federal Permits

The U.S. Army Corps of Engineers (ACOE) approved a plan submitted by BHP in a Nationwide 26 Permit application to reroute one section of a man-made ditch around the northeast corner of the planned SX/EW plant area. After public notice was given and a 401 Water Quality Certification was received from ADEQ, ACOE issued permit File Number 954-0306-MB to BHP on March 20, 1997. The need to relocate the drainage will be evaluated during final engineering design and steps will be taken to ensure the relocation is properly permitted if relocation is needed. A new biological survey for threatened and endangered species may be required before rerouting is initiated.

The Florence Project operated under National Pollutant Discharge Elimination System (NPDES) Stormwater Multi-Sector General (MSG) Permit AZR05A795. The MSG program is now managed by ADEQ under the AZPDES program. BHP submitted a notice-of-intent to discharge stormwater under the EPA MSG permit guidelines in December 1998. That permit has since lapsed and Curis will submit a notice of intent in accordance with the new mining permit (MSGP-2010-Mineral Industry) which is now undergoing final edits by ADEQ.

The National Environmental Policy Act (NEPA) did not apply to the issuance of the UIC permit in 1997 because EPA's issuance of such permits is expressly exempt from NEPA requirements. Therefore, any future amendments of the UIC permit will not trigger NEPA. NEPA will not be triggered by the issuance of a National Pollutant Discharge Elimination System ("NPDES") discharge permit (whether individual or general) because the NPDES program has been delegated to the State of Arizona, and state agency actions do not trigger NEPA.

NEPA could be triggered under Clean Water Act Section 404 if authorization is required for any aspects of the project involving the discharge of fill material into jurisdictional waters. However, NEPA review is not triggered by authorization under Section 404 Nationwide Permits ("NWP"), and several NWPs potentially may be utilized to authorize any project impacts, particularly considering the small anticipated impact to potentially jurisdictional waters (0.2 acres). If no NWPs may be utilized and, as a result, an individual Section 404 permit is required, although NEPA review will be triggered, it will be limited and is unlikely to trigger the requirement to prepare an Environmental Impact Statement ("EIS"), because the aspects of the Project involving the discharge of fill material into jurisdictional waters are not critical to enable the project operations.

4.5.2.4 Other State and County Permits

The Arizona State Land Department (ASLD) holds the title to surface and mineral rights on a portion of the north half of the deposit. Before ISCR operations can occur under the Arizona State Lease 11-26500, a Mine Plan of Operations (MPO) must be submitted to and approved by ASLD, and arrangements made for royalty payments. The MPO describes operations, closure, and re-vegetation plans. BHP's MPO was approved by the state on January 29, 1997. The mineral lease was transferred to Curis on February 24, 2010.

The Arizona State Mine Inspector's Office manages the Mined Land Reclamation Program (Arizona Revised Statutes Chapter 5, Title 27,). This program requires the development of reclamation plans that will ensure safe and stable post-mining land use. The plans must include cost estimates and financial assurance for implementing the plans. Curis is in the process of preparing a reclamation plan that will amend the reclamation plans submitted by BHP and Florence Copper to the Arizona State Mine Inspector.

Curis will provide a copy of the plan to ASLD for review and comment. An annual status letter must be provided to the State Mine Inspector. In addition to the reclamation plan, Curis will be required to file other paperwork associated with “new mine start-ups” including applications for a federal and state MSHA number (Mine Safety & Health Administration).

The proposed water impoundments may be subject to dam safety permit requirements administered by the Arizona Department of Water Resources (ADWR). To ensure that the final pond design will meet ADEQ and ADWR approval, information developed during the operation of the PTF that may result in changes in the design of the ponds will be evaluated in light of ADWR requirements. The water impoundment constructed in 1997 for the hydraulic control test was exempt from the dam safety permit requirements because its berms do not exceed the review threshold of six feet above grade.

ADWR is also responsible for managing a complex array of laws and regulations that are designed to ensure long-term supplies of surface water and groundwater resources. It is responsible for managing water rights and permit programs for issuing permits for well installation, well abandonment, hydrological testing, and mineral extraction/metallurgical processing. Annual reports must be submitted to document groundwater use and withdrawal from all wells, including the mineral extraction wells. The well construction and well abandonment plans approved in the APP and UIC permit are designed to meet ADWR’s criteria. However, permits must be obtained from ADWR for drilling and abandoning the wells.

Curis has requested ADWR to transfer permit No. 59-562120.0002 from Florence Copper to Curis. The permit, which authorizes the withdrawal of up to 806 acre-feet of groundwater per year from well 55-562121 for mineral extraction, was transferred on April 5, 2010.

Pinal County issued Air Quality Control Permit number B30588 to BHP on December 17, 1996. The permit covers air emissions from the SX/EW plant and evaporation sprayers. To prepare the application, BHP commissioned two studies to estimate the level of emissions expected from the SX/EW plant. The studies indicate that the Volatile Organic Compounds (VOCs) evaporation rate at the project site will be less than 100 tons (91 tonnes) per year. The operation must have a net VOC discharge of less than 100 tons per year to meet permit conditions. The transfer of the Pinal County Air Quality Control District was completed on March 4, 2010.

County burn permits will be acquired periodically as needed. A waste disposal permit is not required, as all on-site non-hazardous waste will be hauled to the nearby municipal solid waste landfill.

Construction will require a building permit from the Town of Florence. Curis will work with Pinal County and the Town of Florence on emergency response plans and will file appropriate reports with the state and local emergency response agencies. The San Carlos Irrigation Drainage District (SCIDD) manages the North Side Canal which runs east to west through the middle of the permitted mine area. BHP contacted SCIDD to relocate two irrigation wells (BIA-9 and BIA-10) owned and operated by SCIDD. The wells are located central to the resource area, and their use will adversely affect an ISCR operation. The SCIDD Board of Directors had no objections to relocating the wells at BHP’s expense. A plan for closing and relocating BIA9 and BIA10 by drilling and developing replacement wells will be developed with SCIDD as the applications for APP and UIC permit amendments for commercial operations are being prepared.

Table 4-1 Permits, licenses, and authorizations for the Florence Project

Item	Agency	Original Issue Date	Current Status
Aquifer Protection Permit No. 101704	Arizona Department of Water Quality	6/9/97	Transferable to new owner. Permit is for life of project mine. Financial assurance demonstration required for construction, operation, maintenance, closure costs. Permit transfer request sent to ADEQ on 3/18/10 with letter of credit for financial assurance. Additional information, including financial assurance, was submitted to ADEQ on 5/19/10. Curis has indicated intent to ADEQ that the company will be submitting a significant amendment application to support full operations in the 4th Quarter of 2010.
Underground Injection Control and Aquifer Exemption No. AZ396000001	U.S. Environmental Protection Agency	6/1/97	Transferable to new owner. Permit is for life of project mine but is reviewed every 5 years and annual financial proof required. Request for permit transfer was submitted to EPA on 2/18/10. Additional information was submitted on 5/28/10 and on 6/25/10. Curis has indicated to EPA that the company will be submitting an application to support full operations in the 4th Quarter of 2010. EPA will review, undertake appropriate public consultation and, if acceptable, re-issue the UIC Permit.
Air Quality Permit No. B30588.000	Pinal County Air Quality Control District	12/16/96	Permit has been transferred to Curis.
Burial Agreement Case No. 94-24, A.R.S., 41-865	Arizona State Museum and representative tribes	5/22/96	Adopt by reference or renegotiate.
Programmatic Agreement Section 106	U.S. Environmental Protection Agency	8/30/95	No change to agreement
Nationwide Permit Number 26 No. 954-0306-MB	U.S. Army Corps of Engineers	3/20/97	Permit is transferable. Status is under review.
401 Water Quality Certification ERP 07-0014	Arizona Department of Environmental Quality	11/15/96	Status is under review.
Mineral Lease Agreement 11-26500	Arizona State Land Department	1/29/97 (extension granted)	Transferred to Curis on 2/24/10.

Table 4-1 Continued

Item	Agency	Original Issue Date	Current Status
C.A.P. Canal Turn Out Agreement	Pinal County (Fee No. 1996-041942)	12/20/96	No change to agreement.
Mined Land Reclamation Plan	Arizona State Mine Inspector	8/28/97	New plan is being prepared. Annual status letter required.
Permit for the Withdrawal of Groundwater for Mineral Extraction	Arizona Department of Water Resources	8/29/07	Permit transferred to Curis on 4/5/10.
Storm Water General Permit No. AZR00A224	U.S. Environmental Protection Agency (now under jurisdiction of ADEQ)	12/31/92	Permit has lapsed. Curis will submit NOI for new multi-sector mining permit that is scheduled to be signed by ADEQ in September/October 2010.
Radio License No. 9510D001927	Federal Communications Commission	11/13/95	New application will be needed
Sewage Permit No. 389-92	Pinal County Department of Health and Human Services	11/10/92	Permit was transferred to Curis.
Change-of-Use Permit	Pinal County Courthouse	2/25/97	Permanent ruling.
Amendment of General Plan and Site Rezoning	Town of Florence	n/a	Discussions ongoing. GP amendment and site re-zoning required prior to start of construction of facilities for commercial operations on lands outside of State Mineral Lease area

Source: Compiled by Curis using available information as of September 30, 2010



Figure 4-1 Location map – Curis Resources Ltd. Florence Project

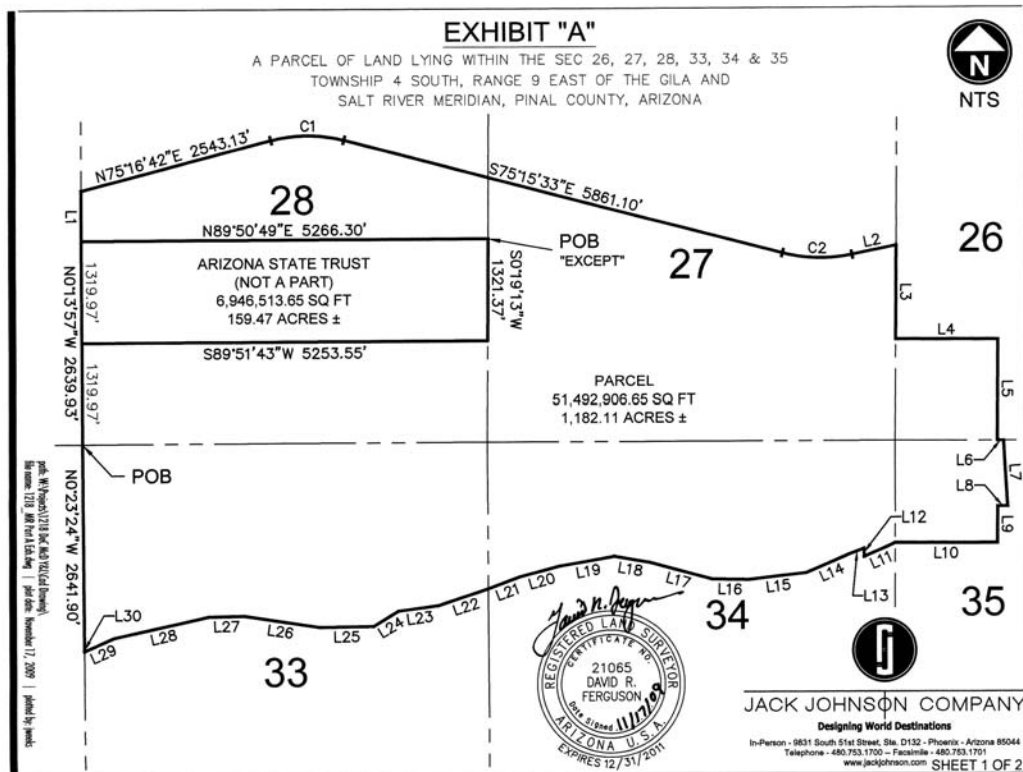


Figure 4-2 Curis land ownership map – November 2009

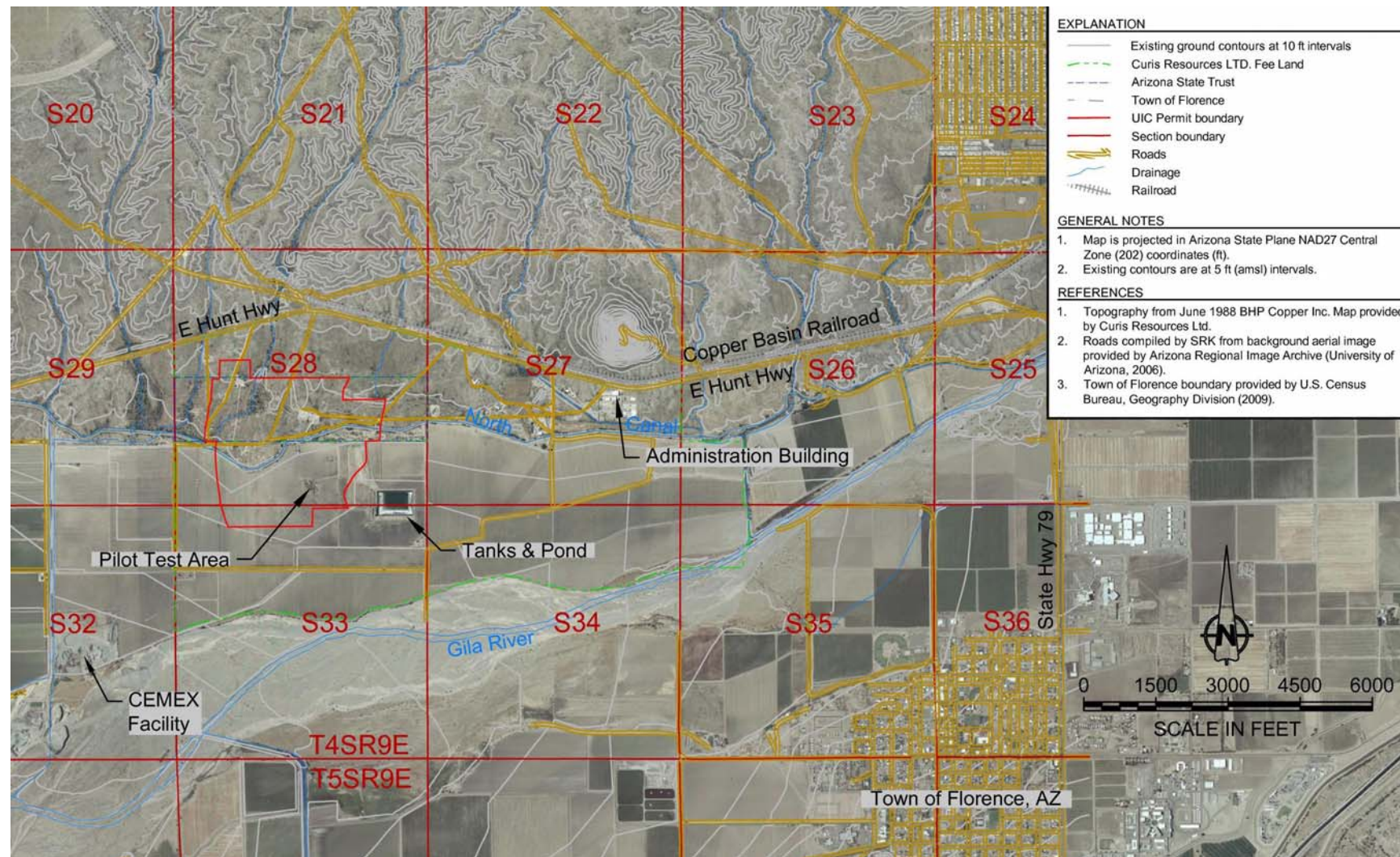


Figure 4-3 Site map (SRK, 2010)

5 Accessibility, Climate, Local Resources, Infrastructure and Physiography (Item 7)

This section discusses the physical conditions of the project site.

5.1 Topography, Elevation and Vegetation

The topography of the project area is a flat alluvial surface, historically suitable as farmland. The land surface slopes gently southward across the site. The site elevation is approximately 1,480 feet above mean sea level. Most desert plants are widely spaced, and their leaves are small or absent. Many species have thorns. Typical Sonoran Desert vegetation consists of short trees, 10 to 30 feet tall, and shrubs. Cacti, yucca, and agave also are common in selected areas; their ranges depend largely upon elevation. There is sparse vegetation in the Florence area; mainly it consists of creosote bushes, which aggressively populate disturbed areas of the desert.

5.2 Climate and Length of Operating Season

The climate in the region is typical of a semi-arid desert region with low precipitation, high summer temperatures, and low humidity. Rainfall is seasonal with peaks in winter and summer. Summer precipitation often occurs as heavy thunderstorms, locally referred to as monsoons. The annual precipitation at Florence from 1909 through 2005 ranged from 2.4 inches in 1911 to 20.01 inches in 1978. The average annual precipitation is 9.95 inches, compared with an evaporation rate of 92 inches. Temperatures during the summer regularly exceed 100 degrees Fahrenheit. During the winter, temperatures average 50 degrees to 80 degrees Fahrenheit. Because of high evaporation rates, only small amounts of precipitation are available for recharge to the aquifer. The climatic regime is supportive of year-round mining operations.

5.3 Physiography

The project site is located in south-central Arizona, in the Sonoran Desert of the Basin and Range Lowlands physiographic province. The region is characterized by generally northwest-trending mountain ranges separated by relatively flat valleys filled with sediments shed from the adjacent mountains. Elevations range from 1,000 to 3,000 feet above mean sea level (amsl). Tertiary age volcanic activity in the region is responsible for occasional peaks in the intermountain valleys, such as Poston Butte north of the project area.

The project area is at the south end of the valley, at an approximate elevation of 1,480 feet amsl. The principal surface water feature in the area is the Gila River, with a drainage area of approximately 58,000 square miles. The river is located about one half mile south of the Florence copper deposit. The river is dry much of the year and flows east to west in response to regional precipitation events. Coolidge Dam, which is approximately 55 miles east of Florence, regulates 75 percent of the upstream watershed runoff. All upstream flow is diverted into the Florence-Casa Grande canal, south of the project area, and the North canal, which transects the project area.

5.4 Access to Property

The project area is approximately equidistant from Tucson and Phoenix, which are both connected by U.S. Interstate 10 (I-10). Travel north or south on I-10 as appropriate. Take Exit 185 toward Coolidge/Florence and follow the signs to AZ-387. Continue on AZ-387 for 6.9 miles. Turn right onto AZ 87 and continue for 7 miles. The road changes from AZ-87 to AZ-287. Stay straight for 2.9 miles.

Turn left onto N. Attaway Road and continue for 3 miles. Turn right on East Hunt Hwy and continue for 3.9 miles to the site. Access from the town of Florence is also available by paved roads. Travel north on AZ-79/Pinal Parkway for 1.7 miles. Turn west onto Hunt Highway and continue 1.8 miles to the site. The area of the previous ISCR field test and ancillary areas of the Florence property are accessible via all-weather graded roads and local farm roads.

5.5 Surface Rights

Some 1,182.1 acres of patented land constituting the Project area is held in fee simple; there are no separate surface rights. A portion of the surface and mineral rights (approximately 159.5 acres) is on State Trust Lands of Arizona under Arizona State Mineral Lease 11-26500.

5.6 Local Resources and Infrastructure

Local infrastructure and vendor resources to support exploration, development, and mining are excellent. Exploration and mining service companies for the metals/non-metals, coal, oil and gas, industries are located in Phoenix and Tucson, and at a greater distance, in Albuquerque, New Mexico and Denver, Colorado. Locally available resources and infrastructure include power, water, communications, sewage and waste disposal, security, rail transportation, and a skilled and unskilled work force.

5.6.1 Access Road and Transportation

Travel access into the Florence Project is excellent. I-10 from both Phoenix and Tucson, Arizona to AZ-387/AZ-87/AZ-287 provides quick access on interstate and state highways. Four-wheel-drive vehicles are recommended to access dirt roads lacking a gravel veneer during wet weather when the flat terrain becomes soft. Local access is shown on Figure 4-3. Ingress and egress to the future plant and wellfield facilities for light duty vehicles and commercial delivery trucks will be via Coors and Largo Roads, which are currently all-weather graded farm roads. Sections of the road will be paved prior to operations startup to minimize dust. Access to the production field test area and the future wellfield will be via the bridge over the North Canal. SCIDD permitted BHP to upgrade the bridge so that it can accommodate all vehicles needed for operations; signs for traffic control have been installed.

One additional crossing will be required for the piping runs to the wellfield. Fluor Daniel Wright (FDW) of Vancouver prepared preliminary engineering drawings for the site including a bridge crossing that eliminates the possibility of process solution contacting canal water.

5.6.2 Buildings and Ancillary Facilities

The Florence Project is equipped with an administrative office building, parking lot, fenced laydown yard and water tank, and a steel core-storage Quonset shed. The office building is equipped with offices; conference, map, drafting, file, and display rooms; lavatories; and a wet chemical laboratory. A portion of building was renovated in May and June 2010 for use by technical staff during the production field test. Historic documents and records are maintained in the building; the files and records were consolidated and secured during building rehabilitation activities. The core-storage Quonset has wooden and steel shelving that holds core boxes and pulp samples from previous work. This building is open to the elements via a ceiling vent and some of the cardboard boxes holding pulp samples have been adversely affected by rain. A master list in the building provides an index to the core boxes stored in this facility and their location among the shelving. The buildings are secured with locks and/or padlocks.

Additional ancillary facilities are associated with the pilot ISCR field test including tank farm, water impoundment, piping, and a wellfield. The water impoundment and tank farm are enclosed by a locked six-foot high chain link fence with barbed wire on top.

5.6.3 Communications and Security

Landline telephone, cellular telephone, and internet services are available at the Project site.

Curis has retained a contract security company to provide security for the Florence Project. The contract security firm patrols the project area, buildings, and wellfield because the site is currently accessible to the public and there are no fences around the site other than around the existing water impoundment and tank farm. During full-scale operations, a six-foot high chain-link fence with three-strand barbed wire mounted on top will be installed around the plant and wellfield areas with controlled gates and a primary entry location near the office building. A weigh scale will be provided at the primary entry and the security guard will serve as weigh-master.

5.6.4 Railroad

The Copper Basin Railway, a federally regulated shortline railroad located 100 feet north of Hunt Highway adjacent to the site, provides rail access between the town of Winkelman and the Union Pacific Railroad connection at the Magma loading station near Interstate-10. The railroad has branch lines connecting the ASARCO mine and processing facilities at Ray and Hayden in Gila and Pinal Counties, and interchanges with the San Manuel Arizona Railroad in Pinal County. The Florence Project will utilize rail cars for receipt of supplies, possible shipments of copper cathode, and rail receipt of materials for construction of the plant facilities. This would be accommodated by acquiring a right-of-way and installing a rail spur off the Copper Basin Rail Road line. Discussions on this matter remain at an early stage, however, and pursuit of a rail spur would only be advanced with the support of the Town of Florence, Pinal County and the agreement of the Copper Basin Railway.

5.6.5 Power Supply

Power is provided directly to the project site by the San Carlos Irrigation Project (SCIP), a private company categorized under Water Distribution or Supply Systems for Irrigation. The company, established in 1930, is located in Coolidge, Arizona. SCIP obtains power from various sources including the Salt River Project (SRP, Arizona Public Service (APS), and the Western Area Power Association (WAPA). The service area for irrigation and power customers encompasses 3,000 square miles in Pinal, Pima, Maricopa, and Gila counties. In 2002, approximately 17,000 customers both on and off the two Indian Reservations received their electricity from this company.

The Florence Project is currently service exclusively by SCIP. A 12.5-kW line emanates from the Florence substation and runs parallel to Hunt Highway. The line terminates at a small substation on the property and is inadequate to service the life-of-operation facilities. Estimated power requirement is 17 MW with a peak need of 20 MW (FDW, 1995). This load represents a major percentage of the current SCIP load. A power contract between Curis and SCIP will need to be negotiated.

Curis will also investigate the option to utilize renewable solar power to service a portion of the site's power needs. The location of readily accessible infrastructure and a competitive feed in tariff regime for renewable power in the State of Arizona makes the production and use of solar power an attractive option for consideration. This will be considered more fully in the full feasibility assessment of the project.

5.6.6 Natural Gas

Southwest Gas Company supplies natural gas through an existing 3-in line that feed from the El Paso Natural Gas high-pressure line that lies just north and west of the planned facilities. Natural gas will be required for the boiler for the cathode wash and strip system and for shower facilities for the proposed facilities. In the preliminary engineering designs completed in 1995-1996, FDW estimated that the line requires upgrading to 4 inches and that the gas pressure is inadequate. They performed a trade-off study

for back-up power for the back-up generator and recommended that a diesel generator would be the most capital and cost efficient option given the limited need for back-up power. This option is included in the capital cost estimate. Southwest Gas will bear the cost of upgrading the line.

5.6.7 Water Supply

The Florence Project site is within the Pinal Active Management Area (AMA), which is managed by the Arizona Department of Water Resources. Within the AMA, a landowner must have a groundwater right or permit to pump groundwater unless the landowner is withdrawing groundwater from an “exempt” well – defined as a well with a maximum pump capacity of 35 gallons per minute (gpm). The Florence Project has 11 exempt wells. Non-exempt wells are those wells that have a pump capacity of greater than 35 gpm and include grandfathered rights, service area rights, and withdrawal permits. The Florence Project has 16 non-exempt wells with grandfathered water rights that specify how groundwater can be used. The Type I non-irrigation grandfathered rights are used for land that is permanently retired from farming and converted to non-irrigation uses such as subdivisions or industrial plants; this right may be conveyed only with the land. The maximum amount of groundwater that can be pumped annually from the Type 1 non-irrigation right acquired from Florence Copper Inc. (58-105084.0004) is 3.4 acre/feet per acre.

Wells with Type II non-irrigation grandfathered rights wells can be used for any non-irrigation purpose; the right is based on historical pumping rates and the maximum pumped in any one year from 1975 through 1980. These rights can be sold separately from the land or well. Curis has acquired from Florence Copper, Inc. two such Type II non-irrigation rights (58-112949.0002 and 58-112948.0004) and the maximum amount of groundwater that can be pumped annually under these rights is 17 acre-feet per annum and 4,063.51 acre-feet per annum, respectively. Curis has filed change of well ownership forms with the Arizona Department of Water Resources for its “exempt”, “non-exempt”, “monitor/piezometer”, and “other” wells.

Water requirements for the proposed Florence Project were calculated by FDW to be approximately 450 gallons per minute (725.4 acre-feet per annum). The present well that serves the office building has a capacity for 150 gpm but is inadequate for the future SX/EW plant facilities. The combined mineral extraction and irrigation groundwater rights of 4,889 acre feet per annum secured by Curis and the quality of this water, however, are sufficient to supply the LOM water needs. A stamped preliminary engineering design will need to be prepared to design a pipeline to pump the water from an existing irrigation well to the existing 100,000 gallon storage tank and planned plant location. The previous design stamped by Brown and Caldwell was to bring water from an existing irrigation well that has been sold and is not controlled by Curis. Potable water is not available at the site so bottled water is used for drinking.

As mentioned previously, the project is within the San Carlos Irrigation and Drainage District, which formed because of the 1924 Landowners Agreement that allocated water rights to Native Americans and others along the Gila River and North Side Canal. The agreement covered groundwater and canal water and levies fee for use of the water. BHP noted that the agreement did not allow for water use for industrial purposes so applied for a change-of-use to the agreement with the U.S. District Court. SCIDD and the Gila River Indian Community agreed to drop their objection to the change-of-use application if BHP would allow a right-of-way from the Central Arizona Project (C.A.P) Canal to the North Side Canal. BHP agreed to this as it would give the company access to its 2,200 acre/feet per year annual allotment of C.A.P water. In February 1997, the District Court Judge in charge of resolving water rights issues granted a permanent change of use that allows SCIDD area groundwater and canal water to be used for industrial purposes. BHP subsequently sold the right to the annual allotment of C.A.P. water. Curis has sufficient water rights for the project without this allotment, and there is no need to make any changes to the North Side Canal.

5.6.8 Waste Disposal

The current site refuse is primarily office trash, which is removed to the Adamsville County landfill, located about seven miles by road from the project site. Projected life of mine wastes will primarily be construction and office trash; dumpsters will be provided at the office building, maintenance shop, wellfield, and SX/EW plant with trash pickup by the Town of Florence or a private waste disposal firm. Contract drilling companies and other contractors will be responsible for their own trash removal. The mine will be a qualified low hazardous waste generator; the hazardous wastes will be minimized and are expected to be less than 100 pounds (45 kg) per month. A Toxicity Characteristic Leaching Procedure (TCLP) will be conducted on filter residues or other substances as needed to assess the concentrations of hazardous materials prior to disposal. Other materials such as used motor oil, tires, batteries, fluorescent lights, and oily rags will be sent to recycling facilities or permitted waste disposal facilities as appropriate. FDW and Brown and Caldwell looked at the options of on-site disposal, but eliminated these options owing to the cost of permitting and other field work.

5.6.9 Manpower

Southern Arizona is an area with a long history of mining-related construction, copper exploration, mining, heap and in-place leaching, and processing with long-established vendor-support services. Labor for these activities is available in small nearby towns, such as Florence, Queen Creek, Mesa, Eloy, Apache Junction, and the greater metropolitan areas of Phoenix and Tucson, Arizona. All these nearby towns can easily accommodate the necessary labor force. The cities of Tucson and Phoenix also have skilled manpower available.

6 History (Item 8)

There is a long history of metal exploration, mine development, milling, smelting, leaching (heap, dump, in-place) in southern Arizona. Initially, mining occurred in underground mines and shallow surface excavations; eventually modern bulk tonnage, low-grade porphyry copper and copper-molybdenum mines replaced the underground mines in prominence. The open pit operations are operated to process both sulfide mill ore and oxide leach ore similar to that found at Florence. In-place leaching on similar ore types was performed for a number of years at nearby copper operations and has been used at BHP Miami since 1947.

In the early 1960s, American Smelting and Refining Company (ASARCO) geologists noted the presence of “live limonite” along the base of Poston Butte and drilled three holes but were unsuccessful in locating the main deposit area; the leases and claims held by ASARCO near Poston Butte were dropped. Additional historic exploration in the neighborhood of the Florence Project included the Aztec, Cholla Mountain, and the Santa Cruz properties, but these are not directly connected geologically to the Florence deposit.

6.1 Ownership

The project area has had three owners whose primary business is exploration and mining development including Continental Oil Company (Conoco), Magma Copper Company (Magma), and BHP Copper Inc. (BHP). BHP conveyed the land constituting the Florence Project to Florence Copper Inc. on May 26, 2000. Florence Copper Inc. was then sold to Merrill Mining LLC of Atlanta, Georgia, effective on December 5, 2001. In 2004, Roadrunner Resorts, LLC acquired the patented land owned by Florence Copper Inc. including land forming part of the Florence Project. WHM Merrill Ranch Investments LLC subsequently acquired those patented lands. On January 8, 2008, Felix-Hunt Highway, LLC acquired Florence Copper, Inc., the lessee under the Arizona State Mineral Lease 11-26500. The annual reports of Florence Copper, Inc. filed with the Arizona Corporation Commission for the years 2001 to 2009 list the main business activity of Florence Copper Inc. as “real estate”. In the 2009 report dated January 28, 2010, Felix Hunt Highway, LLC is listed as owning more than 20 percent of the shares of Florence Copper, Inc.

On March 10, 2009, certain patented land, including land comprising the Florence Project, was conveyed in foreclosure proceedings to The Peoples Bank. On October 28, 2009, Merrill Ranch Properties, LLC acquired the patented land from The Peoples Bank. Curis purchased the surface rights and all of the mineral rights of some 1,182.59 acres of patented land constituting part of the Florence Project from Merrill Ranch Properties, LLC on December 17, 2009. On February 24, 2010, Curis obtained assignment of Arizona State Mineral Lease 11-26500. On April 14, 2010, the name of Curis was changed from U1 Resources Inc. to Curis Resources (Arizona) Inc.

6.2 Past Exploration and Development

Florence property was originally held by American Smelting and Refining Company (ASARCO). In the early 1960s, ASARCO drilled three holes around the edge of the deposit but none were drilled in the more mineralized portion (S. More, oral communication, 2010). The land leases and permits held by ASARCO were subsequently dropped.

In 1969, regional reconnaissance of Arizona by the Continental Oil Company (Conoco) led Conoco geologists to evaluate the potential copper resource at Florence. After signing land options (ASARCO retained a small lease to the west of the deposit), Conoco started drilling in March 1970 and by August 1970, core samples from drilling indicated that a potential ore body had been discovered. The first drill hole, which was located on the southwest flank of Poston Butte, encountered oxide/silicate copper and

secondary copper enrichment. Conoco implemented a drilling program to determine if there was sufficient mineralization to warrant a multi-hole exploration program. The initial drilling program did show cause to examine the deposit further. A triangular grid-drilling pattern was established and the initial holes were spaced at the 1,000-foot apexes of the equilateral triangles. Later drilling stages brought about the addition of holes spaced 500 feet apart. Finally, the 500-foot spaced drilling pattern was in-filled with holes on 250-foot centers.

Conoco envisioned a large open-pit sulfide mine with waste rock and tailings facilities north of Hunt Highway; they developed the project in three phases. Phase I was a study that focused on an extensive rotary and core drilling program. Phase II included a more detailed study with additional drilling. Phase III work included the development of a pilot mine, the construction and operation of a pilot plant, preliminary design of processing facilities, and various other studies required for the evaluation of project feasibility.

Between 1969 and 1975, Conoco geologists delineated an extensive, low-grade porphyry copper resource near Poston Butte. The delineation was based on 605,857 feet of exploration and development drilling in 659 holes (Nason and others, 1983). The drilling program included 396 rotary-core and 263 rotary only drill holes. Approximately one-half of the holes were drilled into the main portion of the mineral deposit, with the remainder drilled into peripheral areas primarily for site condemnation.

In 1974, Conoco mined over 50,000 tons of mineralized quartz monzonite from a single-level, underground mine designed for metallurgical, mining, and geological testing. The mine included one mile of drifts and two vertical shafts for ventilation and hauling ore to the surface. The shaft infrastructure was later removed and the openings sealed with concrete. Metallurgical testing of the recovered material was performed using a small pilot plant built on the property. The pilot mine is now sealed and flooded. Development drilling ceased in 1975 and the project was forced into dormancy owing to a low copper price (\$0.50/lb) at the time and the relatively large capital investment. Conoco invested US \$27 million in the project studies, drilling, engineering designs, and construction of a pilot plant and underground mine. The property remained idle for nearly two decades thereafter.

Magma Copper Company acquired the property from Conoco in July 1992 for US \$9 million and initiated a pre-feasibility study in January 1993 to verify the Conoco work and to determine the most effective technology for extracting copper from the deposit. Magma Copper Company drilled an additional 23 holes into bedrock as part of its verification program during the pre-feasibility study (1993-1995). There were no fatal flaws encountered regarding the accuracy and consistency of the Conoco data. A detailed description of the results of these comparisons can be found in Magma's pre-feasibility report (RDTG, 1995).

The pre-feasibility study focused on identifying the most appropriate mining method for developing the oxide portion of the deposit. The methods evaluated were: (1) open pit mining followed by heap leaching and solvent extraction and electrowinning (SX/EW), and (2) in-situ solution mining followed by SX/EW. Parallel studies were performed by Magma personnel and by Independent Mining Consultants (IMC) of Tucson, Arizona (contracted by Magma). Magma personnel evaluated the in-situ potential of the project while IMC evaluated the open pit scenario.

Magma also drilled 12 holes for material properties testing purposes (pumping tests), and two large-diameter (6") holes for obtaining bulk samples for metallurgical testing; the large-diameter holes, MCC-533 and MCC-534, were completed during the early stages of the feasibility study. These additional holes were drilled into the central portion of the deposit for a total footage of 10,892 feet.

An exploration program was implemented to drill five holes (8,280 feet) in Section 22, located about 2 miles northeast of the Florence deposit. Land access issues had prevented drilling prior to this time. Near-surface outcrops and subcrops of acid soluble copper mineralization were the targets of this program. The geologic target was proposed to be a small, faulted segment of the large-scale Florence porphyry copper system. Drilling confirmed the presence of propylitic alteration and low-grade, erratic, copper sulfide mineralization. No copper mineralization of economic grade was encountered.

The pre-feasibility study was completed in January 1995 (RDTG, 1995) at an approximate cost of US \$2.6 million. The results from copper resource modeling, metallurgical testing, material property testing, and financial analysis all supported the conclusion that the most appropriate technologies to employ were well-to-well in-situ leach mining followed by SX/EW to produce cathode copper. The lithologic, mineralogical, and structural features are all favorable to solution mining because of the low acid-consuming potential of the host rock, the presence of acid-soluble chrysocolla located along fractures and in argillized feldspars, and the intense fracturing of the rock, which allows solution migration.

The recommendation was made to proceed with a feasibility study that would provide ore reserves, permitting, detailed in-situ mine design, and facility engineering capable of advancing the project to the construction stage.

In January 1996, Broken Hill Proprietary Company Limited of Australia acquired Magma and created BHP Copper Inc. The feasibility study started by Magma in January 1995 continued through the acquisition phase. The study included a drilling program of 67 holes drilled into the deposit and surrounding area to serve as pumping, observation, and monitoring wells. These wells were drilled to provide hydrologic data for the Aquifer Protection Permit Application and to characterize the aquifer in the hydrologic computer model. An additional 38 diamond drill holes were completed to confirm geologic resources in the deeper, western portion of the deposit, and to gather material for geological and metallurgical tests.

In 1998, BHP conducted a multi-month, field optimization ISCR test to gather copper recovery and other technical data for final feasibility. The outcome of the study indicated that in-situ solution mining followed by SX/EW processing would be the preferred method to develop the Florence deposit.

6.3 Historic Mineral Resource and Reserve Estimates

The following section includes historic estimates of mineral reserves and resources provided as background information only. The source of information for historic resources includes an unpublished internal report with appendices prepared by the Magma Copper Company Resource Development Technology Group (RDTG) in 1995. BHP prepared numerous memoranda documenting internal protocols and methods for generating the drillhole database, geology block model, and mineral resource estimation; much of these protocols, methods, and information including the declaration of mineral resources were compiled in an internal, unpublished report with appendices prepared in 1997. In addition, Curis is also in possession of the digital MineSight geology model, resource estimation routines, and resource model. The historic resources stated by Magma and BHP used the same resource categories – Measured, Indicated, and Inferred that are used in the current declaration of mineral resources. See Section 17 for estimates of the current mineral resources.

The Magma 1994 pre-feasibility study (RDTG, 1995) reported an oxide resource of 368.16 million tons (333.98 million tonnes) of 0.34 %TCu and 0.24 percent acid soluble copper (%ASCu) using a 0.1 %

ASCu cutoff grade.² Of this total, 323.49 million tons (87.8 percent) were classified as measured and indicated resources based on a composite-to-block distance of less than 250 feet. These figures were for a total resource within a 3.94 square mile area and were not constrained within any permit boundaries.

The BHP pre-feasibility study (BHP, 1997) reported the measured and indicated oxide mineral resource at 321.28 million tons (291.46 million tonnes) of 0.38 %TCu and 0.23 %ASCu grade at a 0.15 %TCu cutoff (Table 6.1), containing 2.42 billion pounds of copper. These figures were for a resource within the APP and UIC permit area, which is 1.04 square miles. A cutoff grade of 0.15 %TCu was selected for the resource estimate (as opposed to 0.0 %TCu) because BHP initially assumed negligible copper production would likely occur below 0.15 %TCu or in the high-iron leached cap owing to the presence of difficult-soluble minerals and relatively higher acid-consumption rates. BHP (1997) stated there is some potential to extract copper from low-grade portions of the high-iron zone, so using a lower %TCu cutoff grade may be appropriate. They had insufficient metallurgical test work on material having a grade less than 0.15 %TCu, so did not include it in the estimates of recoverable copper.

The BHP mineral resource was completed in-house according to guidelines and standards published by *The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (AusIMM JORC, 1996a, b). Although the BHP resource estimate may have been completed using best resource estimation practices in effect at the time and many of the methods used are still relevant, these historical resources are not being presented by Curis as current and CIM-compliant resources. SRK has audited the historical resources, and made modifications to the resource estimation methods as described in Section 17. The historical resources reported in this section are presented for comparative information only and should not be relied upon. The issuer is not treating the historical estimate as the current mineral resources as defined in Section 1.2 of 43-101. The current and CIM-compliant resources are reported in Section 17 of this report.

Table 6-1 BHP historical estimate of total Measured and Indicated Oxide Mineral Resources, within the permit area.

KTons	TCu (%)	ASCu (%)	%Total	Distance to Composite	Resource Category
313,160	0.378	0.232	97.5	<150 feet	Measured
8,120	0.295	0.146	2.5	150-250 feet	Indicated
321,280	0.376	0.230	100.0		Total

Source: BHP, 1997a. Note that the 1997 resource estimate is historical in nature and is based on prior data and reports prepared by BHP

The BHP mineral resource estimate was based on a database that contained the following information:

² The %ASCu component of the sample assay is an empirical measure of the percentage of total copper that is dissolved by dilute sulfuric acid under specified time and temperature conditions. For the Florence assays performed by Magma and BHP, the %ASCU values are the result of exposing 5 grams of sample pulp materials to a 15% concentration of sulfuric acid for 5 minutes in a water bath held at 73 degrees Celsius. The results allow for relative comparison of the ratio of TCu:ASCu in various rock materials in the deposit and do not reflect the ultimate copper recovery in oxidized materials under field leaching conditions.

- 795 boreholes drilled by Conoco, Magma, and BHP from the 1960s to 1997 including exploration drillholes, and wells used for geotechnical, piezometer, aquifer testing, compliance monitoring, non-irrigation water production, and in-situ production purposes.
- 112 new holes included in the tally above were added by BHP from 1995 to 1997 and consisted of 45 core diamond drill holes (resource confirmation, metallurgical samples, first five field test wells), 33 monitor wells (including 16 point-of-compliance wells), and 34 pumping and observation wells.
- 74,495 total copper assays in the model area with a drill spacing of approximately 250 feet;
- 274 drill holes within the permit area, with 14,586 TCu assays and 13,760 ASCu assays in the oxide bedrock; and
- 1,857 re-assayed Conoco pulps from an area proposed as the first mining cell.

Although the BHP mineral resource model built on the work of the 1994 Magma pre-feasibility model, the BHP model cannot be directly compared to the Magma pre-feasibility model. The two main reasons are: (1) the 1994 model reported mineral resources with respect to an ASCu grade cutoff instead of the TCu grade cutoff used in the BHP model; and (2) the Conoco model covered a much larger area (3.94 square miles instead of 1.04 square mile). Other changes included the additional 112 drill holes and assays added by 1997 and the use of different interpolation techniques.

7 Geological Setting (Item 9)

The regional and local geology are discussed in this section. A regional geology map is provided in Figure 7-1. Representative profiles showing the local geology are shown in Figure 7-3 and Figure 7-4; a representative plan map is shown in Figure 7-5.

7.1 Regional Geology

This section provides a description of the regional geologic setting of the Florence Project area, summarized from Brown and Caldwell (1996a, v. II, p. 3-8 to 3-10).

The Mazatzal Orogeny, a compressional deformation event that occurred about 1,670 million years ago (Ma) in central to southeast Arizona, accreted three tectonic assemblages to the North American craton, and formed the early Precambrian crust. This event involved thrust and reverse faulting and large-scale folding (Anderson, 1989). The three different tectonic assemblages were the Northwest Gneiss Belt (Vishnu Schist), the Central Volcanic Belt (Yavapai Schist), and the Southeast Schist Belt (Pinal Schist) (Anderson, 1989). The Pinal Schist (1,750-1650 Ma) forms the basement rock of the [Florence Project] area.

The Mazatzal Orogeny was followed by a tectonically quiet period during which erosion was the dominant geological process. Around 1,400 Ma, thermal instability in the upper mantle resulted in deep crustal melting and widespread emplacement of potassium-rich granites into the upper crust (Anderson, 1989). The Oracle Granite Batholith intruded the Pinal Schist during this time. The Oracle Granite is locally represented by a quartz monzonite porphyry, and is the host for mineralization at the Florence Project area.

The Grand Canyon Disturbance (900-800 Ma) occurred at the end of the Precambrian Era. This orogeny resulted in uplifting and tilting of the crust, with extensive intrusion of diabase sills and dikes (Wilson, 1962). Dikes of this nature intrude the Oracle Granite and Pinal Schist.

As a result of regional stresses that occurred throughout the late Precambrian and into the early Paleozoic time, east-northeast trending structural lineaments formed in the western continental crust (Anderson and others, 1971). One such structure in southern Arizona is the Ray Lineament, which trends N. 70° E. and extends approximately 50 miles from the Sacaton Mountains to the Pinal Mountains. The Ray Lineament trends west-southwest through the Florence Project area and parallels the Pinal Schist-Oracle Granite contact (Conoco, 1976). At Florence, the lineament intersects a pre-existing Precambrian diabase dike swarm that strikes N. 10-30° W. (Conoco, 1976). After the initial formation of the Ray Lineament and related discontinuities, a long period of erosion produced a peneplain landscape.

Significant orogenic activity did not re-occur in Arizona until the latter part of the Cretaceous Period. The Laramide Orogeny occurred during Late Cretaceous through Early Tertiary time (80 to 50 Ma). The event involved regional-scale thrust faulting and folding in southern Arizona (Dickinson, 1989). Reactivation of normal faults produced large northeast-trending vertical block uplifts associated with the emplacement of scattered plutons in western and southern Arizona (Anderson and others, 1971). Intrusions, principally of granodiorite and quartz monzonite, occurred along the Ray Lineament during [this time]. Hydrothermal mineralization associated with these intrusions resulted in the formation of porphyry copper deposits (Dickinson, 1989). The Florence copper deposit was formed in this fashion as the Precambrian Oracle Granite was intruded and mineralized in association with the emplacement of a Tertiary granodiorite porphyry. Following the formation of the Florence deposit, un-mineralized dikes consisting of latite, dacite, andesite, quartz latite, and basalt intruded the Oracle Granite and the granodiorite.

Continued Laramide activity produced faulting and uplift, resulting in the erosion of Paleozoic and Mesozoic sedimentary sequences. This erosion also exposed the Precambrian and Tertiary intrusive bodies. Oxidation and further erosion occurred on these surfaces, followed by the accumulation of coarse clastic sediments derived from the surrounding bedrock terrain. This depositional sequence ultimately produced a landscape of low relative relief. Precambrian age outcrops exposed in the surrounding area as a result of the Laramide Orogeny include the Pinal Schist and the Oracle Granite (Nason and others, 1982). Exposed Tertiary-age intrusive rocks include the Sacaton Stock and granodiorite porphyry (62 ± 1.0 Ma). Most copper mineralization in the area occurs within the granodiorite porphyry and the Oracle Granite (Conoco, 1976).

As the uplifted surface began to erode, a sedimentary sequence was deposited over the Precambrian surfaces during the Oligocene through Early Miocene (36 to 17 Ma). These deposits are composed of deeply weathered bedrock or grus-type deposits, as well as coarse, angular breccias or gravels. Sediments became finer grained as the topography matured. The basal breccia/conglomerate is commonly overlain by finer-grained silts and sands, and locally interbedded with lava flows or volcanic ash. Alluvial, fluvial, and lacustrine (both lake-bed and playa) sediments accumulated during this time in southeast Arizona. Tertiary-age sediments are not believed to exist in the in-situ mine area because of erosion, subsequent uplift, and faulting. It is possible that such sediments are preserved in the deeper portions of the graben to the west of the proposed in-situ mine area, or in the basin center to the south.

The last major orogenic event to affect the Western United States was the Basin and Range Orogeny, an extensional event occurring from the early Miocene to the Pleistocene (17-5 Ma). Basin and Range faulting and tilting in the Florence Project area resulted in north-northwest trending horst and graben structures bounded by normal faults with large displacements to the west (Nason and others, 1982). The Florence deposit occurs on a complex horst block that is bounded on the east and west by grabens. The Party Line fault, a major normal fault on the east side of the deposit, strikes north 35 degrees west and dips 45 to 55 degrees southwest. This fault is reported to have a vertical displacement of over 1,000 feet (Conoco, 1976; Nason and others, 1982). Near-parallel normal faults that strike north to northwest lie west of the Party Line fault.

The Sidewinder fault occurs near the west side of the in-situ mine area and has a displacement in excess of 1,200 feet (Conoco, 1976). This fault represents a continuation of a complex of north-south trending normal faults to the east. The north-south fault system has down thrown the south end of the horst more than 1,500 feet (Conoco, 1976). Additional en echelon, north to northwest trending normal faults east of the Sidewinder fault produce a graben east of the in-situ mine area. The graben strikes north to northwest and extends for about 5 miles or more.

Post-Basin and Range basin-fill sediments were deposited over the Precambrian bedrock surface at the Town of Florence. The sediments consist of unconsolidated to moderately well consolidated interbedded clay, silt, sand, and gravel in variable proportions and thicknesses. Basalt flows are interbedded on the west and northwest portions of the deposit area. Total thickness of basin-fill materials near the Property ranges from 300 to over 900 feet, and exceeds 2,000 feet at a distance of 1.5 miles southwest of the deposit area.

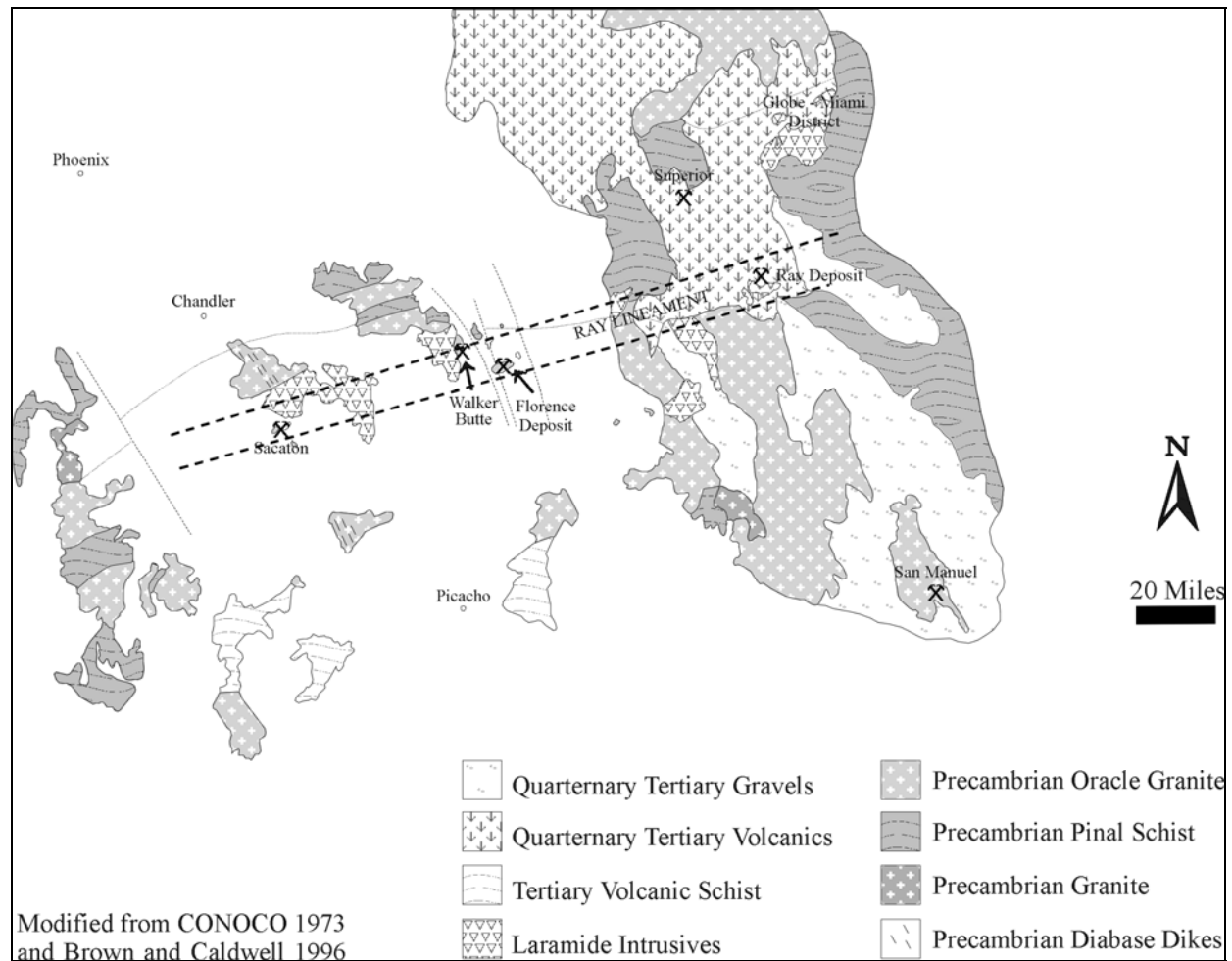


Figure 7-1 Regional geology map

7.2 Local Geology

The Florence porphyry copper deposit formed when numerous Laramide-age dike swarms of granodiorite porphyry intruded Precambrian quartz monzonite near Poston Butte (see geologic plan map in Figure 7-3 and cross sections in Figure 7-4 and Figure 7-5). The dike swarms were fed by a larger intrusive mass at depth. Hydrothermal solutions associated with the intrusive dikes altered the host rock and deposited copper and iron sulfide minerals in disseminations and thin veinlets. Hydrothermal alteration and copper mineralization were most intense along the edges and flanks of the dike swarms and intrusive mass.

The region was later faulted and much of the Florence deposit was isolated as a horst block. This horst block, as well as the downthrown fault blocks to the west, was exposed to weathering and erosion. The center of the deposit was eventually eroded to a gently undulating topographic surface while a deep basin formed to the west.

The copper sulfide minerals were oxidized and converted to chrysocolla, tenorite, chalcocite, and minor native copper and cuprite. A majority of the copper oxide mineralization is located along fracture surfaces, but chrysocolla and copper-bearing clay minerals also replace feldspar minerals internal in the granodiorite porphyry and quartz monzonite. A barren or low-grade zone, dominated by iron/manganese oxide and clay minerals, caps some portions of the top of bedrock. The ore is typical of most Arizona porphyry copper deposits. The thickness of the oxide zone ranges from 100 to 1,200 feet with an average

thickness of 400 feet. Examples of the drill core showing a examples of the rock and mineralization types are shown in Figure 7-2.

The bedrock units have been covered by an average of 350 feet of Tertiary-Quaternary gravels, fines, and alluvium. These overburden units are flat lying and rest unconformably on the erosion surfaces. The Whitetail Conglomerate overlies the porphyry deposit in the deep graben to the west. The Whitetail is described as a poorly to moderately indurated, poorly sorted conglomerate composed of angular and sub-angular igneous pebbles in a brown arkosic matrix (Nason and others, 1983). Overlying the Whitetail Conglomerate is a poorly indurated, poorly sorted terrestrial deposit consisting of pebbles and cobbles and commonly, volcanic clasts and basalt flows. This formation may be correlative with the Gila Conglomerate some 30 miles east of Florence. Within the conglomerate is a flat-lying, aerially extensive clay layer with a palynological age of Pliocene. The layer is typically 20 to 30 feet thick and occurs 60 to 70 feet above the present bedrock surface. Aquifer testing has demonstrated that this clay layer acts as an aquitard between the bedrock aquifer below and the overburden aquifer above.



Notes: BHP-1 Chrysocolla mineralization in fractured monzonite (Yqm), 0.44 %TCu, 0.40 %ASCu, Metzone=2 (Mixed), FRACI=5 (>15 fx/ft), Scale in cm and in units is at top of core box.

BHP-2 Contact of Lower cemented conglomerate overlying the Yqm, 6-in core; one half of the 5-ft long core box is shown.

BHP-3 Tgdp dike in contact with Yqm. Chrysocolla mineralization is concentrated in the Tgdp in this interval. No core recovery in 4-ft interval from 510-514'; 0.50%TCu, 0.35%TCu;

BHP-4 Low-grade, iron-stained Yqm, 0.11 %TCu, 0.03 %ASCu, Metzone=2, FRACI=2 (6-10 fx/ft)

Figure 7-2 Selected drill core photographs of BHP-1 through BHP-4

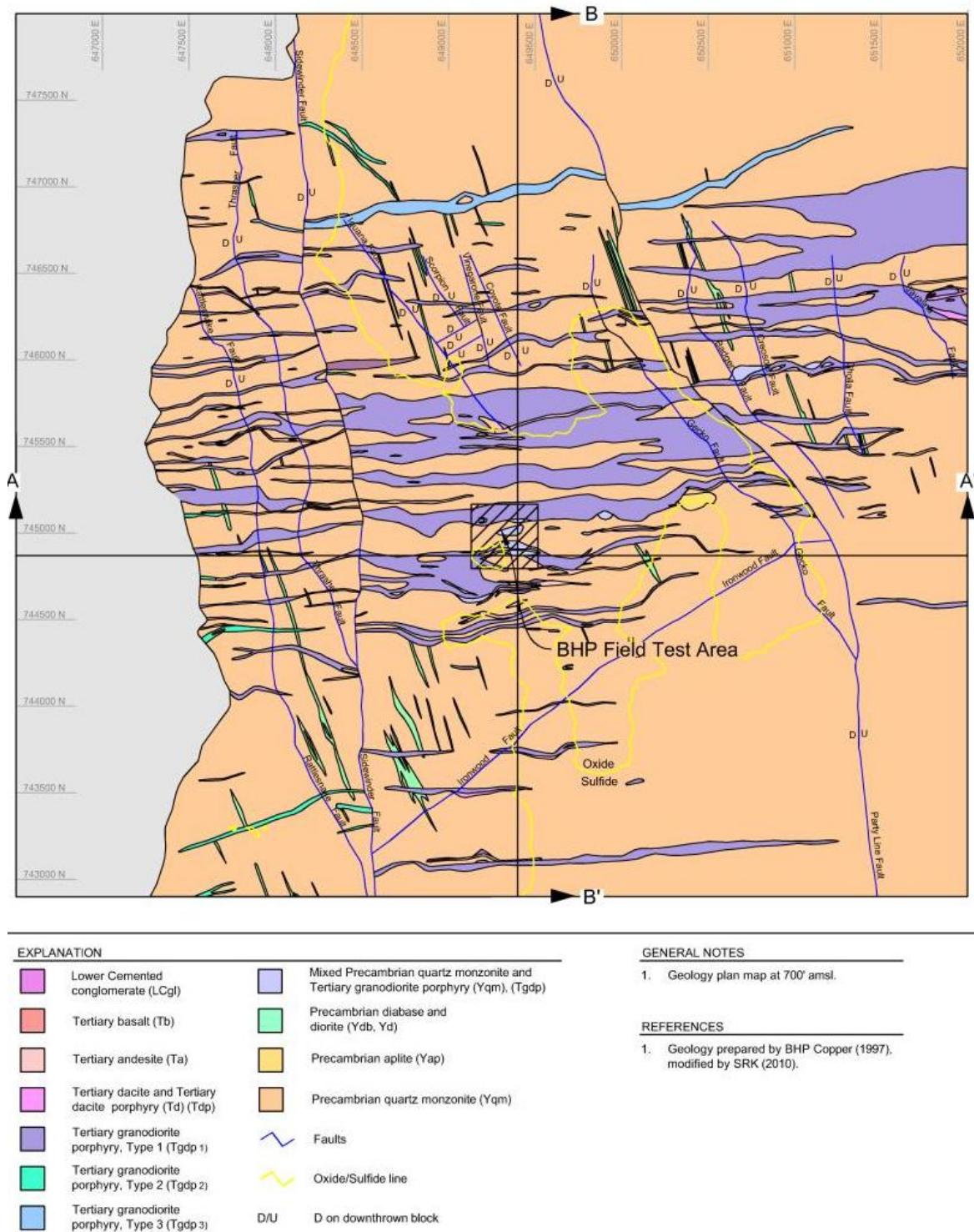


Figure 7-3 Geology plan map at 700 feet above mean sea level (SRK, 2010)

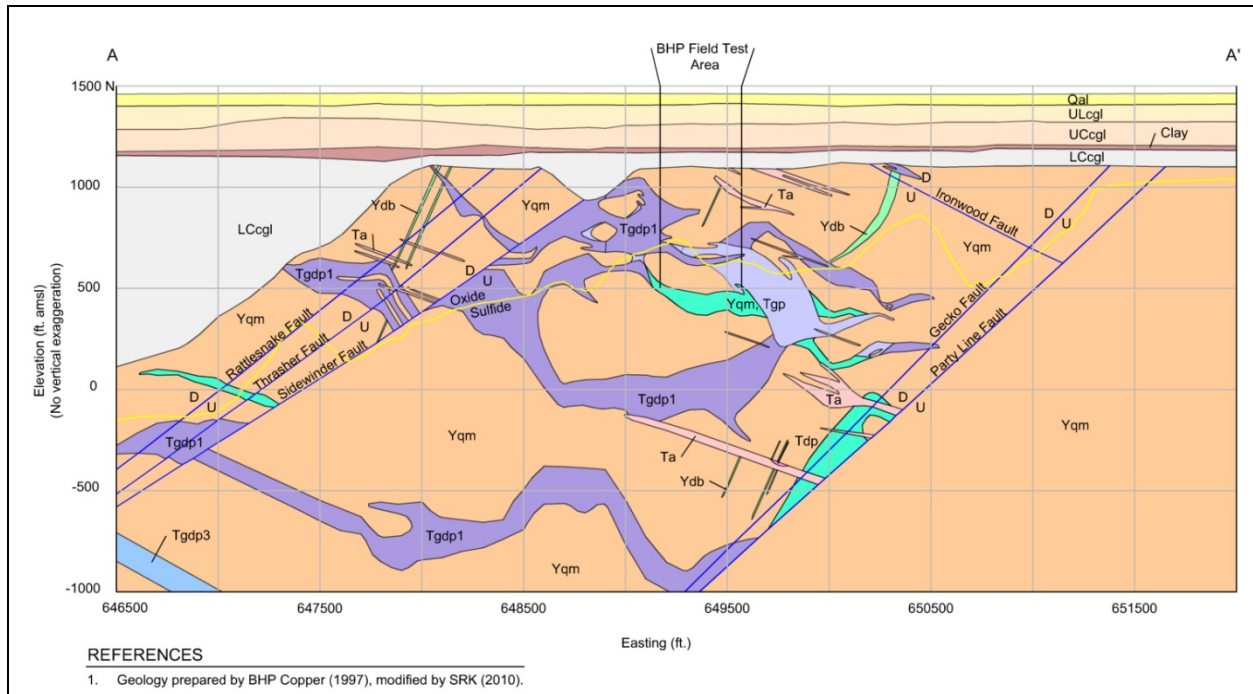


Figure 7-4 East-west geology cross section at 744870N looking north (SRK, 2010)

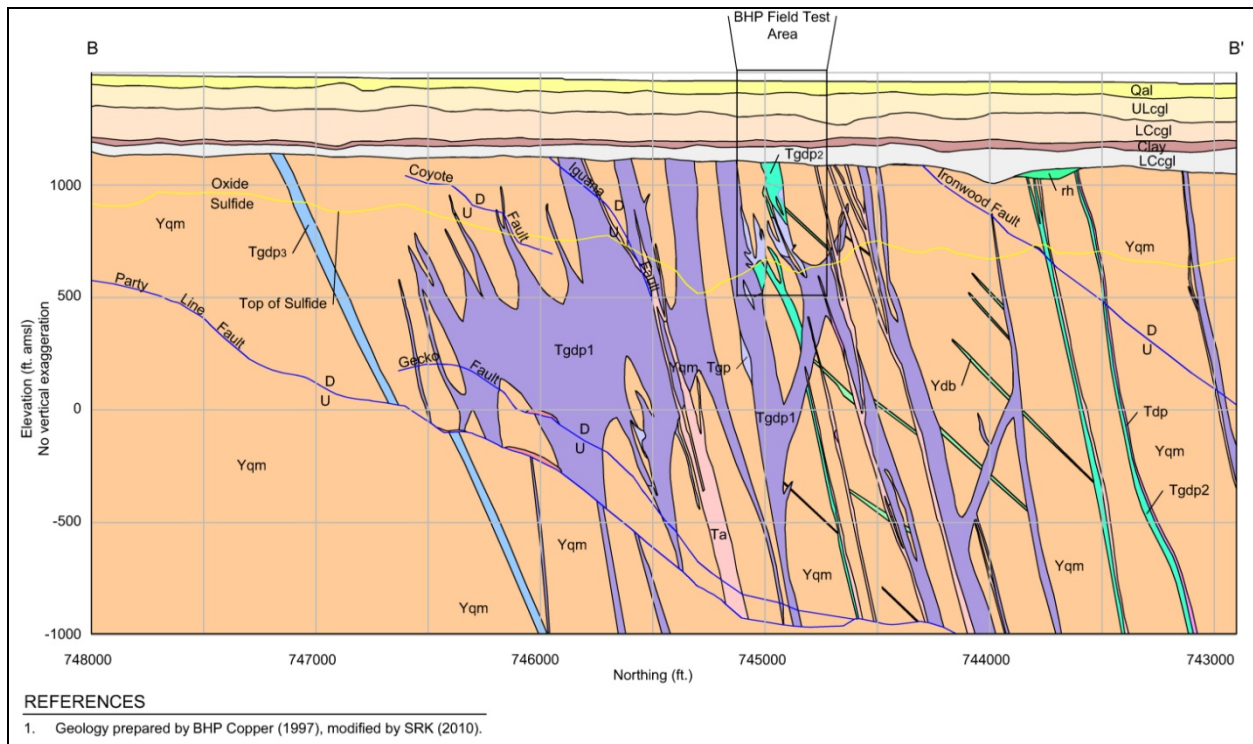


Figure 7-5 North-south geology cross section at 649500E looking east (SRK, 2010)

7.2.1 Structure

The regional structure has been previously described by Balla (1972) and Nason and others (1983). These authors suggest that the oldest structural trend affecting the Florence deposit is the N.70°E.-trending Ray lineament (see lineament depicted in Figure 7-1) – a pre-Laramide zone of crustal weakness that can be traced east-northeastward from Sacaton through Walker Butte, Florence, and on to Ray. The northeast-trending fracture patterns related to this regional structure are recorded at the Florence deposit on Conoco's underground maps and in oriented drill core drilled and logged by Magma and BHP. Laramide intrusions are interpreted from these data to have been emplaced and elongated in an east-northeast direction at the intersections of conjugate fault sets that intersect the Ray Lineament. At Florence, the Type I and Type III granodiorite intrusions are both elongated in a northeast to east-northeast direction. Northwest-trending en echelon Precambrian diabase dikes suggest a conjugate structural direction.

The most evident structures in the Florence area are related to post-Laramide Basin and Range faulting. These post-mineralization faults, intersected sub-surface in drill core, are the Party Line and Sidewinder faults and associated sub-parallel faults (Figure 7-6). The Party Line fault is a fault zone 50 to 100 feet thick striking N. 34° W., dipping -45° to -50° W. with a vertical displacement of 800 to 1000 feet. The Party Line fault bounds the eastern portion of the deposit and has a strike length in excess of 3,600 feet. The Party Line fault is the main control of economically mineable copper oxide mineralization on the east side of the deposit; the footwall east of the fault is not economically mineable. Associated with the Party Line fault is a series of normal faults striking north to north-northwest that have displaced the deposit down to the west over 1,200 feet (Figure 7-6).

The Sidewinder fault, which also can be traced sub-surface for thousands of feet, bounds the western edge of the deposit. Displacement in the central deposit area reaches a maximum of 1,200 feet, displacement increases south of the deposit to a maximum of 1,500 feet. The offset along the associated fault zone is approximately 250 feet; the hanging wall has been intensely fractured. The Sidewinder fault formed a structural zone of weakness that facilitated the development of a north-northwest trending paleo-valley within the deposit that is as much as 200 feet deep and has been traced over a strike length of 2,500 feet. Several other north-northwest trending faults have been postulated between the Party Line and Sidewinder faults and west of the Sidewinder fault.

Statistical analysis of drill core indicates an average of 11 to 15 open fractures per foot in the fractured oxide zone underlying the unconsolidated material. The sulfide zone underlies the oxide zone and is significantly less permeable, with an average of 6 to 10 open fractures per foot.

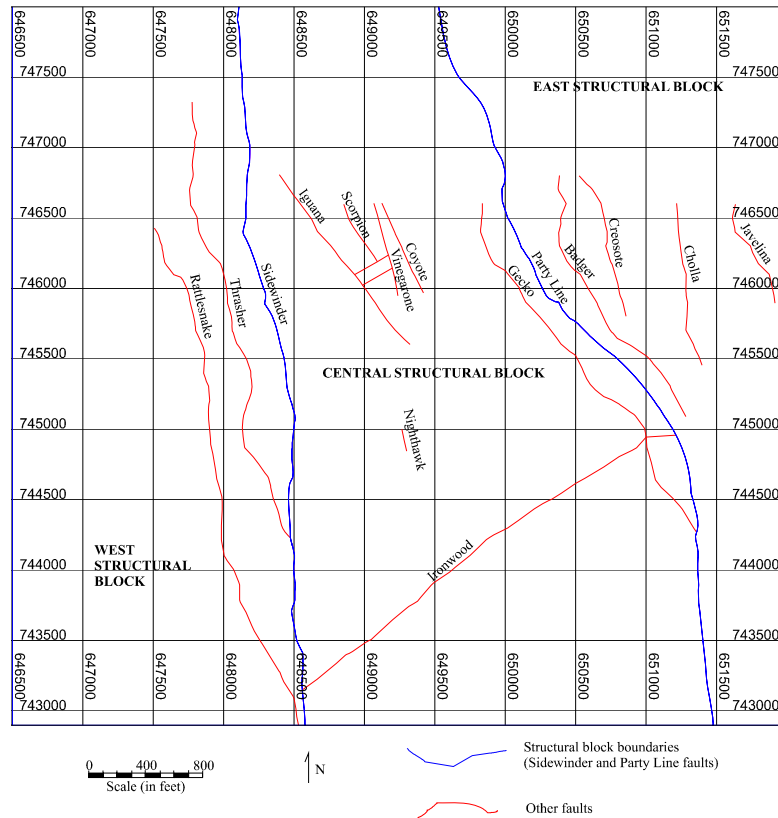


Figure 7-6 Subsurface faults in the Florence deposit area shown at 700 feet elevation amsl (BHP, 1997)

7.2.2 Hydrogeology

An extensive summary of the hydrogeology of the regional and local surface water and groundwater systems is found in B&C (1996a). The major surface water feature in the area is the Gila River, located about ½ mile south of the project. Because of upstream diversions (Florence-Casa Grande Canal and North Side Canal), the Gila River is generally dry with the exception of flow caused by brief, intense seasonal rainfall. Two watershed drainages (East Drainage and West Drainage) transect the property and administration areas and are classified as “jurisdictional waters of the United States” under section 404 of the Clean Water Act. These two arroyos discharge only ephemeral flow to the Gila River. Consequently, infiltration of river water into the upper basin-fill sediments is limited to periods of ephemeral flow.

The regional groundwater gradient is from the recharge zone along the Gila River flowing north-northwest to the Salt River Basin. Historically, regional groundwater withdrawals have been primarily related to agricultural uses and utilize the upper and lower basin-fill aquifer. Land subsidence of 7 to 12 feet and associated land fissuring has been measured in the nearby farming communities (e.g. Casa Grande, Eloy, Stanfield, and Maricopa) and is related to groundwater withdrawal. Investigations performed in the Florence area from the 1970s to 1990s indicated negligible subsidence in the Florence area; no documented land fissures have been identified in the Florence area or project site. Settlement related to net groundwater withdrawals over the ISCR wellfield area was estimated to be 0.1 to 0.3 inches based on the depth of the overlying sedimentary formations, average thickness of the mineralized zone, the average grade (0.34 %TCu) of the mineralized zone, and how much would be extracted by ISCR methods (B and C, 1996a).

Locally, the aquifers correlate well with the lithologic units identified in the project area; the hydraulic properties, pump tests, and water quality data confirm that there is little vertical communication between the aquifers. The approximately 350 feet of unconsolidated conglomerate and alluvial material overlying the deposit was divided into five units (BHP, 1997): (1) Quaternary Alluvium (Qal), (2) Upper Loose Conglomerate (ULcgl), (3) Upper Cemented Conglomerate (UCcgl), (4) Clay, and (5) Lower Cemented Conglomerate (LCcgl). Flat-lying basalt flows and dikes were encountered by drilling in the poorly indurated conglomeratic unit. The ULcgl is the principal source of groundwater in the area, primarily for irrigation purposes; the aquifer for this unit is called the Upper Basin-Fill Unit (UBFU). The Clay layer is approximately 20 to 40 feet thick and is 50 to 70 feet above the top of bedrock over most of the deposit area; the aquifer in this unit is called the Middle Fine-Grained Unit (MFGU). The LCcgl varies in thickness from 50 to 800 feet and consists of weakly to moderately cemented conglomerate; the aquifer in this unit is the Lower Basin-Fill Unit (LBFU). Table 7-1 correlates the aquifer units associated with the lithologic units found in the project area.

Table 7-1 Correlation of geologic and hydrogeologic units in the basin fill formations

Lithologic Map Unit	Lithology	Aquifer Unit	Aquifer Description	Comments
Qal	Quaternary alluvium	Qal	Alluvium	Recent, coarse-grained, highly permeable, unconsolidated sediments
ULcgl	Upper Loose Conglomerate	UBFU	Upper Basin-Fill Unit	Laterally uniform, coarse-grained, permeable, unconsolidated, sediment, and matrix-supported conglomerate. Wells have a "GU" designation for Gila (Conglomerate)Upper
UCcgl	Upper Cemented Conglomerate	UBFU		
Clay	Clay	MFGU	Middle Fine-Grained Unit	Laterally extensive, fine-grained, calcareous silt/clay unit with low permeability
LCcgl	Lower Cemented Conglomerate	LBFU	Lower Basin-Fill Unit	Laterally extensive, coarse- to fine-grained, unconsolidated conglomerate with increasing induration and decreasing permeability with depth. Wells have a "GL" designation for Gila Lower

Source: Compiled by SRK, 2010

7.3 Geochemistry and Mineralogy

A number of materials characterization tests have been performed on rock materials including acid base accounting, totals metals, attenuation tests, and metallurgical column tests with simulated raffinate some of which are briefly summarized in Section 16.2. Geochemical laboratory work and model simulations were performed to assess environmental impacts during operations and post-closure as part of the demonstrations required for the APP application and for other studies and investigations (Brown and Caldwell, 1996b). BHP performed a number of mineralogy studies and metallurgical column tests to assess copper dissolution, acid consumption, and the chemistry of the raffinate over time. These studies are documented in BHP (1997d).

A number of mineralogy studies were completed by all previous owners and will be only briefly cited here. Work includes specific gravity studies (Carneiro, 1998; and others), X-ray diffraction studies of secondary minerals and column test residues (Brewer and LeAnderson, 1996; Eastoe, 1996; and others), and cation-exchange studies on clay minerals (Patel, 1996; Williamson, 1996; and others). Two University of Arizona master theses were completed to investigate controls on fracture mineralogy in the deposit (Davis, 1997) and the leachability of oxide materials and mass balance related to in-situ leaching reactions (Brewer, 1998).

7.4 Geophysics

A number of exploration companies worked regionally in the “Ray Lineament” area in the 1960s to 1980s including Conoco, Getty, Cities Service, Noranda Exploration, and others. Early work by Conoco and others consisted of the standard geophysical methods of the time period for covered area porphyry copper targets, which would have included regional airborne and ground magnetic surveys, and extensive use of dipole-dipole induced polarization (IP) electrical methods. The data generated are typically of regional reconnaissance usage and in the case of the Florence deposit, the work was largely done after the discovery was made by initial drilling. Much of this information is not currently available in the Florence Project files.

Between 1993 and 1995, Noranda (Gingerich and Schaefer, ca 1996) undertook a series of covered terrain porphyry copper exploration mapping programs to evaluate the use of airborne time domain electromagnetic (TDEM) applications for geologic mapping. Poston Butte, in 1993, was one of the first covered porphyry copper deposits to be tested. The test survey over the Poston Butte deposit mapped a circular pattern that was coincident with the deposit location. The known major structures and areas of deep cover also were clearly visible in the data set.

In 1995, Magma ran borehole geophysical logs in 13 diamond drill holes to correlate downhole geophysics with geological core data. The tools evaluated were caliper, gamma ray, spectral gamma ray, neutron, neutron-gamma induced, sonic/variable density log, resistivity, spontaneous potential, temperature, density, radioactive tracer log, fluid density log, spinner surveys, induction, and heat pulse. Based on correlation of the geophysical signal with geologic core data, the gamma neutron tool was considered the most valuable. The geophysical signals facilitated the identification of the clay layer in the overburden, the top of bedrock, major structures, and certain rock types.

In 1997, the University of Arizona was retained to perform a three-dimensional electrical resistance tomography (ERT) study in the pilot field test area using five boreholes. ERT is sensitive to changes in electrical conductivity of the subsurface both temporarily and spatially (Stubben and LaBrecque, 1997). ERT is a borehole DC electrical method that employs a dipole-dipole configuration. This method was tested to assess whether it would be sensitive enough to monitor changes in the conductivity of groundwater and ultimately be able to monitor the flow and recovery of injected sulfuric acid. The test successfully detected changes in electrical conductivity based on the injection of groundwater that had a different conductivity than the background groundwater and was deemed to be a useful tool to map the temporal and spatial location of injected solutions.

8 Deposit Type (Item 10)

The mineral deposit type found at the Florence Project site is an extensive, low-grade porphyry copper deposit consisting of a large core of copper sulfide mineralization lying beneath a zone of copper oxide mineralization. The central portion of the deposit is overlain by approximately 350-375 feet of flat-lying conglomerate and alluvial material that contains a clay interbed (see Figure 7-4 and Figure 7-5). The oxide and sulfide zones are separated from one another by a transition zone. Both oxide and sulfide copper mineralization are present, but the depth of the sulfide zone renders it currently uneconomic to mine by conventional open-pit mining methods. The impermeability of the sulfide zone renders it difficult to mine by ISCR methods.

Approximately 71 percent of the oxide mineralization is hosted by a Precambrian quartz monzonite host and 26 percent by Tertiary granodiorite porphyry. The remaining igneous rocks associated with the deposit are Precambrian diabase and Tertiary andesite, latite, dacite, basalt, and aplite. The Florence deposit occurs in a structural horst block, which is bounded on the east and west by grabens and is controlled by normal faults trending north to northwest.

The deposit type is a variant of the typical southwestern U.S. porphyry copper deposit, as described by many authors (Titley and Hicks, 1966; and Lowell and Guilbert, 1970).

9 Mineralization (Item 11)

This section describes the mineralized zones, the controls on mineralization, and the type and location of mineralization.

9.1 Mineralized Zones

The mineralized zones consist of an iron-enriched leached cap, an oxide zone, and an underlying sulfide zone. In most instances, the transition from the leachable copper silicates and oxides to the sulfide zone is quite abrupt. A majority of the copper oxide mineralization is located along fracture surfaces, but chrysocolla and copper-bearing clay minerals also replace feldspar minerals in the granodiorite porphyry and quartz monzonite. A barren or low-grade zone, dominated by iron oxide and clay minerals, caps some portions of the top of bedrock. The mineralization on the eastern periphery of the deposit is typical of most Arizona porphyry copper deposits. The thickness of the oxide zone ranges from 40 feet to 1,035 feet in the western portion, and has an average thickness of 400 feet. The lateral extent of mineralization in plan is approximately 3,500 feet across in an east-west direction and from 1,500 feet to over 3,000 feet across in a north-south direction.

9.2 Rock Types and Relevant Geological Controls

9.2.1 Rock Types

The dominant lithologic unit is a Precambrian quartz monzonite (correlative with the Oracle Granite and Ruin Granite known elsewhere in Pinal and Gila Counties). This unit is known to have intruded the Precambrian Pinal Schist as evidenced from drill core data and regional outcrops. The monzonite is felsic and phaneritic, but may appear porphyritic locally. The monzonite was intruded by a series of Precambrian diabase dikes. These dikes range in thickness from a few centimeters to several meters and are tabular in shape. In general, they have a dark grey to olive black aphanitic matrix with localized small (1-2 mm) plagioclase feldspar laths.

A series of Laramide intrusive bodies are also known to cross cut the Precambrian quartz monzonite and diabase dikes. The Laramide is dominantly represented by three phases of granodiorite porphyry (62 ± 1 m.y.) and, to a lesser extent, by younger (55-60 m.y.) Tertiary andesite and quartz latite dikes (data from Conoco as reported in Nason and others, 1983). The principal variety (Type I) is a light gray, medium- to fine-grained rock containing small (2-3 mm) phenocrysts of plagioclase feldspar, biotite lenses, and less common quartz in a quartz and orthoclase matrix. Type II is more mafic and finer-grained but is coeval with Type I. The Type III variety crosscuts the other two varieties and forms barren, greenish gray dikes containing only quartz and small plagioclase phenocrysts. The Type I and Type II granodiorite units occur as a series of long thin (50 to 300 feet wide) dikes that coalesce at a depth of zero to 500 feet amsl, forming an elongated lens-shaped body. The Type III granodiorite is less common and occurs as thin tabular planes. In general, the granodiorite porphyry is less fractured and mineralized than the quartz monzonite.

Andesite, generally various shades of medium grey, is present as thin tabular dikes that intrude along or within the granodiorite porphyry. Dikes of dacite to dacite porphyry are present in minor amounts and generally contain a medium grey, moderate to weakly magnetic aphanitic matrix with small plagioclase phenocrysts and (locally) with quartz. Minor dikes of latite, generally brown to medium grey, have a fine crystalline groundmass, contain minor amounts of finely disseminated biotite, and often are weakly magnetic.

Overlying this surface are basin-fill units approximately 350 feet deep consisting of moderately consolidated fanglomerate with a coarse, calcareous arkose matrix and completely unconsolidated sand, silt, clay, and gravel lenses. The geologic model prepared by BHP (1997) divided the overburden into five units: (1) Quaternary Alluvium (Qal), (2) Upper Loose Conglomerate (ULcgl), (3) Upper Cemented Conglomerate (UCcgl), (4) Clay, and (5) Lower Cemented Conglomerate (LCcgl). Flat-lying basalt flows and dikes were encountered by drilling in the poorly indurated conglomeratic unit.

9.2.2 Relevant Geologic Controls

Because the Florence deposit is almost entirely covered by 350 feet of basin-fill material, Conoco originally based its interpretation of geologic structures on regional geology and exploration geophysics, development drill holes, and underground mine maps. In 1995, Magma Copper developed a technique to refine structural interpretations of buried deposits by employing an acoustic borehole televiewer (BHTV) logging tool in selected NX, HX, and six-inch diameter holes on the west side of the deposit. During the summer of 1996, the technique was utilized by BHP on the five holes located in the first production cell. This downhole geophysical tool provides dip angles and dip azimuths for digitized fractures visible on a digital display.

The dominant structural trend at Florence is northeast; within the deposit area, the pre-Laramide and Laramide northeast-trending fracture patterns are recorded on Conoco's underground maps and in oriented drill core completed by Magma and BHP. The Tertiary granodiorite porphyry intrudes along the east-northeast to northeast zones of structural weakness. Conoco reported that most sulfide copper-bearing fractures underground also trend northeast. Another dominant set of fractures trends north to north-northwest and dips westerly; these fractures have been attributed to the Basin and Range extensional tectonics. The most apparent structural trends in the Florence area are the major horst-and-graben structures related to mid-Tertiary normal faulting. The Florence deposit lies within a horst block bounded on both the east and west sides by deeply buried, fault-controlled depressions or grabens. The relatively narrow depressions trend north-south to north-northwest and are filled with as much as 1,300 feet of fanglomerate and unconsolidated alluvial material. Copper grades exceeding 0.4 %TCu were encountered in quartz monzonite in deep drill holes beneath these paleo-depressions.

The major post-mineralization structures intersected in drill core are the Party Line and Sidewinder faults (see Figure 7-6). The Party Line fault is a fault zone 50- to 100-feet thick striking N. 34° W., and dipping -45° to -50° W. with a maximum offset of 1,000 feet. The Party Line fault bounds the eastern portion of the deposit and has a strike length in excess of 3,600 feet. The footwall east of this fault was not previously deemed to be economic owing to thin oxide zone, but this will be reviewed by Curis. Bounding the western edge of the mineable deposit is the Sidewinder fault, which can also be traced for thousands of feet. The offset along this thick fault zone is approximately 250 feet; the hanging wall has been intensely fractured. The Sidewinder fault is responsible for creating a north-northwest trending paleo-valley within the deposit; this depression is as much as 200 feet deep and has been traced over a strike length of 2,500 feet. Several other north-northwest trending faults have been postulated between the Party Line and Sidewinder faults and west of the Sidewinder fault.

The BHTV was used in conjunction with detailed fracture angle and fracture mineralogy notes recorded and compiled by geotechnicians. The goal was to study the vertical distribution of common ore and gangue minerals, to determine predominant structural trends, and to identify preferred fracture orientations for copper-bearing structures. These data are incorporated into the geology and hydrology models and production wellfield design. Structural data from more than 27,000 fractures in 17 oriented core holes indicates a preferred strike range of north to N. 30° E. dipping -60-70 degrees west or northwest. Copper-bearing fractures are somewhat randomly distributed, but copper oxides most commonly occur on fractures striking north to N. 30° E. and dipping -50-60 degrees west or northwest.

The BHTV data indicated the possible presence of eastwardly and southwardly dipping structures, which have not yet been incorporated in the geologic model and will be re-examined in future model iterations.

Conoco drilling intersected tilted Whitetail Conglomerate (basal consolidated fanglomerate) with dips of 40 to 60 degrees in some downthrown blocks; north of the deposit, however, the same conglomerate units show little or no tilting. Along the Party Line fault, the oxide-sulfide boundary shows significant offset; however, over the majority of the deposit the oxide-sulfide interface is quasi-horizontal and mirrors the eroded, post-fault paleotopography of the top of bedrock. Rotation, if it occurred, took place pre-oxidation or within specific fault blocks before the latest age of faulting (Nason et al., 1983). The steeply dipping Tertiary granodiorite porphyry and Precambrian diabase would suggest that any titling of the deposit was probably minor (less than 30 degrees). Additional structure analyses combined with alteration studies may provide more conclusive data regarding the possible rotation or tilting of the Florence copper deposit.

9.3 Length, Width, Depth, and Continuity

The thickness of the oxidized zone ranges from 100 to 1,000 feet, and has an average thickness of 400 feet. The top of the oxide zone begins below 350-375 feet of alluvial and basin-fill material. The length and width of the oxidized zone is irregular. The proposed ISCR wellfield area covers 216 acres.

A three-dimension geologic model constructed by BHP between September 1996 and May 1997 used information from 795 drill holes including 4687 drillholes within the block model area. The geologic model consisted of a rectified set of digital 52 east-west and 56 north-south sections at 100-foot spacing and 50 plan maps at 50-foot elevations (see Table 9-1); the digital files are in possession of Curis. The block model reflects the general dimensions of the deposit, which are given in Table 9-2. Coordinates are expressed in Arizona State Plane Coordinates (northing and easting) and elevation (feet) above mean sea level amsl.

Table 9-1 Cross sections and plan maps within the geologic model area

Plane Type	# of Planes	Plane Range (ft)	Spacing (ft)	Scale (ft)
E-W Cross Section	52	742900 N to 748000 N	approx. 100'	1"=100' or 1:1,200
N-S Cross Section	56	646500 E to 652000 E	100'	
Plan	50	-1000' to +1400'	50'	

Note: Compiled from BHP, 1997a. Coordinate system is in the Arizona State Plane system in feet.

Table 9-2 Spatial limits of the geologic block model based on Arizona State Plane Coordinates

	Minimum (ft)	Maximum (ft)
Northing	742500	748000
Easting	646500	652000
Elevation ft amsl	-1500	+2000

Note: Compiled from BHP, 1997a

9.4 Type, Character, and Distribution of Mineralization

The main type of mineralization is oxide with underlying sulfide separated by a transition oxidation zone. The underlying sulfide zone, because of its depth, low permeability, and relatively non-leachable mineralogy, is not economic to mine. Mineralization in the oxide zone consists of chrysocolla, “copper wad,” tenorite, cuprite, native copper, and trace azurite, and brochantite. The majority of the copper occurs as chrysocolla in veins and fracture fillings, while the remainder occurs as copper-bearing clays in fracture fillings and former plagioclase sites. John Davis’ (1997) study on the fracture-controlled mineralogy within the Florence deposit indicates that copper is not adsorbed onto the clay surfaces, but rather the copper resides in the octahedral site of the clays. The “copper wad” appears to be an amorphous mix of manganese, iron, and copper oxides that occurs as dendrites, spots, and irregular coatings on fracture surfaces. Cuprite occurs locally smeared out along goethite/hematite-coated fracture surfaces; the chalcotrichite variety of cuprite is also present on fractures or vugs, sometimes intergrown with native copper crystals.

The main hypogene sulfide minerals are chalcopyrite, pyrite, and molybdenite with minor chalcocite and covellite. Supergene chalcocite coats pyrite and chalcocite and dusts fracture surfaces. The supergene chalcocite blanket is very thin and irregular (zero to 50 feet). In most instances, the transition from the leachable copper silicates and oxides to the sulfide zone is quite abrupt.

In general, the grade of oxide mineralization is very similar to that of the primary sulfide mineralization. The overall grade of the oxide and sulfide mineralization is approximately 0.356 %TCu and 0.268 %TCu, respectively.

9.5 Alteration

Hydrothermal alteration accompanied the intrusion and cooling of the Tertiary granodiorite porphyry stocks and dikes into the Precambrian quartz monzonite. Alteration in the granodiorite porphyry is primarily veinlet-controlled, whereas alteration in the quartz monzonite encompasses all three styles; pervasive, selectively pervasive, and veinlet-controlled. Potassic alteration (quartz-orthoclase-biotite-sericite) is the dominant alteration assemblage. Salmon-colored, secondary orthoclase replaces primary orthoclase phenocrysts, rims quartz $\pm$ biotite veins, and occurs as pervasive orthoclase flooding. Shreddy, secondary brown biotite replaces plagioclase and matrix feldspars, and occurs in biotite-sulfide veinlets.

A sericitic (quartz-sericite-pyrite) alteration zone surrounds the potassic zone and is especially evident in the deep portions of the sulfide mineralization. Fine-grained sericite selectively replaces plagioclase, orthoclase, and biotite, and forms thin alteration selvages along quartz $\pm$ sulfide veins. Propylitic (calcite-chlorite-epidote) alteration is visible in mafic dike rocks and is reported in exploration holes fringing the deposit. The most noticeable feature in the oxide ore zone is a late-stage argillic alteration assemblage consisting of montmorillonite - kaolinite $\pm$ illite $\pm$ halloysite. The conversion of sericite to clay minerals in plagioclase phenocrysts and along fracture surfaces is selectively pervasive. X-ray diffraction analyses indicated the clay is primarily a mixture of calcium-montmorillonite and kaolinite. These clay-altered plagioclase sites were favorable loci for remobilized copper generated from natural in-situ leaching (BHP, 1997, v. 2, p.18).

10 Exploration (Item 12)

Curis has yet to conduct its own exploration activities at the project. SRK has reviewed the Project data generated by the previous operators for site characterization, resource estimation, and environmental permitting.

A summary of the historical exploration is provided in Section 6.2. Conoco, Magma, and BHP conducted multiple geological, geochemical, hydrogeological, and geophysical investigations and surveys to characterize the Florence copper deposit. The historic data including drill logs, sample rejects/pulps, assay sheets, cross sections, core box photographs, downhole survey discs and plotted deviation maps, underground geology map, aerial photographs, hydrological pump test data, metallurgical reports, project correspondence, and other data are available for inspection. Geologic logs record the type of drilling (diamond drill, reverse circulation (RC), rotary), collar surveys and/or approximate drill collar coordinates, rock types, mineralization, alteration, and structure. More recent historical work relevant to a potential ISCR operation is summarized below.

10.1 Surveys and Investigations

Detailed mineralogy and petrography reports are available on numerous drill core samples. Structural logs recording the fracturing, faulting, and jointing information have also been prepared. Two Masters theses were written on fracture-controlled mineralogy (Davis, 1997) and leaching experiments and mass balance modeling simulating in-situ leaching within the oxide zone (Brewer, 1998) of the Florence property. Approximately 74,500 drill-core intervals and RC-chip samples were assayed for TCu. Of that number, 28,310 assays were in the oxide zone.

Specialized investigations undertaken at the Florence Project consisted of borehole geophysical and geotechnical logging to aid in mapping the subsurface geology; fracture mineralogy studies; and mapping with an acoustic borehole televiewer. Borehole geophysics (sonic, gamma-neutron, electrical conductivity, acoustic borehole televiewer) are available on all BHP drillholes and a selection of Magma drillholes. It was used first to correlate geophysical logs with geological core data. The correlation then was applied to gaining reliable geological information from the injection and recovery wells that were rotary drilled. The gamma and neutron logs were considered to provide the most valuable downhole information at the Florence Project.

Geotechnical logging was used to gain a better understanding of fracturing intensity and depths. The geotechnical works included marking detailed core footages; measuring core recovery and core losses and calculating Rock Quality Designations based on that information; and characterizing rock fracturing and mechanical integrity.

Fracture mineralogy studies were undertaken because, for solution mining, it is critical to identify the ore and gangue minerals on the fractures in order to model and predict the chemical reactions that will occur as the injection solutions travel through the rock. Three techniques were used to study aspects of fracture mineralogy: X-ray diffraction (XRD), scanning electron microscope (SEM), and fracture mineralogy logging of 15 core holes. The results of the XRD and SEM studies indicated that most of the Cu-bearing clays are smectite, most probably Ca- or Mg-montmorillonite. Results of the fracture mineralogy logging identified limonite, goethite, and/or hematite in 12,234 of 13,378 fractures identified in the study and chrysocolla and/or tenorite in 4,041 fractures. The data on fracture intensity and fracture/fault dips were deemed relevant not only to characterize the nature of mineralization, but also to help estimate hydraulic conductivity and connectivity. Statistical analyses of the fracture data were part of this study.

An acoustic borehole televiewer survey was performed in holes located primarily on the west side of the deposit and within the area proposed as the first production area. The intent was to identify actual orientations of subsurface fractures and faults by surveying the undisturbed borehole wall.

Magma and BHP prepared detailed databases for accessing and preserving results of the investigations. In addition to the main drillhole database, a separate structure database was created. The purpose of the structure database was to store specific information on the location, thickness, and character of the structures identified in the drill holes in order to correlate those structures across holes. As of 1997, the structure database contained data from all of the Magma and BHP core holes and some Conoco core holes (BHP, 1997).

10.2 Interpretation

Currently, SRK has relied on the reports and interpretations made by previous operators and various consulting companies related to:

- Regional and local geology, hydrogeology, and structure;
- Deposit-scale geology, hydrogeology, structure, and mineralogy;
- Distribution of mineralization;
- Water level and water quality conditions; and
- Numerical groundwater flow modeling and hydrochemical modeling prepared to support environmental permit applications.

Based on a review of the information provided to SRK by Curis and information available in the public domain, SRK is of the opinion that the specific historic mineral exploration work on the property was conducted in a professional manner. The site characterization test work and modeling (geological, groundwater, metallurgical, geochemical) were performed to industry standard methods and were acceptable to the regulatory agencies. Interpretations derived from these studies appear reasonable and accurate.

11 Drilling (Item 13)

Curis has not yet done any confirmation drilling on the Florence property; all drilling is historical. As the historical drilling is fundamental to the project, and more than one company has verified it, the basic information on the drilling that supports the resource estimation in Section 17 of this report is presented here.

Drilling on the Florence Project was undertaken by means of core drilling, reverse circulation (RC) rotary drilling, and conventional rotary drilling. Conoco developed a detailed geologic core logging protocol in the early to mid-1970s. With slight modifications, Magma and BHP geologists continued to use this method to maintain compatibility with the geologic data produced by Conoco.

11.1 Type and Extent of Drilling

Between March 1970 and late 1975, Conoco drilled 686 holes on the property – 332 holes within the main deposit and 354 holes on the periphery. The Conoco holes were drilled by rotary, rotary-core, and core methods. Nearly all of the core was NX-diameter (5.4 cm), although poor ground conditions necessitated a reduction to BX-diameter (4.2 cm) core upon occasion. In addition, four holes were NC-cored through the overburden. The Conoco exploration drilling program was initiated on a triangular grid pattern beginning with 1,000-ft spacing and subsequent 500-ft spacing. Development drilling was performed on in-fill drillhole density of 250 ft.

Magma drilled 42 additional holes for the pre-feasibility study: 23 NX-diameter core holes for the verification drilling program, five HX-diameter (6.4 cm) core holes for exploration in Section 22, two 6-inch core holes for obtaining bulk samples for metallurgical testing, and 12 rotary-drilled pumping and observation wells for pumping tests. In general, the core holes were rotary drilled through the overburden to about 50 to 100 feet above the top of bedrock, and then cored into bedrock; on the western side of the deposit, coring sometimes started several hundred feet above the top of bedrock.

By May 31, 1997, 112 new holes had been drilled for the BHP final pre-feasibility study. Thirty-three monitoring wells (including 15 point-of-compliance wells) were drilled by conventional mud rotary methods. Thirty-four aquifer test wells (pumping and observation wells) were drilled by conventional mud rotary or reverse circulation methods. BHP-5 used in the pilot field test was mud rotary drilled from the ground surface to approximately 40 feet into bedrock, and then was reverse circulation drilled to total depth. Of the 44 core holes drilled during the BHP pre-feasibility study, two holes were 6-inch core, eight holes were HX-diameter core, one hole was a combination of 6-inch and HX core, and the remaining 33 holes were NX-diameter core. In general, these core holes were rotary drilled to about 50 to 100 feet above bedrock, cased to the bottom of the rotary portion, and cored using a split tube in order to maintain core integrity for rock quality designation (RQD) measurements. In most cases, Magma and BHP conducted downhole surveys at 100-foot increments recording both bearing and inclination as did Conoco.

Magma compiled the drillhole information from 795 exploration, development, and water holes into a consistent database. In addition, approximately 37 percent of the data compiled by Conoco in the mid-1970s were entered into the project database by Southwest Data Services (SDS), of Tucson, Arizona. These data were restricted to 267 drillholes within the mineralized area. The data entry for representative percentage of the resulting database was spot-checked by Independent Mining Consultants (IMC) of Tucson, Arizona (IMC, 1994).

IMC added the remaining 419 Conoco drill holes to the database directly from the drill logs early in 1993. (Approximately 55 of the Conoco drill holes are not represented in the current database. The log files for

some of these holes were never located, collar locations for others could not be determined, and drill core could not be found for any of these holes.) Most of these holes are located on the periphery of the deposit (including condemnation drill holes), or were drilled only to the top of bedrock. IMC also entered data from 23 holes drilled during Magma's pre-feasibility verification drilling program, as well as from two 6-inch core holes drilled for metallurgical testing, 12 pumping and observation wells drilled for aquifer testing, and five exploration holes drilled in Section 22.

Drillhole data from BHP's pre-feasibility drilling program were entered in-house as geologic logging was completed; an extensive review was completed by BHP staff of all prior data entry for the entire database. A summary of the historic BHP drillhole database as of May 31, 1997 used for resource estimation is shown in Table 11-1; 487 drillholes were within the model area and used for resource estimation. The table includes the number of TCu and ASCu assays for all the metallurgical zones, as well as for the oxide zone only (including the transition zone). The reassayed intervals are from Conoco drill holes within the first mining block that were reassayed during the feasibility study.

Sixteen additional holes were added in 1998 for the pilot field test; these holes were logged and assayed for %TCu and %AScu but an updated resource estimation was not prepared. A summary of the number of drillholes, footage lengths, sample intervals, and intervals with TCu assays in the BHP database and within the model limits at the conclusion of drilling in 1998 is presented in Table 11-2. A perspective view of the drill collars and downhole drill traces as of 2010 in the immediate vicinity of the project land boundary is shown in Figure 11-1.

All of the exploration core holes drilled by Magma and BHP from 1993 through 1996 were abandoned in compliance with, and according to the requirements of the Arizona Department of Water Resources (ADWR) Well Abandonment Procedure Arizona Revised Statutes (A.R.S.) § R12-15-816.

SRK is of the opinion that the historical drilling is sufficiently well documented that it forms a substantially reliable drillhole database sufficient for resource estimation. Type of drilling, extent, and drill spacing density (approximately 250 ft) are adequate to represent the geology and mineralization.

Table 11-1 Historic drilling and assays in BHP database as of May 31, 1997

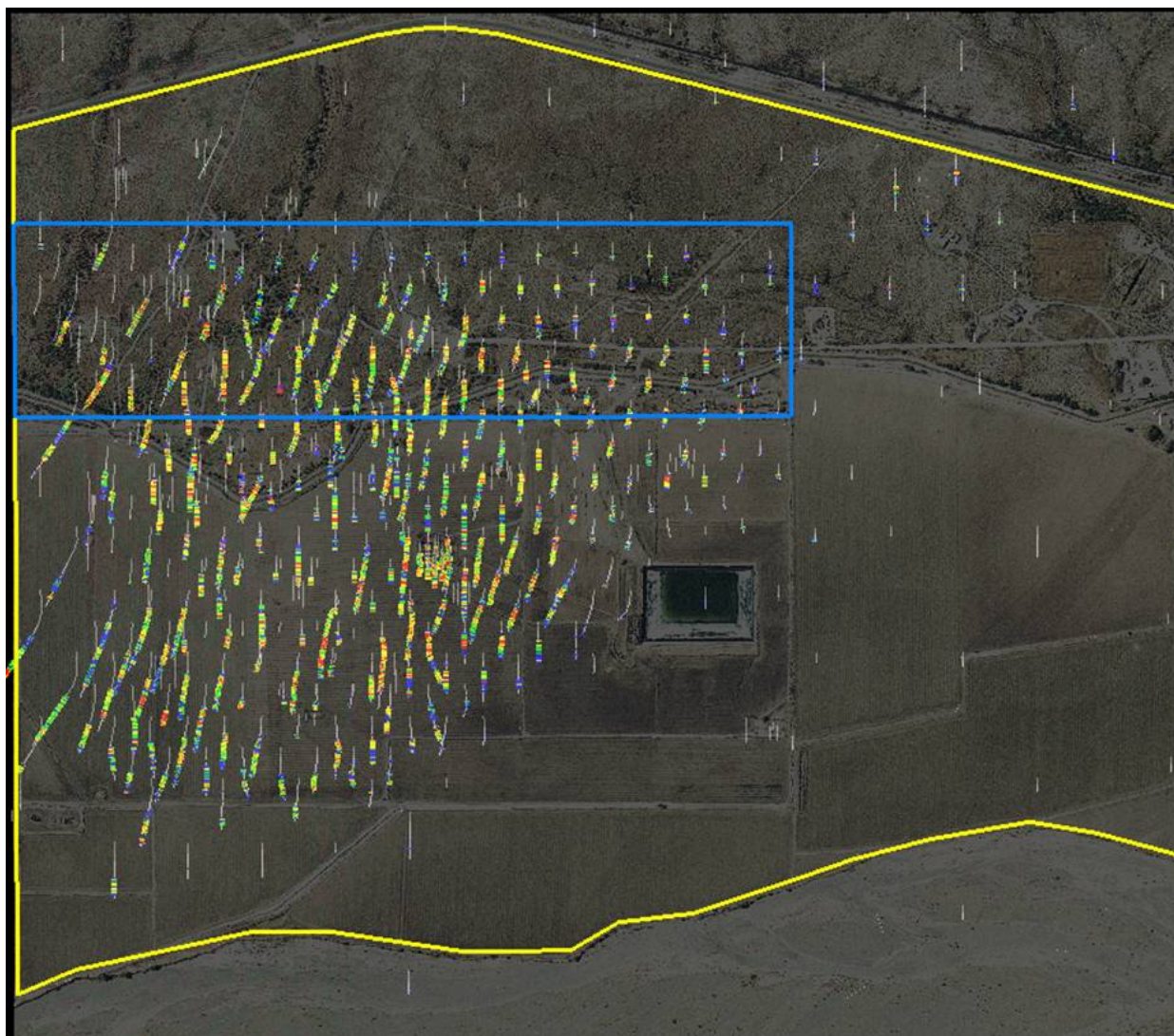
	Total Database	Within Model Limits	Within Permitted Area
Drill Holes	795	487	274
Sample Intervals	86,236	70,300	43,034
Intervals with TCu assay	74,495	60,880	37,975
Intervals with TCu assays in the oxide zone	28,310	22,544	14,586
Intervals with ASCu assays	31,482	29,385	20,755
Intervals with ASCu assays in the oxide zone	19,239	18,540	13,760
Re-assayed Conoco intervals	432	432	432

Source: BHP (1997, v. 2, p. 29).

Table 11-2 Drilling and assays in the BHP database as of 1998

	Total Database	Within Model Limits
Total Drill Holes	811	502
Drill holes with TCu assays	610	380
Total Drilling Footage	788,335.7	577,317.4
Total Assayed Footage	410,486.4	328,850.6
No. of Sample Intervals	87,273	71,402
No. of Intervals with TCu assays	75,079	61,531
No. of Basin-Fill Intervals		10,074
No. of Basin-Fill Intervals with TCu assays		2,886
No. of Oxide/Mixed Intervals		25,175
No. of Oxide/Mixed intervals with TCu assays		22,765
No. of Sulfide Intervals		36,153
No. of Sulfide intervals with TCu assays		35,880

Source: Compiled by SRK, 2010. Holes lacking TCu assays consist primarily of monitor, aquifer test, POC, and water supply wells, geotechnical drillholes.



Note: Perspective view looking due north at -80 degrees. Drill collars and downhole drill traces from 2010 database. TCu cutoff colors are shown; yellow=0.3 %TCu, orange=0.5 %TCu, red=>0.6 %TCu. Topographic contours -10 ft. Curis land (yellow); Arizona state mineral trust land (blue).

Figure 11-1 Deposit area with property and mineral lease boundaries, topography, and drill hole traces as of February 2010.

12 Sampling Method and Approach (Item 14)

This section describes sampling methods and quality of historical drilling data, as documented by Magma/BHP (BHP, 1997).

12.1 Sampling Methods

The selection of drill samples was generally related to the logging increments used by Conoco, Magma, and BHP. Conoco logged drill core in 2.5-foot and 5-foot increments and assayed every 5-foot or 10-foot sample for TCu on bedrock samples. Between 1970 and 1973 (exploration phase), Conoco routinely assayed 50-foot sample composites through the oxide zone and the oxide-sulfide interface for ASCu. Starting in 1974, ASCu was assayed for every 10-foot core interval extending through the oxide zone and 50 feet into the sulfide zone. Fifty-foot bench composite samples were simultaneously assayed for ASCu. In 1975, 1,388 50-foot composites from 95 holes were analyzed. For the check samples, Conoco reduced half or whole core through a series of splitters, crushers, and pulverizers to get the required pulp weight of 100 grams of -150 to -200 mesh material. The TCu and ASCu method Conoco used in its laboratory is not known.

Magma logged and sampled in 5-foot increments for the pre-feasibility study. The pre-feasibility core material was split on site and sent to the Magma San Manuel Metallurgical Laboratory for preparation and assaying. The San Manuel assaying techniques were used on all core samples and on the pre-feasibility reassays of Conoco sample pulps.

In contrast, for the feasibility study, Magma and BHP sampled core in 10-foot intervals but honored lithologic contacts as well as 50-foot bench elevations. Analysis of new core samples, verification assays, and other analyses was primarily performed by Skyline Assayers & Laboratories of Tucson. Sample preparation methods are described in Section 13.

12.2 Sample Quality

Conoco, Magma, and BHP developed protocols for all techniques to provide a consistent quality, to ensure that meaningful samples were collected, that the material was properly handled and assayed, and that assays could be duplicated and verified by in-house or third-party auditors (BHP, 1997). The protocols covered all drilling; sample collection, handling, logging, and preparation; assaying practices; and data entry procedures. Documentation, data verification, control assays, and reassaying, as appropriate, were part of the protocols. SRK has every reason to believe that sample quality is acceptable.

13 Sample Preparation, Analyses, and Security (Item 15)

This section describes sample preparation, analyses, and security related to drilling samples. The sample collection and analysis of water quality samples is also discussed.

13.1 Historic Sample Preparation

Historically, Conoco, Magma, and BHP used rotary drilling methods to drill through the basin-fill formations and to install water supply, aquifer test, or monitor wells. Diamond drilling was the preferred drilling method in bedrock for Conoco and Magma; BHP used a combination of diamond drill core and reverse circulation drilling in bedrock for the production field test wells. Rotary cuttings were used for geological control only; RC cuttings and diamond drill core were used for sample analyses.

Sampling protocols were developed to ensure consistency and remove or eliminate bias. Conventional rotary and/or RC drill cuttings were generally collected every 10 feet by Conoco, Magma, and BHP. A representative fraction of each sample was placed in a sieve, and observations were made on the chips both before and after rinsing. Every 10 feet, a representative sample was placed in a waxed, cylindrical cardboard container (Conoco) or plastic chip tray (BHP) for future reference. Samples drilled by RC methods were then sent for assays. Samples taken in the conventional rotary drillhole were not analyzed by BHP because the primary purpose was to provide geologic formation information and an open hole in which to perform downhole geophysical tests or other characterization tests. TCu analyses from conventional rotary drilling were considered unreliable by the previous companies and those samples were not sent for assays.

Core samples provide the most detailed information. BHP sample-handling protocols used during core handling are summarized here, but were built on similar protocols used by Conoco and Magma. The core was first wiped free of drilling mud and then photographed using 35mm, color film to preserve a record of the intact core. The core sample was next split according to the intervals listed on the sample sheets prepared by a geologist. The following method was used to saw and sample the core:

The core within each row of core box was divided visually into left and right halves running the length of the box.

The dividing line was used as a guide to saw the core into halves. In the first row, the left half was put into an olefin sample bag for assaying and the right half was returned to the box. In the next row, the right half was selected for assaying and the left was returned to the box. The use of alternating left and right halves for the assay sample was intended to reduce one aspect of sampling error.

Intensely broken material was taken from the core box row using a narrow, flat-edged scoop that was half the width of the core box row.

Every 200 feet, both halves of the sample interval were prepared for assaying. The duplicate samples were labeled “A” and “B” and were weighed prior to shipment. Ideally, duplicate samples weighed the same. In practice, the difference in weight between samples “A” and “B” was no greater than 200 grams.

At every 15 samples, a control sample was inserted into the set of samples shipped to Skyline Laboratories. The control samples were already prepared as pulp samples and weighed prior to shipment.

The coarse rejects were stored in 55-gallon drums adjacent to the core storage building, and the core boxes were shelved in the core storage building.

13.2 Sample Assaying Procedures

This section presents the sample analysis procedures for rock, water quality, and solution samples taken at the Florence Project since the 1970s by various companies. Sections 13.2.1 through 13.2.3 present the sampling and analysis procedures by predecessor companies and the confirmation sampling completed by SRK.

13.2.1 Conoco

Through 1973, Conoco logged the geology in the exploration drill holes (1,000-feet and 500-feet drill spacing) in 2.5-foot intervals and collected assay samples at 5-ft intervals. The later in-fill development drill holes (250-ft spacing) were logged in 5-ft intervals and assayed in 10-ft intervals (Conoco, 1976). The core from the 500-ft spaced holes was photographed and sample pulps were prepared on-site. The 5-ft and 10-ft sample pulps were sent to outside assay laboratories (primarily American Analytical and Research Laboratories of Tucson, Arizona) for TCu content in percentages listed to two decimal places and with a method detection limit of 0.01 %TCu. The remaining material in the pulp sample was composited into 50-ft samples and assayed for %TCu, %ASCu, molybdenum (ppm), silver (ppm), and some gold (ppm) on early samples. Check assaying for %TCu was done by another outside assay laboratory. Reject samples of two size fractions were retained on the property for future reference and for metallurgical bench testing (Conoco, 1976).

When development drilling began, core samples were completely crushed for analysis on 10-ft intervals and were not retained for reference. Every tenth sample was check assayed by another assay laboratory for %TCu. Conoco analyzed the core drilled in 1975 in its on-site laboratory at the pilot plant facility.

Much of the Conoco laboratory equipment remains on-site in the Admin Building (glassware, hot plates, Bunsen burners, fume hoods, beam balances, chemical cabinets/sinks etc.). During the limited time available during the site visits, SRK was unable to find physical records documenting the sample preparation and analytical protocols used by Conoco or its contract laboratories. The QP assumes these are stored on site, however, based on the careful storage and organization of other drillhole-related materials (logs, assay receipts, pulps, core, rejects etc). Conoco pulps and rejects are stored in a dry condition (with minimal damage by rain/animals) in the core storage building on site. Dry, undamaged pulps were used by Magma during confirmation reanalysis efforts. The assays by the primary contract laboratory, American Analytical and Research Laboratories, were performed under the supervision of Mr. Pete Soto Flores who was an Arizona-registered assayer (#6852) from 1968 through 1990. Signed (sealed) and dated laboratory receipts have been continuously filed on site in the geology log files, which are now in Curis' possession. Although a record of the assaying procedures was not found during the site visits, the QP assumes the analytical methods used for the %TCu and %ASCu assays were by well known and standard methods.

13.2.2 Magma and BHP

Magma/BHP utilized both its in-house laboratory at the nearby Magma/BHP San Manuel Operations and outside contracted laboratories (primarily Skyline Assayer & Laboratories (Skyline) in Tucson, Arizona) to perform analyses of core and RC samples. The San Manuel Metallurgical Laboratory and sample preparation facilities were designed to provide daily support to the mine, SX/EW plant, concentrator, smelter, electro-refinery, and rod plant operations including daily underground and open pit blasthole samples, process solution samples (raffinate, PLS), and quality control analysis of copper and molybdenum sulfide concentrates, and copper anodes, cathodes, and rod. The analyses were performed under the supervision of professional metallurgists and laboratory managers. The San Manuel Metallurgical Laboratory used standard, industry accepted methods for the preparation of sample rejects

and pulps and the analysis of %TCu content by atomic absorption methods. The analyses are typically in percentages to two decimal places for both TCu and ASCu content.

Many variations exist on the method used to analyze acid soluble copper content at the copper mining operations in Arizona. The methods vary slightly from operation to operation even under the same company ownership – the most important factor was to maintain internal consistency at each operation for relative comparison of the extent of oxidation in each material type within the same deposit. The various ASCu determination methods provide a relative indication of the percentage of copper that is released with short-duration exposure to dilute sulfuric acid under specified time, temperature, and acid-concentration conditions; the time (5 minutes to 2 hours), temperature, and concentrations vary by operation. When outside laboratories are used, the mine operation typically provides a copy of its method to the outside laboratory to ensure consistency of the method used.

The “San Manuel Method” was consistently used by Magma, BHP, and outside laboratories contracted by Magma/BHP for the analysis of %ASCu content in the Florence drill and metallurgical test samples. The “San Manuel Method”, as provided by Skyline upon request from SRK, is shown below.

Acid Soluble Copper Assay Method – San Manuel Metallurgical Laboratory

- 1) Weigh 0.500 grams of pulverized sample into a 50-mL Erlenmeyer flask.
- 2) Add 10 mls of 15 percent (V/V) sulfuric acid.
- 3) Place in a water bath held at 73 degrees Celsius for 5 minutes.
- 4) Remove the flask from the water bath and immediately filter through a 15-cm VWR No. 413 filter paper into a 100-ml volumetric flask. Wash 3 to 4 times with demineralized water.
- 5) Cool, dilute the contents of the flask to 100 mL. Stopper the flask and shake well to mix the contents. Place in the Instrument Room and allow the flasks to equilibrate to room temperature.
- 6) Read by Atomic Absorption using 10.0 micrograms/mL and 30.0 micrograms/mL copper calibration standards in 1.5 percent sulfuric acid.
- 7) Calculate the percent acid soluble copper by the formula:

$$\% \text{ ASCu} = 0.02 * \text{Cu (micrograms/mL)}.$$

The analyses by Skyline of drilling samples, metallurgical test materials, and process solutions were performed under the supervision of Arizona-registered assayers Bill Lehmbeck (#9425) and Jim Martin (#11122) who are both still employed by the laboratory. Analysis of groundwater quality from monitor wells and surface water samples collected by Magma/BHP or its environmental consultants was performed by outside laboratories certified in Arizona to perform environmental water quality analyses. Analysis of metallurgical column test samples (column test heads/tails, feed solution, and effluent/pregnant leach solution) was performed primarily by outside laboratories. The records associated with the analyses performed by outside laboratories are filed in drill log files, attachments to various reports prepared by Magma (RDTG, 1995), or BHP (1997a,c). The amount of documentation varies greatly by laboratory but generally provides the standard metallurgical test methods/protocols, information on sample preparation (weights, size fractions), sample analysis method, method detection limits, analysis units, internal laboratory QA/QC methods, laboratory qualifier comments, and chain-of-custody records. The environmental water quality analyses provide the greatest degree of documentation.

13.2.3 SRK Consulting

SRK used Skyline for the confirmation assay program performed by SRK in 2010. Skyline has provided analytical services to the copper mining industry for 70 years and was used to ensure consistency with

prior analytical methods. Skyline has been accredited by the American Association for Laboratory Accreditation in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories* since December 2009. Skyline used the company's standard method (described below) for the analysis of TCu (and molybdenum, lead, zinc, and iron as applicable) in percent concentration to two decimal places for all analyses performed for Magma, BHP, and SRK. Skyline used the "San Manuel Method" (as described above) in percent concentrations to two decimal places for all ASCu analyses performed for Magma, BHP, and SRK.

Total Copper Analysis in Rock Samples – Skyline Assayer & Laboratories

- 1) Accurately weigh 0.4000 to 0.4300 grams of the sample into a 200 mL flask. Weigh samples in batches of 20 samples plus 2 checks (duplicates) and 2 standards per rack. At end of job, weigh the tenth sample out of each rack plus 4 standards.
- 2) Add 10.0 mL HCl, 3.0 mL HNO₃ and 1.5 mL HClO₄ to each flask. Place on a medium hot plate (about 250 °C).
- 3) Digest until the only remaining acid present is HClO₄. Note: The volume of the liquid in the flask should be less than 1 mL.
- 4) Remove from the hot plate and cool almost to room temperature. Add about 25 mL DI water and 10.0 mL HCl. Boil gently for about 10 to 20 minutes.
- 5) Cool the flask and contents to room temperature, dilute to the mark (200 mL) with DI water, stopper and shake well to mix.
- 6) Read the solutions for Copper by Atomic Absorption using standards made up in 5 percent Hydrochloric acid.
- 7) Read the solutions for Molybdenum, Lead, Zinc and/or Iron on the ICP using standards made up in 5 percent hydrochloric acid.

13.3 Sampling Procedures

Magma/BHP engaged Dr. Francis Pitard of Broomfield, Colorado, as an independent sampling specialist to observe procedures and train staff in proper sampling techniques. The training covered sampling techniques for base and precious metal deposits, identifying large- and small-scale variability in sampling procedures, identifying all of the possible sampling errors, and identifying the overall effect on resource estimation. The training course also introduced statistical processes and statistical quality control.

Magma created analytical assay standards at several grade ranges for the Florence deposit to minimize or eliminate biases. They performed a detailed evaluation of assay laboratories to select the most qualified. Ultimately, Magma selected Skyline in Tucson to analyze all samples collected during the feasibility program.

Randomly selected control samples were added to each batch of drill core or RC chip samples that was shipped to Skyline. Every 15th assay sample was an assay control assay pulp sample that was used to check for analytical bias or variance. The assays from the control samples were required to be within two standard deviations of the overall mean or the entire batch was re-assayed.

13.4 Water Quality Sampling and Analysis Procedures

An extensive groundwater characterization program was conducted as part of the permit application processes required by regulations of ADEQ and the EPA. Data from the program were used in groundwater flow, and transport models to evaluate proposed ISCR operations and to establish 12-month baselines to serve as the statistical foundation for alert levels (ALs) and aquifer quality limits (AQLs) at 31 Point of Compliance (POC) wells. The ALs and AQLs were to be used in the compliance monitoring

program that would be required as conditions of the APP and the UIC permit issued respectively by ADEQ and EPA.

The groundwater characterization samples were collected and analyzed in accordance with procedures specified in a work plan approved by ADEQ and EPA. Specifically trained personnel of an environmental consulting firm collected the samples, applied appropriate labels and transported the samples with properly completed chains of custody to laboratories licensed in accordance with Arizona law to perform the analyses specified in the work plan. The laboratory data were reviewed and entered into a database in accordance with the approved work plan and then used to develop ALs and AQLs approved by ADEQ and EPA.

After the APP and UIC Permit were issued in June 1997, a compliance monitoring program involving the POC wells was initiated in accordance with requirements specified in the APP and UIC Permit. The program involves the analysis of seven parameters per well each quarter and the analysis of 41 parameters per well biennially. Samples continue to be collected and analyzed quarterly and compared to ALS and AQLs specified in the APP and the UIC Permit. Reports of sampling and analytical results are submitted quarterly to ADEQ and EPA. Specifically trained personnel of an environmental consulting firm collect all samples, label them and transport them with appropriate chains of custody to laboratories licensed in accordance with Arizona state law to perform the analyses required by the permits. The environmental consulting firm maintains a database of all groundwater quality data collected under the initial characterization program and the subsequent compliance monitoring program.

Water quality samples related to the BHP field test consisted of groundwater monitored before and after the field test and the make-up water pumped from well WW-4. Water quality samples related to process solution included injectate (the mix of groundwater and sulfuric acid injected into the injection wells), pregnant leach solution collected from the recovery wells, and the water impoundment water. Process solution samples were taken daily and weekly by field technicians trained in water quality sampling procedures. Water quality analyses were performed by the BHP Copper San Manuel Metallurgical Laboratory, ACTLABS-Skyline of Tucson (now Skyline Assayers & Laboratories), and ACTLABS-Enzyme (now ACTLABS) of Ancaster, Ontario, Canada. Field data (water level, electrical conductance, and pH) were recorded and entered by BHP field technicians on a daily basis.

The groundwater and process solution analyses related to the field test and subsequent rinsing phase are available in a Microsoft Access database (FlorenceDB.mdb-revised 6/28/2010) for the period from November 1, 1997 through October 1999. Although the number of sampling points decreases after March 1998, sampling data are also available from 2000 through 2007. The database contains records of water quality sampling, well construction and well history details, flow data, the results of mechanical integrity tests, and other information. Data entry forms, queries, and reports that generate graphical views of the concentrations of constituents for various sets of wells are also available in the database. The data were originally entered by BHP employees to record the results of drilling (well construction details, costs, integrity tests) and the results of solution analyses related to the ISCR and rinsing field test.

13.5 Factors Impacting Accuracy of Results

Total copper analyses are quantitative analyses performed using standardized methods that can be duplicated from laboratory to laboratory. As mentioned in Section 13.2, acid-soluble analytical results are an empirical measurement of soluble copper using various analytical methods performed under timed leaching conditions with variations in heat, time, and acid concentration. There are a number of methods to analyze the acid-soluble component of the total copper content of a rock sample. Varying results can be generated owing to slight differences in the analytical method. ASCu results are therefore viewed to be a relative measure of the minimum component of total copper that is acid-soluble under certain laboratory

conditions and which do not necessarily reflect the actual amount of copper that is recoverable under leaching conditions. The important factor is to maintain consistency where possible in methods used on a particular site.

In SRK's opinion, the historical sample preparation procedures, analyses performed, and the sample security in place for rock, groundwater quality, and process solution samples were industry standard procedures then and now, and are sufficient to support the project information database.

14 Data Verification (Item 16)

Data verification has been performed by each company conducting exploration at the Florence Project site as described below. During the 2010 site visit, SRK verified that drill core and pulps stored at the Florence Project are generally dry and free of animal or moisture damage and are available for verification sampling. A number of core samples were subsequently taken for confirmation assays as described below. An extensive data verification program of the drill logs, assay receipts, and database was not deemed necessary by SRK. One of the QPs (C. Hoag) was personally familiar with the data entry and database verification programs; sampling, data entry, and quality assurance/quality control protocols, and the reanalysis programs undertaken by both Magma and BHP during her 5-year assignment to the project for the previous operators.

14.1 Project Quality Controls and Quality Assurance

Quality Control and Quality Assurance procedures used by Conoco included inserting check samples to a secondary laboratory on 10 percent of its assayed samples. Magma/BHP protocol for Quality Control and Quality Assurance (QA/QC) included inserting a control samples into samples shipped to Skyline. The control samples were prepared to represent seven TCu grade populations within the deposit. The control samples, already prepared as pulp samples and weighed, were inserted at a rate of one control for every 15 samples. BHP was concerned that the laboratory would begin to recognize the grade ranges of the control samples. The samples were therefore weighed prior to shipment to Skyline and after analysis to ensure the laboratory actually removed material for analysis.

14.2 Check Assay Sample Preparation and Results

Sections 14.2.1 and 14.2.2 provide information on the historical and current check assay programs.

14.2.1 Historical Check Assay Program

Conoco used approximately four laboratories for TCu and ASCu before and during the time in which they set up their own sample preparation and assay laboratory on site. American Analytical of Tucson completed most of the initial assays; 10 percent were sent to Southwestern Assayers of Tucson for a check assay of %TCu and %ASCu.

Magma reassayed Conoco sample pulps for its pre-feasibility study. Because many of the Conoco drill intervals lacked an actual ASCu assay, Magma contracted in 1993 with Independent Mining Consultants of Tucson to compute an ASCu value for the missing intervals based on ratios of ASCu to TCu seen at various grade ranges. Although listed separately in the pre-feasibility database, these calculated values were used along with the actual ASCu assays in the Magma pre-feasibility kriging process.

These estimated ASCu values based on ratio relationships were not used by BHP. The original Conoco 50-foot composites were kept but a program was initiated to replace the 50-foot composited ASCu assays with individual 5-foot and 10-foot assays. For the final pre-feasibility study, BHP attempted to reassay 33 Conoco holes within the proposed first mining area. Because pulps for five of those holes were missing or mislabeled, Skyline performed 1,857 TCu and ASCu reassays on a total of 28 holes. In general, the Skyline TCu assays showed high statistical correlation to the Conoco assay results, but the ASCu assays are not well correlated because BHP assayed the individual 5-foot or 10-foot assay intervals rather than the 50-foot composite pulp samples used by Conoco.

14.2.2 Current Check Assay Program

SRK performed verification sampling for Curis on 32 samples to confirm the presence of copper mineralization. Continuous 5-foot and 10-foot samples representative of the major rock types, oxidation zones, and copper grades were selected from five drillholes within the main deposit area. The samples were selected by SRK from one Conoco drillholes (105MF) and three Magma drillholes (MCC-367, MCC-561, and MCC-562). In addition, SRK personnel prepared fresh control pulp samples from pulverized and well-labeled bulk standard materials stored in the Administration building and sent seven control samples at various grade ranges for verification analysis.

A comparison of the results of the TCu assays on the original core interval and residual materials for the same sample interval indicate the average difference between the assays was statistically insignificant at less than 0.01 percent for TCu and 0.05 percent for ASCu assays. Results of paired t-tests on the TCu assays for the core and control samples indicate a high Pearson Correlation (0.9467 and 0.9995, respectively) as shown in Table 14-1 and Table 14-2; the result of the paired t-test for ASCu assays has a lower Pearson Correlation of 0.7923. The results of these confirmation analyses are illustrated in Figure 14-1 and Figure 14-2. In general, the re-analyses confirm the presence of copper in the intervals tested, the homogeneity of the TCu results taken from two core splits, and the relative homogeneity of the deposit as seen in the A and B core splits. There was a high correlation between the historic and new assays performed on the TCu assay standards.

Table 14-1 Results of paired T-test on historic and new %TCu assays for splits from same sample intervals

	Historic %TCu	New (2010) %TCu
Mean	0.31278125	0.3234375
Variance	0.02434366	0.031603931
Observations	32	32
Pearson Correlation	0.946745815	
Hypothesized Mean Difference	0	
df	31	
t Stat	-1.029678042	
P(T<=t) one-tail	0.155564219	
t Critical one-tail	1.695518742	
P(T<=t) two-tail	0.311128439	
t Critical two-tail	2.039513438	

Source: Historic assays were performed by a number of laboratories; 2010 analyses were performed by Skyline Assayers & Laboratories of Tucson.

Table 14-2 Results of paired T-test on %TCu assays for control standards

	Historic %ASCu	New (2010) %ASCu
Mean	0.472571429	0.478571429
Variance	0.065297952	0.062514286
Observations	7	7
Pearson Correlation	0.999582493	
Hypothesized Mean Difference	0	
df	6	
t Stat	-1.735497678	
P(T<=t) one-tail	0.066668883	
t Critical one-tail	1.943180274	
P(T<=t) two-tail	0.133337766	
t Critical two-tail	2.446911846	

Note: The “historic” %TCu assays for 7 QA/QC control standards are mean results calculated based on analyses of multiple samples at each grade range by five analytical laboratories in the U.S. and Canada; 2010 analyses were performed by Skyline Assayers & Laboratories of Tucson.

Table 14-3 Results of paired T-test on historic and new %ASCu assays for splits from same sample intervals

	Historic %ASCu	New (2010) %ASCu
Mean	0.1691875	0.200625
Variance	0.020774867	0.034309274
Observations	32	32
Pearson Correlation	0.792341634	
Hypothesized Mean Difference	0	
df	31	
t Stat	-1.573311233	
P(T<=t) one-tail	0.062899361	
t Critical one-tail	1.695518742	
P(T<=t) two-tail	0.125798722	
t Critical two-tail	2.039513438	

Source: Historic assays were performed by a number of laboratories; 2010 analyses were performed by Skyline Assayers & Laboratories of Tucson.

14.3 SRK Conclusion

SRK concludes that work performed by historical operators at the Florence project and limited sample verification work completed by SRK, confirm that the database of information supporting the project resource estimate and the scoping level studies in this report, are of high quality and have been sufficiently verified. The project database of information is verifiable and supports the statement and conclusions presented in this report.

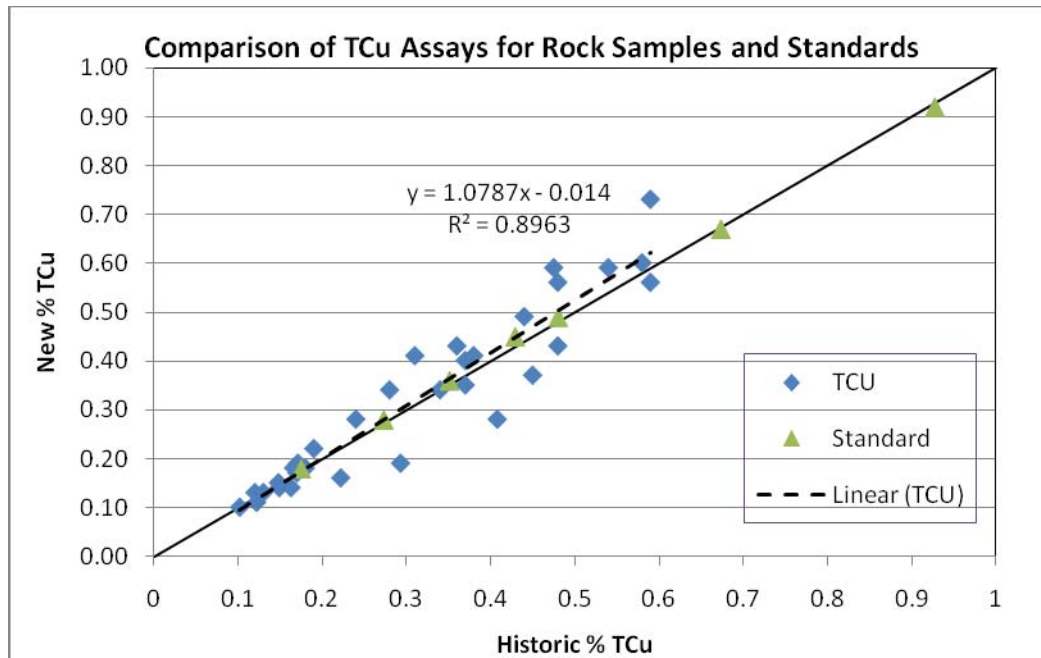


Figure 14-1 Comparison of TCu check assays performed on selected drill core and pulp standards by SRK

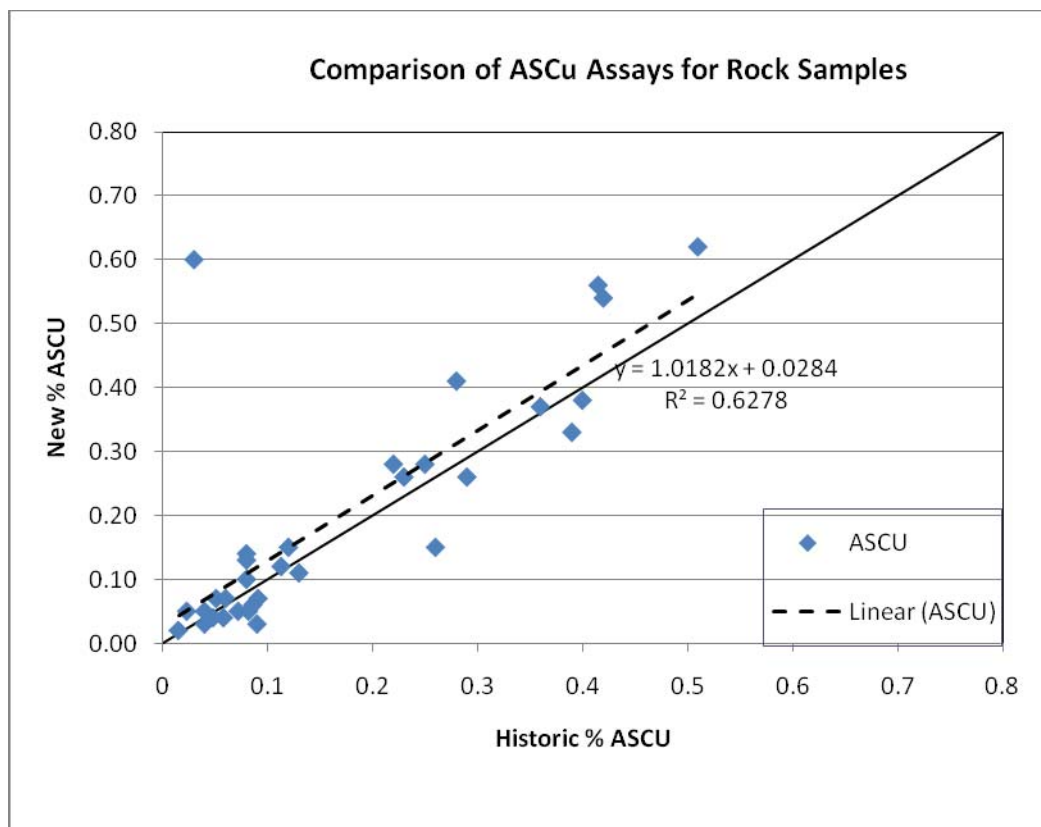


Figure 14-2 Comparison of ASCu check assays performed on selected drill core samples by SRK

15 Adjacent Properties (Item 17)

There is no metal mining near the Florence Project. Adjacent properties consist of agricultural production (cotton, alfalfa, maize), undeveloped desert and open-pit gravel operations. A relatively large open-pit gravel operation is located to the south-southeast on the north side of the Gila River, less than a mile from the Florence Project. Future residential and light industrial development is planned for areas to the north and west of the Florence Project. However there are constraints on this as the property is surrounded by an active rail line, a major highway and extensive electrical (500 KV and 125 KV) transmission infrastructure.

16 Mineral Processing and Metallurgical Testing (Item 18)

This section briefly summarizes the mineral processing and metallurgical testing at the Florence property, with specific reference to the BHP pre-feasibility study for ISCR copper recovery dated December 1997.

16.1 Hydrological Test Work

The Florence Project is expected to be a well-to-well in-situ operation in complexly and pervasively fractured bedrock with raffinate injection, copper mineral dissolution, and copper solution recovery. Hydraulic control of the injected solution and recovery is necessary to recover copper efficiently and to protect the aquifers downgradient of the project area. Hydrological testing was completed as part of studies by the previous owners in order to evaluate whether the site is suitable for an ISCR operation and to prepare documentation for the application for the APP and UIC permits. The test work characterizing the aquifers and hydraulic properties of the basin-fill and bedrock formations are described in detail in Brown and Caldwell (1996c) and in BHP (1997c). The hydrological test work program was designed to assess variability in the various aquifers; the locations of pump, observation, and monitor wells were collared in representative locations and screened at various depths below ground surface. The results of the program appear to be representative of the range of values expected in the Florence aquifers; the results and characterization documentation were deemed to be sufficient by ADEQ and to EPA to issue the APP and UIC permits.

16.1.1 APP Hydrologic Studies

The hydrologic tests and water quality sampling were performed to characterize the formations on site and to support a numerical groundwater flow model and reactive transport model. Additionally the site characterization work and delineation of an aquitard unit in the basin-fill formations was used to demonstrate that site-specific geological and hydrogeological characteristics are present that will ensure solution control.

The well installations and hydrologic test work were performed using industry standard methods. A series of 49 aquifer (pumping) tests were conducted in 17 locations around the site. This included 17 major pumping wells and 46 monitoring wells, screened within the different formations and aquifers. Eight wells were completed within the upper basin-fill unit (UBFU), 17 within the lower basin-fill unit (LBFU), and 38 wells within the oxide bedrock including the hanging wall and footwall zones of the major faults. The hydrophysical data and findings from single-well tests, single cross-hole tests, and multiple cross-hole tests as performed by Colog, Inc. of Golden Colorado were presented in BHP (1997, Appendix IV-5).

Hydraulic conductivities in the basin-fill formations decrease with increasing formation consolidation at depth. The pumping tests in the basin-fill formations indicate that the UBFU is the most conductive, 60 ft/day; the mean hydraulic conductivity of the LBFU is 5 ft/day. These units are hydrologically separated by the almost impermeable, clay-rich middle basin-fill unit (MBFU). The oxide zone is less conductive than the LBFU with a mean hydraulic conductivity of 0.5 ft/day. The lowest value is 0.1 ft/day. The hydraulic connection between the interface of the lower basin-fill unit and the oxide zone was not characterized by the pumping test data.

The clay-rich MBFU has been documented across the deposit and is an aquitard barrier between the UBFU and the underlying LBFU and oxide zone. The MBFU is the key geological and hydrological site characteristic that was used in the APP application to demonstrate the ability to maintain solution control in the ISCR operation to prevent excursion of solution into the upper aquifer. The construction design for

the injection and recovery wells was intended to maintain a permanent seal in the borehole annulus between the aquifers and units penetrated by the wells.

16.1.2 BHP Production Field Test

In order to assess copper recover rates in an actual field test, BHP installed ISCR wells in a five-spot pattern with adjacent, additional recovery and observation wells (20 total) to ensure and monitor inward hydraulic gradient during the pilot ISCR test. The adjacent recovery and observation wells were designed and installed in locations enabling them to be converted into future ISCR wells following the pilot test. The major pre-test objectives were to provide geological, hydrogeological, and metallurgical information for the field test in an area representing average grade material.

In preparation for numerical model simulations, a conceptual hydrological model was developed for the pilot test area. Hydraulic parameters, including porosity, were estimated given the available geological and hydrological data (BHP, Appendices IV-2 and IV-7). Golder Associates reviewed the previous hydraulic tests – an excerpt of their report is presented in BHP (1997c, Appendix IV-4). Water injection and bromine injection tests were conducted using the five wells (BHP, 1997). A three-dimensional electrical resistance tomography study was performed by the University of Arizona in the 5-spot before raffinate injection began; conductive groundwater was injected to assess how the injected fluid moved through the formation with time and to verify that the well construction design prevented migration of conductive solutions upwards into the overlying aquifers (BHP, 1997c, Appendix IV-8).

A number of numerical groundwater flow models and mass transport models were developed based on the various test results and were used to predict fluid movement during operations and the field test and potential future effects on the environment. The numerical simulations will not be described in detail here but include a (1) regional groundwater model (MODFLOW), (2) transport flow models (PATH3D – particle tracking code and MT3D – contaminant transport code), (3) geochemical model (CHILLER, SOLTHERM database), and a (4) reactive chemical equilibrium transport (TRANQUI), and a reactive chemical and kinetic transport study (MULTIFLOW). The numerical simulations were performed by several consultants using industry standard procedures and software.

The field pilot test consisted of four injection wells (BHP-6, BHP-7, BHP-8, BHP-9) arranged at a distance of 71 feet (Figure 16-2) and an injection rate of 40 gallons per minute (gpm). Five recovery wells were installed, one of which was in the center of the injection wells (BHP-1); four recovery wells (BHP-2, BHP-3, BHP-4, BHP-5) were outside of the injection wells. The total injection rate was 160 gpm and the total recovery rate was 190 gpm. The injected raffinate was brought in from the BHP San Manuel operation and diluted with groundwater from a local groundwater withdrawal well (WW4). The flow data into and out of the field was controlled by flow meters and monitored via a SCADA computer system; flow data was transmitted to a control room computer via a fiber optic line.

Feasibility of SX/EW processing was not tested because decades of experience exist, so no pilot SX/EW plant was constructed during the test. PLS was pumped to a 7-acre double-lined pond where the excess water was evaporated using wobblers and misters; the solids and recovered metals settled to the bottom of the water impoundment. Daily field analyses were performed on the raffinate injected and the recovered PLS for pH, free acid, conductivity, copper, magnesium, chloride, and sulfate. Free acid is the hydrogen ion content available in the solution to maintain or dissolve the copper and keep copper into solution up to pH 4.5 when it will drop out as a salt; it is related to pH indirectly. pH is buffered in these highly saline solutions and cannot be used to measure accurately the available strength of dissolution, thus free acid is used as an empirical method to measure dissolving strength. Bromine was monitored on a daily basis during the bromine-injection tests prior to the pilot test.

The raffinate-injection phase of the field test was intended to run for a period of one year, but was terminated three months into the test by a corporate decision to curtail work on the Florence Project during a downturn in copper prices. The results at the time of termination of the field test were positive but the copper recovery curve was not completely assessed, although solution management controls were successful. Following the 3-month field test, the pilot test area was rinsed with near-neutral groundwater for 1 month and intermediate pH (5.5-6.0), water impoundment water for 2 months with no added amendments to remediate the groundwater in the pilot test area. Injection of neutral water continued again from July to December 1998 when injection ceased and a recovery-only phase was initiated. Periodic monitoring of the pilot test area, as well as routine quarterly sampling of the POC wells, continued for approximately 10 years following the test.

The UIC permit specifies that the water quality for those constituents with a primary maximum contaminant level (MCL) should be restored at closure to concentrations that are less than or equal to MCLs – or to background, pre-operation concentrations. Alert Levels and Aquifer Quality Limits (AQLs) were calculated after the baseline, pre-operation water quality samples were collected and are identical for the UIC permit area (within wellfield) and for the APP (at points of compliance). The closure timeline to rinse prior production blocks to original background levels is estimated at 18-24 months. Post-rinsing water quality concentrations measured within the remediated pilot test area are compared to site-specific APP AQLs for reference purposes only. The intent of the comparison is to assess the potential macrochemistry and trace element chemistry in the pilot test area after the limited-duration solution injection and recovery occurred, and remediation activities were completed. The BHP pilot test area was rinsed but not treated with any added amendments to effect remediation. The assumption is that water quality that meets reference groundwater quality standards within the ISCR wellfield post-remediation will likely meet the applicable standards at the POC wells – located at distances in which dilution and metal attenuation processes are in effect.

The field test results and water quality data were examined in detail by SRK during the current Scoping Level studies. Analyses, performed by certified environmental laboratories during the rinsing phase, indicate the regulated metals in the field test groundwater were rinsed below the AWQSs and APP AQLs. Amendments were not added to neutralize the low-acid water conditions; pH measured in some wells appears to have buffered at a pH that is lower than the AWQS.

16.2 Summary of Previous Metallurgical Test Work

Magma and BHP conducted numerous mineralogy, bottle roll, column leach tests, and chrysocolla dissolution studies during their respective pre-feasibility studies, which are briefly summarized below (Appendix 3, Magma, 1995; BHP1997d). Representative samples were selected for the test work by geologists familiar with the deposit rock types, mineralogy, alteration, and assay grade populations. The metallurgical tests used NX/NQ-diameter drill core and 6-inch diameter drill core and targeted the dominant rock types and grade ranges. Magma studies were designed to assess leach recovery and acid consumption under heap leach conditions; the tests were performed by McClelland Laboratories, Inc. of Sparks, Nevada using small- and large-diameter drill core.

BHP's pre-feasibility metallurgical program was initiated in 1996 to provide information for the design and planning of the ISCR operation. Representative samples were selected to represent materials to be leached within the first 5 to 7 years of operation. The program was designed to address technical issues that had been identified from previous work. These mainly consisted of estimating the amount of copper-bearing minerals that could be contacted with acidic solutions and the geochemical behavior of fluid-rock interactions. The metallurgical program consisted of mineralogical studies, cation-exchange experiments to evaluate the removal of copper from smectite clays, bottle roll tests to determine copper mineral solubility and acid consumption in sulfuric acid lixiviant, and column leach tests to determine aspects of

copper leaching, kinetics (time-recovery), likely leach solution chemistry, and reclamation chemistry. Limitations in the column-test work program and results were related to the inability to replicate completely the hydrologic conditions and porosity existing in the saturated bedrock. Solution velocities, contact time, and fluid-to-rock ratios can be considerably different in unsaturated column tests or heap leach materials versus in-situ conditions.

A summary of the results of the bottle roll tests, vat leach pilot tests, column tests with various pre-treatments, acid strengths, flow rates, and rinses, and the field ISCR test are briefly presented below.

16.2.1 Bottle Roll Tests

Various leaching tests and mineralogical characterization studies were carried out by Hazen Research, Inc. from 1971 through 1974 (Conoco, 1976). Most of the Hazen work comprised bottle roll and mechanically agitated leaching tests. In about 1972, a decision was made to adopt vat leaching of finely crushed copper oxide mineralization with a cut-off grade of 0.3 %TCu. During 1972–74, the vat-leaching concept was refined by tests that explored the influence of particle size, temperature, and free acid concentration on leaching kinetics. Recognizing the relatively brief duration of a commercial vat leaching cycle (7 to 12 days), the tests were focused on achieving 70–76 percent copper dissolution in less than 10 days, and preferably 2–4 days, in the interest of minimum acid consumption. The Hazen program concluded with a pilot-scale vat-leaching test in 1976.

In 1994, McClelland Laboratories, Inc. conducted 19 bottle roll tests and 4 column tests as part of a study that was designed to compare the feasibility of an open pit, heap leach operation with in-situ leaching and recovery (Magma, 1994). The tests were made on drill core samples obtained during the Magma pre-feasibility assessment and were intended to complement the Conoco effort. The bottle roll leach tests dissolved 40–80 percent of the total copper in the samples and approximately 65–75 percent dissolved during column leaching.

In 1995, 19 column tests were performed under the direction of Brown and Caldwell (1996) as a part of the work needed to apply for an Aquifer Protection Permit (APP). Seventeen of the tests examined the acid neutralization capacities of various rock types and basin-fill sedimentary units. Two other column tests were run in order to determine PLS composition after leaching at pH 1.5 with recycled SX raffinate. Head assays were not obtained, but the columns produced maximum PLS grades of 3.8 grams per liter (g/L) and 8.4 g/L Cu and the estimated leachable copper content of the samples equated to 0.56 %TCu and 0.84 %TCu, respectively.

The laboratory tests conducted by Hazen, McClelland, and Brown and Caldwell followed procedures normally used to enable scale-up of metallurgical response to conventional vat, heap, or agitated leaching and generally did not yield data of direct use in designing in-situ recovery. For example, solution flowing between injection and recovery wells must pass through typically 50 to 100 feet of mineralized formation without pH adjustment, whereas the early tests incorporated periodic acid addition to maintain a nearly constant free acid concentration. Nonetheless, those tests did provide useful information about response variability and maximum likely copper solubilization.

The Conoco studies defined six “metallurgical zones” as follow:

- Zone 0 Overburden
- Zone 1 Copper oxide mineralization
- Zone 2 Mixed copper oxides and iron oxides
- Zone 3 Dominant iron oxides, no visible copper oxides
- Zone 4 Transition with copper oxides and sulfides

- Zone 5 Sulfides only

The Hazen work for Conoco and the McClelland program showed that samples from Zones 1 and 2 with dominant chrysocolla (and other copper-bearing silicates) typically allowed copper dissolutions representing 65–70 percent of the total copper with average residue assays of about 0.15 %TCu. However, only about 40–45 percent of the copper in Zone 3 samples dissolved.

Therefore, the BHP team set out to design experiments that would more closely simulate in-situ conditions by saturating the column sample with leaching solution, by using lower solution flowrates, and by altering solid/liquid contact and fluid retention. The last two techniques were to involve coating large-diameter core samples with epoxy and filling the cavities in the column charges with inert silica sand.

Although the non-sulfide copper mineral at Florence has been generically labeled chrysocolla, it has been known for decades that the composition of chrysocolla is variable and that the copper content may be much lower than one would expect from hydrous copper aluminum silicate. Examinations by Adrian Brown Consultants, Inc. (Williamson, 1996) as well as by Davis (1997) and Brewer (1998) revealed a highly variable composition with aluminum ions typically substituting for copper in a layer silicate lattice. Some mineral grains can contain only a few percent copper and will be only faintly bluish in color. During leaching with raffinate, the copper silicates initially dissolve congruently with silica until the leaching solution becomes silica-saturated and only copper dissolution is favored. A rough quantification of this type of mineralization versus the percent of copper-bearing mineralization located dominantly on fractures is noted for each assay interval in the drill logs and in the project database.

16.2.2 Large-scale Column Tests

Four 6-inch diameter by 10-foot high column leach tests were performed by Magma on crushed 1-inch drill core using San Manuel raffinate and 135 to 150 g/L sulfuric acid cure. Recovery rates of 64 to 73 percent were obtained under these conditions. Six-inch diameter drill core was also used in a large column (3 feet by 20 feet) using the same conditions with a calculated TCu recovery of 67 percent (BHP, 1997c)

Fourteen column tests were performed by the BHP San Manuel Metallurgical Lab and METCON Research in Tucson, Arizona. The materials tested included Magma and BHP drill core representing primarily quartz monzonite with small amounts of granodiorite porphyry, diabase, and andesite; two columns tested primarily granodiorite porphyry. Column leach testing conducted since 1996 by BHP was organized in three phases:

- Scoping Phase: 60-day tests to determine raffinate-rock reactions and composition;
- Phase I: determine leaching behavior of mineralization representative of the first mining area; and
- Phase II: evaluate alternative lixivants.

The first four column tests, representing the Scoping Phase of the program, were conducted by METCON on minus 2-inch sample. Columns 1, 2, and 3 began with de-ionized water that was acidified with sulfuric acid to concentrations of about 5, 10, and 20 g/L H₂SO₄, respectively, whereas Column 4 was treated with raffinate from the San Manuel SX/EW plant. The head assays of the quartz monzonite sample were 0.398 %TCu, 0.058 %S, and 1.51 %Fe. The columns were leached for approximately 60 days and copper was continuously removed by SX, but it should be noted that copper was still being dissolved at the end of the test period. It is also noteworthy that the San Manuel raffinate with 80 g/L total sulfate had a leaching effectiveness (percent copper dissolved) mid-way between the results for 5 g/L and 10 g/L acid, despite containing only 2.9 g/L free H₂SO₄.

Of the four tests, as shown in Table 16-1, the 20 g/L H₂SO₄ leaching solutions used in Column 3 dissolved the most copper, but at the expense of higher acid consumption. The BHP metallurgists concluded that the leaching solution containing about 10 g/L acid offered the best balance of copper dissolution, acid consumption, and cation loading (summation of cation concentrations in the final raffinate). Therefore, the final PLS composition from Column 2 was used to synthesize raffinate for the subsequent Phase I column tests. Table 16-1 summarizes the results obtained during the Scoping Phase. Total solution applications averaged 16.5 pore volumes (PVs) or 4.08 liters/kg solids.

Table 16-1 Summary of results from Scoping Phase columns, METCON

Column #	Rock Type	Head Grade %TCu	Acid conc., gpl.	Days	%TCu dissolved	lb acid/ton ore	lb acid/lb Cu
1	QM	0.398	4.8	63	45.8	11.0	3.1
2	QM	0.398	9.7	63	54.5	17.2	4.1
3	QM	0.398	19.7	63	66.2	30.4	6.0
4	QM	0.398	2.9	63	48.7	7.6	3.3

Source: Compiled by SRK from BHP 1997d

The Scoping Phase tests were followed by Phase I column tests designed to examine copper leachability from samples representing major resource types. Columns A and B were run by the BHP San Manuel Lab, and column tests 5-10 were performed by METCON. The sample origins included 6-inch core from diamond drill holes MCC-534 and BHP-2, which were within the first planned mining block. Synthetic raffinate was made according to the final PLS compositions of previous tests, but without copper. In Table 16-2, the origin of the synthetic raffinate is shown as follows: that for Columns A and B resembled the composition of the final solution from column 2; the final column A solution was synthesized to start columns 8 and 9. Usually, the initial raffinate was made by dissolving reagent-grade chemicals in de-ionized water. However, column 10 was initiated with the solutions produced by columns 8 and 9. Column tests 5, 6, and 7 evaluated the response of very low-grade mineralization with head assays, respectively, of 0.15 %TCu, 0.16 %TCu, and 0.126 %TCu.

Table 16-2 Summary of results from Phase I column tests

Column	Rock Type	Head Grade %TCu	Raff Source	pH	Days	PVs	Liters/kg	%TCu dissolved	lb acid per ton	lb acid per lb Cu
A	QM	0.301 (calc)	2	1.4	84	13.0	4.40	35	2.5	7.6
B	QM	0.141 (calc)	2	1.5	84	12.9	4.23	34	10.5	15.2
5	QM	0.155	2	1.5	59	12.9	3.49	46	16.6	26.0
6	QM	0.164	2	1.5	26	6.4	1.36	7	36.0	7.8
7	Tgdp	0.126	2	1.5	39	9.3	2.98	28	23.5	18.4
8	QM	0.216	A	1.7	158	35.2	8.00	54	1.6	43.7
9	QM	0.243	A	1.7	203	24.7	5.80	60	2.9	17.1
10	QM	.305 (calc)	8+9	1.5	119	11.7	4.09	56	9.1	31.2

Source: Compiled by SRK from BHP 1997d

Columns 8, 9, and 10 were tested by METCON Research using average-grade, chrysocolla-bearing, quartz monzonite (approximately 0.32 %TCu) from 6-inch diameter drill core; the voids were filled with inert sand (Col 8, 9) and tap was used prior to raffinate application to simulate saturated conditions. The columns were 12-inch diameter by 5-foot tall (Col 8) and 12-inch by 10-foot tall (Col 9 and Col 10); the material was subjected to simulated locked cycle in-situ leaching regime to assess the rate of copper dissolution and acid consumption. Leaching ranged from 158 days (Col 8) to 203 days (Col 9); rinsing with tap water and a wash of sodium bicarbonate or sodium hydroxide was performed following leaching. Copper extraction ranged from 54 to 56 percent with an acid consumption ranging between 2.83 and 15.6 kg/metric ton of material (BHP, 1997c).

Although the tests were terminated when PLS copper grades were near or below 0.1 g/L, copper recovery rates were still significant at the end of each test. This was because the relatively large volume of leach solution that filled the column void spaces contains a relatively large mass of copper even at low copper concentrations. The copper recoveries attained during these column tests are therefore not necessarily the maximum recoverable copper available for in-situ leaching and recovery.

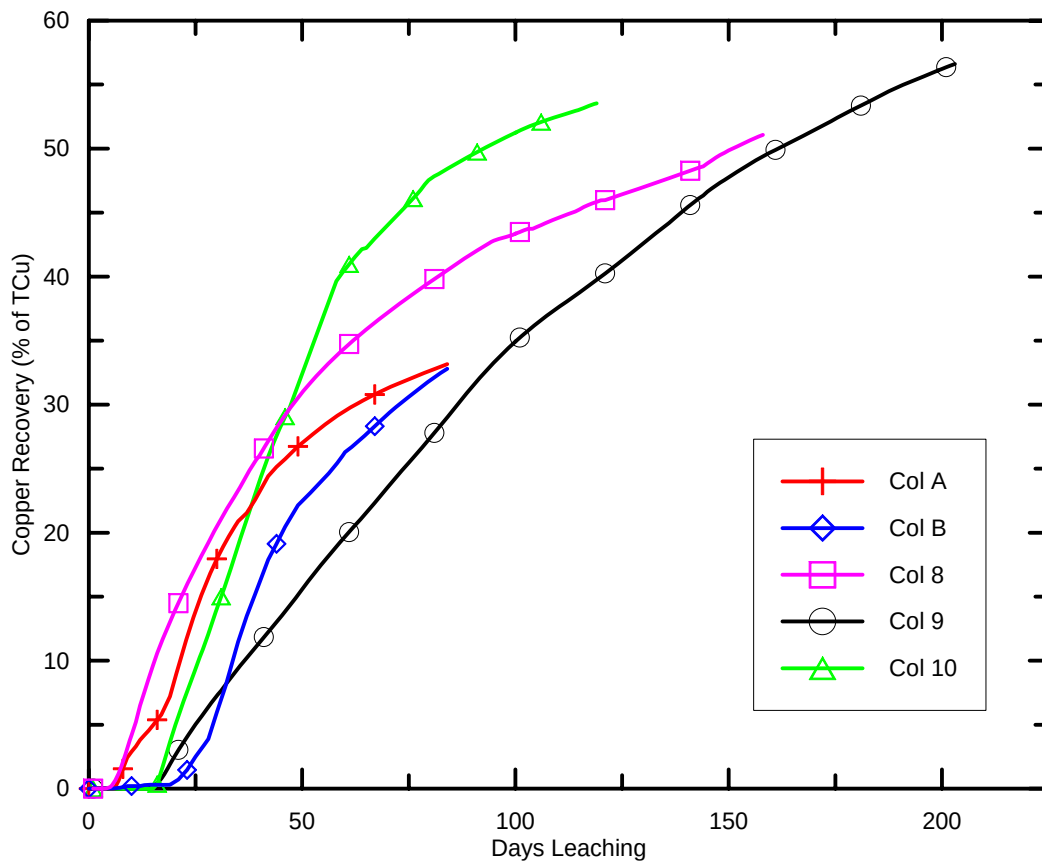


Figure 16-1 Total copper recovery curves of Phase I large-scale column tests.

The Phase II column tests were designed to determine the efficiency of aluminum sulfate to pre-treat typical chrysocolla mineralization for removal of exchangeable cations, specifically calcium and copper. Copper recovery curves were similar to those illustrated in Figure 16-1, with relatively high rates of recovery still present at the termination of the tests.

The columns were operated sequentially to simulate solution “stacking”, where low-grade PLS is reconstituted with acid and returned to the formation in an effort to increase the PLS grade. The two

column tests were carried out at the BHP San Manuel Metallurgical Lab. The results are summarized in Table 16-3.

Table 16-3 Summary of results from Phase II column tests, BHP San Manuel

Column	Rock Type	Head Grade %TCu	Raff Source	pH	Days	PVs	Liters/kg	%TCu dissolved	lb acid per ton	lb acid per lb Cu
C	QM	0.386 (calc)	A	1.5	133	31.8	7.25	52	1.77	7.08
D	Mixed QM + Tgdp	0.296 (calc)	C	1.7	126	28.1	6.22	35	-	-
Combined									3.30	10.13

Source: Compiled by SRK from BHP 1997d

The copper recovery values were compared to the total copper content that was estimated from residue analyses and copper mass recovered in solution. Copper was still being extracted at the termination of each column test, albeit at low copper values in solution. The copper recoveries resulting from column tests should not be considered the ultimate copper recovery, only those that are measured under specific test conditions.

Recoverable copper estimates for the Florence ISCR project are based on previous observations and experiments conducted by a cohesive multi-disciplinary staff. Conceptually, copper recovery of in-situ leaching is very easy to estimate. When acidic solutions are placed in contact with chrysocolla and are subsequently pumped from the ground, 100 percent recovery is attained. Estimating the proportion of copper contained in a given volume of rock that meets those conditions is more complex and requires estimations the proportion of copper contained in fracture-controlled chrysocolla, the proportion of those fractures contacted with acidic solutions and/or available to be contacted, and the proportion of extracted copper that is contained in PLS of an economic grade.

Additionally acid generation potential, column leach, and attenuation studies were performed by Brown and Caldwell to assess environmental effects and to support the APP application process. The Magma/BHP studies evaluated interactions among the various rock units present in the Florence deposit to assess copper extraction, sulfuric acid consumption and raffinate chemical characteristics over time. Two types of column leach studies were undertaken: (1) to monitor reactions between acidic raffinate and bulk rock samples and (2) to monitor reactions that simulated leach field remediation.

Geochemical simulations were performed by Brown and Caldwell (1996b) and BHP consultants (BHP, 1997d) to assess solution control, chemical reactions, mass balance, and water balance issues during operations, simulate block closure, and assess the post-closure solute transport. The numerical simulations will be briefly reviewed below.

The wellfield copper extraction and remediation simulations were performed for a 100-foot spaced 5-spot system, and at a flushing flow rate of 40 gpm, the background sulfate levels and neutral pH were estimated to be achieved within 60 and 133-150 days respectively. Chemical and kinetic transport simulations were undertaken using the same inputs, and the predictions were that it would take 15 years to achieve extraction of all copper available for recovery. It should be noted that the kinetic model indicated that 50 percent of the recoverable copper could be achieved within the first two years and that would include the fractured chrysocolla being consumed within the first year. The model was sensitive to porosity decrease which it predicted would approximate 50 percent in two years and also to clay rate

constants that with this basic system would increase the period for the initial fifty percent recovery of available copper to five years.

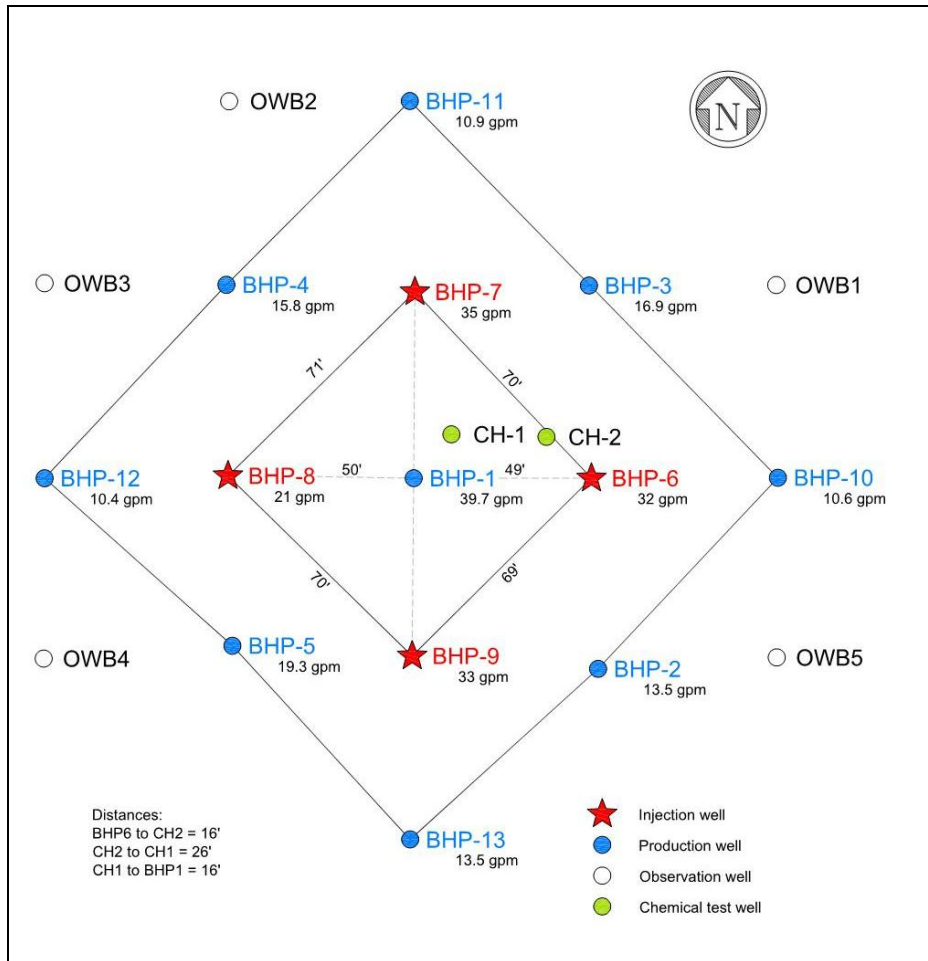


Figure 16-2 BHP field test configuration

16.3 Curis Planned Production Test Facility (PTF)

As part of a Phase 1 project development program, a Production Test Facility (PTF) will be constructed to allow Curis to operate a small-scale ISCR program for the purpose of verifying certain critical operating parameters in the field. These operating parameters are essential to the development of the process design criteria that will be utilized in the design of the full-scale commercial facilities that will ultimately be constructed following initial completion of the testing phase. The PTF will be operated for a period of approximately 12 to 14 months although the wells that are installed for the test will continue to be used through the first few years of the full commercial operations of the project.

The PTF will be designed and operated in accordance with the requirements of the APP and UIC Permit, and will be similar to the east well block and supporting surface facilities that were installed by BHP Copper in 1997 to conduct a similar testing program. Curis will expand and enhance the test program undertaken by BHP by including a greater number of production, recovery and monitoring wells and demonstration scale SX/EW plant to allow the recovery and plating of copper cathode.

16.3.1 PTF Program Objectives

During operation of the PTF, raffinate will be injected into the oxide portion of the deposit beneath the proposed test well block, copper will be dissolved from the fractured host rock, and PLS will be pumped from recovery wells located in the test well block to the existing double-lined water impoundment (with leachate detection and collection system) after neutralization. The flow rates to and from the PTF block will be monitored and adjusted as necessary to maintain hydraulic control (inward groundwater gradient within the ore body).

The testing program will evaluate total copper recovery, the rate of copper recover, and reagent consumption. Field personnel will monitor water quality data (injectate, PLS, Pond water) and collect data on a number of other operating parameters. Curis proposes to conduct the test for a period of up to 14 months so that temporal and spatial variations in the chemistry and flow of the in-situ solutions can be adequately characterized.

Water levels in the area of the test block, electrical conductivity, and flow rates will be monitored as required by permit requirements to demonstrate hydraulic control during the period of the test, and beyond, during closure of the operation.

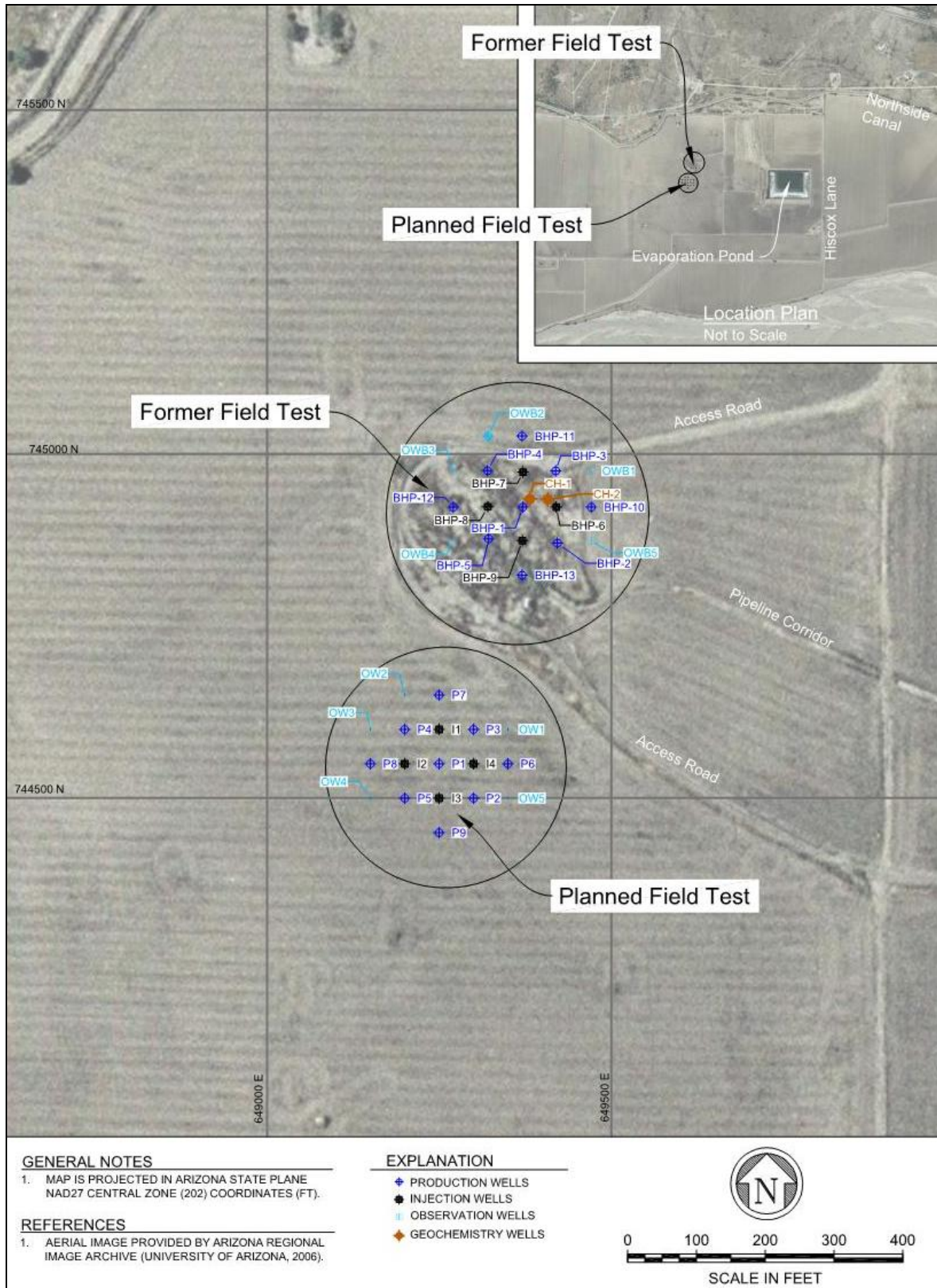
16.3.2 PTF Wells

The proposed PTF location and its position relative to the previous field test are shown in Figure 16-3. The location of the new test block has been chosen to be immediately south and west of the original BHP wellfield. The new test block will include new wells rather than the existing BHP test wells because prior testing activities in the existing well block may have altered the mineralogy in that zone, potentially compromising the results of the testing in the original block. The arrangement of the well is essentially identical to the original wellfield arrangement developed by BHP, and is an arrangement that is common to in-situ recovery practices.

The principal components of the PTF are depicted on Figure 16-3 including the proposed test well block, 21 new test wells (four injection wells, nine recovery wells, seven observation wells and an additional observation well), the re-constructed tank farm and water impoundment, and renewed pipelines to connect the proposed test well block to the water impoundment and tank farm.

Injection and recovery wells are expected to be generally similar in construction as described in Section 19.2.3.2. Curis has modified the design of these wells as part of its design development of the PTF, with the intent to improve both the design and the performance of these wells, within the constraints of its permits.

All injection and recovery wells will be drilled, cased, and tested in accordance with the requirements of the UIC Permit. Although the wells will be operated in accordance with their planned designations (injection, recovery, or observation) during the injection period of the test, the wells will be of consistent design so that operation of the wells may be interchanged, if desired.



re 16-3 Location of the proposed Curis PTF (SRK, 2010)

16.3.3 PTF Surface Facilities

PTF surface facilities include the wellhead equipment, pipelines to connect the proposed test well block to the water impoundment/tank farm, existing tank farm and water impoundment.

Curis is proposing to use the general plan developed by BHP Copper for the wellhead design for the injection, recovery, and observation wells, the same design that is reflected in the wellheads in the existing test well block. The wellhead equipment includes pressure gauges, instruments, valves, fittings, and pipes associated with controlling flow into or out of the well.

This equipment is used to measure the fluid of pressure, flow rate, and to take solution samples. The well head holds the down-hole tubing string and provides pressure sealing. The injection and recovery wells, and their wellheads will be equipped with the following equipment:

- One flow meter and controller,
- One pressure transducer,
- Two regulators, and
- One pump and tubing in each recovery well. and
- One or two packers and tubing in each injection well.

New overland pipelines will be used to convey solutions between the test well block and the water impoundment/tank farm. The lines will be installed in a lined trench so as to be non-discharging in the event of a failure.

Tank farm facilities will be used to prepare leach solutions for injection and to neutralize PLS before it is placed in the water impoundment. The water impoundment will store PLS and evaporate water. The water impoundment has two HDPE liners with a leachate detection and collection system between the two liners. Natural evaporation will be enhanced using mechanical evaporation equipment.

The existing components of the BHP test facility (overland pipeline, tank farm, water impoundment) are being inspected, tested, and repaired as necessary to ensure they meet applicable operational and permit requirements. The pond lining system has been recently inspected by a firm specializing in testing and installing liners, and a report detailing inspection results and will be submitted to the regulatory agencies.

Curis will evaluate PLS treatment alternatives with the objectives of improving copper recovery efficiencies, increasing groundwater conservations, and reducing the amount of neutralized PLS that would otherwise be placed in water impoundments. To conduct the evaluations, one or more portable water treatment unit(s) may be located near the water impoundment for testing purposes.

Curis is also intending to construct and operate a demonstration scale SX/EW facility to produce pure copper cathode during this production test phase. The demonstration plant will be sized to handle the anticipated PLS flow rates and will be modular in nature such that its components can be used in the ultimate full development of the project.

16.4 SRK Conclusions

SRK concludes that extensive mineralogical, metallurgical, and chemical test work has been done to characterize the Florence deposit mineral resource and the potential for in-situ recovery and SX/EW copper production by industry standard methods. The quantity and quality of that test work is deemed sufficient to use for project planning. SRK has reviewed the test work program and results, and has used that data to estimate in-situ copper recoveries expected from ISCR operations. SRK and contributors to

this report have used the significant amount of historical information available to develop a conceptual wellfield design and wellfield operational plan (equivalent to a mine plan), as the basis for an overall production plan, as further described in Section 19 of this report.

17 Mineral Resource and Mineral Reserve Estimates (Item 19)

SRK has estimated CIM compliant mineral resources sufficient for NI 43-101 reporting. SRK has reviewed in detail, and updated by slightly modifying the historical estimation methodology and developed criteria for assigning classification of Measured, Indicated and Inferred resources, in line with current industry standards. SRK used Maptek's Vulcan software for wireframe reconstruction, compositing, statistics, and block modeling. The mineral resource estimation was prepared by Mr. Russell White, R.G. a SRK resource geologist with 26 years of experience. Mr. White has no affiliation with Curis Resources Ltd. or PCI-1 Capital Corp. and is independent of the issuer per qualifying tests in Section 1.4 of the Canadian National Instrument 43-101.

17.1 Drillhole Database

The SRK resource drillhole database was limited to the 502 holes within the project area. Of these holes, 445 holes were logged and 380 were assayed for total copper; other holes for monitoring and water production wells were not assayed. These 445 holes represent 328,851 feet of sampled drilling, with 61,561 sampled intervals. The majority of the TCu assays (58.3percent) are from the sulfide zone reflecting the thickness of this zone and that the focus of previous exploration targets was the sulfide zone. Thirty-seven percent of the TCu assays are within the oxide zone and a minor component (4.7percent) were assayed in the basin-fill formations. Relative to the total number of assays intervals, 48 percent of the intervals have been assayed for ASCu; 63 percent of the 29,969 ASCu assays are within the oxide zone. Within the oxide zone, 83.2 percent of the TCu assays have corresponding ASCu analyses as shown in Table 17-1.

Table 17-1 Summary of assayed intervals in model area as of February 2010

Category	TCu Assays	Footage Assayed	ASCu Assays	Footage Assayed
Basin-Fill	2,886	19,796	403	3,090
Oxide/Mixed	22,765	128,797	18,935	109,077
Sulfide	35,880	180,257	10,631	54,561
Total	61,531	328,851	29,969	166,727

Source: Compiled by SRK, 2010

In addition to the TCu and ASCu assays, the database contains numerous fields for geologic codes, which were used for creating the geologic model described in Section 17.2. The codes most relevant to the resource estimate are the metallurgical zone (*METZO*) as defined in Table 17-2, and the copper oxide abundance codes (*CUOX1* and *CUOX2*). Fields in the databases that were derived from other data are *SMZ*, *TCUCAP*, and *ASCUFEX*. The *SMZ* (Simplified Metallurgic Zone) designation was assigned based on the value of the *METZO* code and the *CUOX* codes, as shown in Table 17-3.

Table 17-2 Drillhole database fields and weight percentages assigned to CuOX codes

Record	Field	Description
COLLAR	HOLE#	Hole ID
	EAST	X-coord (ft)
	NORTH	Y-coord (ft)
	ELEV	Z-coord (ft amsl)
	DEPTH	Hole depth (ft)
SURVEY	HOLE#	Hole ID
	FROM	Survey Depth (ft)
	AZ	Hole Azimuth (degrees)
	DIP	Hole Inclination (degrees of dip from vertical)
ASSAY	HOLE#	Hole ID
	FROM	Interval Start Footage
	TO	Interval End Footage
	ROCK	Rock Code see below
	TCU	Total Copper Assay (percent)
	TCUCAP	Capped Copper Assay (percent)
	ASCU	Acid Soluble Copper (percent)
	ASCUFx	Adjusted Acid Sol. Copper (percent)
	FRACI	Fracture Intensity
	FRACD	Fracture Density
	FTDIP	Fracture/ Fault Dip (dip relative to core axis)
	REC%	Core Recovery
	RQD	Rock Quality Designation
	METZO	Metallurgic Zone Code
	CUOX1*	Copper Oxide 1 (Fracture Hosted, 1-7)
	CUOX2*	Copper Oxide 2 (Clay hosted, 1-7)
	MOS2	Molybdenum Assay
	CODE	Surface Code
	SMZ	Simplified Met Zone
		1=CuOx,2=FeOx,3=Sulfide

Source: Compiled by SRK, 2010. *Notes: See sub-table below for details on CUOX1 and CUOX2 codes.

Copper Oxide Codes (CUOX1, CUOX2) Mineral Weight %	
1 =	< 1%
2 =	1-2%
3 =	2-5%
4 =	5-10%
5 =	10-20%
6 =	20-50%
7 =	>50%

Source:

BHP,

2007a

Table 17-3 Relationship of metallurgic zone (METZO) codes and SMZ codes

Metallurgical Zones	METZO	SMZ
Basin-fill	0	0
Copper-oxide dominant	1	1
Mixed copper/iron oxide	2	1
High-iron oxide	3	2
Transition with copper oxide	4	1
Transition w/o Copper Oxide	4	2
Sulfide	5	3

TCUCAP was applied as high-grade, capped values based on the SMZ code as follows:

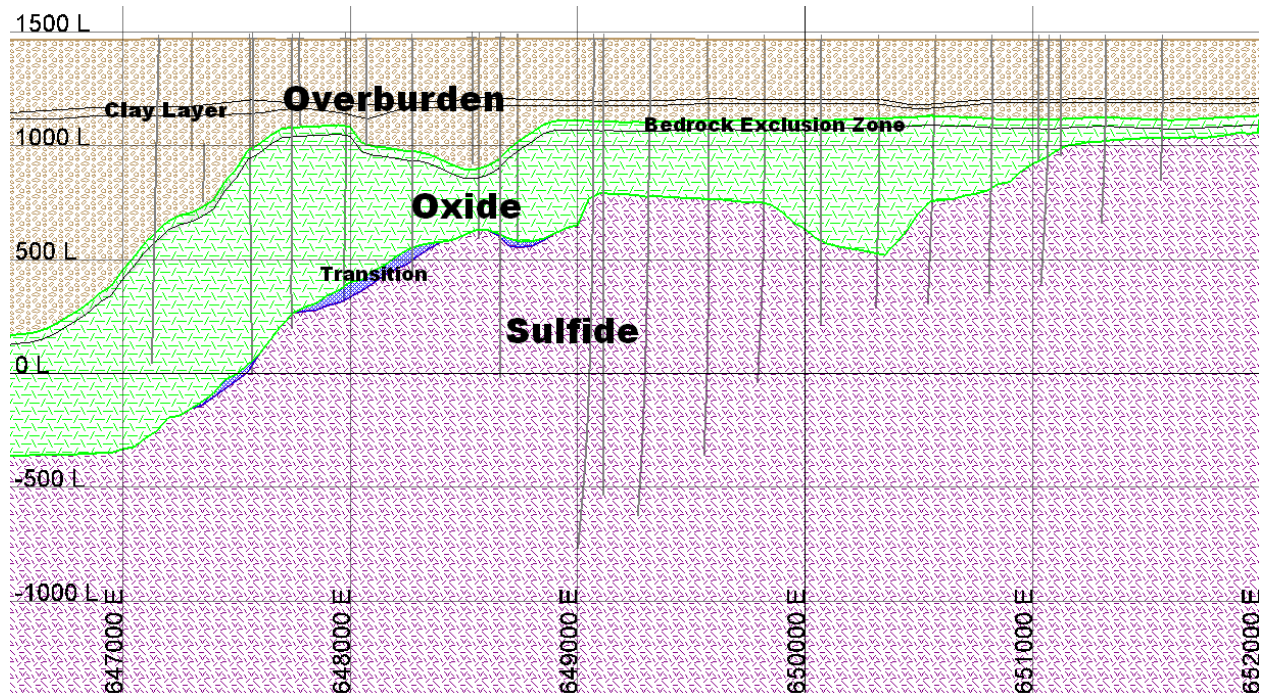
- SMZ=1: TCu was capped at 2.7 percent,
- SMZ=2:TCu was capped at 1.2 percent, and
- SMZ=3:TCu was capped at 2.0 percent. This is based on the break in populations as show in the probability plots shown in Section 17.4.

ASCUFEX is a derived acid soluble copper grade for those grades that were missing or unreasonably high. It is important to address the missing ASCU values so that the TCu and ASCu estimates are done in a similar fashion. Differential sample distribution of the two sample types could lead to estimates of ASCu that are higher than the TCu estimates. Any ASCu assay more than 95 percent of the corresponding TCu grade was capped at 95 percent of the total copper grade. Any missing sample in the ASCu field was derived from the TCu values using the factors described in Section 17.4.

17.2 Geology

Wireframe grid surfaces were generated from the cross sectional surface digitized lines for use in coding and sub-blocking the 3D block model. The most relevant surfaces represent topography, top of bedrock, bottom of oxide, and top of sulfides as shown in Figure 17-1. Other surfaces representing top of conglomerates, and the inter-conglomerate clay layer were also created, but were inconsequential to the resource model.

Grades were only estimated in rock codes designated as bedrock as shown below. The “base of oxide” surface and the “top of sulfide” surfaces coincide in most areas, although in a few areas there is a minor gap between them that represents a transition zone. For the purposes of this estimation, the transition zone is included with the oxide zone since some copper recovery is possible from this small volume.



Prepared by SRK, 2010. Drillholes are shown with downhole deviations. Overburden is the basin-fill formations overlying the oxide and sulfide zones. The Bedrock Exclusion Zone is the area within top 40' of bedrock in which solid (not slotted) well casing will be installed.

Figure 17-1 EW Section 745700N looking north showing subsurface boundaries relevant to resource estimation

17.2.1 Hydrogeology

As part of the APP application process, B&C conducted an extensive site characterization program in 1995 that was designed to assess baseline water quality, water levels, vertical communication of the aquifers, and hydraulic head distribution within the project area as well as in the area upgradient and downgradient to the project site. In a preliminary review of area-wide groundwater quality for the APP application, B&C (1996a) compiled the existing groundwater geochemistry data. The data covered a 100-square mile area in the region and spanned a 52-year period; the data were from wells of various depths and completions, and were drilled for a variety of uses. B&C statistically evaluated the concentrations of sodium, sulfate, total dissolved solids, and nitrate found in the existing wells. The data showed that approximately 70 nitrate values and 3 cadmium values exceeded Aquifer Water Quality Standards; the nitrate exceedances were attributed to impacts related to agricultural activities in the Florence basin.

To characterize the local groundwater quality, water samples were taken from 5 irrigation wells, irrigation water in the SCIDD North Side Canal, and the abandoned air shaft connected to the underground workings. In addition, B&C drilled, completed, and developed 23 new monitor wells, 17 observation wells, and 17 pumping wells in 1995 using standard industry practices. The wells were constructed in clusters of 2 to 4 wells and screened at various depths to monitor water quality and the hydraulic properties in the different aquifers (upper and lower basin-fill, oxide bedrock, sulfide bedrock). Twelve months of baseline groundwater samples were collected from 31 point-of-compliance (POC) monitoring wells using standard industry sampling methods and analyzed by a laboratory certified in Arizona to perform environmental water quality analyses. The parameters monitored include inorganic common ions, inorganic trace metals, and radiochemicals. Results for volatile and semi-volatile organics, polychlorinated biphenyls, pesticides, total petroleum hydrocarbons, sulfur isotope ratios and tritium

isotope values are also available on selected sampling events. An average concentration for each APP- and UIC-regulated constituent was calculated to develop site-specific compliance limits. These data and calculations were submitted for review to ADEQ and EPA on August 28, 1997, as part of the APP and UIC applications.

ADEQ concluded the baseline water quality data were sufficient to calculate site-specific Aquifer Quality Limits (AQLs) and Alert Levels (ALs) for compliance monitoring. The AQLs and ALs are established in the APP and reflect the water quality concentrations documented before the initiation of leaching and recovery operations. Water quality compliance monitoring and reporting has continued on a quarterly basis since 1997. Self-monitoring report forms have been submitted to ADEQ on the frequency specified in the APP. Curis has reinitiated water quality compliance sampling and reporting to ADEQ after a lapse of approximately one year in sampling and reporting by Florence Copper Inc.

No exceedance of an AL or an AQL has been verified since compliance monitoring began in 1997. Occasional exceedance of the Arizona Aquifer Water Quality Standard (AWQS) for nitrate of 10 milligram per liter has been detected. However, ADEQ did not establish an AL or an AQL for nitrate because of elevated levels regionally and because nitrates are not used or generated in the ISL process. Groundwater chemistry associated with the UBFU, LBFU, oxide bedrock, and sulfide bedrock show distinct compositional variations. The variation in water quality suggests limited vertical communication between the aquifers in the hydrogeologic system (B&C, 1996a). In general, higher concentrations of bicarbonate, sulfate, nitrate, chloride, and TDS are detected in the UBFU than in the groundwater in the LBFU and underlying bedrock. With the exception of iron, strontium, aluminum, and manganese, the majority of trace metals are below detection or their respective AWQS in the UBFU. Elevated iron and aluminum concentrations above detection are measured in the LBFU, and nitrate exceeds the AWQS in both basin-fill aquifers. No regulated organic constituents or radiochemicals are above their respective AWQS in basin-fill aquifers. The oxide bedrock aquifer shows elevated fluoride with respect to the basin-fill units. Iron and sulfate are substantially concentrated in the sulfide bedrock aquifer.

The following ranges in concentrations in the UBFU have been measured based on a total population of 268 samples:

- Sulfate: 130 to 400 mg/L,
- Nitrate: 4.9 to 19.6 mg/L (96 samples),
- Fluoride: 0.42 to 1.0 mg/L, and
- TDS: 610 to 3,200 mg/L.

The following ranges in concentrations in the LBFU have been measured based on a total population of 551 samples:

- Sulfate: 31 to 250 mg/L,
- Nitrate: 0.3 to 12.2 mg/L (176 samples),
- Fluoride: <0.4 to 1.4 mg/L, and
- TDS: 412 to 1,500 mg/L.

The following ranges in concentrations have been measured in the oxide unit based on a population of about 730 samples:

- Sulfate: 5.8 to 230 mg/L (excluding M24-O, which ranges from 630 to 1000 mg/L),
- Nitrate: <0.1 to 8.1 mg/L (238 samples),
- Fluoride: <0.4 to 2.8 mg/L, and
- TDS: 200 to 710 mg/L.

The following ranges in concentrations in the sulfide unit have been measured based on 45 samples:

- Sulfate: 89 to 2,200 mg/L,
- Nitrate: <0.1 to 0.1 mg/L (45 samples),
- Fluoride: 0.16 to 4.8 mg/L, and
- TDS: 380 to 3,400 mg/L.

17.3 Drillhole Composites

Composites were created as 25-foot “Bench” composites, which are half the block height. This allows for greater resolution when estimating the fractional components of each block (Oxide, Sulfide, etc.)

Fields composited by average are: TCU, TCUCAP, ASCUFX, CUOX1, CUOX2, and MOS2. Any field which had missing samples (represented by a -1) excluded the missing portion from the average. If the entire composite were missing, a default of -1 was stored to represent the missing sample. Due to the pervasive nature of the mineralization, this method handling was deemed appropriate. Several water wells and other un-sampled technical holes are represented as un-sampled holes, and if treated as zero grade would unduly lower the estimated grade of the deposit.

Fields that were composited by majority code include ROCK, METZO, MIN1, CODE, and SMZ.

Fields INDOX, INDFE, and INDSU were then calculated based on the METZO and CUOX codes as described in Section 17.1.

17.4 Statistical Analysis

Histograms and probability plots were produced for raw assays in three categories – Cu-Oxide, Fe-rich Oxide, and Sulfide (see Figure 17-2 through Figure 17-7). From these plots and visual inspection of the high-grade distribution, the capping scheme described in Section 17.1 was derived.

Table 17-4 %TCu capping scheme

Category	Count	Grade (%TCu)	Variance	Max (%TCu)	Cap (%TCu)
All	58,604	0.275	0.070	8.84	2.0
Oxide	14,128	0.404	0.104	5.05	2.7
Fe-Rich	8,699	0.120	0.034	8.84	1.2
Sulfide	35,777	0.262	0.053	5.54	2.0

Source: Compiled by SRK, 2010

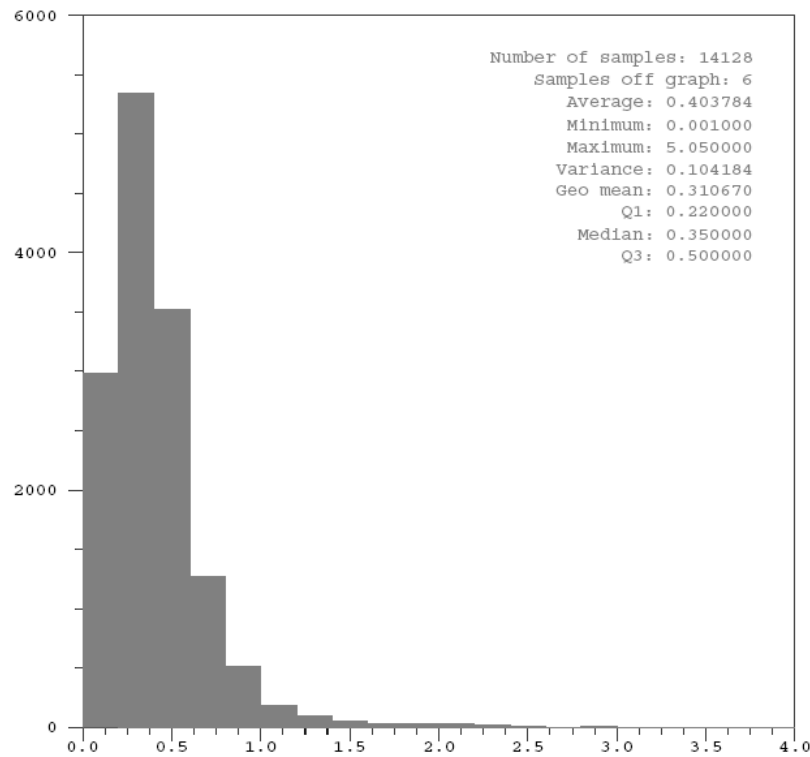


Figure 17-2 Histogram of Oxide TCu assays

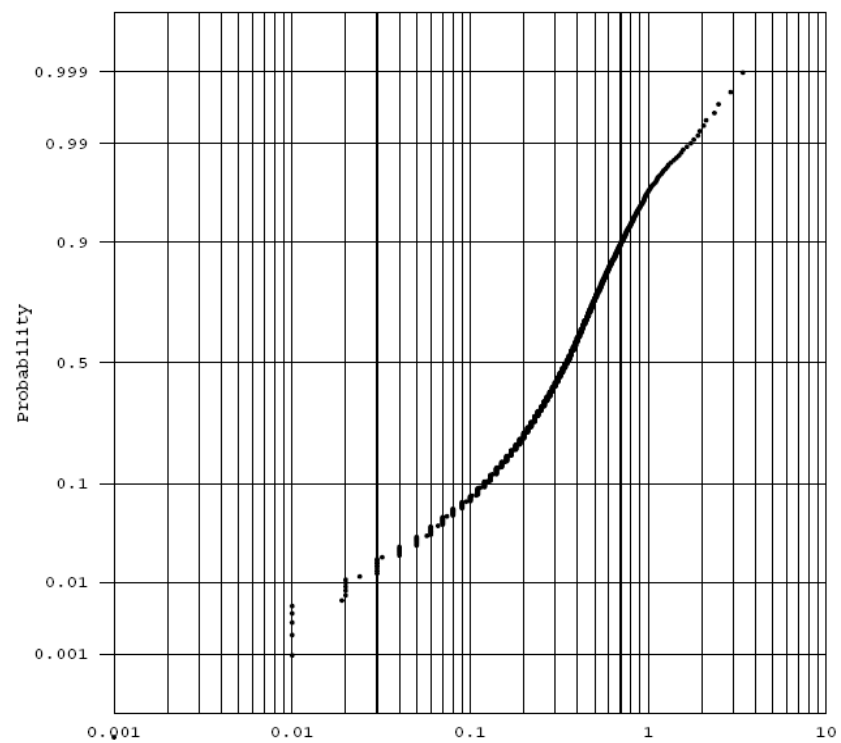


Figure 17-3 Probability Plot of Oxide TCu assays

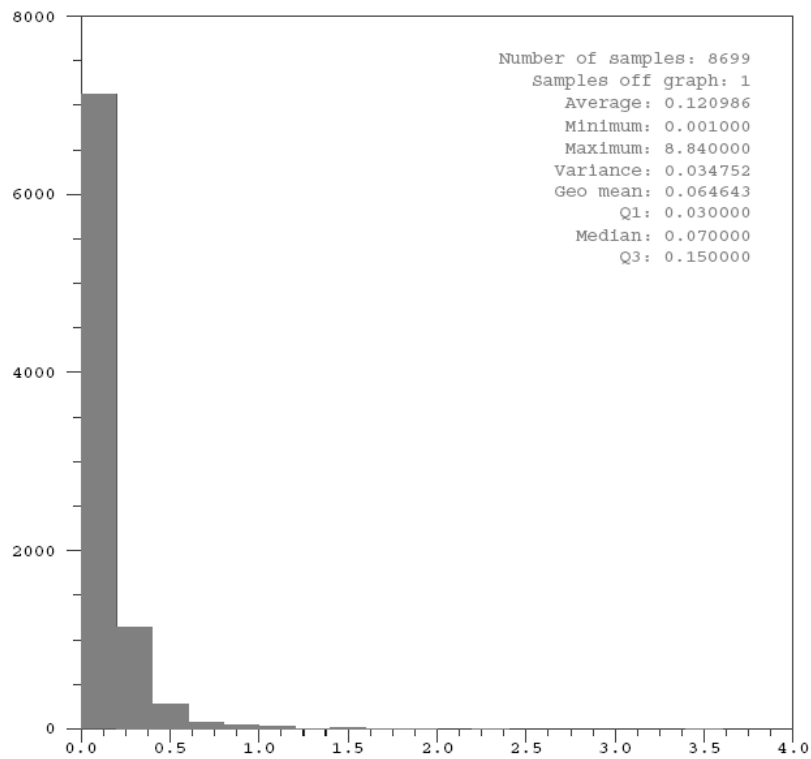


Figure 17-4 Histogram of Fe-rich TCu assays

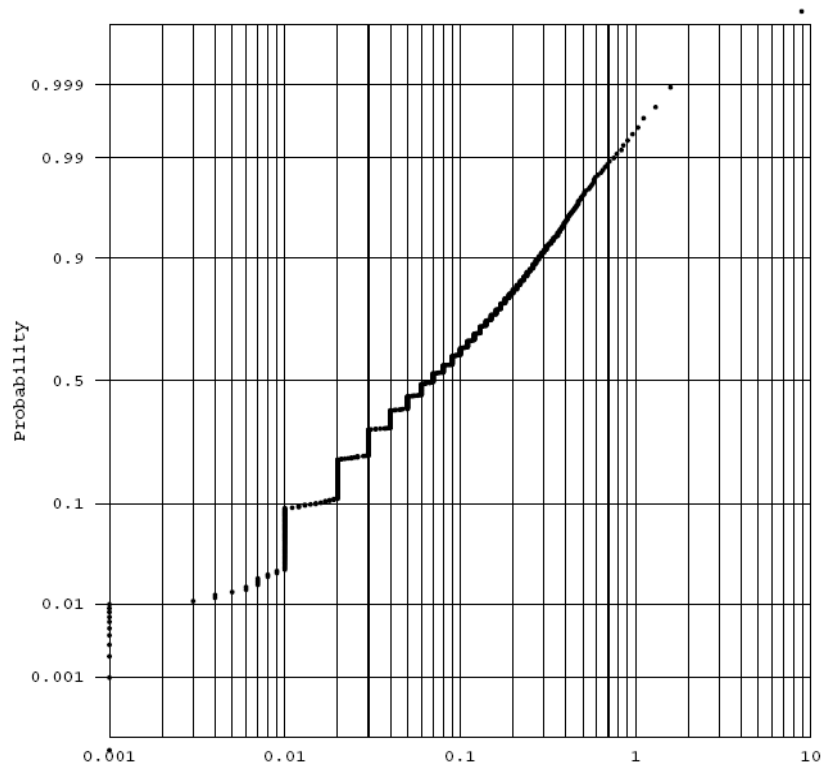


Figure 17-5 Probability Plot of Fe-rich TCu assays

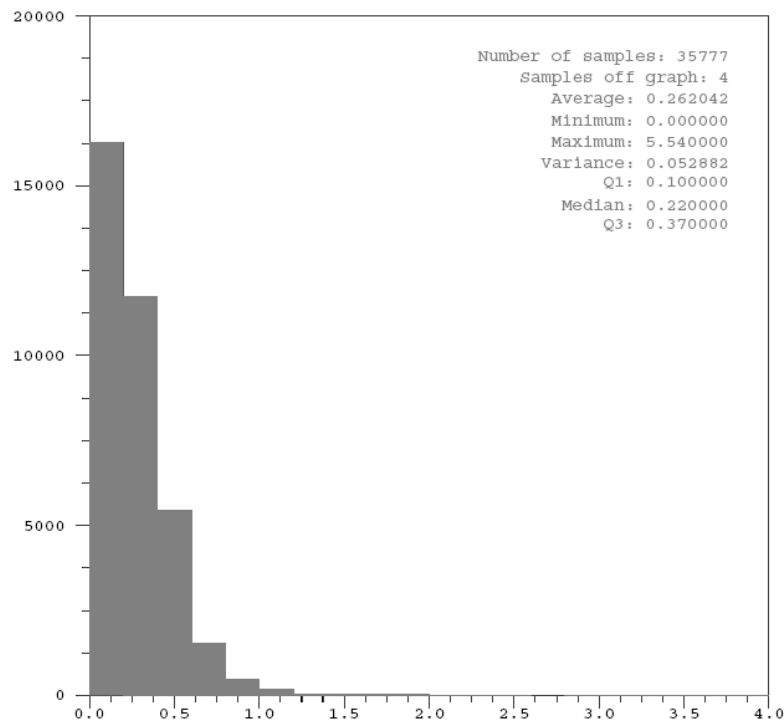


Figure 17-6 Histogram of Sulfide TCu assays

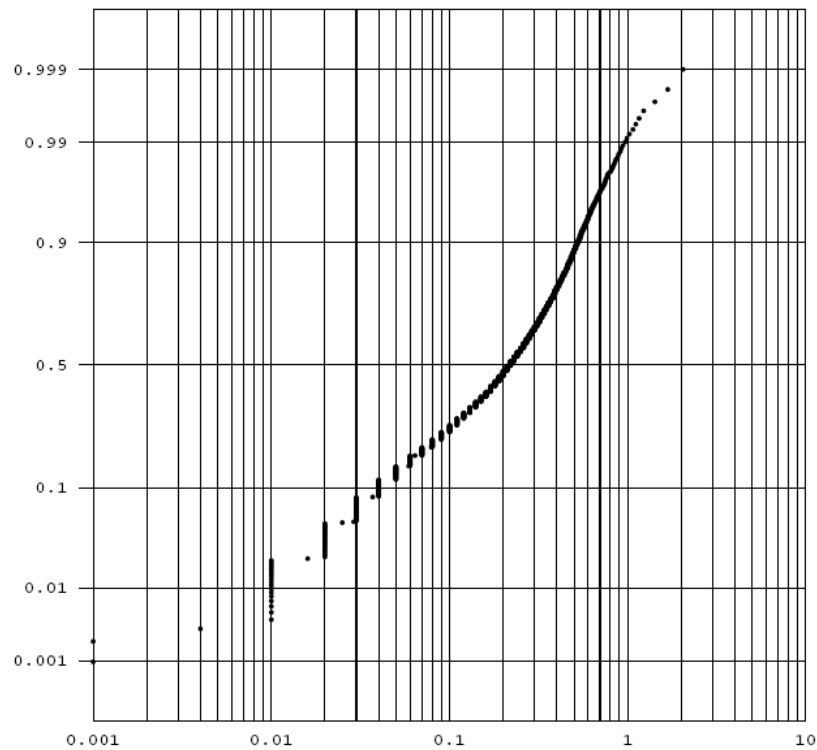


Figure 17-7 Probability Plot of Sulfide TCu assays

To determine the relationship of TCu grades to ASCu grades, measured ASCu assays were compared to assess the relationship to their corresponding TCu assays; Q-Q plots were generated to compare the populations. Although scatter plots were also generated, it was much more difficult to determine population relationships from these plots. This is due to both the nugget effect, and the fact that 50-foot composited ASCu grades are stored for some Conoco drillholes in the uncomposited drill hole file. The QQ-plots clearly show the population relationships, which can be interpreted, as simple factors. For the Oxide population, which is of most interest, the ASCu grade is roughly 68 percent of the TCu grade. This relationship varies between 58 to 72 percent depending on the grade range, but 68 percent fits the curve well enough to be used a simple average (Figure 17-8). For the Fe-rich oxidized zone, the ASCu Assays are roughly 60 percent of the TCu (Figure 17-9). For the Sulfides, although considered not practical to leach, the ASCu assays are roughly 18 percent of the TCu assays (Figure 17-10).

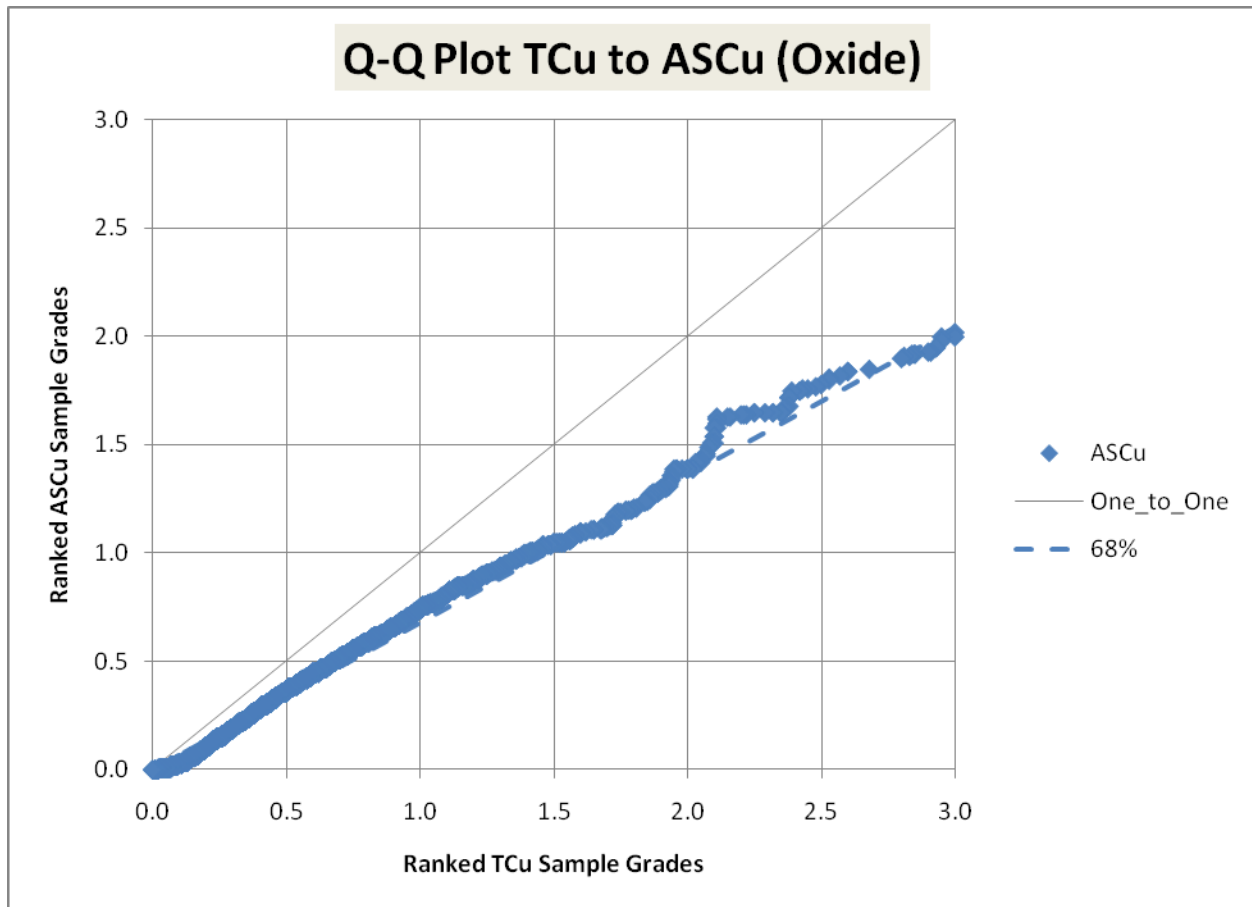


Figure 17-8 Q-Q Plot showing relationship of TCu-ASCu in Oxide samples (13,483 pairs)

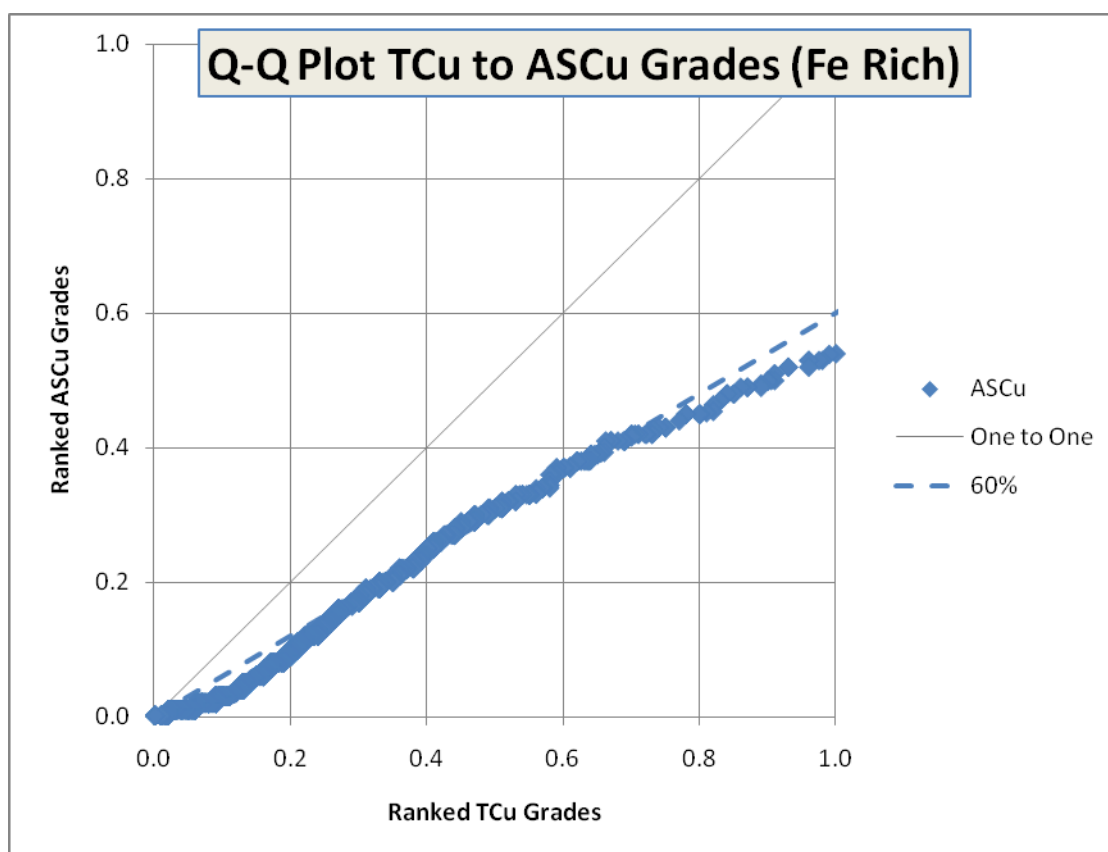


Figure 17-9 Q-Q Plot showing relationship of TCu-ASCu in Fe-Rich samples (5613 pairs)

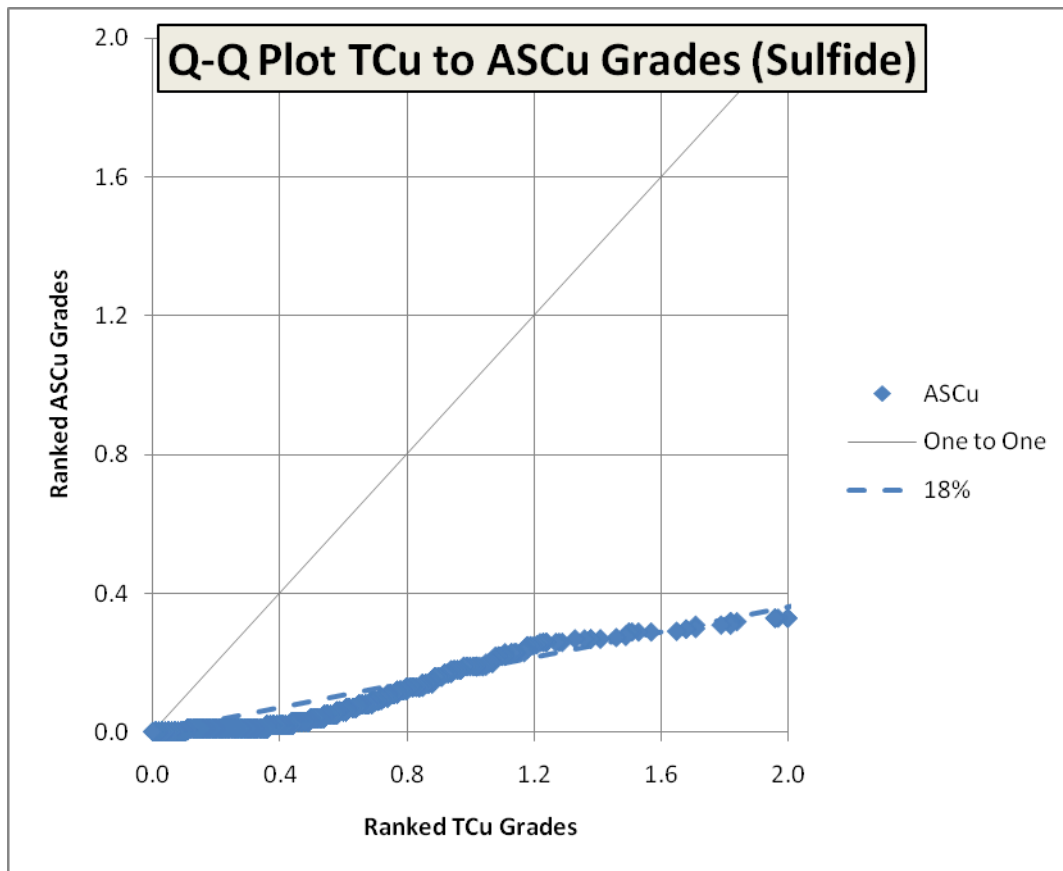


Figure 17-10 Q-Q plot showing relationship of TCu-ASCu in Sulfide samples (8059 pairs)

17.5 Variogram Analysis

Semi-variograms on 25-foot composite copper values less than 2.0 %TCu yielded clearly defined spherical variogram structures. The Vulcan autofit algorithm produced a reasonable fit, which was manually adjusted to fit the best variograms. The resulting parameters and primary search ellipse are shown in Figure 17-11. Variogram examples are presented in Figure 17-12 and Figure 17-13. Variograms on met-codes indicators were not performed, as these indicators are generally consistent (with no variation) within the boundaries already defined.

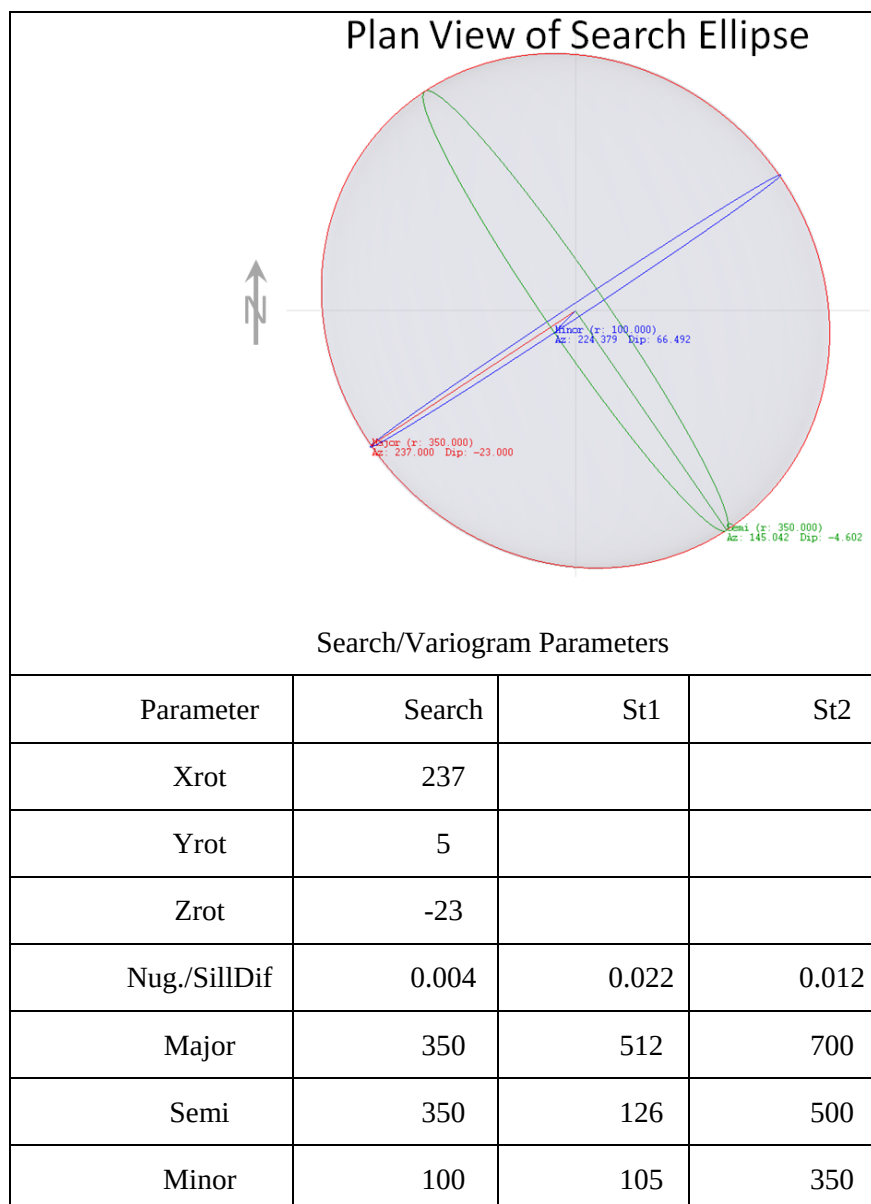


Figure 17-11 Parameters and primary search ellipse

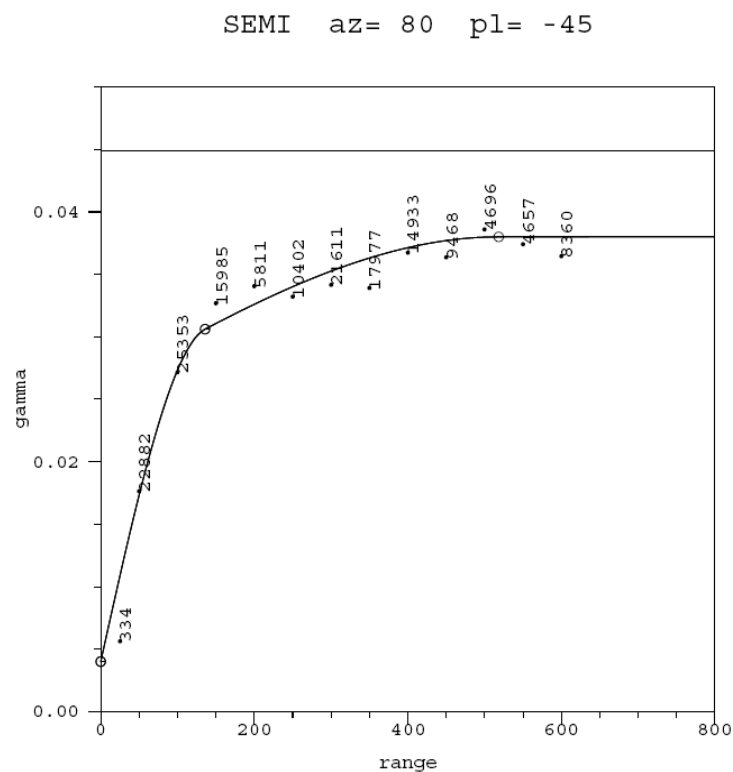


Figure 17-12 TCu variogram – Azimuth 80° and plunge -45°

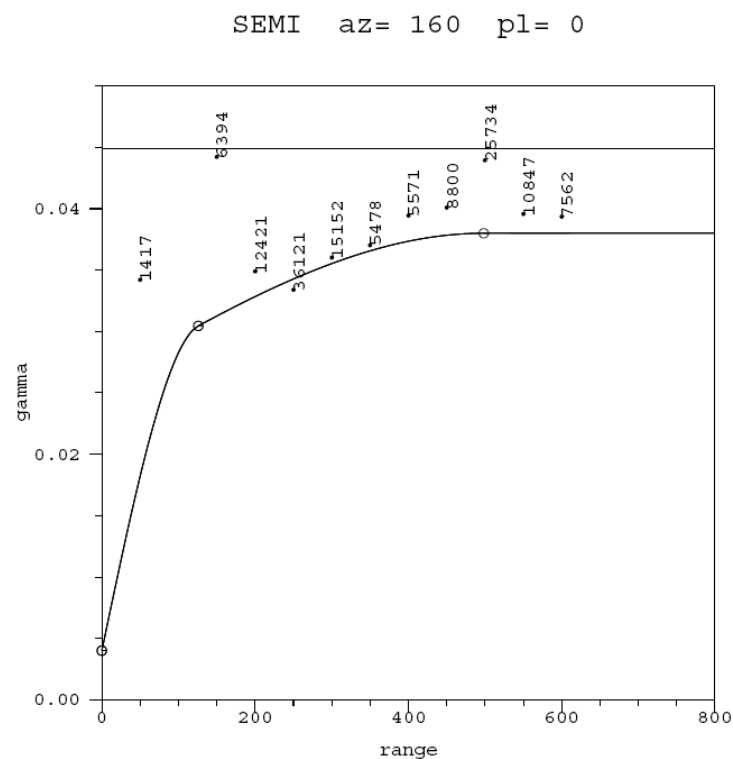


Figure 17-13 TCu variogram – Azimuth 160° and plunge 0°

17.6 Block Model Description

The block model extends from 646,500E to 652,000E, and from 742,900N to 748,000N in Arizona Central State Plane coordinates (in feet). The location of the block model is shown on Figure 17-16. The elevation ranges from 1,500 feet below sea level to 1500 feet above sea level. Each block is 50 feet on a side (50'x50'x50' cube), but these blocks are sub-blocked on 25'x25'x25' intervals where necessary to fit lithology or metallurgical boundaries. Plan maps of block grades are shown on Figure 17-17 (700 ft amsl) and Figure 17-18 (1,000 ft amsl). Cross sections of block grades are shown on Figure 17-19 (east-west) and Figure 17-20 (north-south).

17.6.1 Grade Estimation Methods

The primary estimation method used by SRK is similar to the Mineral-Indicator estimation method implemented historically by BHP. Index values were assigned to the composites for each of three mineral categories; Oxide, Fe-rich, and Sulfide. Each composite received a “1” in the index if the met-code matched the mineral category; otherwise it received a “0”. Percent indicator fields were then estimated from these composite indices using ordinary kriging. The resulting block values are between 0 and 1, and represent a fraction of the block likely to contain that mineralization type. For example, if the PIOX field of a block is 0.6, it indicates that 60 percent of that block is likely to be Oxide. Three separate grades were then estimated for each block: one for the Oxide Fraction, one for the Iron-rich fraction, and one for the Sulfide fraction. Next, the resulting grades are combined using the percent-indicator fields as weighting factors. The percent-indicator with the greatest value was determined and a “majority” code was assigned for each block. This allowed for a simplified “whole-block” summation of combined grades, categorized by majority block code.

In the case where the sum of the fractional components did not sum to 1.0 (either more or less than 100 percent), the percent indicators were “normalized” to keep the same ratios and their values were adjusted to equal 1.00. After normalization, each fraction could be reported separately, resulting in a more accurate assessment of the estimated tons and grade of each component.

In addition, separate estimates were done using unrestricted-ordinary-kriging, and a nearest-neighbor (pseudo-polygonal) estimate.

17.7 Model Validation

The block model was validated by visual inspection of numerous cross sections, comparing block grades to drillhole grades. Several blocks were inspected on an individual basis to ensure that the indicator normalization and grade combination scripts worked as expected. The block model fits the expected pattern of grade distribution, with no grades estimated above the bedrock surface and fault boundaries effectively acting as boundaries between low- and high-grade regions (see Figure 17-17 through Figure 17-20). The model was also compared to the previous block model, and although the SRK model did display more variability and less smoothing, the high-grade centers were in approximately the same areas.

17.8 Resource Classification

The vast majority of the oxide mineralization within the permit area is drilled on approximately 250-ft centers, and the mineralization is remarkably consistent and predictable from hole to hole. The scheme shown in Table 17-5 was used to assign Measured, Indicated and Inferred classification to the block model.

Table 17-5 Resource classification criteria

Resource Classification	Class Code	Criteria for Classification
Measured	1	Average distance to samples used is <200 feet <i>or</i> closest sample is less than 125 feet away <i>unless</i> the combined indicator grade is >0.150 %TCu and the nearest neighbor is < 0.150 %TCu (or vice versa), in which case the Class 2 (Indicated) is assigned to reflect the uncertainty in the grade estimate
Indicated	2	Average distance to samples used is <260 ft
Inferred	3	All other estimate blocks

Source: SRK, 2010.

17.9 Mineral Resource Statement

The current resource estimate is reported below within the model area and within historically defined boundaries for reference purposes.

17.9.1 Current Resource Estimate

SRK is reporting current in-situ mineral resources as shown in Table 17-6 at a 0.05 %TCu cutoff grade. The historic mining cutoff grade used by BHP in its 1997 pre-feasibility study was 0.15%TCu. For an ISCR project, the actual mining cutoff grade is a complex determination that includes ore zone thickness, depth to bedrock, the cost of acid, the leach recovery rate versus acid consumption, the PLS concentrate grade, cycle times, etc. The cutoff grade was determined based on order-of-magnitude cost estimate updates from previous work and current copper prices. SRK believes that resources reported at a 0.05% cutoff have a reasonable expectation of potential economic viability. SRK-reported resources are compliant with CIM resource classifications and are sufficient for NI 43-101 reporting.

Table 17-6 Florence Project oxide mineral resources (SRK, 2010)

All Oxide in Bedrock (0.05 %TCu cutoff)			
Class	Mtons	Grade	Mlb Cu
Measured	296.395	0.354	2,100
Indicated	133.091	0.278	741
M+I	429.487	0.331	2,841
Inferred	92.752	0.267	496

Note: All oxide includes the copper oxide zone, and the iron-oxide leached cap zone. Contained metal values assume 100 percent metallurgical recoveries.

17.9.2 Re-estimates of Historically Defined Zones

Also stated at the 0.05 %TCu cutoff, are tabulations by the global categories listed below. They are tabulated with reference to boundaries defined in the historical resource models by BHP as this may have relevance to future resource reporting

- Entire model in bedrock including oxide plus sulfide zones (demonstrates the magnitude of the sulfide mineralization);

- All oxide below the bedrock exclusion zone (top 40 feet of bedrock for which only partial leaching of rock is anticipated due to geometries of anticipated fluid flow from injection/recovery wells, and may be important in future scoping studies) ; and
- All oxide below the bedrock exclusion zone within the current APP permit boundary (may be important in future mining scoping studies) at 0.05% cutoff (Table 17-7), and Measured plus Indicated Mineral resources at various cutoffs (Table 17-9).

SRK is reporting all oxide in bedrock as the current resource for the Florence Project. Curis is currently considering the project only as an ISCR operation, and sulfide mineralization is not considered to have a reasonable potential to be extractable by ISCR. The bedrock exclusion zone and the permit boundaries are permit-related constraints that were placed on the deposit historically and may be modified with the required demonstrations to ADEQ, so are presented in relation to historical work only.

All oxide tons and grade are also reported at numerous cutoffs and plotted in a grade-tonnage curve, to demonstrate the grade distribution of the deposit and how the oxide resource varies depending on the cutoff used.

The following tabulations are sub-sets of the current resources stated in Table 17-6. They have relevance to the planed scoping study as mining- and permit-related constraints to the current resource, and are reported here for the propose of defining potentially mineable and permittable resource. The purpose for stating these tables here is to provide an assessment, under current permits, of the global oxide resource (Table 17-6) versus the potentially mineable resource for comparative purposes.

Table 17-7 Florence Project, oxide mineral resources below Bedrock Exclusion Zone (SRK, 2010)

All Oxide below Bedrock Exclusion Zone (0.05 %TCu cutoff)			
Class	Mtons Cu	%TCu Grade	Mlb Cu
Measured	273.901	0.359	1,968.016
Indicated	116.295	0.282	656.122
M+I	390.197	0.336	2,624.138
Inferred	85.941	0.273	468.386

Note: All oxide includes the copper oxide zone, and the iron-oxide leached cap zone. Bedrock Exclusion Zone is the top 40 feet of bedrock where blank casing is required. Contained metal values assume 100 percent metallurgical recoveries.

Table 17-8 Florence Project oxide mineral resources below Bedrock Exclusion Zone within Permit (SRK, 2010)

All Oxide below Bedrock Exclusion Zone within Permit Area (also excludes 40KTons extracted for Pilot Mine) (0.05 %TCu cutoff)			
Class	Mtons Cu	%TCu Grade	Mlb Cu
Measured	225.223	0.382	1,720.174
Indicated	72.657	0.317	460.655
M+I	297.881	0.366	2,180.829
Inferred	31.246	0.373	233.271

Note: All oxide includes the copper oxide zone, and the iron-oxide leached cap zone within the permit area and below the top 40 feet of bedrock. Contained metal values assume 100 percent metallurgical recoveries.

The total oxide resource below the bedrock exclusion zone shown in Table 17-7 is the resource used as the basis for determining potentially ISCR mineable copper for the purpose of this Preliminary Economic Assessment.

Table 17-9 Florence Project global Oxide Mineral Resources at various cutoffs (SRK, 2010)

%TCu Cutoff	MTons Cu	%TCu Grade	Mlb TCu
0.05	429.487	0.331	2,841.2
0.10	380.406	0.364	2,769.2
0.15	343.363	0.390	2,677.4
0.20	313.496	0.410	2,572.7
0.25	281.072	0.432	2,426.5
0.30	245.849	0.454	2,232.1

Note: Oxide includes the copper oxide zone, and the iron-oxide leached cap zone. Contained metal values assume 100 percent metallurgical recoveries.

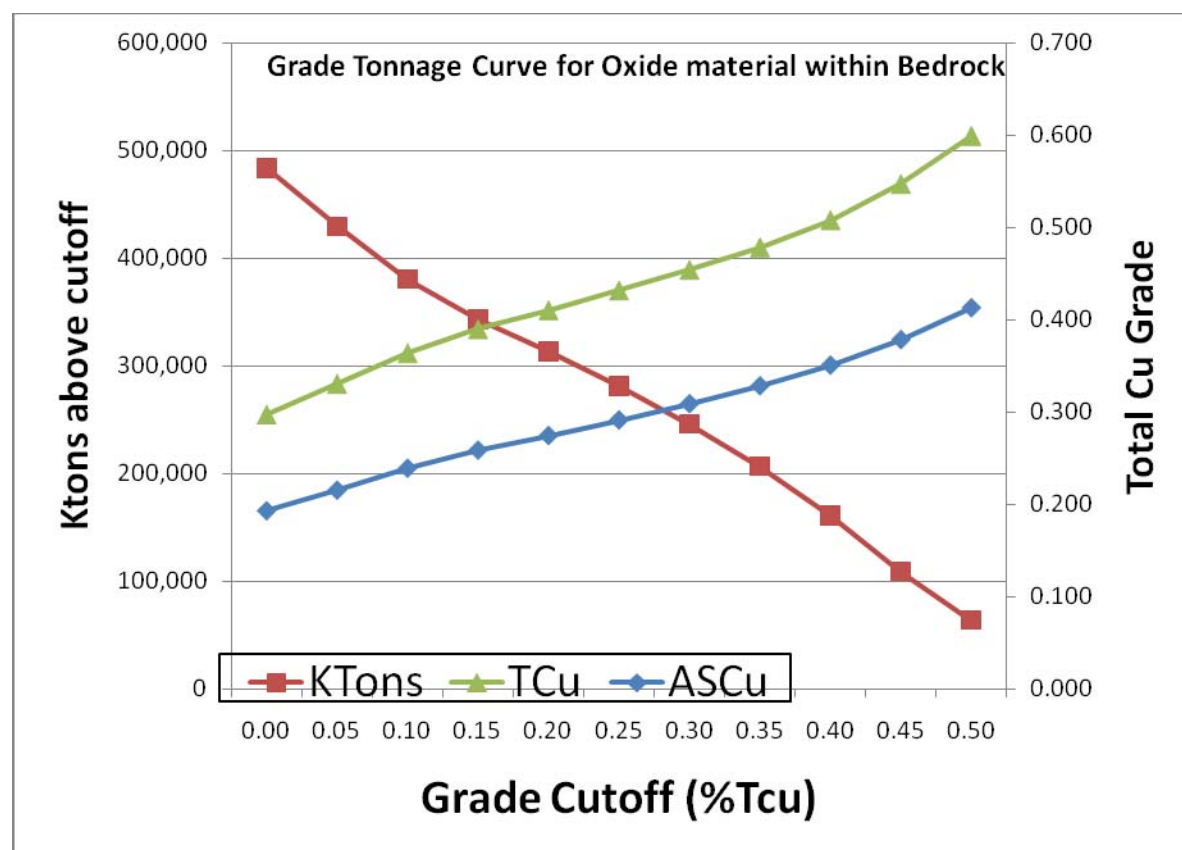


Figure 17-14 Grade-tonnage curve for all oxide zone material within bedrock

17.10 Mineral Resource Sensitivity

Separate grade estimates were performed using unrestricted-ordinary-kriging, and a nearest-neighbor (pseudo-polygonal) estimate. These estimation methods are compared to both the majority and the fractional reporting methods of the mineral-indicator estimate in Table 17-10 and the grade distributions (amount of tons represented within various grade ranges) are graphically demonstrated for each method is shown in Figure 17-15. Although the different estimation methods give slightly different results, this is to be expected. The nearest neighbor estimation has the least smearing of grade, while unrestricted ordinary kriging has the most. The fractional reporting allows higher-grade fractions to be reported without the diluting influence of combined block grades. Although the fractional resource at lower cutoffs has fewer tons, at higher cutoffs, there are more tons, reflecting that there is less smearing in the fractional reports.

Table 17-10 Comparison of estimation and reporting methods at various %TCu cutoff increments

Cutoff %TCu	Proportional Fractions			Proportional Majority			Nearest Neighbor			Unrestricted Ord. Kriging		
	MTons	%TCu	MLbs Cu	MTons	%TCu	MLbs Cu	MTons	%TCu	MLbs Cu	MTons	%TCu	MLbs Cu
0.05	297.881	0.366	2,180.829	307.190	0.362	2,223.295	296.747	0.378	2,241.791	306,232	0.362	2,219.548
0.10	281.260	0.383	2,155.604	295.727	0.373	2,206.139	275.576	0.401	2,210.106	294,995	0.373	2,202.815
0.15	262.649	0.401	2,108.983	280.840	0.386	2,168.052	253.456	0.425	2,154.166	279,579	0.387	2,163.636
0.20	243.321	0.419	2,040.970	258.496	0.404	2,089.093	227.268	0.454	2,062.977	256,752	0.406	2,083.456
0.25	220.833	0.439	1,939.666	232.369	0.424	1,971.291	204.317	0.480	1,960.279	231,483	0.425	1,969.463
0.30	196.489	0.459	1,805.248	203.693	0.445	1,813.216	177.749	0.511	1,814.845	202,879	0.446	1,811.607
0.35	168.694	0.481	1,624.257	168.802	0.470	1,585.956	150.765	0.544	1,640.016	167,759	0.472	1,582.792
0.40	133.765	0.509	1,361.729	127.306	0.501	1,274.390	124.033	0.581	1,440.131	126,169	0.503	1,270.344
0.45	92.430	0.546	1,009.753	83.290	0.540	899.995	92.211	0.634	1,169.774	83,348	0.544	906.421
0.50	54.445	0.597	650.014	47.304	0.591	559.419	67.027	0.695	931.596	48,444	0.594	575.582

Source: SRK, 2010.

Table 17-11 Indicator estimation parameters

Estimation Run			Block Requirements				Sample Requirements			
Estimation ID	Description	Estimation Type	Block Match	Block Variable	Number of Samples Variable	Composite Variable	Max per hole	Min for Estimate	Max. for Estimate	
ind_ox	main ox indic.	OK		PIOX	COMPO	INDOX	3	4	12	
ind_fe	main fe indic.	OK		PIFE	COMPF	INDFE	3	4	12	
ind_su	main sulf indic.	OK		PISU	COMPS	INDSU	3	4	12	
indxox	extended ox ind.	OK	compo	0	PIOX	COMPO	INDOX	3	4	12
indxfe	extended fe ind.	OK	compf	0	PIFE	COMPF	INDFE	3	4	12
indxsu	extended sulf ind.	OK	comps	0	PISU	COMPS	INDSU	3	4	12

Source: SRK 2010

Table 17-12 Indicator search ellipse parameters

Estimation ID	Search Ellipse						Variogram							
	Z-rotation	Y-rotation	X-rotation	Major axis	Semi-axis	Minor axis	Nugget	Sill Differential	Zrot	Yrot	Xrot	Major	Semi	Minor
ind_ox	237	-23	5	350	350	100	0	0.9	237	-23	5	350	350	100
ind_fe	237	-23	5	350	350	100	0	0.9	237	-23	5	350	350	100
ind_su	237	-23	5	350	350	100	0	0.9	237	-23	5	350	350	100
indxox	237	-23	5	450	450	130	0	0.9	237	-23	5	350	350	100
indxfe	237	-23	5	450	450	130	0	0.9	237	-23	5	350	350	100
indxsu	237	-23	5	450	450	130	0	0.9	237	-23	5	350	350	100

Source: SRK 2010

Table 17-13 Copper estimation parameters

Estimation Run			Block Requirements			Block Fields				Extra Variables		Sample Requirements						
Estimation -ID	Description	Estimation Type	Block Requirements			Block Variable	Number of Sample Variables	Flag Variable	Flag Value	Average Distance Variable	Block Variable	Comp. Variable	Composite Variable	Filter Variable	Match	Max per Hole	Min. for Estimate	Max. for Estimate
tcuox	Oxide	OK			piox gt 0	TCUOX	COMPO	FLAGO	1	DISTO	ASCUO	ASCUFX	TCUCAP	INDOX	1	3	4	12
tcufe	Iron	OK			pife gt 0	TCUFE	COMPF	FLAFG	1	DISTF	ASCUF	ASCUFX	TCUCAP	INDFE	1	3	4	12
tcusu	Sulfide	OK			pisu gt 0	TCUSU	COMPS	FLAGS	1	DISTS			TCUCAP	INDSU	1	3	4	12
tcuoxx	Oxide. Ext.	OK	flago	0	piox gt 0	TCUOX	COMPO	FLAGO	2	DISTO	ASCUO	ASCUFX	TCUCAP	INDOX	1	3	4	12
tcufex	Iron Ext.	OK	flagf	0	pife gt 0	TCUFE	COMPF	FLAGF	2	DISTF	ASCUF	ASCUFX	TCUCAP	INDFE	1	3	4	12
tcusux	Sulfide Ext.	OK	flags	0	pisu gt 0	TCUSU	COMPS	FLAGS	2	DISTS			TCUCAP	INDSU	1	3	4	12
tcuun	Unrestricted OK	OK				TCUU	COMPU	FLAGU	1	DISTU	ASCUU	ASCUFX	TCUCAP			3	4	12
tcuunx	Unrestricted OK Ext.	OK	flagu	0		TCUU	COMPU	FLAGU	2	DISTU	ASCUU	ASCUFX	TCUCAP			3	4	12
tcunn	Nearest Neighbor	NN				TCUNN		FLAGN	1	DISTN	ASCNN	ASCUFX	TCUCAP			0	1	1

Source: SRK, 2010.

Table 17-14 Copper search ellipse parameters

Estimation-ID	Search Ellipse						Variogram	Structure 1							Structure 2						
	Z-rotation	Y-rotation	X-rotation	Major axis	Semi-axis	Minor axis	Nugget	Sill Diff.1	Zrot	Yrot	Xrot	Major	Semi	Minor	Sill Diff.2	Zrot	Yrot	Xrot	Major	Semi	Minor
tcuox	237	23	5	350	350	100	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcufe	237	23	5	350	350	100	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcusu	237	23	5	350	350	100	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcusoxx	237	23	5	450	450	130	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcufex	237	23	5	450	450	130	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcusux	237	23	5	450	450	130	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcuun	237	23	5	350	350	100	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcuunx	237	23	5	450	450	130	0.004	0.022	237	23	5	512	126	105	0.012	237	23	5	700	500	350
tcunn	237	23	5	450	450	130	0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: SRK, 2010

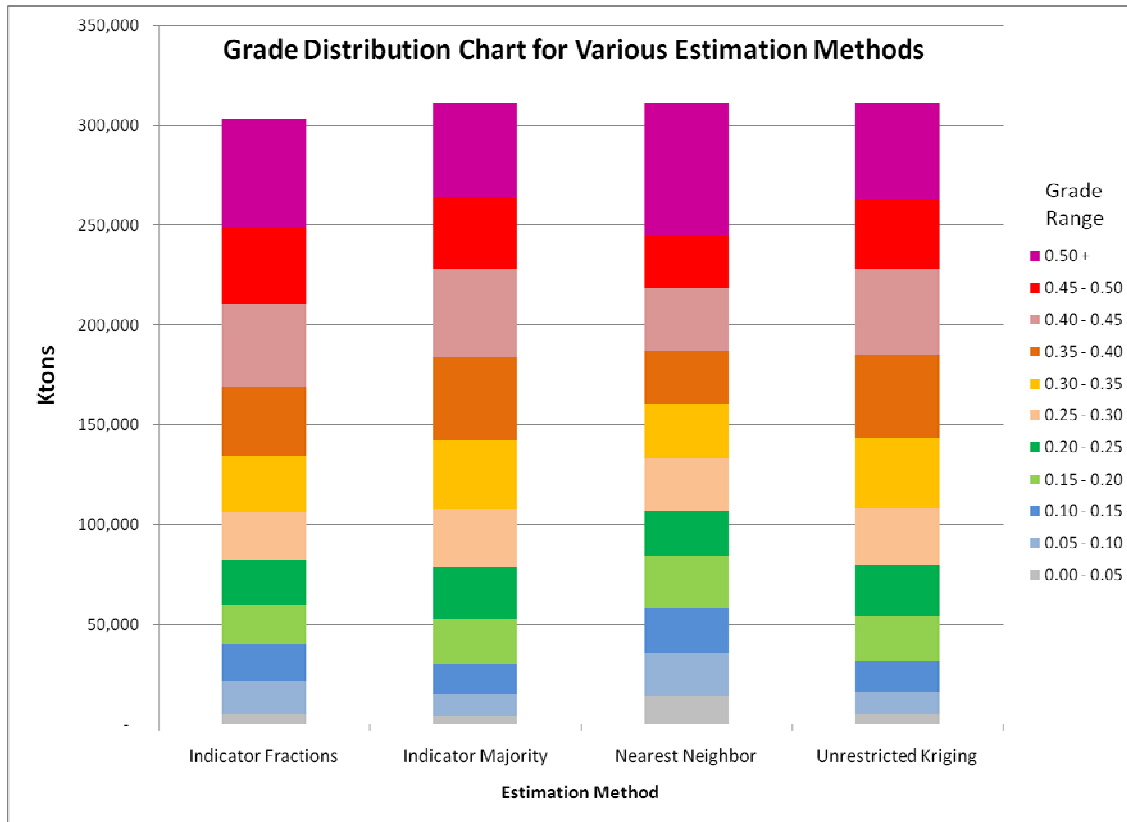


Figure 17-15 TCu grade distribution chart for various estimation methods

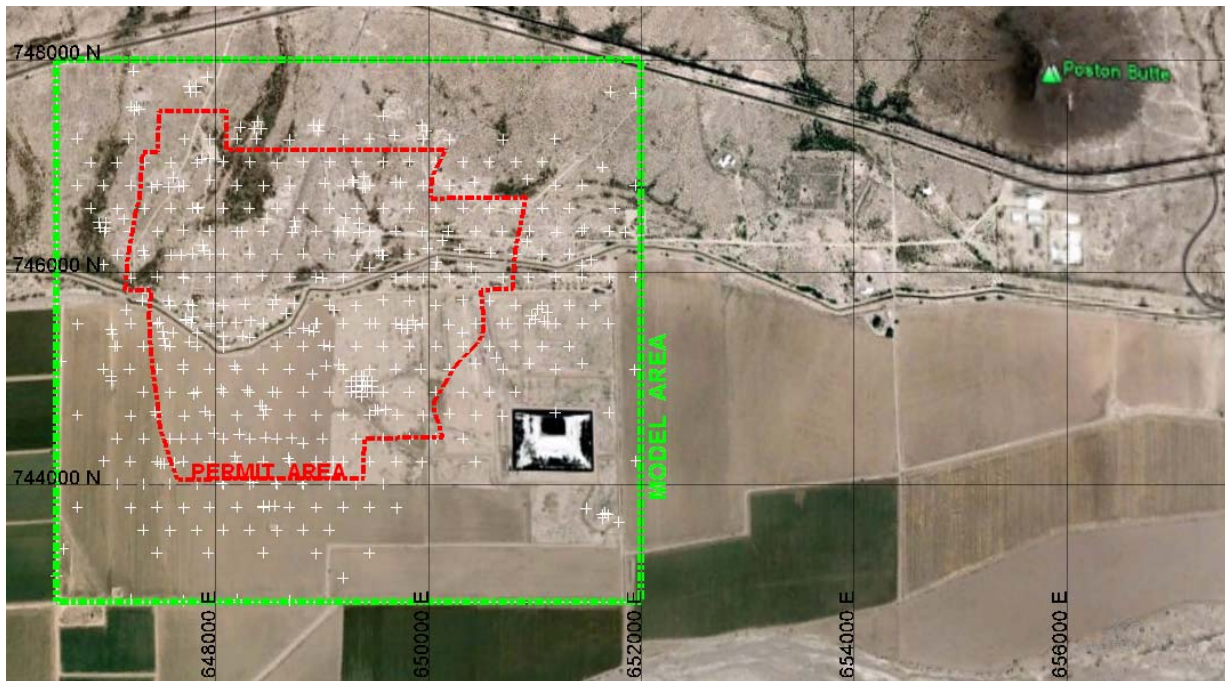


Figure 17-16 Location of block model (green), drill data within the block model (white crosses), and the permit area (red)

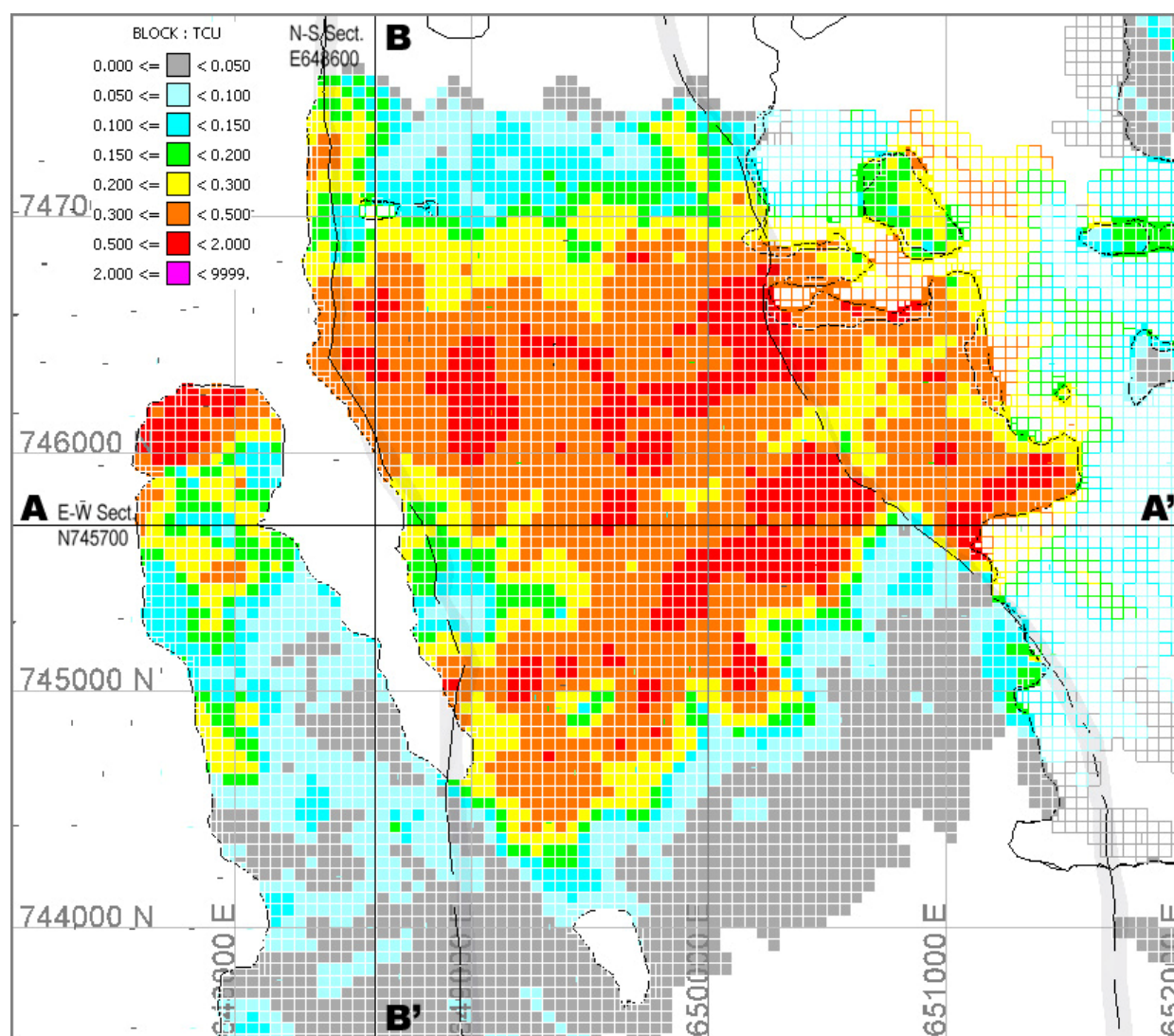


Figure 17-17 Plan map (700 ft amsl) showing block grades (Oxide/Fe-rich Blocks are solid bold shading; sulfides are light shading)

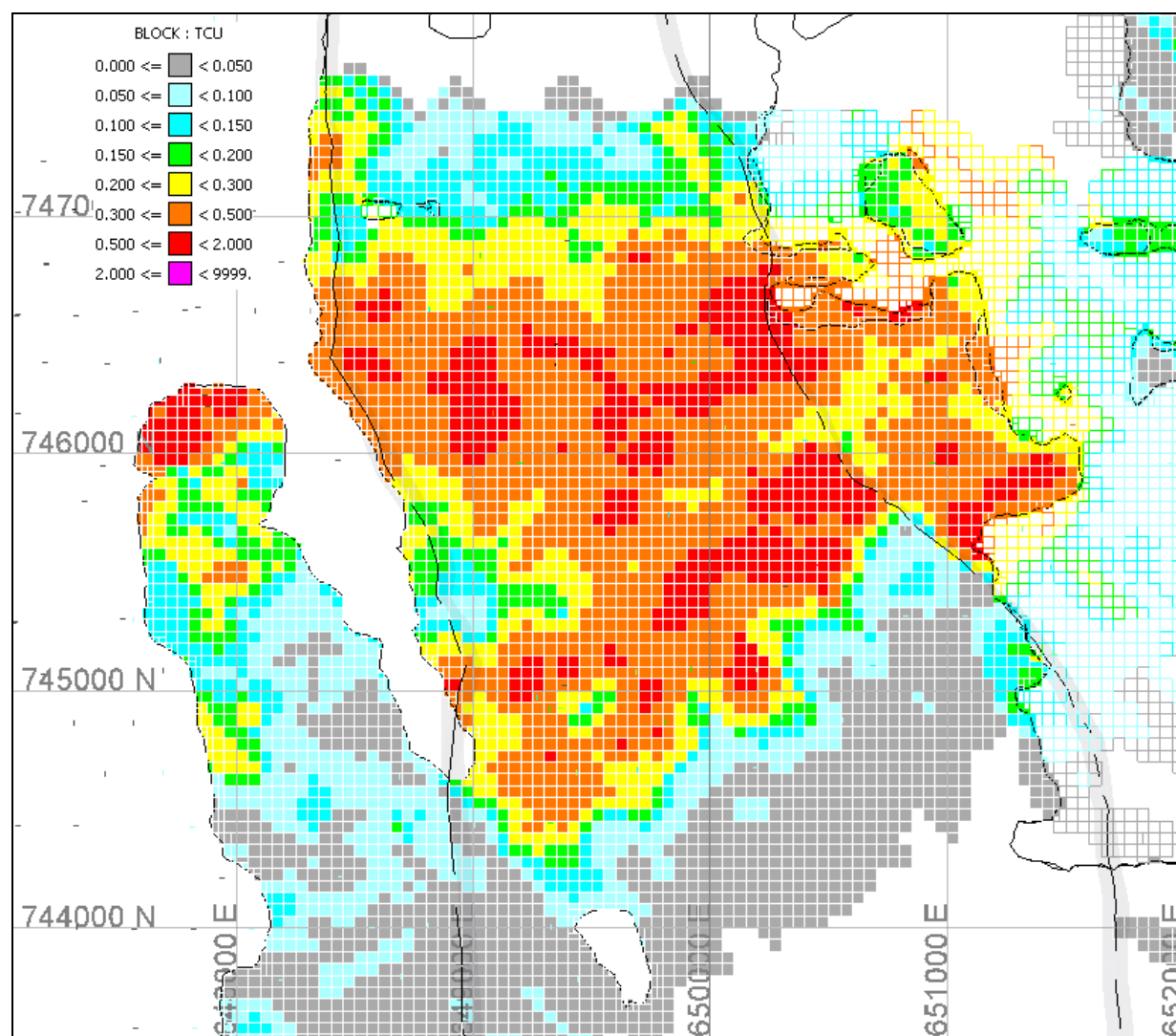
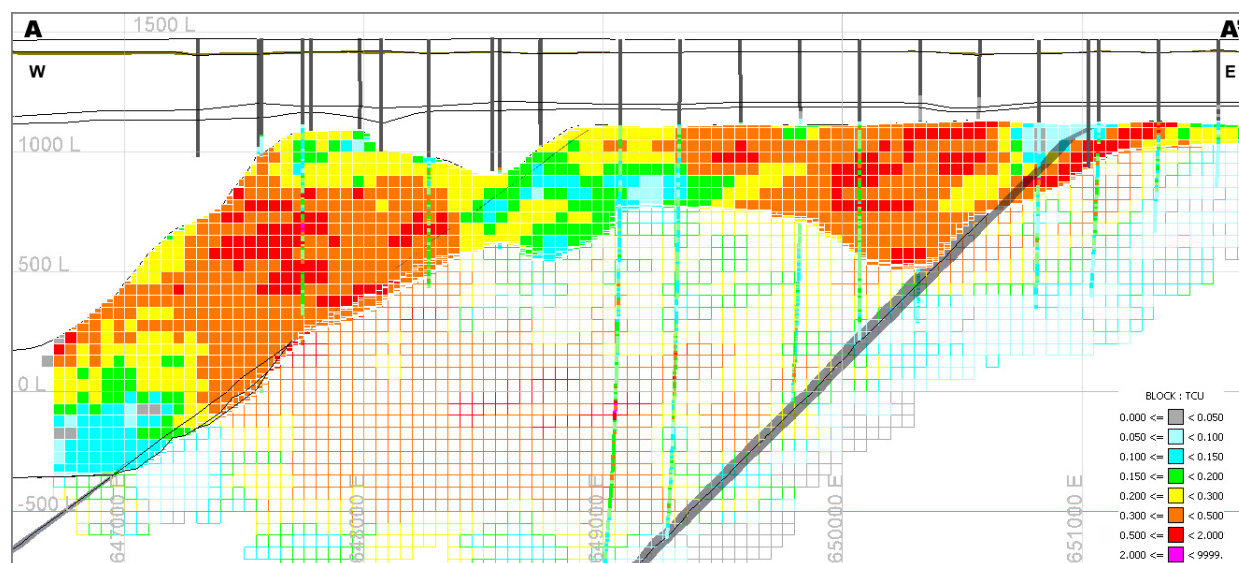


Figure 17-18 Plan map (1000 ft amsl) showing block grades (Oxide/Fe-rich Blocks are solid bold shading; sulfides are light shading)



Source: SRK Oxide/Fe-rich blocks are solid bold shading; sulfides are light shading). Party Line (east) and Sidewinder (west) faults are shown.

Figure 17-19 East-west cross section N745700 looking North showing TCU block grades at a 0.05%TCu cutoff.

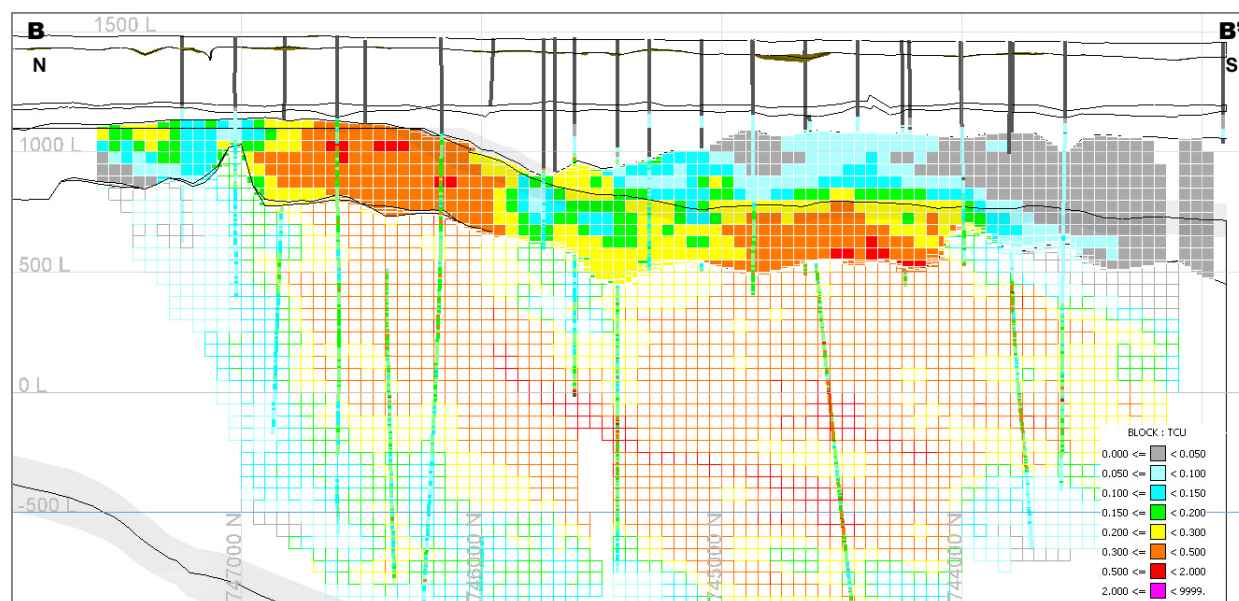


Figure 17-20 North-south cross section E648600 looking East showing block grades (Oxide/Fe-rich Blocks are solid bold shading; sulfides are light shading)

18 Other Relevant Data and Information (Item 20)

Other relevant information that is available for the property is discussed below.

18.1 Land Zoning Status

Patented lands held by Curis Resources (Arizona) Inc. totaling 1,181.59 acres are currently included as part of the Merrill Ranch Master Planned Community. Curis also holds mineral rights for 160 acres of Arizona State land, administered by the Arizona State Land Commission. A portion of patented lands within the Town of Florence are intended to be rezoned to its previous (2007) zoning designation of Employment/Light Industrial to accommodate facilities used in the ISCR commercial operations. This process has been initiated by Curis and is anticipated to be completed over the next 12 months.

Upon cessation of copper production, groundwater within the ISCR production area will be remediated to acceptable levels as per the requirements of Curis' UIC and APP permits. Well infrastructure, water impoundments and SX/EW plant facilities will be removed and the land made suitable for other beneficial uses. At that time, the Florence Copper Project lands will be suitable for a broad range of beneficial public uses – including residential development, agricultural or other commercial purposes.

18.2 Community Relations

Curis initiated a broad-based community relations and stakeholder outreach program in support of the Florence Copper Project in spring 2010. Elements of this program include:

- Two dedicated community relations staff in Florence / Pinal County;
- Opening of a Community Office in Florence;
- Development of community relations and communication tools and resources (e.g. project website, project e-newsletter; published and presentation materials);
- Public open houses and technical briefings; and
- Targeted stakeholder outreach to government, community, business, non-profit and special interest groups and leaders at the local, county and state level.

Curis' community relations program will be ongoing from the current project development and permitting phase, through project construction, operations and closure. The community relations objectives include:

- Ensuring that local and regional stakeholders are effectively informed and have ready access to public information about the development and operation of the Florence Copper Project;
- Providing meaningful opportunities for two-way dialogue and active public involvement in the process by which the Florence Copper Project is planned, built and operated;
- Ensuring that public benefits associated with the Florence Copper Project (e.g. training and employment opportunities, supply and services contracts, local infrastructure development and community investment) are optimized in the best interests of local residents, businesses and communities; and
- Ensuring that local issues and concerns associated with development of the Florence Copper Project are adequately addressed through project design and associated mitigation strategies.

18.3 Water Usage

Water usage in Arizona is an important issue. Curis has re-investigated the water rights assignable to the project and usage requirements, affected nearby water rights holders, proposed water management, and

application during and after an ISCR operation. Basic information with which to re-examine this topic is available in the project files.

18.3.1 Water Rights

There is one grandfathered irrigation water right that is appurtenant to the land and that right has been transferred to Curis (formerly known as U1 Resources, Inc.) with the February, 2010 filing of a Notification of Change of Ownership of an Irrigation Grandfathered Right (No. 58-112948.0004, for 4063 acre feet per year). There are provisions within Arizona Revised Statutes to convey the right for a non-irrigation use.

There are two Type 2 grandfathered non-irrigation rights, which can be used for industrial purposes. These rights have been transferred to Curis (formerly known as U1 Resources, Inc.) with the February 25, 2010 filing of a Notification of Change of Ownership for a Type 2 Non-Irrigation Grandfathered Right for each of the two rights. These two water rights and volumes are as follows:

- Right No. 58-105084.0002, for 3.4 acre feet per year
- Right No. 58-112949.0002, for 17 acre feet per year

In addition, Curis holds a mineral extraction withdrawal permit (No. 59-562120.0002, for 806 acre feet per year). This water may currently be withdrawn from a block of wells designated under well registration number 55-562121. Other wells may be added to this permit in the future as needs dictate.

A total of 28 water wells have been identified on the property (11 “exempt” meaning wells with a maximum pump capacity of 35 gpm and 17 “non-exempt” wells meaning wells with pump capacities exceeding 35 gpm). SRK, acting under direction of and on behalf of Curis Resources, applied to ADWR for the transfer of ownership of these wells to Curis Resources (Arizona), Inc. The applications have been submitted, processed and updated in the ADWR database.

18.3.2 Usage during PTF Operation

As explained in Section 16.3, Curis intends to construct and operate a demonstration scale Production Test Facility (PTF) at its Florence site. The PTF will include a number of test wells and downstream process facilities that will enable Curis to evaluate critical operational and process design parameters. The results of the evaluation will be used in the final design of full-scale facilities required for commercial operations.

The PTF that will be constructed by Curis will resemble, in both design and operation, test facilities that were constructed in 1997 except for the addition of a demonstration scale SX/EW plant which will be a new feature of the site. The facilities were successfully operated by BHP to demonstrate hydraulic control (an inward hydraulic gradient) in the portion of the ore body undergoing injection and recovery (injection zone). Hydraulic control is maintained by withdrawing more solution from the injection zone than is injected, thus maintaining a negative hydraulic gradient or inward flow of groundwater into the injection zone. The inward flow prevents in-situ solutions from migrating beyond the ore body and into the surrounding aquifer.

The excess solutions that are produced will be directed to a water impoundment and auxiliary mechanical evaporative equipment. There will be no discharge of process solutions to the surrounding environment.

The test wells will be arranged as shown in Figure 16-3. A set of four injection wells will surround a single recovery (also known as production) well. This set of five wells will be surrounded by eight

additional recovery wells to ensure inward hydraulic control of the PTF; these outer recovery wells will be surrounded by 7 or more observation wells to monitor the inward hydraulic gradient required by permit conditions. For the period of the production test, which is about 12 to 14 months, relatively minor pumping rates are involved. The exact rates will be defined once the exact number of wells to be installed is finalized.

During the Production Test, additional studies will be conducted to evaluate ways to reduce water consumption during the future commercial operation phase. Among these will be a study to evaluate whether surplus solutions can be satisfactorily treated to permit subsequent beneficial use, such as crop irrigation. Upon successful completion of the Production Test, the data collected will be utilized as input to the design of the full-scale production facility.

18.3.3 Usage during Commercial Operation

Upon initiation of the commercial production facilities, a number of injection and recovery wells will be commissioned and placed into operation (the actual number determined by process requirements). Most of the water that is used during the operations is recycled and reused for injection. Some water is consumed during operations. Preliminary estimates indicate that water consumption by the Florence ISCR operation when at full production will be on the order of 1,290 acre-feet per year, or about 300 acre-feet per year less than would be consumed if two alfalfa crops were grown each year in the in-situ production area of 214 acres.

Most of the water that is consumed is lost to evaporation. As noted in Section 18.3.2, Curis will conduct studies to evaluate the opportunity to treat the water otherwise lost to evaporation so that it may be beneficially used.

18.4 Cultural Resources

Various archaeological site investigations were completed as part of the work conducted on behalf of Conoco and BHP. That work defined archeological sites that would need to be studied and mitigated within the ISCR area. This process can take some time; therefore, Curis should re-activate efforts to evaluate the process and the timing of mitigation of archaeological sites prior to a production decision.

SRK recommends all the above topics be addressed as part of a feasibility study to determine available information, information gaps, a course of action, and timing.

19 Additional Requirements for Development Properties and Production Properties (Item 25)

Section 19 provides additional information on the proposed Florence ISCR project including an overview of the proposed plant facilities, copper extraction method, well construction design, and the wellfield design and arrangement. Information is provided on the life-of-operations production plan, contracts, environmental considerations, taxes, royalties, capital and operating costs, and an economic analysis of the project.

19.1 Plant Facility Design

Engineering investigations and designs prepared by previous owners relative to the proposed plant facilities have been reviewed by SRK and are summarized below in Sections 19.1.1 through 19.1.5.

19.1.1 Overview of Planned Facilities

The planned facilities consist of an ISCR wellfield, a SX/EW plant, tank farm, raffinate pond, water impoundments, and infrastructure. The designs were described in detail in the 1996 APP application (Brown and Caldwell, 1996). Magma Copper Company, later purchased by BHP, commissioned Fluor Daniel Wright (FDW) of Vancouver, B.C. to complete the preliminary engineering designs in 1995.

The wellfield occupies a 216-acre site and will expand in size as wellfield resource blocks are brought on line and will contract in size when reclamation begins after copper recovery declines to noneconomic level. Approximately 150 to 260 new wells will be drilled per year. Reclamation will begin in month 73 and continue until the groundwater chemistry meets the requirements of the UIC and the Aquifer Protection permits for the site.

Raffinate will be pumped from the raffinate pond to the wellfield distribution tanks. The distribution tank will have a 30,000 gallon capacity with a high level alarm and level indicator. The tanks will be fitted with control valves to prevent overflow of solution. The tanks will be located inside a spill control area and any incidental spills will be captured in a lined spill sump. Spillage will be collected in the sump and pumped back into the circuit. The raffinate will be pumped from the distribution tank to the individual injection wells.

The PLS from the recovery wells will be pumped to the in-situ wellfield advance tank and then into the PLS feed pond. The PLS feed pond will be double-lined with an inter-liner leak detection system that meets the Arizona Best Available Demonstrated Technology Control Guidance (2004). A pumpback system will allow leakage to be returned to the PLS pond or transferred to the raffinate pond. The PLS will be advanced by pumps into a solvent extraction train. Each of the two trains will consist of two extraction settlers and mixer sets and one stripper mixer set. Each settler will be fitted with dual mixer boxes. The PLS will enter one extractor and then the solution will be advanced to the second extraction stage. The copper-depleted solution, now raffinate, will be pumped back to the raffinate pond.

The SX/EW plant, acid storage tanks, and tank farm will be located in one contiguous area that has been designed to be a zero-discharge facility, that is, no spilled solution will be able to contact the soils or exit the operating system. Capacity of this system is in excess of 100 percent of the storage capacity of the largest tank in the system. Run-off or spills will be directed to a lined run-off collection pond, the bottom of which is located at the lowest elevation of the tank farm. Any solutions collected in the run-off pond will either be pumped back into their respective circuits or pumped to the water impoundments.

The SX/EW plant will contain two 5,600 gpm capacity trains. The plant will start with one SX train in Year 1 and with the second train planned to come on line in at the end of Year 1 to reach full flow capacity of 11,000 gpm.

The settlers in the SX/EW plant are composed of concrete and stainless steel. Each settler is fitted with a roof to minimize fire potential and exposure of organic vapors outside of the plant. The roof covers the end of the settlers to minimize any volatile organic loss due to wind or evaporation. Each train consists of two extractors with one stripper settler. The units are fitted with primary and secondary mixers, which are the low energy, low shear, Lightning Mixer types. The SX/EW plant is similar in design and operation to other SX/EW plants used elsewhere in Arizona and around the world. Piping runs are easily accessible and any spills are directed to the Electrowinning Tank Farm run-off pond. The Electrowinning Tank Farm is located in an excavated sub-grade area. The tanks consist of tank house solution advance tanks, organic storage, acid storage, column cells for organic entrainment removal, and crud storage tanks.

The tank farm is lined with Gunnite and fitted with stormwater run on and run off controls. The Run-Off pond is located on the north end and is lined with HDPE. Solutions may either be pumped back into the tank from which they spilled. The solutions may also be drained and advance onto the neutralization circuit for further disposal in the water impoundments. The Run-Off pond is designed to contain the maximum probable storm event (MPE) of 14 inches of rainfall, which could then be pumped to the water impoundment where the freeboard of the ponds is designed to handle the MPE.

The Electrowinning tank consists of 106 cells. The control room is located on the south end of the building design. This design allows the operators to have a clear view of the tank farms, main gate and truck scale, cathode storage area, water impoundments and wellfield. The 106 cells are designed to plate a nominal 75 million pounds of cathode per year. The system has an upturn capacity to 84 million pounds. Copper production will vary from 68 to 84 million pounds through Year 14 and decrease to an average of 33 million pounds in Years 15-19. A back-up power supply and rectifier is supplied to prevent de-plating during power outages

The cells are designed to allow for additional storage of lead flakes from the anodes in order to facilitate the production of the highest quality copper cathode. Flow distribution within the cell is enhanced via a distribution header. The cells are composed of polymer concrete. No cell liners are needed. Cell anode-cathode spacing is 3.9 inches (100 mm).

Cathodes are harvested, washed, and stripped by either Kidd Creek or Mt. Isa cathode strippers. Trade-off studies showed the costs for the two strippers to be equivalent. There is no preference at this time for either machine.

The water impoundments will cover approximately 77 acres. There will be eight operation cells of approximately 8.5 acres in each area. The cells will have common inner walls with slopes of 2.5:1. The outer walls will have a slope of 2:1. Construction will be the same as for the PLS and raffinate ponds namely, lower and upper liners, both fully welded double seamed will be set on set on a compacted soil base. There will be geonet liner installed between the upper and lower liners to facilitate collection of any leakage into at the interliner sump. The sump is fitted with a collection pump and monitor. Any leakage will be pumped back into the production system. There will be a ninth cell for backup in case of shut-down of one of the normal operating ponds for repairs. The cells will be designed with a depth of 20 feet. This allows for accumulation of 14 feet of precipitated solids during the mine life, 2 feet of freeboard for storm (including the 100-year, 24-hour event) containment, and 2 to 3 feet of normal liquid level. The operating level will vary throughout the year by several feet due to variations in evaporation rates. The

volume of water in the pond will be maintained with 2 feet of freeboard to prevent the overlap of the solution due to wind conditions.

The water impoundment will be fenced and lighted in a similar fashion to that of the PLS and raffinate ponds. Each pond will have a series of evaporation sprayers mounted on distribution pipes. The sprayers will accelerate evaporation, thereby reducing the footprint of the pond size. The berm width and sidewalls will prevent overspray from escaping from the pond. The sprayer pumps will be connected to a controller that will sense wind velocity. If the velocity exceeds the level which causes overspray, the spray pumps will be deactivated until such time as the wind decreases to a safe level. A set of blower/evaporators is also planned and will be placed in such a manner that windage will not carry the evaporate salts beyond the pond liners. An appropriate bird deterrent system will be put in place to ensure birds are kept off the ponds.

The water impoundment berms will be composed of compacted fill, sized to a maximum minus 5/8 inch and compacted to a Proctor of 95 percent or more. The bottom elevation of the lowest liner will be greater than the elevation of the 100-year floodplain. All of the ponds will be built above the 100-year floodplain. The water impoundment near the edge of the 100- year floodplain will be armored with rock to prevent erosional encroachment of the pond base should a flood event occur. The excavated material will be compacted obviating the need for any clay additives.

Water used for showers, hygiene, and fire protection will be pumped from one of two above-ground storage tanks and will meet state use guidelines. Sulfuric acid (93 percent by weight) and other reagents will be received via commercial truck carrier and/or rail and delivered to one of two above-ground storage tanks.

19.1.2 Preliminary Engineering and Recommended Updates

FDW prepared a Detailed Engineering Design package for Magma Copper Company in January of 1996. The FDW design criteria, equipment lists, preliminary engineering drawings, and the FDW capital cost estimate were reviewed by Terry McNulty, P.E., a metallurgical consultant for SRK. McNulty reviewed the design package and judged the documentation to provide sufficient details to enable SRK to estimate project capital and operating costs for the Florence Project within an accuracy of ± 30 percent. Details included were the material balance, water balance, consumables consumption, process flow diagrams, equipment list (325 pieces of equipment), 65 preliminary engineering drawings, and constructed cost estimates. Mark Vancas, a metallurgical consultant to Curis, and Debra Burkhardt, P.Eng., of Fluor Canada, also reviewed the capital cost estimates and provided recent quotations for selected components. Some modern updates to the FDW SX/EW plant design were recommended by McNulty and by other consultants to Curis, but will be addressed at a later date. Complete design documentation is provided in Volume V of Brown and Caldwell (1996), which was submitted to ADEQ to support the APP application.

19.1.3 Use of BADCT in the Design of Discharging Facilities

In 1995, ADEQ issued a draft *Best Available Design Control Technology – Mining* document for public review. Part 3 of the draft ADEQ BADCT guidance document was incorporated into FDW's facility design considerations. The design criteria met all the BADCT standards discussed in the guidance document. The design criteria and preliminary designs will be reviewed by Curis and its consultants to assess whether all design components adhere to updated BADCT guidance for mining facilities as published by ADEQ in 2004.

19.1.4 Surface Water Diversion and Stormwater Planning

In 1995, Cella Barr and Associates of Phoenix conducted a regional study of surface water of the Gila River watershed (Brown and Caldwell, 1996c). Curis retained Brown and Caldwell in 2010 to reassess the location of the 100-year flood plain. All of the process facilities, ISCR wells, water impoundments, offices, storage areas, warehouses, shops, etc. will be constructed above the elevation of the 100-year flood plain.

The SX/EW plant, tank farm, and paved areas are designed with run-on controls. Hunt Highway is located to the north of the plant area, and stormwater enters the area by either direct contact or through conduits under the Hunt Highway. The conduits are directed around and away from the facilities by an earthen berm located around the plant. The low relief of the surrounding landscape will allow channeling of water into a constructed channel that will be installed north of the SX/EW plant area and directed to its normal course east of the plant.

The run-off from plant roofs, roads, tanks and other areas will be directed via graded slopes to the tank farm. Stormwater will then flow to the run-off pond. Pumps will transfer the stormwater to the water impoundments. The pond berms will be composed of compacted fill and graded to the interior of the pond. The ponds will be fenced to prevent access from range animals.

19.1.5 Geotechnical Analysis Results

Terracon Consultants Western, Inc. of Tucson performed a geotechnical analysis of the proposed location of the Florence ISCR project in 1996 (Brown and Caldwell, 1996c). All of the facilities (wellfield, ponds, SX/EW plant) are located on relatively flat ground that is not adjacent to areas that would result in landslides, subsidence, or known geologic hazards or instability. The native soils are relatively consistent across the project area, moisture contents of the sampled soils were relatively low, and no evidence of groundwater was encountered within the depth assessed through test pits and shallow borings. Native soils from the surface to depths of 5 to 10 feet are generally composed of loose to medium density, coarse-grained sand. From approximately 10 feet to the total depth drilled, the soils were typically dense or very dense and contained significant quantities of gravels, cobbles, and boulders. The natural soil characteristics of the site have been found to be non-reactive to concrete in the area of the plants, spill control sumps, and run-off areas.

Terracon concluded that the site is generally suitable for the project from a geotechnical standpoint and provided recommendations for the depths of subgrade footings. They recommended over-excavation and compaction. Total differential settlement resulting from the assumed structural loads was estimated to be on the order of 1 and 0.5 inch or less. Additional foundation movements could occur if water infiltrates the foundation soils; therefore, Curis will assess drainage during the final design and during construction.

19.2 Wellfield Design

Section 19.2 provides information on the potentially mineable resource, the planned copper extraction method, the basis for design of the injection and recovery wells, and the general arrangements for the wellfield. It also presents the method for developing the life-of-operations production plan and the results and operations schedule.

19.2.1 Potentially Extractable Resource

The basis for the ISCR copper extraction plan (equivalent to a mine plan) is the portion of mineral resources upon which extraction criteria are placed. The potential extraction resource is derived from the total oxide copper mineral resources as stated in Table 17-7. As there is a defined UIC permit area (the

permit is active but in suspension), an extraction plan for this Preliminary Economic Assessment was initially developed internal to that permit boundary, on progressing sets of 500-feet by 500-feet production block areas. The initial development plan and associated wellfield operations will stay within the existing UIC permit boundary, however later on in the development field life, the permit will likely be modified to include ore blocks that are currently outside the current UIC permit boundary to include incremental blocks of potentially economic mineralization outside the current UIC permit boundary but internal to Curis land holdings. That additional mineralization was incorporated into the life-of-operations extraction plan but with less detail on a block-by-block basis. For this scoping level plan, the mineralization outside the permit boundary was added to the production life (Section 19.3), as three peripheral grouped areas: the northwest, southwest, and east areas. The appropriate additional capital and operating costs and recoveries were applied to these additional resources in the economic model. The extraction plan is that portion of the total oxide resource stated in Table 17-7 that is below that bedrock exclusion that has the following criteria applied to it:

- Internal to the UIC permit boundary:
 - All oxide zone material at a 0.05 %TCu cutoff grade.
- External to the UIC permit boundary:
 - A minimum thickness of 100 ft @ 0.10 %TCu for the east area;
 - A minimum thickness of 200 ft @ 0.15 %TCu for the northwest and southwest areas; and
 - A minimum recoverable copper per partial 500-ft by 500-ft block of 5M lbs Cu.

In addition, for this Preliminary Economic Assessment, SRK has included Inferred resources, which account for approximately 15 percent of the total oxide resource, and are primarily located on the lateral edges of the copper deposit. SRK assumes that Inferred resources will be converted to Indicated or Measured resources upon additional definition drilling. Until that additional drilling is completed, as wellfield delineation drilling, there is no certainty these Inferred resources will be upgraded in classification to be considered as potentially economically producible.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. This Preliminary Economic Assessment is preliminary in nature, and uses mineral resources. It includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this Preliminary Economic Assessment will be realized. The planned Production Test Facility will generate total copper recovery, recovery rates, total acid consumption and other factors that will enable a declaration of mineral reserves.

19.2.2 Resource Block Areas

For ease of operations planning, the resource model area was divided into 500 feet x 500 feet blocks with variable block depths. The blocks include basin fill and the oxide zone material. The vertical extent of each block is constrained by the depth to the top of bedrock and to the top of the sulfide zone as delineated in the 3D digital geology model. The block arrangement and designated numbers are shown in Figure 19-1 with respect to the Curis property boundary (green) and the UIC permit area (pink). The mineral resources and other characteristics such as the average TCu and ASCu grade, top of bedrock, injection zone thickness and dominant rock types in each block were tabulated for each block. Figure 19-2 illustrates the relative proportion of Oxide resource blocks that are designated as Measured, Indicated, and Inferred Mineral Resources within the model area at a representative elevation in the Oxide zone. The UIC permit and production plan boundaries are shown for reference.

The method to derive the life-of-operations Production Plan is discussed in Section 19.3. The Production Plan incorporates the oxide mineral resources and contained copper (within the permit area and the identified expansion areas) and the costs to develop the wellfield and extract the contained copper. Capital construction costs for the wellfield are related to remediation of cultural resources, closure of historic coreholes and monitor wells, drilling and installing the injection and recovery wells, and installation of surface wellfield mechanical, electrical, and solution distribution infrastructure. Resource blocks that lacked sufficient mineral resources to offset the capital costs to develop and extract the copper were eliminated from the Production Plan. The major capital cost in developing the wellfield is the drilling and installation of the injection and recovery wells. As a basis for understanding the Production Plan, it is necessary to understand the basis of design for well construction as described in Section 19.2.3.

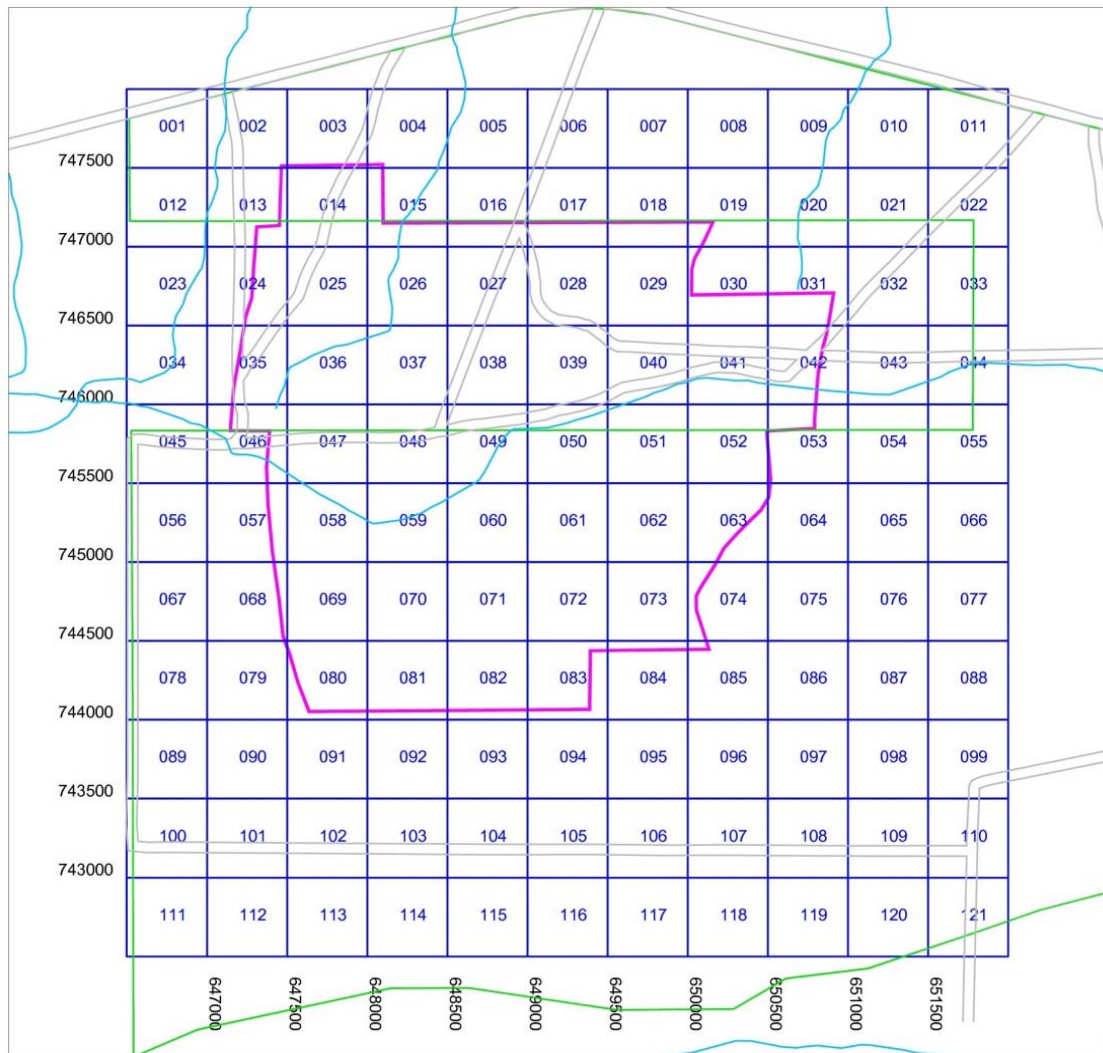
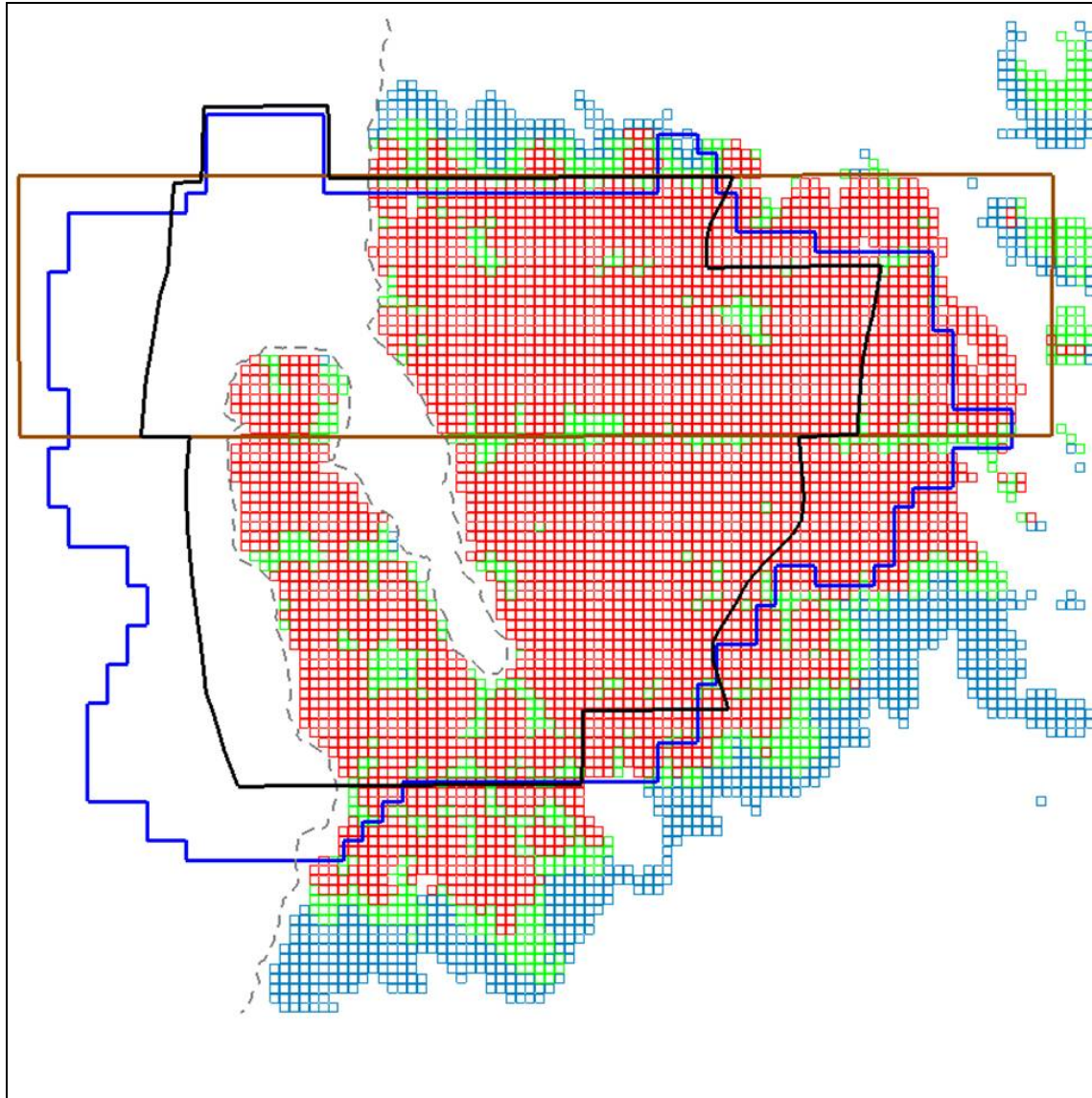


Figure 19-1 Resource block layout (500 feet x 500 feet)



Source: SRK, 2010. Resource designation Oxide zone blocks within the model area; block size is 50'x50'x50'. Measured Mineral Resources=red, Indicated=green, Inferred= blue. UIC permit (black); State mineral lease (brown) life-of-production plan including proposed expansion area (blue).

Figure 19-2 Measured, indicated, and inferred resources at 1,000 feet amsl

19.2.3 Well Construction Design

Following is a brief description of the well design developed for operating the ISCR wells for the proposed wellfield. The basis for the well design was developed based on BHP's work at San Manuel, Florence, and Miami, Arizona, and from Curis' consultants' experiences on other ISCR projects. The construction design criteria incorporate the project requirements that well installation be done in an efficient and cost effective manner that will allow the injection and recovery of solutions while protecting the environment. The well design features to accomplish these requirements are described, and possible future modifications are noted.

19.2.3.1 Basis for Well Design

Several geologic and hydrologic conditions were taken into consideration for the well design. Non-mineralized, poorly-consolidated basin-fill formations extend from surface to an average of 460 feet depth below ground surface (bgs). The Middle Fine-grained Unit (MFGU) is a clay-rich formation that varies between 20 feet to 40 feet in thickness and exists between about 245 to 285 feet depth bgs.

Copper oxide mineralization occurs in intensely-fractured quartz monzonite underlying the basin-fill; the top of oxide bedrock ranges in depth from 315 feet to 1,305 feet. A weakly mineralized “leached cap” may exist in the top few feet and increases in depth along fault zones. The Oxide zone thickness varies from as little as 40 feet on the eastern periphery of the deposit to as great as 1,035 feet in the western portion of the deposit. Mineralization is generally fairly uniform ranging from 0.05 to 0.6 %TCu across the deposit. A zone of slightly lower average grade mineralization (0.1 to 0.25 %TCu) is associated with the granodiorite porphyry intrusion in the central portion of the deposit. Copper mineralization includes chrysocolla, copper-bearing clays, or similar, and is readily soluble in the proposed dilute sulfuric acid lixiviant. The copper sulfide mineralization is hosted by poorly-fractured granitic rock that underlies the copper oxide zone, has low hydraulic conductivity and will not be mined.

The regional groundwater gradient is from the south-southeast to north-northwest. Horizontal hydraulic conductivity (K_h), measured in the basin-fill sediments, was measured between 5 and 60 feet/day. K_h measured in the underlying copper oxide zone was about 0.5 feet/day, which in turn is greater than the K_h value of 0.003 feet/day measured in the deeper granitic rocks which host copper sulfide mineralization (B&C, 1996a). Vertical hydraulic conductivity (K_v) cannot be measured directly by normal means, but is generally assumed to be smaller than K_h in sedimentary rock by as much as an order of magnitude. The clay unit (MFGU) that exists within the basin-fill formations has a measured K_h value of 0.00014 feet/day. Therefore it may have much lower K_v than the surrounding sediments, and acts as a barrier to vertical flow.

Permit requirements for these wells include the following requirements:

- A steel conductor casing must be installed and cemented to a depth of at least 20 feet depth (50 feet in agricultural areas);
- Well casing must be installed and cemented entirely through the basin-fill formations, from surface to a minimum of 40 feet below the top of the oxide zone. This casing may be polyvinyl chloride (PVC) or fiberglass reinforced pipe (FRP), and cannot be low-carbon steel;
- The annulus between the casing and the formation must be grouted with a slurry of water and Portland type V (sulfate-resistant) cement;
- This cemented casing must pass a defined mechanical integrity test;
- At least one electrical conductivity (or resistivity) sensor must be located immediately above the medium fine-grained unit, and must be monitored on regular intervals; and
- The maximum injection pressure allowed is equivalent to a 0.65 psi/foot pressure gradient, at the injection maximum depth.

Operational well requirements include:

- Compatibility of materials of construction with the injection fluids;
- Minimal cost for a well life of 6 to 8 years;
- Provision of zone isolation, to promote effective copper recovery in selected depth intervals, and minimize ore loss due to fluid short-circuiting;
- The well and equipment must be capable of injection or production flow rates up to 60+ gpm;
- The drilling method must provide for adequate support of the highly-fractured rock; and

- Well screen, casing diameters, and screen slot sizes must be sufficient to allow effective well development.

19.2.3.2 Well Design and Construction

The general design basis includes features that provide for requirements and conditions listed above, in addition to incorporating decisions made during the design procedure, including:

- Every well will be designed so that it can be used for either injection or recovery, (resulting in a universal well or “uniwell”),
- The well must accommodate flow rates up to 60+ gpm,
- Well operating lifetime will be in the range of 8 years including production and rinsing,
- ISCR operations will begin in the lowest interval and progress upward.

Most aspects of well design start from the bottom and inside of the well (including well equipment), and continues upward and outward; the design description below generally follows this methodology. Diagrams of the injection and recovery wells are shown in Figure 19-3 and Figure 19-4.

Well equipment proposed for recovery wells includes an electric submersible pump, pump shroud, FRP tubing, straddle-packer equipment, a pressure transducer, and associated power and data cables. Equipment for injection wells includes FRP tubing, straddle-packers, and a pressure transducer. The straddle packers will initially be placed across the lowest leaching interval. In both well types, the two packers will be joined by perforated FRP tubing. In injection wells the packers are connected to tubing which extends through the well head at the surface. In recovery wells the straddle packers are set below the pump and shroud, which is connected to FRP tubing which extends to the surface, through the well head. The largest-diameter well equipment is the pump shroud, which dictates the minimum well casing and screen diameters.

Well casing and screen, large enough to accommodate a suitable ESP, must be between 5- and 6-inch diameter. The present design incorporates 5-inch casing, but this may change to 6-inch diameter, depending upon pump shroud design.

In order to provide leach zone isolation and maximum operational flexibility, it was decided to use the same diameter casing and screen, from the top to bottom of the well.

FRP well casing was selected to extend through the upper 500 feet of basin-fill sediments owing to its high collapse resistance, which makes it suitable for single-stage cementing of the casing through the entire sediment interval. Experience may indicate that PVC can be used in this interval, assuming use of specialized cementing methods and materials. PVC well screen and casing were selected for the copper oxide leaching interval, between approximately 500 and 940 feet depth, based on adequate corrosion resistance, adequate mechanical properties, and low cost. An industry standard thread adapter will be required, to join the FRP and PVC casing and screen.

It is desirable to have the ability to construct isolated leaching zone depth intervals in individual wells according to local geologic conditions. The “standard” design described here assumes three screened intervals of approximately 137 feet length each, separated by blank PVC casing intervals.

Well casing equipment must (per permit) include at least one electrical conductivity (or resistivity) sensor, placed just above the top of the MFGU). Two more sensors below the MFGU will be included, for operational control purposes. These sensors will be metal casing centralizer pairs placed 1 meter apart on the outside of the well casing, and connected to electric wires which extend to the surface. Centralizers will also be placed on the casing at regular intervals, to ensure a uniform annular space around the casing.

Injection and recovery zone isolation will be provided by incorporating intervals of PVC well screen, with the adjacent annular space between the casing and the borehole filled with coarse-grained non-reactive formation support gravel. Seals between these screened intervals will be provided by short lengths of blank well casing, with the adjacent annular space filled with a bentonite clay material.

All materials used in the casing-borehole annular space (including casing cement through the top 500 feet of sediments) will be installed by use of a 2-inch tremie pipe. In order to provide sufficient annular space for the tremie pipe, the drilled borehole diameter must be large enough for the tremie pipe to fit in the annular space adjacent to the FRP casing joints, which are about 7.5-inch OD. This will require a borehole of approximately 12 ¼ inches diameter.

Drilling is proposed to be done by direct circulation mud rotary, using polymer and/or bentonite drilling fluid. This method was selected to provide the maximum amount of support in highly fractured rock during drilling. The drilling fluid system should be designed to minimize formation damage and allow effective well development. Experience may later indicate suitability of another drilling method, such as reverse circulation, which may have additional benefits.

Geophysical wireline logging will be performed in the open borehole prior to casing installation. Following well construction and development, it is probable that geophysical logs will be conducted in the cased hole to define hydraulic conductivity vs. depth (the “flow profile”) within the screened leaching interval of the well and to identify the location of the MFGU, which is the upper limit of the aquifer exemption zone granted by UIC permit.

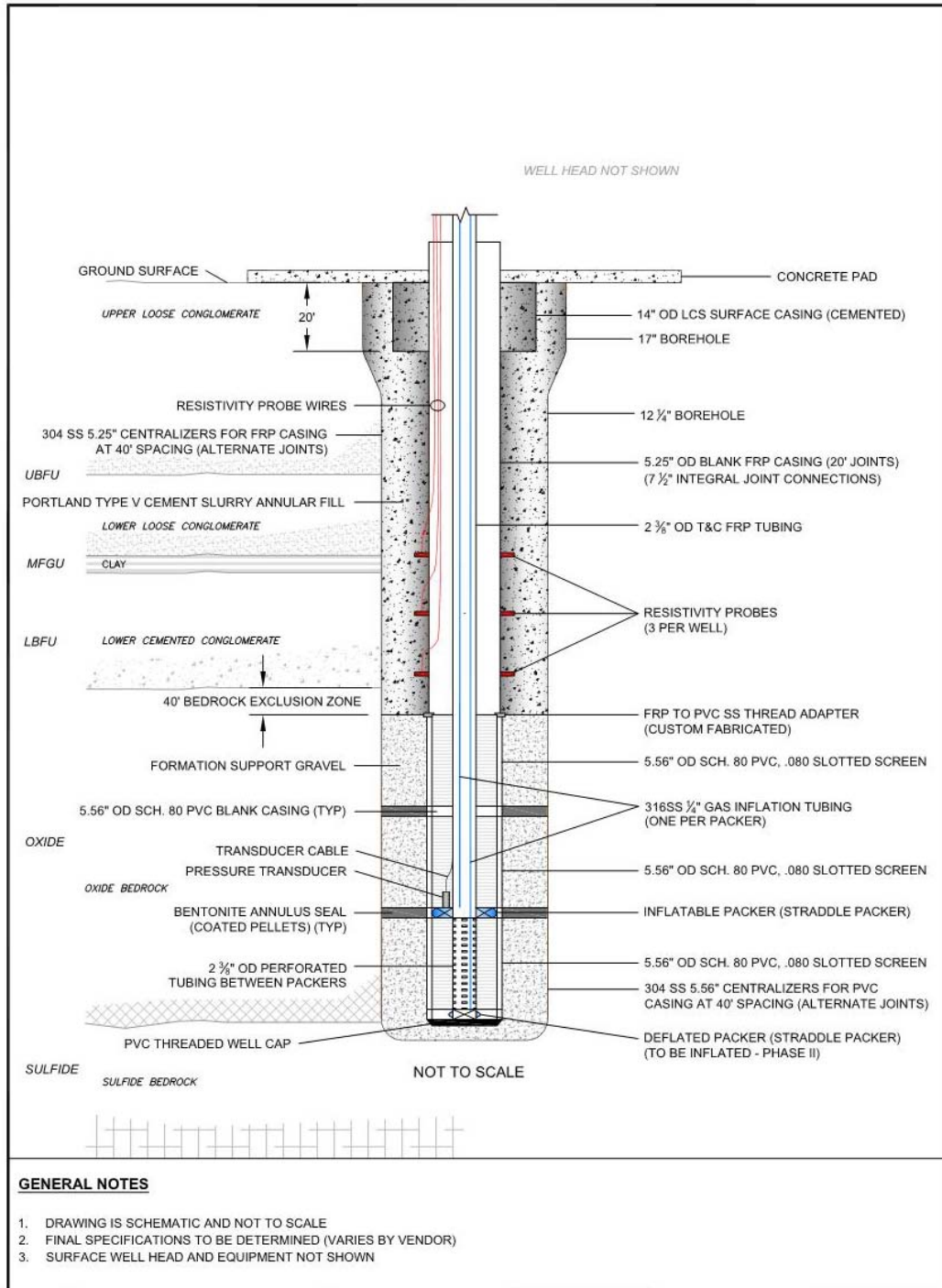


Figure 19-3 Typical construction of an injection well

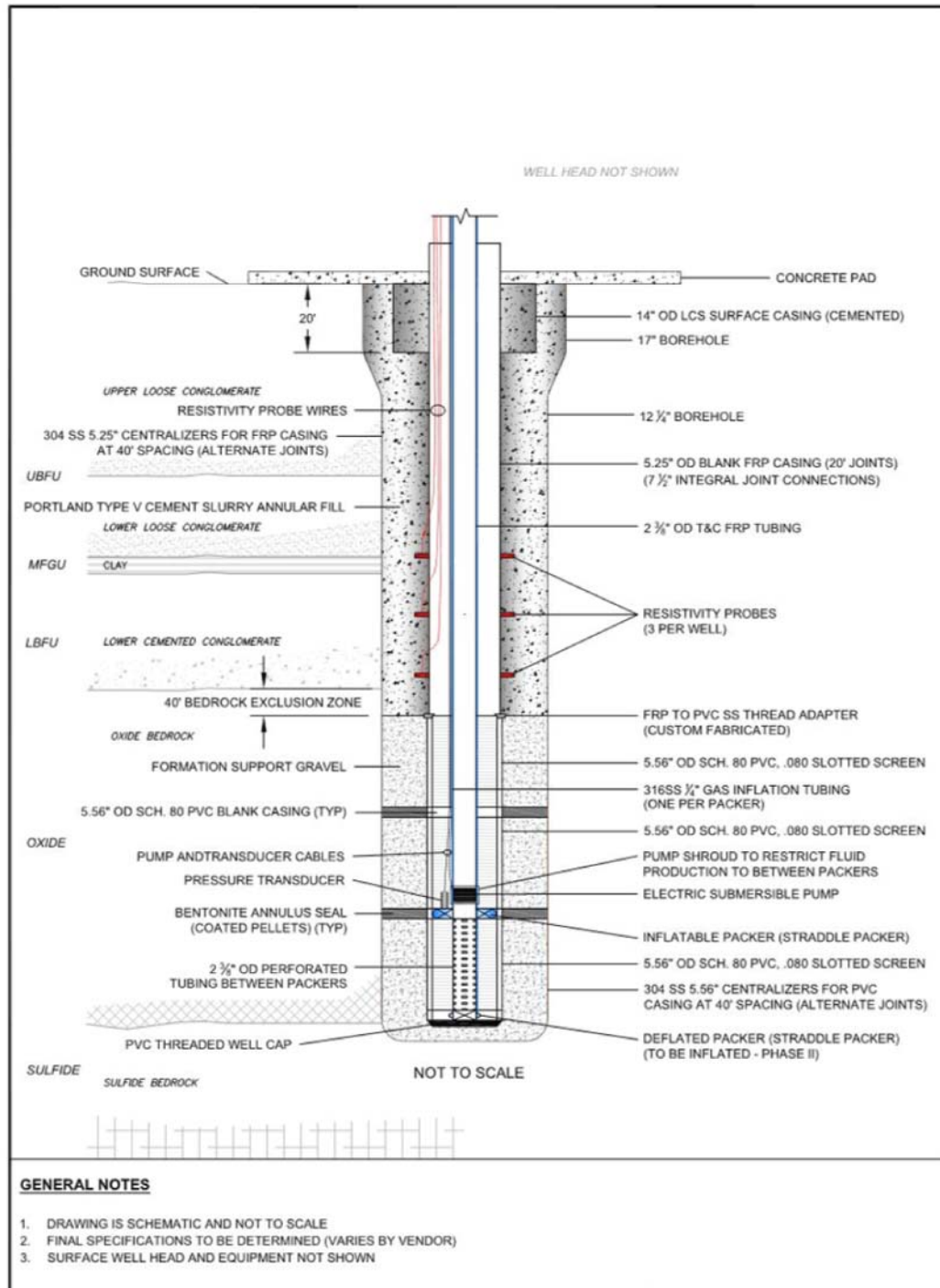


Figure 19-4 Typical construction of a recovery well

19.2.3.3 Well Operations

The most important goal of the ISCR wellfield is to maximize total copper recovery in as timely manner as possible while ensuring full compliance with environmental requirements designed to protect groundwater during and following full operations. The material properties of the injection zone are

determined as a result of field tests, which profile the copper grade and aquifer characteristics and contribute to the design of the wellfield pattern and well spacing. Wellfield designs include empirically determined parameters such as injection flow rates, recovery flow rates, pore volumes, sweep efficiency estimates, and copper extraction rates. These parameters are optimized with site experience, and trained technical staff (hydrologists, metallurgists, and geologists) are essential in making these determinations. The well spacing and pattern are critical components influencing the sweep efficiency, rate of copper recovery and capital costs. As the distance between the wells decreases, the rate of recovery and sweep efficiency increases, but the capital costs increase to prohibitive levels.

The grade of the PLS collected (PLS tenor) is primarily determined by the grade and mineralization of the rock within the injection zone. Bringing higher grade ore on line quickly helps to shorten the payback of initial capital expenses. Although the Florence deposit shows fairly uniform copper grades in a vertical and horizontal profile, lower grade material is present along the periphery and center of the deposit. Blending the flows from lower and higher grade areas is typically done to homogenize the PLS tenor during the life of operations and to ensure consistent copper production on a yearly basis. Repetitive sampling allows for determination of production trends and helps to establish when to bring new production blocks or wells on line in order to maintain a steady PLS tenor to the SX/EW plant.

As previously discussed, there is a basis of well design for the Florence injection and recovery uniwells. ISCR operations are planned to operate starting at the lowest elevation in the oxide zone where injection and recovery intervals will cross-match with the lowest, isolated screened intervals in adjacent wells. Injection and recovery flows will be constrained to selected intervals by use of straddle packers and pump shroud equipment. Metal recovery will progress upward as metal recovery is completed in the lowest zone. Pressures in these isolated intervals will be measured and recorded by pressure transducers connected to the extraction interval through the top packer. If direct fluid connections (“short circuits”) develop between injection and recovery wells, the isolated extraction interval may require repair in order to continue ISCR operation, or abandonment and moving upward to the next interval. ISCR using isolated intervals may enhance fluid contact with copper minerals contained in the lower-conductivity portions of the deposit, and may thereby increase overall copper recovery compared to leaching the entire oxide ore zone interval at one time (as was previously attempted). For simplicity, the 2010 Scoping Level production plan models copper extraction from the entire injection zone within each production block rather than from the discrete intervals as described above. The PTF will field-test the proposed method, and the production model forecasts will be refined following the conclusions of the PTF.

The mechanical arrangement within the wellfield is essentially a distributive system where acidified raffinate, known as injectate, is piped from the Raffinate Pond to the active wellfield. The PLS collecting system begins at the recovery wells; PLS from individual wells is pumped to the surface, combined with the PLS from other sets of wells and pumped in larger pipelines to the SX/EW plant. Main pipeline corridors will be established every 1,000 feet, running east and west for the injectate and PLS pipelines. The PLS pipelines terminate at the Plant Feed Pond, which delivers the blended PLS to the SX/EW.

In between the main pipeline corridors, electrical/instrumentation corridors will contain Power Centers for transforming the delivery voltage (probably 4160 volts) to an operation voltage of 480 volts; this power is used to operate the electrical submersible pumps located in the recovery wells. A switch gear is needed at each Power Center. Power is sent from the Power Center to a Motor Control Center (MCC) unit where starters for each electric submersible pump are placed along with any electrical protection devices deemed necessary.

ISCR operations are typically controlled from a Control Room where measurements and data sent on a real-time basis from the tank farm, wellfield, and impoundments are monitored and recorded. Along with power distribution information, data on the performance of each well are collected and transmitted

through a fiber-optic communication system. Each set of recovery wells associated with a MCC will have automatic composite samplers on their PLS production and magnetic flow meters. This equipment, along with the pressure transducers installed in all the wells, allows solution quality, flow rates, and pressure data (converted to water level) to be collected and forwarded to Wellfield Control Room. A supervisory control and data acquisition (SCADA) system will be designed and tailored to the needs of the Florence wellfield operations. Control Room operators will be trained to monitor fluid levels, flow rates, power usage, and other operational parameters, and respond as needed to short-duration imbalances.

Safety procedures will be developed and established for all aspects of the operation from the SX/EW plant through to the wellfield and impoundments. At the Raffinate Pond, an acidification station will use pipeline static mixers with ratio control for acid additions based on the flow rates of injectate to the wellfield. The controls allow acid addition to reach the desired free acid concentration for the injectate. This area is Limited Access Only, which requires proper safety gear and necessary training.

The Power Centers will be skid-mounted, and all switchgear must be padlocked. MCCs are also skid-mounted and must be secured with padlocks for starters and switchgear. All 480-volt cable will be placed into easily identified, colored (yellow) HDPE surface pipeline. Cable for the 4160-voltage power will be purchased with easily identified colored jackets (blue). Thorough mandatory electrical and safety training will be required for all personnel. The use of highly visible colored HDPE pipelines and high-voltage cable jackets will allow easy identification of power cables; maintenance will be performed by qualified electricians.

BADCT engineering controls will be used to protect the environment from accidental discharge of solutions. The main pipeline corridors will be lined with sheets of a thermal-resistant plastic material that will allow drainage to a sump where any discharge can be neutralized and safely removed. Black HDPE pipelines will be used for injectate and PLS. Isolation block valves will be installed to help control discharges, and to allow construction and maintenance activities. The SX/EW control room will have a monitoring station for the wellfield.

19.2.3.4 Post-Extraction Rinsing

Following completion of leaching the oxide zone, it will be necessary to “rinse” the deposit blocks sufficiently to original background levels of chemical constituents prior to extraction operations or to values established by ADEQ and EPA. It is expected that this procedure would follow the same sequence of well operations as in active wellfield operations, starting in the lowest screened interval, and proceeding upward.

19.2.3.5 Well Abandonment

Following the completion of rinsing activities, the wells will be permanently decommissioned and the ground surface restored to a suitable contour for other beneficial use. During the decommissioning process, the wellhead infrastructure and surface piping will be removed and the pumps, packers, injection/discharge pipe, cables, and transducers will be pulled from the wells. The usable equipment will be recycled to sustain on-going operations or will be installed in new injection and recovery wells as they become operational.

Once the wellhead and internal equipment has been removed, the well will be cemented and permanently closed. A tremie pipe will be used to place high-density, acid-resistant Type V (or equivalent) cement from the bottom of the well to approximately 5 feet below ground surface (bgs). The surface casing will be cut 5 feet below ground surface. Soil will be used to backfill the top of the hole. These methods are specified in the approved plan for well and corehole abandonment that currently exists with ADEQ and EPA, but may be modified in the future to reflect best practices. The goal of the well abandonment

method is to prevent excursions of impacted solutions from migrating vertically into the overlying aquifers.

19.2.4 Cell Pattern and Wellfield Design

Several options for wellfield layout were analyzed by BHP (see G. Chen, Vol. IV Final Pre-Feasibility Report, 1997); these options included arrangements using a line drive, 5-spot, 7-spot, and 9-spot patterns. Spatial arrangements were also analyzed based on the site-specific structural fabric and geologic characteristics, and the dominant directions and ratio of anisotropy of the aquifer properties derived during the aquifer tests. Wellfield layout takes into account heterogeneities found in the deposit geology and aquifer properties, sweep efficiency based on the flow path distance, and the cost of well construction. The 5-spot configuration was found to be optimum when a review of sweep efficiency versus installation costs was completed. An example of two orientations for a 5-spot layout is shown in Figure 19-5. In both cases the cell dimension is a 100-foot square in which the cells bound one another in a repetitive pattern. The distance between recovery wells (or injection wells) is 100 feet; the distance between each injection and recovery well is fixed at 70.71 feet.

As shown in the left-hand illustration in Figure 19-5, the injection wells (red) and recovery wells (blue) are arranged in an E-W and N-S layout. The injection well is placed in the center of the cell and is situated 70.71 feet diagonally from each corner recovery well. The resulting flow paths are oriented in a perpendicular N45°W and N45°E alignment. In the right-hand illustration, the injection and recovery wells are aligned in a N45°W and N45°E direction and the resulting flow paths are oriented N-S and E-W. The bottom pattern was used in the BHP field test, but the distances between the wells in Figure 19-5 are scaled at actual production distances. The right-hand layout more closely aligns the flow path direction with the directions of the major principal axis (E-NE) and minor principal axis (N-NW) represented in the deposit geology, structure, and aquifer responses seen during pump tests. Wellfield configuration and design will be refined in more detail during feasibility studies. During operations, the actual layout and spacing may be slightly modified based on operator experience in each part of the wellfield.

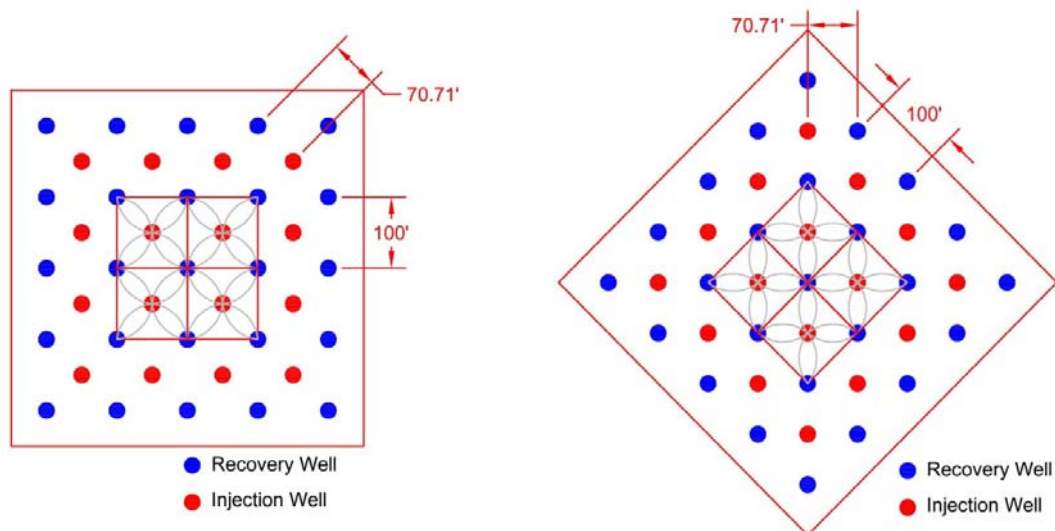


Figure 19-5 Illustration of potential 5-spot wellfield layout

19.2.5 Wellfield Development Schedule

Wellfield development must occur in a manner to ensure consistent flows to the SX/EW Plant while also maintaining compliance with environmental permit requirements and cultural resource agreements. Wellfield development will generally consist of the following activities in the order listed below:

- Cultural resources remediation including, recovery, preservation, and surface clearance,
- Well closure and abandonment of prior wells and core holes within 500 feet of the advancing production area,
- Drilling and installation of new injection and recovery wells,
- Wellhead instrumentation, pump, piping, electrical hookups, and
- Preparation of new pipeline and access corridors.

19.2.5.1 Cultural Resources Remediation

Under UIC regulations, the operation must comply with the National Historic Preservation Act (NHPA). A Class III survey was conducted over the entire area planned for the wellfield and plant facilities. Fifty-six sites were found to be “eligible”, “non-eligible”, or “undetermined” for listing on the National Register of Historic. Under NHPA, BHP was allowed to develop a Cultural Resource Management Plan (CRMP) that would cover the mine for the life of operations; the CRMP required developing a Programmatic Agreement under Section 106 of the Act. A precursor to this agreement was the requirement for a Burial Agreement to handle any human remains discovered during excavation. The Burial agreement was signed on May 22, 1996 by the Arizona State Museum, the Gila River Indian Community, and BHP. The Programmatic Agreement was finalized on February 22, 1996 and was signed by the Gila River Indian Community, EPA Region IX, the Arizona State Historic Preservation Office, the Advisory Council on Historic Preservation, and BHP. The CRMP was approved by all signatories in January 1997 (BHP, 1997b).

In 1995 and 1998, Western Cultural Resources Management of Scottsdale, Arizona, prepared an estimate of the cost of surface clearance for the cultural sites identified with the project area. The costs were based on two phases of activities. Phase I costs were based on backhoe trenching and limited hand excavation; the costs were deemed by WCRM to be unlikely to exceed the estimate. Phase II costs were more variable as they were based on the density of cultural resources encountered after sub-surface disturbance. The Phase II costs also include the Arizona State Museum curation fees and generating the reports required by SHPO. In 2010, WCRM confirmed that the work approach and level of effort has not changed since the late 1990s (L. Ford, Curis Resources, written commun., 2010). For costing purposes, SRK escalated the previous estimates to 2010 using standard inflation escalators.

SRK prepared a schedule on a monthly basis for clearance and remediation of the cultural sites potentially impacted by the wellfield activities. The schedule matches the timeline for other pre-production work in each resource block within the planned wellfield area. Costs for the clearance activities were proportionally assigned to each resource block based on the relative area of the each site within the various blocks. The clearance schedule follows the general 19-year production plan outlined in Sections 19.2.5.2 and 19.2.5.3. Cultural site clearance proceeds any drilling or construction activities planned during that year.

19.2.5.2 Well Closure and Abandonment Schedule

Corehole and monitor well closure and abandonment activities will typically be completed in the 6- to 12-month period prior to the installation of the injection and recovery wells in the advancing portions of the wellfield. The coreholes and wells targeted for closure are those boreholes that remain as open boreholes or wells within 500 feet of the advancing wellfield operations.

The majority of the coreholes drilled by Magma Copper are already cemented and abandoned following the approved well and corehole abandonment plan. A number of coreholes drilled by Conoco, however, remain open with the exception of a grouted interval within the top 20 feet of the ground surface. Groundwater monitor wells were installed to monitor groundwater levels and to perform pump and other aquifer tests for site characterization purposes. These monitor wells will be closed because they do not meet the stringent well design construction requirements necessary to ensure aquifer protection during full operations. Where cultural resources have been identified as present in a particular area, recovery and remediation of the cultural resources will be completed prior to any well or corehole abandonment activities. SRK has prepared a pre-development schedule that includes closure of the historic wells on an annual basis. Over the first 12 years of operation, approximately 60 monitor wells and 280 historic core holes will be closed primarily during the first few couple years. Curis will file notices of intent to abandon the coreholes and wells with Arizona Department of Water Resources (ADWR); completion reports will be filed with ADWR once the abandonment has been completed.

19.2.5.3 Drilling and Well Installation Schedule

SRK has developed a preliminary drilling schedule based on the conceptual production plan described in Section 19.3. Drilling of the injection and recovery wells will occur on a steady, near-continuous basis for the first 13 years of operation. The time to complete each well will be refined during the installation of the PTF and experience gained with the field conditions. SRK estimates that the wells can be drilled, installed, developed, tested for mechanical integrity, and instrumented in a 10-day to 2-week period depending on the depth to the wells. Drilling operations will occur with sufficient drill rigs and personnel to complete on average one well every one to two days.

19.2.5.4 Wellhead Instrumentation

The wellhead design is intended to be simple in design, cost effective, and easy to field assemble; some components will be reusable elsewhere in the wellfield as mature wells are brought off-line. The Florence Project will use a “uniwell” design so all wellheads will essentially be identical; a budget of \$2,000 has been developed for each wellhead. The wellhead equipment must service the following functions:

- Preserve the integrity of the well opening;
- Provide support for well pumping units, injection pipelines, and necessary instrumentation;
- Provide easy access for wellfield technicians charged with gathering field data at each well and collecting solution samples; and
- Minimize any chance of solution discharges.

Surface casing is installed to preserve the integrity of the well opening. This is accomplished by drilling a 17-inch diameter borehole 20 feet below ground surface and grouting a 14-inch diameter steel pipe in line with the top of the main pipe at ground level.

To support the downhole well equipment, concrete (regular neat concrete) is poured around the 14-inch diameter steel conduit pipe, rising about 6 inches above the ground level and about 2 feet by 2 feet in dimension. This concrete base will support a 12-inch diameter stainless steel collar pipe with tabs for fastening to the concrete base. Once the collar pipe is in position, the location of the securing tabs will be marked on the concrete. Using a concrete bit, 1-inch diameter holes will be drilled 3 inches deep, collar pipe spotted again, and epoxy bolted to the concrete. The collar pipe will support all equipment put into the hole.

Error! Reference source not found. provides a view of the BHP-5 wellhead used for the BHP field test. A “paddle wheel” flow meter, stainless-steel sampling port with a stainless steel quarter-inch valve, and a transition piece of PVC 2-inch tubing to help alignment with PLS discharge piping are visible. The

yellow HDPE pipelines are used to distinguish easily the electrical/instrumentation piping from the pipelines conveying injectate or PLS.

A recovery well used at Florence during the pilot test is pictured; the stainless steel the plate/cap is placed on top of the collar pipe. There is a probe to determine certain quality of the PLS being handled, such as pH, and there is electrically controlled “V” ported ball valve that can be adjusted in the control room.

Placing the sampling port and the instrumentation at a 3- to 4-foot height is the best ergonomic layout and expedites the field technicians’ collection duties including sampling and recording flow information.

The wellhead design is to prevent the solution discharge from the various plumbing components that can be found at each well head. Because “uniwells” are required, there will be an injection connect which is valved close at hand and a PLS connection, valved as well, close to the well head. Instrumentation down the well will consist of an electric power cable fasted to discharge pipeline and installed at the time the electric submersible is installed. There will be a stainless steel cable, a safety line, securing the pumping unit to the collar pipe. There will also be a transducer installed. The transducer and the electrically actuated control value will in conjunction with the SCADA system control the injection fluid level and also the PLS level in the casing pipe.



Figure 19-6 Example of a wellhead design

19.2.5.5 Pipeline Preparation

Injectate and PLS will be distributed to and from the wellfield via aboveground HDPE-pipelines using established electrical/communication and pipeline corridors. Branch lines (2 to 6-inch diameter) from the individual wells and sets of wells will connect to 20 to 24-inch diameter main trunk lines; PLS will be pumped to the SX/EW Plant using booster pumps. The pipeline corridors will be constructed as shallow depressions lined with HPDE liner material, and will be routinely inspected during daily operations and as a part of a formal compliance monitoring program.

19.3 Life-of-Operations Production Plan and Schedule

The life-of-operations production plan was prepared by SRK and by John T. Kline, consultant to SRK. The plan forecasts the production schedule and costs, flow volumes to the SX/EW Plant, PLS grade (tenor), acid consumption, and pounds of copper produced on an annual basis. The production plan includes a pre-development period to construct the initial set of production blocks, a production period that extends through Year 19, and post-production rinsing and closure activities that extend through Year 22. The production plan is based on the current and historic data including:

- A current mineral resource estimate based on historic drillhole data;

- Wellfield limits including the area within the current UIC permit and potential expansion areas adjacent to the permit area (see Figure 19-7);
- Previous geological modeling (top of bedrock, thickness of Oxide (injection) zone, distribution of rock types);
- Previous hydrogeological data (water quality, aquifer properties, flow model);
- Previous metallurgical test work (bottle rolls and column tests); and the
- Copper extraction models developed by Lichtner and others (1996).

The Lichtner recovery model was based on assumptions that will be confirmed or modified during the Curis PTF but which constitute the best available data at this time. These assumptions include:

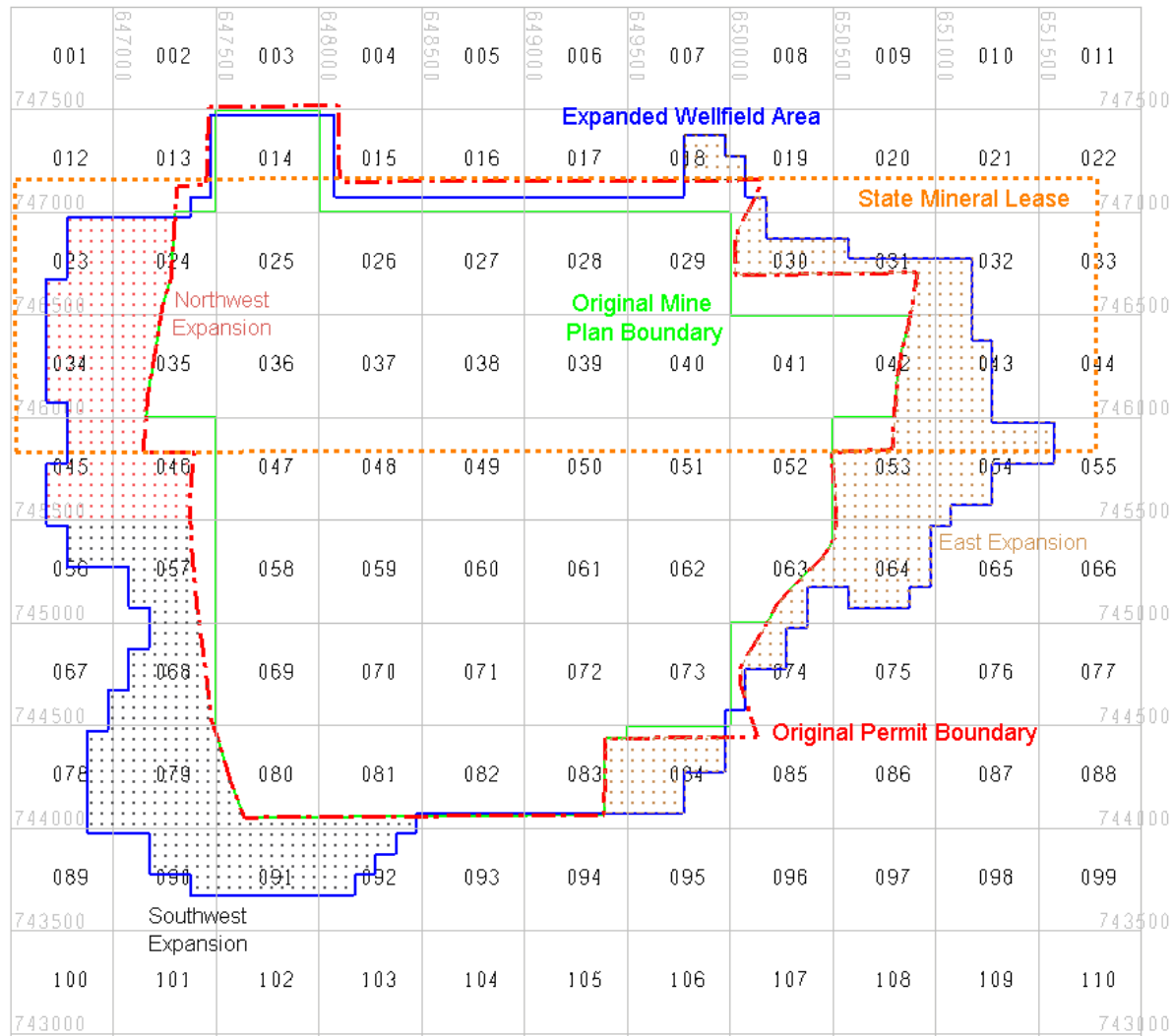
- Sixty-seven percent of the copper is soluble based upon the ASCu to TCu ratio of the mineralized rock at a 0.15 %TCu cutoff;
- Production cells assumed to be 100 feet on a side and 400-feet thick;
- Metallurgical results of BHP Column 2 with an average grade of 0.38 %TCu is a representative basis for recovery model;
- In-place bedrock density is 12.5 cubic feet per ton;
- Effective porosity of 5 percent for bedrock units;
- The “sweep efficiency” of the injectate moving through the production cell is 80 percent (20 percent of the rock mass may not be contacted by the injectate); and
- Early acid consumption of gangue minerals (reaction of the injectate with the rock mass) will result in the precipitation of between 0.16 and 0.32 percent by weight of sulfate, primarily as gypsum. Gypsum is soluble to extent of about 2.5 g/L. The acid consumption rate was estimated (based on metallurgical tests) to be 5 lbs acid consumed for each pound of copper extracted.

The production plan additionally assumes that:

- Copper grade and PLS tenor are normalized on a block-by-block basis (using average injection zone thickness and TCu grades);
- The flow to the SX/EW plant is constrained to a maximum of 11,000 gpm;
- The average number of days per month is 30.4 during a 365-day work year;
- The arithmetic difference between flows to and from the wellfield will go to the water impoundments for neutralization and evaporation (or reuse),
- An acceptable level of iron is maintained in the electrowinning tank house circuits from the bleed (10 gpm for period when first SX train is used and 25 gpm when both trains are used). The tank house bleed of spent electrolyte assumes a concentration of 180 g/L free acid and acid makeup from third-party deliveries at 93 percent sulfuric acid;
- Recovery of total copper resources over a 6-year production cycle is approximately 49 percent;
- Recovery and injection wells and costs based on inputs from SRK, Curis, and consultants to Curis;
- PLS that contains similar acid concentrations and copper tenor as the injectate will be “stacked” (recirculated back to wellfield) during the initial extraction phase to ensure that copper production is met and the overall flow design capacity of the SX/EW plan is not exceeded;
- Rinsing of the blocks begins at approximately 1,000 gpm when the copper tenor decreases below a grade allowing economic extraction. Rinsing continues until permit requirements are met for the post-production groundwater quality. This timeframe is estimated to take approximately 18 months following the cessation of production activities in each block. Sulfate will elute out of the rinse water at 2.5 g/L calcium sulfate until most of the precipitated gypsum is dissolved;
- 2.5 lb of quick lime are used to neutralize each pound of acid in the excess water pumped during operations and the reclamation rinse water.

The production plan model results during the life of operations are shown in Table 19-1; detailed results are shown in Exhibit 19-1. As shown in Figure 19-10, annual production varies from 68 to 84 million pounds of copper with an average of 76.5 million pound during the first 14 years; production is reduced thereafter as rinsing activities increase. The average annual flow to the SX/EW plant and bleed to the water impoundments are shown in Figure 19-11 and Figure 19-12, respectively.

SRK considers the production plan to be sufficient to be used as a basis for estimating annual operating costs and produce a technical economic model. The planned Curis PTF will provide field-based estimates of total copper recovery, rate of copper extraction, gangue acid consumption, and injection flow efficiencies that will provide a refined production model and recovery estimates.



Source: SRK, 2010. Wellfield development and production have been addressed within UIC permit area. Potential expansion areas based on the mineral resource grades and thickness of the Oxide zone have been delineated east, south, and north of the permit area as shown in blue. UIC permit boundary (red), and state mineral lease are shown with respect to the 500 foot x 500 foot mineral resource blocks.

Figure 19-7 Life-of-production wellfield development within UIC permit area and potential expansion areas

Table 19-1 Summary of production plan results

Item	Result
Production life, years	19
Total operation life, years	22
Total recovery of contained copper (%)	48.8
Acid consumption, pounds acid consumed per pounds copper	5.0
Acid consumed, 93 percent, tons (000)	2,931
Copper plated, life of mine, (millions)	1,236
Average annual copper plated (millions)	76.5
Total wells needed	2559
Assumed porosity, %	5
Reclamation rinse rate, gpm	1,000
Year Rinsing Concludes	22

Source: SRK, 2010

A general schedule showing the relationship of pre-development activities (corehole abandonment, drilling), wellfield production, rinsing, and well closure through the life of operations is shown in Figure 19-8 presents the annual schedule for the drilling and abandonment schedule based on the 2010 production plan; note that future production plans will be done at a finer resolution to normalize and smooth the schedule to ensure a more even rate of drilling and abandonment.

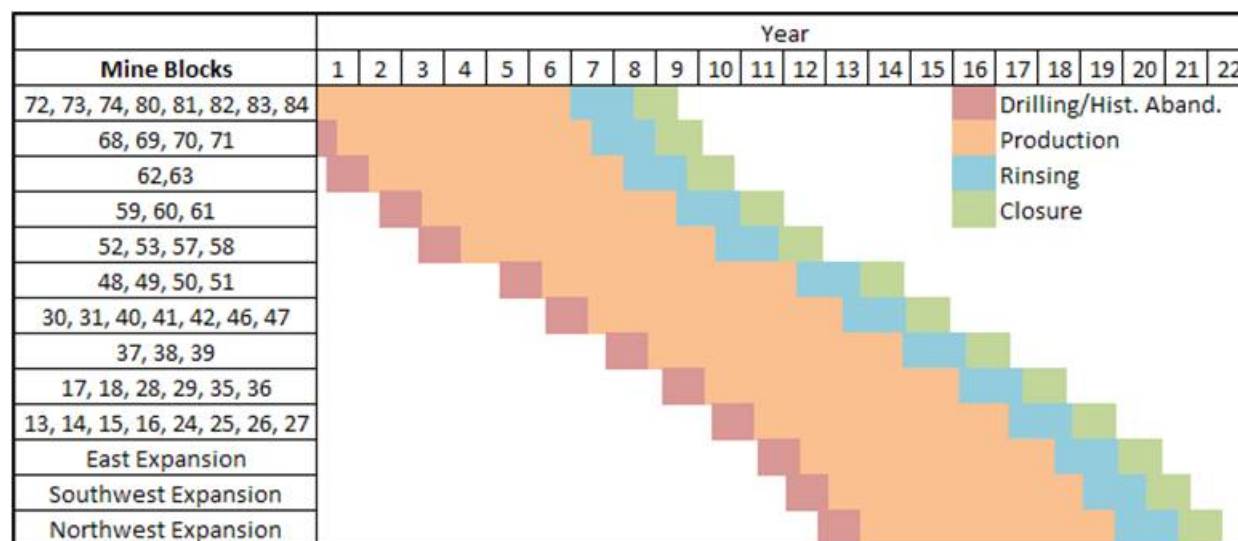
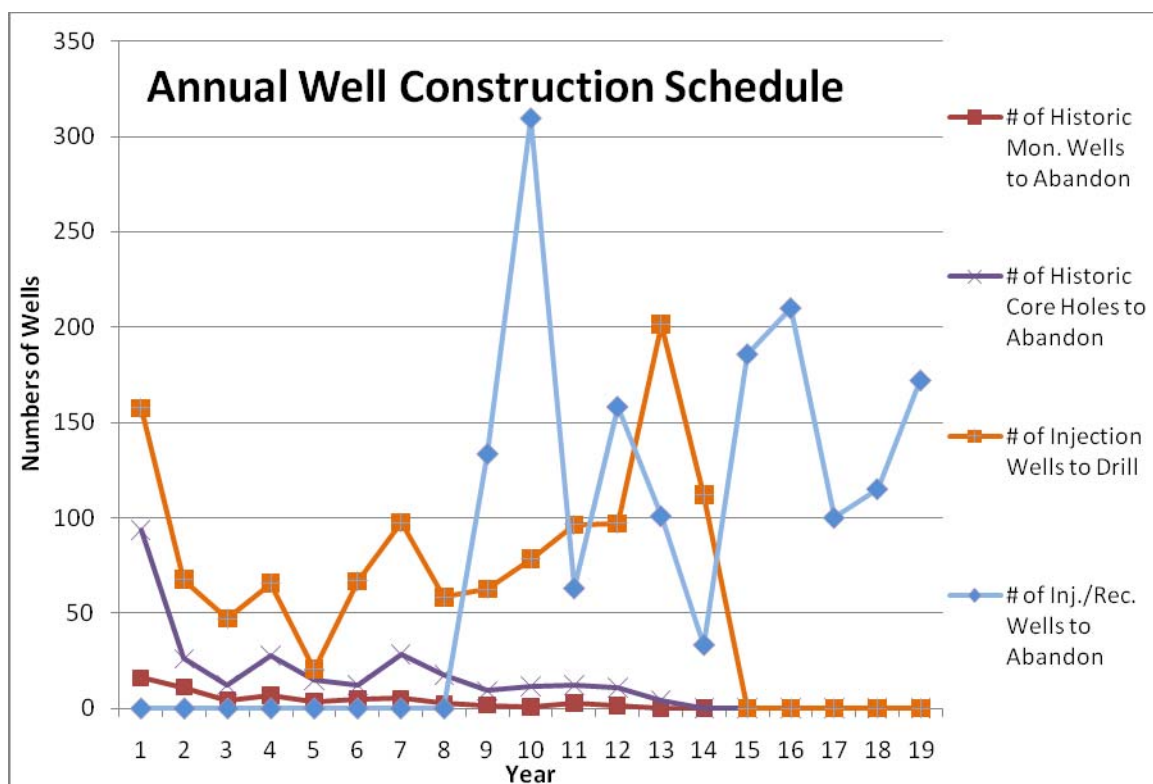


Figure 19-8 Wellfield pre-development, production, rinsing, and closure sequence



Source: SRK, 2010

Figure 19-9 Annual well construction and abandonment activities

19.3.1 Life-of-Operation Water Balance

The life-of-operation water balance is predicated on the design and operation of a non-discharging facility. All process solutions and captured precipitation are designed to be contained within the PLS Pond, Raffinate Pond, Run-Off Pond and Impoundment Ponds. The operating requirements of the ISCR circuit will generate a bleed stream of approximately 850 to 1,050 gpm that will be directed to the Impoundment Ponds. Adequate freeboard is provided in each pond to contain the design precipitation event.

The bleed stream is primarily associated with maintaining hydraulic control in the ISCR area during copper recovery and reclamation operations. Since this water is planned to be evaporated it becomes the primary water consumption for the project. Water treatment options will be studied to determine if economical options are viable for sustainable water reuse opportunities.

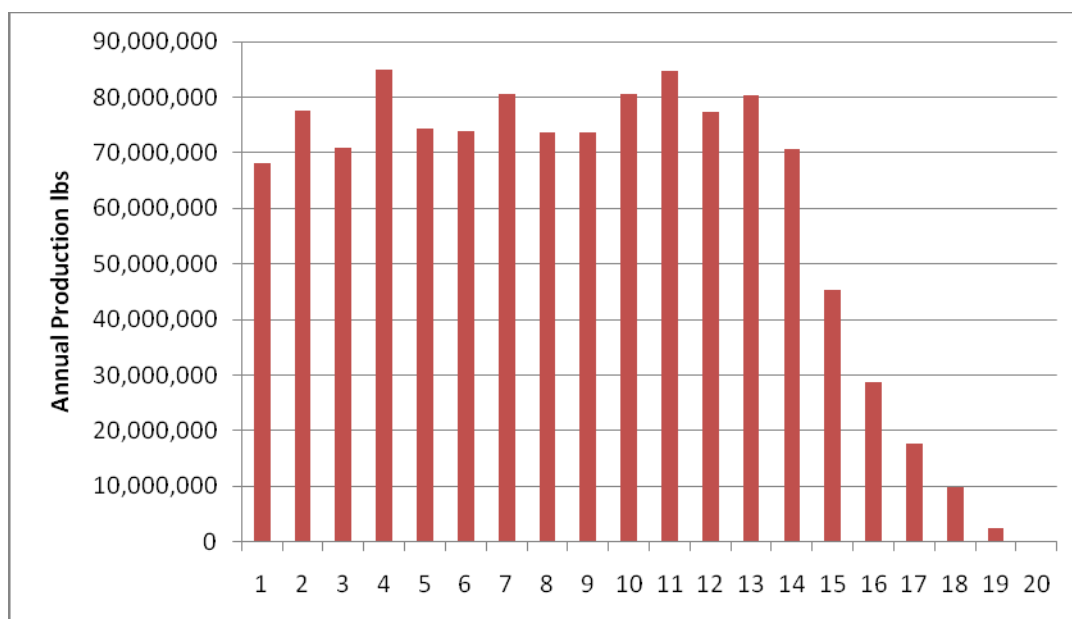


Figure 19-10 Average annual copper production (million pounds)

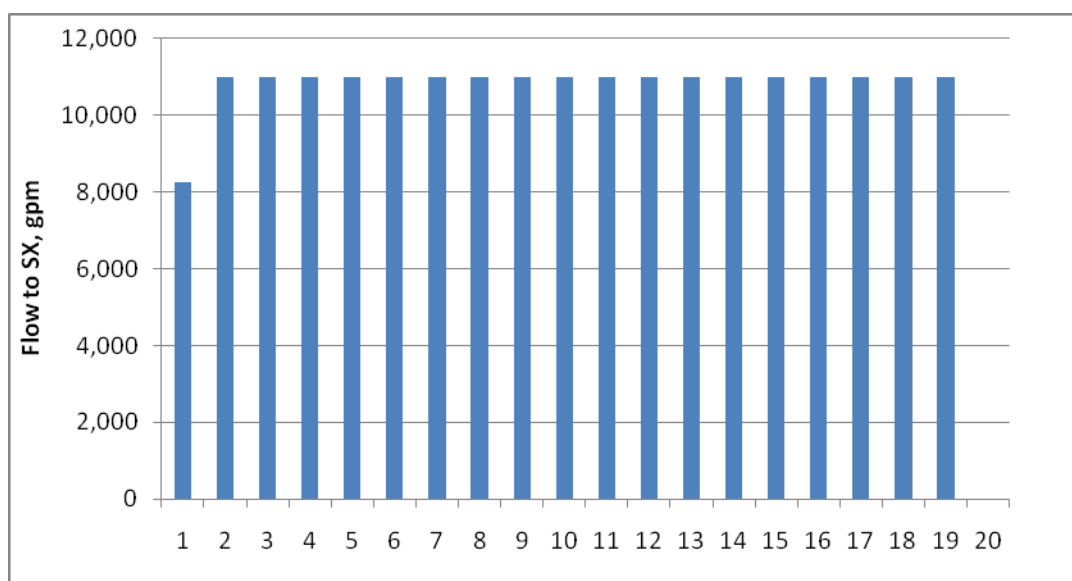


Figure 19-11 Average annual PLS flow to the SX plant (gpm)

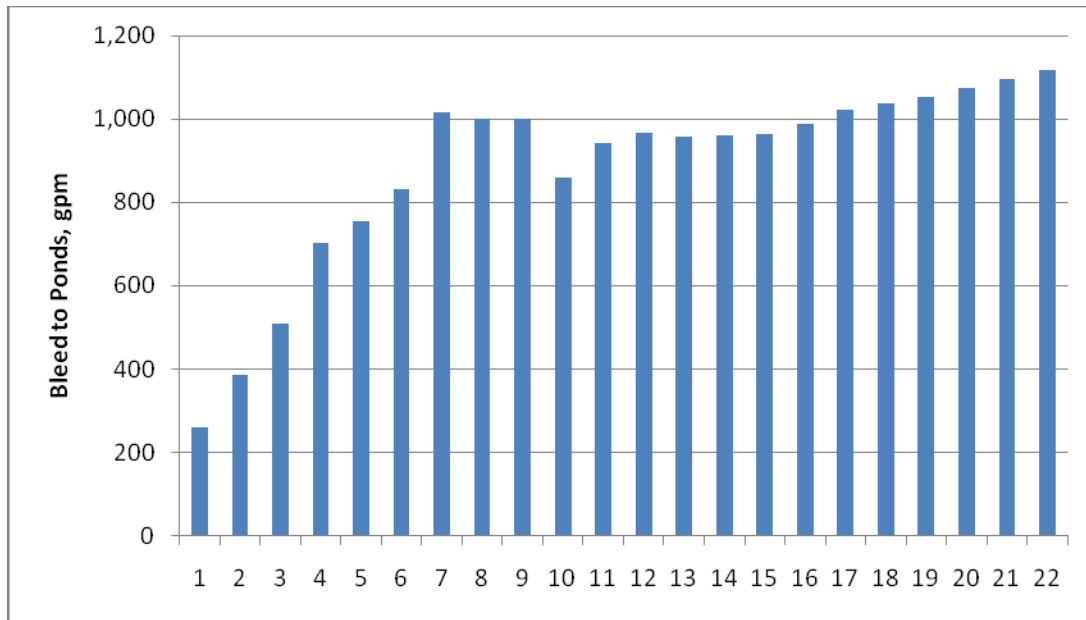


Figure 19-12 Average annual bleed to the ponds (gpm)

19.4 Contracts

Principal activities during early development of Curis' Florence ISCR Project are project financing, community relations, environmental studies and permitting, and related engineering activities that support the design, construction and operation of the Phase 1 Production Test Facility (PTF). This period will extend from early 2Q 2010 through 1Q 2013. During this period, early contracting activities will continue to be driven by the need to acquire specialists and professional services firms to assist Curis with these various activities.

Curis currently has in place a number of professional services contracts to help advance the Florence ISCR Project. These include:

- Project financing,
- Community relations,
- Land use,
- Environmental studies and permitting,
- Hydrology and hydrogeology,
- Archeological studies,
- Resource development and 43-101 Reporting,
- Metallurgical and process engineering support,
- Detail engineering and procurement, and
- Site safety and health services.

As the project advances, other contracted services will be required to support construction of the Production Test Facility. These will include:

- Professional Services,
- Construction management services,

- Surveying (land and aerial),
- Geotechnical engineering support,
- Geochemical engineering support,
- Site Security,
- Field construction,
- Drilling services contractors,
- General and Industrial construction contractors, and
- General site services contracts (water, other services).

The general contracting strategy for construction of the PTF is straightforward. Drilling contracts will be bid and awarded, with the scope of work providing for the drilling, casing and construction of PTF wells under the direction of a field construction management contingent that operates under the direction of Curis. The field construction management contingent will be staffed with the resources necessary to ensure that proper core and drill cutting samples are collected, as well as to ensure proper collection of downhole geophysical data that will prove useful to the operators of the PTF during the testing phase to follow.

In parallel with well construction, an industrial construction services contract will also be awarded. The scope of work provides for the demolition of unnecessary facilities that were associated with the original BHP test program, and the installation of new facilities as is required by the scope of work that is developed by Curis Florence ISCR Project team.

Contractors will be pre-qualified by the Curis Project team and its contingent of professional services consultants on the basis of their:

- Safety record,
- Previous experience on similar projects,
- Quality of workmanship on previous projects,
- Quality/experience of on-site management,
- Local availability in region,
- Previous schedule performance,
- Financial stability, and
- Cost competitiveness.

Areas with clearly defined scopes of work will be required as unit price or lump sum contracts. Work areas that require interfacing new construction with existing test facilities must be done on a cost reimbursable basis.

As the PTF is placed into operation, other contracted services will be added and/or completed as appropriate. The PTF will operate for a period of approximately 14 months. Test data collected from the PTF during that period will be used to drive the process and detail design criteria that will serve as inputs to the Prefeasibility and Feasibility Studies that will commence in later 2011 or early 2012. These studies will be conducted by professional engineering services firms with demonstrated experience in the mining industry and familiar with the unit processes that will be applied to process solutions generated by the Florence ISCR operations.

Such studies, when completed, will serve as the planning platform and cost estimates to move forward with final financing and the detail engineering, procurement and construction of the commercial ISCR and production facilities.

19.5 Environmental Considerations and Permitting

Environmental and permitting related considerations relevant to the operation and closure of the Florence Project are discussed below.

19.5.1 Financial Assurance

Section 4.5 includes a summary of the steps that Curis is taking to obtain permits needed for the construction and operation of the project. The amendments to the UIC and APP permits will include updates required by ADEQ and US EPA and changes proposed by Curis for the successful operation of the Florence ISCR facility. Required elements of the applications will include closure and post-closure cost estimates for the facility as permitted for commercial operations and a demonstration of Curis' financial capability to fund the closure and post-closure activities.

The reclamation plan mentioned in Section 4.5.2.4 and described more fully in Section 19.3 is within the jurisdiction of the Arizona State Mine Inspector's Office. This reclamation plan will be updated to address reclamation needs that are not covered under the jurisdiction of the APP and UIC permit closure plans. A demonstration of the capability to fund the updated reclamation plan will also be required.

The amount proposed for Bonding or as a set-aside will be based on the closure cost estimates included in the applications to amend the APP and the UIC permit for commercial operations.

The closure plan for the wellfield will be based on the phased installation of new production blocks while previously installed production blocks are operated and then closed following depletion of economic levels of copper. The phased process of installation, operation, and closure of production blocks will be continued throughout the permitted operation area and will minimize the area to be closed at any point in the life of the project and at the end of ISCR extraction activities.

19.5.2 Closure

The APP and the UIC permit require all permitted components of the Florence ISCR facility to be closed in accordance with criteria specified in approved closure plans. Components of the facility approved in 1997 for commercial operations include the injection and recovery wells in the wellfield, tanks, piping, and utilities; process ponds; water impoundments; and tanks. In the 1997 APP, the SX/EW plant was approved as a process facility that is exempt from designation as a discharging facility under the APP program. All components of the wellfield and processing operations were designed to meet Best Available Demonstrated Technology (BADCT) in accordance with APP regulations and guidance. Compliance with BADCT reduces the potential for releases that will impact groundwater and thereby reduces the potential for unplanned closure costs.

The APP closure criteria for the wellfield require that groundwater in zones affected by in-situ operations be restored to levels equal to the Arizona Aquifer Water Quality Standards (AWQS) or to pre-development background concentrations if the pre-development concentrations exceed the standards. The UIC closure criteria are similar to AWQS except they are stated in terms of the primary maximum contaminant levels (MCLs) defined in 40 CFR 141, which are equivalent to the AWQS. Once the groundwater has been restored to the required levels, all wells in the production block are required to be closed in accordance with a US EPA-approved plan that includes current UIC regulations and the regulations of the Arizona Department of Water Resources.

As explained in Section 19.2, the wellfield will be divided into production blocks. Installation of injection and recovery wells will be phased such that a new block can be placed in operation as an existing block is being closed. The phased process of installation, operation, and closure of production blocks will be

continued throughout the permitted operations area and will minimize the area to be closed at any point in the life of the project and at the end of ISCR operations.

The APP requires surface impoundments to be closed in a manner that will prevent groundwater quality from exceeding the AWQS or pre-development background concentrations if the pre-development concentrations are higher than the AWQS. The closure plan in the APP approved in 1997 required that all process impoundments except the proposed water impoundments be removed at the completion of operations. The water impoundments were to be drained, capped with low porosity material and left in place.

19.5.3 Reclamation

Criteria for the approval of reclamation plans required under the Arizona Mined Land Reclamation Act are listed at Arizona Revised Statutes (A.R.S.) 27-973. They require the plans to provide reclamation measures for surface disturbances that are (1) necessary to achieve a safe and stable condition suitable for the post-operations land use objectives stated in the reclamation plan and (2) compatible with good engineering practices regarding erosion control and seismic activity for the applicable seismic zone. Mechanisms for providing required financial assurance for the cost of implementing the plans are listed at A.R.S. § 27-973.

The Mined Land Reclamation Plan (MLRP) addresses 57.4 acres of surface disturbances, of which 31.4 acres will be graded and scarified and all areas (57.4) will be revegetated. The primary goal is to prevent soil erosion and return the land to an open, natural space. Land in certain areas may be used for other purposes including farming, recreation, or residential development. The reclamation plan for commercial operations will be updated for the APP and UIC amendment.

19.6 Taxes and Royalties

The Florence ISCR project is subject to taxation by multiple levels of government. These taxes have either been categorized as Production Taxes or Income Taxes. The following summary is a highlight of what are considered the material taxes, rather than an exhaustive list of all taxes that the project may be subject to.

19.6.1 Production Taxes

Production taxes in Arizona include: property tax, mining tax, severance tax and sales tax.

Property taxes collected are split between Pinal County and the Town of Florence based on a pre-determined formula that varies by year. The property tax is calculated based on the assessed value of the property and its intended use. Properties are assessed annually either by Florence or, in the case of a mining property such as the Florence ISCR project, by the state of Arizona.

The Town of Florence applies a mining tax of 0.1 percent of 'gross income from mining'.

The state of Arizona applies a severance tax to projects that operate within the state. The state applies a 2.5 percent tax to 50 percent of the difference between the 'gross value of production' and the production costs associated with the project. 'Gross value of production' is generally defined as the sum of the value of production for each metalliferous mineral mined. Production costs are generally defined to mean the costs incurred in mining and processing until point of sale including energy, fuel, labor, supplies, transport, and depreciation among other expenses. A portion of severance taxes collected by the state are redistributed to the cities and towns within the state based on population and other distribution metrics.

In addition, the Town of Florence recently introduced a motion to enact an additional severance tax of 2.5 percent modeled on the same basis as the State severance tax. As this tax is not yet law, it has not been included in the economic model of this report. In Arizona purchases of equipment, machinery, and chemicals used in mining operations are exempt from sales tax. The state imposes 5.6 percent tax on retail sales and services.

19.6.2 Income Taxes

A taxpayer is required to calculate taxes under both the regular corporate tax system and the Alternative Minimum Tax system and pay whichever system results in the higher amount of taxes.

The combined federal and state corporate income tax rate in Arizona is 39.53 percent and is applied to ‘taxable income’ derived from the Florence ISCR project. Generally, taxable income is net income for financial statement purposes adjusted for any non-cash items and taking into account various adjustments allowed under the Internal Revenue Code (“IRC”). State and local taxes are deductible against federal taxes.

A project that is in a ‘taxable loss’ position will not be subject to cash tax. Rather, the losses generated in a given year may either be carried forward for 20 years and applied to taxable income when it arises or carried back 2 years and applied against taxable income in those years, to the extent the project earned taxable income. To the extent the company that generated the tax loss undergoes a change in control; certain rules within the IRC may restrict the ability to use the pre-change in control loss against any post change in control tax year. It is typical for mining projects to incur losses in the early years of a project due to the magnitude of expenditures required.

Common adjustments when calculating taxable income in the mining industry include, among others:

- Tax depreciation deductions on purchases of capital equipment subject to various rates;
- Deductions for exploration and evaluation expenses subject to certain limitations depending on which method the taxpayer elects to deduct these expenditures;
- Deductions for development expenses subject to certain limitations depending on which method the taxpayer elects to deduct these expenditures;
- Deductions for depletion under either the cost or percentage depletion methods; and,
- Deductions for reclamation and remediation of the property.

The IRC provides a favorable tax deduction to mining companies called depletion. Depletion is a form of cost recovery which allows a project to recover costs it has incurred prior to the production phase to the extent there is an economic interest in the producing property. Cost depletion is based on the cost recovery concept and allows a project to deduct the costs of the mineral property ratably as the mineral is produced and sold. Cost depletion ceases once all costs have been recovered. Percentage depletion is a concept under the regular tax system that is tied to ‘adjusted gross income from property’ and applies a rate to the calculation based on the mineral being mined. Generally, the amount of percentage depletion that can be claimed as a deduction for regular tax purposes cannot exceed 50 percent of taxable income from the particular property before deducting depletion. In practice, percentage depletion in a sufficiently productive mine can greatly exceed the capitalized basis over the life of a mine. Taxpayers will calculate depletion under both the cost and percentage methods and deduct under the method that yields the highest deduction

The federal tax system also provides incentives and tax credits available to taxpayers that are based on manufacturing. The state provides incentives for the number of Arizona resident employees hired and also

to projects that operate within ‘Special Economic Zones’ within the state of Arizona. The Florence ISCR project intends to maximize these incentives and credits to the extent they are available.

The federal tax system also employs an alternative system of taxation called Alternative Minimum Tax (“AMT”). AMT is a separate and parallel tax system to the regular corporate income tax system. AMT is calculated by adjusting taxable income calculated under the regular corporate tax system by either denying or adjusting certain deductions allowed under the regular tax system. The rate of tax under AMT is 20 percent.

Typical deductions not allowed under AMT include, among others:

- Percentage depletion deductions;
- Certain tax depreciation methods on capital equipment; and
- Restrictions in losses that may be applied.

Due to the capital intensive nature of mining industry most mining projects will be subject to AMT for all or a portion of the life of the mine. Based on initial projections the Florence ISCR project should be subject to AMT for a portion of life of mine which will lower the tax rate from the statutory rate of 39.53 percent noted above.

19.6.3 Royalties

The Florence ISCR Project is subject to a gross variable royalty of 2 to 8 percent based on the price of copper pursuant to an Arizona state mineral lease, applicable to the state lease portion only.

The project is subject to a gross variable royalty of 2 to 3 percent to Conoco Inc., applicable to the entire property (3percent “Net Returns” Royalty, which is subordinate to royalties paid to third parties, but even where such other royalties exist, the Conoco royalty will not be less than 2 percent of “Net Returns”).

The project is subject to a net profits royalty of 2.5 percent to BHP Copper Inc.

19.7 Capital Costs

Initial capital costs include the capital required to construct the processing facilities, the initial portion of the wellfield, and infrastructure and associated Owner’s costs. On-going capital includes costs related to the construction of the remaining portion of the wellfield, infrastructure upgrades, and other Owner’s costs during the life of production. The previous capital cost estimates were based on estimates prepared in 1998 by FDW for the SX/EW plant and by BHP in 1999 for the wellfield, infrastructure, general and administrative (G&A), and Owner’s costs.

Plant costs consist of the SX/EW plant and initial supplies, the tank farm, and process and water impoundments. Wellfield capital costs consist of two major components – construction of the production wells and construction of the wellfield electrical and distributive facilities. The capital costs for the Florence Project were reviewed, revised, and updated as described in Sections 19.7.1 through 19.7.4.

A summary of life-of-operation capital costs is presented in Table 19-2. Life-of-operations capital costs are estimated to be US\$682.06 million. Initial and on-going capital costs are estimated to be US\$237.78 million and US\$444.29 million, respectively.

Table 19-2 Summary of life-of-operation capital costs

	Initial (\$000)	On-Going (\$000)	Life-of-Operation (\$000)
Wellfield	63,220	436,042	499,262
Infrastructure	9,527	610	10,137
SX/EW	158,714	0	158,714
Owner Costs	6,316	7,634	13,950
Total Capital Costs	237,776	444,286	682,062

Compiled by SRK, 2010; All monetary values are in US dollars.

19.7.1 Plant Processing Facilities

To update the FDW capital cost estimate for plant and water impoundment facilities, SRK used an estimation methodology that included a combination of the following:

- The purchased prices of some pieces of equipment was escalated using a combination of Consumer Price Index and Mining and Milling Price Index;
- Some prices, such as those for some pumps, fans, and tanks, were interpolated according to capacity or volume between current prices that are tabulated annually by Mining Cost Service;
- Current price quotations were used for key components that contain copper and stainless steel such as electrowinning bus bars, rectifiers, transformers, and some valves and pumps; and
- Current prices were obtained for consumables including SX extractant and diluents, cobalt sulfate, sulfuric acid, quick lime, natural gas, and electrical energy.

A summary of the capital costs associated with the plant facilities is shown in Table 19-3. The direct and indirect costs including a 10 percent contingency are estimated to be US\$158.71 million.

Table 19-3 Life-of-operation capital costs for the plant facilities

	Initial (\$000)	On-Going (\$000)	LoM (\$000)
Wellfield Tank Farm	11,897	0	11,897
SX Plant	14,231	0	14,231
EW Tank Farm	14,850	0	14,850
EW Tank House	28,823	0	28,823
RAF, PLS & Ponds	24,454	0	24,454
Ancillaries	6,299	0	6,299
General	10,277	0	10,277
Direct Cost	110,830	0	110,830
Freight/EPCM	6,097	0	6,097
Start-up	500	0	500
Field Indirects	12,547	0	12,547
Health/Environmental	7,044	0	7,044
First Fill Reagents	3,241	0	3,241
Spare Parts	718	0	718
Membrane Filtration Unit	3,308	0	3,308
Indirect Cost	33,455	0	33,455
Contingency	14,429	0	14,429
Total SX/EW	158,714	0	158,714

Source: Fluor Daniel Wright, 1998 and BHP Copper, 1997; Updated by SRK, 2010; All monetary values are in US dollars.

19.7.2 Wellfield Facilities

The capital cost estimate related to the well construction was compiled by SRK using a basis of well design, and equipment components, quantities, and cost inputs provided by technical consultants to Curis. Costs for some items were escalated from the 1999 BHP estimate using the Consumer Price Index. Current quotations were used for drilling, well installation, and in-well equipment components. The quantity of recovery and injection wells was derived using a standard 100-foot cell pattern and the production plan prepared by SRK. The well construction casing and materials costs are identical for both types of wells owing to the uniwell design. The unit cost for a recovery well, however, is slightly higher than the unit cost for an injection well because each recovery well requires a pump. The production plan generates a slightly greater number of recovery wells than injection wells to ensure compliance with the environmental requirements in the UIC and APP permits.

The well construction components include costs related to:

- Pre-production closure of historic boreholes and monitor wells;
- Pre-production remediation of cultural resources;
- Drilling and installation of the production wells by a drilling contractor. Costs include drill footage charges, labor and standby, surface casing, blank and slotted casing, and drilling and well construction consumables;
- In-well equipment such as blank and perforated injection/discharge pipe, pumps, inflatable packers, pressure transducers, and cabling;
- Wellhead equipment such as valves, flow meters, and electronic controls, and
- Post-production abandonment of production wells and removal of wellhead infrastructure.

Capital costs related to pre-development, drilling, and post-production activities were consolidated to produce an average per foot well installation cost of US\$113/foot. Based on an average depth of 940 feet, the well construction costs are estimated to be approximately US\$105,767 per well. Downhole well equipment is estimated to be US\$26,726 per injection well and US\$39,722 per recovery well. Surface wellhead equipment and instrumentation is estimated to be US\$2,000 per well. Well costs were developed for each mineral resource block and were annualized based on the production schedule. The pre-development costs were assigned to the year preceding the start of production for each group of blocks to be brought into production in a given year.

The capital cost estimate related to the wellfield distributive system was compiled by SRK based on a conceptual design for the wellfield layout, equipment components and quantities, and cost inputs prepared by Stephen Hildebrand, a technical consultant to Curis. The wellfield arrangements consist of wellfield electrical and communications infrastructure (electrical substation, motor controls, booster pumps), a distributive HDPE pipeline system to convey injectate to wellfield and return the PLS to the plant, and electrical/communications and HDPE-lined pipeline corridors. The wellfield components were costed on a per block basis using the same resource blocks used in the production plan. Costs for some items were escalated from the 1999 BHP wellfield estimate using the Consumer Price Index; current quotations were used from some components. The costs were annualized based on the production plan schedule.

One miscellaneous capital cost associated with initial wellfield construction activities is the replacement of two irrigation wells (BIA-9 and BIA-10) owned and operated by the San Carlos Irrigation and Drainage District (SCIDD) as previously discussed in Section 4.5.2.4. Removal of these irrigation pump wells from within the wellfield operations area is necessary to ensure environmental control of the process solutions. Capital costs include related hydrology and engineering studies and well installation.

A summary of the life-of-operation capital costs associated with the wellfield including production well and wellfield construction is shown in Table 19-4. The costs including a 10 percent contingency are estimated to be US\$499.26 million.

Table 19-4 Life-of-operations capital costs for the wellfield facilities

	Initial (\$000)	On-Going (\$000)	LoM (\$000)
Mob/Demob	0	0	0
Archaeology Clear	1,156	5,119	6,275
Abandon Monitor	85	258	343
Abandon Core	460	852	1,312
Inj/Recov Lower Zone	18,396	108,673	127,069
Inj/Recov Upper Zone	18,336	141,546	159,881
Injection Equipment	4,209	28,610	32,820
Recovery Equipment	7,428	45,482	52,910
Electrical	3,222	19,999	23,221
Mechanical	1,878	10,961	12,840
Production Wellheads	689	4,431	5,120
Closure	0	30,473	30,473
SCIDD Well Relocation	900	0	900
Bag & Carbon Filter	713	0	713
Subtotal Wellfield	57,473	396,402	453,874
Contingency	5,747	39,640	45,387
Total Wellfield	63,220	436,042	499,262

Source: SRK, 2010; All monetary values are in US dollars.

19.7.3 Infrastructure

Infrastructure capital costs include new construction and upgrades related to the general buildings, roads, water supply, sewage disposal, permanent and temporary electrical power systems, and the purchase of mobile equipment. The costs for these items were compiled by SRK based on previous estimates prepared in 1999 by BHP. The life-of-operations infrastructure costs including a 10 percent contingency are presented in Table 19-5.

Table 19-5 Life-of-operation infrastructure capital costs

	Initial (\$000)	Sustaining (\$000)	LoM (\$000)
Facilities	1,044	0	1,044
Water Supply	700	0	700
Sewage Disposal	120	0	120
Temp Electrical Power	135	0	135
Electrical Power	2,795	0	2,795
Mobile Equip - Plant	1,374	0	1,374
Mobile Equip - Wellfield	2,117	531	2,647
Direct Cost	8,284	531	8,815
Freight/EPCM	0	0	0
Spare Parts	0	0	0
Contractor Profit	0	0	0
Indirect Cost	0	0	0
Contingency	1,243	80	1,322
Infrastructure	9,527	610	10,137

Source: SRK, 2010; All monetary values are in US dollars.

19.7.4 Owner's Costs

A summary of the Owner's costs are presented in Table 19-6. These costs include engineering studies, environmental permitting and compliance support, employee training, security, legal and corporate support services. The life-of-operations costs including a 5 percent contingency are estimated to be US\$13.95 million.

Table 19-6 Life-of-operation Owner's costs

	Initial (\$000)	On-Going (\$000)	LoM (\$000)
EIA & Permitting	300	0	300
Reclamation Bond	500	(500)	0
Employee Training	0	1,350	1,350
Communications	0	470	470
Security	1,000	3,450	4,450
Community Relations	0	0	0
Legal Permits & Fees	1,215	0	1,215
Drilling Program	0	0	0
Engineering Studies	3,000	0	3,000
Contractor Mobilization	0	0	0
Corporate Services	0	0	0
Mine Closure	0	2,500	2,500
Subtotal Owners Cost	6,015	7,270	13,285
Contingency	301	364	664
Total Owner Capital	6,316	7,634	13,950

Source: SRK, 2010; All monetary values are in US dollars.

19.7.5 Payback of Initial Capital Costs

Payback of initial capital from free cash flow occurs early in the first quarter of production year 4 (2016) as shown on the cumulative cash flow line of page 1 of the technical economic model (Exhibit 19-1).

19.8 Operating Costs

Operating costs were compiled by SRK with input by Curis and technical consultants to Curis on quantities needed, reagent consumption use, and current cost quotations for supplies and consumables. A summary of life-of-operation total operating costs including property taxes are presented in Table 19-7. The life-of-operation total operating costs are estimated to be US\$870.21 million or \$0.704/lb-Cu produced.

SX/EW operating costs primarily include reagents (sulfuric acid, LIX, diluent, etc.), replacement anodes, and cathode repair, and the power necessary to operate the plant facilities and plate copper cathode. Non-labor maintenance, miscellaneous supplies and services are also included. The life-of-operation costs associated with SX/EW processing operations is presented in Table 19-8. The total cost including a 10 percent contingency is estimated to be US\$264.48 million or a cost of \$0.214/lb-Cu produced.

The dominant operating costs related to the wellfield include power (to pump injectate to the wellfield and PLS to the SX/EW plant), replacement pump motors and packers, an allowance for well repairs and rehabilitation, vehicle fuel, and non-labor related maintenance on support vehicles and mobile equipment. Operating costs related to off-site solid waste disposal, dust and weed control, miscellaneous assays/tools, and liner maintenance is also included. Labor costs include technical, operations, and maintenance personnel responsible for wellfield design, construction, operation, and maintenance. The labor and consumables to drill and install new wells is assumed to be outsourced and was incorporated in the per foot charges related to the initial and on-going capital costs associated with the well construction. The life-of-operation costs associated with the wellfield operations are presented in Table 19-9. The total cost is estimated to be US\$525.34 million or a cost of \$0.425/lb-Cu produced.

General and Administrative (G&A) costs include labor, supplies, and support services related to management, finance, and health, safety, and environmental costs. The life-of-operations total G&A costs including a 5 percent contingency are presented in Table 19-10. The total cost is estimated to be US\$50.22 million or \$0.041/lb-Cu produced. Life-of-operations costs related to property taxes are estimated to US\$30.18 million or \$0.024/lb-Cu produced.

Table 19-7 Summary of life-of-operation operating costs

	\$/Cu-lb	LoM (\$000s)
Wellfield	0.425	525,327
SX/EW	0.214	264,482
G&A	0.041	50,219
Property Taxes	0.024	30,184
Total Operating Cost	0.704	870,211

Source: SRK, 2010; All monetary values are in US dollars.

Table 19-8 SX/EW operating costs

	\$/Cu-lb	LoM (\$000s)
Labor	0.044	54,902
Supplies	0.133	164,122
Consumables	0.017	21,414
Sub-total SX/EW	0.195	240,438
Contingency	0.019	24,044
Total SX/EW	0.214	264,482

Source: SRK, 2010; All monetary values are in US dollars.

Table 19-9 Wellfield operating costs

	\$/Cu-lb	LoM (\$000s)
Labor	0.055	67,433
Supplies	0.254	313,786
Consumables	0.078	96,350
Sub-Total Wellfield	0.386	477,570
Contingency	0.039	47,757
Total Wellfield	0.425	525,327

Source: SRK, 2010; All monetary values are in US dollars.

Table 19-10 G&A operating costs

	\$/Cu-lb	LoM (\$000s)
Labor	0.034	41,577
Supplies	0.005	6,250
Subtotal G&A	0.039	47,827
Contingency	0.002	2,391
Total G&A	0.041	50,219

Source: SRK, 2010; All monetary values are in US dollars.

19.9 Economic Analysis

SRK prepared a technical economic analysis based on the life-of-operations production plan, updated capital and operating costs, and the market assumptions listed in Table 19-11. The technical inputs and economic results are shown in Table 19-12.

Table 19-11 Market assumptions

	Value	Unit
Cu Price	\$2.50	\$/lb-avg
Cu Recovery	included	%
BHP Royalty	2.5%	% NOI
State Royalty	8.0%	% gross
Conoco Royalty	2-3%	% gross
Weigh/Sample	\$0.005	lb-Cu
Handling	\$0.005	lb-Cu
Transportation	\$0.035	lb-Cu

Source: SRK, 2010; All monetary values are in US dollars.

Table 19-12 Technical inputs and economic results

Model Parameter	Technical Inputs and Results
Pre-production Period	3 years
Production Life	19 years
Cu Price/lb	\$2.50
Operating Days/Year	365
Max Prod (klb/d)	232
Cu Cathode (klb)	1,236,149
Discount Rate	7.5%
IRR	30.0%
Royalty	6.3%
Tax Rate	42%

Source: SRK, 2010; All monetary values are in US dollars.

A summary of the life-of-operations plan on an annual basis is shown in Exhibit 19-1. During the 19-year production period, SRK estimates that approximately 1.24 billion lbs Cu will be extracted by ISCR methods and will be plated to saleable cathode as presented in Table 19-13. Approximately 1.17 billion lbs Cu will be recovered from the current UIC permit area; an additional 61.14 million lbs Cu have been identified in potential expansion areas east, northwest, and southwest of the current permit. The summary of the economic model results is presented in Table 19-14; the details are shown in Exhibit 19-1.

Table 19-13 Life-of-operation copper production

Description	Total lbs (000)
Cathode Produced	1,175,011
Additional Cathode	61,137
Total Cathode	1,236,149

Table 19-14 Financial model results

Description	Units	Value Base Case		\$2.75/lb-Cu Value	\$3.00/lb-Cu Value
		\$2.50/lb-Cu Price	\$/lb-Cu		
Production					
Copper	klb	1,236,149	-	1,236,149	1,236,149
Market Price	US\$/lb	\$2.50	-	\$2.75	\$3.00
Gross Revenue	US\$000s	\$3,090,372	\$2.500	\$3,399,410	\$3,708,447
Royalty	US\$000s	(\$195,415)	(\$0.158)	(\$218,838)	(\$242,260)
Transportation	US\$000s	(\$55,627)	(\$0.045)	(\$55,627)	(\$55,627)
Gross Income	US\$000s	\$2,839,331	\$2.297	\$3,124,945	\$3,410,560
<u>Operating Costs</u>					
Production	US\$000s	\$525,327	\$0.425	\$525,327	\$525,327
SX/EW	US\$000s	\$264,482	\$0.214	\$264,482	\$264,482
G&A	US\$000s	\$50,219	\$0.041	\$50,219	\$50,219
Property Taxes	US\$000s	\$30,184	\$0.024	\$30,184	\$30,184
Total Operating Cost	US\$000s	\$870,211	\$0.704	\$870,211	\$870,211
Operating Margin	US\$000s	\$1,969,119	\$1.593	\$2,254,734	\$2,540,348
<u>Taxes</u>					
Severance Tax	US\$000s	(\$25,449)	(\$0.021)	(\$28,988)	(\$32,551)
City of Florence Tax	US\$000s	(\$2,839)	(\$0.002)	(\$3,125)	(\$3,411)
Income Tax	US\$000s	(\$441,594)	(\$0.357)	(\$532,565)	(\$624,317)
<u>Project Capital</u>					
Production	US\$000s	\$499,262	-	\$499,262	\$499,262
SX/EW	US\$000s	\$158,714	-	\$158,714	\$158,714
Infrastructure	US\$000s	\$10,137	-	\$10,137	\$10,137
Owner Costs	US\$000s	\$13,950	-	\$13,950	\$13,950
Total Capital Costs	US\$000s	\$682,062	-	\$682,062	\$682,062
Initial	US\$000s	\$237,776	-	\$237,776	\$237,776
Ongoing	US\$000s	\$444,286	-	\$444,286	\$444,286
Cash Flow	US\$000s	\$817,175	-	\$1,007,994	\$1,198,007
IRR		30%	-	35%	39%
NPV 7.5%		359,830	-	455,069	550,055

Source: SRK, 2010; All monetary values are in US dollars.

19.9.1 Sensitivity

The project sensitivities to market price, capital costs, and operating costs are presented in Table 19-15 and are shown in Figure 19-13 and Figure 19-14.

Table 19-15 Project sensitivity

NPV 7.5% US\$ M											
	-25%	-20%	-15%	-10%	-5%	Base	5%	10%	15%	20%	25%
Market Price	121,000	169,000	217,000	265,000	312,000	360,000	407,000	455,000	503,000	550,000	598,000
Capital Costs	441,000	425,000	409,000	392,000	376,000	360,000	344,000	327,000	311,000	295,000	278,000
Operating Costs	423,000	411,000	398,000	385,000	373,000	360,000	347,000	334,000	322,000	309,000	296,000

IRR %											
	-25%	-20%	-15%	-10%	-5%	Base	5%	10%	15%	20%	25%
Market Price	17%	20%	23%	25%	28%	30%	32%	35%	37%	39%	41%
Capital Costs	41%	38%	36%	34%	32%	30%	28%	27%	25%	24%	23%
Operating Costs	33%	32%	32%	31%	31%	30%	29%	29%	28%	28%	27%

Source: SRK, 2010; All monetary values are in US dollars.

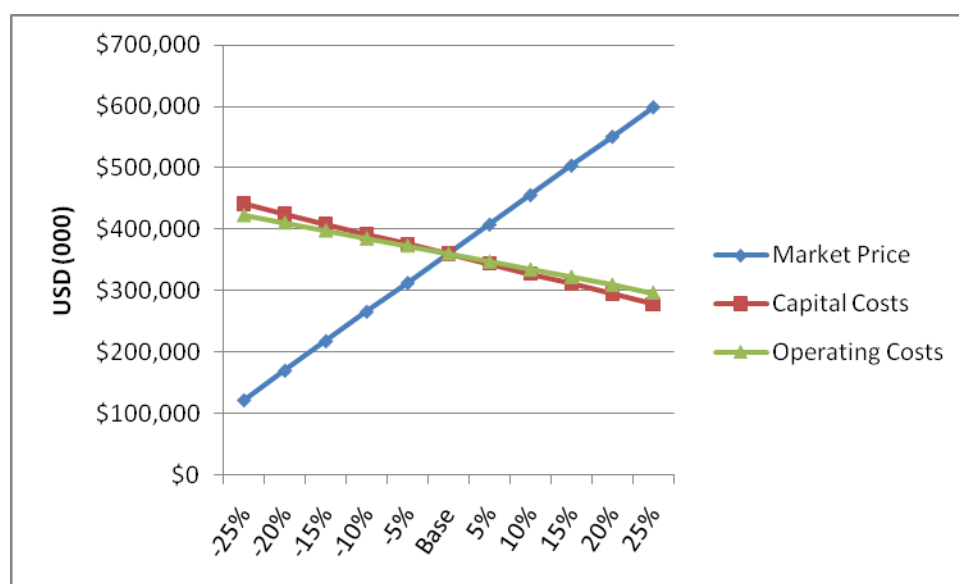


Figure 19-13 NPV sensitivity chart

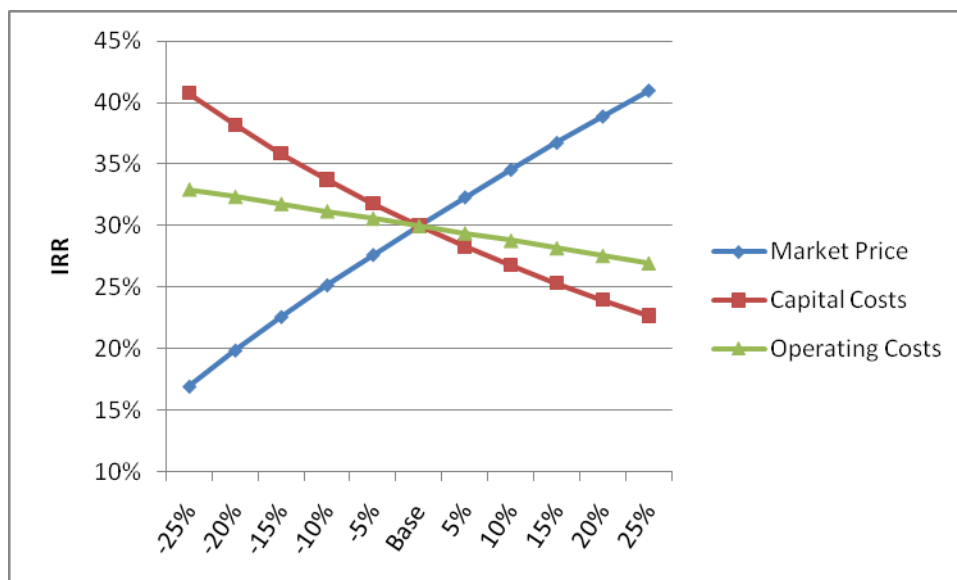


Figure 19-14 IRR sensitivity chart

Exhibit 19-1 Technical Economic Model including Cash Flow, Operating Expenses, and Capital Expenses

[illegible]

COMPANY		Curis Resources		Cash Flow																																			
BUSINESS UNIT		Florence ISCR																																					
OPERATION		80,000k-lbs Cu/yr		PREPRODUCTION			START																		END PRODUCTION							POST PRODUCTION				CLOSURE			
		value / factor	units / sensit.	Total or Avg.	-3 2010	-2 2011	-1 2012	1 2013	2 2014	3 2015	4 2016	5 2017	6 2018	7 2019	8 2020	9 2021	10 2022	11 2023	12 2024	13 2025	14 2026	15 2027	16 2028	17 2029	18 2030	19 2031	20 2032	21 2033	22 2034	23 2035	24 2036	25 2037							
Cu PRODUCTION																																							
PROJECT CAPITAL - See backup tabs for capital cost details.																																							
Capital	1.00	sensitivity																																					
Production		\$000s	499,262	0	0	63,220	26,299	17,127	26,651	9,503	21,694	33,006	19,757	21,243	31,381	38,532	43,466	68,645	55,604	2,104	2,321	1,048	1,303	2,162	3,299	4,165	5,005	1,728	0	0	0	0							
SX-EW		\$000s	158,714	3,014	57,274	98,426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Infrastructure		\$000s	10,137	78	78	9,372	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	8	32	0	0	0	0							
Owner Costs		\$000s	13,950	525	2,258	3,533	2,069	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	53	53	2,153								
Total Capital		\$000s	682,062	3,617	59,609	174,550	28,368	17,285	26,808	9,696	21,887	33,199	19,950	21,436	31,574	38,726	43,659	68,838	55,797	2,297	2,514	1,241	1,496	2,355	3,492	4,331	5,194	1,885	53	53	2,153								
Initial		\$000s	237,776																																				
Ongoing		\$000s	444,286																																				
Working Capital																																							
Beginning Balance		\$000s	-	0	0	0	1,448	7,444	8,688	8,504	9,671	9,274	9,496	10,401	9,854	9,821	10,342	10,645	10,707	10,417	10,417	9,732	7,750	6,532	5,646	4,985	4,331	2,872	1,681	1,381	1,103	882							
Ending Balance		20.0%	-	0	0	1,448	7,444	8,688	8,504	9,671	9,274	9,496	10,401	9,854	9,821	10,342	10,645	10,707	10,417	9,732	7,750	6,532	5,646	4,985	4,331	2,872	1,681	1,381	1,103	882	437								
Change		\$000s	0	0	0	(1,448)	(5,996)	(1,243)	184	(1,167)	397	(222)	(905)	546	33	(521)	(302)	(63)	290	685	1,982	1,218	886	661	655	1,459	1,191	300	278	222	445								
INCOME TAX																																							
Income Tax																																							
Net Revenue		\$000s	2,839,331	0	0	0	165,030	187,961	169,624	206,137	183,550	182,132	200,825	184,134	183,417	194,762	202,398	189,393	186,501	161,720	105,141	66,831	40,961	22,976	5,840	0	0	0	0	0	0	0							
Operating Costs		\$000s	(870,211)	0	0	(7,240)	(37,221)	(43,438)	(42,520)	(48,355)	(46,371)	(47,480)	(52,003)	(49,271)	(49,107)	(51,711)	(53,223)	(53,536)	(52,084)	(48,658)	(38,749)	(32,658)	(28,229)	(24,926)	(21,653)	(14,360)	(8,404)	(6,905)	(5,516)	(4,408)	(2,183)								
Operating Profit		\$000s	1,969,119	0	0	(7,240)	127,808	144,524	127,104	157,782	137,179	134,652	148,821	134,863	134,311	143,051	149,175	135,856	134,417	113,061	66,392	34,172	12,731	(1,950)	(15,813)	(14,360)	(8,404)	(6,905)	(5,516)	(4,408)	(2,183)								
Interest Expense		\$000s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Severance Tax		\$000s	(25,449)	0	0	0	(1,598)	(1,807)	(1,589)	(1,972)	(1,715)	(1,683)	(1,860)	(1,686)	(1,679)	(1,788)	(1,865)	(1,698)	(1,680)	(1,413)	(830)	(427)	(159)	0	0	0	0	0	0	0	0	0							
City of Florence Tax		\$000s	(2,839)	0	0	0	(165)	(188)	(170)	(206)	(184)	(182)	(201)	(184)	(183)	(195)	(202)	(189)	(187)	(162)	(105)	(67)	(41)	(23)	(6)	0	0	0	0	0	0								
Depletion		\$000s	(364,419)	0	0	0	(10,328)	(27,306)	(24,317)	(29,645)	(26,429)	(26,179)	(28,293)	(25,752)	(25,125)	(26,231)	(27,110)	(25,470)	(25,448)	(21,948)	(12,233)	(2,786)	(0)	0	0	0	0	0	0	0	0	0							
Depreciation		\$000s	(673,482)	0	(7,903)	(28,734)	(28,688)	(27,263)	(27,206)	(25,017)	(24,626)	(25,698)	(24,979)	(24,536)	(25,416)	(27,080)	(29,152)	(34,113)	(36,823)	(32,508)	(28,758)	(25,319)	(22,341)	(19,843)	(17,799)	(16,115)	(14,750)	(13,142)	(11,506)	(10,074)	(9,084)								
Net Income		\$000s	902,930	0	(7,903)	(35,974)	87,029	87,961	73,823	100,941	84,226	80,910	93,488	82,884	81,907	87,758	90,845	74,386	70,279	57,031	24,466	5,573	(9,810)	(21,816)	(33,618)	(30,475)	(23,154)	(20,047)	(17,021)	(14,482)	(11,267)								
Loss Carry Forward		\$000s	214,204	0	7,903	35,974	(66,372)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,810	21,816	33,618	30,475	23,154	20,047	17,021	14,482	11,267								
Taxable Income		\$000s	1,117,134	0	0	0	20,657	87,961	73,823	100,941	84,226	80,910	93,488	82,884	81,907	87,758	90,845	74,386	70,279	57,031	24,466	5,573	(0)	0	0	0	0	0	0	0	0	0							
State Tax		6.968%	77,842	0	0	0	1,439	6,129	5,144	7,034	5,869	5,638	6,514	5,775	5,707	6,115	6,330	5,183	4,897	3,974	1,705	388	(0)	0	0	0	0	0	0	0	0	0							
Federal Tax		35%	363,752	0	0	0	6,726	28,641	24,038	32,868	27,425	26,345	30,441	26,988	26,670	28,575	29,580	24,221	22,884	18,570	7,966	1,815	(0)	0	0	0	0	0	0	0	0	0							
Income Tax		\$000s	441,594	0	0	0	8,166	34,770	29,181	39,901	33,294	31,983	36,955	32,764	32,377	34,690	35,910	29,404	27,781	22,544	9,671	2,203	(0)	0	0	0	0	0	0	0	0	0							
Depreciation																																							
Additions		\$000s	682,062	3,617	59,609	174,550	28,368	17,285	26,808	9,696	21,887	33,199	19,950	21,436	31,574	38,726	43,659	68,838	55,797	2,297	2,514	1,241	1,496	2,355	3,492	4,331	5,194	1,885	53	53	2,153								
Opening Balance		\$000s	-	0	63,226	229,873	229,507	218,103	217,648	200,138	197,008	205,581	199,834	196,291	203,329	216,638	233,218	272,903	294,588	260,062	230,068	202,550	178,727	158,741	142,391	128,923	118,001	105,136	92,046	80,593	72,672								
Depreciation		12.5%	673,482	0	7,903	28,734	28,688	27,263	27,206	25,017	24,626	25,698	24,979	24,536	25,416	27,080	29,152	34,113	36,823	32,508	28,758	25,319	22,341	19,843	17,799	16,115	14,750	13,142	11,506	10,074	9,084								
Closing Balance		\$000s	-	3,617	55,322	201,139	200,818	190,840	190,442	175,121	172,382	179,883	174,855	171,755	177,913	189,559	204,065	238,791	257,764	227,554	201,309	177,232	156,386	138,899	124,592	112,807	103,251	91,994	80,541	70,519	63,588								
Loss Carry Forward																																							
Additions		\$000s	280,576	0	7,903	35,974	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,810	21,816	33,618	30,475	23,154	20,047	17,021	14,482	11,267								
Opening Balance		\$000s	-	22,495	30,398	66,372	66,372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,810	31,626	65,244	95,719	118,873	138,921	155,942	170,424	181,691								
Losses Used		\$000s	66,372	0	0	0	66,372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
Closing Balance		\$000s	-	22,495	30,398	66,372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,810	31,626	65,244	95,719	118,873	138,921	155,942	170,424	181,691								
BHP ROYALTY																																							
Revenues																																							
Cathode Sales	-	\$000s	3,090,372	0	0	0	173,351	197,438	180,383	218,576	194,405	193,212	216,937	201,414	202,987	218,589	228,168	212,817	207,077	180,367	116,607	73,406	44,335	24,417	5,886	0	0	0	0	0	0	0							
Other Revenue	-	\$000s	0																																				
Total Revenues	-	\$000s	3,090,372	0	0	0	173,351	197,438	180,383	218,576	194,405	193,212	216,937	201,414	202,987	218,589	228,168	212,817	207,077	180,367	116,607	73,406	44,335	24,417	5,886	0	0	0	0	0	0	0							
Cumulative Revenue	-	\$000s	-	0	0	0	173,351	370,789	551,172	769,748	964,153	1,157,365	1,374,302	1,575,716	1,778,702	1,997,291	2,225,459	2,438,276	2,645,353	2,825,721	2,942,328	3,015,734	3,060,069	3,084,486	3,090,372	0	0	0	0	0	0	0							
Costs																																							
Transportation	-	\$000s	55,627	0	0	0	3,120	3,554	3,247	3,934	3,499	3,478	3,905	3,625	3,654	3,935	4,107	3,831	3,727	3,247	2,099	1,321	798	440	106	0	0	0	0	0	0								
Operating	-	\$000s	870,211	0	0	7,240	37,221	43,438	42,520	48,355	46,371	47,480	52,003	49,271	49,107	51,711	53,223	53,536	52,084	48,658	38,749	32,658	28,229	24,926	21,653	14,360	8,404	6,905	5,516	4,408	2,183								
Capital	-	\$000s	682,06																																				

COMPANY				Curis Resources				Operating Expenses																															
BUSINESS UNIT		Florence ISCR																																					
OPERATION		80,000k-lbs Cu/yr		PREPRODUCTION								START				END PRODUCTION																POST PRODUCTION				CLOSURE			
value / units / Total																																							
factor		sensit.		or Avg.																																			

COMPANY		Curis Resources		Operating Expenses																																				
BUSINESS UNIT		Florence ISCR																																						
OPERATION		80,000k-lbs Cu/yr																																						
				PREPRODUCTION			START																					END PRODUCTION					POST PRODUCTION				CLOSURE			
				-3	-2	-1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25									
				2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037									
		value / factor	units / sensit.	Total or Avg.																																				
	Lights	\$000s	11			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0										
	Dust & Weed Control	\$000s	68			3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0										
	Trailer/Misc Safety Supl	\$000s	43			1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	0										
	Pipe/Truck Repair	\$000s	18			0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0										
	Port-a-Potty Contract	\$000s	15			1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0										
	Pond Operational Costs	\$000s	24			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0										
	Liner/Leak Detect Maint	\$000s	64			2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	1	1	0	0									
	Misc. Assays/Tools/Nit	\$000s	898			24	47	47	47	47	47	47	47	47	47	47	47	47	47	47	47	24	24	24	24	24	24	0	0	0										
	Subtotal O&M		96,350	0	0	1,854	2,370	2,731	3,353	3,493	4,095	4,975	5,421	5,369	4,766	5,370	5,574	7,067	7,651	6,721	5,848	5,409	4,930	4,216	3,271	1,264	350	131	76	29	18									
	Total Consumables	- \$000s	96,350	0	0	1,854	2,370	2,731	3,353	3,493	4,095	4,975	5,421	5,369	4,766	5,370	5,574	7,067	7,651	6,721	5,848	5,409	4,930	4,216	3,271	1,264	350	131	76	29	18									
		\$/lb-Cu	\$0.078																																					
SX-EW Plant																																								
	Labor	\$000s	54,902	0	0	802	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	1,838	1,838	1,631	1,136	955	550									
	Supplies	\$000s	164,122	0	0	0	8,151	9,663	9,076	10,391	9,824	9,783	10,600	10,065	10,119	10,657	10,987	10,458	10,260	9,340	7,143	5,655	4,654	3,967	3,329	0	0	0	0	0	0									
	Consumables	\$000s	21,414	0	0	80	1,053	1,204	1,146	1,277	1,194	1,190	1,272	1,218	1,224	1,277	1,310	1,257	1,238	1,146	926	777	677	608	545	184	184	163	114	95	55									
	Subotal SX-EW	- \$000s	240,438	0	0	882	11,633	13,297	12,650	14,098	13,447	13,402	14,301	13,712	13,772	14,363	14,726	14,145	13,927	12,915	10,499	8,861	7,760	7,005	6,303	2,022	2,022	1,795	1,250	1,050	605									
	Contingency	10% \$000s	24,044	0	0	88	1,163	1,330	1,265	1,410	1,345	1,340	1,430	1,371	1,377	1,436	1,473	1,414	1,393	1,291	1,050	886	776	700	630	202	202	179	125	105	61									
	Total SX-EW	\$000s	264,482	0	0	970	12,796	14,626	13,915	15,507	14,791	14,742	15,731	15,084	15,149	15,800	16,199	15,559	15,320	14,206	11,548	9,747	8,536	7,705	6,933	2,224	2,224	1,974	1,375	1,155	666									
		\$/lb-Cu	\$0.214																																					
SX-EW Plant																																								
	Labor																																							
	SX-EW	\$000s	54,902	0	0	802	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	1,838	1,838	1,631	1,136	955	550									
	Total Labor	- \$000s	54,902	0	0	802	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	2,429	1,838	1,838	1,631	1,136	955	550									
		\$/lb-Cu	\$0.044																																					
Operating Parameters																																								
	Reagent Loss	50 ppm		0	0	0	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50															
	LIX	92% %		0.0	0.0	0.0	6.7	5.7	5.2	6.2	5.5	5.4	5.9	5.4	5.4	5.9	6.2	5.7	5.9	5.2	3.3	2.1	1.3	0.7	0.2															
	g/l Cu per V%LIX	0.26		0.00	0.00	0.00	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26															
	Diluent	100%-LIX%		100.0	100.0	100.0	93.3	94.3	94.8	93.8	94.5	94.6	94.1	94.6	94.6	94.1	93.8	94.3	94.1	94.8	96.7	97.9	98.7	99.3	99.8															
	Water Makeup	30 gpm		0	0	0	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30															
	Cobalt	120 ppm		0	0	0	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120															
	Guartec	0.55 lb/ton Cu		0.00	0.00	0.00	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55															
	Operating Days	365 d/yr		0	0	0	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365	365															
	Acid in Spent Elecytrolyte	180 g/l		0	0	0	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180															
Supplies Consumption																																								
	LIX	16% kgal	867	0	0	0	35	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	0	0	0	0	0	0									
	Diluent	84% kgal	4,553	0	0	0	182	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	243	0	0	0	0	0	0									
	Clay	kt	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
	Acid Makeup	1.00 kt	617				35	39	36	44	39	39	43	40	41	44	46	42	41	36	23	15	9	5	1															
	Water Makeup	kgal	299,592	0	0	0	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768	15,768																
	Cobalt Makeup	84.57418 klb	145	0	0	0	6	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8																
	Guartec	klb	340	0	0	0	19	22	20	24	21	21	24	22	24	25	23	23	20	13	8	5	3	1																
	Fuel	kgal	114	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6																
	Power	mw/yr	961	0	0	0	54	61	56	68	60	60	67	63	63	68	71	66	64	56	36	23	14	8	2															
	Anodes - replacement	6,466 ea.	9,699	0	0	0	0	0	0	0	647	647	647	647	647	647	647	647	647	647	647	647	647	647																
	Cathode - replacement	6,360 ea.	12,084	0	0	0	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636	636																
Supplies Cost																																								
	LIX	\$4.55 \$000s	30,131	0	0	0	1,205	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	1,607	0	0	0	0	0	0										
	Diluent	\$3.86 \$000s	17,575	0	0	0	703	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	937	0	0	0	0	0	0										
	Clay	\$700 \$000s	692	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	0	0	0	0	0	0										
	Acid	\$90.00 \$000s	55,507	0	0	0	3,114	3,546	3,240	3,926	3,492	3,470	3,896	3,618	3,646	3,926	4,098	3,822	3,719	3,240	2,094	1,318	796	439	106	0	0	0	0	0										
	Acid Transport	\$10.00 \$000s	6,167	0	0	0	346	394	360	436	388	386	433	402	405	436	455	425	413	360	233	146	88	49	12	0	0	0	0	0										
	Water Makeup	\$2.00 \$000s	599	0	0	0	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	0	0	0	0	0	0										
	Cobalt Makeup	\$24.00 \$000s	3,489	0	0	0	140	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	186	0	0	0	0	0	0										
	Guartec	\$4.50 \$000s	1,530	0	0	0	86	98	89	108	96	96	107	100	100	108	113	105	103	89	58	36	22	12	3	0	0	0	0	0										
	Fuel	\$2.50 \$000s	285	0	0	0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	0	0	0	0	0	0										
	Power	\$45.00 \$000s	43,265	0	0	0	2,427	2,764	2,525	3,060	2,722	2,705	3,037	2,820	2,842	3,060	3,194	2,979	2,899	2,525	1,632	1,028	621																	

COMPANY	Curis Resources				Capital Expenses																												
	BUSINESS UNIT	Florence ISCR																															
		OPERATION	80,000-lbs Cu/yr	PREPRODUCTION	START																			END PRODUCTION					POST PRODUCTION				
	value / factor	units / sensit.	Total or Avg.	-3 2010	-2 2011	-1 2012	1 2013	2 2014	3 2015	4 2016	5 2017	6 2018	7 2019	8 2020	9 2021	10 2022	11 2023	12 2024	13 2025	14 2026	15 2027	16 2028	17 2029	18 2030	19 2031	20 2032	21 2033	22 2034	23 2035	24 2036	25 2037		
Cu PRODUCTION																																	
Cathode Produced	-	lib-Cu	1,175,011			0	68,175	77,648	70,826	84,859	74,302	73,824	80,637	73,571	73,565	80,646	84,787	77,276	80,430	70,709	45,410	28,615	17,609	9,767	2,354	0	0	0	0	0	0	0	
Additional Cathode		lib-Cu	61,137			0	1,165	1,327	1,327	2,572	3,460	3,460	6,137	6,994	7,630	6,790	6,480	7,851	2,401	1,438	1,232	747	125	0	0	0	0	0	0	0	0	0	
Total Cu Recovered		lib-Cu	1,236,149	0	0	0	69,340	78,975	72,153	87,430	77,762	77,285	86,775	80,566	81,195	87,436	91,267	85,127	82,831	72,147	46,643	29,362	17,734	9,767	2,354	0	0	0	0	0	0	0	
Well Development Summary																																	
Abandon Monitor	-	wells	60			16	11	4	7	3	5	5	2	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Abandon Core	-	wells	280			94	26	12	28	15	12	28	18	9	12	12	11	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Injection	-	wells	1,228			158	68	47	66	20	67	98	58	63	78	96	97	201	112	0	0	0	0	0	0	0	0	0	0	0	0	0	
Production	-	wells	1,332			187	73	49	73	25	67	103	62	63	84	104	107	218	117	0	0	0	0	0	0	0	0	0	0	0	0	0	
Maximum Wells On-line	-	wells	237,776		237,776	345	485	581	719	765	898	1,099	1,219	1,211	1,064	1,201	1,247	1,566	1,762	1,576	1,366	1,266	1,151	979	752	430	81	0	0	0	0	0	
Closure	-	wells	2,560			0	0	0	0	0	0	0	0	0	134	310	63	158	101	33	186	210	100	115	172	227	322	349	81	0	0	0	
CAPITAL COST																																	
Capital Summary																																	
Production	-	\$000s	499,262	0	0	63,220	26,299	17,127	26,651	9,503	21,694	33,006	19,757	21,243	31,381	38,532	43,466	68,645	55,604	2,104	2,321	1,048	1,303	2,162	3,299	4,165	5,005	1,728	0	0	0	0	
Infrastructure	-	\$000s	10,137	78	78	9,372	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	8	32	0	0	0	0	
SX-EW	-	\$000s	158,714	3,014	57,274	98,426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Owner Costs	-	\$000s	13,950	525	2,258	3,533	2,089	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158	53	53	2,153	
CAPITAL	-	\$000s	682,062	3,617	59,609	174,550	28,368	17,285	26,808	9,696	21,887	33,199	19,950	21,436	31,574	38,726	43,659	68,838	55,797	2,297	2,514	1,241	1,496	2,355	3,492	4,331	5,194	1,885	53	53	2,153		
		\$/lb-Cu	\$0.552																														
Wellfield																																	
Mob/Demob	\$0	\$000s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Archaeology Clear		\$000s	6,275	0	0	1,156	435	183	612	371	177	1,086	856	716	65	235	270	114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abandon Monitor		\$000s	343	0	0	85	58	21	38	19	25	26	13	19	6	22	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abandon Core		\$000s	1,312	0	0	460	115	45	109	60	50	121	77	44	70	83	60	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inj/Recov Lower Zone		\$000s	127,069	0	0	18,396	8,927	5,981	9,387	3,385	6,155	9,328	5,446	4,903	7,712	10,633	8,925	13,684	14,208	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Inj/Recov Upper Zone		\$000s	159,881	0	0	18,336	7,311	4,650	6,971	2,329	6,812	9,798	5,827	6,308	8,954	13,391	18,081	26,455	24,660	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Injection Equipment		\$000s	32,820	0	0	4,209	1,804	1,256	1,753	546	1,782	2,606	1,559	1,670	2,094	2,575	2,590	5,383	2,993	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recovery Equipment		\$000s	52,910	0	0	7,428	2,900	1,927	2,903	1,010	2,648	4,081	2,466	2,483	3,343	4,138	4,260	8,669	4,654	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical		\$000s	23,221	0	0	3,222	1,322	868	1,340	473	1,204	1,889	1,146	1,133	1,589	1,961	1,863	3,369	1,843	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mechanical		\$000s	12,840	0	0	1,878	756	448	838	356	604	670	330	336	679	867	1,150	2,538	1,389	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Production Wellheads		\$000s	5,120	0	0	689	281	191	277	92	267	401	241	250	325	401	408	839	458	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Closure		\$000s	30,473	0	0	0	0	0	0	0	0	0	0	0	1,450	3,682	724	1,897	1,335	344	1,913	2,110	952	1,184	1,965	2,999	3,786	4,550	1,571	0	0	0	
SCIDD Well Relocation	\$900	\$000s	900	0	0	900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bag & Carbon Filter	\$713	\$000s	713	0	0	713	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal Production	-	\$000s	453,874	0	0	57,473	23,908	15,570	24,228	8,639	19,722	30,085	17,961	19,312	28,528	35,029	39,514	62,404	58,549	1,913	2,110	952	1,184	1,965	2,999	3,786	4,550	1,571	0	0	0	0	
Contingency	10%	\$000s	45,387	0	0	5,747	2,391	1,557	2,423	864	1,972	3,001	1,796	1,931	2,853	3,503	3,951	6,240	5,055	191	211	95	118	197	300	379	455	157	0	0	0	0	
Total Production	-	\$000s	499,262	0	0	63,220	26,299	17,127	26,651	9,503	21,694	33,006	19,757	21,243	31,381	38,532	43,466	68,645	55,604	2,104	2,321	1,048	1,303	2,162	3,299	4,165	5,005	1,728	0	0	0	0	
		\$/lb-Cu	\$0.404																														
Infrastructure																																	
Facilities	\$1,044	\$000s	1,044	0	0	1,044	0																										
Water Supply	\$700	\$000s	700	0	0	700	0																										
Sewage Disposal	\$120	\$000s	120	0	0	120	0																										
Temp Elec Power	\$135	\$000s	135	68	68	0	0																										
Electrical Power	\$2,795	\$000s	2,795	0	0	2,795	0																										
Mobile Equip - Plant	\$1,374	\$000s	1,374	0	0	1,374	0																										
Mobile Equip - Well Field	\$2,117	\$000s	2,647	0	0	2,117	0	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	7	28	0	0	0	0
Direct	-	\$000s	8,815	68	68	8,149	0	0	0	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	7	28	0	0	0	0
Freight/EPCM	0%	\$000s	0	0	0	0	0																										
Spare Parts	0	\$000s	0	0	0	0	0																										
Contractor Profit	0	\$000s	0	0	0	0	0																										
Indirect Cost	-	\$000s	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Contingency	15%	\$000s	1,322	10	10	1,222	0	0	0	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	1	4	0	0	0	0
Infrastructure	-	\$000s	10,137	78	78	9,372	0	0	0	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	8	32	0	0	0	0
		\$/lb-Cu	\$0.008																														
SX-EW																																	
In-Situ Tank Farm	\$11,897	\$000s	11,897	238	4,521	7,138	0																										
SX Plant	\$14,231	\$000s	14,231	285	5,408	8,539	0																										
EW Tank Farm	\$14,850	\$000s	14,850	297	5,643	8,910	0																										
EW Tank House	\$28,823	\$000s	28,823	576	10,953	17,294	0																										

COMPANY		Curis Resources			Capital Expenses																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Source: SRK 2010; All monetary values are in US dollars.

20 Interpretation and Conclusions (Item 21)

The Florence Project is a shallowly buried porphyry copper deposit that is amenable to ISCR copper recovery and SX/EW copper production. The Florence Project has an estimated Measured plus Indicated mineral resource of oxide material in bedrock of 429.5 million tons grading 0.331 percent total copper (TCu) for a contained 2.84 billion pounds Cu, and an additional 92.8 million tons grading 0.267 %TCu for an additional 496 million contained pounds Cu (Table 1-1). Florence copper deposit represents a substantial copper resource that warrants further investigation and economic analysis by Curis. Previous owners conducted drilling on a nominal 250 foot drill spacing sufficiently characterized the copper oxide mineralization, and allow for current and CIM-compliant resource estimation and classification. Additional drilling and technical studies characterized the hydrological and metallurgical characteristics of the deposit. In SRK's opinion, the project data is sufficient to evaluate the potential for ISCR copper recovery and SX/EW copper production.

Based on the existing project data, and input from Curis and independent consultants working for Curis, SRK has developed a conceptual ISCR wellfield production schedule for life-of-production development, and has developed an estimate of associated development and production costs. Based on the production schedule and estimated copper recovery from metallurgical test data, approximately 76.5 million pounds of copper can be recovered annually by ISCR wellfield methods. SRK has used industry available information to appropriately size and cost a SX/EW copper recovery plant to be constructed on the property for planned cathode copper production as saleable product.

SRK has completed this Preliminary Economic Assessment as a study of the potential ISCR mineability of the project, utilizing industry standard criteria for Scoping Level studies. The results of this Preliminary Assessment indicate that ISCR development of the Florence Project offers the potential for positive economics based upon the information available at this time.

The base case economic analysis results indicate an after-tax NPV of US\$359.8 million at a 7.5 percent discount rate with an IRR of 30 percent. Payback will be early in production Year 4 in a projected 19-year mine-life. The economics are based on a base case of US\$2.50/lb Cu long-term copper price and a design production rate of 76.5 Mlb Cu/yr. Direct operating costs are estimated at US\$0.680/lb-Cu; total operating costs including property taxes are US\$0.704/lb-Cu. Total capital costs are estimated at US\$682.1 million, consisting of initial capital costs of US\$237.8 million, and ongoing sustaining capital over the life of operations of US\$444.3 million.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. This Preliminary Economic Assessment is preliminary in nature, and uses mineral resources. It includes Inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that this preliminary assessment will be realized. This preliminary assessment includes Inferred resources (15 percent of total resources) that are assumed will be converted to Indicated or Measured resources upon additional definition drilling. The Inferred resources are primarily located on the lateral edges of the copper deposit. Until that additional drilling is completed, as wellfield delineation drilling, there is no certainty these Inferred resources will be upgraded in classification to be considered as potentially economically producible.

As with any pre-development property, there are risks and opportunity attached to the project that need further assessment as the project moves forward. SRK deems those risks, on the whole, as identifiable and manageable.

20.1 Project Opportunity

Presented below is a brief discussion of the development of ISCR copper recovery technology, the environmental benefits relative to other metal extraction methods, and the ISCR opportunity relative to the Florence project.

20.1.1 Development of ISCR Copper Technology

Minerals extraction utilizing ISCR technology is not new in the mining industry. It has been practiced extensively in the uranium and salt industry throughout the world. Copper ISCR operations have been shown to be quite successful in the Southwest US in highly broken material open pit benches and in-pit rubbelized material that is not economic to blast, haul, and place on a heap facility and from ISCR in post-mining underground areas.

The opportunity exists to utilize tried and tested drilling and wellfield completion techniques employed in the uranium ISCR industry. Modified as necessary to fit the Florence Project, these techniques will help optimize wellfield development, minimize the learning curve timeline for Florence, and thus help minimize development costs.

20.1.2 Environmental Benefits

For the right deposits, the environmental benefits of an ISCR approach can be significant. ISCR avoids the intrusive aspects of physically removing tons of rock in order to access a minor fraction of the element of value (copper), and in so doing, avoids the need for disposal of millions of tons of unused material (waste rock), material that would otherwise displace land that could be left to beneficial use, or perhaps just left alone, undisturbed. The potential for acid rock drainage from exposed sulfide-bearing waste rock dumps is avoided, as there will be no waste rock dumps typical of conventional mining operations.

There are other benefits. During operations, the usual mining activities of blasting, haulage, and processing of massive amounts of material, with the associated noise, emissions of exhaust and particulates from heavy mining equipment, are avoided. Energy consumption is reduced. In addition, following the period of ISCR operations, the surface land use can be returned to its prior state, or developed for other beneficial use. Water usage is minimized, as de-watering a convention open pit or underground mine is avoided. The ISCR approach will use less water than conventional mining/milling ISCR operations, and the proposed copper operation will use less acre-feet per year of water than agricultural water usage on the same lands.

20.1.3 The ISCR Opportunity

Curis regards the development of the Florence ISCR Project as an opportunity to further advance the application of ISR technology use in the copper industry. ISCR extraction has many benefits and will allow access to deposits that heretofore were not developable, with significant reductions in cost, and with the added environmental benefits summarized above. There are sound reasons for choosing Florence as an ideal site for ISCR production including the facets discussed below.

Geology – First, the oxide deposit is isolated vertically by geological strata that possess low permeability characteristics. This means that process solutions can be controlled in a manner that avoids vertical migrations of solutions into other strata – geological control to hydrological confinement of process solutions.

Hydrology – Second, the mineralized zone is completely saturated with groundwater. If the zone of operation is saturated, an operator can control groundwater hydrology with confidence by pumping more

water from the zone of the operation than is injected. Doing so ensures that surrounding groundwater displaces the water thus removed and creates an inward hydraulic gradient, ensuring against loss of solutions to surrounding strata – hydrological control of process solutions.

Highly fractured ore – Third, the oxide copper deposit is highly fractured, allowing water (and process solutions) to readily migrate throughout the deposit and to contact copper-bearing minerals which largely coat the surfaces of the fractures. A less fractured media would impede and reduce the flow of the solutions, limit their access to copper bearing sites, and therefore limit recovery.

Finally, the Florence copper deposit has been undisturbed by prior mining activities. This is important because the data generated by this test work can be used to evaluate the development other copper deposits, with perhaps similar characteristics, and without concern that the data collected at Florence had been compromised by nearby mining activities.

20.2 Project Risks

Curis acquired the Florence property in January of 2010. There have been numerous and extensive discussions of risk within the Project team, and a formal risk analysis will be completed.

Much of the work of the past 6 months has been directed at reactivating and refreshing permits, assessing the technical merits of the opportunity, establishing a community outreach program, and developing the long-term development strategy.

The current active phases of the project are focused on updating the project engineering and associated studies, initiating a comprehensive Community Outreach Program, land and the associated rezoning efforts, environmental studies and permitting activities, and cultural resource studies and mitigation planning. Following the successful completion of these activities, a period of approximately 14 months will be devoted to the operation of the PTF and Phase 1 development program, during which key operational data will be collected and used to develop key process and engineering design criteria, which will be used for the design of the commercial plant. After a successful operation of the test facility, the commercial plant will be designed and constructed and thereafter the facility will be in operation for a period of some 19 years. This period will be followed by closure activities as required by permit.

In this sense, the development of the Florence ISCR Copper Project can be divided into five phases, and the risk allocated by phase:

- Phase 1: Project development activities leading up to the operation of the PTF,
- Phase 2: Operation of the PTF,
- Phase 3: Engineering & Construction of the Commercial ISCR facilities,
- Phase 4: Operation of the Commercial ISCR facilities, and
- Phase 5: Closure and remediation.

There are the “usual” risks, defined as the general risks of doing business. The Curis team will engage responsible resources to assist it with the various tasks of shepherding the project forward. The key risks that are specific to the development of the Florence ISCR Project, and strategies that will be implemented to mitigate these risks, are summarized in Table 20-1 through Table 20-5.

Table 20-1 Phase 1: Near-Term Risks

Risk	Mitigation Strategy
Failure to achieve Florence General Plan Amendment and associated rezoning to employment/light industrial status.	Curis has implemented a robust and comprehensive community outreach and communications program that has reached a significant component of the community, business leaders and community leadership of the Town of Florence. The Initial sense (with few exceptions) is that the broader Florence and regional community is receptive to the development of the project. The Prospect of new jobs and increased development and diversification of business in the area is a significant driver. Continued work with the Town of Florence Planning staff and officials is needed to broaden their understanding and comfort with both near term and long term land use opportunities for the Florence Copper Project site. To that end, Curis is engaged in a comprehensive land use planning and architectural exercise to assist in the development of a broad based and comprehensive near and longer term land use plan for Florence Project area. Discussions with the Town on this are ongoing and progressing.
Failure to secure approval of environmental and cultural resource permit applications.	The Florence Copper Project had all major production permits in place in 1998. These included a Burial Agreement and comprehensive Treatment Plan for assessing, mitigating and treating sites of archaeological value. Permits for the revised development plan being proposed by Curis will require the amendment and updating of these permits and treatment plans. Given that the company is amending and updating existing permits, proposing to use best available demonstrated control technology and the project site has been monitored continuously for the last 12 years following the BHP pilot test, there is a relatively high degree of confidence in the ability to successfully manage the project permitting process. Brown & Caldwell and Western Cultural Resource Management (WCRM) were intimately involved in obtaining the permits for BHP in the 1990s. Curis has retained both Brown & Caldwell and WCRM to assist them in transferring, modifying, and in general advancing the environmental and cultural resource studies and permit applications for the Florence ISCR Project. These firms' prior experience on the Florence project will help to ensure a timely permitting and award process.

Source: Curis Resources, 2010

Table 20-2 Phase 2: Production Test Facility (PTF) Operational Risks

Risk	Mitigation Strategy
Loss of hydraulic control; loss of solutions to the surrounding groundwater	Curis has situated and configured the new test well site near and using a similar layout to the original BHP location and design. Solution flows will be similar and process controls will be arranged such that hydraulic control, which was demonstrated in the prior testing program, will be maintained.
Failure to meet and maintain environmental compliance obligations	As described in Phase 1 above, Brown & Caldwell has been providing compliance services since the early days of the BHP development program. Their continuity of service in this respect, as well as their performance over the years has demonstrated that the facilities contemplated can be operated within the constraints of the original permitting.
Failure to achieve required recovery from the test block to justify advancing the project	Curis has identified and retained some of the most experienced technical resources available to assist with the planning for the PTF. Areas to be investigated include the design of the test wells, strategies to control solution access to the test block, extensive instrumentation and monitoring of the testing program to allow the treatment of the test block to be optimized, thereby maximizing the recovery of copper.

Source: Curis Resources, 2010

Table 20-3 Phase 3: Project Evaluation and Development Risks

Risk	Mitigation Strategy
Capital cost	Curis will retain recognized industrial engineering houses with demonstrated experience in the engineering, procurement and management of construction of mining and minerals processing facilities. Curis will select drilling and construction contractors that are experienced in their respective areas of expertise, and qualify these through a competitive bidding process to ensure that the candidate has nominated a team that can deliver on its commitments. A comprehensive control system will be implemented to ensure that costs of both engineering and construction are managed to defined scope and budget, and within defined time constraints.
Schedule	The final project evaluation and development phase of the work will commence during the period that the PTF is operating. Data that are collected will serve as indicators of process flow and engineering criteria that can be factored early into process flowsheets for evaluation of the data and early indication of recovery, acid consumption, and similar parameters. Because they were required to support the permitting strategy that BHP was pursuing at the time, process facilities designs developed by Fluor during the prior testing program were developed to feasibility study quality. For this reason, engineering of process facilities that are required to treat leach solutions produced by the wellfield are already significantly advanced. Work outstanding is limited to optimizing the design of the Basic Engineering phase; detail designs can commence early after confirmation of the required process criteria.

Source: Curis Resources, 2010

Table 20-4 Phase 4: Commercial Operation Risks

Risk	Mitigation Strategy
Restrictions on acid supply, and associated high cost acid	Curis has identified the need for and will pursue the development of a regional acid supply study to be undertaken to understand both the sulfur and sulfuric acid supply and demand market in the US southwest region.
Copper demand (and therefore price) fluctuations	Because the Florence ISCR operation avoids mining costs, unit costs of production are easily in the lowest quartile of world copper production. Fluctuations of copper price will tend to drive higher cost producers out of inventories, tending to drive commodities prices higher. Relatively lower Florence ISCR unit operation costs will enable the project to weather periods of low commodities prices.
Recovery of less than the 49 percent of total copper expected	See the strategy devised to address recovery in the Phase 2 summary. By the time that the production phase of the operation is commenced, Curis will have installed and extensively tested heavily instrumented test wells during the operation of the PTF and will have devised strategies to allow maximizing “sweep efficiency” (a measure of how effectively process solutions are contacting the active zone of the copper deposit). This test work and efforts to optimize recovery will continue beyond the initial 14 month operational period of the PTF to ensure Curis maximizes recovery.
High acid consumption during operations	During the operating phase of the PTF, Curis will investigate the potential to “rest” an acidified zone of the active test block, to determine whether copper recovery can be enhanced by alternating operationally mature resource blocks between rest and active leaching activities, with corresponding reduction in acid consumption.
Failure to meet and maintain environmental compliance obligations	See mitigation strategy for this item under Phase 2 of this program.

Source: Curis Resources, 2010

Table 20-5 Phase 5: Closure and Mitigation Risks

Risk	Mitigation Strategy
Wellfield remediation effort and costs higher than anticipated	During Phase 1 of the Florence ISCR development program, Curis will conduct a leach block rinsing study that will investigate methods to accelerate the neutralization of a leach block.
Failure to meet and maintain environmental compliance obligations	See mitigation strategy for this item under Phase 2 of this program.

Source: Curis Resources, 2010

In summary, Curis has worked intensely to utilize the considerable prior experience that has been generated by the BHP test and closure program. SRK is of the opinion that the historical BHP test has provided sufficient information to allow for confidence in the ability to maintain ISCR solution controls, and the proposed Curis PTF will provide the added information necessary to demonstrate copper recoveries and wellfield remediation, prior to full production thus minimizing the full-scale production risks

By involving technical experts that have extensive experience on the prior test, as well as identifying other, respected professionals from the in-situ mining industry, Curis expects to minimize project development risks.

In SRK's opinion, project risks and the associated costs are operational risks, which can be adequately assessed and mitigated by using the staged approach that Curis has adopted to achieving full production.

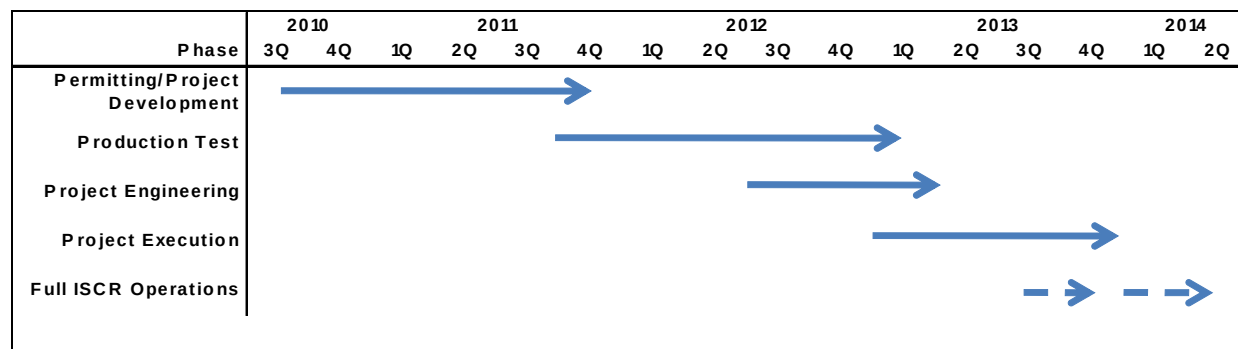
21 Recommendations (Item 22)

Recommendations for future work programs, the approximate timeline, and estimated costs are provided below. The industry standard method for projects with a positive Scoping Study is to recommend proceeding to a pre-feasibility level study. For ISCR projects, this normally involves a pilot-scale recovery facility (production test facility) with construction and operation of a test injection and recovery wellfield. This would be operated for a period of time sufficient to develop a recovery curve to accurately predict extraction rate and ultimate total amount of recoverable copper. Data derived from the PTF are used to define production parameters is a pre-feasibility or feasibility level study to justify a full production decision. For the Florence Project, these steps are recommended, not as separate steps, rather as stages in the continuous process of moving the project forward toward full ISCR production and SX/EW copper recovery. The Florence Project can advance in this manner as there has been sufficient historical work too build on that has already characterized the groundwater hydrological confinement sufficient to have achieved the UIC permit from regulators that is currently in the process of re-activation.

Plans for moving forward at the Florence Project are therefore presented as the steps (phases) and costs to achieve full production in the staged approach that Curis has implemented.

21.1 Recommended Work Programs

Curis is presently advancing the project through the full production permitting processes and addressing other issues in preparation to conduct the Production Test and Phase 1 development program that will commence in 4Q 2011. The purpose of the production test and phased development program is to develop essential operating information that will serve as inputs to the Project Engineering phase (in essence, the feasibility study) and process criteria that is required for engineering of the commercial plant (Project Execution). Following detailed engineering and construction ("Project Execution"), the full ISCR commercial production will commence. The relationship of the phases of the project is outlined in Figure 21-1 below.



Source: Curis Resources, 2010

Figure 21-1 Project phases

It should be noted that although the phases are showing as being discrete in nature, it is Curis' intent to consider the expansion of the PTF to include additional production, recovery, and monitoring wells, and a SX/EW demonstration facility. This expansion would be initiated once the production test is sufficiently advanced to support this additional investment. The expanded production test program and demonstration facility would operate during the project engineering and feasibility phase and through to the commencement of full commercial operations.

21.1.1 Phase Ia Project Development

The project development phase is in progress effective the date of this writing and consists of the work required to secure full production permits, advance the rezoning process, undertake mechanical integrity testing of the BHP test wells, project engineering and complete final design and preparation work for the construction and operation of the PTF. Significant activities to be completed during this period are the following:

- Transfer and upgrade all applicable permits;
- Mobilize an effective community and public relations program;
- Complete rezoning effort with the Town of Florence;
- Refurbish, restart the Florence ISCR site facilities and infrastructure;
- Conduct cultural resource studies and prepare mitigation plans;
- Review and update the Florence ISCR project resource and reserves estimate;
- Complete mechanical integrity testing of existing test wells;
- Complete detailed engineering for the construction of the PTF,
- Develop a comprehensive PTF Operations and Testing Protocol;
- Develop projected leach recovery curves and production planning methodology;
- Complete a essential engineering studies:
 - Water balance,
 - Water treatment alternatives evaluation, and
 - Preliminary power study
- Establish on-site health and safety program; and
- Prepare for the recruitment and staffing of the PTF operations team.

The Phase Ia program budget is estimated to cost approximately US\$12.6 million distributed as shown in Table 21-1.

Table 21-1 Phase Ia PTF design and construction preparation

ID	Cost Center	Amount (\$000)
1.0	Curis Resources (Arizona and Vancouver) Ltd. Costs	\$ 4,000
2.0	Curis Resources Arizona Project Costs	
2.1	Curis Project Team	\$ 604
2.2	Environmental and Permitting	\$ 2,096
2.3	Zoning/Land Entitlement	\$ 250
2.4	Cultural Resources Study for PTF	\$ 150
3.0	Mechanical Integrity Testing and Field Studies of BHP Wellfield	
3.1	Contractor (20 wells @ \$10,000/well)	\$ 200
3.2	B&C Supervision/Labor/surveys	\$ 40
3.3	Core Drilling of Leached area (6 holes)	
	Contractor costs (6,000 feet at \$100/foot)	\$ 600
	Assays/Sample Handling	\$ 100
	Geologists/Geotechnicians	\$ 50
	Supplies	\$ 10
4.0	Engineering & Studies	
4.1	Resources, Reserves, Geology, Metallurgy	\$ 200
4.2	Hydrology, hydrogeology, and geochemistry	\$ 380
4.3	Metallurgy, Process Engineering and PTF Planning	\$ 200
4.4	SX/EW Demonstration Plant Engineering and Design	\$ 500
4.5	Update of BHP Pre-feasibility Study	\$ 500
5.0	Contingency	\$ 934
	Total	\$ 10,814

Source: Curis Resources, Ltd. ; All monetary values are in US dollars.

21.1.2 Phase Ib Construction and Operation of Production Test Facility

The PTF will initially be operated for a period of 12 to 14 months and will accomplish several objectives as listed below:

- Complete site preparation, establish field facilities construct and test Wellfield, and SX/EW Pilot Facilities;
- Commence operations of facilities, conduct test scenarios;
- Establish that hydraulic control can be maintained within the area of the new PTF wellfield;
 - Monitor groundwater levels in response to ISCR activity
- Measure copper recovery over time;
 - Establish copper production per unit of acid consumed
 - Monitor and control gangue acid consumption
- Verify water balance and required makeup water rates;
- Calibrate recovery and production planning models;
- Develop methods to measure, monitor, and control sweep efficiency within the active block;
- Refine operational methods and controls;
- Develop process operations design criteria; and

- o Well injection head and level control
- o Acid concentration
- o Solids criteria
- o Raffinate constituent limitations
- o Copper recovery curve
- o Acid consumption
- Establish key economic factors.

The estimated costs associated with the PTF construction and operations are shown in Table 21-2.

Table 21-2 Estimated costs for construction and operation of the PTF

	Cost Center	Amount (\$000)
1.0	Curis Resources (Arizona and Vancouver) Ltd. Costs	\$ 3,000
2.0	Curis Resources Arizona Project Team Costs	2,000
3.0	Drilling of wells for PTF (24 holes)	3,040
4.0	Mechanical Integrity Testing (24 holes)	250
5.0	WestBay Installation (4 holes)	300
6.0	Downhole Surveys	728
7.0	SX/EW Pilot Scale Facility Construction	700
8.0	Environmental/Archaeological	250
9.0	Operation and data collection of the PTF	3,000
10.0	Contingency	800
	Total	\$ 14,068

Source: Curis, 2010; All monetary values are in US dollars.

Curis is considering the expansion of the PTF development program that would include additional production, recovery and monitoring wells and a demonstration-scale SX/EW plant. The demonstration plant would be sized to accommodate predicted flows from the expanded PTF mine block area. Based on the operation of one complete production mine block that would be 500 feet by 500 feet in size utilizing a total of 61 injection and recovery wells (25 recovery and 36 injection), a demonstration plant that would handle this level of production is predicted to cost between an additional \$8 and \$10 million. Assuming an additional 40 wells from the original PTF, this would represent an additional \$5.6 million in well development costs.

21.1.3 Phase IIa Project Engineering and Evaluation

The project evaluation phase is essentially the preparation of a feasibility study and basic engineering. This work will assemble the data that has been generated during the Production Test and marshals it into a comprehensive set of documents to support the financing and ultimate development of the project.

In conjunction with managing the business side of development of the Florence ISCR Project (executive management, public and community relations, environmental & permitting, archeological), critical technical aspects of this work will include the development of tools that enable the operations team to optimize solution access to copper-bearing sites within the deposit, to maximize copper recovery while reducing (to the extent practicable) gangue acid consumption, establish hydraulic control over the area of operation, and refine the production planning tools that will have been developed during the PTF operation phase.

This phase is expected to require between 6 and 9 months. It is important to note that, during prior work done by BHP, Fluor was commissioned to develop a feasibility-quality scope of work and capital estimate for the commercial plant that was then contemplated. Curis intends to work with a comparable engineering firm again to upgrade the prior work to current industry standards, and expects to achieve significant efficiencies as a result of leveraging this prior effort.

Certain aspects of the feasibility study can be initiated during the Phase Ib PTF operation, to allow for seamless transition through Phase II-a Project Engineering and Evaluation, and into Phase II-b Project Execution (full production). The current estimate to complete the Feasibility Study is shown in Table 21-3.

Table 21-3 Phase IIa estimated costs

Item	Estimated Cost
Engineering	\$3,250,000
Metallurgy	\$2,200,000
Infrastructure	\$125,000
Socioeconomic and Environmental	\$250,000
Surveying	\$200,000
Technical economic model	\$200,000
NI 43-101 Feasibility Report	\$125,000
Supervision	\$425,000
Total	\$6,775,000

Source: Curis, 2010; All monetary values are in US dollars.

21.1.4 Phase IIb Project Execution

Successful completion of the feasibility study, with corresponding positive financial returns will drive the project forward to full commercial operations. The execution phase of the project will continue the work begun during the production test phase and in the feasibility study, and will require about 18 months to complete. Principal activities during this phase of the work include the following:

- Establishment of the Project Management and Project Execution Plans,
- Detail engineering,
- Procurement and logistics,
- Contracts management,
- Field construction, and
- Commissioning and ramp-up of operations.

Within the framework of project execution are included all of the other activities which are so fundamental to successful project completion:

- Comprehensive site Safety, Health, Environmental and Community Relations Plan;
- Project controls system to manage scope, cost and schedule; and
- Quality assurance and quality controls programs to ensure an operable facility following startup.

As has been noted previously, BHP commissioned a pre-feasibility quality scoping and estimate of capital and operating costs for the facilities that were then contemplated. SRK has reviewed and upgraded these estimates to 2010 costs (see Sections 1.6 and 19.1.2 of this report). The Phase IIb cost estimate is essentially the capital cost to achieve full production, which is estimated in the technical economic model, US\$237.8 million.

The Phased approach will allow for flexibility and smooth transition between the phases, with for instance some aspects of the feasibility study (Phase IIa) possible to complete during the Phase Ib Production Test. SRK concurs with this approach and recommends the Phase I program be pursued. The results of the Phase I program will define the scope of the Phase II program. A brief summary of the Phase I and II programs, budgets, and timelines are shown in Table 21-4.

Table 21-4 Phase I and Phase II program and budget

Phase	Work Program	Estimated Cost (US\$)	Time to complete
Phase Ia	Environmental/permitting; hydrology; PTF wellfield design; process engineering, design, and construction details for PTF	\$10.8 million	Approx. 12 months
Phase Ib	Production Test: PTF construction, operation, data collection and evaluation.	\$14.0 million	12 months
Phase IIa	Project Evaluation: Feasibility study including engineering, metallurgy, environmental and socio-economic,	\$6.8 million	9 months
Phase IIb	Project Execution: Design, construction, start-up of production (Technical economic initial capital cost in years -1 and -2)	\$237.8 million	3 years

Source: Compiled by SRK based on estimates provided by Curis and results of SRK economic model, 2010; All monetary values are in US dollars.

22 Date

The date of this report is September 30, 2010. The effective date is July 1, 2010.

The undersigned prepared the report entitled *NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA*. The format and content of the report is intended to conform to Form 43-101F1 of the National Instrument of the Canadian Securities Administrators.

Signed and sealed

QP1 Allan V. Moran, RG, CPG

Signed and sealed

QP2 Corolla K Hoag, RG, CPG

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QP3 Terry McNulty, P.E.

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QP4 Russell White, R.G.

23 References (Item 23)

- Arizona Department of Environmental Quality (ADEQ), 2004, Arizona mining guidance manual, BADCT: State of Arizona Publication # TB 04-01, 293 p.
- AusIMM JORC, 1996a, Australasian code for reporting of identified mineral resources and ore reserves - Report of The Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists, and Minerals Council of Australia (JORC): Victoria, Australia, Australasian Institute of Mining and Metallurgy, p. 1-12.
- _____, 1996b, Guidelines to the Australasian code for reporting of identified mineral resources and ore reserves - Prepared by The Joint Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists, and Minerals Council of Australia (JORC) as an attachment to the July 1996 code: Victoria, Australia, Australasian Institute of Mining and Metallurgy, p. 13-20.
- Balla, J.C., 1972, The relationship of Laramide stocks to regional structure in central Arizona: Tucson, University of Arizona, unpub. Ph.D. dissertation, 138 p.
- BHP Copper Inc., 1997a, Florence Project – Final pre-feasibility report, v. II Geology: unpublished document prepared by the BHP Copper Growth and Technology Group, 180 p.
- _____, 1997b, Florence Project – Final pre-feasibility report, v. III Environmental permitting, legal affairs, and community relations: unpublished document prepared by the BHP Copper Growth and Technology Group, 41 p., plus 20 appendices.
- _____, 1997c, Florence Project – Final pre-feasibility report, v. IV Hydrologic and metallurgical evaluations: unpublished document prepared by the BHP Copper Growth and Technology Group, 156 p., plus 8 appendices.
- _____, 1997d, Florence Project – Final pre-feasibility report, v. IV Metallurgical appendices: unpublished document prepared by the BHP Copper Growth and Technology Group, 4 appendices.
- Brewer, M.D. and LeAnderson, J., 1996, XRD study of secondary minerals at the Florence project: Florence, Ariz, Magma Copper Company, unpub. internal memorandum, 18 p.
- Brewer, M. D., 1998, Column leaching experiments and mass balance modeling simulating in-situ leaching within the oxide zone of the Florence porphyry copper deposit, Pinal County, Arizona: Unpubl. M.S. thesis, Univ. of Arizona, Tucson, Arizona, May, 1998, 126 p.
- Brown and Caldwell, 1996a, Site characterization report, Magma Florence in-situ project Aquifer Protection Permit application: Phoenix, Ariz., Brown and Caldwell, unpub. report for Magma Copper Company submitted to ADEQ, v. II, variously paginated.
- _____, 1996b, Modeling, Magma Florence in-situ project Aquifer Protection Permit application: Phoenix, Ariz., Brown and Caldwell, unpub. report for Magma Copper Company submitted to ADEQ, v. IV, 1 appendix.

- _____. 1996c, Detailed engineering design, Magma Florence in-situ project Aquifer Protection Permit application: Phoenix, Ariz., Brown and Caldwell, unpub. report for Magma Copper Company submitted to ADEQ, v. V, Appendix E.
- _____. 1996d, Magma Florence in-situ project, Aquifer Protection Permit application, Volumes I through V: Phoenix, Ariz., Brown and Caldwell, unpub. report for Magma Copper Company.
- Carneiro, R. R., 1998, Bulk density and specific gravity determination, Florence project: unpublished report by METCON Research report prepared for BHP Copper Inc, M405-15, Dec. 17, 1998, 6 p
- Conoco Minerals Department, 1976, Conoco Copper Project, Florence, Arizona – Phase III feasibility study, v. III Hydrology, geology, and ore reserves: unpublished report by Conoco, December 1976, 94 p., 3 appendices, 26 plates.
- Davis, J.R., 1997, The fracture controlled mineralogy within the oxide zone of the Florence porphyry copper deposit, Pinal County, Arizona: Tucson, University of Arizona, unpub. M.S. thesis, 90 p.
- Eastoe, C., 1996, Florence metallurgical study: Work order 27251607: Tucson, Ariz.: unpublished report, in BHP Copper Florence Project, Final Pre-Feasibility Study, Appendix IV-12, 10 p.
- Independent Mining Consultants, Inc. (IMC), 1994, Pre-feasibility open pit resource estimate of the Florence deposit: Tucson, Ariz., unpub. report for Magma Copper Company, 101 p., 35 figs., 33 tbls., 2 appendices.
- Keith, S.B., Gest, D.E., DeWitt, Ed, Woode Toll, Netta, and Everson, B.A. 1983, Metallic mineral districts and production in Arizona: Arizona Bureau of Geology and Mineral Technology Bulletin 194, 58 p. scale 1:1,000,000.
- Lichtner, P.C., Wittmeyer, G.W., and Turner, D.R., 1996, Final report - MULTIFLO predictions of copper production at the Florence, Arizona in-situ leach operation: San Antonio, Texas, Center for Nuclear Waste Regulatory Analyses; unpublished report for BHP Copper Inc, December 19, 1996, 41p.
- Lowell J. D., and Guilbert J. M., 1970, Lateral and vertical alteration-mineralization zoning in porphyry ore deposits; Econ. Geology, v. 66, p. 373-408.
- Nason, P.W., Shaw, A.V. and Aveson, K.D., 1983, Geology of the Poston Butte porphyry copper deposit in S.R. Titley, ed., Advances in geology of the porphyry copper deposits, southwestern North America: Tucson, University of Arizona Press, p. 375-385.
- Patel, R., 1996, Bottle roll leach test, Florence Ore – Cation exchange of copper-bearing clays, ML-2596 and ML-2634: unpublished report prepared by BHP Copper Metallurgical Services, in BHP Copper Florence Project, Final Pre-Feasibility Study, Appendix IV-9), 10 p.
- Resource Development Technology Group (RDTG), 1995, Pre-feasibility study, Florence Project: Tucson, Ariz., Magma Copper Company, unpub. report, 333 p., 5 pls.
- SRK Consulting, 2010, NI-43 101 technical report for the Florence Project, Pinal County, Arizona, USA: prepared for Curis Resources Ltd. and PCI-1 Capital Corp, April 25, 2010, 115 p, plus 1 appendix.

- Stubben, M.A. and LaBrecque, J.J., 1997, ERT monitoring of phase I –In-situ leaching report for BHP Copper Company: unpublished report prepared by Stubben and LaBreque, University of Arizona, 14 p.
- Titely, S. R., and Hicks, C. L., eds., 1966, Geology of the porphyry copper deposits, Southwestern North America: Tucson, University Arizona Press, 287 p.
- Williamson, M., 1996, The kinetics of chrysocolla dissolution, pH 1 - 3.5: in BHP Copper, Hydrologic and metallurgic evaluations: Florence, Arizona, Florence Project final pre-feasibility report, v. IV, Appendix IV-10, 23 p.

24 Glossary

American versions of Imperial English units of measure (U.S. Customary Units) are used in this report, as these are the commonly used units of measure in the United States. Analytical results are generally reported as ounces per short ton (oz/Ton) or parts per million (ppm) for silver (Ag) and gold (Au); percent for lead (Pb), zinc (Zn), copper (Cu), and manganese (Mn); and ppm for other trace elements (1,000 ppm = 0.1percent; 10,000 ppm = 1.0percent).

24.1 Units of Measure

The following list of conversions is provided for the convenience of readers more familiar with the metric system. All dollar amounts used in this report are US\$.

LINEAR MEASURE

1 foot (ft) = 0.3048 meters
1 yard (yd) = 3.0 ft = 0.9144 meters
1 mile (mi) = 5,280 ft = 1.6093 kilometers

AREA MEASURE

1 acre = 0.4047 hectares
1 square mile = 640 acres = 259 hectares

WEIGHT

1 short ton (T) = 2000 pounds (lb) = 0.9072 metric tons (tonnes (t))
1 pound (lb) = 16 ounces (oz) = 0.4536 kilograms (kg) = 14.583 troy ounces

ANALYTICAL VALUES

Troy/tonne	gram/tonne = 1.0 ppm	= 0.02917 oz Troy/short ton	=	0.03215	oz
	oz Troy/tonne (oz/t)	= 31.1035 grams/tonne (g/t)			
	oz Troy/short ton (oz/T)	= 34.2857 grams/tonne (g/t)			

24.2 Acronyms and Technical Terms

The definitions of frequently used acronyms and technical terms are provided in Table 24-1.

Table 24-1 Frequently used acronyms and technical terms

Acronyms / Technical Terms	Definitions
AA	Atomic absorption
AAS	Atomic absorption spectroscopy, an analytical procedure (cf: AA).
ADEQ	Arizona Department of Environmental Quality
Ag	Silver
AL	Alert Level is a numeric value, expressing a concentration of a chemical constituent or a physical or chemical property of a constituent that is established in the APP as an early warning indicating a potential violation of an Aquifer Water Quality Standard at the applicable point of compliance or other permit condition
AQL	Aquifer Quality Limit is the maximum numeric standards established under Arizona Administrative Code R18-11-406 for aquifers that are classified for drinking water protected use.
APP	Aquifer Protection Permit– A groundwater quality permit program administered by ADEQ. The permit identifies potential discharges related to the operation and BADCT discharge control mechanisms to minimize impacts to the aquifer. The program requires compliance monitoring and site inspections and quarterly, annual, and biennial compliance reports to ADEQ
ASCu	Acid-soluble copper refers to the portion of the total copper content in the sample that is released with short-duration exposure to dilute sulfuric acid under specified time, temperature, and acid-concentration conditions. The time of exposure (5 minutes to 2 hours), temperature, and acid concentrations vary by operation or laboratory. ASCu analyses allow an assessment of the spatial variability and relationships of acid-soluble minerals within a deposit but is not a reflection of the actual amount that can be recovered with long-duration heap
ASCu:TCu	Ratio of the acid soluble content to total copper content contained within a sample or mineral zone based on laboratory analyses or metallurgical test work. Copper oxide mineral zones have a high overall ASCu:TCu ratio (typically greater than 50-60 percent while sulfide mineral zones show ratios of 1 to 30 percent.
Assay	The chemical analysis of mineral samples to determine the metal content.
Au	Gold
AWQS	Aquifer Water Quality Standard are regulatory limits established by ADEQ to protect groundwater quality
BADCT	Best available demonstrated control technology, process, operating method, or other alternative to achieve the greatest degree of discharge reduction determined for a facility by the ADEQ Director under Arizona Revised Statutes 49-243 (A.A.C. R18-9-191(7).
Basin-fill	Unconsolidated sedimentary or valley fill that accumulates in basins and low-lying areas adjacent to eroding mountain ranges

Acronyms / Technical Terms	Definitions
Chalcocite	A copper- and sulfur-bearing mineral (Cu_2S) a common secondary copper ore mineral.
Chalcopyrite	A brassy mineral (CuFeS_2) the primary ore of copper.
Cu	Copper
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Florence Property	Used in this report for the 1,342 acres of patented land in the area of the deposit and the portion of mineral rights on State Trust Lands of Arizona (State Mineral Lease 11-26500), which are within the Poston Butte mining district as defined by historical exploration and development work.
Footwall	The underlying side of a fault or stope.
FRP	Fiberglass reinforced pipe
ft	feet
Grade	The measure of concentration of a metal within mineralized rock – typically expressed in percent for copper oxide and sulfide operations.
Hanging wall	The overlying side of an fault or stope.
ICP	Inductively-coupled plasma spectroscopy, an analytical procedure
Igneous	Primary crystalline rock formed by the solidification of magma.
In-situ solution recovery (ISCR)	A mining process that pumps a weak acid solution into a metal-bearing deposit and extracts metal- (copper) rich solution from which the copper is recovered and plated as high-quality, low-impurity saleable cathode product.
Lithology	Geological description pertaining to different rock types.
NI 43-101	Canadian National Instrument 43-101
Oxide	Minerals and mineral zone produced during the oxidation of the primary copper and iron mineralization. The general term includes copper, iron, and manganese hydroxide, oxide, carbonate, and silicate minerals
Oz/Ton	ounces per short ton
opt	ounces per short ton
PLS	Pregnant leach solution, copper-bearing solution pumped from recovery wells and sent to the SX/EW facilities for copper extraction and copper plating
ppm	parts per million
PTF	Production Test Facility
QA/QC	Quality Assurance/Quality Control; procedures used to assure accuracy and consistency of analytical results

Acronyms / Technical Terms	Definitions
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
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 or a zone of sulfur-bearing mineralization. At Florence, this includes copper sulfides such as chalcopyrite, bornite, and chalcocite and iron sulfides such as pyrite.
Supergene	Enrichment processes that occur relatively near the surface and include the predominance of meteoric water circulation with concomitant oxidation and chemical weathering. Metals that have been leached from the oxidized ore are carried downward by percolating groundwater, and react with hypogene sulfides at the supergene-hypogene boundary. The reaction produces secondary sulfides with metal contents higher than those of the primary ore.
TCu	Total copper, typically used to describe the total copper grade of a sample composed of copper-bearing sulfides, oxides, carbonates, and silicates.
Total Expenditure	All expenditures including those of an operating and capital nature.
T	Ton
UIC	Underground Injection Control Permit, a permit managed by the U.S. EPA
Variogram	A statistical representation of characteristics (usually grade).

Appendix A

Certificate of Authors

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CERTIFICATE of AUTHOR

I, Allan V. Moran, a Registered Geologist and a Certified Professional Geologist, do hereby certify that:

1. I am currently employed as a consulting geologist to the mining and mineral exploration industry, as Principal Geologist with SRK Consulting (U.S.) Inc, with an office address of 3275 W. Ina Rd., Suite 240, Tucson, Arizona, USA, 85741.
2. I graduated with a Bachelors of Science Degree in Geological Engineering from the Colorado School of Mines, Golden, Colorado, USA; May 1970.
3. I am a Registered Geologist in the State of Oregon, USA, # G-313, and have been since 1978. I am a Certified Professional Geologist through the American Institute of Professional Geologists, CPG - 09565, and have been since 1995.
4. I have been employed as a geologist in the mining and mineral exploration business, continuously, for the past 36 years, since my graduation from university.
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. The Technical Report is based upon my personal review of the information provided by the issuer. My relevant experience for the purpose of the Technical Report is:
 - Vice President and U.S. Exploration Manager for Independence Mining Company, Reno, Nevada, 1990-1993
 - Manager, Exploration North America for Cameco Gold Inc., 1998-2002
 - Exploration Geologist for Freeport McMoRan Gold, 1980-1988
 - Gold exploration experience in Nevada from 1980 to 2000 with Freeport Exploration, Freeport McMoRan Gold, Independence Mining Company, Vista Gold, and Cameco Gold Inc.
 - As a consultant, I completed several NI 43-101 Technical reports, 2003-2010.
6. I am responsible for the content, compilation, and editing of all sections of the technical report titled “NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA”, and dated September 30, 2010 (the “Technical Report”) relating to Curis Resources Ltd.’s Florence copper in-situ recovery project in Pinal County. I have personally visited the Project in the field on June 15, 2010. I have had no prior involvement with the Florence Project.

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7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, for which the omission to disclose would make the Technical Report misleading.
8. I am independent of the issuer (both Curis Resources Ltd and PCI-1 Capital Corp.) applying all of the tests in Item 1.4 of National Instrument 43-101.
9. 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.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible to the public, of the Technical Report

Dated in Tucson, Arizona, October 08, 2010.

Allan V. Moran

("Signed")

11.

("Sealed")

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CERTIFICATE of AUTHOR

I, Corolla K Hoag, a Registered Geologist and a Certified Professional Geologist, do hereby certify that:

1. I am currently employed as a consulting geologist to the mining and mineral exploration industry, as Principal Geologist with SRK Consulting (U.S.) Inc, with an office address of 3275 W. Ina Rd., Suite 240, Tucson, Arizona, USA, 85741.
2. I graduated with a Bachelors of Science Degree in Geology from Western Washington University, Bellingham, Washington in May 1983. I graduated with a Master of Science Degree in Economic Geology from the University of Arizona in December 1991.
3. I am a Registered Geologist in the State of Arizona, USA, (#32701), and have been since 1997. I am a Professional Geoscientist in the State of Texas, USA (#10380) and have been since April 2008. I am a Professional Geologist in the State of Alaska (G-614) and have been since September 2008. I am a Certified Professional Geologist through the American Institute of Professional Geologists, CPG - 11205, and have been since August 2008.
4. I have been employed as a geologist in the mineral exploration, mining, and mining consulting business for the past 24 years, since my graduation from university.
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. The Technical Report on the Preliminary Economic Assessment is based upon my personal review of the information provided by the issuer. My relevant experience for the purpose of the Preliminary Economic Assessment is:
 - Exploration and mine development geologist for a variety of companies in the Western USA, 1981-1992 including ASARCO Santa Cruz in-situ leach project, Arizona; Boise Cascade Minerals, Washington; U.S. Bureau of Mines (Washington RARE II mineral resource evaluations)
 - Geologist with Freeport-McMoRan Gold Company, 1988-1989
 - Senior Geologist under contract to Cyprus Copper Tohono and Cyprus Copperstone, 1991-1995
 - Senior Geologist with BHP Copper responsible for geological feasibility studies performed to support regulatory permitting, confirm mineral resources and test technical viability of the. Florence in-situ leach project from 1995 to 1999. Member of BHP Ore Reserve and In-situ Ore Reserve teams. Site environmental coordinator, 1998-1999.

Curis- Florence Technical Report - Final -PEA

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- As a consultant with SRK Consulting since 2000, I have prepared geology models for several porphyry copper and molybdenum deposits in Arizona and New Mexico, performed geologic and geochemical site characterization for operating and closed copper operations in Arizona, prepared environmental permit applications for operating and closed copper operations in Arizona, and have contributed to NI 43-101 Technical reports, 2009-2010.
6. I am responsible for the content, compilation, and editing of all sections of the Technical Report titled “NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA”, and dated September 30, 2010 (the “Technical Report”) relating to Curis Resources Ltd.’s Florence copper in-situ recovery project in Pinal County. I have personally visited the Project in the field twice during the period of January 14 and February 7, 2010 and a number of other times during the period from 2000 to 2010.
 7. I have had prior involvement with the property including employment for 4.75 years with Magma Copper/ BHP Copper. I have visited the property on several occasions since 2001 to provide geological consulting services to the subsequent owners.
 8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, for which the omission to disclose would make the Preliminary Economic Assessment Report misleading.
 9. I am independent of the issuer (both Curis Resources Ltd and PCI-1 Capital Corp.) applying all of the tests in Item 1.4 of National Instrument 43-101.
 10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
 11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible to the public, of the Technical Report.

Dated in Tucson, Arizona, October 08, 2010.

Corolla K Hoag

(“Signed”)

(“Sealed”)

Terry McNulty, P.E., Ph.D.

Terry P. McNulty

President

T.P. McNulty and Associates, Inc.

4550 North Territory Place

Tucson, Arizona, U.S.A. 85750

Email: tpmacon1@aol.com

CERTIFICATE of AUTHOR

I, Terry P. McNulty, a Registered Professional Engineer, do hereby certify that:

1. I am currently employed as a consulting metallurgist to the mining and mineral industry, as President, T.P. McNulty and Associates, Inc., with an office address of 4550 North Territory Place, Tucson, Arizona, USA, 85750. I have been a consultant to SRK on this Project.
2. I obtained a Bachelor of Science Degree in Chemical Engineering from Stanford University in 1961, a Master of Science Degree in Metallurgical Engineering from Montana School of Mines in 1963, and a Doctor of Science Degree in Metallurgy from the Colorado School of Mines in 1967.
3. I am a Registered Professional Engineer in the State of Colorado, USA, #24789, and have been since 1987.
4. I have been employed as a metallurgist in the mining and mineral industry for the past 49 years, excluding 2 years as a full-time graduate student at Colorado School of Mines.
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. The Technical Report is based upon my personal review of the information provided by the issuer. My relevant experience for the purpose of the Technical Report is:
 - Various operating and technical management positions with The Anaconda Company 1961-1980;
 - Vice President-Technical Operations, Kerr-McGee Chemical Corp., 1980-1983;
 - Exploration Geologist for Freeport McMoRan Gold, 1980-1988
 - President & CEO, Hazen Research, Inc., 1983-1988;
 - President, T.P. McNulty and Associates, Inc., 1988-2010;
 - As a consultant, I contributed to approximately ten NI 43-101 Technical reports, 2004-2010.
6. I am responsible for the content, compilation, and editing of the sections dealing with metallurgical testing and estimation of capital and operating costs in the Technical Report titled “NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA”, and dated September 30, 2010 (the “Technical Report”) relating to Curis Resources Ltd.’s Florence copper in-situ recovery project in Pinal County. I have not personally visited the Project.
7. I have had no prior involvement with the Florence Project.

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8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, for which the omission to disclose would make the Technical Report misleading.
9. I am independent of the issuer (both Curis Resources Ltd and PCI-1 Capital Corp.) applying all of the tests in Item 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible to the public, of the Technical Report.

Dated in Tucson, Arizona, October 08, 2010.

Terry P. McNulty

("Signed")

("Sealed")

Russell White, R.G.

Russell E. White

Associate Geologist
SRK Consulting (U.S.) Inc.
3275 W. Ina Rd, Suite 240
Tucson, Arizona, U.S.A. 85741
Phone: 907-766-3802
Email: rwhite@srk.com

CERTIFICATE of AUTHOR

I, Russell White, R. Geologist do hereby certify that:

1. I am an Associate Geologist of:
SRK Consulting (U.S.), Inc.
Suite 240, 3275 W. Ina Rd
Tucson, AZ, 85741 USA
2. I graduated with a degree in Bachelor of Science from the University of Northern Arizona in 1983. In addition, I have obtained a minor degree in Computer Science also at Northern Arizona University in 1984.
3. I am a Registered Geologist (number 2293) with the State of Washington.
4. I have worked as a geologist for a total of 26 years since my graduation from university.
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 17 of the “NI 43-101 Preliminary Economic Assessment for the Florence Project, Pinal County, Arizona, USA”, dated September 30, 2010. The effective date of the assay database used for the mineral resource estimate is February 24, 2010.
7. I have not had prior involvement with the property that is the subject of this Technical Report I have not personally visited the site or performed a site inspection.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

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9. I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
10. I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.
11. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.¹

¹If an issuer is using this certificate to accompany a technical report that it will file only with the exchange, then the exchange recommends that this paragraph is included in the certificate.

Dated this October 08,, 2010.

Russell Edward White

(“Signed”)

(“Sealed”)