

ARIZONA STATE UNIVERSITY

FLORENCE COPPER PROJECT: Supplement 2013



Economic and Fiscal Benefits of the Florence Copper Project: Supplement to the 2012 Report based on a New Assessment of Copper Recovery

Dennis Hoffman, PhD
Eva Madly, M. A.
L. William Seidman Research Institute*
W. P. Carey School of Business
Arizona State University

2013

*THE AUTHORS WISH TO ACKNOWLEDGE THE SUPPORT OF CURIS RESOURCES (ARIZONA) INC., 1575 W. HUNT HIGHWAY, FLORENCE, AZ 85132 IN SPONSORING THIS RESEARCH

Table of Contents

| | | |
|------|--|----|
| 1 | ECONOMIC AND FISCAL BENEFITS: 2013 UPDATE | 4 |
| 1.1 | Overall Economic Impacts | 5 |
| 1.2 | Study Method and Scenario..... | 7 |
| 1.3 | Simulation Results..... | 7 |
| 1.4 | Economic Impact Summary | 8 |
| 1.5 | Gross State Product Impact..... | 9 |
| 1.6 | Employment Impact | 10 |
| 1.7 | Personal Income | 10 |
| 1.8 | Impact by Project Phase..... | 11 |
| 1.9 | Construction Phase | 11 |
| 1.10 | Production Phase..... | 11 |
| 1.11 | Closure Phase..... | 13 |
| 1.12 | Annual Average Impact | 13 |
| 1.13 | Employment by Industry | 14 |
| 1.14 | Economic Impacts on the Town of Florence | 17 |
| 1.15 | Fiscal Estimates with the Inclusion of Royalty Payments | 19 |
| 1.16 | Fiscal Impact on the Town of Florence | 23 |
| 1.17 | Fiscal Impact for Pinal County | 25 |
| 1.18 | Sensitivity Analysis and Discussion of the Order of Magnitude of Tax Collections | 26 |

List of Tables

Table S. 0: Florence Copper Project Economic Impact Overview 6

Table S. 1: Florence Copper Project Economic Impact Summary 9

Table S. 2: Economic Impact of Florence Copper Project By Phase 12

Table S. 3: Annual Average Impact of Florence Copper Project By Phase 14

Table S. 4: Annual Employment Impact by Phase and Industry in Arizona..... 16

Table S. 5: State and Local Fiscal Impact: Revenues Including Royalties 22

Table S. 6: Florence Local Fiscal Impact: Revenues..... 25

Table S. 7: Exclusively Pinal County: Revenues 26

1 ECONOMIC AND FISCAL BENEFITS: 2013 UPDATE

This supplement to the 2012 report, “Florence Copper Project: Economic Impact Study,” is the result of a reassessment of the copper recovery that is expected to result from the mining operations planned for the Florence Copper project. This change in the value of the project has implications for the economic impact and the flow of revenues that will be created by the planned production activities of the mine. This reassessment has resulted in significant changes to the conclusions reached in Chapter 5 of the original report. The results of this reassessment are contained in this supplement to the original Chapter 5.

The details of the process whereby the Florence Copper Project was re-evaluated were supplied to the research team by Curis in the spring of 2013.

In September 2010, Curis completed a Preliminary Economic Assessment (“PEA”) on the Florence Copper Project (“FCP”). The PEA was based primarily on metallurgical test work completed by BHP Copper in the mid 1990s which very conservatively estimated overall copper recoveries of approximately 49%. Between June 2011 and January 2013, Curis completed large scale metallurgical test work at Metcon Research in Tucson, Arizona. This recent metallurgical work employed new testing techniques to simulate in-situ treatment of the Florence Copper ore body and is believed to be much more realistic than earlier methods of projecting copper extraction by in-situ leaching. The results from Metcon estimated that an overall copper recovery of approximately 70% would be achieved from a typical mineralized block. These results were integrated into a detailed and comprehensive Pre-feasibility Study (“PFS”) completed by M3 Engineering of Tucson following the requirements of National Instrument 43-101 and released by Curis in March 2013. A complete copy of the PFS can be found on the web site for the System for Electronic Document Analysis and Retrieval (SEDAR) at www.sedar.com.

The PFS estimates a number of significant changes to the economics of FCP compared with the PEA, namely:

- 37% increase in copper production,
- 32% increase in mine life,
- 61% increase in life of mine operating costs comprised of a 37% increase in production volume, and

- an 18% increase in operating cost per lb
- 20% increase in life of mine capital expenditures,
- 34% increase in life of mine income taxes, and
- 80% increase in life of mine net cash flow.

These results indicate that FCP is expected to have a significantly greater economic impact than previously contemplated by the PEA.

As a result of this re-assessment of the potential output of the mine the research team reassessed the economic and fiscal implications. Our findings are summarized below.

1.1 Overall Economic Impacts

During the 30-year life of the project, Florence Copper will create significant economic benefits for Arizona and Pinal County. Arizona Gross State Product will be enhanced by a cumulative value of \$3,354.1 million, with \$2,121.1 million originating in Pinal County, creating jobs and contributing to Personal Income.

Florence Copper will create and support an annual average 796 direct and indirect jobs in Arizona and 480 will be in Pinal County. Mineral recovery jobs will only account for 18 percent, as most (four out of five) will be in other industries in the regional economy.

Total Personal Income generated over the life of the project will be \$1.9 billion, with \$0.9 billion going to Pinal County workers and business owners. Over the 30 years of the project, significant revenue will accrue to Arizona governments. There will be over \$468 million of Arizona government combined state and local revenues and state land trust royalties created, with approximately \$68.5 million directly accruing to the Town of Florence, and \$33.5 million directly accruing to Pinal County. The local and county revenues do **not** include additional monies that may flow from state and federal jurisdictions as a result of the total revenues produced by the mining operations, e.g. due to revenue sharing or block grant programs that transfer revenue from State or Federal levels to local jurisdictions.

The total Economic and Fiscal Impacts are substantially higher than those contained in the 2012 report because the PFS estimates of copper production as well as the working life of the mine have increased in comparison with the 2010 PEA as noted above. Accordingly the estimates of State GSP and aggregate personal incomes earned by all

workers have been revised up by about 50% and 35% respectively. Overall employment generated either directly or indirectly is up about 17% as a result of the revision. Overall State and Local revenues are estimated some 33% higher than in the original report.

| Table S. 0: Florence Copper Project Economic Impact Overview | |
|--|------------------------|
| Impact Focus | Economic Impact |
| Gross State Product, Cumulative | |
| <i>Arizona</i> | \$3,354.1 mil |
| <i>Pinal County</i> | \$2,121.1 mil |
| Employment, Annual Average | |
| <i>Arizona</i> | 796 |
| <i>Pinal County</i> | 480 |
| Personal Income, Cumulative | |
| <i>Arizona</i> | \$1,983.0 mil |
| <i>Pinal County</i> | \$959.6 mil |
| State and Local Tax Revenues, Cumulative | |
| <i>Total S&L for all Arizona</i> | \$468 mil |
| <i>Combined Pinal County & Town of Florence</i> | \$102.0 mil |
| <i>Town of Florence</i> | \$68.5 mil |
| Note: dollar values are constant 2013 dollars. Source: REMI model of Arizona and Pinal County economies and author calculations | |

1.2 Study Method and Scenario

The same study method is employed as in the 2012 report. Economic impacts are obtained based on an Arizona-specific version of the REMI regional input-output forecasting model, updated at the Seidman Research Institute. A newer version of the model (updated in June 2013) is used.

The method for estimating the economic impact involves the same four fundamental steps outlined in the 2012 report: preparation of a baseline forecast for the state economy, development of a policy scenario, preparation of a forecast based on the policy scenario and comparison of the baseline and policy scenario forecasts.

The same caveats related to input-output modeling apply. For more detail on methodology, refer to the 2012 report.

1.3 Simulation Results

To model the economic impact of the Florence Copper project, the effects were broken down into three distinct phases. These are (1) the construction phase, (2) the operations phase and (3) the closure phase. The updated timelines for these phases were provided by Florence Copper.

The construction phase is approximately two years in duration (years 1-2). During this time there will also be initial hiring and training of personnel for the later operations phase, but most of the expenditures and employment will be related to construction of required infrastructure, testing, analysis, and site preparation, along with associated indirect jobs.

The operations phase extends for a 25 year period (years 3-27). This is the period of greatest economic impact, not only because of its duration, but because it includes the peak employment, income and tax revenue generation periods.

The closure phase lasts 3 years, from years 28-30. Mineral recovery employment at the site winds down, but economic activity continues due to reclamation and restoration of the site for future uses.

An important feature of the REMI approach, not available in less complex impact models, is that the REMI impacts include estimates of ongoing economic activity created during the operations phase. As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

Using REMI, the results shown below incorporate the direct economic impacts associated with the establishment and operations of the Florence Copper project as well as the potential indirect impacts that occur due to the increased economic activity associated with the newly established business. Again, it is important to note that all figures presented below are relative to the alternative baseline forecast of no copper mining operations in Florence. For instance, if gross state product is estimated to be “x” dollars higher than the baseline case, this does not mean it is x dollars higher than what gross state product is today but it is x dollars higher than what gross state product is forecast to be in that given year if the new business had not located in Arizona.

The fundamental inputs for the simulation in the Florence Copper case include detailed annual expenses for all three phases of the project, including: labor and purchases; estimated operating revenue; and estimates for employee deployment by type of occupational category. The confidential data are not reproduced in this report but are comparable to the overall employment and capital investment numbers as shown on the Florence Copper website (www.florencecopper.com).

As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

1.4 Economic Impact Summary

The following tables depict the economic impact of the Florence Copper project on key measures of activity. Table S.1 is an overall summary, showing annual average impact and total impact on Arizona and Pinal County over the full life of the project.

| Table S. 1: Florence Copper Project Economic Impact Summary | | |
|--|---------------------|------------------------------|
| Impact Focus | Total Impact | Annual Average Impact |
| Gross State Product | | |
| <i>Arizona</i> | \$3,354.1 mil | \$111.8 mil |
| <i>Pinal County</i> | \$2,121.1 mil | \$70.7 mil |
| Employment | | |
| <i>Arizona</i> | - | 796 |
| <i>Pinal County</i> | - | 480 |
| Personal Income | | |
| <i>Arizona</i> | \$1,983.0 mil | \$66.1 mil |
| <i>Pinal County</i> | \$959.6 mil | \$32.0 mil |
| <p>Note: dollar values are constant 2013 dollars. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.</p> <p><i>Source: REMI model of Arizona and Pinal County economies</i></p> | | |

1.5 Gross State Product Impact

Florence Copper will add \$3,354.1 million to Arizona Gross State Product over the 30 year life of the project.

Gross State Product produced in Pinal County will increase by \$2,121.1 million over this period.

Gross State Product (“GSP”) represents new production, sometimes called “value added.” GSP for Arizona and Pinal County contribute to the tally of Gross Domestic Product (“GDP”) for the nation, our measure of the country’s annual output of goods

and services. GSP is the most comprehensive indicator of economic performance for a state or region.

The annual average addition to Arizona GSP over the entire project life is \$111.8 million (in constant 2013 dollars). The annual average addition to GSP produced within Pinal County is \$70.7 million.

1.6 Employment Impact

The Florence Copper project will create and support an annual average of 796 Arizona jobs over the duration of the three phases of activity.

The annual average employment within Pinal County from Florence Copper will be 480 jobs.

The job count includes the direct employment on site, jobs supported in businesses or government agencies that supply goods and services to Florence Copper, as well as induced employment that stems from the expenditures of all these workers as consumers. Approximately 170 jobs will be required at the Florence Copper site for mineral recovery during the operations phase. Over all project phases, more than 500 additional Arizona jobs supported each year will be in other industries in the overall general economy.

1.7 Personal Income

Florence Copper will increase Personal Income in Arizona by \$1,983.0 million over the life of the project.

Personal Income to residents of Pinal County will rise by \$959.6 million over this period.

The components of Personal Income include combined total wages and salaries of workers, and the contributions by employers to worker social security and benefit accounts. Combined proprietor's earnings by owners of small businesses also are included in Personal Income, as well as rental and interest income.

The annual average addition to Personal Income from the Florence Copper project is \$66.1 million per year for Arizona and \$32.0 million within Pinal County. These additions to aggregate personal income include the wages and salaries paid to the

newly created jobs as well as any salary appreciation that accrues across the economy as the induced economic activity creates additional demands for products and services.

1.8 Impact by Project Phase

The economic impact on Arizona and Pinal County will vary during each of the three phases of the Florence Copper project (Table S.2).

1.9 Construction Phase

The construction phase extends over a two year period. During this time, Florence Copper will invest over \$200 million in site preparation, development of ISCR process facilities and infrastructure, engineering studies, testing and analysis, permits, and initial hiring and training of workers.

The Florence Copper expenditures will increase Arizona GSP during the construction phase by \$183.3 million, with \$70.2 million of the new Gross State Product originating in Pinal County.

Arizona annual average employment created during this three year period will be 934 new jobs, with 225 in Pinal County.

The addition to Arizona Personal Income during the construction phase will be \$93.3 million state-wide. In Pinal County, Personal Income received by residents will rise by \$45.0 million.

Annual average employment created during the production phase rises to 864 state-wide, and to 533 within Pinal County.

Cumulative Personal Income will increase by \$1,801.1 million across the state, and rise by \$871.7 million in Pinal County.

1.10 Production Phase

The production phase at Florence Copper has the longest duration (25 years) and the greatest economic impact. The addition to Arizona Gross State Product from the production phase will be \$3,110.8 million, accounting for 90 percent of the GSP impact over the entire project life. GSP originating within Pinal County will be \$2,016.1 million.

Annual average employment created during the production phase rises to 864 state-wide, and to 533 within Pinal County. Cumulative Personal Income will increase by \$1,801.1 million across the state, and rise by \$871.7 million in Pinal County.

Table S. 2: Economic Impact of Florence Copper Project By Phase

| Impact Category | Construction Phase | Production Phase | Closure Phase | Total Impact |
|--|---|------------------|---------------|------------------------|
| | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Gross State Product | Gross State Product by Phase | | | GSP |
| <i>Arizona</i> | \$183.3 | \$3,110.8 | \$60.0 | \$3,354.1 |
| <i>Pinal County</i> | \$70.2 | \$2,016.1 | \$34.8 | \$2,121.1 |
| Total Employment | Annual Average Employment by Phase | | | Employment |
| <i>Arizona</i> | 934 | 864 | 132 | 796 |
| <i>Pinal County</i> | 225 | 533 | 106 | 480 |
| Personal Income¹ | Personal Income by Phase | | | Personal Income |
| <i>Arizona</i> | \$93.3 | \$1,801.1 | \$88.6 | \$1,983.0 |
| <i>Pinal County</i> | \$45.0 | \$871.7 | \$42.9 | \$959.6 |
| Note: dollar values are constant 2013 dollars expressed in millions. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs. | | | | |
| Source: REMI model of Arizona and Pinal County economies | | | | |

¹ Personal Income is an aggregate measure including wages and salaries of workers, contributions by employers to worker social security and benefit accounts, proprietor’s earnings by owners of small businesses and rental and interest income.

1.11 Closure Phase

Although the production phase is expected to continue for over two decades, mineral recovery is a temporary land use for the site. Following the completion of ISCR operations at the Florence Copper project, the site will be reclaimed and returned to productive use for residential development, agriculture, recreation or a combination of land uses. Reclamation and closure activities at the Florence Copper project are planned to be progressive, such that some portions of the ISCR production area will be fully reclaimed while others are still in production. Following the completion of all mineral recovery operations, project buildings, facilities and infrastructure will be removed.

The closure phase of the project is three years (years 28-30). It is important to note that activity in the overall economy created by the Florence Copper project continues to support jobs not only on the project site, but in the region. For example, additional retail and service firms drawn to the area are projected to continue even as copper production declines.

In the closure phase, the project still contributes a cumulative amount of \$60.0 million to Arizona GSP and \$34.8 million of new value added to GSP in Pinal County.

In the closure phase, annual average Arizona employment becomes much smaller, shrinking to 132 Arizona jobs, but Pinal County jobs fall by a lesser proportion, to an average of 106 jobs over the three year period.

1.12 Annual Average Impact

Workers in the mining industry earn, according to the annual report from the Arizona Mining Association, about twice the total compensation of the average Arizona worker and Curis Industries' compensation package will be representative of mining compensation across the State. The annual average values of impact measures for each phase of the Florence Copper project are set out in Table S.3. Annual average GSP increases in Arizona by \$91.6 million during the construction phase and then by \$124.4 million during the 25-year production phase.

Pinal County GSP more than doubles from the construction to the production phase, rising from an annual average GSP of \$35.1 million to \$80.6 million during each of the 25 years of the production phase. During the production phase, Pinal County GSP

accounts for about 65 percent of new Arizona GSP created by the Florence Copper project. Arizona and Pinal County average annual increases in Personal Income also are greatest in the production phase, and decrease during the closure phase as output and employment decline.

Table S. 3: Annual Average Impact of Florence Copper Project By Phase

| Impact Category | Construction Phase | Production Phase | Closure Phase | Project Annual Avg. Impact |
|----------------------------|--|------------------|---------------|----------------------------|
| | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Gross State Product | Annual Average GSP by Phase | | | GSP |
| <i>Arizona</i> | \$91.6 | \$124.4 | \$20.0 | \$111.8 |
| <i>Pinal County</i> | \$35.1 | \$80.6 | \$11.6 | \$70.7 |
| Total Employment | Annual Average Employment by Phase | | | |
| <i>Arizona</i> | 934 | 864 | 132 | 796 |
| <i>Pinal County</i> | 225 | 533 | 106 | 480 |
| Personal Income | Annual Average Personal Income by Phase | | | Personal Income |
| <i>Arizona</i> | \$46.6 | \$72.0 | \$29.5 | \$66.1 |
| <i>Pinal County</i> | \$22.5 | \$34.9 | \$14.3 | \$32.0 |

Note: dollar values are constant 2013 dollars expressed in millions. Personal income appreciation will accrue throughout the economy as salaries, proprietor income, interest, and property income, not just as wages in the newly created jobs.

Source: REMI model of Arizona and Pinal County economies

1.13 Employment by Industry

The economic development created by the Florence Copper project initially starts with new direct jobs in mineral recovery, but the project ultimately contributes to overall employment gains across the entire economy. The annual average Arizona employment by industry resulting from the project for each phase is shown in Table S.4. The job numbers displayed represent an increase compared to a baseline scenario of the Arizona economy, in which the Florence Copper Project does not locate to Arizona.

In the construction phase, it is not a surprise that a considerable number of jobs will be generated each year in the construction industry (55), but even more jobs will be created

in professional, technical and administrative services, due to testing, analysis, and other such outlays in the early stages of development.

Table S. 4: Annual Employment Impact by Phase and Industry in Arizona

| | NAICS code ² | Construction Phase | Production Phase | Closure Phase | Average Employment |
|-----------------------------------|-------------------------|--------------------|------------------|---------------|--------------------|
| Industry | | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Mining | 21 | 90 | 146 | 17 | 130 |
| Utilities | 22 | 3 | 7 | 1 | 6 |
| Construction | 23 | 55 | 67 | 0 | 65 |
| Manufacturing | 31-33 | 65 | 19 | 0 | 17 |
| Wholesale Trade | 42 | 28 | 24 | 4 | 22 |
| Retail Trade | 44-45 | 110 | 73 | 11 | 77 |
| Transportation, Warehousing | 48-49 | 41 | 42 | 1 | 36 |
| Information | 51 | 8 | 5 | 1 | 5 |
| Finance and Insurance | 52 | 37 | 31 | 1 | 28 |
| Real Estate, Rental, Leasing | 53 | 34 | 37 | 6 | 33 |
| Professional ,Technical Services | 54 | 131 | 84 | 11 | 74 |
| Management of Companies | 55 | 6 | 14 | 1 | 12 |
| Admin. and Waste Services | 56 | 81 | 50 | 6 | 45 |
| Educational Services | 61 | 7 | 14 | 9 | 13 |
| Health Care and Social Assistance | 62 | 53 | 71 | 24 | 64 |
| Arts, Entertainment, Recreation | 71 | 12 | 13 | 5 | 12 |
| Accommodation , Food Services | 72 | 38 | 51 | 13 | 46 |
| Other Services | 81 | 51 | 33 | 8 | 30 |
| Government | 92 | 84 | 83 | 13 | 81 |
| Total By Project Phase | | 934 | 864 | 132 | 796 |

Source: REMI Model of Arizona economy

As workers spend their earned incomes, additional jobs are created in retail, health care, finance, and other industries of the general economy. Mineral recovery employment increases sharply in the production phase, but jobs in other industries also show a rise

² Results are displayed by two-digit NAICS (North American Industry Classification) codes. For a detailed description of each industry, see the U.S. Census Bureau’s website at <http://www.census.gov/eos/www/naics/>

compared to the baseline scenario, including retail trade, construction, real estate, food services, health care and government.

During the closure phase mineral recovery employment is significantly curtailed and the largest sources of employment are health care (24 jobs), accommodation and food services (13 jobs), government (13 jobs) and retail (11 jobs). These jobs continue even as mineral recovery winds down, because they are now supported by an overall larger economy whose growth was stimulated initially by the Florence Copper project.

Employment creation shown in Table S.4 is widely diversified beyond the mineral recovery industry and across the 30 year life of the project. Moreover, the new job creation is not dominated by growth in retail, trade and construction – the sectors that have seen the most job creation historically in Arizona.

The industry distribution in Table S.4 clearly shows how the Florence Copper project will help bring diversity to the mix of jobs across the State. During the production phase, annual average jobs due to the presence of the project are 864. Of these, 718 (four out of five or 83%) are in industries other than mining. This ratio is particularly significant for economic development, as it shows the job-creating effects of a basic industry that brings in external dollars.

A comparison of these employment impacts with Table 4.6 in the baseline growth section (Section 4) reveals that jobs in the mining sector increase approximately 10 fold. Assuming considerable portions of the new professional and technical employment can be retained in the area, employment in these sectors surges by a factor of 3 or 4 during the life of the project.

During the production phase, annual average jobs due to the presence of the project are 864. Of these, 718 (four out of five or 83%) are in industries other than mining. This ratio is particularly significant for economic development, as it shows the job-creating effects of a basic industry that brings in external dollars.

1.14 Economic Impacts on the Town of Florence

The dynamic economic impact model REMI is designed to estimate economic impacts at the state and county levels over a period of several years. Conceptually a considerable portion of the positive economic impact for Pinal County will accrue to the town of Florence where the direct employment opportunities will be created.

Estimating the full economic impact of the Florence Copper project on the Town of Florence and its immediate geography (e.g. surrounding zip code) is challenged by the fact that it is not yet known how many of the new workers will reside in the town and regardless of residency, how many of the new workers will spend dollars on goods and services within Florence.

It is reasonable to expect that the impact results on the Town will be proportional to the number of workers that reside in the Town. Estimates of this impact can be obtained from analyzing the economic impact of a single production year on the zip code containing Florence using the annual model IMPLAN which is designed to allow impact analysis at the zip code level. Maximum impact would be felt if all 170 new Florence Copper workers lived in the town. If only one half lived in the Town, impacts would be reduced in proportion.

IMPLAN, maintained and licensed by the Minnesota IMPLAN Group, Inc. (“MIG”), is used regularly by regional analysts to estimate economic impacts of new businesses and policy changes at the local level. IMPLAN data and accounts closely follow the conventions and format used by the U. S. Bureau of Economic Analysis in the Regional Input Output Analysis System (“RIMS”). IMPLAN provides a point-in-time “snap shot” of economic impact, typically for one year, rather than the dynamic multi-year impacts available from the REMI model. However, the benefit from IMPLAN is that the model can be applied to zip code data, as in the current study of the Florence area.

In an average year, the Florence Copper project will potentially create 170 direct jobs and 84 indirect and induced jobs in the Florence area, while adding \$16.9 million to income of workers.

IMPLAN analysis indicates that, for an average production year, if all Florence Copper workers lived within the Florence zip code area, the Florence Copper project will create 170 direct Florence jobs plus an additional 84 indirect and induced jobs all within the confines of zip codes 85232 and 85132 (we include both because the census assigns economic activity to both in the base data used by IMPLAN). In addition, using IMPLAN’s measures of labor income we find that the Florence Copper project will add \$16.9 million in labor income to the geography encompassed by the Florence zip codes. This new labor income captures the wages associated with the new jobs plus wage increments that accrue to existing Florence jobs as the new capital investment stimulates economic activity throughout the town.

While the local impacts are substantial it is likely that IMPLAN actually underestimates the economic impacts that will accrue to Florence during an average production year since IMPLAN's model for the town is based upon what the town looks like today. As Florence grows, more retail and service establishments will be created and more of the consumer spending activity will likely be retained within the local area.

1.15 Fiscal Estimates with the Inclusion of Royalty Payments

In assessing the total fiscal impact of the Florence Copper project it is important to look beyond the results estimated by REMI or any other general model of Arizona economic activity. Though useful for some of the revenue implications, overall REMI estimates of fiscal impact are incomplete based on several important aspects. REMI employs census data in compiling fiscal estimates – using aggregate comparisons of State GDP with aggregate revenue streams reported by the census. But these estimates are based on statewide data that is skewed by the fact that many companies can take advantage of Arizona's liberal state corporate income tax apportionment laws and that only a small portion of the State's total capital investments result in payments of severance, corporate income taxes and royalties. Simply using REMI or similar regional modeling algorithms will present a potentially inaccurate picture – especially when tax revenues are the focus of the analysis.

Independent analysis of the Florence Copper project conducted by the W.P. Carey School suggests that while REMI captures individual Income, and general sales tax payments that occur throughout the economy as a result of the Curis capital investment and ongoing mining operations, it does not adequately capture Curis' own corporate income tax, severance tax, the particulars and distribution of property taxes that will accrue as a result of the mining operations, and the company's royalty payment obligations that exist for the Florence Copper project. Hence we have chosen not to simply report the REMI estimated revenues for these particular categories, but have estimated the revenue impact in an independent analysis by W.P. Carey economists. This analysis is informed by updated knowledge of the current and future Arizona tax code, analysis of financial data obtained directly from Curis, consultation and data from Arizona Department of Revenue ("AzDOR"), officials from Pinal County, and the Arizona State Land Department, and partially from the results of REMI and IMPLAN output.

The methodology used to assess the value of the mine for property tax purposes followed the prescriptions set forth by the Arizona Department of Revenue. A

description of the due diligence pursued by Curis in this evaluation process was supplied to the research team and is set out below. We affirmed this approach in direct communications with the AzDOR as a part of the research in preparation for this supplement.

In January 2012, Curis personnel, along with its property tax advisor, met with the AzDOR representative responsible for preparing the valuations for all mining companies in Arizona. The valuation model was presented to AzDOR, along with an overview of the assumptions and methodology employed in preparing the estimate. The AzDOR suggested some revisions to the estimate which were then incorporated into the model that became part of the PFS.

The property tax assessment methodology used by Curis in the PFS is set out below.

For the portion of the FCP site used for mineral recovery activities and designated as Producing Mines Lands two valuation approaches were used to estimate assessed value:

- The income approach
- The cost approach

Methodology used for the income approach:

- Estimate cash flow before income taxes (from PFS)
- Deduct 20% for corporate income taxes as prescribed by AzDOR
- Discount net cash flow after tax using a 12.5% discount rate
- Assumed an average assessment ratio of 18.08% over life of mine
- Resulting in an assessed value under the income approach

Methodology used for the cost approach:

- Value recoverable copper at \$0.01/lb
- Add: depreciated cost of capital expenditures (based on AzDOR prescribed depreciation policy with respect to useful life, salvage value and residual value)
- Add: cost of inventory
- Add: cost of land
- Assumed an average assessment ratio of 18.08% over life of mine
- Resulting in an assessed value under the cost approach

Curis selected a weighted average of assessed value under the cost approach and under the income approach to estimate overall assessed value for producing mines lands.

For the portion of the FCP site not used for mineral recovery activities and designated as Agricultural Use Lands:

- Assessed value was estimated based on 2011 AzDOR assessed values (primary and secondary)
- Assessed values were not inflated as the PFS economic model is presented in nominal terms

Similarly the research team examined Curis' estimates of future state royalty payments. The following is taken directly from the 2012 annual report of the State Land Department:

The royalty income from the Florence Copper Project could potentially make this, on a per-acre basis, the most lucrative mining project that the Department has ever participated in, generating between \$78 and \$188 million, depending on the price of copper, just from the 160-acre State Land parcel over the projected 20-year, or less, life of the mine.

Using an analysis of financial data on operations received from the Florence Copper project PFS Pre-Feasibility Study (2013), combined with an analysis that properly accounts for the tax rates that are currently in statute, with corroboration of royalty payment obligations from the Arizona State Land Department, and with corroboration from the AzDOR regarding appropriate methodology for property tax calculations, the fiscal impacts were estimated for the combined State and local levels as shown in Table S.5. The estimates were formulated under the conservative assumption that the price of copper will be \$2.75 in today's dollars over the life of the project. In assessing the fiscal impact we assume the construction phase ends and production begins sometime in project year 3. Slight changes in the end date for construction and beginning of production would have small impacts on estimates.

The table depicts the individual income, sales and selective sales tax estimates projected by the modeling process. These tax dollars represent the combined tax payments of Florence Copper as well as the tax dollars induced by the indirect economic activity that takes place as a result of the direct mineral recovery activities. The greatest tax

revenues and state royalties (\$452.14 million) are created during the production phase. During that period, state corporate taxes (including severance, property, corporate, and local mining taxes) are \$196.93 which includes revenues collected directly from Curis plus revenues assessed on the economic activity that is induced by the mining operations over the period.

Table S. 5: State and Local Fiscal Impact: Revenues Including Royalties

| Adjusted Estimates | Construction Phase | Production Phase | Closure Phase | Cumulative Revenues |
|---|---------------------------|-------------------------|----------------------|----------------------------|
| Tax Category* | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Individual Income Tax | \$1.51 | \$23.29 | \$1.38 | \$26.18 |
| General Sales Tax | \$5.31 | \$49.81 | \$4.50 | \$59.62 |
| Selective Sales Tax | \$2.10 | \$19.73 | \$1.79 | \$23.62 |
| Adjusted Corporate Taxes @ \$2.75/lb ** | \$0.52 | \$196.93 | -\$1.29 | \$196.16 |
| Royalties paid to the State Land Trust @ \$2.75/lb | \$0.00 | \$162.38 | \$0.00 | \$162.38 |
| State and Local Revenue & Royalty Totals @ \$2.75/lb | \$9.45 | \$452.14 | \$6.38 | \$467.96 |

*Values in Millions of 2013 Dollars

** Combined severance, property, corporate income, and local mining tax based on confidential estimates

Source: Calculations based on PFS 2013 data from Curis Resources, Ltd., W.P. Carey School of Business, REMI Model of Arizona and Pinal Co. economies.

The estimates reflect the impending state corporate tax rate reductions scheduled to begin in 2014. The estimates also assume that 100 percent of net income from the Florence Copper project will be taxable in Arizona and not be apportioned out of state to other states.

The adjusted fiscal estimates in Table S.5 show that, based on current estimates of copper recovery, the Florence Copper project will result in the payment of taxes and royalties to Arizona governments of approximately \$468 million dollars over the life of

the project. The revenue projections are consistent with the estimates based on annual surveys of mining companies and from summary data available from the Arizona Taxpayers Association and the AzDOR.

The local community and Pinal County will benefit from portions of the sales, selective sales, income, and severance tax collections based on the State’s revenue sharing provisions, while significant shares of the property and local mining taxes will directly benefit local taxing jurisdictions. As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

Arizona’s state and local governments have experienced substantial revenue declines and relatively slow growth over the past several years. Quite clearly the revenue impact of any single capital investment like the Florence Copper project cannot make up for the revenue erosion that has taken place. However, the simulations in this section reveal that considerable tax revenue will accrue in association with this capital investment and it will be realized following a period of considerable revenue shortfalls. The impact that it will have on both State and local governments will be important and will result in much needed funding for local public services, especially local school districts.

As the Florence Copper project contributes to economic growth, new businesses in retail, health care, transportation, and other industries are established in the region, and continue to support employment and contribute to personal income and tax revenues even after mineral recovery at the site concludes.

1.16 Fiscal Impact on the Town of Florence

The revenue estimates discussed above pertain to the dollars that will accrue to state and local coffers as a result of the Florence Copper project. Tracking those dollars that will accrue to the Town of Florence can be accomplished using estimates from the IMPLAN zip code model, from the REMI model, and from company supplied estimates of local and town property and mining taxes. This analysis, summarized in table S.6, reveals that over the life of the project, the Florence Copper project will result in over \$68 million dollars including direct tax payments from the company and revenues that

will be generated by the additional economic activity in the Town of Florence. These estimates understate the actual estimates of revenue to the town for several reasons. First, the project will generate hundreds of millions of dollars for State and County governments and an even greater sum for the Federal Government. The town receives block grant dollar distributions and/or revenue sharing from the State and Federal government based on population counts and is, of course, home to the County seat for Pinal County. It is reasonable to assume that a portion of these additional revenues produced at other government levels will ultimately return to Florence and the natural population expansion that will occur along with the increased economic activity will increase the revenue shares that are distributed by these population based formulas. Second, Florence is heavily reliant on the corrections industry which in turn is supported by the public sector. Additional dollars that flow to the public sector will be spent on public sector activities with corrections being a prime beneficiary. Finally, the State Land Trust will be the beneficiary of the royalty payments that result from Curis' operations.

Table S. 6: Florence Local Fiscal Impact: Revenues

| Adjusted Estimates | Construction Phase | Production Phase | Closure Phase | Cumulative Revenues |
|---|--------------------|------------------|---------------|---------------------|
| Tax Category* | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Sales Tax- Exc. Selective Sales and Shared Revenues | \$2.51 | \$11.45 | \$1.03 | \$14.99 |
| Adjusted Local Corporate Taxes @ \$2.75/lb** | \$0.09 | \$53.21 | \$0.13 | \$53.43 |
| Florence Totals @ \$2.75/lb | \$2.60 | \$64.66 | \$1.16 | \$68.42 |

* Town of Florence taxes excluding impacts of shared revenue to the town and revenue that is expected to flow to Pinal County with the Town of Florence the county seat. Values in Millions of 2013 Dollars.

**Combined local property, and local mining tax based on confidential estimates

Source: Calculations based on pre-feasibility study analysis(PFS) from Curis Resources, Ltd., W.P. Carey School of Business, IMPLAN and REMI Model of Arizona, Florence and Pinal Co. economies.

1.17 Fiscal Impact for Pinal County

Since the county seat for Pinal County is in the Town of Florence it is challenging to distinguish revenues that accrue to the Town of Florence from revenues that accrue directly to the County. However, estimates of the new revenues that will be administered exclusively by the county – primarily county sales tax and property taxes administered by the county are depicted in table S.7. The property tax categories that were allocated to the county include the county primary assessment, the mobile home relocation fund, the county school equalization assessment, the community college and CIT assessments, and the fire and water district assessments. The analysis reveals that about \$33.5 million will accrue directly to the county over the life of the mine not including any direct Florence revenues nor block grants and shared revenues from other taxing jurisdictions. However, total local revenues that accrue directly within the County would also include the \$68.4 million that accrue to the Town of Florence (discussed in 1.16 above), making total County revenues, including the town and County revenues combined total approximately \$102 million.

Table S. 7: Exclusively Pinal County: Revenues

(not including Town of Florence)

| Adjusted Estimates | Construction Phase | Production Phase | Closure Phase | Cumulative Revenues |
|---|---------------------------|-------------------------|----------------------|----------------------------|
| Tax Category* | Years 1-2 | Years 3-27 | Years 28-30 | Years 1-30 |
| Sales Tax- Exc. Selective Sales and Shared Revenues | \$0.46 | \$6.30 | \$0.57 | \$7.33 |
| Pinal County Administered Property Taxes @ \$2.75/lb** | \$0.05 | \$26.08 | \$0.07 | \$26.20 |
| Pinal County Totals @ \$2.75/lb | \$0.51 | \$32.38 | \$0.64 | \$33.52 |
| | | | | |

* Pinal County administered taxes excluding impacts of shared revenue to the county and revenue that is expected to flow to the Town of Florence. Values in Millions of 2013 Dollars.

**County property based on confidential estimates of assessed value of the mine

Source: Calculations based on pre-feasibility study analysis(PFS) data from Curis Resources, Ltd., W.P. Carey School of Business, REMI Model of Arizona and Pinal Co. economies.

1.18 Sensitivity Analysis and Discussion of the Order of Magnitude of Tax Collections

In the original report the fiscal consequences of alternative future prices of copper were examined. The results suggest that a 10 percent increase in copper price might be expected to have approximately a 6 percent increase in revenue collections and a 40 percent increase in copper price results in nearly a 40% increase in revenues since at significantly higher prices the revenues that flow from the value of the copper revenues like severance, corporate income taxes, royalties and property taxes begin to dominate the predicted revenue stream. And any change - from changes in yields of the mine to changes in tax rates (e.g. property, corporate, sales, etc.) will have implications for revenue flow. For example the Curis PFS financial scenario was conducted when the latest year of property tax rates were available, 2011. Today 2012 is available and any further changes in property tax rates will have a direct impact on revenue flows. After review of the Pinal County Property tax rate schedule for the last 12 years, we believe that the 2011 rates used by Curis to estimate their impending property tax burden is fair and reasonable - noting of course that future rate changes will indeed change revenue collections accordingly.