



The
**ECONOMIC
CONTRIBUTIONS**
OF REVIVAL GOLD'S
PROPOSED RESTART

*Heap Leap Operations at the Beartrack-
Arnet Gold Project in Idaho USA*

2021

ACKNOWLEDGMENTS

We gratefully acknowledge the staff and support provided by Revival Gold particularly to Rodney Cooper, Sr. Technical Advisor, for providing construction and operations budgets and other technical information on the project.

The author is a long-time Idaho regional economist: Steven Peterson, who is employed as an Associate Clinical Professor at the University of Idaho.

We also thank Timothy Nadreau, Ph.D. for providing technical support and an external review of the project.

This project was conducted on a private consulting platform and the results do not necessarily reflect the views of the University of Idaho or any other associations or individuals.

January 25, 2021

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1) INTRODUCTION AND STUDY OVERVIEW

1.1 Study Overview:

Revival Gold Inc. is planning a new venture in Lemhi County Idaho, the restart of the existing heap leach operations at the Beartrack-Arnet Gold Project in Idaho.¹ In addition to their initial feasibility and scoping of this new mine, they requested an overview of how the construction and operations were likely to affect the State's economy. This report represents that analysis. It reports projected contributions in terms of sales and increased transactions within the state, as well as the gross state product (GSP), income, and the associated jobs that would be created through the project's life cycle. The fiscal impacts the mine will likely have on the state and local governments as well as federal tax collection are provided as well.

Preliminary expectations for the first phase of operations suggest that the Beartrack-Arnett Project will produce 72,000 oz/yr of gold over with a 7-year mine life. With current price and costs expectations this represents a 25% internal rate of return on the mine's investment. The mine exists in a rural area of Idaho and supports the comparative advantage of the state by expanding on the relative strength of the industry. The resulting value generated by the mine will provide a much-welcomed infusion of jobs and dollars to the economic base of Idaho.

The report is broken into 5 sections, including this introduction. We begin with a discussion of Idaho's overall economic orientation and Lemhi County's economic and mining background. Section three of the report very briefly discusses the history of mining in Idaho. Section 4 provides the bulk of the economic analysis and data findings and section 5 is the conclusion.

1.2 Major Findings:

- This is an economic contribution estimation of the new Beartrack-Arnett gold project located in Lemhi county, Idaho.
- It is the largest past-producing gold mine in the state and is estimated to produce about 72,000 oz/year over an estimated 7-year life of the mine.
- The initial capital investment (Year 0) will be approximately \$100 million. Factoring in other expenditures (i.e., lease expenses, working capital, and reclamation costs) initial investment will increase to about \$131.7 million.
- Sustaining capital investment over the remaining life of the project will be about \$61.5 million and including other expenditures will increase to about \$75.1 million.
- Total cumulative gross capital investment will be about \$206.8 million.
- The project is expected to employ an average of 164 miners over the life of the project. In addition, the mine will employ about 84 workers in processing and 20 administrative workers. Total annual employment of the mine is 267 workers per year.
- The average salary package is estimated at least \$100,000 per direct worker which is 80.3% higher than the average salary package per job in Idaho (\$55,450) and 107% higher than the

¹ Beartrack-Arnett Gold Project 43-101. Technical Report dated December 17th, 2020.

average salary package in Lemhi County (\$48,298).

Table 1.1: *Estimated Economic Contributions of Revival Gold (millions of constant 2024 dollars)*

Year	Jobs	Gross State Product	Total Compensation	State and Local Taxes
0	1,364	\$171.85	\$113.26	\$11.00
1	813	\$144.67	\$95.34	\$10.14
2	742	\$137.35	\$90.52	\$9.70
3	887	\$152.29	\$100.37	\$10.59
4	912	\$152.79	\$100.69	\$10.57
5	957	\$160.19	\$105.58	\$11.08
6	795	\$147.16	\$96.99	\$10.39
7	897	\$152.04	\$100.20	\$10.47

Source:

- An IMPLAN economic model of Idaho was utilized to estimate the economic contributions Revival Gold. The majority or epicenter of the impacts will be in Lemhi County, but the economic contributions will be felt throughout the state, particularly in the southeast Idaho cities and the Treasure Valley (Ada and Canyon Counties).
- The economic contributions are reported by year in Table 1.1. Initially there will be approximately 1,364 jobs in the first year of the project in construction, reclamation, and scaling up the operations (including the multiplier effects).
- Average annual employment is 858 jobs during the mine operations.
- The mine will make substantial contributions to gross state product (GSP), approximately \$171.9 million in the initial year of construction and an average of \$149.5 million per year during operations. Total contributions to GSP over the seven-year life of the project amounts to \$1.2 billion.
- Total compensation (employee compensation + proprietor’s income) is estimated at \$113.3 million during the first year of construction and averages \$98.5 million per year during operations.
- Mines produce an array of state and local tax revenues. It is estimated that approximately \$11 million of tax revenues will be produced in the construction and scaling up phase of the project and produce an average of \$10.4 million during the years of operations (not including federal taxes)
- Federal tax revenues are expected to be \$19.7 million during the construction and scaling up phase of the project and produce an average of \$14.4 million during the years of operations.
- Of the state and local tax revenues, approximately 29% is property tax contributions, 46% is sales and excise taxes, and 25% is state personal income and corporate income taxes. These include the multiplier effects but exclude mine royalties and the mine license taxes.

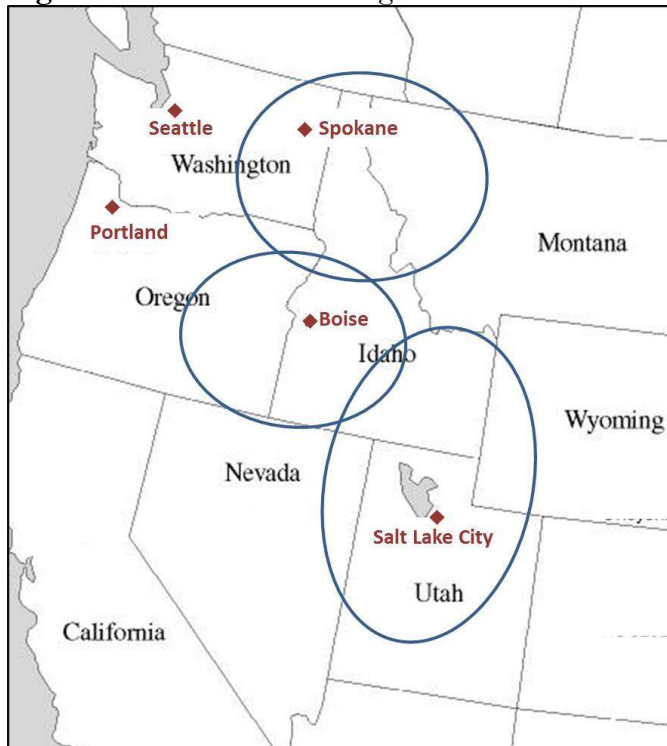
2) IDAHO STATE ECONOMIC PROFILE: A MINING BACKDROP

2.1 Overview of Regional Economy

In terms of political boundaries, Idaho is a single state. In terms of economic boundaries, Idaho is three distinct states. The Bureau of Economic Analysis divides the state of Idaho into three integrated economic regions: 1) The Boise region, which includes eastern Oregon, southwest Idaho, and central Idaho. 2) The Spokane region, which includes eastern Washington, northern Idaho, southern western region of Canada, and part of western Montana. 3) Salt Lake City Region, which includes most of Utah, northwestern Nevada, and southeast Idaho (Figure 2.1).

Political jurisdictions rarely coincide with the integrated economic regions focused on these market centers. Lemhi County falls both in the broader Salt Lake City region and the Boise, Idaho region.

Figure 2.1: *Idaho's Economic Regions*



More narrowly it is included in the Idaho Falls-Blackfoot region. It includes the thirteen counties of Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, and Power. Lemhi County is situated on Idaho's eastern Montana border in the middle portion of the state. It borders on Valley County, Custer County, Butte County, Clark County, and Idaho County in Idaho, and with Beaverhead County and Ravalli County in Montana. Lemhi County has approximately 8,085 people (2020), 2.92 million acres or 4,563 square miles in area and about 1.75 persons per square mile (U.S. Census). The county population grew about 4.5% cumulatively since 2015. About 90.7% of the county is owned by the federal government of which

71% is national forest land. Approximately 133,100 acres are in agricultural use (4.5%) and another 923,300 (31.5%) is range land (Lemhi County Profiles). The county ranked 4th in land area and 33rd (out of 44 counties) in overall population in 2019 (U.S. Census).

Total employment in 2020 was 3,095. Medium household income is approximately \$37,900 which is \$22,400 below the national average of \$60,300 and \$15,200 below the Idaho state average of \$53,100. From 2015 to 2020, employment increased by 11.3% in Lemhi County, Idaho from 2,780 to 3,095 (Emsi). Mining-related jobs will provide a significant boost to median regional incomes.

2.2 Idaho's Changing Economy

There is a clear dichotomy in the State of Idaho's economic performance. One is the urban-rural split. Most of the gains in income and population have occurred in the urban regions. The second dichotomy is between the traditional natural resource industries (farming, mining, wood products, etc.) and newly emerging high technology, service industries, and tourism. Much of this new growth is in high technologies and related service industries.

Idaho was the fastest-growing state in the nation with a 2.1% increase in population between 2018 and 2019, followed by Nevada (1.7%), Arizona (1.7%), Utah (1.7%), and Texas (1.3%). In contrast, the United States grew 0.5% over the same time. Idaho's population has grown quickly since 1990. Idaho was the nation's leader in population growth from 2016 to 2019 and ranked 6th place cumulatively from 2010 to 2019.

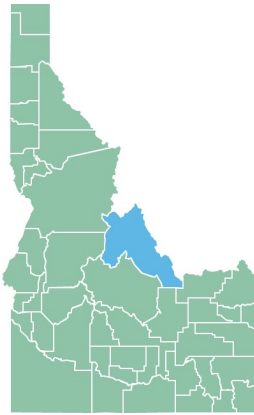
The state had an overall population increase of 29% between 1990 and 2000, compared to 13% for the nation. Only Nevada (66%), Arizona (40%), Colorado (31%), and Utah (30%) grew faster. Between 2000 and 2010, Idaho grew 21%, ranking 4th in the nation.

Idaho's spectacular growth has been unevenly distributed: Most of the growth occurred in the urban regions, while most rural regions grew slowly or lost population. However, some rural counties experienced rapid growth.

2.3 Lemhi County's Economy

Historically, Lemhi County (Figure 2.2) has been caught in the middle of these dichotomies. It is heavily dependent on natural resource industries – agriculture, some mining, and wood products. Its economy however is also part of the new economy of recreation and tourism. Natural resource industries tend to be relatively high paying jobs, particularly non-agriculture jobs. The transition can be problematic and painful for many Idaho economies. Tourism and recreation industries can be bifurcated into relatively high paying occupations and lower paying, more basic service-related industries. The higher paying jobs and occupations can be beneficial to rural communities, but the lower paying industries can be problematic, narrowing the benefit/costs of these newer industries. Tourism related jobs can also be quite seasonal and temporary. A robust mining industry that creates relatively high paying jobs even if they are ultimately temporary can assist in bridging the gap between the historical economy and the new economy of the future.

Figure 2.2: *Lemhi County*



Source: *Idaho Department of Labor*

2.4 Population

The total county population in 2020 was 8,085. The largest city and county seat is Salmon, Idaho whose population was 3,149 in 2010. The population in Salmon grew to 3,169 in 2019. The second largest city is Leadore whose population was 106 in 2019. Lemhi County cumulative population growth 2010 to 2019 of 1.1% has lagged Idaho's robust 14% growth over the same time period (U.S. Census).

2.5 Natural Resource Industries

The economy of Lemhi County historically has been based on traditional natural resource industries of agriculture (particularly cattle ranching), some mining and wood products. In 2017 there were approximately 351 farms and the market value of the products sold about \$33.3 million of which 83% was from livestock (2017 U.S. Census of Agriculture, Lemhi County).

Over the last several decades natural resource-based economies in Idaho have faced strong challenges. Timber harvest on the Nez Perce and Clearwater National forests declined from 1989 to 2010 due largely to changes in national forest policy. Employment in Idaho's timber-related (including paper) jobs has fallen as well (Upper Lochsa Land Exchange, 2011).

2.6 Government Employment

Government related jobs, in contrast increased from a total of 437 in 1969 to 861 in 2019. Government comprised 33% of the county's employment (Emsi). Government employment is problematic for rural economies. It is a stable and provides relatively high-paying jobs, but future growth will likely be negative given the budget challenges faced at the state and U.S. economies.

2.7 Tourism

In recent years tourism has been an important component of the economy. Salmon is the gateway to some of the finest whitewater recreation in the world and to the Frank Church River of No Return Wilderness. Accommodation, eating and drinking, leisure, and recreation industries comprise about 15% of the county labor force (Idaho Department of Labor).

2.8 Region's Largest Employers

Some of the largest nonfarm county employers are Steele Memorial Hospital, Idaho Department of Fish and Game, U.S. Forest Service, Salmon Public School District #291, Lemhi County, and Saveway Market (Table 2.1).

Table 2.1: *Major Lemhi County Employees*

Employer	Ownership	Range
Steele Memorial Hospital-salmon	Local Gov	100 - 249
US Forest Service	Federal Gov	100 - 249
Salmon Public Schools #291	Local Gov	100 - 249
Lemhi County	Local Gov	50 - 99
Saveway Market Inc	Private	50 - 99
Fish & Game Dept	State Gov	50 - 99
Q B Corporation	Private	50 - 99
Dahle Construction LLC	Private	50 - 99
Sawtooth Healthcare Inc	Private	10 - 49
Bureau of Land Management (BLM)	Federal Gov	10 - 49

Source: Idaho Department of Labor

2.9 Unemployment Rates

Lemhi County unemployment rate stood at 5.7% in December 2020, above Idaho's 4.4% rate and below the U.S. unemployment rate of 6.7%. Lemhi County has had persistently higher rates of unemployment than the State of Idaho over the last decade.

2.10 Total Employment

Total county employment stood at 3,095 in 2020 (Emsi) and includes self-employed workers. Government employment statistics estimate the number of jobs (not necessarily workers) so there are several reported employment measures. Covered employment (a narrow measure of employment) was 2,539 (which includes only employees covered on employer unemployment insurance). Covered employment is the measure that is most often utilized by state government officials and state employment measures.

3) MARKET STRUCTURE AND SECTOR OVERVIEW

3.1 Idaho Mining Overview

Idaho has an array of metallic mining operations and companies (mostly gold and silver production) and nonmetallic mining and processing (mostly phosphate) as well.

In 2019, there were 2,373 direct mining jobs including both covered employment and self-employed workers. For mine processing, there were 856 jobs. Total mining jobs were 3,229. This measure misses some mining employment in exploration activities which are partially captured in the Emsi extended proprietor metric. Factoring in extended proprietors, total mining-related jobs could increase to 6,185. The total direct total compensation package can average between \$65,000 to over \$110,000 across mining direct employment industries. Idaho Mining Association wage packages, average about \$110,000 per year depending on the type of mining and job classification. Mining compensation packages are considerably higher than many other industries which enhance the multiplier effects, particularly the induced impacts. This is particularly important in rural economies that have lower average salaries and income than urban regions.

3.2 Idaho Mining Contributions

Including the multiplier effects in 2019, Idaho mining contributed 10,156 total jobs, \$1.2 billion in gross state product, and \$92.8 million in state and local taxes (IMA 2019 Economic Contribution Study). The breakout of job contributions is illustrated in Table 3.1.

Table 3.1: *Jobs Contributions by Mining Industry*

Mining Industry	Total Jobs	Percent
Mining Metallic	1,916	19%
Petroleum/Exploration	1,222	12%
Sand and Gravel	870	9%
Non-Metallic Mining	1,347	13%
Non-Metallic Processing	3,647	36%
Investment and Trucking	1,154	11%
Total Jobs	10,156	100%

Source: IMA 2019

3.3 Efforts at Economic Diversification

There has been a revival of interest in mining in Idaho and feasibility studies are being conducted in several Idaho regions for new or expanded mining including Lemhi County. Mining jobs in Idaho already pay at least \$88,507 per year (in total compensation), 60% above the overall average Idaho average of \$55,450 and 83% of the Lemhi county average compensation package of \$48,354. Mining could provide a badly need injection of revenues and jobs in both the state and local economies (Emsi).

4) ECONOMICS MODEL AND CONTRIBUTIONS

This chapter of the report describes the input-output model used for assessing the extent of the mining sector in Idaho's economy. It incorporates the data and mining sector's financial descriptions from the previous chapters into the IMPLAN model and calculates the contributions the sector has in generating Gross State Product (GSP), household income, and employment. In these ways the mine is no different than other natural resource extractive industries. However, the political boundaries around mining do not exist for other commodities and it results in the sector being distinct in critical ways.

Basic industries provide income to a region by producing and *exporting* their output, which is the primary result of precious mineral mining. Their mine's expenditures in Idaho's economy represent new dollars, otherwise known as financial injections, into the state's economy. This is the standard approach for most contribution analysis. However, the mine also represents a resident serving industry or "non-basic" industry. The impacts of these industries are largely felt through the *retention and circulation* of dollars within the economy. This function of circulating money in the economy is commonly known as "deepening" the economy, since it prevents money from coming in and immediately exiting the market. As the money circulates within the economy it creates jobs and incomes throughout the state's supply chains. In the case of the mine, local provisions and supply chains prevents consumers from seeking product outside of the state, and thus, local production substitutes for imported inputs.

In this case, the mine's exports represent the *direct* contributions to Idaho. However, the mine generates *indirect* contributions as well through their expenditures on their suppliers in other industries. Once the mining output is sold, some portion of that revenue generated by Revival Gold will be spent on electricity, for example. A portion of the revenues received by the utility industry will then be spent on a new turbine from a manufacturing industry, etc. And so, the dollar that was brought into the economy as a result of the mine, circulates through many businesses throughout the state, all the while generating sales and incomes. Indirect effects represent additional economic activity in Idaho's economy driven by the business-to-business transactions that stem from mining expenditures within the Idaho supply-chain.

In addition to the direct and indirect impacts of the mine are the *induced* economic contributions, captured in the form of local goods and services purchased by households. As mine employees spend their salaries and wages in the state economy on retail goods, home improvement, entertainment, etc., those household-to-business transactions ripple through the economy. These induced expenditures represent the households' supply-chains and translate into jobs and income for retailers, bank tellers, grocery store clerks, restaurant employees, gas station attendants, and so on. Typically, these expenditures occur locally, generating urban and rural economic development. These additional linkages, beyond the mining sector and indirectly related sectors of the economy, help to form a complex intertwining web of industries and institutions within Idaho. So, the relevant question to ask is not only what the mine brings into the state directly, but also, how those dollars contributes to Idaho's economy through this complex networking of industries.

Basic vs. Non-Basic Impacts: Which Industry Support the Economy?

A small agricultural town may seem to have a sizeable professional service sector in terms of employment (i.e., accounting or law offices, etc.), while the number of farm employees is fairly low, and often seasonal. However, the farms are exporting their product and bringing new money into the economy. The professional service sector is predominantly serving the residents. In this story, it is the farmers that are supporting the economy and the professional service firms are retaining the money within the economy. However, it should be clear that the farms would continue to exist in the absence of the professional service firms, while those same firms would not be likely to stay in the absence of the farms. In this setting, the non-basic professional jobs rely on the basic agricultural jobs. The employment impacts, including many of the professional employees, would be attributed to the non-basic agricultural industries.

This story gets more complex in the case of apples, potatoes, etc. where processing occurs near the primary commodity input. This is similar to mining operations where processing locates near the source of the commodity. We structure these models to account for the interdependency of the mine and processors and assume the mining operation is dominate basic force.

4.1 Model Description

Input-Output models are designed to capture the entirety of this complex networking of industries and institutions. In this case it serves to show what portion of that economic web will be a result of the mine. To that end, this section of the report covers the technical aspects of the model and the nuances made to various components of it in order to ensure its accuracy. We begin by explaining the basics of any input-output model as well as the data used for this particular analysis. Next, we discuss how the model needed to be modified to ensure there was no double counting when evaluating the contributions of the production vs. processing components of the sector. Lastly, we outline the direct effects, sometimes referred to as the shock, the mine provides to the economy. The subsequent multiplier effects and total contributions are reported at the end of the chapter.

4.2 Basics Model Description

The system of accounts known as Input-Output (I-O) tables represent an economist's version of double-entry bookkeeping for industries. Figure 4.1 below shows a simplified version of an I-O matrix with just a hand full of industries. Each cell, in this table of accounts, is populated by dollar transactions.

Figure 4.1: *Aggregated form Input-Output Matrix*

		Producers as Consumers						Final Demand			
		Agric.	Min.	Const.	Manuf.	Services	Other	Households	Investment	Government	Net exports
Producers	Agric.										
	Min.										
	Const.										
	Manuf.										
	Services										
	Other										
Value Added	Labor							Gross Domestic Product			
	Returns to Capital										
	Taxes										

Reading down a column of this table shows what inputs an industry is buying in order to produce their output. This is what was done This was done by examining the mining budgets and timing of expenditures. The Agriculture column, for example, may buy seeds from themselves, fertilizer and farm equipment from the manufacturing sector, and legal and accounting services from the service sector. Payments to employees are captured in the “Labor” row. Payments must be made to owners of capital, and the industry pays taxes to the government. This is where the expenditure data enabled us to isolate operations. Reading across a row tells us where an industry’s income originates. In this case a large portion of the revenues will stem from exports of the raw and processed mining outputs out of the state.

Summing all the labor, capital, and tax payments for all industries gives the sum of all value-added and will equal the Gross Regional Product (GRP) of the region. Similarly summing all of the expenditures of households, government, investment, and net exports yields the GRP of the region. These two methods of calculating GRP are known as the Income and Expenditure approaches, respectively, and they represent a check for ensuring all accounts balance. It is through the I-O system that we are able to trace the dollars through the economy, quite literally following the money. It is through this tracing of dollars that we are able to calculate multiplier effects associated with the mine’s exports and spending. All of these contributions are reported in terms of gross state product.

Sales vs. value-added

A way to explain why sales overstates impacts is to imagine individuals spending money in a regional economy. Suppose an individual spends \$40,000 on a new truck. Another individual spends the same amount on an appendectomy at the regional hospital. From a sales perspective, the impacts are the same, \$40,000. However, from a value-added perspective the purchase of the truck provides less to the regional economy. Perhaps \$30,000 of the truck purchase had to immediately go to the manufacturer back in Detroit or Japan. Conversely, the appendectomy at the hospital probably saw most of the spending stay local as income to the doctors, nurses and hospital staff. Perhaps only \$10,000 leaves the region for importing of capital assets like the hospital bed, scalpels, etc. From a value-added perspective, the hospital is more valuable than the auto dealership even though they are equivalent from a sales perspective.

Reporting Contributions or impacts on a GSP basis avoids the double counting and overstatement of contributions that results from reporting sales transactions.

The remainder of this chapter breaks the overall contributions of the mining operation into two phases: the initial startup and construction contributions in Phase One², and the onboarding, operations, and infrastructure expansions occurring in Phase Two. We conclude the section with a summary of the contributions for each year of the mining project including the fiscal contributions received by the state & local governments and the federal government.

4.3 Phase One: Initial Investment and Construction Impacts

Phase one is driven by large construction and capital investments. These investments represent immediate albeit one-time costs that will not be sustained each year of the project. Construction impacts represent a somewhat ephemeral part of any business because once the construction is complete the contributions stemming from it are complete as well. This can be juxtaposed to the continued operational impacts (phase two) that continue throughout the duration of the project life. Tables 4.1 shows the total contributions (direct, and multiplier contributions) that stem from the construction spending of the mine. This can be seen by the large contributions that accumulate in the construction industry. Total contributions from this activity amounts to \$95.8 million in the construction year of Phase One.

Those large contributions move to the mining sector in Table 4.2 once start-up and employment onboarding contributions begin being realized. Those large impacts will remain predominantly in the mining industry during phase two once capital expansion becomes a more minor part of the mine's spending. Total contributions from initial and onboarding of new employees during Phase One amounted to \$37.5 million

² Throughout this report Phase One refers to the initial construction and onboarding investments that precede mining operations

Table 4.1: Initial Construction Impacts

Industry	Sales	Gross State Product	Income	Employment
Plant Agriculture	\$120,012	\$63,234	\$33,569	1
Animal Agriculture	\$122,298	\$46,853	\$19,604	0
Logging and Forest Services	\$60,444	\$44,048	\$36,709	1
Mining	\$1,207,363	\$174,234	\$263,782	5
Utilities	\$1,420,683	\$554,283	\$156,586	1
Construction	\$81,045,459	\$55,299,353	\$40,603,587	496
Food Processing	\$602,900	\$112,182	\$89,326	1
Wood and Paper Manufacturing	\$876,687	\$326,730	\$237,849	3
Other Basic Manufacturing	\$5,287,855	\$1,360,702	\$837,000	12
Wholesale Trade	\$18,499,280	\$10,559,501	\$5,115,962	62
Retail Trade	\$5,060,486	\$2,960,834	\$1,955,100	52
Transportation	\$3,600,055	\$1,761,146	\$1,327,172	26
Publishing and Communication	\$2,367,316	\$783,147	\$335,348	6
FIRE	\$16,322,362	\$8,545,093	\$1,809,544	47
Professional Services	\$5,069,178	\$2,775,229	\$2,221,861	32
Other Services	\$7,038,157	\$4,080,789	\$2,919,425	68
Private Education	\$382,236	\$225,551	\$197,024	6
Other Health Care Services	\$3,603,838	\$2,320,976	\$2,080,769	35
Private hospitals	\$2,682,866	\$1,462,693	\$1,283,823	13
Social Services	\$381,396	\$222,859	\$205,362	8
Arts and Culture	\$297,957	\$115,020	\$81,573	5
Recreation	\$358,994	\$204,749	\$118,308	5
Lodging, Food, and Drink	\$2,745,997	\$1,343,099	\$869,503	39
State and Local Government	\$799,461	\$357,642	\$206,972	3
Federal Government	\$215,827	\$173,375	\$180,398	2
Total	\$160,169,107	\$95,873,322	\$63,186,156	929

Source: IMPLAN and Author's Calculations

Table 4.2: Initial Start-Up and Onboarding Impacts

Industry	Sales	Gross State Product	Income	Employment
Plant Agriculture	\$109,804	\$57,855	\$30,714	1
Animal Agriculture	\$92,980	\$35,621	\$14,904	0
Logging and Forest Services	\$23,829	\$17,365	\$14,472	0
Mining	\$76,890,085	\$11,095,973	\$16,798,776	135
Utilities	\$1,445,672	\$564,033	\$159,340	1
Construction	\$952,499	\$649,914	\$477,200	4
Food Processing	\$448,844	\$83,517	\$66,501	1
Wood and Paper Manufacturing	\$162,049	\$60,393	\$43,964	0
Other Basic Manufacturing	\$1,480,800	\$381,048	\$234,392	3
Wholesale Trade	\$4,455,361	\$2,543,147	\$1,232,127	13
Retail Trade	\$3,497,497	\$2,046,347	\$1,351,245	37
Transportation	\$2,024,032	\$990,156	\$746,166	14
Publishing and Communication	\$1,640,123	\$542,580	\$232,336	4
FIRE	\$12,434,172	\$6,509,545	\$1,378,488	34
Professional Services	\$8,639,328	\$4,729,783	\$3,786,686	58
Other Services	\$4,070,135	\$2,359,902	\$1,688,291	43
Private Education	\$289,594	\$170,884	\$149,271	5
Other Health Care Services	\$2,686,577	\$1,730,233	\$1,551,164	26
Private hospitals	\$2,045,881	\$1,115,410	\$979,009	10
Social Services	\$296,373	\$173,178	\$159,582	6
Arts and Culture	\$216,443	\$83,553	\$59,257	4
Recreation	\$292,533	\$166,844	\$96,405	4
Lodging, Food, and Drink	\$2,090,612	\$1,022,543	\$661,980	29
State and Local Government	\$529,873	\$237,041	\$137,178	2
Federal Government	\$120,716	\$96,972	\$100,900	1
Total	\$126,935,811	\$37,463,838	\$32,150,348	436

Source: IMPLAN and Author's Calculations

Total Contributions of both the construction, start-up costs, and onboarding amounted to \$133.34 million. Of those dollars \$10.99 million were collected by state and local governments in the form of Property (\$2.98 million), Sales & Excise (\$4.69 million), and Income Taxes (\$3.33 million). Table 4.3 shows these fiscal contributions in more detail.

Table 4.3: Initial Fiscal Impacts

Industry	Property Taxes	Sales and Excise Taxes	Income	Total
Construction	\$1,431,495	\$2,252,628	\$2,034,427	\$5,718,550
Start-Up Costs and Onboarding	\$1,547,727	\$2,435,534	\$1,294,373	\$5,277,633
Total	\$2,979,222	\$4,688,162	\$3,328,800	\$10,996,183

Source: IMPLAN and Author's Calculations

4.4 Phase 2: Operations and Capital Expansion

In Phase Two the mine will engage in operations and capital expansion projects and mine closures.³ Capital expansion impacts occur throughout multiple years (see section 4.4) the average impacts per year are reported in Table 4.4 and are just over \$9.08 annually for each year the mine operates. Table 4.5 shows the contributions stemming from the mining activity itself, where the majority of the impacts originate. These also represent average Impacts for the seven years of operation. The average capital expansion and operations result in a combined average annual impact of just under \$70 million.

Table 4.4: *Average Annual Capital Expansion Impacts*

Industry	Sales	Gross State Product	Income	Employment
Plant Agriculture	\$11,376	\$5,994	\$3,182	0
Animal Agriculture	\$11,593	\$4,441	\$1,858	0
Logging and Forest Services	\$5,729	\$4,175	\$3,480	0
Mining	\$114,445	\$16,516	\$25,004	0
Utilities	\$134,666	\$52,540	\$14,843	0
Construction	\$7,682,246	\$5,241,789	\$3,848,787	47
Food Processing	\$57,148	\$10,634	\$8,467	0
Wood and Paper Manufacturing	\$83,101	\$30,971	\$22,546	0
Other Basic Manufacturing	\$501,232	\$128,980	\$79,339	1
Wholesale Trade	\$1,753,535	\$1,000,928	\$484,939	6
Retail Trade	\$479,680	\$280,656	\$185,323	5
Transportation	\$341,247	\$166,938	\$125,802	2
Publishing and Communication	\$224,396	\$74,234	\$31,787	1
FIRE	\$1,547,186	\$809,984	\$171,525	4
Professional Services	\$480,504	\$263,062	\$210,609	3
Other Services	\$667,142	\$386,815	\$276,730	6
Private Education	\$36,232	\$21,380	\$18,676	1
Other Health Care Services	\$341,605	\$220,004	\$197,235	3
Private hospitals	\$254,307	\$138,648	\$121,693	1
Social Services	\$36,152	\$21,125	\$19,466	1
Arts and Culture	\$28,243	\$10,903	\$7,732	0
Recreation	\$34,029	\$19,408	\$11,214	0
Lodging, Food, and Drink	\$260,291	\$127,311	\$82,420	4
State and Local Government	\$75,780	\$33,901	\$19,619	0
Federal Government	\$20,458	\$16,434	\$17,100	0
Total	\$15,182,324	\$9,087,769	\$5,989,374	88

The contributions reported include the direct expenditures of the mine within the state, the indirect business-to-business transactions, and the induced, household-to-business transactions. Those transactions are converted to GSP by determining the value-added to total sales transaction ratios. That vector of ratios is then multiplied by the sales vector to determine the GSP for each industry. Income represents a fraction of the overall GSP, and a jobs to income value is used to convert income into full time equivalent employment.

³ Plant Closures technically occur in Year-8 but are included in year 7 contributions.

Table 4.5: Average Annual Operations Impacts

Industry	Sales	Gross State Product	Income	Employment
Plant Agriculture	\$188,569	\$99,357	\$52,745	2
Animal Agriculture	\$156,822	\$60,079	\$25,138	0
Logging and Forest Services	\$40,974	\$29,859	\$24,884	1
Mining	\$140,261,988	\$20,241,143	\$30,644,129	246
Utilities	\$2,525,648	\$985,388	\$278,374	2
Construction	\$1,670,357	\$1,139,726	\$836,845	7
Food Processing	\$756,476	\$140,758	\$112,080	2
Wood and Paper Manufacturing	\$281,664	\$104,972	\$76,417	1
Other Basic Manufacturing	\$2,645,773	\$680,826	\$418,792	5
Wholesale Trade	\$7,864,859	\$4,489,309	\$2,175,021	23
Retail Trade	\$5,921,799	\$3,464,779	\$2,287,865	62
Transportation	\$3,488,596	\$1,706,620	\$1,286,082	24
Publishing and Communication	\$2,642,805	\$874,283	\$374,373	6
FIRE	\$20,880,302	\$10,931,269	\$2,314,850	57
Professional Services	\$7,062,910	\$3,866,740	\$3,095,729	50
Other Services	\$6,421,680	\$3,723,350	\$2,663,710	69
Private Education	\$491,045	\$289,757	\$253,110	8
Other Health Care Services	\$4,534,229	\$2,920,174	\$2,617,954	44
Private hospitals	\$3,459,755	\$1,886,251	\$1,655,585	17
Social Services	\$501,997	\$293,329	\$270,299	11
Arts and Culture	\$351,063	\$135,520	\$96,112	6
Recreation	\$494,764	\$282,184	\$163,051	7
Lodging, Food, and Drink	\$3,451,592	\$1,688,214	\$1,092,925	49
State and Local Government	\$877,479	\$392,544	\$227,170	3
Federal Government	\$201,801	\$162,108	\$168,675	2
Total	\$217,174,946	\$60,588,540	\$53,211,918	702

Table 4.6 shows the closure costs and associated impacts. While these impacts will actually be felt in year 8 after the mine ceases production, they are relatively minor and as such are combined in the year seven results shown in section 4.5 of the report. These direct closure costs amount to \$12.9 million in sales. Once multiplier are applied the total sales captured transactions amount to \$23.6 million or \$12.7 million in gross state product.

Table 4.7 reports the average fiscal impacts according to the state and local governments from the average operating year. Because operations don't vary a great deal between year-1 and year-7 these contributions are quite stable throughout this time frame and the results in table 4.7 are a good representation of the expected revenues each year of mine operations.

Table 4.6: Closure Contributions

Industry	Sales	Gross State Product	Income	Employment
Plant Agriculture	\$19,311	\$10,175	\$5,402	0
Animal Agriculture	\$21,048	\$8,064	\$3,374	0
Logging and Forest Services	\$4,107	\$2,993	\$2,494	0
Mining	\$11,016	\$1,590	\$2,407	0
Utilities	\$183,618	\$71,639	\$20,238	0
Construction	\$110,616	\$75,476	\$55,418	1
Food Processing	\$102,516	\$19,075	\$15,189	0
Wood and Paper Manufacturing	\$22,953	\$8,554	\$6,227	0
Other Basic Manufacturing	\$91,455	\$23,534	\$14,476	0
Wholesale Trade	\$432,411	\$246,823	\$119,583	1
Retail Trade	\$754,161	\$441,251	\$291,367	8
Transportation	\$335,139	\$163,950	\$123,550	2
Publishing and Communication	\$574,305	\$189,990	\$81,355	1
FIRE	\$2,965,098	\$1,552,290	\$328,719	9
Professional Services	\$14,303,110	\$7,830,541	\$6,269,167	91
Other Services	\$1,650,027	\$956,701	\$684,431	16
Private Education	\$61,263	\$36,150	\$31,578	1
Other Health Care Services	\$603,243	\$388,506	\$348,298	6
Private hospitals	\$448,116	\$244,312	\$214,435	2
Social Services	\$63,591	\$37,158	\$34,240	1
Arts and Culture	\$72,012	\$27,799	\$19,715	1
Recreation	\$63,966	\$36,482	\$21,080	1
Lodging, Food, and Drink	\$595,734	\$291,380	\$188,636	8
State and Local Government	\$146,613	\$65,588	\$37,957	1
Federal Government	\$30,288	\$24,331	\$25,316	0
Total	\$23,665,717	\$12,754,351	\$8,944,652	152

Table 4.7: Initial Fiscal Impacts

Industry	Property Taxes	Sales and Excise Taxes	Income	Total
Average Annual Taxes from Capital Expansion	\$135,690	\$213,525	\$192,842	\$542,058
Average Annual Taxes from Operations	\$2,899,808	\$4,563,195	\$2,311,865	\$9,774,868
Average Total Taxes	\$3,035,499	\$4,776,720	\$2,504,707	\$10,316,925

4.5 Economic Summary

Table 4.8 shows the contributions of the mine during the pre-production construction phase one, listed as Year-0, through the end of production in Year-7. While phase one is the year with the largest impacts in terms of gross state product, income (Table 4.9), or employment (Table 4.10), contributions from operations are largest in year 6. Between the ongoing capital investments and operations, year-5 has the second largest contributions projected for GSP \$160.2 million, household income \$105.6 million, employment at 957 jobs. Figure 4.2 and Figure 4.3 presents these results by year for each type of activity.

Table 4.8: Annual Gross State Product Contributions by Year and Source

Industry	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7
Construction	\$95,873,322							
Capital Expansion		\$7,314,289	\$0	\$14,931,939	\$20,079,257	\$21,288,898	\$0	\$0
Opening/Closing	\$4,721,907	\$0	\$0	\$0	\$0	\$0	\$0	\$14,165,721
Operations	\$71,258,775	\$137,353,870	\$137,353,870	\$137,353,870	\$132,706,559	\$138,902,974	\$147,164,861	\$137,870,238
Total	\$171,854,004	\$144,668,159	\$137,353,870	\$152,285,809	\$152,785,815	\$160,191,872	\$147,164,861	\$152,035,959

Figure 4.2: Annual Gross State Product Contributions by Year

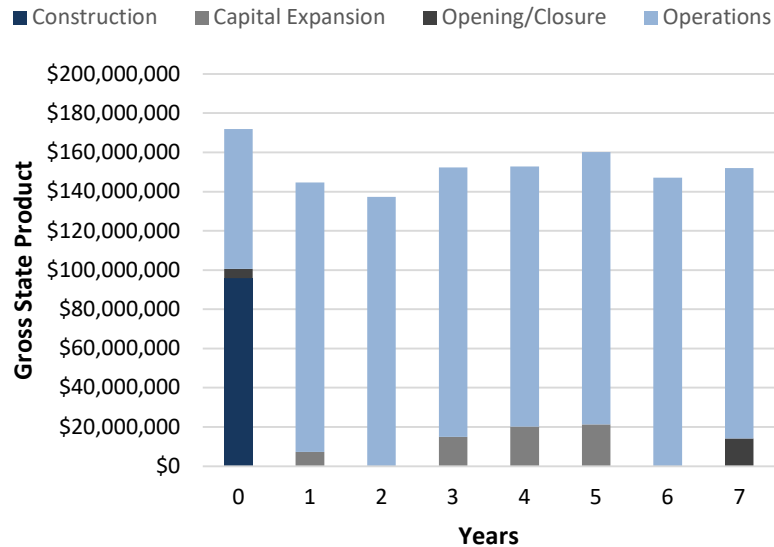


Figure 4.3: Annual Employment Contributions by Year Source

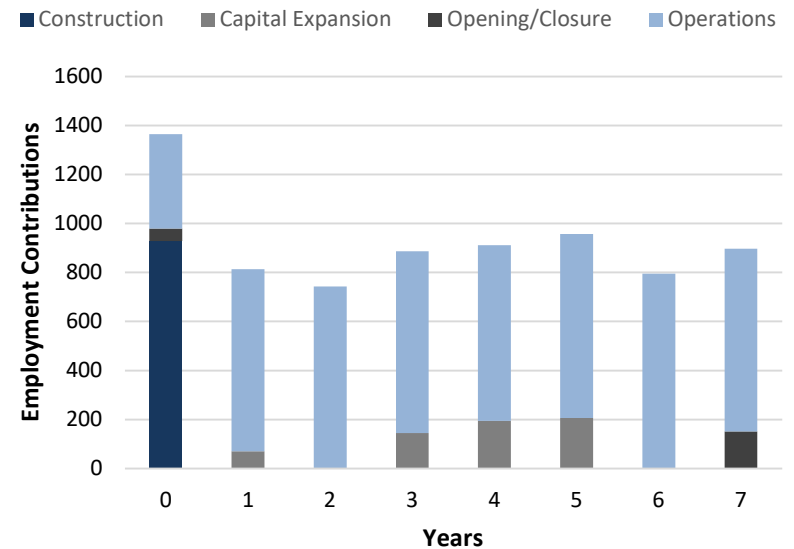


Table 4.9: Annual Labor Income Impacts by Year and Source

Industry	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7
Construction	\$63,186,156	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Capital Expansion	\$0	\$4,820,547	\$0	\$9,841,026	\$13,233,411	\$14,030,635	\$0	\$0
Opening/Closing	\$3,112,014	\$0	\$0	\$0	\$0	\$0	\$0	\$9,336,043
Operations	\$46,963,722	\$90,524,276	\$90,524,276	\$90,524,276	\$87,461,425	\$91,545,226	\$96,990,296	\$90,864,593
Total	\$113,261,892	\$95,344,823	\$90,524,276	\$100,365,302	\$100,694,835	\$105,575,862	\$96,990,296	\$100,200,636

Table 4.10: Annual Employment Impacts by Year and Source

Industry	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7
Construction	929	0	0	0	0	0	0	0
Capital Expansion	0	71	0	145	195	206	0	0
Opening/Closing	51	0	0	0	0	0	0	152
Operations	385	742	742	742	717	751	795	745
Total	1,364	813	742	887	912	957	795	897

The last tables in this section of the report show the State & Local Tax receipts by year and taxing source (Table 4.11 and 4.12). The average annual State & Local taxes collections come out to approximately \$10.5 million in added taxes for the state. These dollars help to slow the rate of tax increases imposed by state and municipal governments on their citizens by expanding the tax base. Taxes Collected by the Federal government averaged \$15.1 million annually with a high of \$19.7 million in Year-0 and a low of \$12.9 million in Year-2 of production. Total state & local tax collections over the entire eight-year project life amounted to \$83.95 million. Total federal tax collections over the project life amounted to \$120.66 million.

Table 4.11: State Fiscal Impacts by Year and Type

Fiscal Impacts	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7
Property Taxes	\$2,979,221	\$2,987,378	\$2,878,168	\$3,101,118	\$3,080,591	\$3,228,495	\$3,083,751	\$3,052,614
Sales and Excise Taxes	\$4,688,161	\$4,700,996	\$4,529,141	\$4,879,980	\$4,847,679	\$5,080,422	\$4,852,651	\$4,803,654
Income	\$3,328,799	\$2,449,820	\$2,294,612	\$2,611,466	\$2,643,055	\$2,772,240	\$2,458,512	\$2,615,043
Total	\$10,996,183	\$10,138,196	\$9,701,921	\$10,592,565	\$10,571,327	\$11,081,159	\$10,394,915	\$10,471,312

Table 4.12: Federal Fiscal Impacts by Year and Type

Fiscal Impacts	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Excise/Other	\$1,053,081	\$1,055,965	\$1,017,362	\$1,096,169	\$1,088,913	\$1,141,194	\$1,090,030	\$1,079,023
Corporate	\$995,902	\$316,141	\$251,815	\$383,136	\$419,885	\$441,884	\$269,801	\$319,016
Income	\$17,670,325	\$12,436,286	\$11,594,879	\$13,312,591	\$13,512,411	\$14,174,640	\$12,423,084	\$13,516,591
Total	\$19,719,310	\$13,808,394	\$12,864,056	\$14,791,898	\$15,021,211	\$15,757,719	\$13,782,917	\$14,914,632

5) CONCLUSIONS

Lemhi County is one of the more rural areas in Idaho. The proposed mine will provide high wage employment and income in an area that is in great need of such economic diversity and development. Table 5.1 shows the growth in activity statewide for each year the mine operates. The majority of these effects will be felt in Lemhi County, though the dispersion of the contributions, especially the fiscal contributions to the state government, will have a positive effect throughout Idaho.

Over the course of the seven years of operations, total additional value to the state's bottom line (Gross State Product) will be a cumulative \$1.22 billion, averaging out to \$152.29 million annually. This large increase in economic activity will generate significant gains in the State's tax base, slowing the growth of individual tax rates. Total gains to state and local government coffers would fall just short of \$84 million, averaging out to \$10.49 million annually. Federal tax collections average \$15.08 million annually, primarily stemming from federal income tax collections (\$13.5 million), and corporate and excise taxes (\$1.50 million).

Table 4.12: *Estimated Economic Contributions of Revival Gold (millions of constant 2024 dollars)*

Year	Jobs	Gross State Product	Total Compensation	State and Local Taxes
0	1,364	\$172	\$113	\$11
1	813	\$145	\$95	\$10
2	742	\$137	\$91	\$10
3	887	\$152	\$100	\$11
4	912	\$153	\$101	\$11
5	957	\$160	\$106	\$11
6	795	\$147	\$97	\$10
7	897	\$152	\$100	\$10
<i>Total Contributions</i>	-	<i>\$1,218</i>	<i>\$803</i>	<i>\$84</i>

The true gains to Idaho will be felt by the increased employment and additional income for families. Annual estimated full time equivalent employment stemming from mine activities is 921 jobs. Those jobs will add roughly \$100.37 million in income for Idaho families.

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APPENDIX 1: CAVEATS AND LIMITATIONS

Mining is very capital intensive and involve massive flows of investment that occur in an irregular fashion over time. Mines tend to be situated in extremely rural regions while the financial backing typically comes from more urban centers, often out of state. This creates challenges in estimating economic contributions. We are assuming that most returns to capital occur within Idaho.

There is debate within regional economists on incorporating opportunity costs for projected contribution analysis (i.e., impact analysis). We are assuming there are no alternative uses for this capital in this mining investment.

This is a forecast based on several factors and there is no warranty or representation made by Peterson and Associates of the projected values or results contained in this study. Every reasonable effort has been made to ensure that the data contained in this report are accurate but given the complexity of the analysis, data errors are still possible. There is no warranty expressed or implied.

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