

**IDAHO MINING AND EXPLORATION, 2005**  
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**Idaho Geological Survey**

Bolstered by stellar prices for molybdenum, Idaho's preliminary nonfuel mineral production value, as compiled by the U.S. Geological Survey, jumped to \$ 893 million in 2005. This is a new record for Idaho and is double the revised value of 2004 production of \$ 446 million (Fig. 1). The last two years have seen a significant increase in the proportion of value attributable to metals versus industrial minerals. Principal minerals by value were molybdenum concentrates, phosphate rock, sand and gravel, silver and portland cement. Idaho ranked second in phosphate and garnet production, third in silver and pumice, fourth in molybdenum concentrate production, and 21<sup>st</sup> overall. Mining employment for the 4<sup>th</sup> quarter of 2005 was listed at 2,130 persons, a slight increase over 2004. In addition, three large phosphate processing plants in southeastern Idaho provide approximately 1,000 mining-related jobs.

Last year, the Idaho Geological Survey updated the state's historic production of gold. In the period 1978-2004, some 2.5 million ounces of gold were mined, principally from open pit operations. That raises Idaho's total historic gold production to 12.4 million troy ounces. Though Idaho was not a major gold producer, the high price last year (\$420 to over \$ 500 per ounce) fueled several exploration projects. Molybdenum prices stayed above \$ 30 per pound for most of 2005, and rose to nearly \$ 40 per pound for part of the year. Silver rose to \$ 8.50 per troy ounce, and base metal prices also increased. Demand for metals by China's growing economy spurred many of the price increases. Within Idaho and nearby states, a robust economy and construction boom also created strong demand for cement, aggregate and dimension stone. According to the Bureau of Land Management, 1,115 new mining claims were filed and only 331 cases closed, while some 11,524 claims were held, approximately a quarter of those by small miners.

### **Metal Mining**

In the world renowned Coeur d'Alene District of north Idaho, silver mining continued to add to the over 1.18 billion ounces produced since 1884. Two mines operated, the Lucky Friday and the Galena, and exploration and rehabilitation work continued at the Sunshine mine in Shoshone County. The high-grade, quartz-siderite-sulfide veins typically contain either copper or lead in addition to silver, and the byproduct credits can be important.

Hecla Mining produced 2.42 million ounces of silver (plus lead and zinc) at an average total cash cost of \$ 5.27 per ounce in 2005 from mining of the Gold Hunter deposit at the Lucky Friday mine in Mullan. Mining is by both mechanized and slusher stopes. The expansion project at the Gold Hunter continued with an additional 2,000 feet of drift completed on the 5900 level access from the 6,200-foot deep Silver Shaft, plus lateral drifting along the vein and installation of I-drifts to ready ore for mining. Exploration drilling to the 6400 level tested about half the strike length of the veins and proved up ore below the 5900 level. Total diamond drill footage for the year was 26,587 feet in 69 holes. The drilling and channel sampling resulted in a doubling of the proven and probable reserve to 17.2 million ounces silver with potential for a deeper resource as well. Mill improvements, including installation of new flotation cells, upgraded crushing capacity and new tailings thickeners, will allow increased production in 2006. Employment increased to about 160 workers.

Coeur Silver Valley operated the Galena mine, also in Shoshone County. Silver production for 2005 of 2.06 million ounces was less than expected due to lower grades and shorter vein lengths in some headings. This resulted in rather high cash costs, and at year's end the company reported that it was looking at strategic alternatives, including sale of the property. Coeur implemented an aggressive exploration program, targeting fault-hosted high-grade veins such as the 72 vein in the Polaris Fault; by December, geologists had completed 75% of a planned 58,000' drill program. Grades and production did improve some at the end of 2005. The mine uses both conventional and mechanized mining.

Sterling Mining Company continued to evaluate and refurbish the Sunshine mine, which it acquired in 2003. The previous owners closed the 360-million ounce silver producer in 2001. Sterling replaced the steel hoist cable on the double and single drums for the Jewell shaft (Fig. 2) and hired contractor Atlas Fausett to re-establish the Sunshine mine's escapeway and ventilation system. This required rehabilitation of the Silver Summit mine, primary escapeway for the Sunshine, and of the Silver Dollar Tunnel which serves as escapeway for the hoist operator at the Silver Summit. Inspection of the 3100 levels of the Jewell Shaft and adjoining part of the Silver Summit showed them to be in good condition, and various safety and maintenance tasks were completed. Sterling has a number of exploration targets, based on review of mine maps and results of surface geophysics and drilling from 2004.

In December, Sterling announced that it had filed Form 10 with the Securities and Exchange Commission in order to become a publicly reporting company. It also announced plans to install utilities in the Silver Summit and Polaris Tunnel and conduct a multi-hole, underground diamond drilling program into the Yankee Girl vein below previously identified geophysical anomalies. Sterling has been acquiring properties adjacent to the Sunshine in order to unitize the geological targets under common ownership and explore areas not tested by previous owners. The aim is to reopen the Sunshine and mine veins in some of the long neglected shallower ground.

Formation Chemicals continued to operate the Sunshine refinery at Big Creek as a custom precious metal refinery. The company owner, Formation Capital Corporation, purchased the hydrometallurgical facility to process cobalt ores from its proposed mine in Lemhi County.

New Jersey Mining Company, based in Kellogg, is the newest underground miner in the Coeur d'Alene region. In March, New Jersey shipped its first gold concentrate from the Golden Chest mine at Murray to the Barrick Goldstrike facility in Nevada. New Jersey is mining the Katie-Dora gold-quartz vein at the rate of about 400 tonnes per month and trucking the ore to its mill in Kellogg using an innovative ore bin and hauling technique – a truck-loadable garbage dumpster (Fig. 3). The mill recovers gold using both a flotation and gravity circuit. Katie-Dora ore in August averaged 14 g/t gold, and mill recovery is over 95%. Late in the year, New Jersey started a 610-meter drill program with four holes, targeting the Idaho vein, which hosts an open pit resource drilled out by Newmont in the 1980's. The new HQ drilling at the Golden Chest followed up a high grade intercept last year on the Idaho vein. The highlight of the 2005 drilling was a 2.4-meter intercept assaying 23.3 grams per tonne gold in DDH05-3 on a deep portion of the Idaho vein. Based on modeling of the four intercepts to date, the moderately dipping vein is interpreted as a 5 to 15-m thick mineralized zone of mesothermal quartz veins with a higher grade core containing both free gold and sulfides. Star Materials operated a placer mine in Butte Gulch, near the Golden Chest east of Murray.

Central Mine Rescue held its annual training session in the Silver Valley. It serves mines in a wide area of the western U.S. Several companies reported difficulty finding experienced miners and other personnel. The safety training and mine rescue service is greatly appreciated. Central Mine Rescue also hosts an annual mining competition in the Valley.

Thompson Creek Mining Company enjoyed a spectacular year of high molybdenum prices as it mined ore from Phase 5 in the bottom of its large, 30,000 tpd open pit west of Challis in Custer County. Average grade runs 0.14 to 0.17% Mo, but there are a few higher grade spots in the granodiorite laced with quartz-biotite-molybdenite veins. Molybdenum oxide prices were over \$ 30 per pound for the year, a far better situation than a few years ago when they were \$ 3 per pound. In addition to mining Phase 5 ore, the mine had a major stripping operation on Phase 6. The company purchased 5 new CAT 789 haul trucks and replaced the conveyor which carries ore from the mine to the mill (Fig. 4). Employment was up to 220 persons, and production was in excess of 15 million pounds of concentrate.

Kinross DeLamar received the Northwest Mining Association's Environmental Excellence Award in 2005 for its work on the closed DeLamar and Stone Cabin mines in Owyhee County. Large scale reclamation started in 2002 at the site and is scheduled to last 5 years. In one example, a 114-acre waste rock disposal area was re-graded, capped with locally sourced, low permeability clay and a growth medium, and engineered storm water channels installed. The pits have been partially backfilled.

### **Phosphate industry**

Caribou County in southeastern Idaho is why Idaho ranks second nationally in phosphate rock production with over 4 million metric tons mined in 2005. The Western Phosphate Reserve consists of apatite-rich beds in organic-rich shale of the Meade Peak Member of the Permian Phosphoria Formation. The phosphate rock is processed into either phosphoric acid fertilizers or elemental phosphorus.

The Smoky Canyon mine, owned by the J.R. Simplot Company of Boise, is located near the Idaho/Wyoming border and is the largest operation; it employs just over 200 persons and ships over 2 million tons of ore a year. Smoky Canyon had an excellent mining and milling year with mining in the C, B, and E panels. The mine purchased a new CAT 24H Moter Grader and 992 loader. Simplot was in the midst of preparing an Environmental Impact Statement (EIS) for a controversial expansion into the Manning Creek Lease, part of which is in a designated roadless area. The Bush administration's changes to roadless area management, providing for more local land management and state oversight, were helpful, and an environmental organization's appeal of the exploration work was denied by a federal judge. The Draft EIS for Manning Creek was released at year's end. Water quality, transportation and selenium mitigation were key issues addressed in the planning process. The expansion would provide approximately 15 years of reserve to the Smoky Canyon operations. Simplot conducted a large exploration program, drilling 150 holes on their Dairy Syncline lease and near Conda. Ore from the Smoky Canyon mine is transported through an 87-mile long slurry pipeline to the Don Fertilizer Plant at Pocatello. The plant, which employed 320 persons, had a record year making over 450,000 short tons of liquid and dry phosphoric acid fertilizers.

Agrium, a Canadium firm, has been mining the Rasmussen Ridge mine. In 2005, Agrium mothballed that facility and moved to the Dry Valley mine, which it had purchased last year

from Astaris. The company shipped most of the Astaris stockpile and started mining the C pit in June. About one million tons were shipped by rail to Agrium's fertilizer plant at Conda.

Monsanto operated the South Rasmussen mine all year and trucked the ore to the Enoch Valley mine tippel to load into triple tractor-trailers which transport the ore to the Soda Springs plant. Concurrent reclamation included a clay cap and revegetation of the East Overburden pile and backfilling of previously mined areas; in addition, 5000 new tubling-sized trees and shrubs were planted. Monsanto initiated the EIS permitting for a new project, the Blackfoot Bridge mine. This included environmental studies and initial scoping meetings. The company also had an extensive exploration effort with surface mapping and sampling and a substantial drilling program from September to mid-December (Fig. 5). Monsanto's ore feeds their elemental phosphorus plant at Soda Springs; it operated at full capacity, supplying the ultra-pure raw ingredients for consumer products and their popular Roundup herbicide. In June, Monsanto received the 2004 Environmental Excellence Award of the Idaho Association of Commerce and Industry for innovative mining and reclamation practices that reduce the likelihood of selenium leaching.

### **Other industrial minerals**

In 2004, industrial minerals, including phosphate rock, comprised 51% of the state's mineral value. While that percentage dropped in 2005 due to rising metal prices (Fig. 1), the number of industrial mineral operations (Fig. 6) and their critical role in Idaho's rural communities was constant. Overall, markets were excellent, especially for building-related materials.

In north Idaho, Emerald Creek Garnet, a subsidiary of Western Garnet International, started trammel mining in the spring on its alluvial garnet leases along the St. Maries River, following a lengthy approval process with the Army Corps of Engineers. The new leases added about 15 years of reserve. Markets were good, especially for the finer sizes used in water jet cutting, as well as precision cutting in metal fabrication and sandblasting. Emerald Creek employs over 30 persons at the washing plants and processing facility in Benewah County.

At Inkom in southeastern Idaho, Ash Grove Cement operated Idaho's only cement plant. Demand and production was up from their 2 rotary kilns, and Ash Grove expected to ship over 315,000 tons of cement, which would be a new record. The company implemented quarry improvements but was concerned about increased fuel costs and the shortage of heavy equipment tires. Most of Ash Grove's output is used in eastern Idaho and northern Nevada. In late December, the Inkom plant achieved 5 years without a lost-time accident.

Opened in 2001, the Bear River Zeolite mine at Preston is Idaho's newest industrial mineral mine. U.S. Antimony Corporation is a 75% owner and operates the K-clinoptilolite mine. Sales increased in 2005 to a new record, and the company added a second screening circuit and hammer mill to expand up to a 300 tpd milling capacity. Bear River announced a contract to supply ground zeolite to replace Portland cement in concrete. The use of zeolites as a substitute for cement has been known since Roman times. Other uses include water and air filtration, catalysts, odor control, and soil amendments.

Hess Pumice hired 50 new employees and added a double shift to expand output from their Wrights Creek mine to approximately 180,000 tons, which was processed at their facility in Malad (Fig. 7). Most of the pumice went into lightweight aggregate produced by the new Owens-Corning manufacturing plant which Governor Kempthorne opened at the site in

September. The joint venture between Hess and Owens-Corning uses the pumice to produce trademarked Cultured Stone, an attractive, manufactured stone veneer and popular construction material. Hess has been one of the most successful companies in adjusting to changing market conditions. They have been pursuing customers in European markets long dominated by European pumice producers. Idaho Minerals, which is also owned by Hess, mines perlite. Perlite production, largely used for potting soil, was up and the material processed in a new expander plant located at Malad (Fig. 7).

Idaho has several attractive decorative stones, and the good housing market in the western U.S. made for excellent market demand. Northern Stone Supply, Oakley Valley Stone, American Stone, and Scrivanich Natural Stone all operated stone quarries south of Oakley in Cassia County. The silver to gold-colored Oakley Stone is a very durable micaceous quartzite flagstone that splits into thin sheets and can be cut into tiles. Near Boise, Table Rock Sandstone was used by Gerhard Borbonus Landscaping for cut dimension stone fireplace hearths, as well as pricey landscaping rock. Idaho Travertine quarried a small tonnage of tan travertine from their Falls Creek quarry in eastern Idaho. Some was used as facing stone for a California community college building.

L and W Stone Corporation quarried their trademarked Three Rivers Stone from an expanding pit adjacent to Highway 75 west of Challis. The company received approval for a new Plan of Operations from the Bureau of Land Management on July 29, 2004. But the BLM was sued by Jon Marvel's Western Watersheds Project. A temporary restraining order by the judge allowed the quarry to operate, and the judge ruled that the company and BLM should prepare an Environmental Impact Statement, as opposed to the previous Environmental Assessment. Scoping meetings for the EIS were held late in the year. A major issue for the quarry, which ships out over 30,000 tons of stone a season, is the large waste dump visible above the highway. The attractive purple to gold-colored argillaceous quartzite fetches premium prices in high end markets.

The Ramshorn quarry above Bayhorse Creek at the old Ramshorn mine produced a small tonnage of slaty flagstone. The owners want to expand operations on to public lands in the surrounding area. Prospectors explored for rock similar to the Three Rivers stone, and individual collectors mined mineral specimens in the Challis area.

The 2005 USGS preliminary value of construction sand and gravel production was up \$ 5 million with about a 5% increase in estimated tonnage. That is no surprise given the rapid growth and construction boom in the Boise Valley, Coeur d'Alene area, and parts of eastern Idaho. One Boise area concrete producer noted the "cement over-demand" evidenced by a 25% increase in volume of concrete orders over 2004. Recent years have seen a consolidation of the aggregate industry, especially under the Oldcastle Group of companies, and it seems likely that some areas may be hit by a scarcity of supply if such rapid growth continues.

U.S. Geothermal secured a power purchase contract with Idaho Power Company for up to 30 MW of production from its 100%-owned Raft River Geothermal project in southernmost Cassia County. They also signed a power transmission line agreement with Bonneville Power Administration and an agreement with ORMAT to design a 10MW binary-cycle electrical power-generating plant at Raft River. Construction is planned for 2006. Well tests in 2004 obtained temperatures over 270°F from old Department of Energy wells drilled in the 1980's but cleaned out by U.S. Geothermal with the aid of a DOE grant. The company conducted extensive ground geophysical surveys in the spring of 2005 to further expand the resource on the

660-acre property. The hot water reservoir is located about a mile below ground surface, and the company leases geothermal rights on an additional 4500 acres. They are considering utilizing waste water and heat for aquaculture or other direct use applications. A second company, Idatherm, held geothermal leases in several locations but did not drill.

## **Exploration**

With prices of several commodities on the rise and the diversity of Idaho's mineral wealth, there was more than just gold exploration happening in 2005. Still, project locations were mostly identical to the 2004 map.

It was a busy year for i-minerals inc. exploring their Helmer-Bovill feldspar-quartz-kaolin project in Latah County in north Idaho. The area is underlain by weathered to fresh granodiorite and Latah Formation sediments, both hosting the historically mined clay deposits. The company collected a 40-ton bulk sample of potassium feldspar to ship to the Mineral Research Laboratory at North Carolina State University for pilot-scale metallurgical tests and to test as a glaze by Wendt Pottery of Lewiston. They also drilled 35 HQ core holes in the Kelly's Basin area at Bovill to evaluate grades of the feldspar and quartz byproduct deposit and prepare an NI 43-101 report, as based on approximately 200-foot centers. They are also assessing the kaolin deposits.

In metals, New Jersey Mining Company straddled the boundary of production and exploration. In addition to additional exploration of the Golden Chest mine, the company received its permit from the U.S. Forest Service in July to open the Silver Strand mine, northeast of Coeur d'Alene. The small underground mine hosts a high-grade gold-silver vein cutting the Revett Formation. The mine has a 17,500-tonne reserve, which is open with good exploration potential, as defined by initial drilling and a ground geophysics survey. Vein material in a 2002 drill hole assayed over 10 g/t gold and 500 g/t silver. Construction will start in 2006; ore will go to New Jersey's mill at Kellogg. The mine will be developed with a ramp system as a seasonal operation extracting about 5000 tonnes per year of ore. New Jersey also has six additional silver exploration properties in north Idaho.

Timberline Resources Corporation drilled the Snowstorm Project in the Silver Valley, earning a 49% interest from Hecla Mining Company. The Phase I program of 10 core holes totaled 4,104 feet and was designed to test for stratabound, Troy-type, copper-silver mineralization in the upper Revett Formation quartzite. Six holes intersected mineralization but at sub-economic grades. The company is interested in a Phase II follow-up to explore for the faulted off segment of the original high-grade Snowstorm mine orebody.

After several years of negotiations, Thunder Mountain Gold, Inc., and the Dewey Mining Company finally completed sale of their patented and unpatented mining claims surrounding the historic Dewey gold mine in the Thunder Mountain Mining District to the Trust for Public Lands. As funds become available, the Trust will convey the 645-acre property and unpatented claims to the Payette National Forest. The Valley County property is surrounded by the Frank Church – River of No Return Wilderness. Funding of \$ 900,000 from the Land and Water Conservation Fund was secured with the assistance of Senator Larry Craig and the Idaho delegation, under the assurance that public access would be preserved to the scenic area.

Also in Valley County, Vista Gold continued to hold the Stibnite gold deposit, while the U.S. Forest Service completed another remediation project on the Meadow Creek tailings pile. Jack Walker did surface work at his Golden Hand mine, located on a cherrystem into the

wilderness area near Big Creek. Valencia Ventures held the Petsite property at Orogrande in Idaho County. Small miners worked gold mines near Powell and Pierce.

At Warren in Idaho County, Kimberly Gold Mines did minor development work and drilled four short holes with a CP65 rig from underground at the Rescue mine to test the gold-quartz veins. Kimberly acquired the property last year and has been rehabilitating the surface facilities. They hope to produce ore in 2006. Unity Gold-Silver Mines expanded its land position, and Sidney Resources worked its Charity mine property in the Warren District. Kimberly also drilled a couple of holes underground at their Marshall Mountains property.

In the Salmon region, Wave Exploration Corporation announced in October that it had signed a letter of intent with Journey Resources Corporation, a Vancouver junior company, to sell 100% of its interest in the Musgrove Creek Gold Project. Wave optioned the 393-hectacre Musgrove Creek property in 2003 and drilled it in 2004. Discovered by Atlas and later drilled by Newmont, the property holds an NI43-101 resource calculated at 314,000 ounces gold, with untested surface anomalies and expansion potential.

Formation Capital Corporation had a busy year on their Idaho Cobalt Project in Lemhi County in the Blackbird Mining District. Formation and its contractors were working on the Environmental Impact Statement (EIS) for its proposed new underground Co-Cu-Au mine. A preliminary Draft EIS was released by the Salmon-Challis National Forest at year's end, and the full DEIS scheduled for public release in spring 2006. Formation started working there in 1993 and discovered a new ore deposit, named the RAM, by soil sampling and drilling on unpatented claims adjacent to the historic Blackbird mine. The proposed new mine would produce over 1500 tonnes of cobalt metal and chemicals per year and employ about 180 workers.

Diamond drilling in 2005 started slow due to poor ground conditions, but finished the year with 6,678 feet in 11 drill holes. Drilling intersected oxidized zones up dip but extended the ore horizons to the south where they appear to thicken. For example, Hole R05-07 intersected a 14.3-foot wide zone assaying 0.98% cobalt, 0.19% copper and 0.0521 ounces per ton gold at 400 feet depth. Other holes confirmed down-dip projections of ore grade mineralization (Fig. 8). Drill results were being used by MDA (Mine Development Associates) for a Bankable Feasibility Study and new reserve update, due out in early 2006. Metallurgy is favorable; the concentrate would be trucked to the company's hydrometallurgical plant in Kellogg, Idaho. Formation has been working to minimize environmental impact of the mine project, which is strongly supported by local citizens and Idaho's political leaders. Cobalt mineralization is interpreted as a Precambrian stratabound, exhalative deposit, but the district is structurally complex and many questions remain.

Further south, in Custer County, Trio Gold drilled 10 holes, including one core hole, totaling 2300 feet early in the year. The holes tested copper mineralization in the garnet-diopside skarn at the contact of a limestone and porphyry intrusion. Drilling confirmed near-surface copper mineralization that grades up to several percent with precious metal credits. Trio was evaluating a solvent extraction operation.

In Clark County, Kilgore Gold held the Kilgore hot spring gold property where it drilled six holes in 2004, intersecting one high grade vein and a thick zone of alteration. It planned to return in 2006.

Molybdenum was the target for Kobex Resources, a Vancouver junior, which picked up the Cumo property from Mosquito Consolidated in March. The deep moly deposit was discovered by Amex in the 1970's, and some 36,000 feet of drilling defined 1.3 billion tons of

0.093 % MoS<sub>2</sub> with a higher grade core. The deposit is located near the headwaters of Grimes Creek in a remote part of Boise County. Drill permits were received late in the year and the company plans to drill in 2006.

Two proposed gold mines in southwestern Idaho's Elmore County received the bulk of the media's mining attention in 2005 and prompted an industry-sponsored proposal to strengthen state bonding and cyanide regulations. Desert Mineral Mining Company, a small California-based firm, applied for a cyanide permit and permission to open a small, 120,000-ton, gold mine and processing plant on private ground in the Neal District about 20 miles southeast of Boise. Several local ranchers, apparently terrified at the prospect of cyanide in the vicinity, testified at public hearings in opposition to approving the cyanide use. The Idaho Department of Environmental Quality granted the mine's permit, but the company later switched to using bromide in the processing and reduced the size of the operation to only 22,000 tons. Rumor was that they were more interested in testing the processing circuit than in actually mining gold.

The second and more controversial project was Atlanta Gold Corporation's proposed open pit, heap leach operation in the historic Atlanta district, tucked into the remote hills near the headwaters of the Middle Fork of the Boise River. The Atlanta project hosts a proven and probable reserve of 13.6 million tons at 0.06 oz./ton gold and 0.16 oz./ton silver in an arsenopyrite-pyrite shear zone that cuts granodiorite. Twin Mining, the owner of Atlanta Gold, was working on permitting studies, including air and water monitoring and engineering work and mine layout planning. Financing problems have delayed the studies and a draft EIS is now scheduled for the end of 2006. The Idaho Conservation League sued the company over arsenic-bearing discharge from a historic adit, but the two parties negotiated a settlement in October, whereby Atlanta agreed to install a water treatment system with the eventual objective of designing a passive treatment facility for the 900-level adit drainage.

### **Idaho Geological Survey activities**

The Survey released 35 new publications during the year. Most of them are available on the Survey's website ([www.idahogeology.org](http://www.idahogeology.org)). New geological mapping was released for areas in northern Idaho around Sandpoint, and the Twin Falls 30 x 60 minute quadrangle and Blaine County regions in south-central Idaho. The Mines and Prospects database and a number of AML (Abandoned Mine Lands) inventory reports can be accessed via the website.

# Idaho Non-fuel Mineral Production

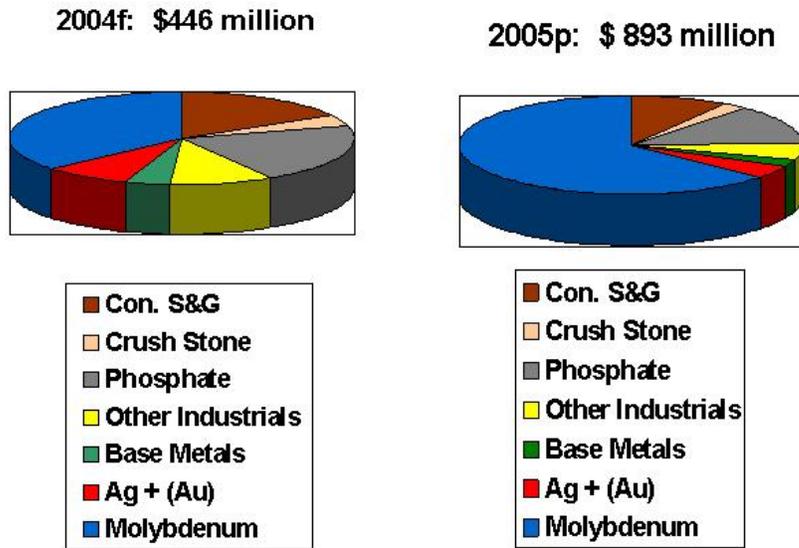


Figure 1: Idaho 2004 final and 2005 preliminary mineral production, based on USGS data.



Figure 2: Sterling's Sunshine Mine. Workers are detaching the old cable from drum before installing new cable for the Jewell Shaft hoist.



Figure 3: New Jersey Mining Company's Golden Chest mine. Uploading the ore bin for transport to mill; mine portal is on far right.



Figure 4: Thompson Creek mine's flotation cells in mill.



Figure 5: Exploration drilling at Monsanto’s Blackfoot Bridge phosphate property.

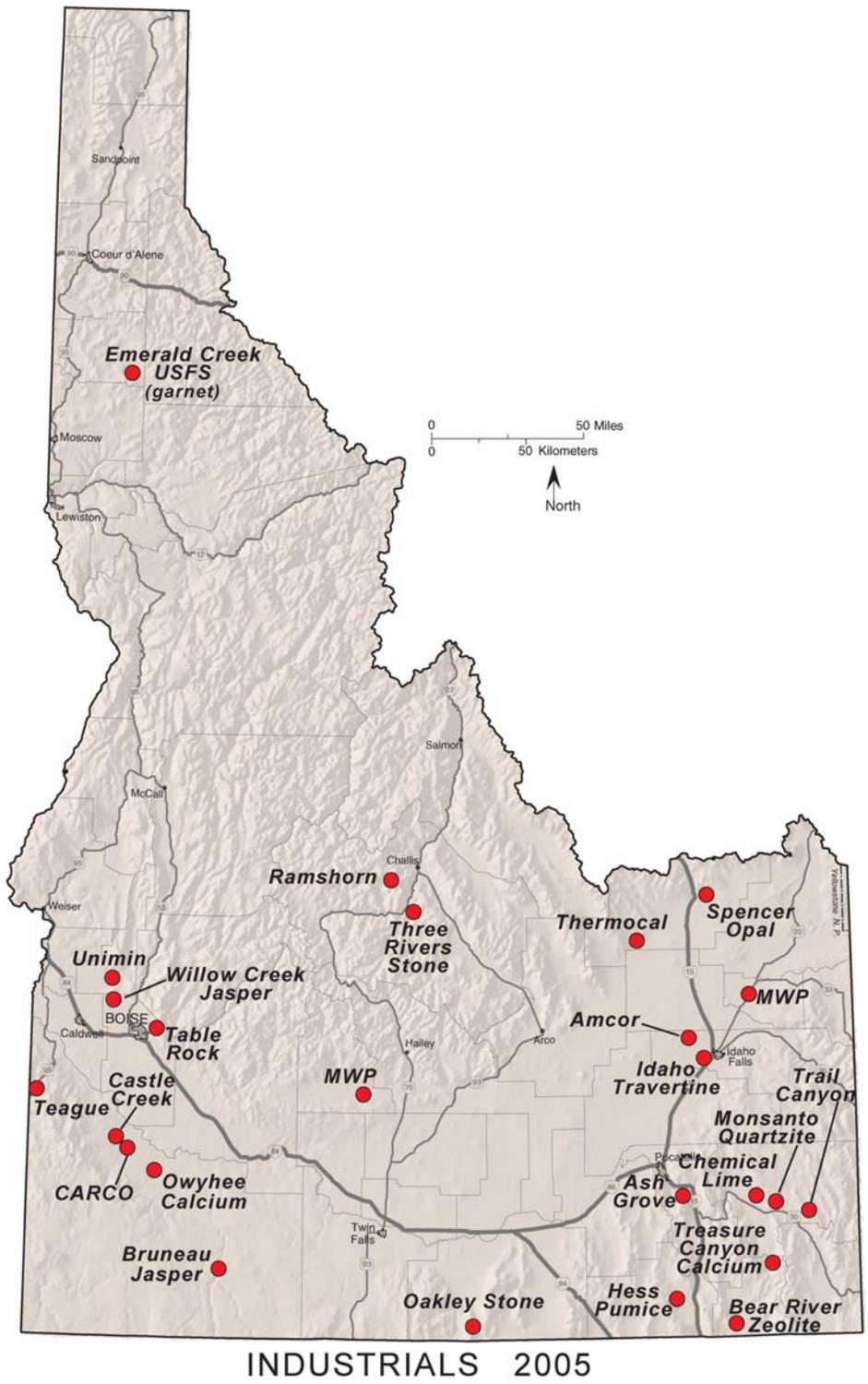


Figure 6: Map of industrial minerals operations in Idaho, excluding phosphate.



Figure 7: Hess Pumice and Owens-Corning's new Cultured Stone plant in Malad is large white building. Idaho Minerals' new perlite expander plant is in upper right.



Figure 8: Formation Capital Corporation's Idaho Cobalt Project. Drill core from R05-03, 694' with massive pinkish cobaltite intercept in garnet-biotite schist.