SMOKE DECISION SUSPENDED

U. S. COURT PERMITS BINGHAM SMELTER TO RESUME.

Sulphur Fumes Must Be Kept Below 1 Per Cent—Big Developments in Old and New Mines—Rise of Tungsten in Colorado—Finds in the Zortman Region.

SALT LAKE, April 8.—Judge Marshall of the United States court has given the United States Smelting Company permission to reopen its plant at Bingham Junction. In giving the smelter permission to reopen Judge Marshall did not modify the original injunction in the strict sense of the word, but granted a suspensory order permitting the smelter company to operate its plant until the farmers could show that the fumes were damaging vegetation. The order permits the smelter to treat ores containing more than 10 per cent. sulphur, providing that the aggregate amount of ore treated shall not average more than 10 per cent. sulphur and providing that the total amount of sulphur contained in the smoke shall not exceed seventy-five one-hundredths of 1 per cent. sulphur dioxide. The original injunction prohibited the smelting of any ore containing more than 10 per cent. sulphur. The smelting company will start at once to make the improvements on the plant necessary to comply with the terms of the suspension of the injunction, and in two months will begin again the treatment of ores, though the improvements will not be completed and the smelter operating to its capacity before the expiration of six months.

The plan gives employment to 750 men and distributes about $75,000 monthly on payroll account. In addition to the industrial benefit to the community the reopening of this plant will afford competition in the purchase of ores. Until the "smoke" decision was made by Judge Marshall there were two independent smelters—the United States and the Bingham Consolidated—operating in Salt Lake Valley, besides the plants of the American Smelting and Refining Company. The Bingham Consolidated has been dismantled and the United States shut down, leaving the field solely to the American company. It is not believed, however, that the actuality of smelter competition will stimulate mine production immediately. Metal prices are still too low to suit the majority of the strongly financed mining companies and they are devoting their energies to developing new territory or increasing their ore reserves and paying little attention to breaking down and shipping ore.

Samuel Newhouse, influenced by rumors concerning conditions at the Boston Consolidated mine at Bingham, has issued a statement to stockholders in which he says: "The first ore encountered by the steam shovels, although good in copper, contains a considerable amount of iron, which prevents its profitable concentration under present operating conditions. Our underground development proves that as the shovels cut deeper into the ore body the iron contents caused by the proximity to the capping become greatly reduced. On my return from Europe this week this condition came to my notice and I immediately enlarged our methods of mining to include the production of ore from some of our tunnels at a depth where there are no iron difficulties and from which a profitable product can be made at the mill. It will require ninety days to make these changes effective. There is no reason for uneasiness concerning the performance of our new mill. Even under the adverse circumstances of handling the product first coming from the shovels it has shown an average saving of 66 per cent."

Developments at the Wabash mine at Park City, in which a strike was made two months ago, are entirely satisfactory. The strike was made on the 600 level at a distance of more than 6,000 feet from the main shaft. This vein has been drifted on for 250 feet. It averages in value 100 to 400 ounces in silver, 12 to 15 per cent. lead, and from 2 to 5 per cent. copper. The vein is fifty feet wide, and in the drifting the best values were found in the roof of the drift which is taken to indicate the probability that a large ore body lies overhead. On account of the water, it has been impossible to upraise on the ground above, but it is draining rapidly and what is believed to be the best territory will soon be opened. The company operating the Wabash has spent nearly $750,000 during several years search in this ground.

Prospectors from all the contiguous regions and many from a distance are flocking to the scene of the recent discoveries in Bull Valley, Southern Utah. The camp is thirty-five miles from the railroad. While rich rock has been found on a number of claims, to date only the Bull Run Mine has a showing that indicates it may become a real mine. A sampling of the face of the tunnel on this property shows values of $6,000 per ton. The Bull Run was located by two prospectors in February. They panned gold at the surface and the first shot disclosed wire gold.

The Consolidated Gold Mines Company at Mercur has opened a new body of ore seventy feet thick and of higher grade than any that has been obtained from the property in recent years. The new ore body is in Golden Gate ground, which is now being prospected. The ore carries from $3 to $30 a ton in gold and, being oxidized, requires no roasting.

The old Sunshine company, which owned the Sunshine mine at Mercur, has been reorganized at the Boston-Sunshine Gold Mining Company. The Sunshine is a gold proposition and includes eighty-two acres of ground. It has a mill. One hundred thousand tons of ore are blocked out in the property which it was impossible to treat at a profit several years ago when the mine was in operation.

COLORADO.

COLORADO SPRINGS, April 9.—State Commissioner of Mines T. J. Dalzell places Colorado's total mineral product for 1907 at $41,398,834.55, of which amount $20,471,526.66 was in gold; $7,886,736.17 in silver, $4,965,517.70 in lead, $2,251,258.20 in copper, $5,275,376.85 in zinc and $552,000 in tungsten. These figures are revised and official and show about 20 per cent. depreciation from the unofficial report sent out January 1.

For the first time tungsten appears in a commissioner's annual report. The product was mined in Boulder county, where several claims are being worked. The 1908 report will show an increase. The mines are owned largely in Pittsburg. Much of the product is shipped to the Krupp gun works in Germany. The ore is largely pure.

Returns from forty-six tons of ore shipped from the Warm Hill lease on the Pharmacist mine, Cripple Creek, show a gold content of $3,539.07. The discovery was made some time ago, but the ore body was practically on the line between the Pharmarcist and the Acacia. The latter received 7 per cent. as a compromise. The shipment netted lessees $1,600. The Pharmacist was the first dividend payer of Cripple Creek.

The Doctor-Jackpot Gold Mining Company threatens suit against the Work Gold Mining Company, both well known Cripple Creek producers, alleging that the Little Clara vein is flat and that its apex lines in the Lucky Corner. The Doctor-Jackpot people claim that the vein apexes in the Lucky Corner but runs at an angle of 45 degrees. The Little Clara has been yielding considerable ore during the last two years. Royalties from lessees have enabled the Work company to pay ten dividends amounting to $165,000, the last one having been paid April 4, while the treasury contains a surplus of $80,000. The suit involves $1,000,000. The main vein is cut by numerous perpendicular veins. The question whether the flat vein mineralizes the perpendicular ones, or vice versa, one of the most interesting in mining annals, is involved.

The Vindicator Consolidated Gold Mining Company has declared dividend No. 40—regular 3 cents and an extra 1 cent—a total of $60,000. The dividend will be paid April 25 to stockholders of record on the 15th inst. The company's dividend total to date is $1,830,000.

The Portland will disburse its regular quarterly dividend in April—$120,000—bringing the company's total to date to $7,867,080. The Jerry Johnson may disburse $25,000 and the British-American Leasing Company $8,000. Prior to the April disbursements $252,500 had been paid out in dividends thus far in 1908. This year promises to show an increase over 1907, notwithstanding the Gatch Park tunnel enterprise.

A specimen of tellurium ore taken from the Lottie mine near Sunshine, Boulder county, Col., carries $20 a pound value. It was found by Irving Van Keuren at 160 feet depth.

The Jones-Carr lease on the Little May of the El Paso company, Cripple Creek, is in a 12 foot vein of $60 ore.

The strike recently made in the Shamrock claim of the Atlantic Cable area by the United Rico Mines Company is probably the most important lead-zinc ore disclosure ever made in Colorado. Neither top, side nor bottom has been reached, although 25,000 tons of ore have been removed. In cutting a station for a winze 20 tons of ore were knocked down by one round of shot. The deposit has been proved for 210 feet in length and about 20 feet in width and 90 feet in depth. The ore in the bottom of the winze is rosin zinc and copper pyrites. At the tunnel level the ore is principally cube lead of high percentage. The deposit is a replacement in dolomite lime. It is probably a part of the Atlantic Cable ore body, but of a higher grade. The outlook assures activity throughout the Rico, Col., district.

The Astor mine of the Red Oaks Mining and Milling Company, on Democrat Mountain, Georgetown, Col., is in a body of ore carrying 700 ounces in silver per ton. Considerable gray copper and silver glance are noticeable in the ore.

The United States Smelting and Refining Company's plant at Florence, Col., is to be started up at once according to orders from the New York owners. This company's plant at Cañon City, after three months idleness, has been reopened. The Empire Zinc Works, also at Cañon City, has been restarted after long idleness.

The March Cripple Creek output reached 61,062 tons of ore, worth gross $1,385,177. Owing to reduced treatment charges made by the United States Reduction and Refining Company, 2,360 tons of ore in excess of February were treated. The average value a ton of ore was slightly decreased. Of the product the smelters treated 3,720 tons worth each $66, or $246,520 total. The Ironclad cyanide mill treated 3,565 tons of $3 average value. Following is the record:

Mills.	Tonnage.	Average Value.	Gross Million Value
Golden Cycle	22,182	$22 10	$499,117
U. S. R. & R.	16,428	26 00	426,920
Smelters	3,720	66 00	245,520
Portland	8,000	22 00	176,000
Isabella	3,875	6 00	23,250
Blue Flag	1,000	4 00	4,000
W. P. H.	1,550	7 00	10,850
Wild Horse	800	3 00	2,400
Ironclad	3,565	2 00	7,130
	61,062		$1,385,177

The January product was 56,785 tons, worth $1,335,820, and the February 58,222 tons, worth $1,212,313; total for 1908 176,069 tons, worth $3,933,310.

The value of the 1907 product by months for the same period was January, $1,032,559; February, $1,135,075; March, $1,150,000; total, $3,327,634; 1908 increase, $305,676.

The United States Reduction and Refining Company's Union mill at Florence, with a daily capacity of 400 tons, has been closed and the 80 tons of ore, which are all that could be secured, will be diverted to the company's plants at Colorado City. Work on the company's smelter at Cañon City will be resumed.

NEW MEXICO.

SILVER CITY, April 6.—The new placer gold field near Hachita has settled down to a good producing basis. The claims which were staked are now being worked very successfully.

The old Carlisle mill in the Steeple Rock district is to be started soon by L. E. Booker of El Paso, who recently took over several properties in the district.

The Irvin-Peaks Mining Company is making good progress with the development of its mines in the Steeple Rock district. It has thirty-four claims in all. It owns a half interest in the famous Lama mine, which for some time past has been stoping $1,000 ore. The company has sunk a shaft about seventy-five feet and drifted from the fifty-three foot level about one hundred feet on the Long Chance vein. The ledge in this mine is five feet wide at the surface and ten feet wide at the fifty foot level. It will mill $10 in gold a ton, it is said. The company is also sinking a shaft on the Golden Crown mine.

The mill at the Stephenson-Bennett mines in the Organ district has resumed operation. The Stephenson-Bennett company owns a number of copper, lead and silver mines in that district which it is developing.

MEXICO.

MEXICO CITY, April 6.—Thomas W. Lawson and associates are preparing to develop their gold and silver properties in Jalisco. In addition to the several mines which they already own options have been obtained on a number of others. They also own several quicksilver claims which are being developed. The furnace for the treatment of the quicksilver ores is to be enlarged. The reduction plant for treating the ores of the other mines will be enlarged, and it is said that in all $500,000 will be expended in improvements and development work. These several mines are in the Mascota district. The holdings also include 5,000 acres of timber land, upon which sawmills are in operation.

A vein of free gold sixty feet wide has been found in the mine of G. W. Carter and associates near the Pinguico mine, in the Guanajuato district. The vein gives a surface value of forty grams of free gold a ton.

The Dolores Mines Company recently shipped seventy bars of gold bullion, valued at $135,000, Mexican, from its Dolores mine. The bullion was consigned to the Banco Minero of Chihuahua.

The Boca Ancha Mining Company has completed the installation of a 50 ton concentrating plant at its Boca Ancha mine, in the Parnaso district, Jalisco, and it will soon begin the erection of a cyanide annex in order to treat the tailings by the cyanide process. The company has obtained a concession from the Government for the erection of a hydroelectric plant near the mine to provide power for operating the machinery.

The American Smelting and Refining Company is erecting a "bag house" at its smelter in Monterrey for the purpose of catching the metal values which now go up in smoke. The building will be built of structural steel and will cost when finished $100,000 gold. The smoke from the furnaces will be driven through a 22 foot ventilator and sucked into the room containing the bags.

The new 250 ton furnace of the Encinillas Mines and Smelter Works, at Santa Rosalia, Chihuahua, will soon be finished and the plant put in operation. The company has not yet closed its options to purchase a number of mines in the Santa Eulalia district. It is, however, accumulating ore from its other mines.

The Dos Estrellas Mining Company treated a total of 23,859 tons of dry ore at its mills in the El Oro district in the month of February. It shipped 586 tons. The value of the ore treated and shipped was $510,323. The expense of operation was $305,431.

The American Milling and Mining Company's new mill in the Guanajuato district is running full capacity. The ore is brought to the mill by a tram about two kilometers long which extends to some of the richest mines in the district.

A large body of rich lead ore has been struck in the mine of the Compania de Minerales y Metales, in the Minas Viejas district, Nuevo Leon.

The Mexican Gold Fields, Ltd., which operates the Palmarcio mine, near Chinapas, Chihuahua, contemplates installing a hydroelectric plant to provide power for operating the machinery of the mine and mill. It is also planned to move the mill from its present site to the mines and to do away with the expensive railroad haul of twelve miles, which is now required.

La Bohemia Mining Company is doing a large amount of development work upon its property in Zacatecas. It has uncovered recently a large body of ore which runs as high as 95 kilos silver to the ton. The company owns about two hundred acres of mineral land. The old drifts on the San Pedro vein have been continued both east and west, crosscutting to other veins. A pumping station has been installed by the company.

It is estimated by the consulting engineers of the Esperanza Mining Company that the reserve mineral in sight in the Esperanza mine, in the El Oro district, was 65,500 tons on December last and that this ore would give a treatment profit of $450,000. It was also estimated that the treatment of the residues would give an additional profit of $540,000.

A bonanza body of ore has been struck in the Cigarrero mine, in the State of Chihuahua. The assay returns are said to be 20 grams gold, 300 to 600 grams silver and 6 per cent. copper.

ARIZONA.

BISBEE, April 6.—Messrs. Worden & Murphy, who are working the Clark property in the Globe district under lease, have struck a pay streak of copper eighteen inches wide.

The Empire State Mining Company is doing considerable development work on its Tip Top claim in the Bisbee district. The property carries good values in copper and silver.

An instance of the ill luck that sometimes pursues a mining man occurred in the Hassayampa district recently. John Thomson, owner of the Paymaster mine, after working that property for twenty-five years with but meagre returns, leased it to Andy Linn for $5,000. The day that Linn began work on the property he uncovered a vein of free milling gold ore which runs $400 to the ton.

There is much activity in the Silver Bell district. The Imprial Copper Company is furnishing about 400 tons of ore a day to the smelter and has 250 men employed. More men have been put to work on the El Tiro mine, which is owned by E. B. Kurtz and associates.

Much excitement has been caused in mining circles by the announcement that a vein of ore four feet wide, running several thousand dollars gold to the ton, has been struck in the Little Clara mine, in the Big William district.

NEVADA.

ELY, April 8.—Ore running from $500 to $1,800 to the ton in gold was discovered last week on the Independence claim of the Blaine Mining Company at Granite, twenty-five miles north. Since then there has been a rush such as has not been seen in this district since the silver excitement of the '70s. Hundreds of men have gone into Granite, and all the surrounding ground has been located. The Blaine has a shaft down 300 feet, and almost from the surface is in ore running about $35 to the ton. The Independence claim is worked through a tunnel, in which at a depth of fifty feet an eight inch vein of bonanza ore was encountered. In the Bunker Hill and Sullivan, adjoining the Independence claim, the shaft is down 108 feet and a four foot vein of good silver-lead ore is exposed.

Confirmation has been received here of the reported strike at the Ward Mountain property of the United Nevada Mines Company, one of the richest mines of former times in Nevada. Twelve feet of ore has been cut which runs upward of 800 ounces in silver with a big percentage in lead. From a shoot similar to the one now being worked values of more than $3,000,000 were obtained in the late '70s. The shoot was lost, and since then only low grade ore has been found on the property.

GOLDFIELD, April 8.—Ralph Waterman of Salt Lake is mining ore of astonishing richness on a lease on the Sandstorm, the first location made in Goldfield. The discovery was made back of the footwall in supposedly worked out ground. The vein is eighteen inches across and carries 49 ounces in gold to the ton.

Conditions are improving greatly at Goldfield. During the seven days ending March 31 the ore purchasing companies bought 1,282 tons of ore from Goldfield mines and leases. In addition to the crude ore sold, the Combination mill treated 600 tons and the Nevada-Goldfield Reduction Works 450 tons, a total for the week of 2,332 tons production.

John W. Gates and his son Charles have joined with Harry MacMilland and George B. Holleran and taken a lease on the Little Florence, to date from the time the present lease expires. About 100 feet of virgin ground has been added to the original lease block and the company, which will be known as the New York Florence, will have the use of the 600 foot shaft on the property.

Samuel Newhouse of Salt Lake has taken an option on the Valcalda mines at Silver Peak, belonging to the O'Meara Bros., also of Salt Lake.

SEVEN TROUGHS, April 8.—There is much leasing activity here as the result of the three stamp mill projects in Seven Troughs Cañon, and the promise of a fourth.

The Wihuja company, operating a lease on the Therien property, broke into what is believed to be the west extension of the Kindergarten ore shoot yesterday. There is a three foot vein with 20 inches of quartz, said to average $500 a ton. The strike was made in the incline shaft at the 225 level and 50 feet distant from the strike in the Kindergarten some time ago.

RHYOLITE, April 8.—The big talc deposit in the Montgomery Shoshone is being quarried and shipped without any necessity of sorting. About 75 feet under cover stopes were started and extended to the surface, and at this time the open space is about 150 feet long and 100 feet wide, with walls 35 to 50 feet high surrounding the floor. The tonnage taken from this space has been trammed to the bins without sorting, except by the removal of an occasional boulder of rhyolite, and shipped to the smelter. The values in the talc run from $40 to $100 a ton.

WINNEMUCCA, April 8.—H. Burgess and associates from Utah are reopening the Old Timer mine near Humboldt House, upon which a shaft was sunk 175 feet forty years ago by Winnemucca men and then abandoned after a mill had been ordered for it in order that the owners might participate in the rush to Unionville. When the shaft had been cleaned out, a strong ledge was found which had been followed down by the original locators. Samples from this ledge show as high as 2,000 ounces of silver to the ton.

LAKE SUPERIOR COPPER.

HOUGHTON, Mich., April 11.—The ice is breaking up rapidly in Portage Lake, and both the lower and upper canals from Lake Superior are open, hence it is evident that opening of navigation is but a few days distant. Despite the poor condition of the metal market for nine months past there is but little copper at the local smelters. This is significant of good demand, for the reason that mixed Lake and rail freights from Houghton to the Atlantic seaboard, via Buffalo, are much cheaper than all rail freights, and in all but seasons of excellent demand a considerable accumulation of copper is noted at the local reduction plants shortly before the opening of Lake navigation.

The heavy machinery equipment of the Lake Superior mines, mills and smelters has shown great changes within the past ten years. The local foundries and machinery firms have more than held their own, and in addition to supplying local demand have built up a good business in the western States, Canada and Mexico and have established the beginnings of a promising export trade to South America, South Africa and other mining fields. Some of the Western manufacturers have succeeded in establishing an assured footing in the Lake field, this being more particularly true of some of the specialties in ore dressing machinery, notably the Wilfley table, which is now in quite general use in this district. The Calumet and Hecla arranged to build its own Wilfley tables to the number of several hundred, paying a fixed royalty on each machine constructed, to save freight charges. In the line of heavy mining machinery, such as hoists and air compressors, ten years has seen a revolution. The big firms that formerly enjoyed almost a monopoly of this work are now securing the small end of the trade.

In the matter of surface equipment of shafts the decade past also has witnessed a revolution. The steel shaft houses and rock houses that were seen occasionally in 1898 are now in almost universal use. None but the smaller mines that must economize at the expense of the future erect wooden headgear at their shafts at present. A wooden mill has not been built in the Lake district for nearly ten years and the old wooden mills of the Calumet and Hecla, once the largest frame buildings in the world, have been torn down in sections and replaced by steel, the work requiring about five years.

Another change of importance, which has but fairly started, is found in the item of timbering. In the beginnings of the Lake copper industry, two-thirds of a century ago, the miner had but to exchange his pick or hammer for an axe and step into the forest from the shaft into the forest primeval, where magnificent pine trees afforded wood of the very best grade and most easily worked. With time the forests receded, and about twenty years ago the rapid disappearance of the Michigan pine caused the most farseeing of the mine operators to take heed of the future. Hardwood, then most abundant, was substituted for many underground uses, and the Calumet and Hecla, Tamarack and Osceola mines invested heavily in timber lands in the upper peninsula of Michigan.

These have been husbanded with care, but it is evident that in time they will fail to meet the heavy requirements of the mines, hence experiments have been made with other materials. The Baltic, Champion and Trimountain mines of the Copper Range Consolidated Company use a system of dry walling, by which worthless rock broken in the mine is built into walls without mortar, affording excellent support for the depleted stopes and greatly reducing the cost of timbering, as well as saving the cost of hoisting barren rock to surface and saving the space that would be required for its disposal. The Calumet and Hecla and several of the Bigelow mines have experimented with concrete for shaft work. As a foundation for skip tracks it seems too rigid, leading to needlessly heavy wear upon rails and wheels, but for other uses it seems satisfactory. It is obvious that cement and concrete must be used underground as well as on the surface by reason of the increasing scarcity and cost of wood.

IN THE BLACK HILLS.

DEADWOOD, S. D., April 6. Work on the Ada May group of placer claims is about to resume. The group is close to Sand Creek and consists of 160 acres, owned by C. M. Hemminger and Sol Burns of Terry. They are preparing to organize a company. The ground is well seamed with a coarse gold and some years ago attained notoriety from the quantity and size of the nuggets its washes contained. So far a cut of 1,500 feet in length has been opened up, showing the gold in several layers. The depth of bedrock varies from nine to thirty feet, but the machinery that will be installed will be large enough to go to sufficient depth.

Within the last few weeks James Cochran has developed the ledge on his property at Rochford to a point where it proves the mineralized belt passing through the ground to be 650 feet wide. Within this belt he has opened up five distinct veins varying in width from eight to seventy-five feet. The ore at a depth of 100 feet, the deepest point on the property, is of the same grade as at the surface and so far is easily millable.

Three rich shoots of ore have been encountered in the Ben Hur workings, in Bald Mountain, and development shows them to be of good extent. The work at the Ben Hur for some time past has been of a prospecting nature. The Ben Hur is one of the old rich properties of that section.

The repairs at the Wasp No. 2 mine and mill, on Yellow Creek, have been completed and the mill is again running. The tanks were overhauled and some slight changes made in the handling of the ore.

MONTANA.

HELENA, Mon., April 7.—What appears to be the greatest strike in the history of the Little Rockies district has been made in the old August mine near Zortman. The property has been famed in years gone by because of the rich ore uncovered, and is now being operated by Louis S. Goslin under lease and bond. The strike confirms a pet theory of the operator as to the existence of deposits, and while the size of the ore body is not as yet definitely determined it is known to be of immense proportions and for cyaniding rock it is unusually rich.

After a careful examination of the Cone Butte mine in Fergus county a few days ago John R. Beggs of Columbus, Ohio, and Max Orcher of New York purchased all the unsold treasury stock, having a face value of about $500,000. A brother-in-law of John A. Drake the Chicago-New York hotel and turfman, is president of the company. It states that plans for the new mill have been approved and immediate construction will begin.

Operations will soon be resumed at the properties of the Daisy Bee Copper-Gold Mining Company near Parrot. The company has just acquired possession of an adjoining claim, and this will be operated in conjunction with the two already owned. The property is in the same district as the famous May flower, which netted former Senator Clark several million dollars, and adjoins the Gold Hill. Assays of ore from the Daisy Bee mines show as high as $350 a ton in gold, with silver and copper in commercial quantities. The shaft is down to a depth of 160 feet, and at 140 feet samples of ore showed 28 per cent. copper. Copper was also discovered at the 100 foot level. The company is incorporated with 600,000 shares of the par value of $1, but none of the stock has been sold. Butte men are the moving spirits.

A. W. Bennett is exhibiting some fine looking specimens from the property of the Cœur d'Alene and Montana Mining Company's property at Trout Creek. The ore carries gold, silver and copper, and one piece is liberally sprinkled with peacock copper, while red oxide of copper shows to good advantage. The group of the company consists of eight claims, and one is developed by a 450 foot tunnel, crosscutting being done at intervals. At a distance of 150 feet a well defined ledge was encountered, and the crosscutting here proved valuable. The ore assays from $40 to $160.

It is understood that local promoters have secured a bond and lease of the famous Ruby mine in the Zortman district, and that both New York and Butte capitalists are considering its purchase. The property is owned by Phillips & Whitcomb of Helena, and the bond is for several million dollars. In the meantime the owners have made arrangements for an enlarged water power from the Black ranch and also from Cow Creek. It is stated that if the proposed deal fails the owners will enlarge the mill to one of 1,000 tons daily capacity.

E. E. Berry, superintendent of operations at Beaver Creek, reports striking cyaniding ore, with values ranging from $65 to $200 a ton. This property is in the same district as the Ruby and the property of the Little Rockies Exploration Company. The Beaver Creek tunnel is now in 450 feet.

The total receipts of gold at the United States Assay Office in this city for the first quarter of the year amounted to $850,195, a substantial gain over the corresponding quarter of last year. Fergus county leads, with Chouteau second and Madison third.

The Little Rockies Exploration Company has made its second cleanup within three weeks, and has deposited $12,000 in the assay office here. The first cleanup realized $15,000. The company operates in the Zortman district.

C. J. Kelly and associates, while doing development work in their property, four miles southwest of Elk Park in Jefferson county, have encountered very good copper ore a short distance from the surface.

A vein eight feet wide has been struck in the Spokane and Mother Lode claims, owned by Dunks, Atkins & O'Rourke, adjoining the property of the Sunrise company, near Boulder. The values are in gold, silver and copper.

The Mountain Meadow group of mines, near Pony, has been purchased by the Willow Creek Gold and Copper Mining Company, for $20,000 cash, a Butte syndicate. Last year the purchasing company erected and operated a small concentrating plant and the satisfactory returns led to the purchase of the property. The ore bodies are large and carry good values in gold, silver and copper. A considerable shipment of ore averaged quite $100 to the ton.

Eastern parties have about closed a deal for the purchase of the old Last Chance property in Mitchell gulch, a few miles south of the city. In early days it yielded handsomely, but was never operated below the water level. The ore body is about two feet in width and runs as high as $122 a ton in free milling gold ore. It is developed by both shaft and tunnel.

W. L. Smith, formerly employed as a teamster for the Kendall company, has found a lead of gold bearing ore in the Armells district, Fergus county. Twelve assays from a pile of surface stone showed values ranging from $3 to $100 a ton. Hundreds of persons have flocked to the scene and many claims have been located. The strike beneath the surface rock assayed $46 and the body is said to be well defined.

BUTTE, April 8.—At the East Butte properties a number of leasers are working and shipping ore to the Washoe, to the Butte Reduction Works and to Helena. The East Butte mines have never been in better shape than at present, and it has been closely figured by engineers that there are a million tons of concentrating ore in sight besides a lot of first class ore in the lower workings, upon which, however, no mining is being done as the company reserves this for itself, the leasers being confined in their operations to the 400 level and above. Recent rumors of possible litigation over ore bodies between the East Butte and other companies were, it is claimed, circulated maliciously. High Amalgamated officials whose company owns all the property surrounding East Butte say there can be no possibility of dispute over boundaries, veins or ore bodies which are well defined and understood. The East Butte owns both placer and quartz titles, and the only trouble has been by leasers crossing in two instances the boundaries of the East Butte Company, and when discovered the leases were promptly cancelled. The company's capitalization is small, amounting to 300,000 shares, with 90,000 shares unissued in the treasury. It is very probable that a large concentrating plant will be established on the property to treat the ores of the company's mines as well as several small properties in the vicinity. The plan has been under consideration for some time.

The Butte Balaklala Copper Company is progressing well with its shaft sinking, and it is expected to intersect the Edith May vein at a distance of about twenty feet north of the shaft from a crosscut on the 700 foot level. The crosscut will intersect all the four known veins, the Edith May, Bell Speculator, Old Joe and Modoc, which have been explored on the 500 foot level. These are the veins of the North Butte company, and the Edith May proved very rich on the 500 foot level, the vein being nearly thirty feet wide at that depth, with two feet of 20 per cent. copper ore, besides good silver values. The company's new electrical hoist is capable of sinking to a depth of 2,500 feet. An electrical pump will be installed on the 700 foot level station.

The territory north of the rich North Walkerville district in Butte is fast proving itself a permanent one and threatens to rival the old locality in the richness of its ores and the permanency and size of its veins. The North Butte has proved the value of the veins to a depth of 1,800 feet and is taking out first class ore from the 800 foot level down. A considerable amount of underground exploration work has been done from some of the Amalgamated properties, and it is reported that large veins of copper ore have been encountered. Just now the only new company operating in the section is the Butte and Superior, but the Butte-Milwaukee, Butte and Bacorn and North Butte Mountain Copper companies will all be working in a short time. The Butte-Milwaukee, it is understood, will resume operations about May 1 and it is expected that a new equipment, including a Nordberg first motion hoist and additional boiler and compressor capacity, will be added. The company owns sixty acres near the Butte and Superior and the surface indications are good. The shaft is down 700 feet and will be sunk to a depth of 1,500 or 2,000 feet. The Butte and Bacorn owns about 200 acres of ground in this vicinity and the company is said to be without any indebtedness. Pittsburg people are the heaviest stockholders, and the property was closed during the depression because of the tight money situation. Sinking will be resumed in the Belinda shaft, which is located near the Calumet shaft, where operations were suspended. The company will be able to determine and develop all its big ledges which the company found through crosscuts and drifts from the Calumet at a depth of 1,000 feet. With the resumption of operations a complete new hoisting plant will be installed, and the Belinda shaft, which is now down 850 feet, will be sunk to a depth of 2,000 feet.

The North Butte Mountain Copper Company owns 160 acres west of the Butte and Bacorn and as yet has done no development work, but the company intends to sink a deep shaft and thoroughly explore all the veins that show on the surface.

An important decision has been rendered by Judge Hunt of the United States Court affecting mineral rights in the southern part of the Butte district which originally was patented thirty or forty years ago as placer, while copper leads were known to exist, but were then of little value. In recent years these leads have been located as quartz by other persons and remarkably rich bodies of copper have been developed. Under the law all known quartz veins are exempted in a placer patent. The development of quartz veins has given rise to a great deal of litigation between quartz and placer claimants.

The South Butte Mining Company has acquired considerable mineral rights from the Great Northern Railroad under its right of way, the Great Northern in many instances owning its right of way under placer patents and titles. The decision of Judge Hunt is the first in a number of suits, although it is not determining on any other case, as the facts in each are different. Judge Hunt's decision shows that the lode claimants in the particular case decided failed in their proofs.

Some weeks ago a gold nugget worth $1,250 was discovered in the Highland district. There have been several locations made in the section upon the strength of the find, but the most successful of these has been made by four Butte men who located five claims on the side of the mountain south of Butte. The surface croppings were far from good, but without any real mining knowledge the men began sinking a shaft and at the depth of ten feet encountered a ledge of gold bearing quartz seven feet wide. The values were very fluctuating, but the prospectors stuck to sinking the shaft until it reached fifty feet, where they uncovered ore assaying $1,750 to the ton. The shoot has no appearance of being a pocket. It is in a continuous vein and the ore is free milling. The mine is known as the Montana.

WASHINGTON.

SEATTLE, April 6.—Fourteen claims on Hall Creek showing a heavy outcrop of silver lead ore as yet undeveloped have been bonded for $30,000.

The Seattle-Cascade mine on Miller River is installing a tram. The Apex mine has made an experimental shipment of ore to Swansea, Wales.

The Ordville Consolidated Mines Company has been stripping the surface on three of its claims and the work has exposed another ledge on the Sunrise which runs northwest and southeast, while the main ledge on this claim runs northeast and southwest. The ledges contain blue and green copper carbonates and red oxide of copper in hematite iron.

A strike of gray copper ore has been made in the property of the Wizard Copper Company, near Chewelah. The ore was encountered in a shaft which is now down about fifty feet and it is fully two feet wide.

The largest gold brick ever cast in the United States Assay Office in Seattle was sent to the San Francisco Mint a few days ago. It was worth $25,660.8. The total value of the shipment on that day was in excess of $2,000,000. The total bullion shipments for the past ten months from Seattle are valued at $17,000,000. The San Francisco Mint has $343,000,000 of bricks on hand.

BRITISH COLUMBIA.

SEATTLE, April 6.—It was decided at a meeting of the directors of Le Roi No. 2 held in London recently to take over the Vancouver mine on Slocan Lake. The capital is to be provided under a plan suggested by Lord Hamilton by a stock issue of 100,000 shares of £1 each. The Le Roi directorate voted favorably on the plan.

In the abandoned workings of the famous North Star near Cranbrook a new ore body has been encountered. It is an ironoxide shot through with wires and leaves of native silver.

Mining operations at the Granby mine at Phœnix are now being conducted on a larger scale than ever. The daily output averages 3,900 tons. The management is making arrangements to increase the production to 5,000 tons daily as soon as the furnace at the company's smelter at Grand Forks are enlarged.

The report of the Hall Mining and Smelting Company, operating the Hall smelter at Nelson and the Silver King and Emma mines, showed that the mines yielded a good profit for the eighteen months covered by the report. The total profit from the two mines was about $90,000. The report shows that in the same period the smelter ran at a loss. It is said there was a grave error made in the estimate of values and before the error was discovered the smelter was shown to be $51,000 worse off than was anticipated. The total loss for the eighteen months covered by the report amounted to $117,635.35. As soon as the discovery was made known the mines and smelter were shut down.

The Snowstorm has increased its daily output of ore to 250 tons a day and has added forty men, making a crew of 100.

Hydraulic mining operations will be carried on in Atlin district in the coming season on a larger scale than ever. This is the opinion of John M. Ruffner, general manager of the North Columbia Gold Mining Company, which has been operating on Pine Creek for six or seven years with good success. Last year's cleanup was valued at nearly $75,000.

Mr. Ruffner said that the output of the company will soon be increased four or five fold by reason of the construction of a big ditch which will provide 15,000 miners' inches of water, an unusually large supply. The improvements have been under way for a year and will be completed before the end of the coming season.

The Nickel Plate mine at Hedley is cleaning up monthly about $80,000 in gold bricks, besides shipping concentrates of like value monthly to the Trail smelter. This makes Hedley the biggest gold producing camp in British Columbia.

ALASKA.

SEATTLE, April 6.—The report has reached Dawson that the Consolidated Gold Dredging Company of Alaska, better known as the Davidson outfit, is planning to put two more dredges on the Fortymile. George McIntyre Gibbs, formerly Dawson manager of the Canadian Bank of Commerce, is to be the Vancouver manager or representative of the big mining company. The Davidson people have two dredges on the Fortymile.

The White Pass Company is building extensive wharves, conveyors and other equipment at Skagway for the handling of copper ore, and will undertake at once the extension of the railway twelve miles or more into the Whitehorse district. The road will follow along the line of developed copper properties.

Two new quartz mines will be opened up this summer on Kenai Peninsula, the management having gone up on the Portland on her last trip. One is near Knik, where a three stamp mill will be installed. The group is owned by the Bartholf brother who have been operating at Kenai Peninsula for several years, and is said to be a free milling gold proposition. A two stamp mill prospecting outfit will be installed on the other property, adjoining the Barnes holdings, by Coy & Thomas.

Another claim on which there is good pay has been found in the Valdez Creek placer district. The find was made on creek claim No. 2 above on Valdez Creek, where a number of men have been working all winter on a prospecting shaft. This claim adjoins the Tammany bench claim on which Pat Monahan made his rich find last year.

NEW USES FOR STEEL.

Dullness of Trade Stimulates Invention —The Pittsburg Market.

PITTSBURG, April 12.—Because of the falling off in demand for standard types of steel the Carnegie Steel Company has engineers and salesmen working to find other outlets for their products to keep mills busy. The armor plate department, which has been almost knocked out of business by the few ships being built and by competition from the Midvale Steel Company, has been turned to making armor plate for bank vaults. Forty of these vaults have been built to date and there is more money in this class of work than profit in making armor for warships. During the week a contract for a vault for the Dollar Savings and Trust Company, Youngstown, Ohio, was booked, and seven other banks will install similar vaults soon, with armor belting well below the burglar line. The Bethlehem Steel Company has retired entirely from the armor plate business.

One of the commodities for steel which the Carnegie company is pushing is that of steel sheet piling. Contractors have discovered that such piling can be driven into the ground and interlocked for coffer dams, dock work, &c., and in driving making itself absolutely watertight. After the masonry work is completed the sheet piling can be withdrawn and used over and over again. On the Great Lakes, especially around Chicago, vast quantities of the steel piling are being used for reclaiming land around the lake and for sewers and culverts. In scores of other lines of work in which lumber was exclusively used formerly steel is now taking its place.

One of the new uses of steel largely brought about by the Carnegie Steel Company is that of pipe supports. Heretofore no one has even thought of using anything but timber in mines. To-day thousands of tons of steel are being rolled by the Pittsburg concern for pipe supports and it is figured that within the new decade the consumption of steel will almost double through the introduction of steel into operations where it was never used before.

Some price cutting is being done here and there is a strong suspicion that several independent interests are taking all the business they can get at lower prices. Shading is reported in plates, structural material and light rails. While the principal bar iron producers are strictly adhering to the quotation of 1.50 cents Pittsburg on iron bars, it is certain that sales have been made lately at from $1 to $2 a ton less. Steel bars, however, remain firm at 1.60 cents.

The Republic Iron and Steel Company resumed operations at its big bessemer steel plant at Youngstown on April 6 and its Valley and Brown-Bonnell works are still running to more than 50 per cent. of capacity. More mills were put on at the Homestead plant of the Carnegie Steel Company at the beginning of last week and the plant is practically in full operation this week. The Edgar Thomson rail plant was entirely closed during the week for the first time this year, but new business has been booked and it is probable that the three rail mills will be going again tomorrow.

The American Sheet and Tin Plate plant added 16 more tin plate mills to the active list by putting the twenty-eight mill plant at Elwood, Ind., on in full at the opening of last week. While new business in structural material has been light there are strong ind