

FORTY MILE PLACER DISTRICT RESOURCE INVENTORY, ALASKA

by

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NOTICE

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UNITED STATES DEPARTMENT OF THE INTERIOR

Cecil D. Andrus, Secretary

BUREAU OF MINES

John D. Morgan, Acting Director

FOREWORD

by

John J. Mulligan 1/

This report was prepared for the Bureau of Mines as part of a continuing effort to collect and preserve previously unrecorded but currently valuable information on Alaskan mining districts. The Bureau made no field checks or evaluations. The author is a mining engineering ~~ing~~ with professional experience in the district. His report and conclusions are based on the factors outlined under "Present Report," pages 2 and 3.

1/ Chief, Alaska Field Operations Center, Juneau, Alaska.

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October 25, 1977.

INTRODUCTION:

The Fortymile Placer District as far as this report is concerned comprises the Alaska part of the Fortymile River drainage basin, the Eagle District and the Seventymile River drainage basin, as shown on the Eagle, Alaska quadrangle Map, (see Plate No. 1).

The district consists of many discontinuous groups of mountains that rise a few hundred feet above a fairly uniform plateau between 3,000 and 5,000 feet above sea level. The upland is cut by valleys of the Fortymile River and its tributaries together with several other streams.

Most of the district is underlain by Precambrian (?) and Paleozoic gneiss and schist, of both sedimentary and igneous origin and minor crystalline limestone, and by Paleozoic, Mesozoic and Tertiary felsic, mafic, and ultramafic igneous rocks, according to: U.S.G.S. Bulletins 872, by J. B. Mertie, Jr., (1937b); Bulletin 1241-B, by H. L. Foster (1969a); Bulletin 1312 M, by H. L. Foster and S. H. B. Clark (1970); and Bulletin 1281, by H. L. Foster and T. C. Keith (1969).

Although the upland portion of the Fortymile area was not glaciated except for the summits of some of the highest mountains, loess, derived largely from proglacial flood plains, covers much of the area. The district is in a zone of discontinuous permafrost, however, most of the ground that has been placer mined was permanently frozen.

The Fortymile is one of the oldest placer districts in Alaska. Gold was discovered in the Yukon Territory near the mouth of the Fortymile River in 1886 and in Alaska on Franklin Creek in 1887. In 1888, commercial gold placers were found in many other places of the Fortymile River area and on Walker Fork, a westerly flowing stream to the South Fork of the Fortymile. By 1903, many of the most productive deposits had been located. According to the U.S.G.S. Bulletin 1374, Placer Deposits of Alaska by Edward H. Cobb (1973), the Fortymile District was worked every year since its discovery in 1887, and through 1961 had produced about 417,000 ounces of gold. ~~At today's price of \$160.00 per ounce, this would have amounted to about \$66,720,000 or more than 9 times the purchase price of Alaska.~~

Since 1961, the data on production in most years are not available, even though a dredge operated on Chicken Creek, through the end of 1967. The best estimate on production in the Fortymile, from 1961 to 1977, is about 35,000 ounces according to knowledgeable mining men in the area. This results in a total production from the Fortymile District of about 452,000 ounces, ~~valued at \$72,320,000 based on \$160.00 gold.~~

The source of gold in the placers is the result of weathering away of many mineralized quartz veins in Metamorphic rocks near contacts with felsic intrusive bodies. Other heavy minerals found in the placer concentrates include magnetite, ilmenite, hematite, barite, garnet, pyrite, scheelite, cassiterite, cinnabar, monazite and allanite, none of which have been recovered in commercial quantities. Although much of the gold was fine, some was very coarse. A 25 ounce nugget was found on Wade Creek, a 30 ounce nugget on Franklin Creek and other nuggets weighing several ounces were not uncommon.

Both stream and bench placers have been mined in the Fortymile District. The most productive benches were those along upper Chicken Creek and its tributaries and along the top of and on the west slope of Lost Chicken Creek. Bench mining was also conducted in several other areas, particularly on Napoleon Creek and immediately north of Dome Creek. The auriferous bench deposits along the north side of Dome Creek extend for more than 6 miles.

Although practically every kind of placer mining method has been used in the Fortymile, including drift mining, most of the production was from Dredges. A total of 9 dredges operated in the area one time or another between 1907 and 1967. All of the dredges are now abandoned and are probably unoperative, except for the one now located on Chicken Creek. This dredge will someday be moved into an economic area in the district or to another location in some distant locality.

ACKNOWLEDGEMENTS:

In addition to the U.S.G.S. Bulletins already mentioned under my "Introduction", I wish to cite U.S.G.S. Bulletin 897-C, Gold Placers of the Fortymile, Eagle and Circle Districts, Alaska, by J. B. Mertie, Jr. (1938), as another valuable source of information.

The writer also wishes to particularly thank Howard Bayless, miner on upper Chicken Creek; Billy Meldren, miner on upper Chicken and Stonehouse Creeks; Jerry Hanks and Vern Weaver, miners on Lost Chicken; George Robinson, miner on Wade Creek; Tom and Betty Dilly, Roadhouse operators at the confluence of the Fortymile River and O'Brien Creek; Dave Weston, miner on Dome Creek; Al Stout, miner on American Creek; Barney Hansen, old time miner and expert in the Eagle-Seventymile area; and Dan Eagan, Fairbanks Manager, Alaska Gold Company, Fairbanks, Alaska, who has had a long association with the Fortymile area, particularly in the Chicken area since about 1948.

PRESENT REPORT:

In May, 1977, the writer was authorized to prepare a Fortymile District resource inventory report on the gold placers in the area by James C. Barker, Mining Engineer for the U. S. Bureau of Mines, Fairbanks, Alaska.

This report is based on:

1. A mining-claim recording research in the Division of Geological and Geophysical Survey office on the University of Alaska, Fairbanks campus.
2. Personal knowledge and visitations to various parts of the Fortymile area since 1936.
3. Information and knowledge accumulated by miners who are now deceased.

4. A fact finding auto trip to the area July 16 through July 18, 1977.
5. Personal interviews with the individual miners as listed under "Acknowledgements".
6. U.S.G.S. publications by Mertie, Cobb, Foster, Clark and Keith as previously listed.

There was no money or time allotted for more expensive field investigations so consequently, the conclusions and reserve calculations are what one might call on educated estimate, based on the writer's personal knowledge and the information gathered as per the previous listing.

The fact that all of the productive placers of today were discovered from 80 to 90 years ago, however, should not be regarded as a deterrent to new prospecting. In the first place, the current price of gold ~~at \$160.00 per ounce~~, as compared to \$20.67, before 1934, may make it possible to mine deposits now, that were unworkable years ago. Also, new methods of large-scale mining have been developed in recent years so that it will be possible in the future to work the lower grade ground around the old placers and to rework many of the same areas that were previously mined.

Mining in the Fortymile District is now active on a relatively small scale and on only a few creeks as compared to the early 1900's. The two largest operations are in the Chicken Area. Smaller, 1 and 2 man operations can be found in several other creeks to be described later in the text. As near as can be determined, there are now about 1200 current gold placer claims staked in the Fortymile District. The exact number of people now engaged in mining in the district could not be definitely determined but an estimate would be between 50 and 60 according to the post office reports at Chicken and in Eagle and a rough estimate by local miners along the Taylor highway.

The Enclosed Maps or plates are:

1. Plate No. 1, Eagle Quadrangle Map, Alaska, is presented as a vicinity map. Heavy "Black" lines are used to accentuate those creeks that have been partially or completely staked in the past and may become economically important in the future.
2. Plate No. 2, Eagle (A-3) Alaska.
3. Plate No. 3, Eagle (A-2) Alaska.
4. Plate No. 4, Eagle (A-1) Alaska.
5. Plate No. 5, Eagle (B-1) Alaska.
6. Plate No. 6, Eagle (C-1) Alaska.
7. Plate No. 7, Eagle (D-1) Alaska.
8. Plate No. 8, Eagle (D-2) Alaska.
9. Plate No. 9, Eagle (D-3) Alaska.

These 9 plates show the streams and benches that are now being worked or have a better than average chance of production in economic quantities at some future time. "Red", indicates areas that are believed to be worked out. "Black", indicates areas that are probably economic now ~~at \$160.00 gold~~ or areas that will prove to be economic in the future. "Green", indicates known bench deposits that have been partially mined, on a very small scale, that may be found to be economic for large scale mining now or at some future date.

In order to prevent utter confusion when discussing the many streams in the Fortymile District, each area will be discussed individually, ie.:

1. Mosquito Fork
2. South Fork
3. Fortymile River
4. North Fork
5. Middle Fork
6. Eagle
7. Seventymile River

MOSQUITO FORK:

The Mosquito Fork Drainage system is shown on Plates No. 2 and No. 3. Gold Creek and its tributaries, Moose Creek, Old Man Creek, Ingle Creek and Chicken Creek and its tributaries all flow into Mosquito Fork. At one time all of Mosquito Fork was staked from its mouth, at the confluence of Dennison Fork and the South Fork to Kechumstuk, a distance of about 24 miles (see Plate No. 1). At this writing only about 2 miles of Mosquito Fork is staked which includes the mouth of Chicken Creek and a few claims near the mouth of Ingle Creek. Dredging may sometime be considered economical on Mosquito Fork, from its mouth to a point above Ingle Creek.

Old Man Creek, Moose Creek, Gold Creek and its tributaries have all been completely staked but are believed to be open at this writing. There is believed to be 16 claims currently held on Ingle Creek and the Mosquito. Only small scale mining is believed to be going on. The bedrock on Ingle Creek consists chiefly of green schist and quartzite, cut by numerous veinlets of quartz, a sample of which was supposed to have assayed 1.87 ounces of gold and 2.05 ounces of silver to the ton. Assays on placer gold from Ingle Creek, show a fineness of about 850 parts of gold and 144 parts silver.

The Chicken Creek drainage which includes Myers Fork and Stonehouse has been a very productive area. Probably close to 100 claims are still being held in this area. The history of mining in the Chicken Creek area dates back to before 1900 and has been more or less continuous since that time. There is still a lot of ground to be mined in the area some of which will pay to be remined. Billy Meldren and Howard Bayless feel that there is a lot more gold to be mined

from this area than has been mined to date. They also report that the ground will average better than \$3.00 per cubic yard at \$140.00 gold.

The dredge that was moved to Chicken Creek, from the Fairbanks area in 1961, operated for 7 years and mined out the lower 1-1/2 miles of the creek. There is now a cat, dragline and sluice box operation continuing upstream from where the dredge stopped because of shallow ground and a steeper creek grade.

A considerable amount of bench ground is also available to future mining as shown in "Green" on Plate No. 3. Some of this bench ground lies about 275 feet above the level of Chicken Creek and up to 35 feet deep, a portion of which has been drift mined.

The fineness of gold ranges from 820 to 864 with an average of about 840. Assays shows a gross of between 6 to 58 parts per thousand because of extraneous impurities, such as lead shot, etc.

The width of the paystreaks are from 600 feet wide in one section on Chicken Creek to only 20-30 feet wide upstream near the heads of Myers Fork and on Stonehouse Creek. Depths range from 14 feet to 4 feet.

SOUTH FORK:

The South Fork drainage system includes important creeks such as Lost Chicken Creek, Atwater and Wall Creeks, Walker Fork, which includes Wade Creek and its tributaries of Ophelia, Robinson, Gilliland, Grace and Warner Creeks. It also includes upper Walker Fork tributaries of Liberty, McKinley, Twelvemile, Cherry, Crow, Davis, Poker and Younger Creeks. Lower streams on the South Fork are Napoleon Creek and its tributary, Franklin Creek, Buckskin, Fortymile Pup, Butte and Uhler Creeks, (See Plates No. 2, 3, and 4).

All of these creeks have been mined in the past and as far as can be determined they are all active in some degree now, except for Atwater, Wall, Butte, and McKinley Creeks. The number of active claims today cannot be definitely ascertained but an approximate figure may be about 200. Very little of this huge potential is considered completely worked out except for the areas shown in "Red", such as on Upper South Fork, Wade, Upper Walker Fork, Lower Napoleon and Franklin, two sections of Uhler Creek, and a small area on Twelvemile. Aside from the bench ground shown in "Green" on Lost Chicken Hill, the only other bench ground in this drainage system known to the writer is that shown on Napoleon Creek.

As far as is known the largest outfit this year was on Lost Chicken Creek, where 3, D-8^s and a Slickplate type sluice box were in operation. This mine is run by Jerry Hanks and Vern Weaver, who employ 3 men. Water for the operation is collected in a small reservoir on the divide between Lost Chicken Creek and Chicken Creek. It is piped to the sluice box on the Lost Chicken Creek side. Additional water is pumped from the South Fork, near the mouth of Lost Chicken Creek. The overburden or Muck cover is stripped with water and caught in a series of low level dams at the mouth of Lost Chicken Creek. Sluicing water also runs through these settling ponds, consequently, very little coloration could be observed in the South Fork below the operation.

It is reported that the Lost Chicken Creek mine is running \$3.50 per cubic yard at \$140.00 gold.

Walker Fork, at one time was staked from its head to its confluence with the South Fork and including most all of its tributaries. Today, the writer can only substantiate about 52 claims on Walker Fork and about 60 other claims scattered on Wade Creek, Ophelia, Robinson, Gilliland, Grace, Twelvemile, Cherry, Davis, Poker and Younger Creeks. George Robinson says that he sold his 20 lower claims this past year on Wade Creek. He also says that there are 3 cats and a loader mining on Wade and its tributaries. Robinson indicates that there is considerable side-pay left on Wade and many sections could be remined with larger and more sophisticated equipment. The early day miners took only a very small percentage of the gold in the area. Most of the gold was lost in the primitive washing methods or could not be mined in the first place because of excessive ground water and small inadequate equipment.

Apparently there were only about 8 people mining on the tributaries of upper Walker Fork, such as Twelvemile Creek, Davis, Poker, Younger and Cherry Creeks. Small cats are reported to be working on Twelvemile and Davis Creeks. The other creeks are either shovel-in type or ground sluicing type mining operations.

Three people and a cat are reported to be working 12 claims on Forty-five Pup. Miners are also reported on Franklin, Buckskin, Uhler and Napoleon Creeks but their operations are small and primitive except maybe for Napoleon Creek, where a D-8 is reported to be in use.

Franklin Creek is the oldest producing creek in the Fortymile District, having now produced gold for more than 90 years, or since 1887. This creek is only about 6 miles long. The headwater portion of the valley is fairly open and wide but the lower part of the valley is quite narrow and steep. The paystreak is reported to be only about 50 feet wide and the depth of pay gravels range from 2 to 12 feet. Some of the gravels on Franklin went as high as \$5.00 per cubic yard at \$20.67 gold, ~~which would be more than \$35.00 per cubic yard today.~~ Nuggets up to 30 ounces have been found on Franklin.

Considerable mining has also occurred on Napoleon and on Uhler Creeks, but the recovery is considered small when compared to their expected potential. The benches on Napoleon Creek although not drilled are expected to be highly productive.

Dredging on the South Fork and its tributaries began in about 1907 and is believed to have continued until about 1941. The first small dredges began digging on the South Fork proper. One was also built on upper Walker Fork, in those early years. All of them were steam powered, requiring from 5 to 7 cords of wood a day. The dredge that operated on the South Fork near the mouth of Franklin Creek was discontinued and its machinery moved to the new Wade Creek dredge in 1936. Two other dredges started operating in 1936, one on upper Walker Fork near Poker Creek and the other by Atwater Creek on the South Fork. The South Fork dredge worked its way upstream to just above the confluence with Dennison Fork, where it lies abandoned today. The Walker Fork dredge mined the area between Poker Creek and Cherry Creek. Dredging on Wade Creek and on Walker Fork was quite successful. It is reported though,

that the South Fork dredging was not always financially profitable in that the small light dredges could not handle the large rocks and many of the reefs were too hard with no gravel cover, so flotation was a continuous problem. Very little planning seemed to be accomplished before a dredge was built. Prior evaluation and thawed ground was also neglected, all resulting in a very costly operation.

FORTY MILE RIVER:

The Fortymile River drainage below its confluence with its North and South Forks encompasses Plates No. 4 and 5 and the lower portion of No. 6. This river flows across the border into the Yukon Territory in a North-easterly direction for about 15 miles before it enters the Yukon River. Its past, present and probable future gold producing streams are: Steele Creek, Canyon Creek and its tributaries, Smith Creek, Alma, Moose, Sam Patch, Snow, Discovery, Twin, Flat Creeks and Nugget Gulch. Alder Creek, Upper O'Brien Creek, Dime and King Solomon Creeks and Liberty Fork, also Dome Creek and its tributaries of Little Johnny, Georgie and Little Miller Creeks are also included.

Almost all of these creeks have been staked at one time, but probably less than 100 claims are now in good standing. The greatest activity in this area is on Canyon Creek, Squaw Creek, the bars and benches colored in "Green" along the Fortymile River and on Dome Creek.

Bedrock is exposed in many places in the bed of the Fortymile River, but even on the bars and sloping benches close to the river, the cover of gravel is thin. Consequently, the bars and low benches of the Fortymile River have for many years been sites for small-scale mining and at some localities larger hydraulic plants and dredges have been installed. As far as small scale mining is concerned, these low bars are perennial sites, because after being worked, they may again be enriched by flood waters that remove the old alluvium and deposit new gravel and gold from points farther upstream. On the writer's first trip to the Fortymile area in 1936, there were about 12 to 15 men engaged in this small-scale mining along or near the River. Today, according to Tom and Betty Dilly, proprietors of their lodge near the bridge over the Fortymile at O'Brien Creek, there are at least a dozen people working those same bars and benches. The only difference today is that many are using small suction dredges instead of the customary rockers and small sluice boxes.

Davy Weston has a small crew and tractor working on the Dome Creek bench ground near Little Miller Creek. ~~He indicates huge yardages and values exceeding \$2.50 per cubic yard.~~ The bench is reported to be 6 miles in length and 300 feet wide, varying in depth from a few feet to 80 feet in the back. Water is brought to his cut through a ditch or could be pumped from Dome Creek. The gold is quite small but has a fineness of about 880. Considerable pyrite occurs in the concentrates, but some galena and cinabar have also been observed.

Canyon Creek is reported to have several active small-scale mining operations. The area shown in "Red" is believed to be mined out but an enormous amount of auriferous potential remains on Canyon and its tributaries. A large high auriferous gravel deposit is reported along the west side of Canyon Creek but its location could not be definitely determined.

These deposits and other high level benches might possibly be worth some intensive prospecting.

NORTH FORK:

Several potentially important creeks flow into the North Fork of the Fortymile River. These are Hutchinson Creek and its small tributary Montana Creek, Bullion Creek and Slate Creek which has several tributaries such as Ina, Jim, Gold Run, Ruby, Green and Ben Creeks, (see Plate No. 1). All of these streams were staked years ago, but time did not permit me to investigate them, in order to determine how many claims are valid and who was doing what in the area. It was believed by the Chicken area miners that upper Hutchinson Creek had the greatest activity this past year.

The main North Fork in the vicinity of "The Kink" was dredged back in 1907 or 1908 but without too much success. The dredge was abandoned at this site.

MIDDLE FORK:

Portage Creek and Pittsburg Creek and its tributaries flow into the Middle Fork drainage, (see Plate No. 1). Other than knowing that these creeks were once staked, nothing new could be learned concerning recent activity, except that two men were supposed to have flown in there last summer. They were landed on a hill top. They were also reported to have a two month food supply with them and were scheduled to come out in late August.

EAGLE:

The Eagle District comprises those creeks flowing into the Yukon River near Eagle, (see Plates No. 6 and 7). The creeks that were staked years ago are Boundary Creek, American Creek and its tributaries, and Mission Creek.

It is not believed that there are any valid claims held in the Eagle District except on American Creek and its tributaries. Al Stout holds 19 claims and twelve other claims are thought to be valid.

Gold was first found on American Creek in 1895 and the whole creek was staked except for the lower 4 to 5 miles. Discovery claim includes both Discovery Fork and American Creek. For a distance of about a mile shown in "Red" the creek is considered worked out, having been mined and remined many times. The largest operation on American Creek is owned by Al Stout, who employs 2 men. He uses a D-8 to push into the boxes and to stack tailings. He pumps water through a short pipe line to furnish water for his boxes.

The paystreak on American Creek varies from about 50 feet wide to over 200 feet. The depth varies from about 4 feet to 14 feet. ~~His auriferous gravels are running more than \$3.00 per cubic yard.~~ Most of the gold is right on or in bedrock which consists of foliated green quartzite schist and some carbonaceous schist which contains many small veins and stringers of quartz. The gold is rather coarse and a few larger nuggets are occasionally found. One from Discovery Fork weighed 19 ounces and one from American

Creek weighed about 11 ounces. The fineness of this gold is about 800.

No mining has occurred on either Boundary or on Mission Creeks for many years, although it is reported that a party living in Fairbanks plans to begin exploring parts of Mission Creek next year.

SEVENTYMILE RIVER:

The Seventymile River area is shown on Plates No. 7, 8 and 9. Creeks that may have placer gold potential, or have been staked previously are: Phoenix, Big Boulder and Rock Creeks, Hudson Coulee, Bryant, Fox and Aurora Creeks, Lucky Gulch, Crooked, Eldorado, Mogul, Broken Neck and Gold Creeks, also Little Washington, Ruby, Bear, Sonickson, Barney, Placer, Nugget, Alder, Bonanza and Flume Creeks.

The Seventymile River from which the district gets its name heads against several large eastern tributaries of the Charley River and flows in a general easterly direction for about 60 miles to the Yukon River. Many tributaries flow into the Seventymile River, but it is a noteworthy fact that all of the large tributaries enter from the south. The number of tributaries, however, on which placer gold has been found and mined is about equally distributed on the north and south sides of the valley.

The principal southern tributaries that have produced the most gold in the past are Flume, Alder, Nugget, Sonickson and Gold Creeks. On the north side of the valley, the chief producing streams are Barney, Little Washington, Broken Neck, Crooked and Fox Creeks. Some small-scale mining has been done on other northern and southern tributaries. Considerable mining was also done years ago in the main valley of the Seventymile River, principally between the mouth of Sonickson and Little Washington, just below Crooked Creek and near the mouth of Fox Creek. Many other low benches and meanders of the Seventymile River show promising prospecting results, however, no attempt has been made to include these in the reserve potential figures, as insufficient information is available.

The original discovery in the Seventymile River District was on Barney Creek, in 1895. The bedrock in Barney Creek consists entirely of Tertiary rocks, and the gold in its placers is believed to have been derived from the disintegration and erosion of these rocks. The placers of Barney Creek were worked by open-cut shoveling-in methods as were most all other streams in the area. In recent years, small scale mining has been confined to the bench placers to the north. According to Barney Hansen of Eagle who has spent many years on the Seventymile, the bench placers on Barney Creek haven't hardly been touched. Hansen also indicated huge potentials of bench placers on Little Washington, Flume, Alder, Crooked and Fox Creeks but couldn't give me an exact location of the benches except on Flume, Alder and Barney Creeks.

The largest placer operation on the Seventymile in the past was on Crooked Creek. The gold was found in stream placers which formed the present valley floor, and the pay streak was 270 feet wide. The bedrock consists of sandstone, shale and conglomerate. The alluvian placers are from 4 to 8 feet deep with about 3 to 4 feet of muck cover. Contrary to the usual condition found in the placers of this part of Alaska, the gold is

not concentrated on bedrock but occurs throughout the body of gravel. The gold is rather fine grained, as the largest pieces will not weigh much more than a quarter ounce. Some small silver nuggets have also been recovered with the gold which has a fineness of a little over 900.

Fox Creek is another relatively short creek that has been mined for many years. All of the mining operations in this district have used either the shovel-in type or they used hydraulic methods, with water coming through ditches to give sufficient nozzle pressures. The auriferous conglomerate that crosses Lucky Gulch is believed to be the source of gold on this creek. Placer mining has also been accomplished on the benches along Fox Creek. These benches are about 70 feet above Fox Creek and have a width of at least 100 feet. The auriferous gravels are 4 to 8 feet thick overlain with between 4 to 8 feet of Muck. Mammoth tusks have been found in this upper alluvial cover.

As far as could be learned in Eagle, there are about 6 people in the Seventymile River basin. Two are supposed to be on Barney Creek, 2 on Flume Creek and 2 on Crooked Creek. No information could be learned on the number of active claims there are in the Seventymile but an estimate by Barney Hansen is that there are at least 100 valid claims.

CONCLUSIONS:

The placer gold mining potential of the Fortymile District as described in the preceding text and as depicted on Plate Nos. 1, 2, 3, 4, 5, 6, 7, 8, and 9, contains huge areas of inferred auriferous gravels. As of this date, however, only a relatively small portion of this vast district has been prospected or mined. Many placers, that were too low in grade to be worked in the early days of the district, were known only to the prospectors and miners in those days. All of the men who worked in this area 80 to 90 years ago are now dead. The results of their prospecting and small-scale mining attempts have not been recorded, so much of their work will need to be repeated in the light of present economic conditions.

In lieu of a more thorough examination of the district, a minimum estimate of the placer gold reserves is tabulated below. This estimate leaves much to be desired but it is based on the mining results that have taken place, as recorded by various government Engineers, Geologists and office personnel, by the writer's own personal knowledge of the district and reports by miners and knowledgeable persons now living in the area.

PLATE NO. 1

	<u>Cubic Yards</u>	<u>Ounces</u>	
Portage Creek, Pittsburg Creek and its tributaries	2,100,000	45,000	.03/cuyd .0214
Slate Creek, Ina Gulch, Jim Creek, Gold Run, Green, Ruby and Ben Creeks	4,500,000	97,500	.0216
Bullion Creek	1,000,000	22,000	.022
Hutchinson Creek	1,600,000	35,000	.0218
North Fork (Area known as "The Kink")	<u>1,400,000</u>	<u>30,000</u>	.0214
TOTAL	10,600,000	229,500	.0216

PLATE NO. 2

Mosquito Fork	3,450,000	74,000	.0214
Ingle Creek and its tributaries	360,000	7,500	
Old Man Creek	420,000	8,200	
Moose Creek	700,000	15,000	
Gold Creek and its tributaries	2,100,000	45,000	
Buckskin Creek	825,000	17,300	
Fortymile Pup	1,200,000	24,000	
Bench Across from Ingle Creek	<u>680,000</u>	<u>14,300</u>	
TOTAL	9,735,000	205,300	.021

<u>PLATE NO. 3</u>	<u>Cubic Yards</u>	<u>Ounces</u>
Mosquito Fork	1,730,000	37,000
Chicken Creek, Stonehouse Creek and its tributary and Myers Fork	700,000	15,500
Lost Chicken, Wall Street and Atwater Creeks	800,000	17,000
Wade and Ophelia Creeks	440,000	9,900
Walkers Fork and Liberty Creek	1,250,000	27,000
Napoleon Creek and its tributary	700,000	15,000
Franklin Creek	560,000	12,000
Buckskin Creek	1,130,000	24,000
Butte Creek	540,000	11,000
Uhler Creek	825,000	17,200
Benches on Napoleon, Chicken, Stonehouse Creeks, Myers Fork and on Lost Chicken Hill	<u>1,950,000</u>	<u>42,000</u>
TOTAL	10,625,000	227,600 0214

<u>PLATE NO. 4</u>	<u>Cubic Yards</u>	<u>Ounces</u>
Walker Fork and McKinley Creek	3,900,000	82,500
Twelvemile Creek and its tributary, Davis, Poker, Younger, Cherry and Crow Creeks	1,400,000	29,700
Smith Creek	430,000	9,700
Canyon, Mariner, Iles Creeks, Squaw Gulch, Babe, Arkansas and Brophy Creeks	2,800,000	59,000
Steele Creek	400,000	8,300
Wade, Gilliland, Grace, Warner, Robinson and Ophelia Creeks	<u>700,000</u>	<u>15,000</u>
TOTAL	9,630,000	204,200

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<u>PLATE NO. 5</u>		
Alder Creek	270,000	5,800
Flat Creek and its tributary, Twin Creek and its tributary, Nugget Creek, Discovery Creek and its tributary, Smith, Snow, Sam Patch, Moose and Alma Creek	2,700,000	59,000
Bench ground bordering the Fortymile River	1,100,000	23,700
Dome, Little Johnny, Georgie and Little Miller Creeks	1,800,000	38,500
Bench ground north of Dome Creek	2,500,000	51,700
O'Brien, Dime, King Solomon Creeks, and Liberty Fork	<u>700,000</u>	<u>15,000</u>
TOTAL	9,070,000	193,700

.0214

PLATE NO. 6

	<u>Cubic Yards</u>	<u>Ounces</u>
King Solomon Creek and Liberty Fork	1,100,000	23,000
Boundary Creek	1,200,000	26,000
American Creek, Teddy Fork Nugget Gulch, Discovery Fork, Star Gulch and Marion Creek	1,800,000	40,000
Mission and Small tributary	<u>250,000</u>	<u>5,500</u>
TOTAL	4,350,000	94,500

10217

PLATE NO. 7

Mission and Colorado Creeks	820,000	16,000
Phoenix Creek	410,000	8,100
Big Boulder Creek	400,000	8,000
Rock Creek	<u>60,000</u>	<u>1,200</u>
TOTAL	1,690,000	33,300

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<u>PLATE NO. 8</u>	<u>Cubic Yards</u>	<u>Ounces</u>
Mission and Seward Creeks	680,000	14,000
Rock and Hudson Coulee Creeks	500,000	10,800
Bryant Creek	950,000	20,000
Mogul Creek	800,000	16,000
Gold Creek	200,000	4,000
Sonickson Creek	400,000	8,000
Barney Creek and tributaries	560,000	9,700
Barney Creek North Bench	660,000	14,000
Little Washington, Ruby and Bear Creeks	690,000	15,000
Broken Neck Creek	270,000	5,900
Crooked and Eldorado Creeks	800,000	17,000
Fox Creek, Lucky Gulch and Aurora Creek	<u>820,000</u>	<u>17,200</u>
TOTAL	7,330,000	151,600

10706

PLATE NO. 9

	<u>Cubic Yards</u>	<u>Ounces</u>
Placer Creek	270,000	5,900
Nugget Creek	140,000	3,000
Alder Creek	550,000	11,500
Bonanza Creek	270,000	5,900
Flume Creek	550,000	11,500
Bench ground on Flume and Alder Creeks	<u>390,000</u>	<u>8,200</u>
TOTAL	2,170,000	46,000

,0212

SUMMARY

Plate No. 1 - Total	10,600,000	229,500
Plate No. 2 - Total	9,735,000	205,300
Plate No. 3 - Total	10,625,000	227,600
Plate No. 4 - Total	9,630,000	204,200
Plate No. 5 - Total	9,070,000	193,700
Plate No. 6 - Total	4,350,000	94,500
Plate No. 7 - Total	1,690,000	33,300
Plate No. 8 - Total	7,330,000	151,600
Plate No. 9 - Total	<u>2,170,000</u>	<u>46,000</u>
GRAND TOTAL	65,200,000 cubic yards	1,385,700 ounces

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