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February 26, 2002

RECEIVED
FEB 27 2002
IDWR/North

Allen Beardslee, Sr. Water Resource Agent
Department of Water Resources
State of Idaho
1910 Northwest Blvd., Suite 210
Coeur d'Alene, ID 83814-2615

RE: Gold Creek Mines, Inc. - Application for Permit

Dear Mr. Beardslee:

The following is in response to your letter of February 8, 2002 wherein the Department requested certain information concerning the above entitled application for permit. As we have discussed on a couple of occasions, I believe it will be necessary to request an extension of time for submitting comments from the entities which you requested in the last check mark of your letter. I have written those entities, but I do not anticipate having comments from the same prior to March 11, 2002.

My response to your request for information is in the same order as set forth in your letter.

1. Information concerning any design, construction or operation techniques which will be employed to eliminate or reduce the impact on other water rights.

Response: There are no other water rights being impacted by Gold Creek's project. Attached hereto as Exhibit "1" is a brief summary of the project. All water used in connection with the project will be returned to the stream and ponds located entirely within the geographical boundaries of property owned by Gold Creek. There are no upstream or downstream water users that will be affected by the non-consumptive use associated with the project.

2. Provide the diversion rate that will be required during peak use and during average use, as well as the annual volume and annual volume of water to be consumptively used. Describe the impact this project will have on stream downstream from the point of diversion.

Response: Peak use diversion rate will be determined from the hydrograph which is contained in Gold Creek's feasibility study, page 6, Exhibit "1". The diversion rate for months other than May will be the estimated average flow for the month minus the instream flow to be determined in consultation with the State of Idaho, Department of Fish and Game. There is no consumptive use associated with this project.

The downstream impact will essentially be a reduction of stream flow between the point of diversion and the pond where the water is returned. This impact will be mitigated with the instream flow to be determined. No other impact is anticipated since water quality will not be affected as a result of project operation. Water returned to the stream during warm weather operation will have an incremental lower temperature resulting from conduit sheltering in the 4200' penstock.

3. Show the quantity of water available from the source during peak and average water demand periods and/or other sources of supply that may be used as a supplemental water source.

Response: The hydrograph contained on page 6 of the feasibility study sets forth the quantity of water available during peak and average water demand periods. There are no other sources of supply that may be used as a supplemental water source.

4. Submit copies of deeds, leases, easements, or other information documenting a possessory interest in the lands necessary for all project facilities and the place of use or if such interest can be obtained by eminent domain proceedings the applicant must show that appropriate actions are being taken to obtain the interest.

Response: Exhibit "2" contains copies of deeds conveying the real property from the Almquist family to Gold Creek Mines, Inc. Ownership is fee simple absolute and all of the project facilities, including point of diversion and place of use will be located on Gold Creek's property. Gold Creek is an Idaho corporation in good standing.

5. Submit copies of plans and specifications along with the estimated construction costs for the project works. The plans should be definite enough to allow for determination of project impacts and implications.

Response: Preliminary construction plans and specifications along with estimated construction costs for the project are attached. The intake structure

is a preliminary design at this point. The total height of the structure will only be 4' at the spillway. The penstock is approximately 4200' in length and will be 16" in diameter. It will be constructed of No. 1 welded steel pipe with a wall thickness of .375". A suitable coating will be applied and the pipe buried with no less than 2' of cover material. The penstock will be 96% efficient at design flow resulting in a 1103' dynamic or working head of water subject to a later survey to confirm the gross head.

6. Provide our Department of comments on the effects the construction and operations of the proposed project from the city, or country where the project is located, the Idaho Fish and Game, Idaho Department of Health and Welfare (Divisions of Environmental Quality), irrigation District, canal company, or Tribal Reservation where the project is located and return comments as part of the additional information.

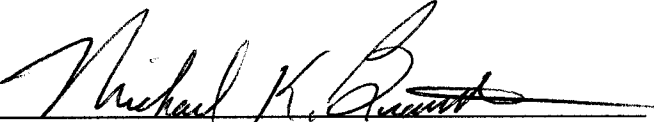
Response: Letters have been written to Shoshone County, the Idaho Fish and Game, Idaho Department of Health and Welfare, Division of Environmental Quality. There are no cities, irrigation districts, canal companies or tribal reservations located where the project is situated.

This is to confirm that Ray Hennekey of the Department of Fish & Game and June Bergquist of DEQ will be visiting the site with you and I on Thursday, March 7, 2002. We will meet at the Wallace Visitor's Center at 9:30 a.m. You have indicated a willingness to view the site in order to gain a better understanding of the nature and scope of Gold Creek's project. Enclosed as Exhibit "3" is a brief narrative summary of the proposed project.

If you have any further questions or desire additional information, please contact me.

Very truly yours,

HULL & BRANSTETTER CHARTERED

By: 
Michael K. Branstetter

MKB:cla

Enclosures

cc: Marge Almquist (no enclosures)
Dennis Almquist (no enclosures)

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EXHIBIT "1"

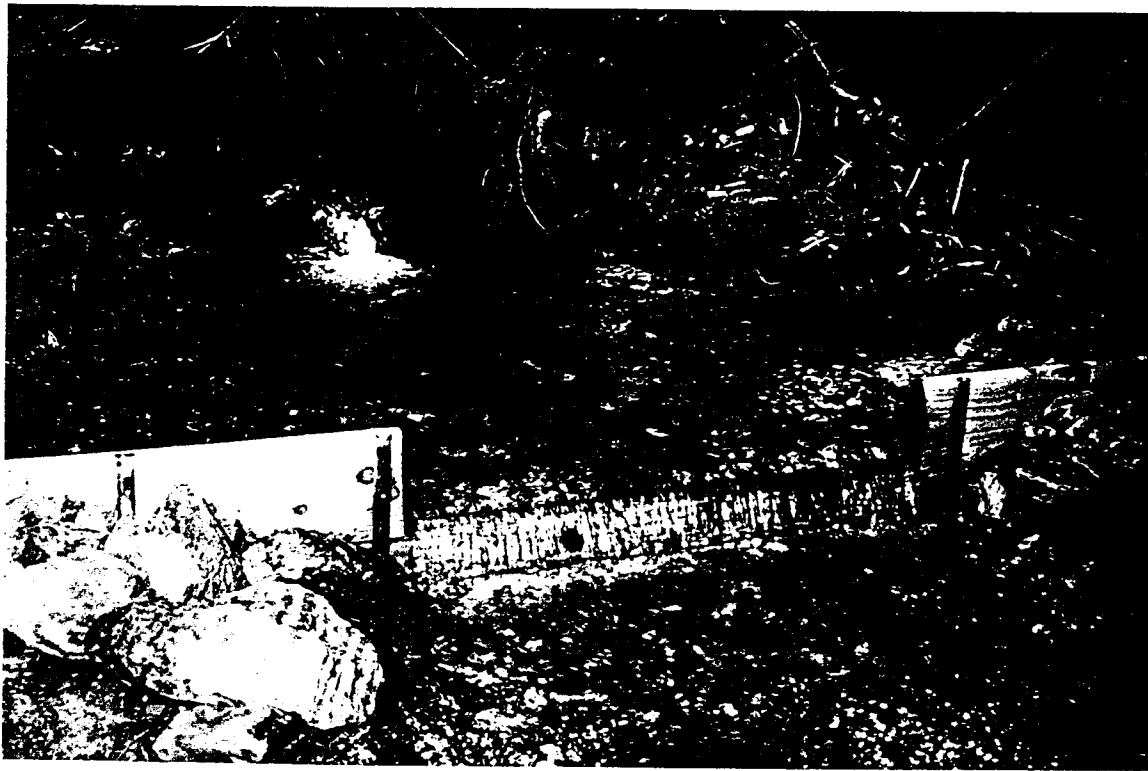
FEASIBILITY STUDY

FOR

THE GOLD CREEK HYDROELECTRIC DEVELOPMENT

August, 2001

RECEIVED
FEB 27 2002
IDWR/North



Hydro Technology Systems Inc.
P.O. 683 Kettle Falls, Washington 99141

1.0 INTRODUCTION AND PROPERTY DESCRIPTION

1.1 Introduction to Proposed Project

The Gold Creek Mines property owned by Gold Creek Mines, Inc. lies approximately 1.5 miles west of Mullan, Idaho, which is located approximately 1 hour drive east of Coeur d'Alene, Idaho. Property boundary of interest begins on the south side of Interstate 90 and contains the Gold Creek drainage up to the surveyed Forest Service boundary (Map 1). Preliminary survey results indicate an elevation drop of 1130+/- 50 feet by pressure altimeter method.

1.2 Historic Use

Earliest commercial use of the property appears to have been mining and logging. Timber harvesting and management is now the primary commercial use for the property. Consideration for hydroelectric use began seriously in 1980 with some limited work conducted by Boyle Engineering. This study information is no longer available from Boyle and the original correspondence to Gold Creek Mines has been lost.

Two large fountains, constructed decades ago, are visible from Interstate 90. Named after the builder, Elmer's Fountain serves as a local landmark and rest stop for tourists.

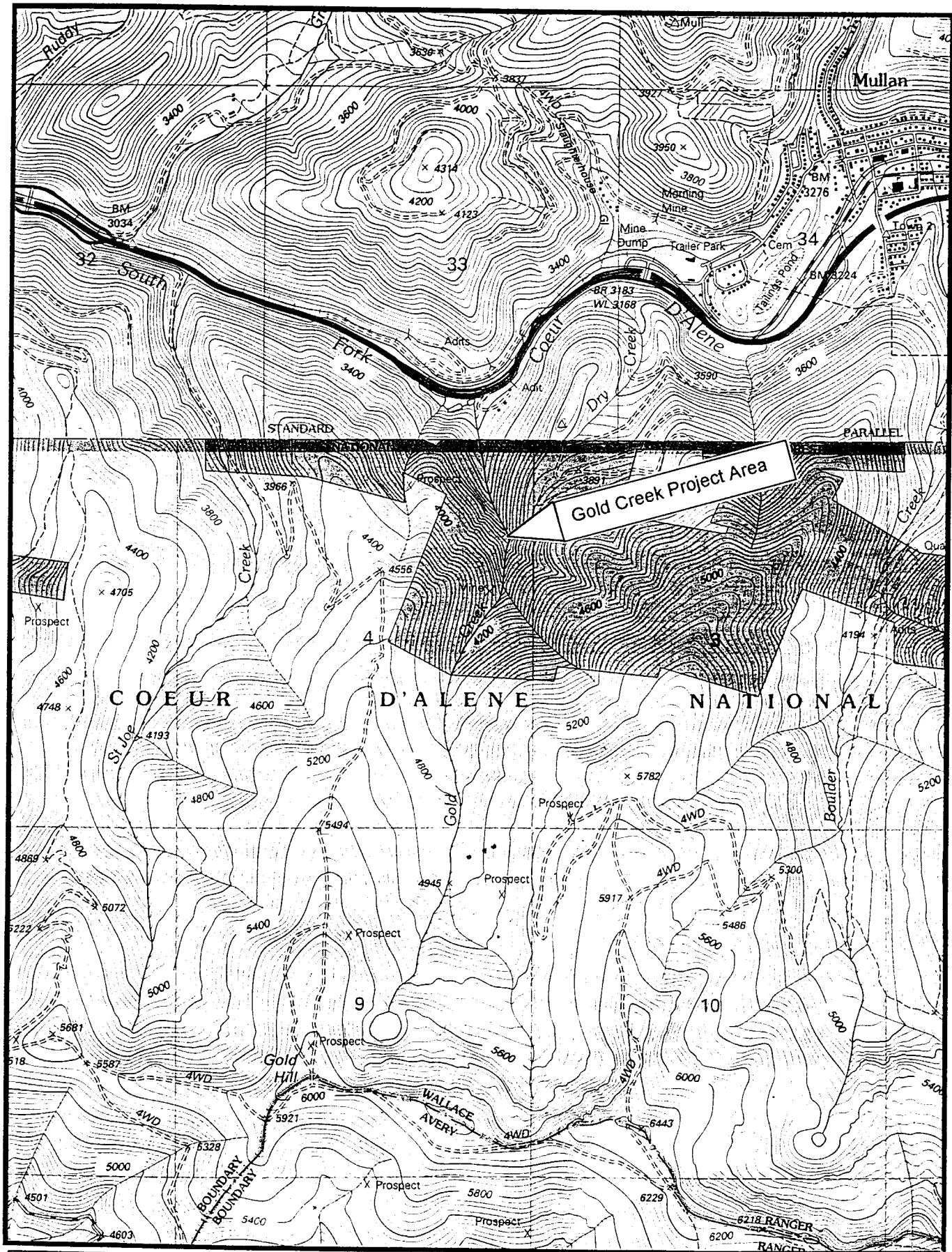
2.0 PURPOSE AND SCOPE OF SERVICES

2.1 Purpose of Study

The purpose of the Gold Creek hydroelectric feasibility study is to provide Gold Creek Mines, Inc. with recommendations regarding the development of a small scale, grid connected hydroelectric system. Recommendations are based on several site visits to the project, a technical analysis of the site conditions and a financial analysis.

2.2 Scope of Work

The feasibility study has been conducted in accordance with the June 18, 2001 Scope of Work provided to Gold Creek Mines Inc.



Map 1 USGS Mullan Quadrangle 1995

2.2.1 Hydrology Study

The purpose of the hydrology study is to ensure that the turbine is the correct size for the water flow, and has the correct variable flow characteristics, so that expense is not wasted on over- or under-capacity. The sizing of the intake works and penstock is also determined by the hydrological study. Most importantly, the study will determine the water resource available for power generation.

Three methods were used for the hydrology study

- Flow prediction by area-precipitation method. The catchment basin area above the project diversion was determined by USGS topo maps. Precipitation was determined by available rainfall gauging data and historic records. Local evaporation and transpiration factors were used to determine runoff and average annual daily flows. Sub surface transfer flow between catchments was considered.
- Flow prediction by correlation method. Hydrological records and resulting flow duration curves of gauged streams and rivers in the vicinity of the project were used to correlate corresponding flows at the gauging station installed at Gold Creek.
- Site measurement of flow. A gauging was installed at Gold Creek on July 3, 2001 and regular measurements of the streamflow were recorded over the period of the study. The streamflow gauging program should be continued for as long as practical to establish actual flow values for Gold Creek over a longer period of time and further refine the hydrology assumptions presented in the study. Gold Creek Mines is expected to provide assistance in taking and recording the daily flow readings during and after the study.

The above methods were used to provide an estimated flow duration and exceedence curve for Gold Creek

2.2.2 Geo-Technical Study

The geo-technical study consisted of investigations of the proposed intake site, penstock route and powerhouse location to identify overall geologic suitability during construction and operation. The study focused on identifying current or future surface or sub-surface movement potential, loose slopes, slip zones, layer faulting and subsidence. Soil and rock types were identified.

Geological history was researched to include stratigraphy, geologic structure seismic risk factors and local and regional geology.

2.2.3 Environmental Assessment

The study attempted to identify obvious environmental issues associated with the construction of the project and later operation and maintenance.

2.2.4 Preliminary Design and Site Map

The preliminary design, based on the project hydrology and geo-technical study established the design and location of the project features including the intake, penstock route and gross hydraulic head. Site GPS mapping in conjunction with USGS data was used to provide a preliminary site map. Preliminary drawings and specifications for costing purposes are provided:

- Diversion structure , intake works and spillway
- Penstock sizing, materials, specification, length and thrust-blocking if required
- Powerhouse design and materials
- Turbine, generator and protective control system specifications
- Switchgear, transformers and transmission line specifications
- Access roads

2.2.5 Financial Evaluation

The financial evaluation addresses all anticipated costs associated with the development and operation of the project including the following:

- Project feasibility study
- Project permits and licensing process
- Detailed engineering design
- Power contracting for power purchase agreement
- Construction costs of intake, penstock, powerhouse and access roads
- Electrical and mechanical equipment costs
- Transformers and transmission line
- Commissioning and testing
- Project management cost
- Annual operation and maintenance costs

Plant estimated annual gross revenues were determined by project hydrology (anticipated average monthly flow) x net hydraulic head x value of power. The financial evaluation is based on Avista Corp. published avoided costs for power sales in the state of Idaho. In addition, power sales outside of the Avista system to Idaho Power and Pacificorp are included in the evaluation.

The evaluation includes a 10 year and 15 year net present value (NPV) based on annual revenue, start up costs, operation costs and a discount factor with an internal rate of return (IRR) calculated.

Financial calculations are presented in Microsoft Excel format so that sensitivity analysis for various power sales rates, annual generation figures and discount rates can be done.

3.0 HYDROLOGY STUDY

3.1 Introduction

The absence of long term flow gauging on Gold Creek, made it necessary to use a combination of precipitation data, correlation methods and short term flow gauging. Although these methods can predict to a certain degree of accuracy the annual streamflow characteristics, the results are intentionally conservative and are not a substitute for long term flow gauging. It is strongly recommended that a program of long term flow gauging be continued for Gold Creek as a means to amend this study as necessary.

3.2 Correlation Method

Gold Creek has a drainage size above the proposed intake site, of approximately 1.5 square miles. The only historical records existing for Gold Creek are during November and December of 1980 and contain only sixteen days of measurement. This relatively short amount of gauging record allows only a small percentage of the entire year to use for estimating a hydrograph.

A common method to estimate flow is to correlate data of a similar stream in the region. An effort was made to select gauging records for a stream that was in close proximity to Gold Creek, had a similar drainage size and had long- term flow gauging records. This stream should also experience typical rain and snowfall characteristics.

Placer Creek, which flows through Wallace, has 33 years of USGS flow data available, is within 10 miles of Gold Creek and has a drainage area of 15 square miles. Drainage elevations are similar and long-term precipitation records for Wallace and Mullan do not differ significantly. No other streams were found that approximated better criteria. Placer Creek was selected and the available flow data for Placer Creek in November and December of 1980 was compared to the corresponding period of data for Gold Creek (see figure 5).

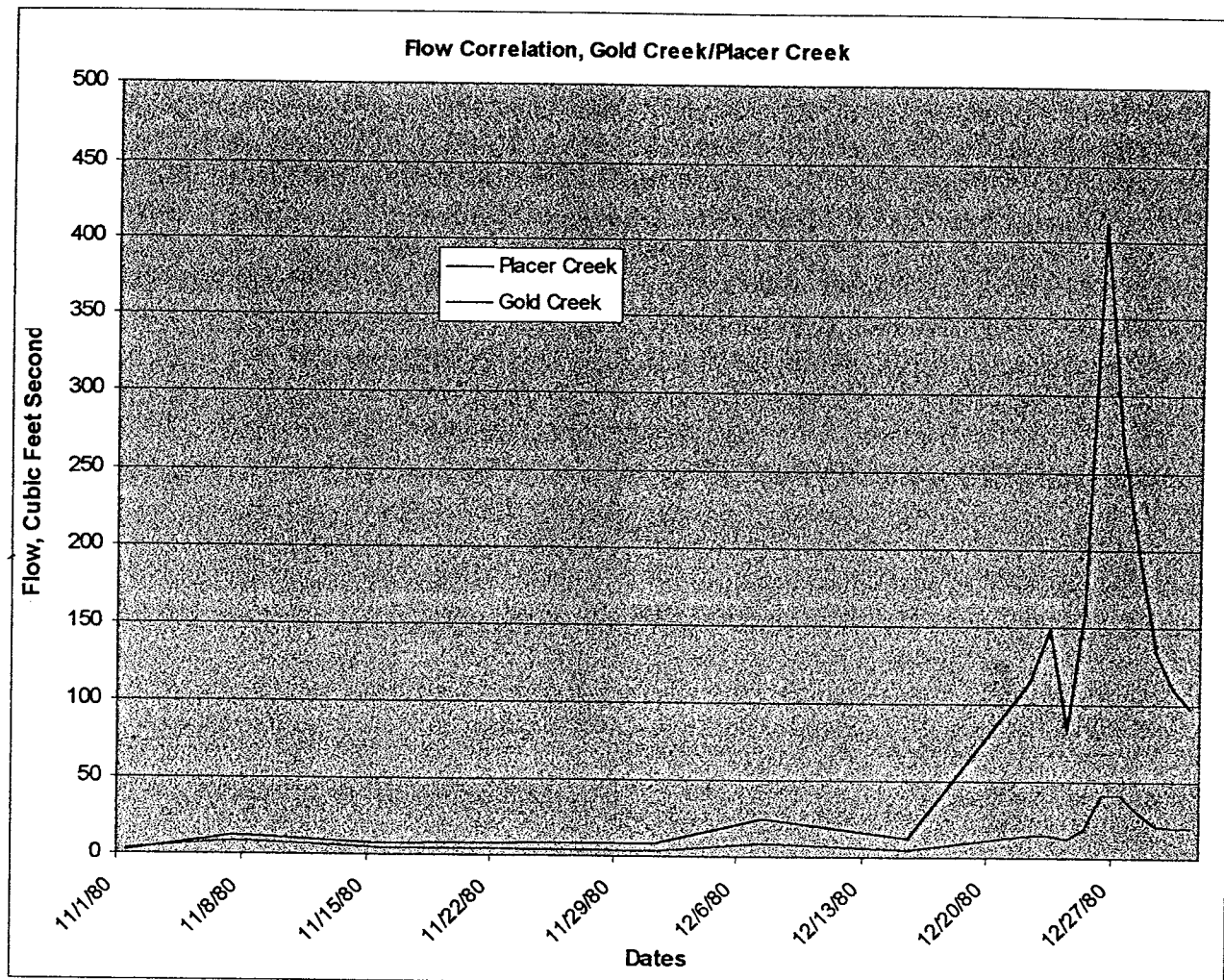


FIGURE 5

The two streams exhibited strong correlation on both the low and high flow spectrums. Variations were noticed during times of extreme high flow and are likely attributed to high elevation temperature differentials. Summer and fall flows would likely be more consistent. Extreme variations were excluded and a correlation ratio of 7 to 1 was established and tested to a satisfactory margin of error by comparing both the daily and average flows for both streams during the November-December gauging period.

An estimated hydrograph for Gold Creek is depicted in figure 6 and is based on the 33-year average for Placer Creek, using the established 7 to 1 ratio to establish corresponding flows.

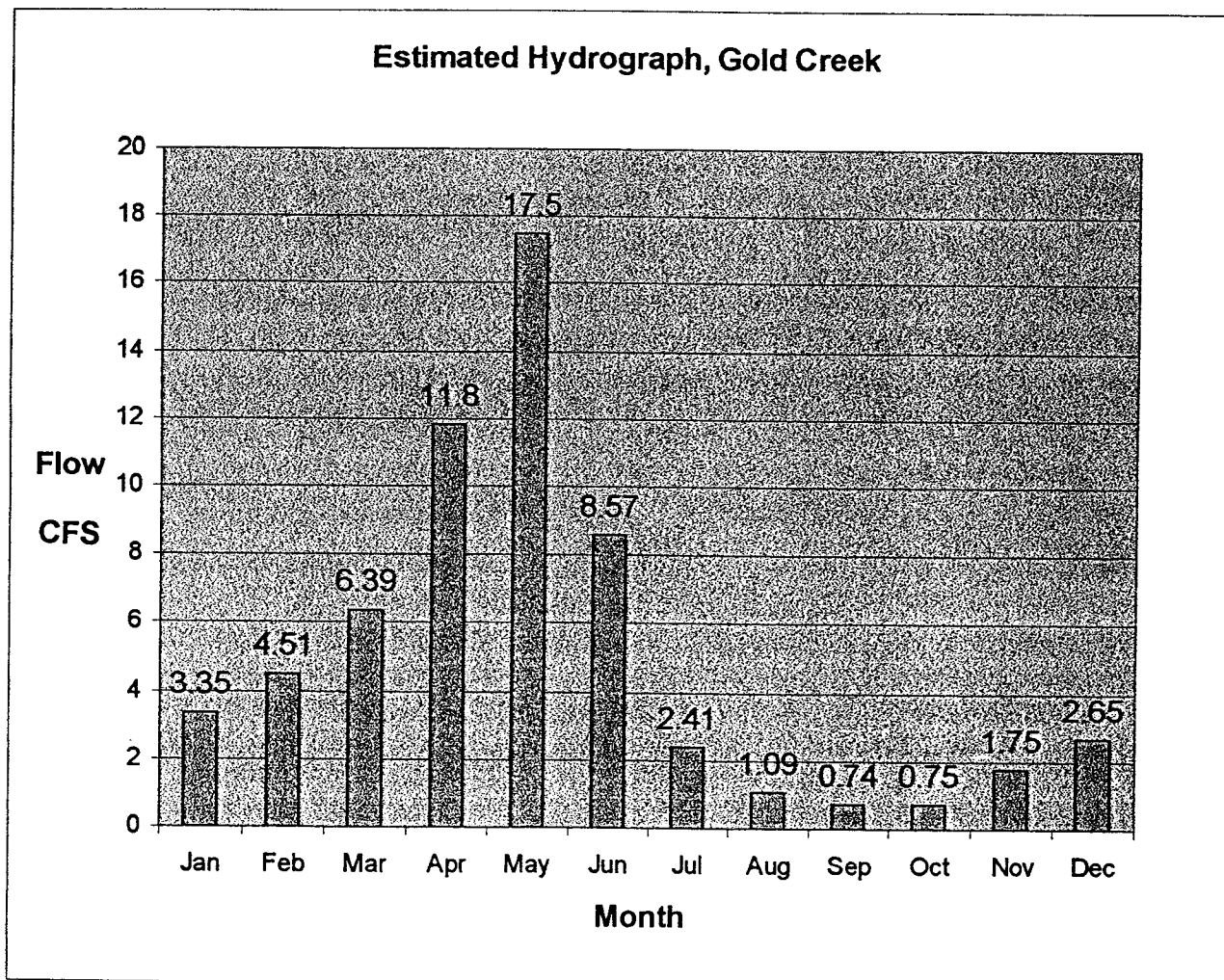


FIGURE 6

Based on the estimated hydrograph in figure 6, predicted flow for Gold Creek would average 5.1 cubic feet per second on an average year. Predicted flow for the first six months of the calendar year would average 8.7 cubic feet per second. The hydrograph in figure 6 is considered conservative and is only an estimation of the average annual streamflow. Factors that differ by year and month are temperature and precipitation. For example, the December gauging period for Gold Creek in 1980 exceeded 15 cfs average flow. High flows in December may be common for Gold Creek and not for Placer Creek. Only long term gauging of Gold Creek can produce an accurate hydrograph and flow duration curve.

In figure 7 the data is presented in the form of an estimated flow duration curve, showing months of optimum generation.

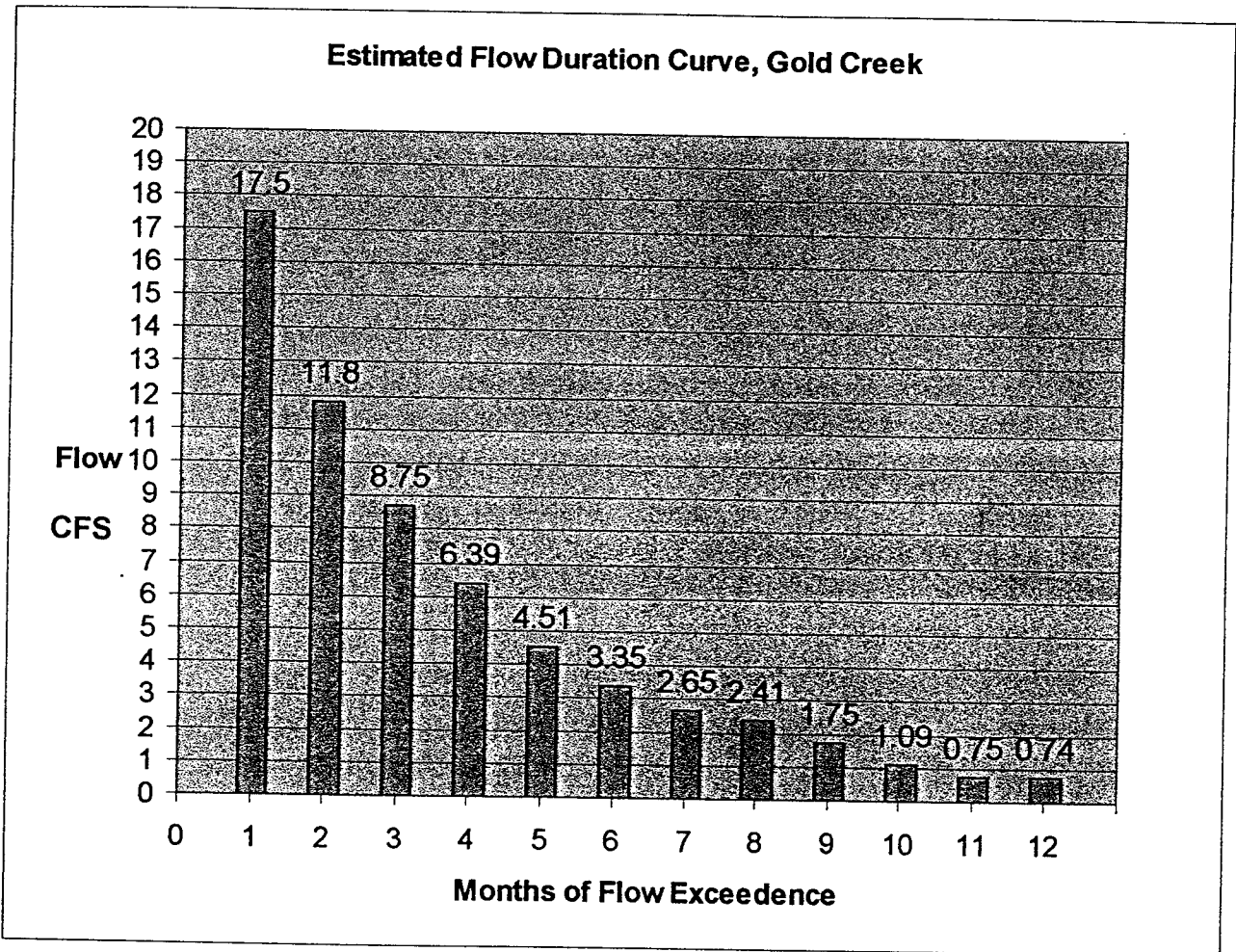


FIGURE 7

3.3 Precipitation Method

Long term rainfall gauging for Mullan was available from 1938 through 1997 (see Appendix). A 49 year average rainfall of 38.97" was calculated (see figure 8), and applied to the 1.5 mile catchment basin of Gold Creek above the proposed intake site. Based on sparse vegetation, exposed rock and high altitude temperatures an estimated evapotranspiration percentage of 10% was applied (Hanson, 1991). Predicted flow was then based on the following calculations.

1. Gold Creek catchment is equal to 62,726,400 square feet.
2. Average rainfall is equal to 38.97" per square foot.
3. 203,860,800 square feet of precipitation fell in one year.
4. 10% was lost to evapotranspiration leaving 183,474,720.
5. A 502,670 daily average.
6. A 20944 hourly average
7. Resulting in a 5.8 cubic foot per second average yearly flow.

By experimenting with higher ET rates and applying the maximum percentage for the inland northwest, 20% (Hanson) the average yearly flow rate does not drop below a 5 cubic feet per second yearly average. This figure does not differ significantly from the 5.1-cfs flow found by correlation.

Monthly precipitation averages based on rainfall are difficult to quantify due to the fact that precipitation at high altitudes falls as snow during the winter and is released in unpredictable volumes during the spring. Therefore, in this case, a hydrograph or flow duration curve based on regional precipitation records was not constructed.

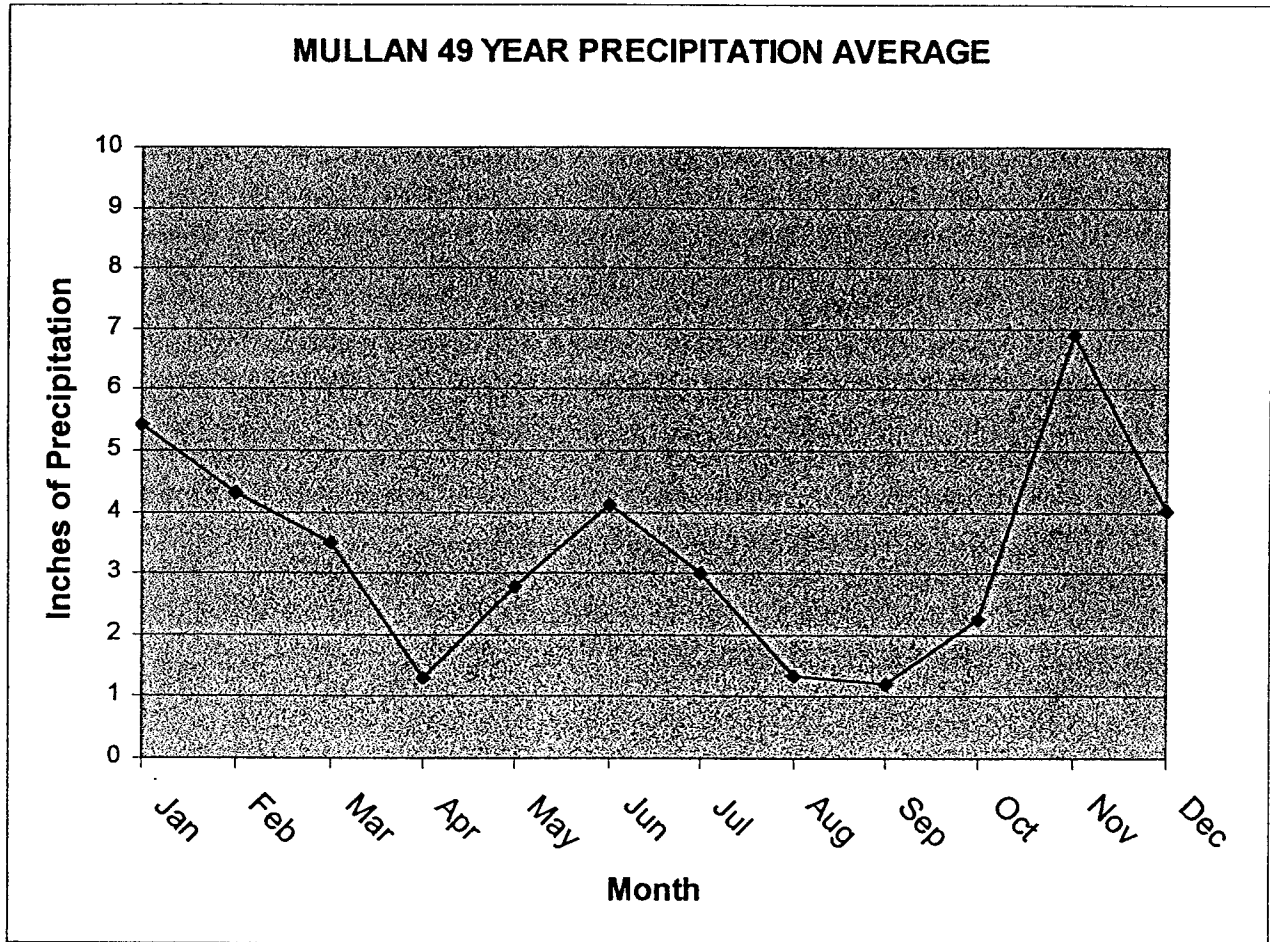


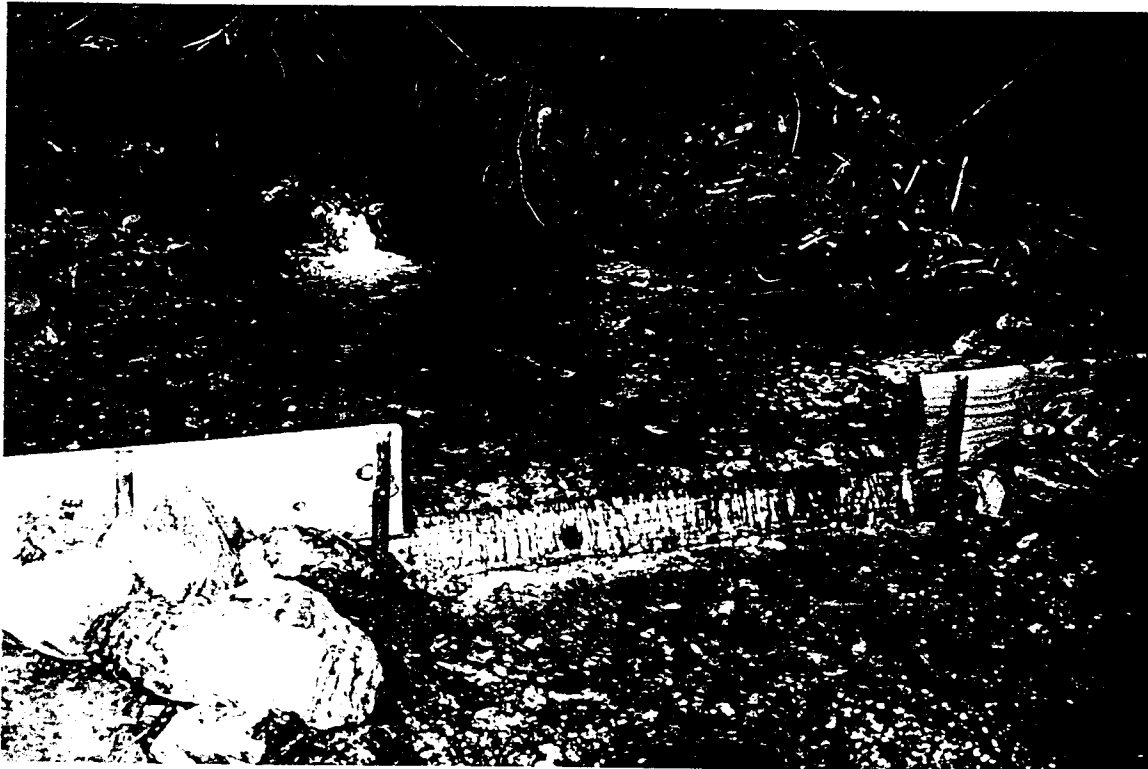
FIGURE 8

By referring to figure 8 it is obvious that Mullan sustains impressive rainfall in October, November and December, and flow likely exceeds that predicted by the hydrograph in figure 6.

3.4 Site Measurement

A calibrated gauging weir was installed on the lower reach of Gold Creek July 3, 2001, and gauging began the same day. The weir is a rectangular crest type with a calibrated opening capable of passing 20 cubic feet per second. During high streamflows the capacity of the weir could be exceeded.

Flow measurements were also taken on Gold Creek near the proposed intake site to determine the net gain or loss between the weir and the actual intake location. It was found that the flow values at the weir and the road culvert near the proposed intake site are effectively the same for purposes of this study. This determination takes into account the flow diverted for operation of the fountains.



Streamflow gauging weir on Gold Creek

Initial measurements of approximately 0.8 to 1.8 cfs for Gold Creek reflect the current 2001 drought year. On July 13 a flow measurement of 7.8 cfs was gauged on Placer Creek and compared to the daily reading taken for Gold Creek of .9 cfs. The 7 to 1 correlation ratio showed accuracy to within 10% and further confirmed findings in the correlation section of this study. The current drought reflects a worst case scenario for Gold Creek flow. Unfortunately, flow data for the spring melt was not gauged and it is only possible to speculate that flows were roughly 50% of normal. Any percentage decrease below average flow has a direct connection to generation. A 50% flow year means 50% percent of generation will be lost.

7.0 ECONOMIC EVALUATION

7.1 Estimated Project Development Costs

Estimated project development costs based on 2001 dollars. Equipment pricing is from manufacturer quotes. Other costs based on budgetary quotes and estimates from contractors who have not had the opportunity to visit the site.

Gold Creek Hydroelectric Project - Estimated Costs

Project Civil Works

Intake structure	17,500
Powerhouse and fencing	22,000
Penstock, installed	216,000
Site clearing and access roads	8,000
Sub total	263,500

Equipment Costs

Turbine, generator, controls and switchgear	265,000
Installation and commissioning	18,000
Transmission line and installation	9,000
Transformers and fencing	13,000
Metering and interconnection	24,600
Sub total	329,600

Regulatory Issues and Licensing Costs

Resource agency and Tribe Consultation Phase	37,000
Filing of application for FERC Exemption	23,000
Water rights application	1,500
Sub total	61,500

Project Engineering and Supervision Costs

Engineering and detailed design	28,000
Project supervision and management	55,000
Sub Total	83,000

Total Estimated Project Development Costs **\$737,600**

7.2 Estimated Project Operation and Maintenance Costs

The proposed hydroelectric system to be designed for operation in an automated mode. Typically, the plant would self-adjust to fluctuating streamflows in order to optimize the water resource and generation available at any given time.

In the event of a station trip due to loss of utility power, or in the event of any abnormal condition of the powerplant, the system would automatically shut down and dial out an announcement to selected phones and pagers.

While a full time operator is not necessary for operation, a qualified person needs to be on-call and make regular checks on the powerplant. In addition, while the intake is designed to be essentially self-cleaning, regular inspections of the intake will be required.

Basic maintenance of the system will include the following:

- A regular inspection, as required, of the intake structure to remove debris, sand and gravel as it accumulates.
- A periodic inspection (monthly) of the penstock route to check for landslip or areas of erosion.
- A daily walk-through inspection of the powerhouse and generating equipment while the system is in operation.
- Periodic lubrication of the turbine and generator bearings as specified by the manufacturers.
- Annual maintenance to include an inspection of the turbine runner and nozzles for erosion, cracks and wear.

Annual Operation and Maintenance costs estimated as follows:

System operator (not full time)	12,000
Annual interconnection fees and insurance	3,000
Routine road maintenance and snow plowing	2,500
Annual equipment inspections	1,500
Lubricants and general maintenance supplies	2,000
State and county property taxes	4,000
Annual fee for dedicated phone line service to plant	1,000

Total of estimated annual O&M expenses **\$26,000**

7.3 Estimated Annual Plant Revenue

The annual plant revenue is based upon the estimated hydrograph and flow duration curve for Gold Creek. Conservatively, an annual figure of 2,870 megawatt hours is used to determine annual revenue using published rates from Avista Corp, Idaho Power and Pacificorp.

In the case of a power purchase agreement negotiated with Avista Corp, only an interconnection agreement is necessary since Avista is the local provider of service to the proposed Gold Creek powerplant.

Should a power purchase agreement be negotiated with either Idaho Power or Pacificorp, an interconnection agreement and transmission contract will be required with Avista to deliver energy through their system. The cost of using Avista's system to deliver power to a third party utility (wheeling charge) is dependent on a number of variable factors including transmission losses. For purposes of this study, an initial figure of \$1.53 per megawatt hour is used.

The payback periods and average annual rates of return on investment for a 20 year period are as follows:

<i>Contracted 2003 with:</i>	<i>Payback Period</i>	<i>Avg. Annual Return</i>
Avista Corp	11.8 years	13%
Idaho Power	5.4 years	29%
Pacificorp	5.3 years	29%

While Avista Corp's current published rates are quite low, Idaho Power and Pacificorp offer rates that result in a relatively short payback period and a good rate of return on investment.

Strictly from a project financial point of view, it is problematic that the proposed powerplant happens to be located within the Avista service area and the resulting low published rates. Discussions should take place with Avista to negotiate a non-published rate based on the 1,008 kW nameplate capacity of the plant. (Powerplants over 1 megawatt are not obliged to accept the published avoided cost rates)

At the same time, discussions should take place with Idaho Power and Pacificorp for the purchase of the Gold Creek capacity.

Average Estimated Annual Generation

Month	Avg Q cfs	Bypass Q cfs	MW/hrs	Totals
Jan	3.35	0.5	165.0	165.0
Feb	4.51	0.5	217.2	382.3
Mar	6.39	0.5	341.1	723.3
Apr	11.8	0.5	633.2	1356.5
May	12.5	0.5	694.9	2051.4
Jun	8.57	0.5	452.2	2503.6
Jul	2.41	0.5	110.6	2614.2
Aug	1.09	0.5	33.1	2647.3
Sep	0.74	0.5	13.9	2661.2
Oct	0.75	0.5	14.5	2675.7
Nov	1.75	0.5	70.0	2745.7
Dec	2.65	0.5	124.5	2870.2

Annual Estimated Operation & Maintenance

Annual total \$ 26,000

Annual Estimate Transmission Charges

(For Idaho Power and Pacificorp)

Annual total \$ 4,400

Avista Corp. Published Avoided Cost Rates (US\$ per MW/hr)

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	27.02	28.24	29.51	30.83
2	27.60	28.84	30.14	32.92
3	28.18	29.45	30.78	32.16
4	27.52	28.76	31.41	32.82
5	29.34	30.66	32.04	33.48

Annual Gross Revenue Based on Avista Corp. Published Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	77554	81055	84700	88489
2	79218	82777	86509	94488
3	80883	84528	88346	92307
4	78989	82548	90154	94201
5	84212	88001	91962	96095

Annual Net Revenue Based on Avista Corp. Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	0	55055	58700	62489
2	0	56777	60509	68488
3	0	58528	62346	66307
4	0	82548	64154	68201
5	0	62001	65962	70095

Idaho Power Published Avoided Cost Rates (US\$ per MW/hr)

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	50.25	52.94	55.79	58.80
2	51.53	54.30	57.23	60.32
3	52.83	55.67	58.67	61.84
4	54.13	57.05	60.12	63.37
5	55.44	58.42	61.58	64.91

Annual Gross Revenue Based on Idaho Power Published Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	144229	151950	160130	168769
2	147903	155853	164263	173132
3	151634	159786	168396	177495
4	155365	163746	172558	181886
5	159125	167679	176749	186306

Annual Net Revenue Based on Idaho Power Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	0	121550	129730	138369
2	0	125453	133863	142732
3	0	129386	137996	147095
4	0	133346	142158	151486
5	0	137279	146349	155906

PacifiCorp Published Avoided Cost Rates (US\$ per MW/hr)

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	50.57	53.28	56.14	59.16
2	51.86	54.64	57.58	60.68
3	53.15	56.01	59.02	62.20
4	54.44	57.37	60.46	63.72
5	55.73	58.73	61.89	65.24

Annual Gross Revenue Based on PacifiCorp Published Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	145147	152926	161135	169803
2	148850	156829	165268	174165
3	152553	160761	169401	178528
4	156255	164665	173534	182891
5	159958	168568	177638	187254

Annual Net Revenue Based on PacifiCorp Rates

Contract (years)	On- Line Year			
	2002	2003	2004	2005
1	0	122526	130735	139403
2	0	126429	134868	143765
3	0	130361	139001	148128
4	0	134265	143134	152491
5	0	138168	147238	156854

Return on Investment

(PacifiCorp 5 year contract - on line year 2003)

Year	Net Revenue (6% annual escalation)	Project Capital Cost	Avg. Annual Rate of Return =	0.29 %
		\$ 737,600		
1	\$ 138,168	\$ 599,432		
2	\$ 138,168	\$ 461,264		
3	\$ 138,168	\$ 323,096		
4	\$ 138,168	\$ 184,928		
5	\$ 138,168	\$ 46,760		
6	\$ 179,618	\$ (132,858)		
7	\$ 179,618	\$ (312,477)		
8	\$ 179,618	\$ (492,095)		
9	\$ 179,618	\$ (671,714)		
10	\$ 179,618	\$ (851,332)		
11	\$ 233,504	\$ (1,084,836)		
12	\$ 233,504	\$ (1,318,340)		
13	\$ 233,504	\$ (1,551,844)		
14	\$ 233,504	\$ (1,785,348)		
15	\$ 233,504	\$ (2,018,852)		
16	\$ 303,555	\$ (2,322,407)		
17	\$ 303,555	\$ (2,625,962)		
18	\$ 303,555	\$ (2,929,517)		
19	\$ 303,555	\$ (3,233,072)		
20	\$ 303,555	\$ (3,536,627)		

\$ 4,274,227

4.0 GEO-TECHNICAL STUDY

4.1 Introduction

The purpose of the geologic study is to determine the best location for the proposed civil works, and to estimate construction costs and possible future maintenance costs. In addition, a best effort is made to determine risks associated with the proposed locations. Landslides, flooding and faulting present the greatest risk and can be quantified by observing historical and current geologic activity.

4.2 Regional Geology

The Gold Creek property lies within the Coeur d'Alene district, Shoshone County Idaho and has historically been one of the world's larger lead, zinc and silver producing regions. The district lies completely within the Coeur d'Alene Mountains, which is the area of the Bitterroot Range that is drained by the Coeur d'Alene River. The Bitterroot Range extends on both sides of the Idaho-Montana border for more than 200 miles and is a part of the Rocky Mountains. Bedrock in the district consists primarily of the Precambrian Belt Series, which contains the rocks that host ore deposits. This series consists of a thick group of fine-grained clastic rocks laid down in a geosyncline, which covers central and northern Idaho and much of western Montana.

4.3 Local Geology

Gold Creek Mines property is contained within the Wallace and Saint Regis Formations. The Wallace Formation is a heterogeneous group of rocks comprised of quartzite, argillite, dolomite and limestone (Hobbs, 1965). Exposed entirely on the surface of the Gold Creek property is the Saint Regis Formation (Map 2). This formation can be easily observed along the proposed pipeline route, intake and powerhouse structures. It is present as alternating beds of predominately dark-purple and dark-green interlaminated argillite and sillite and very fine-grained quartzite. The upper portion is dolomitic and easily broken.

4.4 Structural Geology

The Wallace Formation shows an abundance of high and normal angle faults, most of them being steep to vertical. Most of the faults show no significant offset on the ground or at map scale. Beds of argillite and sillite strike generally west-northwest and dip north-northeast. One large high angle normal fault exists outside Gold Creek Mines property (Map 2) and lies at approximately the 5400-foot elevation, bisecting Gold Creek in an east-west direction. This fault can be observed by an abrupt easterly change in stream flow direction.

4.5 Geologic Risk

4.5.1 Intake structure

The proposed intake structure located at approximately the 4300 elevation and 50 feet down-stream from the Forest Service survey boundary contains outcroppings of argillite and sillite that appear stable and capable of anchoring a concrete diversion structure. The Slopes are moderately bound and covered in vegetation. No evidence of loose or active slopes, subsidence or flooding beyond the high water mark was observed at the intake site. No evidence of faulting could be observed at the intake site. A supply of aggregate for concrete could not be found at the site. Access to the proposed intake site does not appear difficult given the existing network of logging roads in the vicinity. Some mild landslip rotation faulting was observed on some of the access roads.

4.5.2 Pipeline Route

Soil type along the proposed 4,000 ft. pipeline route is uniformly gravelly with small to medium sized rock fragments of local rock type. Existing logging access roads provided much of the information needed to assess the proposed pipeline route. The relative ease in which the roads were constructed and maintained indicates the probability of a low cost excavation during pipeline installation. Based on discussions with local road construction contractors, outcroppings of argillite and sillite generally break up with a dozer or excavator and without the aid of drilling or blasting. No cliffs or large storm gulleys were observed along the proposed route that would necessitate the use of drilling and blasting or bridge building.

4.5.3 Powerhouse Structure

The proposed powerhouse location is located on the West Side of Gold Creek approximately 50 feet from the recently installed stream-gauging weir. The stream makes a natural angle at this location allowing the powerhouse to be located a conservative distance and elevation from the stream and still have a relatively short discharge channel. This site location was also selected based on the following criteria.

1. Lowest practical elevation in relation to the intake.
2. Low flood danger based on observed high water mark.
3. No observed loose slopes or landslip faulting.
4. High gravel content in soil will provide a good foundation base.
5. Proximity to highway and power lines will allow relatively easy access during construction and operation.

4.6 Geo-Technical Conclusions

Based on site inspections of the proposed intake, pipeline route and proposed powerhouse location, the existing on-site conditions are favorable for the construction and operation of the proposed hydroelectric plant. Additionally, no geologic risks, beyond some normal landslip on existing roads could be identified that would affect long term operation.

5.0 ENVIRONMENTAL EVALUATION

5.1 Incremental Impacts During Construction

Environmental impact of the proposed Gold Creek hydroelectric system is anticipated to be minimal. The only in-stream work will be construction of the intake structure. Minimal in stream excavation is expected and will be completed by hand. The intake structure will be made entirely of concrete and steel and contain no oil or grease lubricated components.

Pipeline installation will necessitate construction of a road with an average gradient of 25% from the intake to the powerhouse. It would likely have no more impact than the existing road construction used for logging. Presently, a logging road exists that nearly reaches the intake site. The pipeline would be buried in the road and flood burms constructed to prevent erosion.

The powerhouse is expected to be located nearly 50 feet laterally from the streambed. Construction of the powerhouse may be concrete block type on

concrete foundation and slab. Transformers of the non-oil filled dry type will be located adjacent to the powerhouse in a fenced enclosure. System turbine and generator will use sealed type bearings.

5.2 Incremental Impacts During Operation

Long-term environmental issues are expected to include the requirement for an in-stream minimum bypass flow to sustain aquatic life and the transfer of nutrients.

The steep gradient of Gold Creek and abundance of waterfalls acting as natural fish barriers likely prevents any upstream fish migration. No fish were observed in the upper portion of the stream during the study. Fish are not expected to be an issue for the Gold Creek project, however a determination will likely be required by Idaho Dept. of Fish and Wildlife.

During the initial resource agency consultation process for project license or exemption, environmental issues will be discussed and addressed. This process will identify the environmental issues associated with the project and develop mitigation strategies if required by the resource agencies.

6.0 PRELIMINARY DESIGN SPECIFICATONS

6.1 General Equipment Specifications

Based on the design criteria of 12 cfs and a dynamic head of 1,104 feet the plant would have a nameplate rated output of 1008 kilowatts and an actual output of 960 kilowatts. Detailed information is given in the attached printout, Hydroelectric Parameters (see appendix), general specifications are as follows:

- Penstock 4,200 ft of 16 inch I.D. .375 wall thickness No. 1 steel pipe coated, buried with a minimum of 2 ft. cover.
- Turbine Pelton, horizontal shaft, 2 needle nozzles, 2 deflectors 1200 rpm, integrally cast stainless steel runner (CA6NM) alloy
- Generator Horizontal induction generator, 60 HZ, 480 V, 1200 rpm
- Inlet Valve H.P. Butterfly, manual operator, .406 m diameter

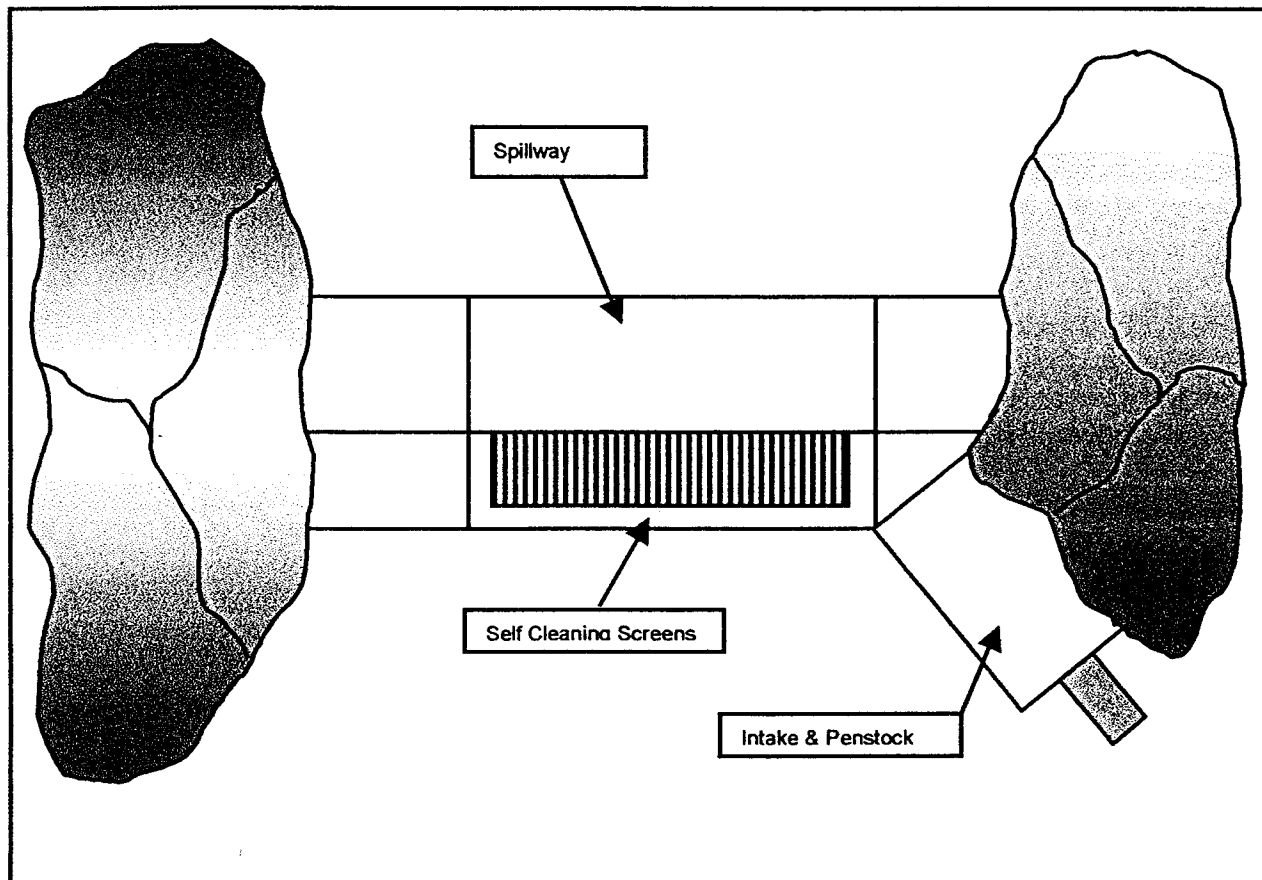
Switchgear, Control & Protection Panels

- 480V automatic breaker
- Standard over/under relaying for current and frequency
- Reverse power relay
- Bearing over/temp shutdown
- Bearing vibration shutdown
- Generator winding over/temp shutdown
- Automatic/manual paralleling
- Fault indication panel
- Metering of phase current/voltage, kW output, kWh meter
- Power factor meter, operating hours counter
- Automatic headlevel controller

- Transformer 3 phase 480 V secondary x 13,200 V primary rated 2000 kVa
Pad mounted dry type

6.2 Intake Structure

Preliminary location and design of the structure is based on site visits conducted during July of 2001. To maximize the total gross head, the location selected is near the South property boundary with the U.S. Forest Service (highest elevation available). Approximately 50 feet North of the USFS property line is streambank rock structure affording an acceptable anchoring point for an intake structure. Although other locations are evident downstream from this point, a reduction in the total gross head available would result. For preliminary design purposes, the uppermost location has been selected.



Preliminary design, Gold Creek Intake Structure

6.3 Penstock

Initial measurement of the penstock route indicates an over the ground length of 4,200 ft. from intake structure to powerhouse. The measurement was taken with belt chain and has been factored to account for a later refinement of the route. For purposes of the financial evaluation, the length of 4,200 is used.

As a design flow of 12 cfs has been selected for the proposed project a 16 inch I.D. diameter pipeline is required to maintain an acceptable friction loss within the penstock during operation. The penstock will be 96% efficient at design flow resulting in a 1,103 ft. dynamic or working head of water subject to a later survey to confirm the gross head.

The penstock will be constructed of No. 1 welded steel pipe with a wall thickness of .375 inch. A suitable coating will be applied and the pipe buried with no less than 2 ft. of cover material.

The site map indicates the approximate route of the penstock. The final route to be refined during the site survey.

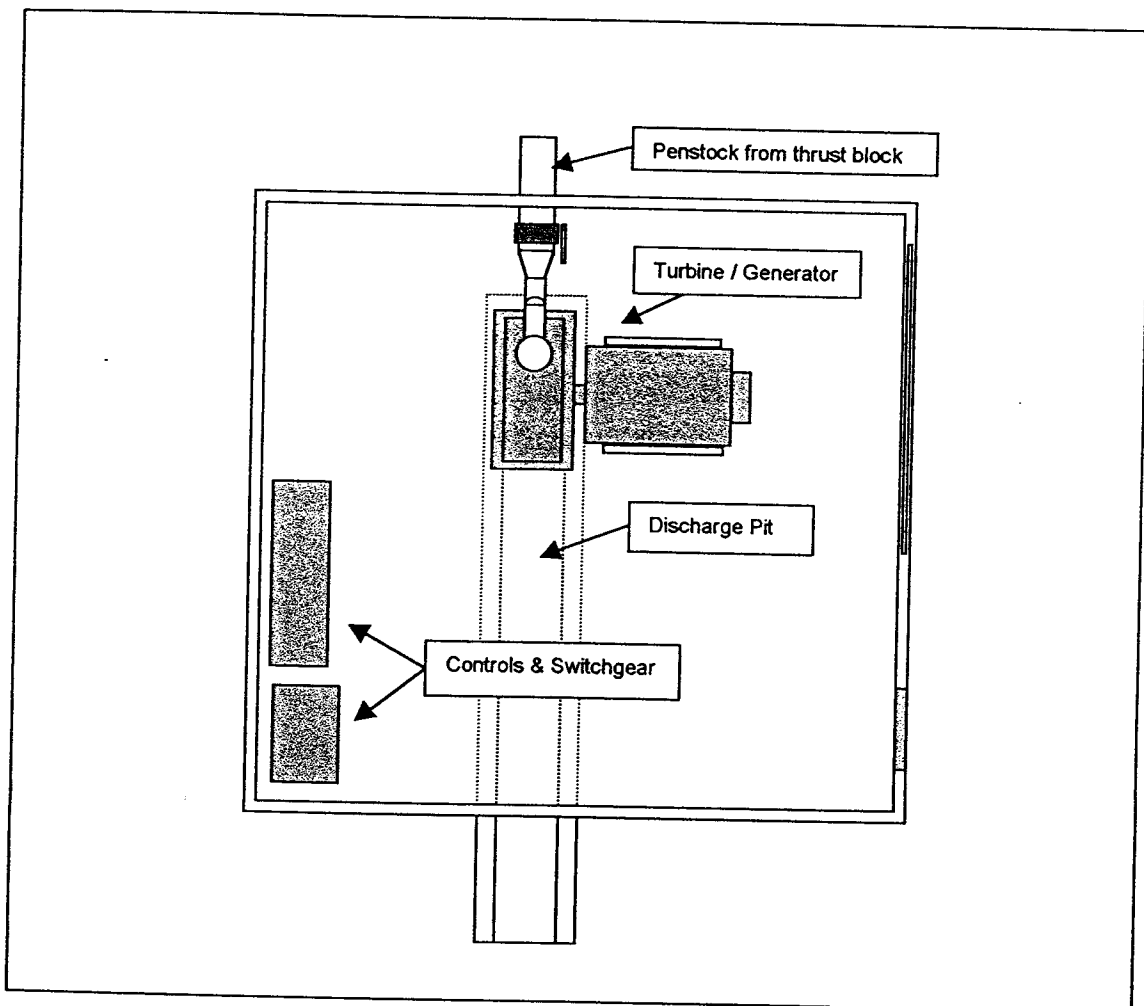
A suitable communication type cable will be buried with the penstock to provide for the headlevel control device.

6.4 Powerhouse

The project powerhouse can be sited directly to the West of the stream gauging weir at the foot of the slope. The building floor elevation should be well above any potential flooding from Gold Creek.

Powerhouse dimensions – 20ft. x 20ft. x 14ft. high.

Construction – Reinforced concrete foundation, discharge pit and machinery foundations. Reinforced concrete floor, concrete block walls, steel trusses and roof. The building to have commercial steel doors and ventilation fixtures.



General Powerhouse layout

DEPENDABLE TURBINES Ltd.**BUDGET PRICE****PROJECT: GOLD CREEK HYDRO****DATE: JULY 30, 2001****DTL REF.: P0600;010730****GENERAL EQUIPMENT SPECIFICATIONS****TURBINE**

TYPE:	HORIZONTAL TWO NOZZLE PELTON		
RATED HEAD:	340 m	RATED FLOW:	0.34 m ³ /s
SPEED:	1200 rpm	RUNAWAY SPEED:	2200 rpm
RUNNER DIAMETER:	0.6 m	RATED OUTPUT:	1008 kW
EFFICIENCY @ 100% FLOW:	89 %,	EFF. @ 75% FLOW:	89.5 %,
		EFF. @ 50% FLOW:	88.5 %
INLET PIPE DIAMETER:	0.406 m		

RUNNER:

- INTEGRALLY CAST STAINLESS STEEL (CA6NM) ALLOY
- HIGH ABRASION RESISTANCE
- HIGH TENSILE STRENGTH
- WELDABLE

NOZZLES:

- FABRICATED ASTM A53 STEEL BODY
- NEEDLE & ORFICE: CA6NM STAINLESS STEEL

DEFLECTORS:

- CARBON STEEL

TURBINE HOUSING:

- FABRICATED of ASTM A36 STEEL PLATE

GENERATOR

TYPE:	HORIZONTAL INDUCTION	RATED OUTPUT:	962 kW
FREQUENCY:	60 Hz	PHASES:	3
VOLTAGE:	480 V	POWER FACTOR:	0.8
SPEED:	1200 rpm	DESIGN OVERSPEED:	2200 rpm
EFFICIENCY @ 100% LOAD:	95.5 %,	EFF. @ 75% LOAD:	95.9 %,
		EFF. @ 50% LOAD:	95.7 %

TURBINE INLET VALVE

TYPE:	H.P. BUTTERFLY	NOMINAL DIAMETER:	0.406 m
RATED PRESSURE:	51 bar		
OPERATOR:	MANUAL		

HYDRAULIC PUMPING UNIT (OIL)

- FOR OPERATION of the NEEDLE ACCUATORS & DEFLECTOR ACTUATOR
- SYSTEM RATED PRESSURE UNDER 1,000 psi
- COMPLETE with AC MOTOR, VALVING and ACCULULATOR
- WITH SUFFICIENT PRESSURED OIL RESERVE for TWO (2) COMPLETE OPENING and CLOSING OPERATIONS.

BUDGET PRICE: US\$ 180 000. - FOB EXWORKS

DELIVERY: 9 - 10 MONTHS

SWITCHGEAR, CONTROL & PROTECTION PANELS: US\$ 80 000.

RECEIVED
FEB 27 2002
IDWR/North

EXHIBIT "2"

DEEDS
332748

RECEIVED

FEB 27 2002

MINING DEED

IDWR/North

THIS INDENTURE, Made the 27th day of March,
1988, between WALTER ALMQUIST, a single man, party of the first
part, and GOLD CREEK MINES, INC., an Idaho Corporation, of P.O. Box
463, Mullan, Idaho 83846, party of the second part;

W I T N E S S E T H:

That the said party of the first part, for and in
consideration of the sum of One and no/100 Dollars (\$1.00), lawful
money of the United States of America, to him in hand paid by the
said party of the second part, the receipt whereof is hereby
acknowledged, has granted, bargained, sold, remised, released and
forever quitclaimed and by these presents does grant, bargain,
sell, remise, release and forever quitclaim unto said party of the
second part, its successors and assigns the following patented and
unpatented mining claims situated in Hunter Mining District,
to-wit:

AN UNDIVIDED ONE-SIXTH (1/6th) interest in and to the
following described premises, in Shoshone County, Idaho,
to-wit:

The following patented mining claims situated in a portion of
the Sections 3 and 4, Township 47 North Range 5, E.B.M., in
Hunter Mining District, Shoshone County, Idaho.

Moe No. 2, Moe No. 3, Moe No. 4, Moe No. 5, Moe, Moe No. 7,
Moe No. 8, Moe No. 6, Moe Fraction No. 1, Moe Fraction No. 2,
Matt, Inspiration, Joe, Bob, all being Mineral Survey No.
3373;

Blue Jay, Florence, Gold Creek No. 1, Gold Creek No. 2, Gold
Creek No. 3, Owl No. 2, Snow Bird, and Wren, all being Mineral
Survey No. 3372;

Troy No. 1, Troy No. 2, Troy No. 3, and Troy No. 4, all being
Mineral Survey No. 2182;

Black Bird, Grouse, Oriole, Hawk, Magpie and Waxwing, all
being Mineral Survey No. 3342.

332748

and

The following unpatented mining claims situated in a portion of Sections 3 and 4, Township 47 North Range 5, E.B.M. in Hunter Mining District, Shoshone County, Idaho:

Anna Bell 1, Anna Bell 2, Anna Bell 3, Alm and Candlestick.

Together with all the dips, spurs and angles, and also all the metals, ores, gold and silver-bearing quartz rock and earth therein belonging thereto, and all the rights, privileges and franchises thereto incident, appendent and appurtenant, or therewith usually had and enjoyed; and also all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof; and also all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in and to said premises, and every part and parcel thereof incident, unto the said party of the second part, its successors and assigns forever.

IN WITNESS WHEREOF, the said party of the first part has hereunto set his hand and seal the day and year first above written.

Walter Almquist

Walter Almquist

STATE OF IDAHO)
) ss
County of Shoshone)

On this 2nd day of March, 1988, before me the undersigned, a Notary Public in and for the State aforesaid, personally appeared WALTER ALMQUIST, a single man, known to me to

332748

be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand the day and year in this certificate first above written.

Michael K. Branstetter
Notary Public in and for the State
of Idaho, Residing at: Osburn
My Commission Expires: 3/28/88

RECORDED
at the request of

Mike Branstetter
in

332748

Deeds
return to:

Mike Branstetter
Attorney at Law
Box 709
Wallace, ID 83873

FILED

'88 APR 28 PM 4 11

MARCIA WINGFIELD
SHOSHONE CTY RECORDER
BY *Janet Zamboni* DEPUTY

Fee \$ 9.00

DEEDS

332749

MINING DEED

THIS INDENTURE, Made the 22nd day of March, 1988, between RONALD G. MARTIN and ALMA E. MARTIN, husband and wife, of St. Maries, Idaho, parties of the first part, and GOLD CREEK MINES, INC. an Idaho Corporation, of P.O. Box 463, Mullan, Idaho 83846, party of the second part.

W I T N E S S E T H:

That the said parties of the first part, for and in consideration of the sum of ONE DOLLAR (\$1.00), lawful money of the United States of America, to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, have granted, bargained, sold, remised, released and forever quitclaimed and by these presents do grant, bargain, sell, remise, release and forever quitclaim unto said party of the second part, its successors and assigns the following patented and unpatented mining claims situated in Hunter Mining District, to-wit:

AN UNDIVIDED ONE-SIXTH (1/6th) interest in and to the following described premises, in Shoshone County, Idaho, to-wit:

The following patented mining claims situated in a portion of the Sections 3 and 4, Township 47 North Range 5, E.B.M., in Hunter Mining District, Shoshone County, Idaho.

Moe No. 2, Moe No. 3, Moe No. 4, Moe No. 5, Moe, Moe No. 7, Moe No. 8, Moe No. 6, Moe Fraction No. 1, Moe fraction No. 2, Matt, Inspiration, Joe, Bob, all being Mineral Survey No. 3373;

Blue Jay, Florence, Gold Creek No. 1, Gold Creek No. 2, Gold creek No. 3, Owl No. 2, Snow Bird, and Wren, all being Mineral Survey No. 3372;

332749

Troy No. 1, Troy No. 2, Troy No. 3, and Troy No. 4, all being Mineral Survey No. 2182;

Black Bird, Grouse, Oriole, Hawk, Magpie and Waxwing, all being Mineral Survey No. 3342.

and

The following unpatented mining claims situated in a portion of Sections 3 and 4, Township 47 North Range 5, E.B.M. in Hunter Mining District, Shoshone County, Idaho:

Anna Bell 1, Anna Bell 2, Anna Bell 3, Alm and Candlestick.

Together with all the dips, spurs and angles, and also all the metals, ores, gold and silver-bearing quartz rock and earth therein belonging thereto, and all the rights, privileges and franchises thereto incident, appendent and appurtenant, or therewith usually had and enjoyed; and also all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof; and also all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said parties of the first part, of, in and to said premises, and every part and parcel thereof, with appurtenances.

To have and to hold all and singular, the said premises, together with the appurtenances and privileges thereto incident,

332749

unto the said party of the second part, its successors and assigns forever.

IN WITNESS WHEREOF, the said parties of the first part have hereunto subscribed their names the day and year first above written.

Ronald G. Martin
Ronald G. Martin

Alma E. Martin
Alma E. Martin

STATE OF IDAHO)
County of Benewah) ss.

On this 2nd day of March, 1988, before me, the undersigned, a Notary Public for the State aforesaid, personally appeared RONALD G. MARTIN and ALMA E. MARTIN, husband and wife, known to me to be the persons whose names are subscribed to the foregoing instrument and acknowledged to me that they executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year in this certificate first above written.



Donald P. Abquist
Notary Public in and for the State of Idaho, Residing at: Mullan
My Commission Expires: 6/23/93

in

Deeds

Return to:

Mike Branstetter

Attorney at Law

Box 709

Wallace, ID 83873

Fee \$ 9.00

FILED

'88 APR 28 PM 4 11

MARCIA WINGFIELD

SNOSHONE CTY RECORDER

Janet Zamboni DEPUTY

DEEDS

332750

MINING DEED

THIS INDENTURE, Made the 6th day of April, 198~~8~~, between MARJORIE P. ALMQUIST, a widow, party of the first part, and GOLD CREEK MINES, INC., an Idaho Corporation, of P.O. Box 463, Mullan, Idaho 83846, party of the second part;

W I T N E S S E T H:

That the said party of the first part, for and in consideration of the sum of One and no/100 Dollars (\$1.00), lawful money of the United States of America, to her in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has granted, bargained, sold, remised, released and forever quitclaimed and by these presents does grant, bargain, sell, remise, release and forever quitclaim unto said party of the second part, its successors and assigns the following patented and unpatented mining claims situated in Hunter Mining District, to-wit:

AN UNDIVIDED TWO-THIRDS (2/3rds) interest in and to the following described premises, in Shoshone County, Idaho, to-wit:

The following patented mining claims situated in a portion of the Sections 3 and 4, Township 47 North Range 5, E.B.M., in Hunter Mining District, Shoshone County, Idaho.

Moe No. 2, Moe No. 3, Moe No. 4, Moe No. 5, Moe, Moe No. 7, Moe No. 8, Moe No. 6, Moe Fraction No. 1, Moe Fraction No. 2, Matt, Inspiration, Joe, Bob, all being Mineral Survey No. 3373;

Blue Jay, Florence, Gold Creek No. 1, Gold Creek No. 2, Gold Creek No. 3, Owl No. 2, Snow Bird, and Wren, all being Mineral Survey No. 3372;

Troy No. 1, Troy No. 2, Troy No. 3, and Troy No. 4, all being Mineral Survey No. 2182;

Black Bird, Grouse, Oriole, Hawk, Magpie and Waxwing, all being Mineral Survey No. 3342.

and

The following unpatented mining claims situated in a portion of Sections 3 and 4, Township 47 North Range 5, E.B.M. in Hunter Mining District, Shoshone County, Idaho:

Anna Bell 1, Anna Bell 2, Anna Bell 3, Alm and Candlestick.

Together with all the dips, spurs and angles, and also all the metals, ores, gold and silver-bearing quartz rock and earth therein belonging thereto, and all the rights, privileges and franchises thereto incident, appendent and appurtenant, or therewith usually had and enjoyed; and also all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof; and also all the estate, right, title, interest, property, possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in and to said premises, and every part and parcel thereof incident, unto the said party of the second part, its successors and assigns forever.

IN WITNESS WHEREOF, the said party of the first part has hereunto set her hand and seal the day and year first above written.

Marjorie P. Almquist
Marjorie P. Almquist

STATE OF IDAHO)
) ss
County of Shoshone)

On this 6th day of April, 1988, before me the undersigned, a Notary Public in and for the State aforesaid, personally appeared MARJORIE P. ALMQUIST, a widow, known to me to

332750

be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand the day and year in this certificate first above written.

Melissa Schefelner
Notary Public in and for the State
of Idaho, Residing at: Wallace
My Commission Expires: 7/20/93

332750

RECORDED
at the request of

Mike Branstetter

in

Deeds

return to:

Mike Branstetter

Attorney at Law

Box 709

Wallace, ID 83873

Fee \$ 9.00

FILED

'88 APR 28 PM 4 11

MARCIA WINGFIELD
SHOSHONE CITY RECORDER
BY Janet Zamboni DEPUTY

State of Idaho

Department of State.

CERTIFICATE OF INCORPORATION OF

GOLD CREEK MINES, INC.

I, PETE T. CENARRUSA, Secretary of State of the State of Idaho, hereby certify that duplicate originals of Articles of Incorporation for the incorporation of the above named corporation, duly signed pursuant to the provisions of the Idaho Business Corporation Act, have been received in this office and are found to conform to law.

ACCORDINGLY and by virtue of the authority vested in me by law, I issue this Certificate of Incorporation and attach hereto a duplicate original of the Articles of Incorporation.

Dated: April 20, 1988



Pete T. Cenarrusa
SECRETARY OF STATE
by: *Sandra Mathes*



**Idaho Secretary of State
Search Results**

Search Result Summary

[New Search]

~~Search Results 1 through 6~~

~~(BIG CREEK GOLD MINES, INCORPORATED ... REEDS CREEK GOLD MINES COMPANY)~~

~~**BIG CREEK GOLD MINES, INCORPORATED**~~

~~Organizational ID / Filing number: C16492~~

~~Filed 09 Jun 1928
CORPORATION
FORFEITED~~

GOLD CREEK MINES, INC.

Organizational ID / Filing number: C86465

P.O. BOX 463
MULLAN, ID 83846

Filed 20 Apr 1988
CORPORATION
GOODSTANDING

~~**GRIMES CREEK GOLD MINES, INC.**~~

~~Organizational ID / Filing number: C20723~~

~~Filed 10 Oct 1940
CORPORATION
DISSOLVED~~

~~**MOORE CREEK GOLD MINES COMPANY LIMITED**~~

~~Organizational ID / Filing number: C6256~~

~~Filed 05 May 1909
CORPORATION
FORFEITED~~

~~**NEW YORK CANAL EXTENSION COMPANY LIMITED**~~

~~Organizational ID / Filing number: C3183~~

~~Filed 02 Feb 1901
CORPORATION
FORFEITED~~

~~**REEDS CREEK GOLD MINES COMPANY**~~

~~Organizational ID / Filing number: C18485~~

~~Filed 27 Jul 1933
CORPORATION
FORFEITED~~

EXHIBIT "3"

SUMMARY OF GOLD CREEK MINES, INC.
PROPOSED HYDRO-ELECTRIC PROJECT

February 26, 2002

Gold Creek has been studying for many years the possibility of developing a hydro-electric facility on its property and in 2001 commissioned a feasibility study for that development. The results of the feasibility study were encouraging and Gold Creek applied for a water permit in November, 2001.

Gold Creek's plan is to construct a small 4' diversion dam (point of diversion) in the upper reaches of Gold Creek and run a pipeline (penstock) from there to the mouth of Gold Creek in the general vicinity of the present location of "Elmer's Fountain". The penstock will be earth covered and approximately 4200' long, 16" in diameter and have 1104 feet of lead. A power house will be constructed near "Elmer's Fountain" for housing a water turbine, generator and related equipment for the generation of electricity. After the water passes through the turbine, it will be returned to Gold Creek and fed into the present ponds that are near I-90. The entire project will be located entirely upon Gold Creek's privately owned property. The consultant hired by Gold Creek has vast experience in developing small hydro-electric systems and, in fact, operates such systems as an owner. He has reviewed the geography and all issues relating to this development and believes that it is feasible. There will be no adverse impacts upon the environment and the water that is used will be returned to Gold Creek. There are no competing water rights to the water that Gold Creek will utilize and we do not believe there will be any adverse impacts upon fish. Presently, there are natural fish barriers which preclude any fish that are in the Gold Creek pond from traveling to the upper reaches of Gold Creek. Gold Creek flows down a very steep hillside and fish passage is blocked by the steepness of the terrain. The Gold Creek pond is separated by a natural barrier from the South Fork of the Coeur d'Alene River by the culvert which passes under I-90 and discharges into the South Fork. The culvert is elevated above the South Fork and it is impossible for any fish to travel from the South Fork to and through that culvert into the Gold Creek pond.

The electricity to be generated will be sold to Avista or some other electrical utility. The cost of the project will be funded entirely by Gold Creek and will not involve the expenditure of any public funds. The water permit being applied for is a "non-consumptive" permit and the water that is used in generating the power will not be consumed by the project. The power plant will carry a nameplate capacity of 1008 kw. The permit seeks the right to use 15 cfs for power generation from January 1st through December 31st of each year.

The project will create local construction related jobs and after the project is placed into operation, there will be the need for a part-time employee on a limited or "as-needed" basis. A small building will be constructed to house the equipment and Gold Creek estimates that cost to be in the neighborhood of \$20,000 to \$25,000.