DIVISION OF MINING, LAND & WATER
WATER RESOURCES SECTION

Alaska Department of NATURAL RESOURCES

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907-269-8503
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400 Willoughby, 4th Floor
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APPLICATION FOR TEMPORARY WATER USE PERMIT

Instructions
- Complete one application for each project - **Incomplete applications will not be accepted**
- Attach map indicating water withdrawal point(s), location(s) of water use, and point(s) of return **flow - Map must identify meridian, township, range, and section**
  Attach sketch, photos, and / or plans of water system, and driller's well log, if applicable
  Attach completed Coastal Project Questionnaire, if applicable (see page 3)
  Submit **filing fee - Non-refundable** (see page 3)

Project Name: Big Hurrah Mine

Alaska Gold Company
Business Name

Bristol Environmental & Engineering Services Corporation
Charlotte MacCay (agent)
111 W. 16th Avenue, Suite 301, Anchorage, Alaska 99501
907 743-9366 e-mail cmaccay@bristol-companies.com
Contact Person

P.O. Box 640, Nome Alaska 99762
Mailing Address City State Zip Code

907 443-5272
Phone Number Fax Number E-mail Address

Legal Descriptions

Location of Water Use - **It *is applicant's responsibility to obtain and maintain legal occupancy***

Identifiable Landmarks (e.g. milepost, subdivision)	Meridian	Township	Range	Section	Quarter Sections	
Little Hurrah Creek Valley	West Kateel River	10 S	28 W	3, 10		¼
						¼

Location of Water Source - **It *is applicant's responsibility to obtain and maintain legal access***

Geographic Name of Water Body or Well Depth	Meridian	Township	Range	Section	Quarter Sections	
Interception wells surrounding Big Hurrah Mine Pit	West Kateel River	10 S	28 W	3, 10		¼
					¼	¼

Location of Water Return Flow or Discharge, if *applicable*

Geographic Name of Water Body or Well Depth	Meridian	Township	Range	Section	Quarter Sections	
Injection Wells, Little Hurrah Creek Valley	West Kateel River	10 S	28 W	3, 10	¼	¼
					¼	¼

Attach page if needed

Purpose of Water use Water	Quantity of Water Less than 5,000 gal/day		Season **Summer 2006 (may be renewed)**		Calculations **Show how quantity was determined**
	Maximum Withdrawal Rate	Total Daily Amount	Date Work Will Start	*Date All Work Will be Completed	Hours/day: 24 Hrs/Day (as needed)
Mine dewatering of ground water via interceptor wells	250 GPM	360,000 GPD	September 2006	August 2011	Days/week . 7 days/wk (as needed)
Total Amount	250 GPM	360,000 GPD	***You may want to use the end of the construction season for your ending date**		Period. Year Round (as needed)

Method of Taking Water

PUMP	Pump intake ___inches	Hours working	24 hrs. (as needed) hours/day
	Pump output 250 GPM	Length of pipe	feet (from pump to point of use)
Gravity	Pipe diameter_____ inches	Length of pipe	feet (take point to use point
	Head_____feet		
Ditch	L_____H ---- W --- feet	Diversion_____	GPM or CFS
Reservoir	L H ------ W feet	Water storage _____	AF
Dam	L ------ H ------ W ------ feet	Water storage _____	AF

Project Description

What alternative water sources are available to your project should a portion of your requested diversion be excluded because of water shortage or public interest concerns?

None – the purpose is to prevent groundwater from reaching the mine pit.

Are there any surface water bodies or water wells at or near your site(s) that could be affected by the proposed activity? If yes, list any ground water monitoring programs going on at or near the sites, any water shortages or water quality problems in the area, and any information about the water table, if known.

Yes there will be some reduction of flow to Little Hurrah Creek – although most of its flow is from surface water runoff.

Briefly describe the type and size of equipment used to withdraw and transport water, including the amount of water the equipment uses or holds.

Five (5) interceptor wells are located around the mine pit for dewatering. Water collected by the interceptor wells will be reinjected into the ground at up to as many as seven (7) injection wells. Water will be treated to meet applicable water quality standards before reinjection.

Briefly describe what changes at the project site and surrounding area will occur or are likely to occur because of construction or operation of your project (e.g. public access, streambed alteration, trenching, grading, excavation)

Streambed alteration, trenching, grading and excavation

Briefly describe land use around the water take, use, and return flow points (e.g. national park, recreational site, residential)

Fairly remote region on the Seward Pennisula, uninhabitated, no adjacent communities or houses within 10.0 miles.

Will project be worked in phases? State reason for completion date.
No.

Briefly summarize your entire project.

The proposed mining site is located just above the confluence of the Big Hurrah and Little Hurrah Creek. The topography of Big Hurrah Creek is moderately steep approaching a 30% grade, with steeper rock slopes along sections of Little and Big Hurrah creeks. The bottom of Little Hurrah Creek consists of thin alluvial/colluvial deposits. The undelying rock consists of predominately structurally complex schist and marble with abundant alterations-related carbonate, quartz, and graphite associated with secondary gold mineralization along the veins.

The Big Hurrah Mine facilities will include the following: one open pit gold mine, a satelite pit that will also be used for stockpiling ore, a non-acid generating development rock dump, a temporary stockpile for potentially acid generating development rock to be backfilled in the pit at closure, truck maintenance shop, small administration building, explosive and fuel storage.

The ore mining rate will be approximately 1,500 tonnes per day (tpd) and the stripping rate will be 5,000 tpd. Ore will be stockpiled and delivered overland by truck to the Rock Creek Mill at an average rate of approximately 1000 tpd.

The five (5) pit perimeter dewatering wells have a capacity of 360,000 gallons per day. Water from pit perimeter dewatering wells will be reinjected in up to as many as seven (7) Class V injection wells locoated southeast of the mine pit. Water will be treated to meet applicable water quality standards before reinjection.

Attach extra page if needed

References

Coastal Zone

If this appropriation is within the Coastal Zone, and you are using more than 1,000 GPD from a surface source or 5,000 GPD from a subsurface source, you need to submit a completed Coastal Project Questionnaire. *For more information on the Coastal Zone, contact the Division of Governmental Coordination; Anchorage 269-7470, Juneau 465-3562.*

Fee Schedule - Make *checks payable to "Department of Revenue"*

$ 50.00 For use of 5,000 GPD or less,

$ 100.00 For use of more than 5,000 GPD but less than 30,000 GPD.

$ 200.00 For use of 30,000 GPD or more but less than 100,000 GPD.

$ 300.00 For use of 100,000 GPD or more but less than 500,000 GPD.

$ 500.00 For use of 500,000 GPD or more but less than 1,000,000 GPD.

$ 1,000.00 For use of 1,000,000 GPD or more except (see next line)

$ 1,500.00 For use of 1,000,000 GPD or more, outside of the hydrologic unit from which it was removed (based on current USGS Hydrologic Unit Map of Alaska).

$ 500.00 For use of any quantity of glacier ice.

Definitions

GPD = Gallons per day

CFS = Cubic feet per second

GPM = Gallons per minute

AFY = Acre-feet per year (325,851 gallons/year)

AFD = Acre-feet per day (325,851 gallons/day)

MGD = Million gallons per day

Conversion Table

5,000 GPD=	30,000 GPD=	100,000 GPD=	500,000 GPD=	1,000,000 GPD=
0.01 CFS	0.05 CFS	0.2 CFS	0.8 CFS	1.5 CFS
3.47 GPM	20.83 GPM	69.4 GPM	347.2 GPM	694.4 GPM
5.60 AFY	33.60 AFY	112.0 AFY	560.1 AFY	1120.1 AFY
0.2 AFD	0.09 AFD	0.3 AFD	1.5 AFD	3.1 AFD
0.01 MGD	0.03 MGD	0.1 MGD	0.5 MGD	1.0 MGD

The information presented in this application is true and correct to the best of my knowledge. I understand that no water right or priority is established per 11 AAC 93.210-220, that water use remains subject to appropriation by others, and that a temporary water use permit may be revoked if necessary to protect the water rights of other persons or the public interest.

Signature Charlotte A. MacCay

Name (please print)
Charlotte Maccay

Date May 7, 2004

Title
Environmental Management, Project Manager

DIVISION OF MINING, LAND & WATER
WATER RESOURCES SECTION

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Alaska Gold Company

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907 743-9366 e-mail cmaccay@bristol-companies.com

Business Name — Contact Person

P.O. Box 640, — Nome — Alaska — 99762
Mailing Address — City — State — Zip Code

907 443-5272
Phone Number — Fax Number — E-mail Address

Legal Descriptions

Location of Water Use - **It *is applicant's responsibility to obtain and maintain legal occupancy***

Identifiable Landmarks (e.g. milepost, subdivision)	Meridian	Township	Range	Section	Quarter Sections	
Little Hurrah Creek Valley	West Kateel River	10 S	28 W	3, 10		¼
						¼

Location of Water Source - **It *is applicant's responsibility to obtain and maintain legal access***

Geographic Name of Water Body or Well Depth	Meridian	Township	Range	Section	Quarter Sections	
Big Hurrah Mine Pit – Little Hurrah Creek Valley	West Kateel River	10 S	28 W	3, 10		¼
					¼	¼

Location of Water Return Flow or Discharge, if *applicable*

Geographic Name of Water Body or Well Depth	Meridian	Township	Range	Section	Quarter Sections	
Injection Wells, Little Hurrah Creek Valley	West Kateel River	10 S	28 W	3, 10	¼	¼
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Purpose of Water use Water	Quantity of Water Less than 5,000 gal/day		Season **Summer 2006 (may be renewed)**		Calculations **Show how quantity was determined**
	Maximum Withdrawal Rate	Total Daily Amount	Date Work Will Start	*Date All Work Will be Completed	Hours/day: 24 Hrs/Day (as needed)
Mine dewatering of precipitation and seepage via mine pit sump pumps	3,500 GPM	5.04 MGD	September 2006	August 2011	Days/week . 7 days/wk (as needed)
Total Amount	3,500 GPM	5.04 MGD	***You may want to use the end of the construction season for your ending date**		Period. Year Round (as needed)

This is the absolute maximum quanity of surface water from precipation ever expected to be pumped from the mine pit for purposes of permitting and planning.

Method of Taking Water

PUMP	Pump intake ___inches	Hours working __24 hrs. (as needed)__ hours/day
	Pump output __3,500____GPM	Length of pipe . feet (from pump to point of use)
Gravity	Pipe diameter_____ inches	Length of pipe feet (take point to use point
	Head_____feet	
Ditch	L_____H ---- W --- feet	Diversion_____GPM or CFS
Reservoir	L H ------ W feet	Water storage _____AF
Dam	L ------ H ------ W ------ feet	Water storage _____AF

Project Description
What alternative water sources are available to your project should a portion of your requested diversion be excluded because of water shortage or public interest concerns? None - purpose is to dewater the mine pit.
Are there any surface water bodies or water wells at or near your site(s) that could be affected by the proposed activity? If yes, list any ground water monitoring programs going on at or near the sites, any water shortages or water quality problems in the area, and any information about the water table, if known. Yes – may deplete flows to lower Little Hurrah Creek. Thre are no downstream users.
Briefly describe the type and size of equipment used to withdraw and transport water, including the amount of water the equipment uses or holds. Mine pit water will be removed via pumps located in low areas or sumps withn the mine pit. Water will be reinjected into the ground water wells – there may be up to as many as seven (7) injection wells. Water will be treated to meet applicable water quality standards before reinjection.
Briefly describe what changes at the project site and surrounding area will occur or are likely to occur because of construction or operation of your project (e.g. public access, streambed alteration, trenching, grading, excavation) Streambed alteration, trenching, grading and excavation
Briefly describe land use around the water take, use, and return flow points (e.g. national park, recreational site, residential) Fairly remote region on the Seward Pennisula, uninhabitated, no adjacent communities or houses within 10.0 miles.
Will project be worked in phases? State reason for completion date. No.

Briefly summarize your entire project.

The proposed mining site is located just above the confluence of the Big Hurrah and Little Hurrah Creek. The topography of Big Hurrah Creek is moderately steep approaching a 30% grade, with steeper rock slopes along sections of Little and Big Hurrah creeks. The bottom of Little Hurrah Creek consists of thin alluvial/colluvial deposits. The undelying rock consists of predominately structurally complex schist and marble with abundant alterations-related carbonate, quartz, and graphite associated with secondary gold mineralization along the veins.

The Big Hurrah Mine facilities will include the following: an open pit gold mine, a small satelite mine pit also to be used for ore stockpiling, a non-acid generating development rock dump, temporary stockpile of potentially acid generating development rock to be backfilled in the pit at closure, truck maintenance shop, small administration building, explosive and fuel storage.

The ore mining rate will be approximately 1,500 tonnes per day (tpd) and the stripping rate will be 5,000 tpd. Ore will be stockpiled and delivered overland by truck to the Rock Creek Mill at an average rate of approximately 1000 tpd.

Surface water accumulating from precipitation and runoff in the mine pit will be collected in low areas or sumps and pumped out for operational purposes. The water will be reinjected in up to as many as seven (7) Class V injection wells located southeast of the mine pit. Water will be treated to applicable water quality standards before reinjection.

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Signature Charlotte L MacCay
Name (please print) Charlotte Maccay

Date 7 May 7, 2006
Title Environmental Management, Project Manager