

007016

NOV 22 1996

Geological Survey Branch

DEBBIE 900 ZONE

**PROPOSED CONTINUATION OF TEST BULK
SAMPLE AND MILLING PROGRAM**

BY

PROPERTY FILE

092F 079

WHITE HAWK VENTURES INC.

PREPARED BY

**BARRETT E. G. SLEEMAN
ENGINEER OF MINES, P. ENG**

NOVEMBER 18, 1996

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BACKGROUND

In the late 1800's, gold was first discovered in the Port Alberni area on what later became known as China Creek. This creek was worked as a placer stream for a number of years in its bed and along its banks from its terminus in Alberni inlet (approximately 7 km due South of the city of Port Alberni) to the vicinity of McLaughlin Ridge some 12 kilometers upstream.

Around the turn of the century, lode gold was discovered near McLaughlin Ridge and a number of small mines which are now collectively known as the Dunsmuir mines produced gold from small and narrow, but in places very rich veins.

From the time of closing of the Dunsmuir mines to the 1980's, sporadic exploration and prospecting was carried out with limited success.

About 10 years ago, a number of claims were staked and otherwise acquired in the region of China Creek, Mineral Creek and Yellow Creek. As geologic features were very encouraging, a very extensive exploration program was carried out by several companies. Eventually Westmin Resources Limited acquired all of the property of interest in the area and conducted further extensive exploration. Among other activities, close to 50,000 meters of drilling was carried out and a 3.5 meter by 3.5 meter adit was driven south from Yellow Creek a distance of 2 km to within about 100 meters of Mineral Creek and close to but underneath the old Dunsmuir workings. While the adit itself did not surface, a ventilation raise from near the end of the tunnel was driven to the surface. All told, several tens of millions of dollars has been spent on this area in modern times. All of these investigations produced a number of inconclusive but none-the-less encouraging results.

One of the areas of interest was identified first by surface geochemistry and eventually by diamond drilling in 1991 and is now known as the "900 zone". The drilling indicated several rich gold intersections, however after considerable investigation, Westmin, feeling the potential was too small declined to proceed further and in 1994 it signed an agreement with White Hawk Ventures Inc. calling for underground exploration and possible development. This was carried out in the summer of 1995 and led to the mining and stockpiling of 600-800 tonnes of ore on the surface. While the grade

of the overall orebody was encouraging, the size turned out to be less than expected and further mining was halted in early 1996 pending investigation of various milling alternatives. It is reliably estimated that 200-500 tonnes of ore grade material remain in place underground.

In August of 1996 the author became a director of White Hawk Ventures Inc. and on October 1, managing director. Also on October 1, agreements were finalized to acquire all of Westmin's interests, making White Hawk the only landholder of size in the region.

INTRODUCTION

The company anticipates being very active in the region in 1997 and expects to spend several million dollars on its claims in both surface and underground drilling.

The development of the 900 zone has not been and will not be an economic success for the company and management wishes to finish all activity at this mine as soon as practical get on with other things. All told, well over a million dollars has been spent so far on this development and only about 800 ounces of recoverable gold has been mined with another 200-300 ounces blocked out underground for a gross value of just over \$500,000. It is estimated that it will take another \$50,000 to mine the remaining underground reserves and an additional \$25,000 to bring in a portable mill to produce a gold concentrate for sale to a refiner and an additional \$10,000 for site reclamation.

PROPOSAL

The company seeks approval to complete mining of the blocked out ore at the 900 zone, mill it on site along with the stockpiled ore and pump the tailings directly underground. The site will then be reclaimed by filling in the portal with waste rock, contouring the site and reseeding with suitable seeded mulch. The short road to the portal will be removed but the access to the site (an old forestry road) will be left as is.

which is the source of the other water entering and ultimately flowing from the mine. At any rate although very likely unnecessary, we are proposing to dispose of any excess water during the course of milling operations by trucking it to a suitable disposal site.

With careful operation, there should be very limited opportunity for spills and even if there were one, it would be limited to the small amount in the circuit (mostly in the mill itself). The chemicals used in the floatation process are environmentally benign. Please see the characteristics in the information provided by Van Waters & Rogers.

Total consumption of chemicals in milling the estimated 1000 tonnes of ore is predicted to be as follows:

TABLE 1
PREDICTED CHEMICAL CONSUMPTION

<u>CHEMICAL</u>	<u>GRAMS/TONNE</u>	<u>TOTAL KG</u>
PAX	50	50
A208	25	25
MIBC	5	<u>5</u> 80

Most of this material will be retained in the settled tailings. It will not be a problem for the following reasons:

- a) Eighty kilograms is very little material in the first place.
- b) Very little of the total chemicals used will be available for remobilization and most will forever remain permanently buried with the tailings, as any water flow will be over the top of the solidified and partly cemented tailings-not through them.
- c) There will be very little water production from the back of the mine that will be available to carry the chemicals out of the mine.
- d) The chemicals will break down.
- e) The chemicals are generally environmentally benign.
- f) The amount of chemicals carried out of the mine in the first month after milling will be virtually non-detectable and decline logarithmically over time.

g)Very substantial dilution by surface water will occur (several orders of magnitude) of any water that does exit from the mine prior to reaching China creek.

h)When final milling is complete and all reclamation done, water quality will be monitored once a month for six months and semi annually for three years after that or until it has been determined to everyone's satisfaction that a stabilized, environmentally benign outflow has been achieved. It is expected that company personnel will be in the region for some time over the next several years conducting other activities and monitoring will be without difficulty.

PREDICTED WATER QUALITY

TABLE 2
WATER MEASUREMENTS (SEE ATTACHED)

DATE	pH	SOLIDS	ANIONS	AL	CU	FE	ZN
6/12/93	7.95	29	34.2	.56	.017	.965	<.005
15/12/93	7.84	7	147	.067	<.001	.156	<.005
4/08/95	8.1	19	151	.059	<.001	.05	<.005
Predicted (stabilized)	8.0	5	150	.05	<.001	.05	<.005

(All measurements in mg/liter except pH)

SURFACE RECLAMATION

Earth moving equipment will be used to contour the existing waste dump and fill in and contour the portal. There has been limited surface disturbance anyway and there will therefore be limited surface reclamation needed. All remnants of human activity will be buried or removed. No culverts have been used for mine access. A 2 inch diameter pipe beginning behind the last berm inside the mine will be buried and terminated a short distance downslope from the portal that will carry all water from the mine. A short section of the discharge end will be left unobtrusively exposed for observation and monitoring of the water outflow.

A landscape contractor will be hired to reseed exposed areas. The forestry road will be left untouched.

TIME TABLE

The following is an estimate of the time required to complete the proposed program from the time of final approval.

Mobilization to complete mining	14 days
Mining	30 days
Build tailings dams and set up mill	7 days
Milling	21 days
Demobilization and cleanup	7 days
Reclamation & revegetation	<u>7 days</u>
TOTAL	86 days

BEATTIE CONSULTING LTD.

2955 WEST 38th AVENUE
VANCOUVER, B.C.
V6N 2X2

TEL: (604) 263 0695
FAX: (604) 263 0695
Internet: mbeattie@axionet.com

October 15, 1996

Whitehawk Ventures Inc
2301 - 2075 Comox Street
Vancouver, B.C.
V6G 1S2

Attention: Mr. Barratt Sleeman

Dear Barratt,

We have conducted preliminary metallurgical testwork on a composite sample from your gold project. All testwork was conducted at the laboratories of Process Research Associates of Vancouver. The results are summarized as follows:

Sample description

Five samples were received at the laboratory. Each sample consisted of fragments up to approximately 5 cm diameter. The samples were quite damp as received and were air dried prior to sample preparation. The description of each sample, together with the gold and arsenic assay for each one is summarized in Table 1.

Table 1
Description of Test Samples.

Sample Description	Au, g/t	Ag, g/t	As, %
U/G chute	24.3	9.9	0.08
Top crest muck pile	12.9	5.8	0.11
Mid sample muck pile	15.8	6.5	0.08
Channel sample muck pile	33.3	13.0	0.09
Random sample muck pile	6.17	2.4	0.07

A composite sample was prepared by combining half of each of the samples, which had been crushed to minus 6 mesh. The composite was blended and then split into 2 kilogram portions for the testwork.

Test Results

The sample was ground to approximately 50% passing 200 mesh prior to being concentrated by means of a Knelson concentrator. The Knelson concentrate was panned down to a few grams and the pan tails were combined with the Knelson tails for flotation. Free gold was readily visible in the pan concentrate which was assayed in total. This procedure gives comparable results to what can be expected in a commercial circuit using a high gravity concentrator in the grinding circuit and then tabling the rougher gravity concentrate to produce a saleable product. A sketch of an appropriate circuit is included with the test procedure.

The gravity tails were subjected to a bulk sulphide flotation procedure using low toxicity reagents and without any adjustment of the slurry pH which was about 7.8. The results of the test are summarized in Table 2. The detailed test procedure and metallurgical balance are attached to this report.

Table 2
Test Results

Product	Weight %	Assays, g/t		Distribution, %	
		Au	Ag	Au	Ag
Gravity concentrate	0.1	24443	6510	70.6	62.2
Flotation conc.	0.8	820	340	21.0	28.7
Cleaner tailing	1.8	30.9	7.5	1.9	1.5
Total rougher conc.	2.6	264	106	22.8	30.3
Rougher tailing	97.3	2.02	0.70	6.6	7.6
Feed (calc.)		29.7	8.99		

It should be noted that the head assay for the composite sample is about double what would be expected from an arithmetic average of the individual samples. This variation is consistent with the presence of coarse free gold which makes small individual samples unreliable for predicting head grade.

Approximately 70% of the gold reported to the gravity concentrate. The flotation was successful at recovering much of the remaining gold into a high grade concentrate. No attempt has been made to optimize the conditions such as grind or reagent additions so it is possible that further

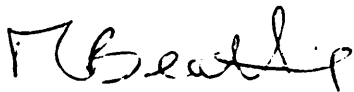
improvements in the results may be achieved. The small quantity of concentrate being produced, together with its high gold content should make marketing of this product feasible, in spite of the fact that it is expected to contain in the order of 1% As. The concentrate has not been analyzed for the presence of any other elements which may reduce its marketability. This analysis should be done as soon as sufficient concentrate is available. The gravity concentrate should be sold directly to a refiner to provide very rapid cash flow.

Tailings Analyses

The flotation tailings have been analyzed for their acid producing potential. The tailings were found to contain 0.10% sulphur of which 0.04% was in the form of sulphate so that the acid producing potential of the material is 1.88 kg/tonne. At the same time the neutralization potential is 219 kg/tonne so that the neutralization capacity of the material greatly exceeds the acid production potential and no acid generation problems are expected from this material.

The highest reagent addition made during the test was for potassium amyl xanthate which used 50 g/t. At a solids density of 33% by weight and assuming that 95% of the added reagent reports to the concentrate, the residual xanthate in the effluent would be 1.25 mg/l. This concentration is well below the toxic range for this material. Similar consideration applies to the other two reagents which were used. The MSDS sheets for all three reagents are included with this report.

Yours sincerely,
BEATTIE CONSULTING LTD



Dr. M.J.V. Beattie, P.Eng.

TEST PROCEDURE

Test: F1
Technician: Peter Tse

Date: Oct 10, 1996
Project: 96-085

Objective: Initial bench gravity/flotation scoping test on composite sample

Stage	Time (minutes)	pH	Addition	
			g/tonne	Reagent
Grind (2 kg)	16			
Knelson gravity concentration				Water pressure 1.5 psi
Panning (Knelson Conc)				
Rougher flotation (Knelson tail and Pan conc)	5	7.9	50	PAX
			25	A208
		7.8	5	MIBC
Cleaner flotation (Rougher conc)	5	7.8	0	MIBC

METALLURGICAL BALANCE

Test No: F1
Sample: Composite

Date: 10-Oct-96
Project No: 96-085

Objective: Initial bench gravity/flotation scoping test

Products	Weight		Assay		Distribution (%)	
	(g)	(%)	Au (g/t)	Ag (g/y)	Au	Ag
Pan concentrate	1.7	0.1	24443	6510	70.6	62.2
Flotation cleaner conc	15.1	0.8	820	340	21.0	28.7
Flotation cleaner tail	36.1	1.8	30.9	7.5	1.9	1.5
Total Rougher Conc	51.3	2.6	264	106	22.8	30.3
Final Rougher Tail	1938.9	97.3	2.02	0.70	6.6	7.6
Total Measured	1991.8	100.0	29.7 39.1	8.99 8.90	100.0	100.0

SIZE ANALYSIS

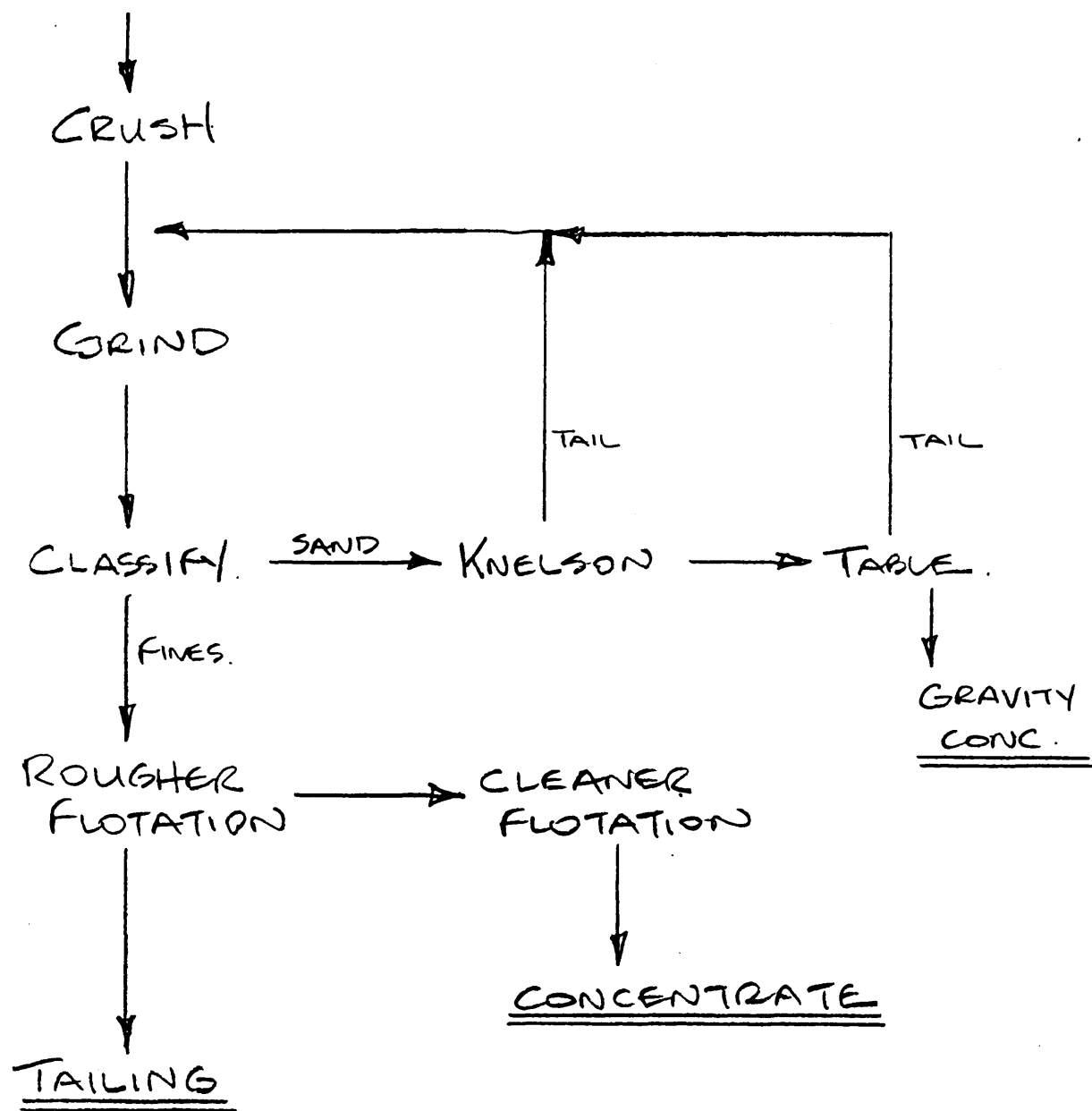
Test No: F1

Date: 10-Oct-96

Sample: Composite

Project No: 96-085

Size Fraction (Tyler Mesh)	Weight Individual Retained		Cumulative Passing (%)
	(g)	(%)	
65	2.24	4.7	95.3
100	7.77	16.5	78.8
150	7.53	16.0	62.8
200	5.31	11.2	51.6
270	4.01	8.5	43.1
325	1.44	3.1	40.1
400	1.04	2.2	37.9
Undersize	17.87	37.9	
Total	47.21	100.0	



WHITEHAWK VENTURES
PROCESS FLOWSHEET.

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Ltd.



CHEMICAL ANALYSIS REPORT

Date: December 6, 1993
ASL File No. D5658
Report On: Sediment Pond
Water Analysis
Report To: **White Hawk Ventures Inc.**
609-325 Howe Street
Vancouver, BC
V6C 1Z6
Attention: **Mr. Ed Skoda**
Received: November 17, 1993

ASL ANALYTICAL SERVICE LABORATORIES LTD.
per:

Katherine Thomas, B.Sc.
Project Chemist

Frederick Chen, B.Sc.
Project Chemist

Specialists in Environmental Chemistry





RESULTS OF ANALYSIS

File No. D5658

#900-01

93 11 16

Physical Tests

pH	7.95
Total Suspended Solids	29

Dissolved Anions

Alkalinity - Total	CaCO ₃	34.2
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Total Metals

Aluminum	T-Al	0.560
Copper	T-Cu	0.017
Iron	T-Fe	0.965
Zinc	T-Zn	<0.005

Results are expressed as milligrams per litre except where noted.
< = Less than the detection limit indicated.

**METHODOLOGY**

File No. D5658

Samples were analyzed by methods acceptable to the appropriate regulatory agency. Outlines of the methodologies utilized are as follows:

Conventional Parameters in Water

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Ed. published by the American Public Health Association, 1992. Further details are available on request.

Metals in Water

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Edition published by the American Public Health Association, 1992. The procedures involve a variety of instrumental analyses including atomic emission spectrophotometry (ICP) and atomic absorption spectrophotometry (AA) to obtain the required detection limit for each element. Specific details are available on request.

End of Report

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CHEMICAL ANALYSIS REPORT

Date: December 15, 1993
ASL File No. D5990
Report On: Debbie 900 Project
Water Analysis
Report To: **White Hawk Ventures Inc.**
609-325 Howe Street
Vancouver, BC
V6C 1Z6
Attention: **Mr. Ed Skoda**
Received: December 3, 1993

ASL ANALYTICAL SERVICE LABORATORIES LTD.

per:

Katherine Thomas, B.Sc.
Project Chemist

Joyce Chow, B.Sc.
Project Chemist





RESULTS OF ANALYSIS

File No. D5990

Sed 1
Sample93 12 02
07:00Physical Tests

pH	7.84
Total Suspended Solids	7

Dissolved Anions

Alkalinity - Total	CaCO3	147
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Total Metals

Aluminum	T-Al	0.067
Copper	T-Cu	<0.001
Iron	T-Fe	0.156
Zinc	T-Zn	<0.005

Results are expressed as milligrams per litre except for pH.
< = Less than the detection limit indicated.

**METHODOLOGY**

File No. D5990

Samples were analyzed by methods acceptable to the appropriate regulatory agency. Outlines of the methodologies utilized are as follows:

Conventional Parameters in Water

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Ed. published by the American Public Health Association, 1992. Further details are available on request.

Metals in Water

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Edition published by the American Public Health Association, 1992. The procedures involve a variety of instrumental analyses including atomic emission spectrophotometry (ICP) and atomic absorption spectrophotometry (AA) to obtain the required detection limit for each element. Specific details are available on request.

End of Report

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CHEMICAL ANALYSIS REPORT

Date: August 14, 1995
ASL File No. F2623
Report On: Water Analysis
Report To: **White Hawk Ventures Inc.**
609-325 Howe Street
Vancouver, BC
V6C 1Z6
Attention: **Mr. Ed Skoda**
Received: August 4, 1995

ASL ANALYTICAL SERVICE LABORATORIES LTD.

per:

Liana Campbell, B.Sc.
Project Chemist

Joyce Chow, B.Sc.
Project Chemist





RESULTS OF ANALYSIS - Water

File No. F2623

SED1
Pond
10895
95 08 01

Physical Tests

pH	8.10
Total Suspended Solids	19

Dissolved Anions

Alkalinity - Total	CaCO ₃	151
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Total Metals

Aluminum	T-Al	0.059
Copper	T-Cu	<0.001
Iron	T-Fe	0.350
Zinc	T-Zn	<0.005

Results are expressed as milligrams per litre except where noted.
< = Less than the detection limit indicated.



METHODOLOGY

File No. F2623

Samples were analyzed by methods acceptable to the appropriate regulatory agency. Outlines of the methodologies utilized are as follows:

Conventional Parameters in Water

These analyses are carried out in accordance with procedures described in "Methods for Chemical Analysis of Water and Wastes" (USEPA), "Manual for the Chemical Analysis of Water, Wastewaters, Sediments and Biological Tissues" (BCMOE), and/or "Standard Methods for the Examination of Water and Wastewater" (APHA). Further details are available on request.

Metals in Water

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Edition published by the American Public Health Association, 1992. The procedures involve a variety of instrumental analyses including atomic emission spectrophotometry (ICP) and atomic absorption spectrophotometry (AA) to obtain the required detection limit for each element. Specific details are available on request.

End of Report

LA1352

MATERIAL SAFETY DATA SHEET

PAGE 1

VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B.C. V6X 1W5

SALES ORDER:

VAN WATERS & ROGERS PRODUCT: 80329

MSDS NUMBER: LA1352 VERSION: 1

DATE PRINTED: 29/10/96

WHITEHOCK VENTURE INC.
669-7780

WHMIS CODES: B.6 D.1B D.2B F

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS
CALL CHEMTREC (800) 424 9300-----
SECTION I. PRODUCT INFORMATIONPRODUCT NAME: POTASSIUM AMYL XANTHATE VW&R CODE: LA1352

TRADE NAME: PAX PELLETS

CHEMICAL NAME: Potassium Amyl Xanthate

CHEMICAL FAMILY: Potassium salt of a dithiocarbonic acid ester

CHEMICAL FORMULA: C₅H₁₁OCS₂K.2H₂O

PRODUCT USE: Flotation Agent

WHMIS CLASSIFICATION: B.6 D.1B D.2B F

SECTION II. HAZARDOUS INGREDIENTS OF MATERIAL

HAZARDOUS INGREDIENTS: Potassium Amyl Xanthate

CONCENTRATION %: 90.0

CAS/NA/OR UN NUMBER: 2720-73-2

EXPOSURE LIMITS: Not established

LD50/LC50/SPECIES/ROUTE: Not available

HAZARDOUS INGREDIENTS: Potassium Thiocarbonate

CONCENTRATION %: 5.0

CAS/NA/OR UN NUMBER: Not available

EXPOSURE LIMITS: Not established

LD50/LC50/SPECIES/ROUTE: Not available

HAZARDOUS INGREDIENTS: Potassium Sulphide

LA1352

MATERIAL SAFETY DATA SHEET

PAGE 2

CONCENTRATION %: 2.0
CAS/NA/OR UN NUMBER: 1312-73-8
EXPOSURE LIMITS: Not established
LD50/LC50/SPECIES/ROUTE: Not available

HAZARDOUS INGREDIENTS: Potassium Carbonate
CONCENTRATION %: 2.0
CAS/NA/OR UN NUMBER: 584-08-7
EXPOSURE LIMITS: Not established
LD50/LC50/SPECIES/ROUTE: LD50: 1870 mg/Kg (Rat oral)

HAZARDOUS INGREDIENTS: Potassium Hydroxide
CONCENTRATION %: 1.0
CAS/NA/OR UN NUMBER: 1310-58-3
EXPOSURE LIMITS: Not established
LD50/LC50/SPECIES/ROUTE: LD50: 273 mg/Kg (Rat-oral)

Material will contain varying amounts of the reactants, Amyl Alcohol (<1%) and Carbon Disulphide (<1%).

SECTION III. PHYSICAL DATA

PHYSICAL STATE (gas, liquid or solid): Solid
BOILING POINT (deg C): Not applicable
FREEZING POINT (deg C): Not applicable
VAPOR PRESSURE (mm Hg): Not applicable
EVAPORATION RATE (Butyl Acetate=1): <1
VAPOR DENSITY (Air=1): Not applicable
BULK DENSITY (kg/L): 0.800 - 0.825
SPECIFIC GRAVITY (water=1): 0.800 - 0.825
MOLECULAR WEIGHT: 202.4
pH: Potassium Amyl Xanthate Solutions are alkaline
ODOR THRESHOLD: Not applicable
COEFFICIENT OF WATER/OIL DISTRIBUTION: Water Soluble
APPEARANCE AND ODOR: Yellow to green pellets with slight disagreeable sulfur type odor.

SECTION IV. FIRE AND EXPLOSION HAZARD OF MATERIAL

FLAMMABILITY: YES
IF YES, UNDER WHICH CONDITIONS?: Exposure to heat and moisture may cause the decomposition of the potassium amyl xanthate to flammable and explosive vapors of carbon disulphide. Storage in hot, moist and/or poorly ventilated environments must be avoided.

MEANS OF EXTINCTION: Use dry chemical, CO2 or alcohol foam. Do not use water to fight fire.

FLASHPOINT (deg C) AND METHOD: Not applicable
UPPER EXPLOSION LIMIT (% by vol.): 1.25 (value for carbon disulphide)
LOWER EXPLOSION LIMIT (% by vol.): 50 (value for carbon disulphide)

LA1352

MATERIAL SAFETY DATA SHEET

PAGE 3

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AUTO IGNITION TEMPERATURE (deg C): 100 (value for carbon disulphide)

TDG FLAMMABILITY CLASSIFICATION: Material is not regulated
HAZARDOUS COMBUSTION PRODUCTS: Sulphur dioxide and carbon monoxide
EXPLOSION SENSITIVITY TO MECHANICAL IMPACT: Not applicable
EXPLOSION SENSITIVITY TO STATIC DISCHARGE: Not applicable

SECTION V. TOXICOLOGICAL PROPERTIES OF MATERIAL

PRIMARY ROUTE(S) OF ENTRY: SKIN CONTACT, EYE CONTACT, INHALATION

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC EXPOSURE)

Eyes: Vapors and fine dust will cause irritation of the eyes.

Skin: Repeated exposure to dust will cause irritation of the skin.

Ingestion: Will cause vomiting, headache, convulsions and unconsciousness.

Inhalation: Inhalation of the dust will irritate the nose and throat and cause coughing and chest discomfort. CS2 vapors are rapidly absorbed and may cause headache, nausea, dizziness, followed by vomiting, blurred vision, respiratory depression and unconsciousness.

SECTION VI. FIRST AID MEASURES

Eyes: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

Skin: Wash with flowing water. Remove contaminated clothing. Get medical help if irritation persists.

Ingestion: Drink large amounts of milk or water and induce vomiting. Quickly transport victim to an emergency facility. Consult medical personnel. Do not administer anything by mouth to an unconscious person.

Inhalation: Place victim in a fresh air environment. Restore and/or support breathing. Consult medical personnel.

SECTION VII. REACTIVITY DATA

CHEMICAL STABILITY: NO

Solid Xanthates are stable when kept cool and dry.

IF NO, UNDER WHICH CONDITIONS?: High temperature and moisture.

CONDITIONS OF REACTIVITY: Exposure to high temperature and moisture will result in decomposition of Xanthates, thus releasing carbon disulphide.

INCOMPATIBILITY WITH OTHER SUBSTANCES: AVOID ACIDS AND OXIDIZING MATERIALS. DO NOT APPLY STEAM TO MATERIAL.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon disulphide, amyl alcohol,

LA1352

MATERIAL SAFETY DATA SHEET

PAGE 4

carbon monoxide, carbon dioxide and oxides of sulphur.

SECTION VIII. PREVENTIVE MEASURES

RESPIRATORY (Specify): A full face piece NIOSH approved air-purifying cartridge respirator equipped with particulate filters shall be worn if dusty conditions prevail. In cases where carbon disulphide is present use a NIOSH approved supplied air full face piece respirator or self-contained breathing apparatus.

EYES (Specify): Wear chemical safety goggles or a face shield.

GLOVES (Specify): Wear rubber gloves.

FOOTWEAR (Specify): Wear impervious boots.

CLOTHING (Specify): Wear rubber apron and long-sleeved shirt or complete rubber safety suit.

OTHER PROTECTIVE EQUIPMENT (Specify): Eyewash fountains and safety showers should be readily available wherever this material is handled.

ENGINEERING CONTROLS (Specify): Provide general ventilation and/or local exhaust ventilation if use conditions generate dust.

LEAK AND SPILL PROCEDURES: Ensure that clean-up personnel wear rubber gloves, rubber boots, rubber apron and a self contained breathing apparatus. If a spill is small, a full face piece NIOSH approved air-purifying cartridge respirator equipped with particulate filters can be worn. For a small spill, sweep up and dispose in appropriate containers. Large spills can be shovelled in appropriate containers. Material can be salvaged profitably for reuse locally.

WASTE DISPOSAL: Consult local authorities on proper disposal procedures.

HANDLING PROCEDURES AND EQUIPMENT: Workers must be trained in handling dry Xanthate. Work practices and equipment must be designed to prevent any body contact with dry Xanthate. Avoid inhalation of carbon disulphide vapors. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. No smoking in work area. Non-sparking tools shall be used. Vapor spaces should be checked with an explosimeter. DO NOT use steam on Xanthate material.

STORAGE REQUIREMENTS: Store in a COOL DRY, well ventilated area. Ensure that incompatible materials are kept away from dry Xanthates. Keep away from sources of ignition. No smoking in storage areas.

SECTION IX. TRANSPORTATION INFORMATION

TDG

SHIPPING NAME: POISONOUS SOLIDS, N.O.S. (POTASSIUM AMYL XANTHATE)

LA1352

MATERIAL SAFETY DATA SHEET

PAGE 5

UN:2811

CLASS: 6.1 (9.2)

PACKING GROUP: III

-----MSDS INFORMATION-----

CONTACT MSDS CO-ORDINATOR, VAN WATERS & ROGERS LTD. DURING
BUSINESS HOURS, PACIFIC TIME (604) 273-1441.

DATE ISSUED: September 12, 1996

SUPERCEDES: New

-----NOTICE-----

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-----REVISION INFORMATION-----

09/96: This MSDS replaces P1793. New format; new series.

===== END OF MSDS =====

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VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B.C. V6X 1W5

SALES ORDER:

VAN WATERS & ROGERS PRODUCT: 40160

MSDS NUMBER: LA1277

VERSION: 1

DATE PRINTED: 22/10/96

BILL HILL

WHMIS CODES:

B.3 D.2B

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS
CALL CHEMTREC (800) 424-9300-----
SECTION I. PRODUCT INFORMATION

PRODUCT NAME: METHYL ISOBUTYL CARBINOL

VW&R CODE: LA1277

CHEMICAL SYNONYMS: Methyl Amyl Alcohol, MIBC, 2-Pentanol-4-Methyl

PRODUCT USE: Organic Solvent

WHMIS CLASS: B.3 D.2B

CANADIAN TDG DESCRIPTION (ROAD & RAIL)

SHIPPING NAME: METHYL ISOBUTYL CARBINOL

CLASS DESCRIPTION: Class 3 Flammable Liquid

PACKING GROUP: III

UN NUMBER: 2053

SECTION II. INGREDIENTS & TOXICOLOGICAL PROPERTIES

PRODUCT & CONTROLLED INGREDIENTS

PRODUCT: METHYL ISOBUTYL CARBINOL

100% VOL

CAS# : 108-11-2

WHMIS CONTROLLED: YES

Rat Oral LD50: > 2590.0 mg/kg

Inhal. LC50: > 2000.0 ppm 4.00 hrs

Rabbit Dermal LD50: > 3.5 mL/kg

TOXICOLOGICAL INFORMATION

RATIONALE FOR WHMIS TOXICITY CLASSIFICATION

Exposure may occur via inhalation, ingestion, skin absorption and skin or eye contact.

This product is irritating to the eye but is not a primary skin irritant after exposure of short duration.

Data is insufficient to further classify according to WHMIS criteria.

SUPPLEMENTAL HEALTH INFORMATION

Prolonged and repeated contact with skin can cause defatting and drying of the skin resulting in skin irritation and dermatitis. Vapours are moderately irritating to the eyes and respiratory passages. Prolonged exposure to high vapour concentration can cause headache, dizziness, nausea, and central nervous system depression. Ingestion of this product may cause headache, dizziness, fatigue and central nervous system depression. Preexisting eye, skin and respiratory disorders may be aggravated by exposure to this product.

SECTION III. EMERGENCY AND FIRST AID PROCEDURES

EYES: Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Obtain medical attention immediately.

INHALATION: Remove victim from further exposure and restore breathing, if required. Obtain medical attention.

INGESTION: Do not induce vomiting. Do not give anything by mouth to an unconscious person. Guard against aspiration into lungs by having the individual turn on to their left side. If vomiting occurs spontaneously keep head below hips to prevent aspiration of liquid into the lungs. Obtain medical attention immediately.

SKIN: Start rinsing and remove contaminated clothing while rinsing. Wash contaminated skin with mild soap and water. If irritation occurs and persists, obtain medical attention.

NOTES TO PHYSICIAN: If more than 2.0 mL/kg has been ingested, vomiting should be induced with supervision. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before vomiting, gastric lavage with a cuffed endotracheal tube should be considered.

SECTION IV. EMPLOYEE PROTECTION

THE FOLLOWING INFORMATION, WHILE APPROPRIATE FOR THIS PRODUCT, IS GENERAL IN NATURE. THE SELECTION OF PERSONAL PROTECTIVE EQUIPMENT WILL VARY DEPENDING ON THE CONDITIONS OF USE.

OCCUPATIONAL EXPOSURE LIMITS:

Methyl isobutyl carbinol (MIBC) (skin): 25 ppm, 104 mg/m³ (TLV/TWA)
40 ppm, 167 mg/m³ (TLV/STEL)
ACGIH

EYES AND FACE: Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes. Provide an eyewash station in the area.

SKIN (HANDS, ARMS AND BODY): Impervious gloves (neoprene) should be worn at all times when handling this product. Impervious clothing (apron, coveralls) should also be worn in confined workspaces or where the risk of skin exposure is much higher. Safety showers should be available for emergency use.

RESPIRATORY: Avoid breathing vapor or mists. If exposure exceeds occupational exposure limits, wear a NIOSH-approved respirator. Use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapours. Proper equipment for high concentrations includes an atmosphere supplied, positive pressure demand, self-contained or airline breathing apparatus.

MECHANICAL VENTILATION: Mechanical ventilation is recommended for all indoor situations to control fugitive emissions. Electrical and mechanical equipment should be explosion-proof. Concentrations in air should be maintained below the recommended threshold limit value if unprotected personnel are involved. For personnel entry into confined spaces (i.e. bulk storage tanks) a proper confined space entry procedure must be followed including ventilation and testing of tank atmosphere. Local ventilation recommended where mechanical ventilation is ineffective in controlling airborne concentrations below the recommended occupational exposure limit. Make up air should always be supplied to balance air exhausted (either generally or locally).

SECTION V. PREVENTATIVE MEASURES

STORAGE AND HANDLING: Combustible. Store in a cool, dry, well ventilated area, away from heat and ignition sources. Hot surfaces may be sufficient to ignite liquid even in the absence of sparks or flames. Extinguish pilot lights, cigarettes and turn off other sources of ignition prior to use and until all vapours are gone. Vapours may accumulate and travel to distant ignition sources and flashback. Use explosion-proof ventilation to prevent vapour accumulation. Empty containers may contain hazardous product residues. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. Do not cut, drill, grind, weld or perform similar operations on or near containers. Keep container tightly closed.

Avoid breathing vapours and prolonged or repeated contact with skin. Air-dry contaminated clothing in a well ventilated area before laundering. Launder contaminated clothing prior to reuse. Use good personal hygiene.

SPILL AND LEAK HANDLING PROCEDURES: Issue warning "Combustible". Eliminate all ignition sources. Handling equipment must be grounded. Isolate hazard area and restrict access. Try to work upwind of spill. Avoid direct contact with material. Wear appropriate breathing apparatus (if applicable) and protective clothing. Stop leak only if safe to do so. Dike and contain land spills; contain water spills by booming. Use water fog to knock down vapours; contain runoff. For large spills remove by mechanical means and place in containers. Absorb residue or small spills with absorbent material and remove to non-leaking containers for disposal.

Recommended materials: Clay or Sand Flush area with water to remove trace residue. Dispose of recovered material as noted below. Notify appropriate environmental agency(ies).

WASTE DISPOSAL METHODS: Waste management priorities (depending on volumes and concentration of waste) are: 1. recycle (reprocess), 2. energy recovery (cement kilns, thermal power generation), 3. incineration, 4. disposal at a licenced waste disposal facility. Do not attempt to combust waste on-site. Incinerate at a licenced waste disposal site with approval of environmental authority.

SECTION VI. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

ODOUR AND APPEARANCE: Colourless Sweet Alcoholic Odour

AVERAGE ODOUR THRESHOLD: NOT AVAILABLE

BOILING POINT (DEG C): 130-133

FREEZING POINT (DEG C): -90

DENSITY (KG/M3 @ DEG C): 808.00 @ 20

VAPOUR DENSITY (AIR=1): 3.5

VAPOUR PRESSURE (MMHG @ DEG C): > 2.9 @ 20

SPECIFIC GRAVITY (H2O=1): NOT AVAILABLE

PH LEVEL: NOT AVAILABLE

VISCOSITY (CST @ DEG C): NOT AVAILABLE

EVAPORATION RATE (NEUAC=1): 0.27

PARTITION COEFFICIENT (KOW): NOT AVAILABLE

WATER SOLUBILITY: Slight

OTHER SOLVENT: Alcohol, Ether, Organic Solvents

MOLECULAR WEIGHT (G): NOT AVAILABLE

FORMULA: C6H14O

SECTION VII. REACTIVITY, FIRE AND EXPLOSION HAZARD

FIRE AND EXPLOSION HAZARD

FLASH POINT (DEG C) AND METHOD: 44 Tag Closed Cup

FLAMMABLE LIMITS / % VOLUME IN AIR

LFL: 1.0 UFL: 5.5

AUTOIGNITION TEMP. (DEG C): 338

EXTINGUISHING MEDIA: Dry Chemical, Carbon Dioxide, Water Fog, Alcohol Foam

SPECIAL FIRE-FIGHTING PROCEDURES: Flammable. Do not enter confined fire space without adequate protective clothing and an approved positive pressure self-contained breathing apparatus. Containers exposed to intense heat from fires should be cooled with water to prevent vapour pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

REACTIVITY DATA

HAZARDOUS COMBUSTION / DECOMPOSITION PRODUCTS: Vapour forms a flammable/explosive mixture with air between upper and lower flammable limits. Carbon monoxide and carbon dioxide are produced on combustion.

INCOMPATIBILITY: Avoid contact with strong oxidizing agents and acids.

CONDITIONS OF REACTIVITY/INSTABILITY: Avoid excessive heat, open flames and all ignition sources. Do not use with aluminum equipment at temperatures above 49 degrees Celsius.

STABLE: YES

SENSITIVITY TO MECHANICAL IMPACT: NO

SENSITIVITY TO STATIC DISCHARGE: YES

HAZARDOUS POLYMERIZATION: NO

SECTION VIII. ENVIRONMENTAL DATA

REGULATIONS AND STANDARDS: No Canadian federal standards. This product, or all components, are listed on the Domestic Substances List, as required under the Canadian Environmental Protection Act.

ENVIRONMENTAL EFFECTS AND HAZARDS: Do not allow product or runoff from fire control to enter storm or sanitary sewers, lakes, rivers, streams, or public waterways. Block off drains and ditches. Provincial regulations require and federal regulations may require that environmental and/or other agencies be notified of a spill incident. Spill area must be cleaned and restored to original condition or to the satisfaction of authorities. MIBC is practically non-toxic to aquatic organisms and expected to be slightly toxic to mammalian wildlife. MIBC may deoxygenate surface waters.

BIODEGRADABILITY: Biodegradable. Not likely to bioaccumulate.

-----MSDS INFORMATION-----

CONTACT MSDS CO-ORDINATOR, VAN WATERS & ROGERS LTD. DURING
BUSINESS HOURS, PACIFIC TIME (604) 273-1441.

DATE ISSUED: August 6, 1996

SUPERCEDES: New

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-----REVISION INFORMATION-----

08/96: This MSDS replaces P1530. New format; new series.

===== END OF MSDS =====

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VAN WATERS & ROGERS LTD. 9800 VAN HORNE WAY RICHMOND, B.C. V6X 1W5

SALES ORDER:

VAN WATERS & ROGERS PRODUCT: 01296

MSDS NUMBER: LA1268

VERSION: 1

DATE PRINTED: 22/10/96

BILL HILL

WHMIS CODES:

D.2B E

-----EMERGENCY ASSISTANCE-----

FOR EMERGENCY ASSISTANCE INVOLVING CHEMICALS
CALL CHEMTREC (800) 424-9300-----
SECTION I. PRODUCT INFORMATION

PRODUCT NAME: AEROFLOAT 208 PROMOTER

VW&R CODE: LA1268

SYNONYMS: None

CHEMICAL FAMILY: Phosphorodithioate salt

MOLECULAR FORMULA: Mixture

MOLECULAR WEIGHT: Mixture

USE: Mining chemicals

SECTION II. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT/CAS NUMBER	%	TWA/CEILING	REFERENCE
Sodium hydroxide (1310-73-2)	~0.5	2 mg/m3 (ceiling)	OSHA/ACGIH

SECTION III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE AND ODOUR: Clear, pale yellow to dark amber, mobile liquid; noticeable odour.

STATEMENTS OF HAZARD: Danger! Causes burns of eyes and skin.

POTENTIAL HEALTH EFFECTS:

EFFECTS OF OVEREXPOSURE: The acute oral (rat) and dermal (rabbit) LD50 values for this product are 8.46 g/kg, respectively. Direct contact with this material may cause moderate eye irritation and chemical burns of the skin.

Contact with acid may cause liberation of hydrogen sulfide. Hydrogen sulfide has a strong rotten egg odour, however, some people are unable to smell the gas and exposure will deaden the sense of smell. Therefore, odour is an unreliable indicator of exposure. Overexposure to hydrogen sulfide gas may cause severe eye or respiratory tract irritation, rapid development of coma and respiratory failure. Low levels of hydrogen sulfide may cause headache, dizziness, staggering gait, neurological damage and gastritis.

SECTION IV. FIRST AID MEASURES

SKIN CONTACT: In case of skin contact, remove contaminated clothing without delay. Flush skin thoroughly with water. Do not reuse clothing without laundering.

EYE CONTACT: In case of eye contact, immediately irrigate with plenty of

water for 15 minutes. Obtain medical attention if irritation persists.

SECTION V. FIRE FIGHTING MEASURES

FLASH POINT: >200 F; 93 C
METHOD: Closed Cup

FLAMMABLE LIMITS (% BY VOL): Not available
AUTOIGNITION TEMPERATURE: Not available
DECOMPOSITION TEMPERATURE: Not available

MECHANICAL/STATIC SENSITIVITY: Mixing with acids or aqueous solutions containing acids could result in release of toxic and explosive hydrogen sulfide gas. Use only as directed.

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS: Use water, carbon dioxide or dry chemical to extinguish fires. Wear self contained, positive pressure breathing apparatus and full fire fighting protective clothing. See Section VIII (Exposure Controls/Personal Protection) for special protective clothing. Sulfur dioxide or hydrogen sulfide may be formed under fire conditions. Do not flush to sewer which may contain acid. This could result in generation of toxic and explosive hydrogen sulfide gas.

SECTION VI. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Where exposure level is not known, wear NIOSH approved, positive pressure, self contained respirator. Where exposure level is known, wear NIOSH approved respirator suitable for level of exposure. In addition to the protective clothing/equipment in Section VIII (Exposure Controls/Personal Protection), wear impervious boots. Cover spills with some inert absorbent material; sweep up and place in a waste disposal container. Flush area with water.

SECTION VII. HANDLING AND STORAGE

Do not get in eyes, on skin, on clothing. Wash thoroughly after handling. Mixing with acids or aqueous solutions containing acids could result in release of toxic and explosive hydrogen sulfide gas. Use only as directed.

SECTION VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT (PPE): Where this material is not used in a closed system, good enclosure and local exhaust ventilation should be provided to control exposure. Food, beverages, and tobacco products should not be carried, stored, or consumed where this material is in use. Before eating, drinking, or smoking, wash face and hands with soap and water. Avoid skin contact. Protective clothing such as impervious gloves, apron, work pants, long sleeve work shirt, or disposable coveralls are recommended to prevent skin contact. For operations where eye or face contact can occur, wear eye protection such as chemical splash proof goggles or face shield. Eye wash equipment and safety shower should be provided in areas of potential exposure. Where exposures are below the Permissible Exposure Limit (PEL), no respiratory protection is required. Where exposures exceed the PEL, use respirator approved by NIOSH for the material and level of exposure. See "Guide To Industrial Respiratory Protection" (NIOSH).

SECTION IX. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOUR: Clear, pale yellow to dark amber, mobile liquid; noticeable odour.
BOILING POINT: Not available
MELTING POINT: -5 F; -21 C; (freezing point)
VAPOUR PRESSURE: Similar to water

SPECIFIC GRAVITY: 1.1175 @ 25 C
VAPOUR DENSITY: Similar to water
% VOLATILE (BY WEIGHT): ~50; (water)
PH: 11.0; (minimum)
SATURATION IN AIR (% BY VOL): Similar to water
EVAPORATION RATE: Similar to water
SOLUBILITY IN WATER: Complete
ODOUR THRESHOLD: See Section II for permissible exposure limits.

SECTION X. STABILITY AND REACTIVITY

STABILITY: Stable
CONDITIONS TO AVOID: None known

POLYMERIZATION: Will not occur
CONDITIONS TO AVOID: None known

INCOMPATIBLE MATERIALS: This product contains a neutralized dithioacid.
Avoid contact with strong oxidizing agents and mineral acids.

HAZARDOUS DECOMPOSITION/COMBUSTION PRODUCTS: Thermal decomposition or combustion may produce carbon monoxide, carbon dioxide, hydrogen sulfide and/or oxides of sulfur and phosphorus.

SECTION XI. TOXICOLOGICAL INFORMATION

Toxicological information for the product is found under Section III; Hazards Identification. Toxicological information on the WHMIS regulated components of this product is as follows:
Acute overexposure to sodium hydroxide mists or dusts causes severe respiratory irritation. A solution of sodium hydroxide can produce irreversible damage to eyes and skin.

SECTION XII. ECOLOGICAL INFORMATION

LC50
TROUT 96 HOUR: >125 mg/l
DAPHNIA, 48 HOUR: >100 mg/l
OCTANOL/H2O PARTITION COEF: Not available

SECTION XIII. DISPOSAL CONSIDERATIONS

Disposal must be made in accordance with applicable governmental regulations.

SECTION XIV. TRANSPORT INFORMATION

This section provides basic shipping classification information. Refer to appropriate transportation regulations for specific requirements.

SHIPPING NAME:	TRANSPORT CANADA	ICAO/IATA
	Caustic Alkali Liquid, N.O.S.	Caustic Alkali Liquid, N.O.S.
HAZARD CLASS:	8	8
SUBSIDIARY RISK:	9.2	--
UN/ID NUMBER	1719	1719
PACKING GROUP:	II	II
TRANSPORT LABEL:	Corrosive	Corrosive

PACKING

INSTR: Not applicable

Passenger 809
Cargo 813

MAX NET

QTY: Not applicable

Passenger 1 L
Cargo 30 L

D.O.T.

SHIPPING INFORMATION

IMO

SHIPPING INFORMATION

SHIPPING

NAME: Caustic Alkali Liquid, N.O.S.

Caustic Alkali Liquid, N.O.S.

HAZARD CLASS

PACKING

GROUP: 8 II

8 II

UN

NUMBER: UN1719

1719

IMDG

PAGE: Not applicable

8136

D.O.T.

HAZARDOUS

SUBSTANCE: (product reportable quantity) Not applicable
Not applicable

TRANSPORT

LABEL: Corrosive

Corrosive

ADDITIONAL TRANSPORT INFORMATION

TECHNICAL NAME (N.O.S.): (Contains dithiophosphate salt)

SECTION XV. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this Material Safety Data Sheet contains all the information required by the CPR.

WHMIS CLASSIFICATION: D.2B E

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environment Protection Act and are included on the Domestic Substances List.

US TSCA: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C.

EEC EINECS: All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) in compliance with Council Directive 67/548/EEC, amended 79/831/EEC.

-----MSDS INFORMATION-----

CONTACT MSDS CO-ORDINATOR, VAN WATERS & ROGERS LTD. DURING
BUSINESS HOURS, PACIFIC TIME (604) 273-1441.

DATE ISSUED: July 31, 1996

SUPERCEDES: New

-----NOTICE-----

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-----REVISION INFORMATION-----

07/96: This MSDS replaces P1794001. New format; new series.

===== END OF MSDS =====

THIS AGREEMENT made this 15th day of November 1996

BETWEEN

WHITE HAWK VENTURES INC.

and

ABLE CUSTOM MILLING LTD.

both companies registered in the Province of British Columbia

REPRESENTATIONS AND WARRANTIES

ABLE REPRESENTS AS FOLLOWS:

It is the owner of portable equipment capable of crushing, milling and recovering gold from run of mine ore. The equipment consists primarily of two truck mounted units, one containing all equipment necessary to crush ore to 100 % minus one half inch and one capable of milling the crushed material to 80 % minus 200 mesh at the rate (for ore high in silica) of 250 tonnes per 24 hour day. The milling unit also contains among other things a gravity gold recovery circuit such as a Neilson concentrator or equivalent and a froth floatation recovery circuit.

WHITE HAWK REPRESENTS AS FOLLOWS:

It is the owner of a mining property South East of Port Alberni, British Columbia that has produced in the past high grade gold ore and still has substantial ore reserves underground yet to be mined. It is estimated that the total ore available will be between 1500 and 3000 tonnes.

All necessary permits will be in place before milling commences.

WHEREAS WHITE HAWK wishes to contract for the services and equipment of ABLE it is hereby agreed as follows:

1. ABLE agrees to charge for its equipment and services on site at the rate of \$350 per hour and to operate for at least 10 hours each day. If for reasons that are the fault of ABLE it is not in full operation, then ABLE shall be paid only for the hourly time which it does operate.
2. ABLE agrees to charge a mobilization and demobilization fee of \$2000.

3. Should ABLE be incapable of operation for reasons that are due to the inability of WHITE HAWK to provide the things it has contracted to provide, then WHITE HAWK will pay to ABLE a standby fee of \$200 per hour for the time it is not capable of operating in a 10 hour day.
4. ABLE agrees to stay on site for as long as it is receiving either a milling fee or standby fee until WHITE HAWK notifies it of the termination of operations.
5. ABLE shall be entirely responsible for all of the following:
 - a) At least one person on site at all times who is qualified by experience as a miller and who has a good understanding of the froth floatation process and the chemicals used therein.
 - b) All acts and things necessary to get the equipment to and from the site.
 - c) All personnel necessary to supervise and operate the equipment in a safe, efficient and environmentally sound manner.
 - d) All transportation to and from the site of ABLE personnel, fuel, extra equipment and repairs and any persons or items necessary for the operation.
 - e) The complete operation from when the ore first enters the crusher to when the tailings are pumped back to the mine including a slurry pump with a 2 inch outlet fitting capable of at least 100 pounds per square inch pressure at a volume of not less than 500 liters per minute.
 - f) All chemicals necessary for floatation including transportation to the site and their safe storage.
 - g) The cleanup of all spills from the entrance to the primary crusher to the slurry pump outlet in an environmentally sound manner.
 - h) The production of two concentrates, one a gravity concentrate and one a floatation concentrate and the means to dewater and store the concentrates such as water tight drums.
 - i) That there will be no discharge from the mill save the tailings discharge.
 - j) Electrical supply.
 - k) The safety of its own personnel.
 - l) The security of the concentrates while in the possession of ABLE.

m) All repairs and maintenance to its equipment and the cost thereof however caused.

6. WHITE HAWK shall be entirely responsible for all of the following:

a) Provision of a suitable site to set up and operate the equipment agreeable to ABLE.

b) Water supply via a one inch diameter hose.

c) Loading of the run of mine ore to the primary crusher.

d) Disposal of tailings from the mill discharge pump.

e) Supervision of the entire operation including the milling operation in consultation with the miller with a target recovery of plus 90 % of the gold in the ore.

f) Security of the concentrates once they have been turned over by ABLE in a suitable container.

7. Both parties agree to do all of the acts and things necessary to give full force and effect to this agreement.

8. Should a dispute arise for any reason concerning the interpretation or understanding of this agreement that both parties cannot resolve between themselves then they shall submit their respective sides to binding arbitration.

AGREED to this 15th day of November, 1996

BARRETT SLEEMAN

per WHITE HAWK VENTURES INC.

HAROLD TURNER

per ABLE CUSTOM MILLING

MINE

Mining will be carried out as it was earlier this year with a two man crew supervised by a shift boss. It is estimated that it will take one month from start to finish to remove all of the remaining ore-which will be stored on surface in the existing stockpile awaiting milling. The remaining ore is in stopes accessed by a raise. The top of the raise when all mining ceases will be about 30 meters from the surface. All ladders, ventilation duct, air and water pipes and other equipment will be removed. The raise is about 42 meters in vertical extent and the adit from portal to the raise is 200 meters-driven on a 1 % grade. The floor at the back is therefore 2 meters higher than the floor at the portal giving a gentle drainage for the length of the adit.

The mine makes water and it is felt that the purity of this water along with surface reclamation are the only major issues to be addressed in shutting down the mine. Water flow from the mine is minor and varies from virtually none in the dry season to about 30 liters per minute in the rainy season. Several water analysis have been carried out and the results are shown in the attachments. There are several potential concerns about any mine outflow water being chiefly, turbidity, pH and dissolved solids.

a)TURBIDITY

During mining, turbidity has been handled and will continue to be by directing the water to a settling pond. Shortly after all mining is halted there will no longer be a turbidity problem as there will be no turbulent flow to put solids into suspension and turbidity will be virtually non-existent. As part of the outside reclamation, the settling pond will therefore be removed.

b)pH

This is a measurement of the log concentration of hydrogen ions. All water analysis to date show that the water outflow is slightly basic (non acidic)-and thus obviously not "acid drainage" which has caused environmental concerns on mining properties where it does exist. Non acidic water is to be expected at the 900 zone workings, and there are a number of good reasons for it.

First, most of the water influx to the mine is directly from precipitation (about 75%) and travels a limited distance through the

MILLING

It is proposed to bring in a portable mill to crush and grind the stockpiled ore to produce a gravity concentrate (containing about 70% of the gold) and a float concentrate (containing about 20% of the gold). These concentrates will be trucked to the Cominco smelter at Trail for further processing. It is estimated that the milling will take about three weeks to complete on 10 hours shifts. Tailings will be approximately 50% minus 200 mesh.

The final tailings from the milling circuit will be pumped directly back to the mine and discharged at the very end of the adit. There will be negligible sulfides in the tailings as they will be almost completely removed by the floatation process and retained in the concentrate. Total volume of solids produced from the approximately 1000 tonnes of material to be processed will be about 500 cubic meters. Four rock berms, each about 2 meters in height will be constructed along the length of the adit every 50 meters. The bulk of the tailings will be retained behind the first two berms with the overflow being largely clarified water. After overflowing the first berm this water will overflow the second and third until it has reached the final berm about 10 meters from the portal. It will then be pumped back to the mill circuit after having deposited virtually all of the suspended solids in the non turbulent conditions behind the berms. Any excess water will be sent to the existing settling pond, however it is expected that there will be no excess and that a small amount of make up water will be required. If so, this will be primarily to "wet" otherwise dry ore. All water flow from the mine will be piped directly to the two compartment settling pond. Process water will be pumped to the mill from the first compartment and any unused water will overflow to the second compartment. If this builds up beyond a certain level, it will be pumped to a water truck for haulage and suitable disposal elsewhere. There will be only trace amounts of the mill circuit chemicals in the water and disposal to a sewage plant or other waste water facility will be without any special requirements.

It is not possible at this time to accurately predict the water balance as this will be dependent on how successful we are in stanching flow from the diamond drill holes which currently make on average about 25 % of the water coming from the mine. A second unknown is how wet the season will have been just prior to milling-

rock fractures before it enters the mine within the first 10-25 meters of the portal.

Second, in general, the rock in the mine is very high in calcite and is thus "acid consuming" rather than acid producing. Any acidic water produced that passes over calcite therefore tends to be neutralized.

Third, the adit itself was not driven on a vein and therefore there are negligible sulfides exposed by this activity (which are the minerals that produce acid drainage).

Forth, there is a very limited amount of sulfides even in the veins and neither is the rock well fractured not allowing water easy contact with those that do exist. Consequently there is a very low amount of material subject to producing acid in the first place.

Finally, most of the water influx from the back of the mine comes from four diamond drill holes intersected by the workings. Each of these will have a dry wooden dowel driven into them and allowed to expand and seal off the water flow. Finally they will be grouted with a cement sand mixture for permanent sealing.

c)Dissolved solids

Water analysis shows very low dissolved solids. This is also to be expected for many of the same reasons that the pH is slightly alkaline. There is no known reason for this to change in the future.