

WATER PERMIT NO. 1372-1MAP No. sameName of Applicant St. Joe Minerals CorporationPost Office Address 7733 Forsyth Boulevard, Clayton MO 63105Amount of Water Claimed 0.89 cfs Total Acres NASource of Water Supply ground water - 10⁴ wellsWater to be used for industrial use County LawrenceAbout 3 miles NW of Lead.

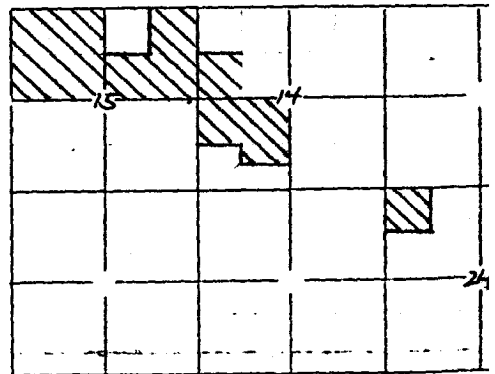
PROOF OF PUBLICATION: Received _____ Not Received _____

APPLICATION: Approved _____ Subject to _____

F.F. & C.L. Adopted _____ Not Approved _____ Deferred _____

PRIORITY Date Received Oct. 31, 1986 Fee 650⁰⁰ Remarks refunded10/31/86 \$325⁰⁰ due to reduced water appropriation 11/12/86Corrected Application Received _____ Period of Annual Use Jan 1 - Dec 31WATER QUALITY APPROVAL RECEIVED NA APPROVED/CONDITIONAL (Circle one)WI-1 Description same as Application YES NO REMARKS _____Diversion Point wells: NW¹/₄, S¹/₂NE¹/₄, NE¹/₄NE¹/₄,NE¹/₄SE¹/₄ sec. 15; N¹/₂SW¹/₄, SW¹/₄NW¹/₄, ^{N¹/₂SE¹/₄ SW¹/₄} sec. 14;NW¹/₄NW¹/₄ sec 24; all in T5N-R2E

Land to be Irrigated _____

NAWell Log: Driller Ralph Taylor, Jr. Licensed YES ☒ NO ☐Depth of Wells 300-600 feet REMARKS _____Type of Map plat PREPARED BY Hydro-Search Inc. Reviewed and the Number assigned on NOV. 3, 1986 By Ron Duvall

No. 1372-1 Hydrologic Unit 10120203
Map No. same Basin Belle Fourche R.
Newspaper Lead Daily Call, PO Box 876 (Daily)

Application For Permit To Appropriate Water Within The State Of South Dakota

Check use of water: Industrial ☒ Commercial ☐ Municipal ☐ Other Common Distribution System ☐
Rural Water System ☐ Suburban Housing ☐ Geothermal Heat ☐ Institutional ☐ Recreational ☐
Domestic ☐ (above 18gpm) Other ☐

Type of Application: Check one or more of the following

New ☒ Vested Right ☐ Future Use ☐ Change Use ☐

☐ Amend Permit No. _____ with old priority date retained

Change diversion point(s) ☐ Add diversion point(s) ☐ Other ☐

☐ Application to: Change diversion point(s) ☐ Add diversion point(s) ☐ on Permit No. _____

☐ Construction to use water reserved by Future Use Permit No. _____

transferred 3-30-88 to St. Joe Richmond Hill, Inc. 4600 S Ulster St., Suite 300

1. Name of Applicant St. Joe Minerals Corporation Denver CO Phone No. (314) 854-9612
80237

Post Office Address 7733 Forsyth Boulevard, Clayton State MO 63105
(Street, RR or Box) Zip Code

2. Amount of water claimed (c.f.s.) -0.223 c.f.s. 0.89

3. Source of water supply Ground Water 14 wells

4. Location of point of diversion SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec 15, T5N, R2E NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$
Sec 15; N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, Section 14; NW $\frac{1}{4}$ NW $\frac{1}{4}$ Section 24; all in T5N, R2E

County Lawrence

5. Counties where water will be used Lawrence

6. Annual period during which water is to be used Highest April to October, all year use Jan 1-Dec 31

7. Give a brief description of proposed project. When available include any preliminary engineering report or other reports or information that will help explain the project. (Attach sheet if more space is needed)

The project to be served is an open-pit mine and ore-processing facility. The attached reports: Hydro-Search, Inc., 1986, HSI files T860333 and T860086 provide ground-water and process water requirement information.

Attachments: Attach Form 2A if diversion from a well or dugout, or if storage of water, is proposed. Attach map (see instruction)

STATE OF SOUTH DAKOTA)
County of Lawrence)^{ss}

I, George M. Obeldobel the applicant, certify that I have read the foregoing application, have examined the attached map and that the matters therein stated are true and that I intend, and am able to complete the necessary construction.

Signed George M. Obeldobel

Subscribed and sworn to before me this 30 day of October 19 86

Handy J. Cleveringa
Notary Public (or other qualified officer) 10/19/86

**SOUTH DAKOTA
WATER PERMIT**

Date of first receipt of application October 31, 1986

Date of return to applicant for correction, amendments or changes required _____

Date of receipt of corrected application _____

The Water Management Board approved Water Permit Application No. 1372-1

on March 2, 1988 for St. Joe Richmond Hill, Inc.
(Applicant)

4600 S Ulster Street, Suite 300 Denver CO 80237
(Street, RR or Box) (City) (State) (Zip Code)

authorizing the construction of the water use system and the placing of water to beneficial use subject to the following limitations, conditions and qualifications:

1. Water Permit No. 1372-1 authorizes an appropriation of 0.89 cfs from up to 14 wells 300 to 600 feet deep to be located in the NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$ section 15; N $\frac{1}{2}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ section 14; NW $\frac{1}{4}$ NW $\frac{1}{4}$ section 24; all in T.5N-R2E.
2. The water appropriated shall be used for the purpose of supplying a heap leach ore - processing facility and an open-pit mine operation and may not exceed the amount of water needed for beneficial use for industrial purposes.
3. The water is to be used during the following described annual period: Jan 1 - Dec 31.
4. The date from which applicant may claim the right is October 31, 1986.
5. One-fifth of the construction is to be completed on or before September 2, 1990.
6. All construction is to be completed on or before March 2, 1993.
7. Water is to be put to beneficial use on or before March 2, 1997.
8. Water rights obtained in compliance with the laws of the State of South Dakota may not be unlawfully impaired by this appropriation.

QUALIFICATIONS

See Attached Sheet.

WATER MANAGEMENT BOARD

By: John H. [Signature]
Chief Engineer

Division of Water Rights
Dept. of Water and Natural Resources

DEC 1 1988

1. The casings of the wells to be constructed under Permit No. 1372-1 shall be pressure grouted with cement (bottom to top) from the producing formation to the surface, the wells constructed by a licensed well driller, and in compliance with Water Management Board Well Construction Rules, Chapter 74:02:04.
2. The wells approved under this Permit may be located near domestic wells which may obtain water from the same formation. The well owner, under this permit shall control its withdrawals so there is not a reduction of needed water supplies in domestic wells.
3. The permit owner shall monitor flows over Bridal Veil Falls for a period of three years to establish an average monthly flow. If the actions of the permit holder cause a reduction in water flowing over Bridle Veil Falls, the permit holder shall either curtail its own water use or directly provide sufficient water so as to restore the flow to the level it would have been but for the permit holder's actions.
4. Approval of Permit No. 1372-1 is subject to compliance with the following then existing and applicable Water Management Board rules:
 - a) Chapter 74:03:15 Ground Water Quality Standards,
 - b) Chapter 74:03:16 Ground Water Discharge Permit,
 - c) Chapter 74:03:30 Heap Leach Design and Construction,
 - d) Chapter 74:03:02 Surface Water Quality Standards
 - e) Chapter 74:03:04 Uses Assigned to Streams,
 - f) Chapter 74:03:17 Surface Water Discharge Permit-General Provisions,
 - g) Chapter 74:03:18 Surface Water Discharge Permit Application Requirements,
 - h) Chapter 74:03:19 Surface Water Discharge Permit Conditions,
 - i) Chapter 74:03:20 Transfer Modification, Revocation and Reissuance and Termination of Surface Water Discharge Permits,
 - j) Chapter 74:03:21 Procedure For Permit Processing,
 - k) Chapter 74:03:22 Secondary Treatment Standards,
 - l) Chapter 74:03:23 Criteria and Standards for Surface Water Discharge Permit,
 - m) Chapter 74:03:24 Toxic Pollutant Effluent Standards for Surface Water Discharge Permits,
 - n) Chapter 74:03:25 Effluent Guidelines and Standards for Surface Water Discharge Permits, and
 - o) Chapter 74:03:26 Pretreatment Regulations for Surface Water Discharge Permits.

Supplemental Information

(type or print in ink)

1. Well Information - Proposed construction

- a) Drill Hole Diameter 8 3/4 inches Depth 500 feet
- b) Casing Type Low Carbon Steel Diameter 7 inches Thickness 0.408 inches
- c) Screen Type N/A Diameter N/A Thickness N/A
- d) Gravel Pack Thickness N/A Length of Gravel Pack N/A
- e) Depth to Top of Water Bearing Material 300 feet
- f) Depth of Water (ground surface to water level) 300 feet
- g) Distance to nearest existing domestic well:
- On applicants property N/A On property owned by others 6,750 feet

2. Dugout Information Estimates

- a) Surface Dimensions _____ Depth _____
- b) Depth to water (ground surface to water level) _____

3. Water Storage Dams

If the proposed water use system contains one or more storage dams, please furnish the information requested below. The locations of each dam should be shown on the map submitted with the application.

- a) If a private engineering firm or government agency was involved in the design of this dam please give their name and address

b) Freeboard _____

c) Crest Width _____

Crest Length _____

d) Height _____

e) Outlet Dimensions:

Pipe diameter _____

Spillway width _____

f) X & Y Slope

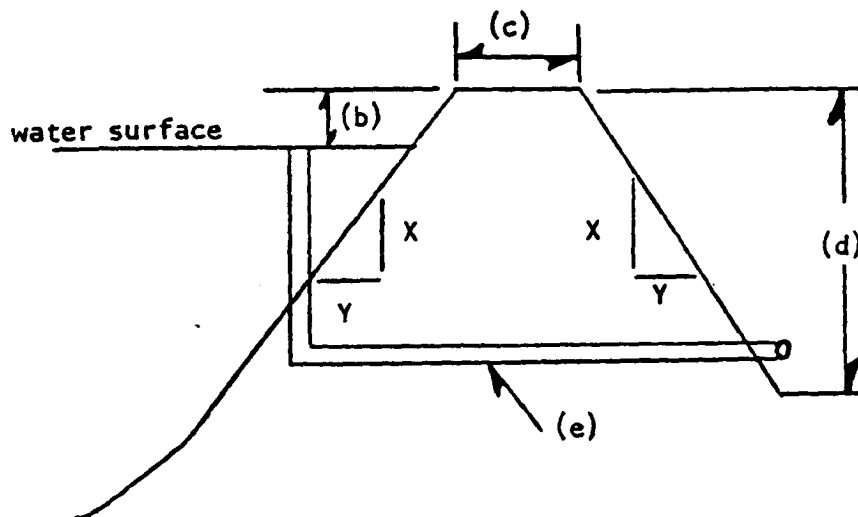
Upstream _____

Downstream _____

Surface Area of Impoundment _____

Storage _____ acre feet

Drainage area above dam _____



Signature of Applicant _____

STATE OF SOUTH DAKOTA
BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE APPLICATION	)	FINDINGS OF FACT,
OF ST. JOE MINERALS CORPORATION	)	CONCLUSIONS OF LAW,
FOR WATER PERMIT NO. 1372-1	)	AND FINAL DECISION

FINDINGS OF FACT

1. This is an application to appropriate .89 cubic feet per second of water from up to fourteen wells to be located in Sections 14 and 15, Township 5 North, Range 2 East and Section 24, Township 5 North, Range 2 East, Black Hills Meridian. The water is to be used for industrial purposes in an ore processing facility for an open pit mine operation.

2. As a part of this operation, crushed rock will be placed on impermeable pads and a dilute cyanide solution will be leached through the ore. The solution will percolate through the ore heap and will be collected at the base and then transferred to what is known as a "pregnant pad." The gold is then extracted from the "pregnant" solution and the fluid is recirculated.

3. The water requested under this permit will be used in the process described above, for dust control, for reclamation, and for other purposes related to the mining and leaching operation.

4. Two areas are proposed for mining. The Richmond Hill ore body is thought to contain four million tons of ore. The Turn-Around ore body is of lower quality

but is also thought to contain about four million tons of ore.

5. Each area will take about four years to mine and process. The projected life of the entire project, including start up time and closing time, is about ten years.

6. The area which will be drilled for water is underlaid by a shallow aquifer, then, at a lower level, an impermeable layer of intrusive rock, and, underlying this, a deeper aquifer which is part of the Deadwood Formation.

7. Four test holes have been drilled into the deep aquifer. Each well was drilled into the top twenty or thirty feet of the deeper aquifer, which is confined at that location. The deeper aquifer may be 200-250 feet thick.

8. Each of the four wells yielded about 95-105 gallons per minute. The yield of the wells will in all probability be greater when they are completed to a further depth into the aquifer.

9. The yields obtained in well tests and the transmissivity statistics indicate there is ample water available for use of this applicant.

10. The Board may consider whether there will be pollution of surface or ground water from the mine operation under the public interest factor.

11. The mine operation will expose sulfide mineral bearing rock at the surface. There will, however, be no concentration of sulfide minerals caused by the

mining. Moreover, the natural processes have resulted in exposure of these sulfide mineral bearing rocks to the environment for a very extended period of time because the hydrogeologic system in which the rock is found is a porous breccia body through which oxygen has been passing throughout geologic time.

12. The exposure of the sulfide bearing rock by the mining operation will have no appreciable effect on the environment and will not result in acid drainage into any water supply.

13. The applicant has applied for and been granted a permit to construct two ponds to contain potentially contaminated water. The PMP event plus a 100 year storm event would cause an accumulation of 81 acre feet. The ponds have a capacity of 115 acre feet. Therefore, under reasonably foreseeable conditions, there would be no discharge of contaminated water from the ponds.

14. To provide for events which substantially exceed the PMP event, plus a 100 year storm event, the applicant has identified a 45 acre plot on which water could be applied. The distribution of water on the 45 acre plot could, in other words, prevent the ponds from overflowing into surface or groundwater should a precipitation event substantially in excess of the PMP event occur. The evidence indicates that if an application on the 45 acres were to be made, there would be no damage to the environment, including surface or ground water, from heavy

metals, sodium, or otherwise. This finding does not preclude further examination of this subject in the event that the applicant here seeks a discharge permit.

15. The evidence submitted by Hydro-Search, Inc. is found to be credible even though the company was retained by the applicant.

16. The effect of pumping the deeper formation on stream flow of the Spearfish Creek or any other creek will be negligible.

17. No evidence has been put before the Board which reasonably indicates that Bridal Veil Falls will be affected by the grant of this permit.

18. There should be no impermissible effect on any water right caused by the grant of this permit.

CONCLUSIONS OF LAW

1. The Board has jurisdiction over this matter.

2. There is a reasonable probability that there is unappropriated water available for the applicant's proposed use.

3. The proposed diversion can be developed without unlawful impairment of either the quantity or quality of existing rights subject to qualifications on approval of this permit.

4. The proposed use of water for mining purposes is a beneficial use.

5. Approval of this permit will be in the public interest.

6. No soil water compatibility permit is needed in this case even though the applicant might, in the event of an extreme precipitation event, be compelled to utilize the 45 acre plot for disposal of water. In such a case, the purpose of the disposal would not be for irrigation purposes.

FINAL DECISION

The application for Water Permit No. 1372-1 is granted subject to the following qualifications:

1. The casings of the wells to be constructed under Permit No. 1372-1 shall be pressure grouted with cement (bottom to top) from the producing formation to the surface, the wells constructed by a licensed well driller, and in compliance with Water Management Board Well Construction Rules, Chapter 74:02:04.

2. The wells approved under this Permit may be located near domestic wells which may obtain water from the same formation. The well owner, under this permit, shall control its withdrawal so there is not a reduction of needed water supplies in domestic wells.

3. The permit owner shall monitor flows over Bridal Veil Falls for a period of three years to establish an average monthly flow. If the actions of the permit holder cause a reduction in water flowing over Bridle Veil Falls, the permit holder shall either curtail its own water use or directly provide sufficient water so as to restore

the flow to the level it would have been but for the permit holder's actions.

4. Approval of Permit No. 1372-1 is subject to compliance with the following then existing and applicable Water Management Board rules:

- a) Chapter 74:03:15 Ground Water Quality Standards,
- b) Chapter 74:03:16 Ground Water Discharge Permit,
- c) Chapter 74:03:30 Heap Leach Design and Construction,
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- e) Chapter 74:03:04 Uses Assigned to Streams,
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- h) Chapter 74:03:19 Surface Water Discharge Permit Conditions,
- i) Chapter 74:03:20 Transfer Modification, Revocation and Reissuance and Termination of Surface Water Discharge Permits,
- j) Chapter 74:03:21 Procedure For Permit Processing,

k) Chapter 74:03:22 Secondary Treatment Standards,

l) Chapter 74:03:23 Criteria and Standards for Surface Water Discharge Permit,

m) Chapter 74:03:24 Toxic Pollutant Effluent Standards for Surface Water Discharge Permits,

n) Chapter 74:03:25 Effluent Guidelines and Standards for Surface Water Discharge Permits, and

o) Chapter 74:03:26 Pretreatment Regulations for Surface Water Discharge Permits.

BY THE BOARD

Marian B. Lunderson



HSI Hydro-Search, Inc.

350 Indiana St., Suite 415
Golden (Denver), Colorado 80401
HYDROLOGISTS-GEOLOGISTS-ENGINEERS
Phone (303) 279-7982

October 27, 1986
(122P05942)
Letter No. 0220



Water Rights Division, DWNR
Attn: Mr. James Goodman
Joe Foss Building
Pierre, South Dakota 57501

Subject: *Point of Diversion Permit Application for Supply Wells.*

Dear Mr. Goodman:

Please find the enclosed permit application package prepared for St. Joe Minerals Corporation by Hydro-Search, Inc. The package includes completed permit applications for fourteen supply wells for the St. Joe Richmond Hill Project. The following documentation is included with the application package.

- 1) Duplicate completed copies of Form 2, Application to Appropriate Water, for each of 14 wells.
- 2) A map, signed by a Registered Professional Engineer, showing the location of each diversion point for each well.
- 3) For each well, duplicate completed copies of Form 2A; a copy of a driller's test log signed by a South Dakota licensed well driller; a copy of the log of borehole for the test hole.
- 4) The application fee for fourteen wells.
- 5) The report "Monitoring Well Installation," HSI file: T860331, for the twelve project monitoring wells, prepared by Hydro-Search, Inc. for St. Joe Minerals Corporation.
- 6) A copy of the report "Process Water Supply and Water Appropriation," HSI file: T860333, prepared by Hydro-Search, Inc. for St. Joe Minerals Corporation.

To be in compliance with South Dakota's Water Rights Laws, items 1 through 4 are included with the application package. As requested, items 5 and 6 are included to represent information and analysis of the ground-water system in the application area.

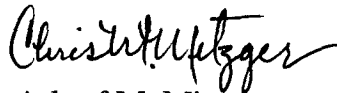
Mr. Goodman
October 27, 1986
Page 2

The attached application package is for fourteen (0.223 cfs) wells, indicating a water use of 3.122 cfs. The actual water use to meet project requirements will be in the range of only 0.446 cfs. The permitted wells will be drilled and production tested until a reliable water supply of 0.446 cfs is developed. The balance of the wells will not be drilled.

I trust this letter and the attached application package are suitable for your evaluation. If you have any questions, please call.

Sincerely,

HYDRO-SEARCH, INC.



for: Ashraf M. Mirza
Manager, Denver Operations

CWM:kns

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

Pierre, November 3, 1986

RECEIVED OF St. Joe. Minerals Corporation, 7733 Forsyth Boulevard, Clayton, MO 63105

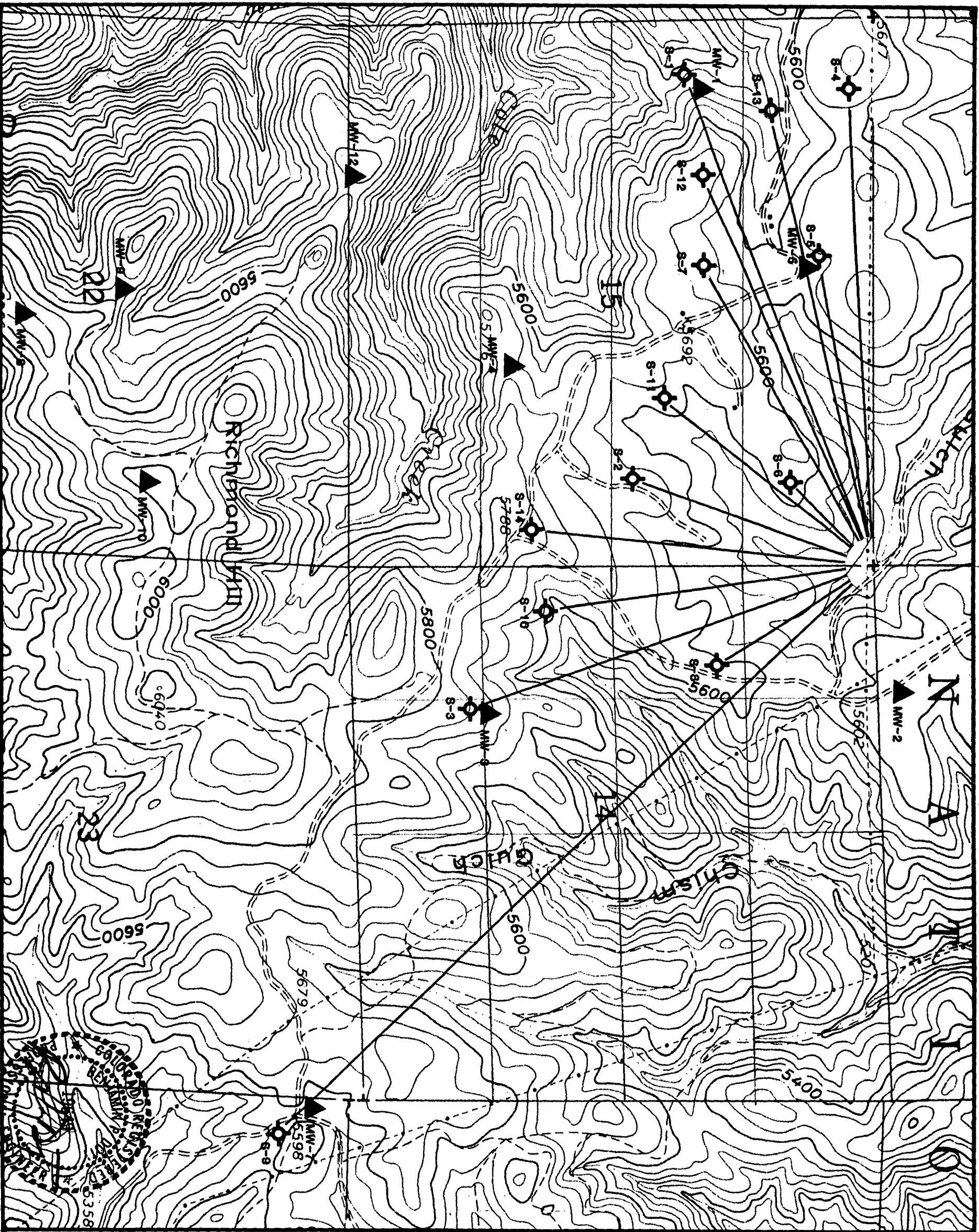
the following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1372-1</u> to Appropriate Water, to construct works and to put water to beneficial use	650	00
Fee for Application for Permit No. _____ to Appropriate Water for Future Use		11-12-36
Fee to retain Future Use Permit No. _____ after period of seven years.		5325.00 Fee
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		refunded
Fee for Filing Transfer Form		to reduce
Fee for Filing Extension Request		diversion
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	650 00

By [Signature]

Chief Engineer

A



EXPLANATION

PROPOSED SUPPLY WELL
SITE FOR POINT OF
DIVERSION APPLICATION

MONITORING WELLS

DISTANCE AND BEARING*		
FROM:	NW COR. SEC. 14	
TO:	T&N R2E.	
	BEARING	DISTANCE (ft)
S-1	S69W	5188
S-2	S19W	2525
S-3	S20E	4288
S-4	S87W	4688
S-5	S80W	3087
S-6	S44W	1125
S-7	S60W	3387
S-8	S34E	1875
S-9	S44E	8213
S-10	S08E	3305
S-11	S38W	2638
S-12	S66W	4195
S-13	S78W	4600
S-14	S05W	3413

* BEARINGS MEASURED FROM TRUE NORTH



DIVERSION POINT LOCATION MAP

PROJECT 122P06942
DATE 10/15/86
REVISIONS

Hydro-search, Inc.
CONSULTING HYDROLOGISTS-GEOLOGISTS
Denver • Reno

SOUTH DAKOTA WATER WELL COMPLETION REPORT

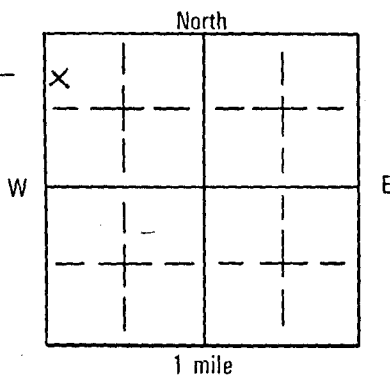
1372-1

10-85

Location NW 1/4 NW 1/4 Sec 14 Twp 5N Rg 2ECounty Lawrence

SW-15

Please mark well location with an "X"

Well Completion Date 6/8/88

PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☒ Industrial ☐ Stock

Method of Drilling:

Air Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>42</u> LB/FT	<u>10 3/4</u> IN	<u>0</u> FT	<u>170</u> FT	<u>13 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUT:

Was the well grouted? ☒ YES ☐ NOTo what depth? 170 FEETWhat is grouting material? cementIf cement, number of sacks? 50Describe grouting procedure pressure grouted through casingWhat was grout weight? 15 LB/GALSCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Other information _____

Was a packer or seal used? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

Was well disinfected upon completion? ☒ YES ☐ NOExplain granular chlorine placed in wellBacteriological analysis ☐ YES ☒ NO

Laboratory sent to _____

Well Owner:

Name Bond Gold Richmond Hill Inc.Address P.O. Box 892 Lead, South Dakota 57754

Well Log:

Depth

Formation	From	To
Winnipeg Icebox	0	5
Porphyry	5	21
Winnipeg Icebox	21	20
Porphyry	30	35
Winnipeg Icebox	35	40
Porphyry	40	48
Winnipeg Icebox	48	66
Deadwood	66	157
Porphyry	157	406
Deadwood Siltstone	406	508
greenish-gray porphyry	508	543
shale + siltstone	543	614
Porphyry	614	667
greenish-gray shale	667	707

STATIC WATER LEVEL 168 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped☐ BailedDescribe: Air Developed☒ Other

Pumping Level Below Land Surface

770 ft. After 2 Hrs. pumped 300 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

REMARKS: well log continued;light gray limestone 707-710greenish-gray shale 710-733greenish-gray quartzite 733-770This well was drilled under license # 331

And this report is true and accurate.

Drilling firm TAYLOR DRILLING CO.

Signature of License Representative:

Ralph Taylor

Signature of Well Owner:

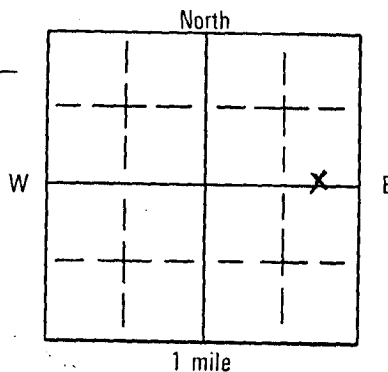
Date 12/30/88

Location SE 1/4 NE 1/4 Sec 15 Twp 5N Rg 2E

County Lawrence

SW-2

Please mark well location with an "X"



Well Completion Date 4/15/88

PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☒ Industrial ☐ Stock

Method of Drilling:

Air Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>42</u> LB/FT	<u>10 3/4</u> IN	<u>0</u> FT	<u>210</u> FT	<u>13 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUT:

Was the well grouted? ☒ YES ☐ NO

To what depth? 210 FEET

What is grouting material? Cement

If cement, number of sacks? 75

Describe grouting procedure pressure grouted
through casing

What was grout weight? 15 LB/GAL

SCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Other information _____

Was a packer or seal used? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

Was well disinfected upon completion? ☒ YES ☐ NO

Explain granular chlorine placed in well

Bacteriological analysis ☐ YES ☒ NO

Laboratory sent to _____

Well Owner:

Name Bond Gold Richmond Hill Inc.

Address P.O. Box 892 Lead, South Dakota 57754

Well Log:

Depth

Formation

From

To

Winnipeg - Icebox 0 37

Porphyry 37 40

Winnipeg - Icebox 40 65

Porphyry 65 72

Deadwood SS + Siltstone 72 197

Porphyry 197 291

Deadwood SS + Siltstone 291 326

Porphyry 326 352

Deadwood SS + Siltstone 352 370

Porphyry 370 383

Deadwood Siltstone 383 398

Porphyry 398 429

SS + Siltstone 429 445

Porphyry 445 454

STATIC WATER LEVEL 212 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut in? _____

WELL TEST DATA:

☒ Pumped

☐ Bailed

Describe: 7 day submersible

☐ Other

pump test

Pumping Level Below Land Surface

623 ft. After 168 Hrs. pumped 150 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

REMARKS: Well Log continued:

gray siltstone 454 - 581

brown SS 581 - 586

light gray quartzite 586 - 604

gray siltstone 604 - 625

light gray quartzite 625 - 635

Pre Cambrian 635 - 649

porphyry 649 - 664

Pre Cambrian 664 - 723

This well was drilled under license # 331

And this report is true and accurate.

Drilling firm Taylor Drilling

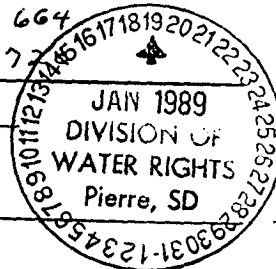
Signature of License Representative:

Ralph Taylor Jr.

Signature of Well Owner:

Date

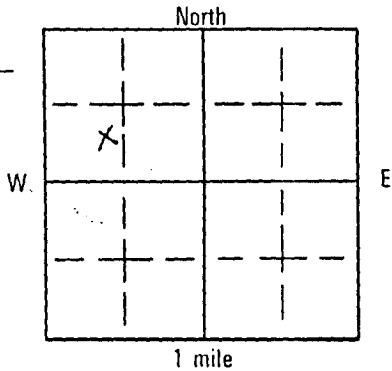
12/30/88



SOUTH DAKOTA WATER WELL COMPLETION REPORT

1372-1
10-85Location SW 1/4 NW 1/4 Sec 14 Twp 5N Rg 2ECounty Lawrence

SW-8

Please mark well
location with
an "X"Well Completion Date 5/7/88

PROPOSED USE:

☐ Domestic ☐ Municipal ☐ Test Holes
☐ Irrigation ☒ Industrial ☐ Stock

Method of Drilling:

Air Rotary

CASING DATA:

☒ Steel ☐ Plastic ☐ Other

If other describe _____

PIPEWEIGHT	DIAMETER	FROM	TO	HOLE DIAMETER
<u>42</u> LB/FT	<u>10 3/4</u> IN	<u>0</u> FT	<u>95</u> FT	<u>13 1/2</u> IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN
_____ LB/FT	_____ IN	_____ FT	_____ FT	_____ IN

GROUT:

Was the well grouted? ☒ YES ☐ NOTo what depth? 95 FEETWhat is grouting material? cementIf cement, number of sacks? 35Describe grouting procedure pressure grouted
through casingWhat was grout weight? 15 LB/GALSCREEN: ☐ Perforated pipe ☐ Manufactured

Diameter _____ IN Length _____ FEET

Material _____

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Slot Size _____ Set From _____ Feet To _____ Feet

Other information _____

Was a packer or seal used? ☐ YES ☒ NO

If so, what material? _____

Describe packer(s) and location? _____

Was well disinfected upon completion? ☒ YES ☐ NOExplain granular chlorine placed in wellBacteriological analysis ☐ YES ☒ NO

Laboratory sent to _____

Well Owner:

Name Bond Gold Richmond Hill Inc.Address P.O. Box 892 Lead, South Dakota 57754

Well Log:

Depth

Formation	From	To
gray to brown ss + siltstone	0	38
gray porphyry	38	58
dark gray ss	58	85
gray porphyry	85	204
gray to brown limestone, ss, siltstone	204	250
gray porphyry	250	295
brown to gray siltstone + shale	295	324
gray porphyry	324	329
gray to brown shale + ss	329	347
gray porphyry	347	358
dark gray siltstone	358	385
light brown gray porphyry	385	460
dark gray shale	460	478
brown to gray porphyry	478	496

STATIC WATER LEVEL 168 Feet

If flowing: closed in pressure _____ PSI

GPM flow _____ through _____ inch pipe

Controlled by ☐ Valve ☐ Reducers ☐ Other

If other; specify _____

Can well be completely shut in? _____

WELL TEST DATA:

☐ Pumped☐ BailedDescribe: Air Developed☒ Other

Pumping Level Below Land Surface

490 ft. After 2 Hrs. pumped 225 GPM

_____ ft. After _____ Hrs. pumped _____ GPM

_____ ft. After _____ Hrs. pumped _____ GPM

REMARKS:

This well was drilled under license # 331

And this report is true and accurate.

Drilling firm TAYLOR DRILLING CO.

Signature of License Representative:

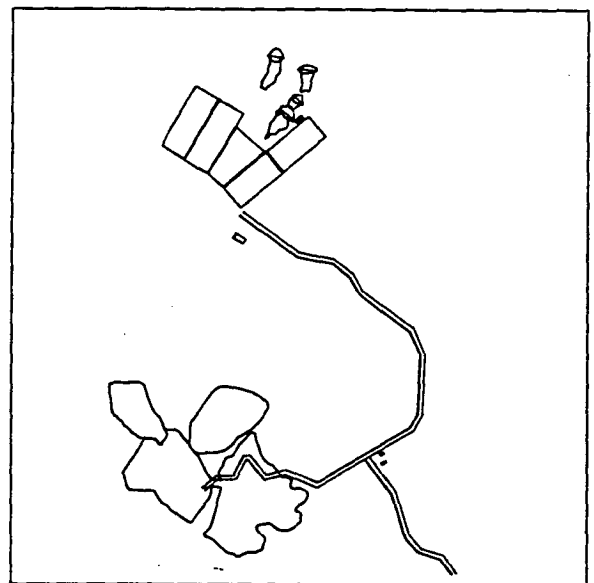
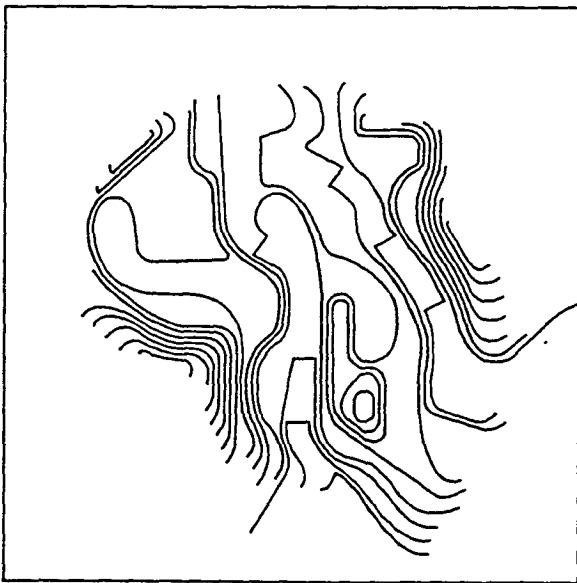
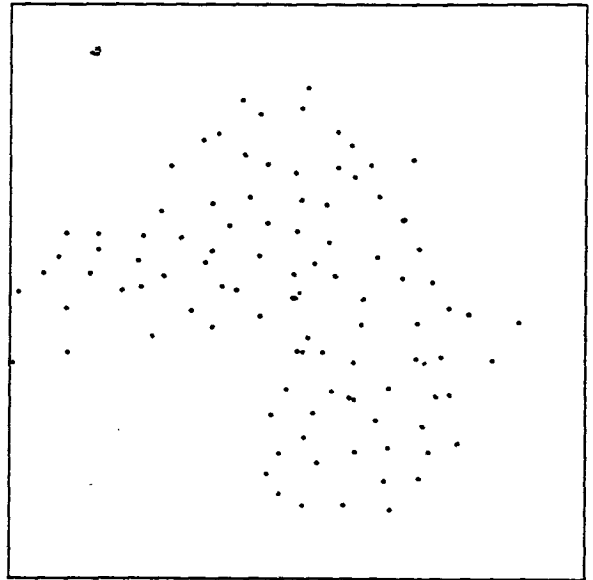
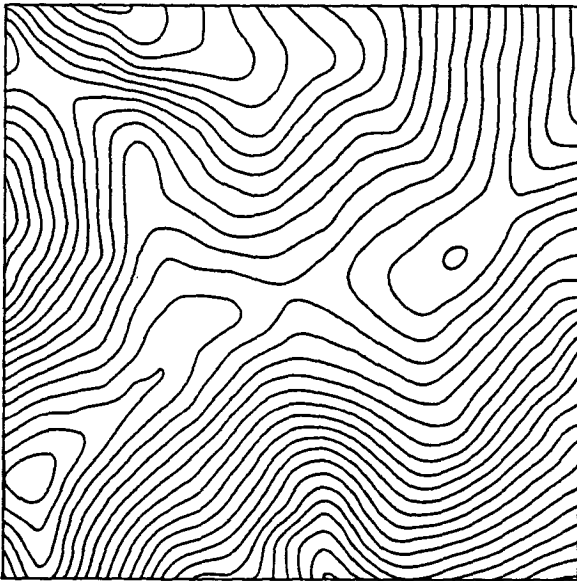
Ralph Taylor

Signature of Well Owner:

Date 12/30/88



RICHMOND HILL OPERATING PLAN



EXECUTIVE SUMMARY

BACKGROUND

St. Joe Gold is primarily engaged in the exploration for an development of precious metal properties (gold and silver) in the United States, Chile and Canada. Its principal operations include the El Indio gold mine and related properties and operations in Chile and the Yuba Placer Gold Company placer gold dredging operation in California. The Company is also actively exploring for precious metals in the United States, Chile and Canada. Based on its 1985 gold production and published production data for other gold mines, the El Indio mine is one of the five largest producing gold mines in the western hemisphere. Gold production attributable to the Company in fiscal 1985 was 257,176 ounces. Of this amount, El Indio produced 242,036 ounces, and Yuba Placer Gold produced 15,140 ounces. In fiscal 1985, El Indio and Yuba Placer Gold accounted for approximately 95% and 5% of net sales, respectively.

St Joe Gold is an indirect, wholly-owned subsidiary of St. Joe Minerals, which in turn is a wholly-owned subsidiary of Fluor, an international engineering, construction and natural resources management company. St. Joe Minerals is engaged in the exploration for and development, mining and production of lead, gold, silver, coal, diamonds, tin, zinc, copper and iron ore, with gold and silver operations in the United States, Chile and Canada being conducted through St. Joe Gold. St. Joe Minerals and its predecessor, which was acquired by Fluor in 1981, have been in the natural resources business since 1864. St. Joe Gold has been listed on the American Stock Exchange since January, 1986.

St. Joe began exploring in the Carbonate Mining District, Lawrence County, South Dakota, in early 1984. Prior to St. Joe entering the area, the area had been explored by several other mining companies. The aggregate of this work indicates the presence of a commercially viable gold orebody - the Richmond Hill Mine.

The Richmond Hill mine consists of 2 orebodies - The Richmond Hill orebody and the Turnaround orebody. The Richmond Hill orebody extends to surface up and over a saddle situated about 1500 feet south of the topographic Richmond Hill. The Turnaround orebody is located about 1000 feet northeast of the Richmond Hill deposit. Of the two, the Richmond Hill orebody is the most economical, and mining will occur here first. Initially, the surface of the Turnaround orebody will be mined as a source of aggregate. Later as mining nears completion at Richmond Hill, and assuming the gold price remains at current levels, the Turnaround will be mined for gold production. Together the two deposits represent approximately 18 million tons

of material (ore and waste) to be mined, essentially equally divided between the 2 deposits. The life of the mine is expected to be about 7 years. The Richmond Hill deposit will require 4 years to mine. Leaching and reclamation will continue about 2 years beyond the time when mining ends. St. Joe's intent is to continue exploration efforts to find additional reserves to further extend the life of this project.

SUMMARY OF PLAN OF OPERATIONS

The Richmond Hill project will be developed as a conventional open pit/heap leach facility. The conceptual lay-out of the facility is shown in Figure I.

The Richmond Hill deposit trends northwest up and over a saddle located about 1500 feet south of the topographic Richmond Hill. The oxidized portion of the deposit lies in a canoe type structure within the saddle. The ore extends virtually to surface so little surface stripping or preparation is required.

Underlying the canoe type structure is a gold mineralized sulfide deposit, which forms the boundary for the mine discussed in this operating plan. Testwork is underway to determine what would be required to treat the sulfide material, and thereby, increase the size of the operation. Definition of the economics of the sulfide material will require at least 1 more year of exploration and metallurgical work.

The ultimate oxide pit at the Richmond Hill deposit will form an irregular oblong type shape, about 1500 feet long X 900 feet across. Pit walls will be sloped back at approximately 49° overall. The deepest point will be about 250' deep in the center of the mine. The bottom of the pit will be a slot, running upslope NNW at about a 12% grade.

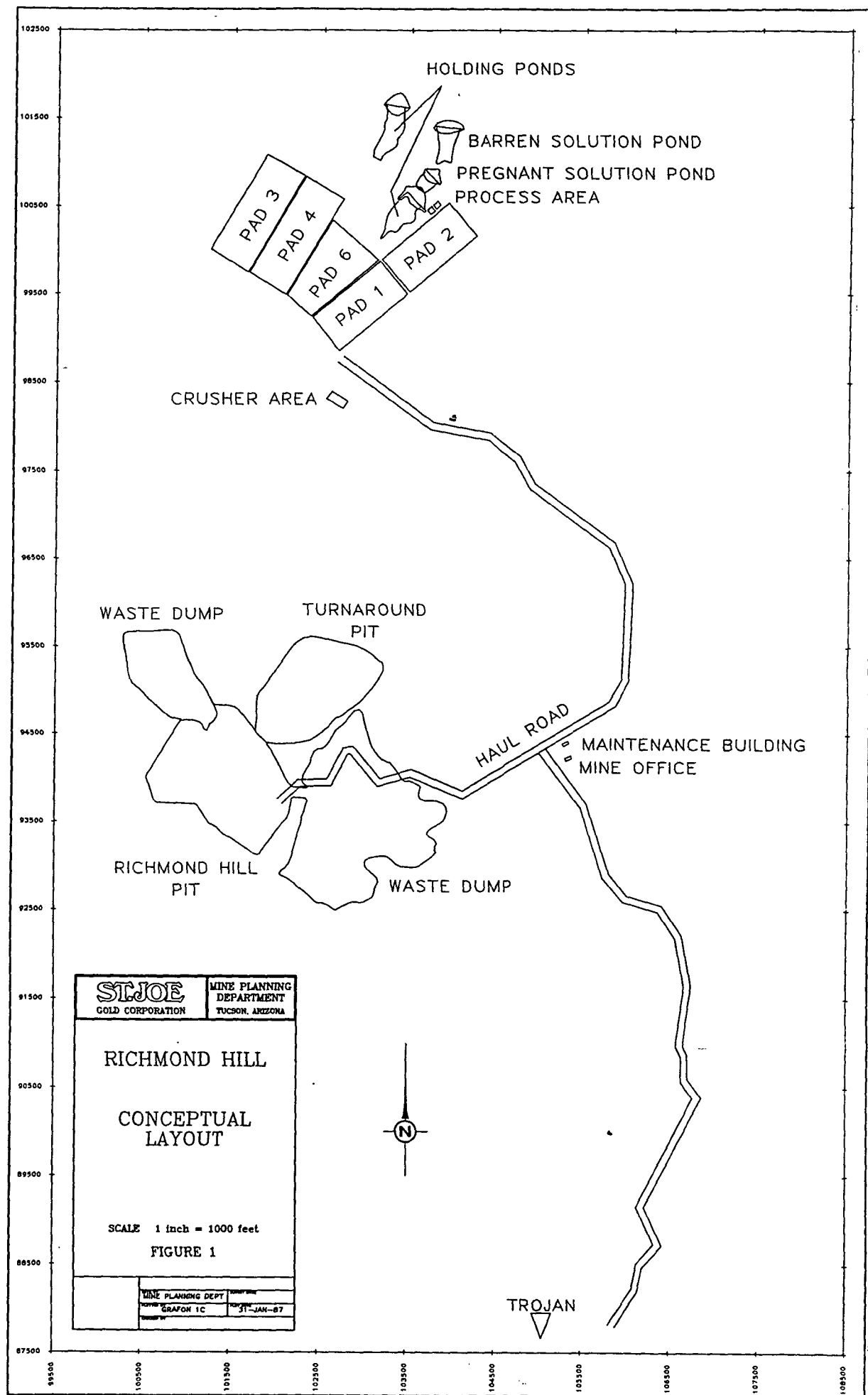
Mineralization in the Turnaround deposit lies deeper below the surface, so development of this mine area will resemble a more typical open cut, or pit configuration.

Mining will be year around on a two shift per day, 5 day/week basis. The mine fleet will consist of 50 ton trucks, 7 cubic yard loaders, dozers, drills, a grader, and other miscellaneous equipment.

Standard drilling and blasting methods will be used for fragmentation. Bench height will be 20'. Dilution is expected to be 5%.

The initial mine waste will be placed in a valley area 0.15 miles east of the mine along the haul road. For later years, waste may also be dumped into a valley 0.07 miles northwest of the mine. Both waste dump areas will be equipped with suitable diversion trenches and french drains to manage stormwater run-off problems. The mines are expected to remain dry, as the main ore zone is a very porous breccia body.

At this point, we have not made a final decision whether St. Joe should do the mining themselves or whether we should contract out the mining to an independent earthwork contractor.



The ore will be hauled by truck about 2 miles on a level haul to the processing facility, which is situated 1 air mile north of the mine. The haul road will be generally 62' wide, with a 54' running surface. Initial aggregate for the road will be obtained by prestripping overburden from the Turnaround deposit as much as practical. Later aggregate will come from Richmond Hill mine waste.

The main access road to the Richmond Hill facility will be about 2.5 miles long and will pass thru the town of Trojan, near the operation of Wharf Resources. The existing dirt road will be widened and will be properly bedded in order to improve the operating surface. The access road intersects the haul road about mid-way between the mine and the process facility. The main security gatehouse, the administration office, the chemical laboratory, and the maintenance shop will be located at this intersection. The chemical laboratory will be fully equipped for both fire assay and atomic absorption. The maintenance shop will handle all routine maintenance; major rebuilds will be sent off-site. Security will most likely be handled on a contract basis.

For optimum recovery, testwork to date suggests that the ore must be crushed to a nominal minus 3/4". To maintain good percolation in the heaps, the crushed product should be agglomerated with 2 lb/ton cement, as required. The crushing system will be designed to operate two shifts per day, 5 days/week. The ore generally will be dumped directly into the primary crusher. A loader will be working in the area to load trucks with crushed product and also to feed the crusher, as required, with stockpiled ore. The crushing system will include a vibrating grizzly ahead of the primary crusher to remove fines, as some parts of the mine contain significant amounts of clay. Secondary crushing will be via a standard cone crusher operating in closed circuit with a double deck screen. Tertiary crushing will be done in a fine head crusher.

Crushed ore will be hauled to the leach pads by truck and will then be dozed over the side with a bulldozer to form about 20' lifts for leaching. The ultimate heap height will depend on metallurgy, but heaps of 125' height are anticipated. Heaps will be ripped periodically to insure good percolation. Initially, leaching will be done only 9 months per year, and ample pad space has been allowed to mine, crush, and place ore thru the winter.

Approximately 70 acres of pad space have been allowed in the design. Pad construction will consist of a compacted, graded surface of up to 7% slope. Alternative lining systems are still being evaluated by a team of experts. The goal of the ultimate liner will be to provide a structurally stable surface which will prevent contamination of the groundwater.

Dilute cyanide solution will be distributed over each lift using sprinklers at 25' centers. Transverse piping will be 2" polyethylene. The main headers to the heaps will be a combination of steel piping with leak proof, mechanical couplings and welded polyethylene piping. Solution flows will be up to 1800 gal.min.

The pregnant solution from the base of the heaps will flow to the recovery plant. The products from this plant will be a gold/silver dore and barren cyanide solution, which will be recycled to the heaps. Fluor Corporation is currently designing this plant.

The normal inventory of pregnant and barren solution will be about 3 million gallons. The make-up water requirement will average 90 gal/min during the year, but will peak to near 200 gal/min during the late summer months. Make-up water will come from up to 6 supply wells. These wells will be in the vicinity of the leach pads, to both lower costs and to best control groundwater flow.

To properly handle winter snowmelt, we have included 2 containment ponds totalling about 30 million gallons capacity in the design. The pond lining systems are currently being engineered. One of the two ponds will be installed initially. As additional pads are added, the additional pond will also be added. Land application has been included in the design as a back-up to inventorying large volumes of water.

After about 1 year of operation, we will begin applying for a separate permit to unload existing pads after they have been washed and treated to insure that the material is compatible with the environment. Available pad space has been allowed to avoid unloading the pads. The main reasons for unloading pads is to avoid ponding large volumes of water and to keep the processing area clean for future projects. Likewise, we will be exploring in the Richmond Hill area for several more years. If a suitably large orebody can be found to bear the capital cost of vat leaching, we have allowed adequate design flexibility that our second permit could be to install a vat leach facility, rather than unload pads.

The Richmond Hill facility will directly employ about 80 people. Most of these people will be from the local area. We expect much of the workforce will already have some experience with mining type operations. During the construction phase of the project, additional workers will be employed.

Following termination of the project, all buildings and concrete structures constructed by St. Joe Gold Corporation will be removed or buried. Reclamation techniques will be used to restore the affected areas to a condition that will be appropriate to the surrounding environment and future land use, and to the standards agreed upon in the approved reclamation plan.

PROJECT SCHEDULE

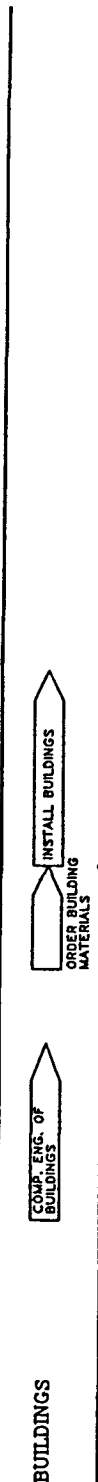
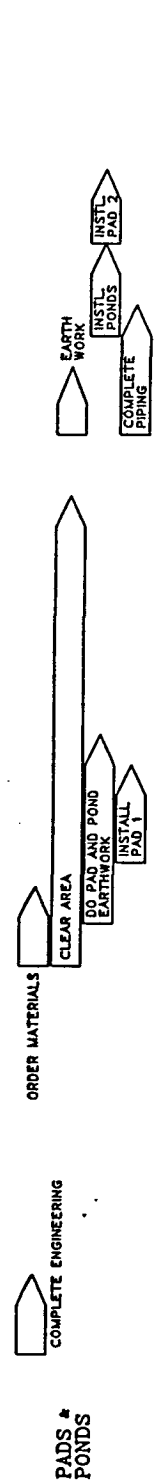
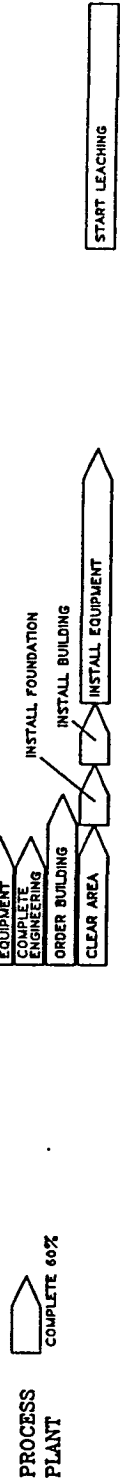
A simplified project schedule is shown in Figure 2. In general, St. Joe's intentions are to:

1. Apply for a conditional use permit in February 1987.
2. Submit a mine operating permit in March 1987.
3. Continue final engineering, so that 80% of the engineering has been completed by June 1987. Fluor Corporation is currently contracted for most of the engineering and construction work. A team of experts from 5 firms are now finalizing the design of the lined systems.

Given project approval by all local authorities by July 1987, there is a reasonable chance, depending upon weather and contractor availability and productivity, that the construction can be completed during the winter and mining could start by January, 1988. In the attached schedule, we have assumed some delay so that final earthwork would have to be completed in spring 1988. Mining would start at approximately the same time.

PERMIT PREPARE APPLICATION SUBMIT AND DEFEND APPROVAL

ENGINEERING and CONSTRUCTION



JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT

JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE JULY AUG SEPT OCT

STJOE MINE PLANNING DEPARTMENT GOLD CORPORATION TUCSON, ARIZONA

RICHMOND HILL SCHEDULE

FIGURE 2

MINE PLANNING DEPT	DATE	31-JUN-87
SAVON TC	DATE	

1987 1988



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181



MEMO TO: John Hatch

FROM: Jim Nelson

DATE: December 1, 1986

SUBJECT: St. Joe Minerals Corporation Application for a Water
Permit for the Richmond Hill Open Pit Mine and Cyanide
Heap Leach Facility

Although St. Joe has provided the Division of Environmental Quality some preliminary information concerning their plans for an open pit mine and cyanide heap leach facility near Richmond Hill in Lawrence County, they have not yet applied for a large scale mining permit. Therefore, the Division does not at this time have enough information concerning the project to recommend issuance of a water permit for the project.

AN2612JN.wq



HSI Hydro-Search, Inc.

350 Indiana St., Suite 415
Golden (Denver), Colorado 80401
HYDROLOGISTS-GEOLOGISTS-ENGINEERS
Phone (303) 279-7982

January 23, 1987
(122E06812)
Letter No. 0291

St. Joe Minerals Corporation
Mr. George Obeldobel
7733 Forsyth Boulevard
Clayton, MO 63105

Subject: *Water Issues, Zoning Permit Application, St. Joe Richmond Hill Project*

Dear Mr. Obeldobel:

Please find attached, as you requested, an updated memorandum regarding water-related questions to be addressed in your zoning application. I trust this is suitable and meets your needs.

Sincerely,

HYDRO-SEARCH, INC.

Ashraf M. Mirza
Manager, Denver Operations

CWM:kns
Attachment: T870021
cc: Pete Fuller

To: Mr. George Obeldobel, St. Joe Minerals Corporation

From: Chris W. Metzger, Hydro-Search, Inc.

Date: January 12, 1987

Subject: *Memorandum Regarding Water Issues for Zoning Permit Application*

This memorandum has been prepared to address surface- and ground-water questions related to St. Joe Minerals Corporation's zoning permit application for development of an open-pit mining operation and ore-processing facility in Lawrence County, South Dakota. The discussion presented herein is a summary of comprehensive surface and ground-water investigative programs. These programs were developed in order to protect surface- and ground-water resources through a better understanding of the surface hydrology and the ground-water system. The mine permit application to the South Dakota Department of Water and Natural Resources (SD-DWNR) requires a detailed presentation of the results from these hydrologic programs. These program results will be the subject of a detailed technical review by the SD-DWNR during the application process.

BACKGROUND

Surface- and ground-water investigation and monitoring programs were developed and initiated in 1986. These programs were developed to characterize the flow and water quality of both surface- and ground-water systems. All hydrologic investigations have been developed in compliance with the SD-DWNR preferences and specifications.

Twelve wells have been installed to establish baseline conditions for ground-water flow and quality. These wells, distributed over an area of 6-square-miles around the operational area, will also provide for operational monitoring.

Nine surface-water stations have been established over the same 6-square-mile area.

These stations are regularly monitored for flow and water quality, and will be continuously monitored during the operational period.

During late 1986 - early 1987, a test well program and well permit application for an operational water supply were initiated. Water rights and water appropriation requirements were reviewed during the permit application process.

WATERSHED

The mine area is located at a high elevation on the upper reaches of the Squaw Creek watershed, which is a tributary of Spearfish Creek. Mining is planned to levels above the water table. The Richmond Hill mine area will consist of two deposits: the Richmond Hill deposit and the Turnaround deposit. The Richmond Hill mine area is located in a topographic saddle, with a restricted ground surface area lying upland from the mine. The Turnaround deposit is located 1,000 feet to the northeast of the Richmond Hill deposit. This topographic position limits the effect of mining activities on surface water runoff and ground-water recharge. Surface water monitoring stations and monitoring wells are installed around the mine areas.

The ore-processing facility area is located about one mile north of the mine. This area drains only to Rubicon Gulch, which is in turn tributary to Spearfish Creek. The processing area is closely bounded on all sides by topographic and ground-water drainage divides. Surface-water monitoring stations and monitoring wells are installed around the processing area.

STREAM SILTING AND CONTAMINATION OF GROUND AND SURFACE WATERS

No deleterious effects on stream flow or water quality from stream silting or contamination of surface or ground water should occur, nor are such effects anticipated, as a result of mining or ore processing activities.

Incident precipitation in the mine pit will provide recharge to the ground-water system through natural infiltration. No dewatering/discharge of storm water is considered

necessary from the mine, due to the high natural permeability of the mine rock. Little, if any, change in quality of water infiltrating from the mine pit is expected. Mining activity will take place in the unsaturated zone, above the water table. Because the mine zone lies above the water table, infiltrating water percolating through the mine rock during mining will encounter substantially the same conditions as would be encountered in the present undisturbed state. For these reasons, ground-water quality is expected to remain substantially unchanged as a direct result of mining activities.

Two waste rock facilities at the Richmond Hill mine comprise a total area of 60 acres. Precipitation incident on the waste rock facilities will percolate through the rock and infiltrate to ground water, or upon flowing from the base of the waste rock become runoff and mix with storm flows of short duration in upper tributary drainages of Squaw Creek. Waste rock will be comprised of large blocks and coarse material. Although some silt and clay-sized material will be present in the waste rock, the downward percolation of water through the rock material will act as a filtering system and should produce few fines (clays and silts) in the waters discharged during storm events. Therefore, surface flows from the waste rock facilities are not expected to develop stream siltation problems.

Runoff exterior to the waste rock facilities will be conveyed around the facilities by diversion ditches. Surface-flow and water-quality stations are established to monitor runoff from the waste rock facilities.

The ore processing facility covers an area of 70 to 80 acres. This area is comprised of impermeable lined heap-leach pads and ponds. Incident precipitation on these 70 to 80 acres will be completely retained and will not produce surface runoff. Because the processing facility is closely restricted on all sides by topographic drainage divides, runoff from areas upland to the processing facility will be of low volume and will be diverted around the facility by drainage ditches and berms. No deleterious effects on stream silting should occur and none are anticipated from the facility.

The possibility of surface and ground-water contamination from the processing facilities is a serious issue and is the subject of intensive review by both St. Joe Minerals Cor-

poration and the South Dakota Department of Water and Natural Resources. The principal concern of both parties is to insure that contamination from cyanide process solutions does not occur. The processing system is designed as a closed system with no discharge to surface or ground water. Safeguards and contingency plans are built into the facilities' design. Because of the close topographic drainage divides, the flow direction of an accidental surface leak can be accurately predicted. In the event of a surface leak from the processing facility, the leak would be detected by designed monitoring systems and contained and controlled by a series of down-gradient ponds, where the leaked fluids would be neutralized. Leaks from the processing facilities to the subsurface are not anticipated because of design leak-detection systems and double liners.

Test wells drilled in the process facilities area show that the ground water lies 200 to 300 feet below the surface in a confined aquifer, the Deadwood formation. Cyanide solutions seeping to the subsurface would be exposed to atmospheric conditions as the solutions percolated through the unsaturated zone and would be rapidly destroyed by both chemical dissociation and complexing reactions with fill and bedrock. The confining conditions under the facilities area exists due to the presence of several hard-rock horizons called sills. These sills are nearly impermeable to fluid movement. Process fluids leaking to the subsurface would migrate downward through the unsaturated zone until encountering a sill and then migrate laterally along the top of the sill in a down-gradient direction. Monitoring wells, scheduled for periodic sampling, have been installed in down-gradient locations from the process facilities area. Water supply test wells are scheduled for installation in the process facilities area. These wells will be periodically sampled and the water analyzed to detect possible leaks to ground water.

RECHARGE

The mine and waste-rock facilities area will undergo no reduction in recharge to the ground water system as a result of the mining activity. In fact, ground water recharge may be increased within the 60-acre waste rock facilities area. Incident precipitation, percolating slowly downward through the waste rock, may recharge greater volumes to

the ground-water system than under existing conditions, whereby rainfall is rapidly discharged to surface runoff.

Incident precipitation on the 70- to 80-acre process facilities area will be retained within the series of lined leach pads and ponds and will not be available for recharge during the operational period. This 80 acres, however, represents a small portion of the watershed and will not significantly impact recharge to the ground-water system. Following closure and facility reclamation, all incident precipitation will be available for recharge to the watershed.

PUBLIC AND DOMESTIC WATER SUPPLIES

The proposed operations are positioned within the Black Hills National Forest between Spearfish and False Bottom Creeks. The surface flows in Spearfish and False Bottom Creeks are fully appropriated, established by senior water rights for irrigation. Flows in Spearfish Creek are also utilized as a public water supply by the town of Spearfish, South Dakota. These water rights will not be effected by the proposed mining and ore processing operations. Supply well permit applications for 0.89 cubic feet per second for a process water supply have been filed and are under review by the South Dakota Division of Water Rights.

Domestic water supplies will not be effected by the proposed operations. Surface and ground waters in the process facilities area flow away from Maitland and Maurice. The nearest domestic wells are at Maitland, located about two miles east of the facilities process area on False Bottom Creek, and at Maurice, located about two miles west of the process facilities area on Spearfish Creek. The nearest domestic well on record with the South Dakota Department of Water and Natural Resources, Division of Water Rights, is near Maitland, about 10,700 feet from the process facilities area.

pat

ST. JOE

10011111 VISTA 731
10011111 VISTA 731
10011111 VISTA 731

September 12, 1986

Mr. Robert Townsend
Exploration and Mining Program Chief
South Dakota Department of Water
and Natural Resources
Joe Foss Building
523 East Capitol Avenue
Pierre, S.D. 57501



Dear Bob,

As you are aware, St. Joe initiated in the spring of 1986 a baseline surface-water quality monitoring program in the vicinity of its Richmond Hill exploration project. A description of the proposed program was forwarded to you and others on April 10th 1986.

In accord with this initial program we have been collecting monthly samples at 9 locations, for quality as well as taking necessary measurements for stream flow. Monthly samples and flow measurements have been collected since March of this year. For reference I have enclosed, herewith, a map of present sample locations and a list of parameters presently being analyzed.

Based upon our review of the data collected to date, we will be switching to to quaterly sampling immediately. This decision has been made after a thorough review of the analysis of over 2800 samples which indicated no meaningful variation in the significant water quality parameters.

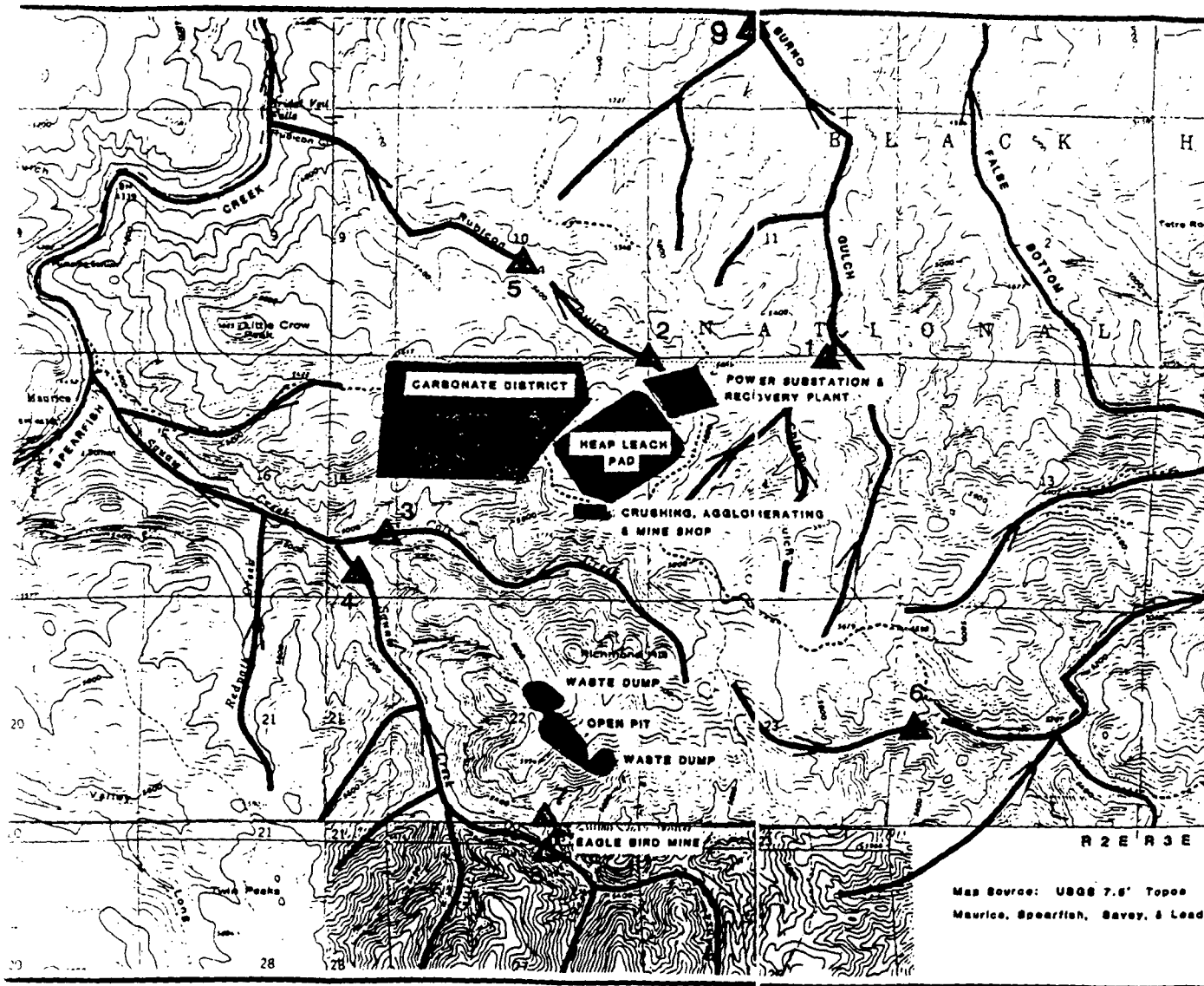
Should you or others in the Department have reservations about our proposed program we would appreciate hearing from you as soon as possible.

Sincerely,

Lee P. Gochhour
Environmental Coordinator

cc: Gary Welch
George Obeldobel
Dennis Rounds
Office of Water Quality

Enclosure: map



SAMPLE SITE
9



REQUIRED MONITORING PARAMETERS

(a) Alkalinity	(m) Conductivity	(aa) Radium 226 and 228
(b) Aluminum	(n) Copper	(bb) Radon
(c) Ammonia	(o) Fluoride	(cc) Selenium
(d) Arsenic	(q) Iron	(dd) Silica
(e) Barium	(r) Lead	(ee) Silver
(f) Bicarbonate	(s) Magnesium	(ff) Sodium
(g) Boron	(t) Manganese	(gg) Sulfate
(h) Cadmium	(u) Mercury	(hh) Temperature
(i) Calcium	(v) Molybdenum	(ii) Total alpha, beta & gamma radiation
(j) Carbonate	(w) Nickel	(jj) Total dissolved solids
(k) Chloride	(x) Nitrate as nitrogen	(kk) Uranium
+ Hardness	(y) pH	(ll) Vanadium
+ Total Cyanide	(z) Potassium	(mm) Zinc
+ Free Cyanide		
+ TKN (Total Kjeldahl)	+ TSS	
	+ Phosphorus	

+ Antimony

+ Chromium

+ Phosphorus



November 10, 1986

Mr. Robert Townsend
Program Chief
Exploration and Mining Program
Dept. of Water and Natural Resources
Joe Foss Building
523 East Capital
Pierre, SD. 57501



Dear Mr. Townsend:

Referencing your letter of October 15, 1986 to St. Joe regarding our surface water quality monitoring program at Richmond Hill, I have the following comments:

1. The parameters in item #1 have been added to our program. They include: nitrite, chromium, cobalt, lithium, beryllium.
2. At this time St. Joe has no intentions of siting any facilities in the west 1/2 of the sections 10 and 15 boundary.
3. With regard to sampling frequency, I propose the following based upon discussion with Nick Bugosh and a review of the hydrograph.

Mid-January - End of low flow period

Mid-April - During the rising limb of the hydrograph

Mid-May - Peak flow

Late August - The beginning of the long period of low flow

4. As requested, I have enclosed are currently available surface water quality data that has been gathered at the Richmond Hill project.

If you have any questions regarding any of the above, please do not hesitate to call or write.

Sincerely,

Lee "Pat" Gochnour

Lee "Pat" Gochnour
Environmental Coordinator

Encl.

cc: Gary Welch
George Obeldobel

RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1372-1

Pursuant to SDCL 46-2A-2, the following is the recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 1372-1, St. Joe Minerals Corporation, 7733 Forsyth Blvd., Clayton MO.

The Chief Engineer is recommending DEFERRAL of Application No. 1372-1 until complete information on the proposed mining and heap leach project is provided. Only preliminary information concerning the proposed open pit mine and cyanide heap leach facility near Richmond Hill in Lawrence County has been provided to the Division of Environmental Quality, of this Department. St. Joe Minerals Corporation has not made an application to the Division of Environmental Quality for a large scale mining permit. Although the Water Management Board has no jurisdiction with Mining permits, it does have public interest responsibilities in granting a water permit. The Board also has water quality responsibilities. Until complete information on the proposed mining and heap leach project is provided, that will answer public interest and water quality questions, Application No. 1372-1 should be deferred.



JOHN HATCH, Chief Engineer
December 5, 1986

REPORT ON APPLICATION NO. 1372-1
ST. JOE MINERALS CORPORATION
November 4, 1986

Application No. 1372-1 proposed to appropriate 0.89 cubic feet of water per second from as many as 10 wells to be located in the NW 1/4, the S 1/2 NE 1/4, the NE 1/4 NE 1/4, and the NE 1/4 SE 1/4, Section 15, T5N, R2E; the N 1/2 SW 1/4, and the N 1/2 SE 1/4 SW 1/4, Section 14, T5N, R2E; and the NW 1/4 NW 1/4 Section 24, T5N, R2E. Water is to be used for industrial purposes in an ore-processing facility for an open pit mine operation.

Geology and Aquifer Characteristics

Review of the areal geology (Darton, 1925) and the logs from test wells submitted with this application indicate groundwater in the area is encountered in nearly all the geologic formation, ranging from the pre-cambrian rocks through the Pahasapa limestone. The probable hydraulically connected formations in the area, from oldest to youngest are: Pre-cambrian mica schist; the Deadwood Formation; the Englewood Limestone; and the Pahasapa Limestone. Tertiary intrusives, primarily porphyries are present locally.

The importance of these formations as aquifers is largely due to zones of secondary porosity and permeability, in the form of fractures and fissures. The distribution, orientation and interconnection of these fractures are unpredictable and the aquifer capabilities are site specific and difficult to assess.

The only hydrogeologic information available for the Richmond Hill area was provided by the applicant, in the form of a report prepared by Hydro-Search, Inc. The report analyzed test hole data, monitor well data, and pumping test data conducted at the project site.

The Hydro-Search, Inc. Report indicates that groundwater is under unconfined conditions in the area, with the potentiometric surface generally conforming to the topography, groundwater flows away from topographic highs and discharges to the perennial streams of Rubicon Gulch, Burno Gulch, False Bottom Creek, Cole Creek, and Squaw Creek.

Groundwater recharge is accomplished through infiltration of precipitation falling directly on the outcrop and possibly through streamflow. Natural groundwater discharge occurs through evapotranspiration and streamflow.

Yields from the 2 inch monitor wells that have been installed range from 0.24 gpm to 48.6 gpm and the specific capacities of the wells range from .0129 gpm/ft to 7.3469 gpm/ft. The monitor wells were test pumped for a short time (4.83 min to 230 min)

and the recovery of each well was measured and analyzed to determine the aquifer characteristics. Transmissivity values were determined to range from 6ft²/day to 1,100 ft²/day and hydraulic conductivity values were determined to range from 3x10⁻²ft/min to 1x10⁻⁴ft/min.

Long term pumping tests must be run to confirm the production potential of the wells.

Review of Existing Permits

There are no existing water rights within the immediate area. The nearest permit to the proposed well sites is approximately 2 1/2 miles away. The permit is No. 565-1, Black Hills Power and Light Company. The permit was licensed for 1.33 cfs to be used for municipal purposes by the City of Deadwood.

Conclusions

1. Application No. 1372-1 proposes to appropriate 0.89 cfs from up to 14 diversion points to be used in aⁿ ore-processing facility.
2. Test wells drilled by the applicant indicate well capacities range from 0.24 gpm to 48.6 gpm. It is unlikely that each supply well will be capable of over 50 gpm long term pumping tests must be run to confirm the production potential of the wells.
3. There are no existing water rights within a one mile radius of the applicant's proposed diversion points. The proposed diversion should have no adverse affects on existing water rights.
4. The groundwater of the area apparently discharges naturally to perennial streams and springs.
5. There are no domestic wells within a one mile radius of the proposed operation.



Ken Buhler
Natural Resources Engineer

References

Darton, N.H., Paige, S., 1925, Geologic Atlas of the United States, Central Black Hills Folio, South Dakota, USGS, Folio No. 219.

Division of Water Rights, 1986, "Domestic Well Log Files and Water Permit Files", DWNR, Division of Water Rights, Joe Foss Building, Pierre, SD.

REVISED RECOMMENDATION OF CHIEF ENGINEER FOR WATER PERMIT
APPLICATION NO. 1372-1, St. Joe Minerals Corp.

Pursuant to SDCL 46-2A-2, the following is the revised recommendation of the Chief Engineer, Water Rights Division, Department of Water and Natural Resources concerning Water Permit Application No. 1372-1, St. Joe Minerals Corp., 7733 Forsyth Boulevard, Clayton MO.

This recommendation includes an analysis on the separation of issues to be considered by the Water Management Board at a water permit application hearing from those issues to be considered at another hearing by the Board for water pollution control permits and issues which are outside of the jurisdiction of the Board.

The Chief Engineer is recommending APPROVAL of Application No. 1372-1 because:

1. There is reasonable probability that there is unappropriated water available for the applicant's proposed use.
2. The proposed diversion can be developed without unlawful impairment of either the quantity or the quality of existing rights subject to qualifications to approval of this permit.
3. The proposed use is a beneficial use of water. The Board has, following previous hearings for water permits to supply mining operations determined that use of water for mining operations is a beneficial use of water.
4. Approval of this permit is in the public interest. Factors considered in balancing and determining the public interest include:
 - a) Should there be a St. Joe Minerals mining project? The Legislature has authorized the Minerals and Environment Board to issue mining permits pursuant to Chapter 45-6B. Mining permits may not be issued by the Minerals and Environment Board unless the applicant is in compliance with all county or city ordinances and permit requirements. The question of whether mining should occur is beyond the jurisdiction of the Water Management Board. The Legislature has directed that the Minerals and Environment Board and local government make mining project decisions.
 - b) Should the Water Management Board consider the pollution potential of surface or ground water under the public interest provisions of the water permit statutes (Title 46)? The Minerals and Environment Board considers potential water pollution when issuing

a mining permit and the Water Management Board has adopted rules to require pollution control permits. The Board will consider the potential for pollution when it considers pollution control permit applications. Any remaining public interest question on pollution in granting a water permit can be answered by conditioning this water permit to require compliance with Board rules for pollution control permits.

- c) Public Safety - public interest questions on safety of storage ponds will be considered in the approval of Application No. 1422-1.
- d) Any effects from pumping the proposed wells on the flows in Rubicon Gulch Creek, Squaw Creek, Cole Creek, and Burno Gulch Creek may be considered by the Water Management Board. However, in past considerations, the Board has not based its decision to approve or deny an application on the potential effect of well pumping upon nearby stream flows.

The proposed wells are located in Section 15 and the W 1/2 of Section 14 within an area bounded by Squaw Creek, Rubicon Gulch Creek, Cole Creek and Chism Creek which drains into Burno Creek. The closest well is about 400 feet from the nearest stream. Two of the creeks are classified as fisheries. Squaw Creek is classified as a coldwater permanent fishery up to the confluence with the east branch of Squaw Creek which is on the west side of the proposed wells. Burno Creek to the northeast of the proposed wells is classified as a coldwater marginal fishery. Although Rubicon Gulch Creek is not classified as a fishery, it does supply the water that flows over Bridal Veil Falls at the confluence with Spearfish Creek.

The only known records for these streams are those measurements which were collected during 1986 (see Table 2-1, Volume III, Attachment 5, Section 2, Mine Permit Application) by Hydro-Search, Inc. a consultant for St. Joe Minerals. The flow variations were as follows:

Rubicon Gulch -

Headwaters - 0.56 cfs in June to 0 flow in August and September

Mid-Rubicon (center of Section 10) - 1.62 cfs in spring to 0.12 cfs (54 gpm) in August and September

Burno Creek in fishery classification area - 5.12 cfs in June to 0 flow in August

Squaw Creek upstream from Cole Creek Confluence - 12.55 cfs in June to 0.76 cfs in August

Cole Creek upstream from Squaw Creek
confluence - 1.73 cfs in spring to 0.12 cfs (54 gpm)
in September

The flow measurements show that area stream flows are subject to precipitation events and to flows from deeper aquifers. Although not quantified, the deeper aquifers do contribute to base flows of area streams. Flow measurements in other years could be expected to show similar precipitation related flows. Pumping the proposed wells is not expected to have an adverse affect upon stream flows or upon Bridle Veil Falls. If the Water Management Board is going to consider any effect of pumping on a stream, then Rubicon Gulch should be monitored. If the flow over Bridal Veil Falls drops below 50 gallons per minute (gpm), then the permit owner could provide supplemental water to maintain at least 50 gpm of flow over Bridle Veil Falls April 1 to October 31 of each year.

Approval is with the following qualifications:

1. The casings of the wells to be constructed under Permit No. 1372-1 shall be pressure grouted with cement (bottom to top) from the producing formation to the surface, the wells constructed by a licensed well driller, and in compliance with Water Management Board Well Construction Rules, Chapter 74:02:04.
2. The wells approved under this Permit may be located near domestic wells which may obtain water from the same formation. The well owner, under this permit, shall control his withdrawals so there is not a reduction of needed water supplies in domestic wells.
3. That the permit owner monitor the flows over Bridal Veil Falls. If the flows over Bridal Veil Falls drop below 50 gallons per minute, that the permit owner provide supplemental water to maintain at least 50 gpm of flow over the Falls during the period April 1 to October 31 of each year.
4. Approval of Permit No. 1372-1 is subject to compliance with the following then existing Water Management Board Rules:
 - a) Chapter 74:03:15 Ground Water Quality Standards,
 - b) Chapter 74:03:16 Ground Water Discharge Permits,
 - c) Chapter 74:03:30 Heap Leach Design and Construction,
 - d) Chapter 74:03:02 Surface Water Quality Standards,
 - e) Chapter 74:03:04 Uses Assigned to Streams,
 - f) Chapter 74:03:17 Surface Water Discharge Permit - General Provisions,
 - g) Chapter 74:03:18 Surface Water Discharge Permit Application Requirements,

- h) Chapter 74:03:19 Surface Water Discharge Permit Conditions,
- i) Chapter 74:03:20 Transfer Modification, Revocation and Reissuance and Termination of Surface Water Discharge Permits
- j) Chapter 74:03:21 Procedure For Permit Processing
- k) Chapter 74:03:22 Secondary Treatment Standards
- l) Chapter 74:03:23 Criteria and Standards for Surface Water Discharge Permits,
- m) Chapter 74:03:24 Toxic Pollutant Effluent Standards for Surface Water Discharge Permits,
- n) Chapter 74:03:25 Effluent Guidelines and Standards for Surface Water Discharge Permits, and
- o) Chapter 74:03:26 Pretreatment Regulations for Surface Water Discharge Permits.

See the attached report for additional information.



JOHN HATCH, Chief Engineer
November 23, 1987



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Water Rights Division
605 773-3352

December 16, 1986

LEAD DAILY CALL
PO Box 876
Lead SD 57754

Dear Sir:

Enclosed is a Notice of Intent to Appropriate Water by St. Joe Minerals Corporation
Application No. 1372-1, in Lawrence County, South Dakota. Please
publish this notice once each week for two consecutive weeks in your paper. The
first publication should be on, or before December 31, 1986.

The APPLICANT MUST VERIFY TO YOU THAT THE NOTICE IS TO BE PUBLISHED, before you
make the first publication. The applicant is to pay the cost of publication and
should make the necessary arrangements with you to pay these costs.

A copy of BOTH publications must be sent to the Water Rights Division. IMMEDIATELY
after the FIRST publication, return a copy of the notice with the FIRST Publication
Transmittal form on the bottom of this page. The first copy is needed to check
the publication for errors so any corrections can be made before the second
notice is published.

Please be sure the SECOND publication is returned with the enclosed Proof of
Publication form. The permit application cannot be considered by the Water
Management Board until proof of publication has been received.

Thank you for your assistance.

Sincerely,

RON DUVALL
Natural Resources Engineer

cc: applicant

***** CUT HERE *****

FIRST
Publication
Transmittal

No. 1372-1
TO: Water Rights Division
Joe Foss Building
Pierre SD 57501-3181

Date _____

We are in receipt of your letter dated _____ and Notice of Hearing to
Appropriate Water by Application No. _____. The notice was first published
in our issue dated _____. ENCLOSED IS A COPY OF THIS FIRST PUBLICATION.

NAME _____ NEWSPAPER _____

Equal Opportunity Employer



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

Water Rights Division
605 773-3352

December 16, 1986

NOTE: TO BE SURE OF PUBLICATION ON
THE CORRECT DATES, CONTACT THE
NEWSPAPER RIGHT AWAY.

George M. Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MO 63105

Dear Mr. Obeldobel:

Your Application No. 1372-1 for a permit to appropriate water for

industrial use, has been examined and found to
comply with the South Dakota Water Laws and applicable rules. A notice of
your intent to appropriate water has been sent to the Publisher of the

LEAD DAILY CALL printed at Lead

South Dakota. For your information, a copy of this notice, the recommendation
of the Chief Engineer and a report on the application are enclosed. Please
review this notice prior to publication and notify this office, if you have
any corrections or questions.

Be sure to contact the above newspaper to authorize publication of your notice
of intent to appropriate water and to arrange for payment. Early contact with
the paper can eliminate delays. The publisher has been instructed to publish
your notice once each week for two consecutive weeks with the last publication
to occur at least thirty days before the board meeting. We must receive
Proof of Publication before the application can be considered by the Water
Management Board.

Sincerely,

RON DUVALL
Natural Resources Engineer

enclosures

Instruction to Newspaper - Publish first publication of the following Notice on or before December 31, 1986 with 2nd publication 1 week later. The applicant is responsible for payment.

NOTICE OF HEARING on Application No. 1372-1 to Appropriate Water
~~and/or to Amend Water Permit or Water Right No. _____~~

Notice is hereby given that St. Joe Minerals Corporation whose mailing address is 7733 Forsyth Boulevard, Clayton, Missouri, ~~South Dakota~~ has made an application for a permit

to appropriate 0.89 cubic feet of water per second from up to 14 wells, 300 to 600 feet deep to be located in the NW 1/4, S 1/2 NE 1/4, NE 1/4 NE 1/4, NE 1/4 SE 1/4 Section 15; N 1/2 SW 1/4, N 1/2 SE 1/4 SW 1/4, SW 1/4 NW 1/4 Section 14; NW 1/4 NW 1/4 Section 24; all in T5N, R2E. Water is to be used for industrial purposes in a heap leach ore-processing facility and for an open-pit mine operation.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends

DEFERRAL of Application No. 1372-1 until complete information on the proposed mining and heap leach project is provided.

This application will be considered by the Water Management Board at Room 216, Joe Foss Building, Pierre SD on March 4 19 87 at 10:00 am.

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and the Chief Engineer by February 20, 1987. The petition may be informal, but it must include a statement describing the petitioners interest in the application, the reasons for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2 46-5-30.4, 46-5-31; ~~(ground)~~ 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; ~~(future use)~~ 46-5-38 thru 46-5-40, ~~(transfer lands)~~ 46-5-30.4, 46-5-33 thru 46-5-35, ~~(10,000 AFA)~~ 46-5-20.1, 46-5-8.1; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15; ~~(future use)~~ 74:02:01:24 thru 74:02:01:25; ~~(10,000 AFA)~~ 74:02:01:15:02 thru 74:02:01:15:05.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWNr, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by February 20, 1987.

PROOF OF PUBLICATION

STATE OF SOUTH DAKOTA)
County Lawrence) ss.

I, Tina Kolb hereby

certify that the annexed printed copy of Notice of Intent to Appropriate

Water was taken from the Lead Daily Call

A newspaper which during the whole time of publication of said notice
herein after stated, has been and is printed and published in the _____

City _____ of Lead

County of Lawrence and State of South Dakota;
that the said notice was published in said newspaper on the following
two dates:

December 31, 1986

January 7, 1987



Tina Kolb
(Signature)

Secretary
(Title)

2-23-88

(Date Signed)



Cost of Printing: _____

92 lines x .2564 = \$23.59

92 lines x .2051 = 18.87

TOTAL \$42.46

NOTICE OF HEARING
ON APPLICATION
NO. 1372-1 TO
APPROPRIATE WATER

Notice is hereby given that **St. Joe Minerals Corporation** whose mailing address is **7733 Forsyth Boulevard, Clayton, Missouri**, has made an application for a permit to appropriate **0.89 cubic feet of water per second** from up to **14 wells, 300 to 600 feet deep** to be located in the **NW¹/₄, S¹/₂ NE¹/₄, NE¹/₄ NE¹/₄, NE¹/₄ SE¹/₄ Section 15; N¹/₂ SW¹/₄, N¹/₂ SE¹/₄ SW¹/₄, SW¹/₄ NW¹/₄ Section 14; NW¹/₄ NW¹/₄ Section 24; all in T5N, R2E**. Water is to be used for industrial purposes in a heap leach ore-processing facility and for an open-pit mine operation.

Pursuant to SDCL 46-2A-2 the Chief Engineer of the Water Rights Division recommends DEFERRAL of Application No. 1372-1 until complete information on the proposed mining and heap leach project is provided.

This application will be considered by the Water Management Board at **Room 216, Joe Foss Building, Pierre SD on March 4, 1987 at 10:00 a.m.**

The recommendation of the Chief Engineer is not final or binding upon the Board and the Board is authorized to 1) approve, 2) approve with qualifications, 3) defer, or 4) deny this application after it reaches a conclusion based upon facts presented at the public hearing. Any interested person who may be affected by a Board decision and who intends to participate in the hearing before the Board and present evidence or cross-examine witnesses according to SDCL 1-26, must file a written petition with BOTH the applicant and the Chief Engineer by **February 20, 1987**. The petition may be informal, but it must include a statement describing the petitioner's interest in the application, the reasons for the petitioner's opposition to or support of the application, and the signature and mailing address of the petitioner or his legal counsel if legal counsel is obtained. The applicant need not file a petition.

This application is made pursuant to the provisions of SDCL 46-1-1 thru 46-1-9, 46-1-12 thru 46-1-15; 46-2-3.1, 46-2-9, 46-2-11, 46-2-13, 46-2-17; 46-2A-1 thru 46-2A-10, 46-2A-12, 46-2A-14, 46-2A-15; 46-5-1 thru 46-5-11, 46-5-13 thru 46-5-15, 46-5-24, 46-5-25, 46-5-30.2 46-5-30.4, 46-5-31; 46-6-3, 46-6-3.1, 46-6-6.1, 46-6-10, 46-6-13, 46-6-14; and Board Rules ARSD 74:02:01:01 thru 74:02:01:15.

This hearing is an adversary proceeding. The applicant or any person, after filing a petition, has the right to be present or to be represented by a lawyer. These and other due process rights will be forfeited if they are not exercised. Decisions of the Board may be appealed to the Circuit Court and the State Supreme Court as provided by law.

Any person wishing a copy of the Chief Engineer's recommendation, further information on this application or to assure access to the hearing by the handicapped can contact the Water Rights Division, DWR, Joe Foss Bldg, Pierre SD (605 773-3352) for assistance prior to the hearing date. The time of the hearing will be automatically extended for at least twenty days upon written request of the applicant or any person who has filed a petition to oppose or support the application. The request for extension must be filed with the Chief Engineer by February 20, 1987.

92
December 31, Jan. 7

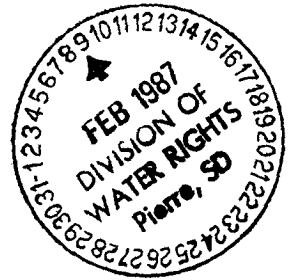
ST.JOE

MINERALS CORPORATION

7733 FORSYTH BOULEVARD
CLAYTON, MISSOURI 63105

TELEX 44-7636
314-726-9500

GEORGE M. OBELDOBEL
DIRECTOR OF METALLURGY
314-854-9612



February 6, 1987

Mr. John Hatch
Chief Engineer
South Dakota DWR
Division of Water Rights
Joe Foss Building
523 East Capital St.
Pierre, SD 57501-3181

Dear John,

We very much appreciate that you took the time on February 3 to allow us to describe our Richmond Hill project to you. The answers to some specific technical questions you asked at the meeting are documented in the attached letter from our hydrologic consultants, Hydro-Search of Denver, Colorado. If you have additional specific areas of concern please let me know.

Re our water rights application 1372-1, which will be reviewed on March 4, 1987, you have recommended deferral of the granting of water rights. After our discussions, I better understand your position. You apparently do not have a problem with adequacy of supply in the area. Your problem, as I now understand it, is that, since we have not yet applied for a mine operating permit, you do not have the data to insure that the granting of the water is in the public's best interest.

My problem is also pretty clear — I need water rights before I can commit millions of dollars to begin constructing the Richmond Hill Mine Project. My schedule is now that, if all goes well, we could obtain a mine operating permit as early as June 1987. I have accelerated my engineering effort so that we will be prepared to begin construction shortly after issuance of a mine permit. I have had to do this to allow me the best potential to utilize the very short construction window available in 1987.

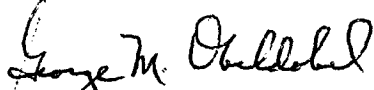
My fear is that, if we defer water rights in March and if we get a protest in May, we suddenly find ourselves into July with no guarantee of water. By this time, I have spent considerable "risk" money. I find this painful in that I started applying for these water rights in October 1986 specifically so that water acquisition would not be a problem for the project schedule.

A solution I would like to suggest is that we review our application on March 4, as scheduled. The objective need not be to issue St. Joe Gold water rights at that time. Rather, I would suggest that we target to approve the conditional granting of water rights. Conditions which I see eliminating both our risks would include that the water be granted to St. Joe Gold:

1. only for mining project related purposes and
2. to be effective simultaneous with St. Joe obtaining an approved mine operating permit

If you wish to discuss any of the above points further, please let me know. Once again, thank you for the consideration.

Sincerely,



George M. Obeldobel
Project Director

GMO:ss

cc:EC
PF
TD
CM

Amundson, Fuller & Delaney

ROBERT A. AMUNDSON
A.P. FULLER
JOHN J. DELANEY

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
PHONE (605) 584-2440

April 6, 1987

Mr. John Hatch
South Dakota Department of
Water and Natural Resources
Water Rights Division
Joe Foss Building
523 East Capitol
Pierre, SD 57501



Re: St. Joe Gold
Application No. 1372-1

Dear Mr. Hatch:

Enclosed please find Notice of Deposition for the taking of Mr. Meinhardt's deposition in Rapid City, South Dakota, at 10:00 on April 20, 1987. I don't know if Mr. Meinhardt will be there, but I am serving notice upon him and I will be there.

Respectfully yours,

AMUNDSON, FULLER & DELANEY

A handwritten signature in cursive script, appearing to read "Peto", which is likely a stylized signature of A. P. Fuller.

A. P. Fuller

APF/slc

Enc.

cc: Mr. Doyle

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the)
Application of)
St. Joe Minerals Corporation,)
d/b/a St. Joe Gold,)
Application No. 1372-1.)

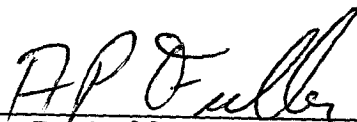
NOTICE OF DEPOSITION

TO: NICK MEINHARDT:

NOTICE IS HEREBY GIVEN that commencing at 10:00 a.m. on Monday, April 20, 1987, at the office of Wheeler Reporting, 618 1/2 St. Joe Street (above Rudolph's Shoe Store) Rapid City, South Dakota, St. Joe Gold will take the deposition of Nick Meinhardt upon oral examination before a court reporter or some officer authorized to administer oath.

The above oral examination will continue from day to day until completed.

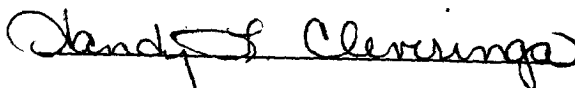
DATED this 6 day of April, 1987.



A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and by first class mail, postage prepaid on the 6th day of April, 1987.



Dandy S. Cleveringa

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the
Application of

St. Joe Minerals Corporation,
d/b/a St. Joe Gold,

Application No. 1372-1.

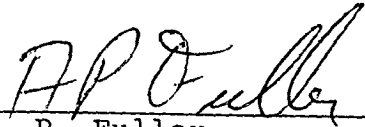
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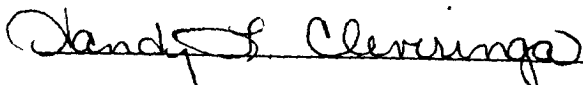
DATED this 6 day of April, 1987.



A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and by first class mail, postage prepaid on the 6th day of April, 1987.



David S. Cleavinga

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the
Application of

St. Joe Minerals Corporation,
d/b/a St. Joe Gold,

Application No. 1372-1.

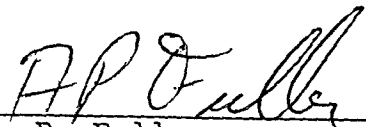
NOTICE OF DEPOSITION

TO: NICK MEINHARDT:

NOTICE IS HEREBY GIVEN that commencing at 10:00 a.m. on Monday, April 20, 1987, at the office of Wheeler Reporting, 618 1/2 St. Joe Street (above Rudolph's Shoe Store) Rapid City, South Dakota, St. Joe Gold will take the deposition of Nick Meinhardt upon oral examination before a court reporter or some officer authorized to administer oath.

The above oral examination will continue from day to day until completed.

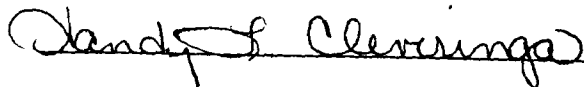
DATED this 6 day of April, 1987.



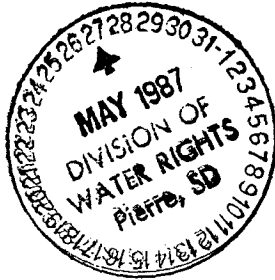
A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and by first class mail, postage prepaid on the 6th day of April, 1987.



Sandra S. Cleveringa



RECEIVED

MAY 21 1987
EXPLOSION AND
MINING PROGRAM

The attached is for your information. As you can read we are very concern about our water wells and our environment. We assume you are aware of the application and will do everything to insure the quality and supply of our wells.

R.M. Reid
P.O. Box 123
Spearfish SD
57783

Please call if you have questions
605-642-7950

Befor the
LAWRENCE COUNTY PLANNING AND ZONING BOARD
And The
LAWRENCE COUNTY BOARD OF COMMISSIONERS
Deadwood, South Dakota

RECEIVED
MAY 21 1987
EXPLORATION AND
MINING PROGRAM

In The Matter of:

An Application for a Land Use Permit
and a Mining Processing Permit by
St. Joe Gold Corporation for their
Richmond Hill Mining Project)
)
)
)

STRONG OPPOSITION

The land owners and users of water wells in Section 36, R2E, T6N of Lawrence County, hereby, submit their Strong Opposition, in connection with the Lawrence County Board of Commissioner's request to provide comments at the May 13, 1987 public meeting held in Deadwood, South Dakota. These comments concern the application for a land use permit from Lawrence County and a mining/processing permit from the State of South Dakota. The Applications were filed by St. Joe Gold Corporation (St. Joe) on March 24, 1987 for their proposed Richmond Hill Project, located in Sections 10, 11, 14, 15, 22, 23, 26, and 35, R2E, T6N, of Lawrence County, South Dakota.

ST. JOE'S PROPOSAL

1. St. Joe proposed to mine and process 1.8 million tons of material per year (maximum of 24 million tons over the 10 year life of the project) from the deposits of Richmond Hill and Turnaround by HEAP LEACHING process. This method of processing involves stacking ore upon an impervious pad and percolating a dilute solution of sodium cyanide through the pile. The metal bearing solution that flows out of the heap ore is collected in impervious ponds and pumped to a metal precious recovery plant. After passing through the plant, the solution is chemically adjusted and recycled back to the heap.

2. The physical aspects of St. Joe's proposed HEAP LEACHING process includes an ore heap and leach pad where the cyanide solution is sprayed over the

pile* (located in the western part of Section 14 and the eastern part of Section 15 consisting of 64 acres). The output from the leach pads is pumped to a "pregnant pond", and then processed in the recovery facilities. After recovery, the solutions are pumped to a barren pond where some of the solution is recycled back to the ore heap. Also proposed are storm water containment ponds located in Sections 14 and 15. These proposed ponds consist of 16 acres of land. Excess waste barren solutions from the barren pond and water from the storm water ponds are then pumped to a chlorination facility including a chlorine treatment pond (100,000 gallon capacity). The surplus solutions are then pumped to a "land application area" to be sprayed over 46 acre area located in the southwest part of Section 11 and the northwest part of Section 14.

3. St. Joe's application proposes the establishment of the "Land application Area" to dispose of polluted waste from ore processing facilities and to dispose of runoff in excess of that which could not be safely stored in the storm water containment ponds. The chlorine treatment plant capacity of approximately one million gallons** a day would then be disposed of by spraying the solutions which contain many toxic metals over the 46 acre site. St. Joe's "Recommend Land Application Rates" (Table 2-12) identifies some of these elements as follows covering the life of the project:

*See Process Flow Hydraulic Profile and Process Schematic, Sheet G-4, Vol IV-2

** Volume IV, Section II, System Requirements and Preliminary Design Criteria, page 2-15

<u>Metals</u>	<u>pounds per acre</u>
Arsenic	2.9
Fluoride	14.60
Mercury	.29
Cyanide	5.83
Lead	150
Chloride	29,190
Sulfate	5,838

These values are based on an annual peak spring runoff of 13 million gallons. At the irrigation pumping rate of 200 gallons per minute less than 60 days would be required to dispose of the 13 million gallons. ST. Joe futher ststes: *

"Land application would only be utilized (1) to despose of runoff in excess of that which could not be safely stored _ _ _; (2) following a very unusual rainfall event _ _ _; (3) in late fall to reduce solution inventory prior to winter; (4) in the latter years of the project when total saturation is reached; (5) and during final heap "neutralization and reclamation treatment."

4. St. Joe's sources of water for the processing of the ore would appearently be derived from (1) wells, (2) the proposed storm water containment ponds and (3) recycled solutions from the barren pond. The possible sources of the water** from the wells include (1) infiltration of percipitation and surface runoff into soil and weathered bedrock; (2) stream channel underflow within alluvial deposits; and (3) water in fractured and fault zones of the bedrock formations. Four potential production wells have been developed in the general processing area. -- The depth to ground water ranges from approximately 525 feet in MW-8 at the east edge of the mine area to less than 50 feet in MW-6 at the

* Volume IV, Section II, System Requirements And Preliminary Design Criteria, page 2-19
 ** Volume III, Section II, Physical Environment, page 2-17

extreme north edge of the project area. Also twelve monitoring wells have been installed at the Richmond Hill Project.

REASONS FOR OUR STRONG OPPOSITION

5. The land owners and water users of wells in Section 36, Lawrence County, have three three major concerns in addition to many questions on the proposed Richmond Hill Project. The proposed facilities are located from two to five miles from our land wells plus possible runoff problems into False Bottom Creek and Burno Gulch. These concerns are:

- * contamination of the sources of our wells,
- * loss of the existing flow of our wells due to the lowering of the water table and possible damage to the underground aquifers,
- * destruction of adjacent land and possible harm both short term and long term to our present good and healthy environment,

Thus, we strongly oppose the grant of the land use permit by Lawrence County and the mining/processing permit by the State of South Dakota as presently proposed in the application. We believe it would be in the public ^{interest} not to grant the applications because safeguards have not been proposed to (1) insure the existing quality and flow of our wells; and (2) to insure the present present good and healthy environment of our land as an agriculture and forest area.

6. The existing quality of the wells is very good based on tests made including those made by the South Dakota State Department of Water and Natural Resources and historical use of the wells. In addition the wells, one of which was established as early as 1966, are currently supplying the requirements of the users without shortages or restrictions on usage.

7. Our concerns are not unfounded as water in the Black Hills is a valuable natural resource which is limited. Through the years, wells have dried up and streams and springs have ceased to flow. False Bottom Creek is only one example. It is our understanding that the creek flow was similar to Spearfish Creek and was habited with trout. Apparently, blasting, diversion of the water and periods of low precipitation has resulted in portions of the stream drying up.

DESTRUCTION OF ADJACENT LAND AND
POSSIBLE HARM TO THE ENVIRONMENT

8. ST. JOE in its "Potential" Environmental Impact Analysis *statement* address "Air Resources". Apparently St. Joe is only concern is with dust control and mining-related activities at its project site. Our concerns as they could affect our land and health involve both short term and long term impact of adverse winds and assorption of particles in the atmosphere. To our knowledge and belief St. Joe has not addressed these issues. Some of our questions are:

Are St. Joe's technical proposals adequate to control the chemical fallout from spray carried by winds to our area.

Could the proposed operation cause ^{acid} rain or other adverse air quality for those who live near the project, e.g., dust, changes in natural precipitation, health related problems?

Will anything grow in the land application area after the project is completed?

With the possibility of drought in the area, will the residue of the ponds and the land application area cause unhealthy dust which could be carried by the wind?

What monitoring facilities will be established in and for the protection of adjacent land owners and inhabitants both during and after the proposed operation.

Our air quality is important to life just as the water is essential for drinking and use to raise food. We do not consider our land to be remote from their proposed operation. Because of this fact, and the lack of St. Joe's application to address the potential impact on adjacent land inhabitants. The Application should be DENIED.

9. There are many other questions which have been raised and are also of concern to the land owners and water users in Section 36 of Lawrence County. Some of these are:

What will result when the leach pad, pregnant pond, storm ponds and the chlorine treatment pond develop leaks?

Are their emergency plans for the possible large breach of these ponds?

What is the effect on wildlife currently in the area during the proposed 10 year operation period?

- ° What bonds will be established and with who to insure St. Joe will preform the reclamation of the land and management control of the project?
- ° Will bonds be established to compensate land owners and water users if damage to the wells or air quality occur?

ADEQUATE PUBLIC NOTIFICATION AND
OPPORTUNITY FOR INFORMATION ON
PROPOSED PROJECT.

10. The public has had only one public hearing on the St. Joe proposal, held Wednesday, May 13, 1987. Many statements and questions surfaced in the meeting. Answers in some cases were not available. To insure that the public interest will be served if St. Joe's application is granted, *We* suggest that questions that were raised at the meeting and comments which are filed be allowed to be consided by the public including notifications of meetings and public hearings. Futher, press releases of the issues and conclusions should be made. *We* believe it is important that the public be aware and understand the impact the proposed project ^{and the impact it} could have on our water supplies and on our environment.
11. We therefore respectfully request the Lawrence County Board of Commissioners and the State of South Dakota to deny, as presently filed, St. Joe's Application. Grant of the application, we believe, is not in the public interest. Granting the application, and if the operation is implemented as proposed in the application could only lead to possible loss of water resources, danger to our environment, disputes and law suits against the responsible parties. We do not believe that the short term benefits to the economy is worth the long term effects on the Northern Black Hills.

Dated: May 19, 1987

Respectfully Submitted

Richard M Reid

Richard M. Reid
PO Box 123
Spearfish, SD 57783

Elizabeth Ruff

Elizabeth Ruff
R.R #2
Spearfish, SD 57783

Tony Goodson

Tony Goodson
R.R #2 Box
Spearfish, SD 57783

Michael Gould

Michael Gould
R.R #2 Box
Spearfish, SD 57783

Debera Gould

Debera Gould
R.R #2 Box
Spearfish, SD 57783

Desiree Goodson

Desiree Goodson
R.R #2 Box
Spearfish, SD 57783

Keith Kellogg

Keith Kellogg
R.R #2 Box 448
Spearfish, SD 57783

Lois Kellogg

Lois Kellogg
R.R #2 Box 448
Spearfish, SD 57783

Dorothy Jones

Dorothy Jones
R.R #2 Box 433
Spearfish, SD 57783

(see other side)

KEN CARTER	Spearfish, S.D.	RR2 Box 430A
Fred Carter	SPEARFISH, SD	RR 2 Box 491
Donna S. Carter	Spearfish, S.D.	RR2 Box 491
Donna M. Carter	Spearfish, S.D.	RR2 Box 430A
Michael Kellogg	Spearfish S.D.	RR2 Box 491
Linda K. Kellogg	Spearfish S.D.	RR2 Box 448
Sarah Nelson	Spearfish R.R.	#2 Box 430B
Fred D. Bray	Spearfish S.D.	RR #2 Box 430 BB
ALONG LUBRAY	RR2 Box 430BB	SPEARFISH S.D
Dale Wally	RR2 Box 430D	Spearfish S.D.

OTHER PEOPLE CONCURRING IN THE OPPOSITION

Dated: May 19, 1987

We have read the document concerning the Strong Opposition
to St. Joe Gold Corporation and we concur in the proposal
set forth in the opposition:

Patrick J. Dwyer 333 EVANS LN
SPEARFISH, SD 57183

Larry Kellogg Box 432
RR #2 Spearfish S.D.

Ruth Kellogg Box 434
B.R. Spearfish

Dorella Kellogg Rt #2 Box 432
Spearfish, SD
Box 428-C, RR #2

Norma Pearson Spearfish, SD
Box 428-C RR #2

John Pearson Spearfish, SD 57183

Mary Ellen Kellogg Rt 2 Box 430
Spearfish S.D.
RR #2 Box 430 57183

Don Kellogg Spearfish SD

OTHER PEOPLE CONCURRING IN THE OPPOSITION

We have read the document concerning the Strong Opposition
to St. Joe Gold Corporation and we concur in the proposal
set forth in the opposition:

CHARLES A DODDS
HC 37 BOX 280
LEAD. S.D. 57754
Charles

Janice V. Dodds
HC 37 BOX 280
Lead. S.D. 57754

Joseph H. Kenney
HC-37, Box 277
Lead, S.D. 57754

Mary Kenney
HC 37 BOX 277
Lead SD 57754

OTHER PEOPLE CONCURRING IN THE OPPOSITION

We have read the document concerning the Strong Opposition
to St. Joe Gold Corporation and we concur in the proposal
set forth in the opposition:

John S. McDermott

John McDermott

OTHER PEOPLE CONCURRING IN THE OPPOSITION

We have read the document concerning the Strong Opposition
to St. Joe Gold Corporation and we concure in the proposal
set forth in the opposition:

Billey G. Hudson

SOUTH Dakota Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

February 24, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352



SUBJECT: Automatic Continuance of Hearing on Water Permit
Application No. 1372-1, St. Joe Minerals Corporation

A petition in opposition to Water Permit Application No. 1372-1 and request for automatic continuance of the hearing has been received from Nick Meinhardt on behalf of the Citizens' Law Center. Pursuant to SDCL 46-2A-4 and 46-2A-5, the hearing for Application No. 1372-1 is automatically continued until the May 6 and 7, 1987 Water Management Board meeting. The hearing on Water Permit Application No. 1372-1 will now be held in Room 216, Joe Foss Building, 523 E Capitol, Pierre on May 6, 1987 at 9:15 am.

cc: Nick Meinhardt
Dan Doyle, Assistant Attorney General
Water Management Board
Legislative Oversight Committee

CERTIFICATION

I hereby certify that on February 24, 1987 I have personally deposited with the U.S. Mail postage prepaid envelopes containing Notice pertaining to Automatic Continuance of Hearing on Water Permit Application NO. 1372-1 addressed as stated below:

George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105

Nick Meinhardt
Citizens' Law Center
PO Box 9084
Rapid City SD 57709

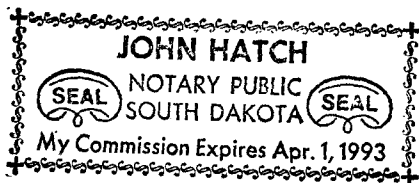
Karen Schlaak

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 24th day of February, 1987.

John Hatch
Notary Public



Citizens' Law Center
P.O. Box 9084
Rapid City, S.D. 57709

February 20, 1987

St. Joe Minerals Corporation
7733 Forsyth Blvd.
Clayton, Mo. 63105

John Hatch, Chief Engineer
S.D. Dept. of Water and Natural Resources
Division of Water Rights
Joe Foss Bldg.
523 E. Capitol St.
Pierre, S.D. 57501



Dear Sirs:

On behalf of the Citizens' Law Center, I hereby petition to intervene in the Water Management Board hearing on application No. 1372-1 by St. Joe Minerals Corporation to appropriate water, and to contest issuance of the requested permit.

On behalf of the Citizens' Law Center, my interest in the application pursuant to SDCL 34A-10-2 is the protection of the State's environment, specifically the State's waters with respect to both quality and quantity; and increasing the opportunity for citizen involvement in decisions affecting the State's environment.

On behalf of the Citizens' Law Center, my opposition to the application is as follows:

1. The application is untimely and inappropriate at this time since no mining operation exists and since no formal permit application has even been made for such an operation.
2. The proposed use is not a beneficial use and not in the public interest.
3. The proposed use is for a purpose and a technology that jeopardizes groundwater and surface water quality.
4. The application does not demonstrate that there is a reasonable probability that the proposed use of the water can be accomplished without unlawful impairment of existing rights.

On behalf of the Citizens' Law Center, I request a continuance or extension of 60 days in order to secure counsel, to review applicant's application and supporting documents on file with the Department and to secure expert witnesses.

Dated this 20th day of February, 1987.

Sincerely,

Nick Meinhardt
Nick Meinhardt
Citizens' Law Center
P.O. Box 9084
Rapid City, SD 57709

Amundson, Fuller & Delaney

ROBERT A. AMUNDSON
A.P. FULLER
JOHN J. DELANEY

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
PHONE (605) 584-2440

April 3, 1987



Mr. John Hatch
South Dakota Department of
Water and Natural Resources
Water Rights Division
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Re: St. Joe Gold
Application No. 1372-1

Dear Mr. Hatch:

Enclosed please find St. Joe's Interrogatories and Request for Production of Documents submitted to Mr. Nick Meinhardt of the Citizen's Law Center. Our records indicate that he is the only person objecting to St. Joe's water application. If any other persons have file written objections we would appreciate being notified so we may serve similar documents on them.

We will be present at the hearing on May 6th. These interrogatories should not delay the hearing. If Mr. Meinhardt can not answer them within the time frame we will be raising no objections. Our calculations indicate that they would be due on the date of the hearing and that is fine with us.

If there are any requests for a continuance or an extension in this matter because of these interrogatories, I wish to advise you that we will waive the formal response time and proceed with the hearing.

Thank you for your attention.

Yours truly,

AMUNDSON, FULLER & DELANEY

A handwritten signature in dark ink, appearing to read "A.P. Fuller".

A. P. Fuller

APF/slc
cc: Dan Doyle
Client

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the	)	
Application of	)	FIRST SET OF INTERROGATORIES
	)	AND REQUEST FOR PRODUCTION
St. Joe Minerals Corporation,	)	OF DOCUMENTS
d/b/a St. Joe Gold,	)	
	)	
Application No. 1372-1.	)	

TO: NICK MEINHARDT:

YOU AND EACH OF YOU WILL PLEASE TAKE NOTICE AND BE ADVISED:

That St. Joe, pursuant to Rule 33 and 34 of the South Dakota Rules of Civil Procedure, and any acts amendatory thereof, demands answers and documents, under oath, to the following written interrogatories and request for production of documents within thirty (30) days of service upon you of said interrogatories and production of documents.

These interrogatories and request for production of documents shall be deemed to be continuing, and, if information is discovered by or becomes known to you or to your attorney or to anyone acting on your behalf after answering the same and before the hearing which would change or add to the answers given, and such additional or supplemental information is not timely furnished to the undersigned, then, and in that event, at the hearing or during the course thereof the undersigned will move the Board for an order suppressing the testimony of undisclosed witnesses and the use of undisclosed evidence should you, or any of you, attempt to use the same.

DEFINITIONS:

A. "You" or "your" means you, your attorney, agents, servants, employees, representatives, private investigators and all other persons acting or purporting to act on behalf of you;

B. As used herein, the term "document" shall mean the original and any copy, regardless of origin or location, of any book, pamphlet, periodical, letter, memorandum, telegram, report, record, study, written note, working paper, chart, paper, index, tape, data sheet, data processing card, or any other written, recorded, transcribed, punched, taped, filmed, or graphic material, however produced or reproduced, to which you have or

have had access.

C. The terms "identify" or "identification" when used with reference to an individual person, shall mean to state his full name, present position, business affiliation, if know, address, and prior position or affiliation, if no longer connected with you. The terms "identify" or "identification" when used with reference to a document, shall mean to state the date and author or signor, as the case may be, the addressee, the type of document, its present or last known location or custodian and all means of identifying it with sufficient particularity to satisfy the requirements for its inclusion in a motion for its production, pursuant to Rule 34 of the South Dakota Rules of Civil Procedure. If any such document was, but is no longer in your possession or subject to your control, state the disposition which was made of it and the reason for such disposition and the date thereof.

REQUEST AND INTERROGATORY 1. State with particularity the facts upon which you will rely to establish your objections as set forth in your letter of February 20, 1987 that St. Joe's Application No. 1372-1 is untimely.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection.
- B. Identify all document(s) written you have to support this objection.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 2. State with particularity the facts upon which you will rely concerning your objection that St. Joe's Permit Application No. 1372-1 is inappropriate.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection
- B. Identify all written document(s) you have to support this objection.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 3. State with particularity the facts upon which you will rely to establish your objection that the proposed use for the Water Under Application No. 1372-1

is not a beneficial use.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection.
- B. Identify all written document(s) you have to support this objection.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

INTERROGATORY 4. State with particularity the facts upon which you will rely to establish that the proposed use of the Water Under Application No. 1372-1 is not in the public interest.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 5. State with particularity the facts upon which you will rely concerning your objections that the proposed use is for a purpose that jeopardizes ground water.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 6. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a purpose that jeopardizes ground water quality.

- A. Identify by name, address and phone number all who have

knowledge and/or information concerning these facts.

- B. Identify all written document(s) you have to support these facts?
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 7. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a technology which jeopardizes ground water.

- A. Identify by name, address and phone number of all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 8. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a technology which jeopardizes surface water quality.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 9. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a purpose that jeopardizes surface water.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.

- B. Identify all written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 10. State with particularity the facts upon which you will rely to establish your objections that the proposed use is for a purpose that jeopardizes surface water quality.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 11. State with particularity the facts upon which you will rely to establish your objections that the proposed use is for a technology that jeopardizes surface water.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 12. State with particularity the facts upon which you will rely to establish your objections that the proposed use is for a technology that jeopardizes surface water quality.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those

having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 13. State with particularity the facts upon which you will rely to demonstrate that there is a reasonable probability that the proposed use of the water under Application No. 1372-1 can not be accomplished without unlawful impairment of existing rights.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 14. State with particularity the facts upon which you will rely to establish what existing rights now exist.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings?

REQUEST AND INTERROGATORY 15. State with particularity the law or other authority that you will rely upon to establish that St. Joe's Application No. 1372-1 is untimely and inappropriate.

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- A. Identify by name, address and phone number all who have knowledge and/or information concerning these laws or authority.
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REQUEST AND INTERROGATORY 17. State with particularity the law or other authority that you will rely upon to establish that the proposed use is not in the public interest.

- A. Identify the name, address and phone number all who have knowledge and/or information concerning these laws or authority.
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REQUEST AND INTERROGATORY 18. State with particularity the law or other authority that you will rely upon to establish that the proposed use is for a purpose and a technology that jeopardizes ground water and surface water quality.

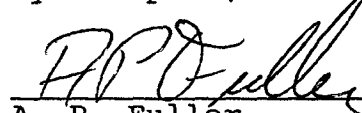
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REQUEST AND INTERROGATORY 19. State with particularity

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- A. Identify the name, address and phone number all who have knowledge and/or information concerning these laws or authority.
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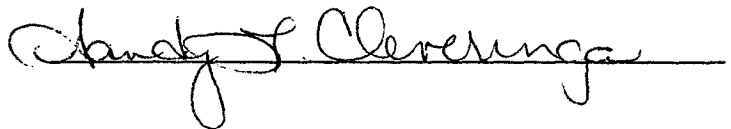
DATED this 3 day of April, 1987.



A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and first class mail, postage prepaid on the 3rd day of April, 1987.



STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the	)	
Application of	)	FIRST SET OF INTERROGATORIES
	)	AND REQUEST FOR PRODUCTION
St. Joe Minerals Corporation,	)	OF DOCUMENTS
d/b/a St. Joe Gold,	)	
	)	
Application No. 1372-1.	)	

TO: NICK MEINHARDT:

YOU AND EACH OF YOU WILL PLEASE TAKE NOTICE AND BE ADVISED:

That St. Joe, pursuant to Rule 33 and 34 of the South Dakota Rules of Civil Procedure, and any acts amendatory thereof, demands answers and documents, under oath, to the following written interrogatories and request for production of documents within thirty (30) days of service upon you of said interrogatories and production of documents.

These interrogatories and request for production of documents shall be deemed to be continuing, and, if information is discovered by or becomes known to you or to your attorney or to anyone acting on your behalf after answering the same and before the hearing which would change or add to the answers given, and such additional or supplemental information is not timely furnished to the undersigned, then, and in that event, at the hearing or during the course thereof the undersigned will move the Board for an order suppressing the testimony of undisclosed witnesses and the use of undisclosed evidence should you, or any of you, attempt to use the same.

DEFINITIONS:

A. "You" or "your" means you, your attorney, agents, servants, employees, representatives, private investigators and all other persons acting or purporting to act on behalf of you;

B. As used herein, the term "document" shall mean the original and any copy, regardless of origin or location, of any book, pamphlet, periodical, letter, memorandum, telegram, report, record, study, written note, working paper, chart, paper, index, tape, data sheet, data processing card, or any other written, recorded, transcribed, punched, taped, filmed, or graphic material, however produced or reproduced, to which you have or

have had access.

C. The terms "identify" or "identification" when used with reference to an individual person, shall mean to state his full name, present position, business affiliation, if know, address, and prior position or affiliation, if no longer connected with you. The terms "identify" or "identification" when used with reference to a document, shall mean to state the date and author or signor, as the case may be, the addressee, the type of document, its present or last known location or custodian and all means of identifying it with sufficient particularity to satisfy the requirements for its inclusion in a motion for its production, pursuant to Rule 34 of the South Dakota Rules of Civil Procedure. If any such document was, but is no longer in your possession or subject to your control, state the disposition which was made of it and the reason for such disposition and the date thereof.

REQUEST AND INTERROGATORY 1. State with particularity the facts upon which you will rely to establish your objections as set forth in your letter of February 20, 1987 that St. Joe's Application No. 1372-1 is untimely.

A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection.

B. Identify all document(s) written you have to support this objection.

C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 2. State with particularity the facts upon which you will rely concerning your objection that St. Joe's Permit Application No. 1372-1 is inappropriate.

A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection

B. Identify all written document(s) you have to support this objection.

C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 3. State with particularity the facts upon which you will rely to establish your objection that the proposed use for the Water Under Application No. 1372-1

is not a beneficial use.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning this objection.
- B. Identify all written document(s) you have to support this objection.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

INTERROGATORY 4. State with particularity the facts upon which you will rely to establish that the proposed use of the Water Under Application No. 1372-1 is not in the public interest.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 5. State with particularity the facts upon which you will rely concerning your objections that the proposed use is for a purpose that jeopardizes ground water.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify written document(s) you have to support these facts.
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REQUEST AND INTERROGATORY 6. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a purpose that jeopardizes ground water quality.

- A. Identify by name, address and phone number all who have

knowledge and/or information concerning these facts.

- B. Identify all written document(s) you have to support these facts?
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

REQUEST AND INTERROGATORY 7. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a technology which jeopardizes ground water.

- A. Identify by name, address and phone number of all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
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REQUEST AND INTERROGATORY 8. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a technology which jeopardizes surface water quality.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
- B. Identify all written document(s) you have to support these facts.
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REQUEST AND INTERROGATORY 9. State with particularity the facts upon which you will rely to establish your objection that the proposed use is for a purpose that jeopardizes surface water.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.

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- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
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REQUEST AND INTERROGATORY 13. State with particularity the facts upon which you will rely to demonstrate that there is a reasonable probability that the proposed use of the water under Application No. 1372-1 can not be accomplished without unlawful impairment of existing rights.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
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REQUEST AND INTERROGATORY 14. State with particularity the facts upon which you will rely to establish what existing rights now exist.

- A. Identify by name, address and phone number all who have knowledge and/or information concerning these facts.
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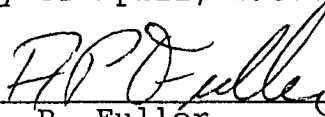
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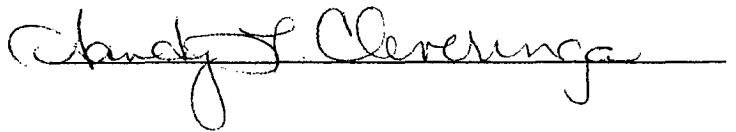
DATED this 3 day of April, 1987.



A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

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The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and first class mail, postage prepaid on the 3rd day of April, 1987.



STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the	)	
Application of	)	FIRST SET OF INTERROGATORIES
	)	AND REQUEST FOR PRODUCTION
St. Joe Minerals Corporation,	)	OF DOCUMENTS
d/b/a St. Joe Gold,	)	
	)	
Application No. 1372-1.	)	

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These interrogatories and request for production of documents shall be deemed to be continuing, and, if information is discovered by or becomes known to you or to your attorney or to anyone acting on your behalf after answering the same and before the hearing which would change or add to the answers given, and such additional or supplemental information is not timely furnished to the undersigned, then, and in that event, at the hearing or during the course thereof the undersigned will move the Board for an order suppressing the testimony of undisclosed witnesses and the use of undisclosed evidence should you, or any of you, attempt to use the same.

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have had access.

C. The terms "identify" or "identification" when used with reference to an individual person, shall mean to state his full name, present position, business affiliation, if know, address, and prior position or affiliation, if no longer connected with you. The terms "identify" or "identification" when used with reference to a document, shall mean to state the date and author or signor, as the case may be, the addressee, the type of document, its present or last known location or custodian and all means of identifying it with sufficient particularity to satisfy the requirements for its inclusion in a motion for its production, pursuant to Rule 34 of the South Dakota Rules of Civil Procedure. If any such document was, but is no longer in your possession or subject to your control, state the disposition which was made of it and the reason for such disposition and the date thereof.

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C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

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is not a beneficial use.

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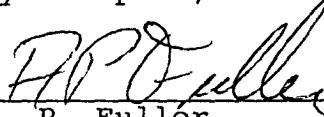
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- B. Identify all document(s) you have to support these laws or authority?
- C. Provide the name, address and phone number of all those having possession of any written information, document(s) and/or evidence and the time and date that St. Joe may view, review and copy such writings.

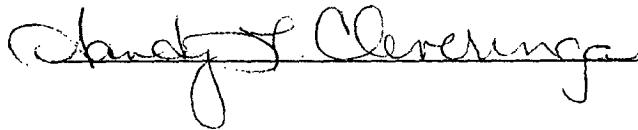
DATED this 3 day of April, 1987.



A. P. Fuller
Amundson, Fuller & Delaney
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Nick Meinhardt, Citizen's Law Center, P. O. Box 9084, Rapid City, SD 57709, by certified mail, return receipt requested and first class mail, postage prepaid on the 3rd day of April, 1987.





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

April 6, 1987

Nick Meinhardt
Citizens Law Center
PO Box 9084
Rapid City SD 57709

Dear Mr. Meinhardt:

Enclosed is the information you requested during our phone conversation on April 2, 1987.

1. Two Hydro-Search studies - "Monitoring Well Installation" and "Process Water Supply and Water Appropriation" for the Richmond Hill Project.
2. A copy of the 14 applications originally submitted for each individual well.

The cost is \$0.04 (315 copies) = \$12.60.

Please contact us if you have any further questions.

Sincerely,

A handwritten signature in cursive script that reads "Ron Duvall".

RON DUVALL
Natural Resources Engineer

RD:ks

enclosures

April 13, 1987

Mr. George Obeldobel
St. Joe American Corporation
7733 Forsyth Boulevard
Clayton, MO 63105

Dear Mr. Obeldobel:

With regard to the large scale mining permit application for the Richmond Hill Mining Project which was filed by St. Joe with the Department of Water and Natural Resources on April 2, 1987, be advised the Department will not consider the application complete until such time as we have from Lawrence County the declaration of intent referred to by SDCL 45-6B-4. Therefore, the Notice of Filing required to be prepared by the Department and published by the applicant (St. Joe) will not be provided to St. Joe until such time as evidence supporting Lawrence County's intent on St. Joe's variance request has been submitted.

This decision is based both on SDCL 45-6B-4 which states that "...the board of minerals and environment may not grant a permit in violation of city, town or county zoning or subdivision regulations unless a prior declaration of intent to change or waive the prohibition is obtained by the applicant from the affected government subdivisions..." and on the motion of the Board of Minerals and Environment at the August 16, 1985, meeting on Wharf Resources' Foley Ridge Project as follows: "Motion...to dismiss the Wharf application (without prejudice) for the large scale mining permit on grounds of jurisdictional issues due to lack of zoning approval." The remainder of the application is under review, and if further omissions/inadequacies are found, you will receive prompt notification. We feel this is the only action that can be taken consistent with the Board's August 16 decision.

Should you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

John J. Smith
Secretary
Department of Water and Natural Resources

cc: Jim Nelson
Roxanne Giedd

Amundson, Fuller & Delaney

ROBERT A. AMUNDSON
A.P. FULLER
JOHN J. DELANEY

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
PHONE (605) 584-2440

April 17, 1987



Mr. John Hatch
South Dakota Department of
Water and Natural Resources
Water Rights Division
Joe Foss Building
523 East Capitol
Pierre, SD 57501

Re: St. Joe Gold
Application No. 1372-1

Dear Mr. Hatch:

Enclosed please find St. Joe's Resistance to
Intervenor's Motion for Continuance.

A copy of this letter is going to Mr. Guhin, Mr. Doyle,
Mr. Richards and Mr. Karaganis. As to them this is intended as
service by mail.

Respectfully yours,

AMUNDSON, FULLER & DELANEY

A.P. Fuller
A. P. Fuller

APF/slc

Enc.

cc: Mr. Guhin
Mr. Dan Doyle
Mr. Reed Richards
Mr. Joe Karaganis

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION

In the Matter of the	)	
Application of	)	
	)	
St. Joe Minerals Corporation,	)	RESISTANCE TO MOTION
d/b/a St. Joe Gold,	)	FOR CONTINUANCE
	)	
Application No. 1372-1.	)	

Comes now, Applicant above named, and resists Intervenor's Motion for Continuance for the following reasons and for the following grounds.

1. St. Joe's Application No. 1372-1 was submitted in December of 1986, applying for a permit to appropriate water for industrial uses. This permit was examined by the Water Rights Division and found to comply with the South Dakota Water Laws and applicable rules as per the letter of Ron Duvall of the Water Rights Division.

2. On December 5, 1986, John Hatch, Chief Engineer, of the Water Rights Division recommended a deferral of this application upon complete information on the proposed mining and heap leach project being provided. During the week of April 6th the entire Surface Mine Land Reclamation Act Permit was filed with the Department of Water and Natural Resources. As Mr. Hatch pointed out, the Water Management Board had no jurisdiction in regards to mining permits, but the Water Management Board did have a public interest responsibility in granting water permits. Since the Surface Mine Land Reclamation Act Permit application has been filed, all of the public interest responsibilities and

the water quality responsibilities have been addressed.

3. On February 24, 1987, St. Joe received a notice from the Water Rights Division through John Hatch, Chief Engineer, that a Petition In Opposition to the water permit Application No. 1372-1 was filed and a request for an automatic continuance of the hearing had been received. Under SDCL 46-2A-4 and 46-2A-5 the hearing was automatically continued until May 6 and 7, 1987, before the Water Management Board.

4. The original hearing was scheduled to be held on March 4, 1987. The Intervenor received a sixty day continuance. This is three times longer than the minimum continuance authorized by statute.

5. The Citizens Law Center filed their objections on February 20, 1987. Intervenor specifically requested a continuance for sixty days in order to "secure counsel, review Applicant's Application and supporting documents and to secure expert witnesses".

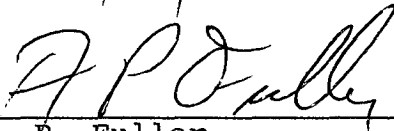
6. Now Intervenor requests an additional continuance because they need time to review the Application and to look at heap leaching as a mining concept. All of these matters were reasons in February for the sixty day continuance. There is no new showing presented by Citizens Law Center to justify a further continuance.

7. Intervenor is now asking for a continuance to allow for various discovery. No discovery was initiated at all since February 20th and was only served upon St. Joe on the 16th of

April, 1987. St. Joe will meet the deadline and have the requested information available prior to the hearing. Further, St. Joe will have persons available for Citizens Law Center to depose on May 5th. The St. Joe discovery should not hold up this hearing.

8. St. Joe will also waive its rights to require Intervenor to serve its answers to St. Joe's interrogatories. A deposition is scheduled for Mr. Meinhardt for the afternoon of May 4, 1987. St. Joe will be able to inquire of Mr. Meinhardt at that time which will be sufficient time to prepare for the hearing on May 6th.

DATED this 17 day of April, 1987.



A. P. Fuller
AMUNDSON, FULLER & DELANEY
P. O. Box 898, 203 W. Main
Lead, SD 57754
(605) 584-2440

KARAGANIS & WHITE LTD.

ATTORNEYS AT LAW

414 NORTH ORLEANS STREET-SUITE 810

CHICAGO, ILLINOIS 60610

(312) 836-1177

JOSEPH V. KARAGANIS
A. BRUCE WHITE
BARBARA ANNE MAGEL
KATHLEEN M. DONAHUE
ELLEN LOIS ZISOOK

April 27, 1987



Mr. Ron Duvall
Department of Water and Natural Resources
Water Rights Division
523 East Capital
Joe Foss Building
Pierre, South Dakota 57501

**RE: St. Joe Minerals Corporation Water Use Permit Application -
Refiling of Appearances and Motion for Continuance**

Dear Mr. Duvall:

Enclosed please find copies of Appearances and a Motion for Continuance of the Hearing on the above referenced application for a water use permit. As we discussed in our phone call of this date, signed copies of each of these documents were originally transmitted to our local counsel for filing on April 13, 1987. Mr. Fuller has responded to the Motion for Continuance and stated that he will respond to various discovery requests on behalf of St. Joe Minerals Corporation, so I am sure that St. Joe's counsel did receive their copies. Also enclosed is a response to St. Joe Minerals' opposition to the Motion for a Continuance for filing with the Board.

If you have any questions with respect to these filings, please let me know. I appreciate the Board's consideration.

Very truly,

Joe Karaganis
Joseph V. Karaganis

Enclosures

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD

In The Matter Of The Application Of:

ST. JOE MINERALS CORPORATION,
d/b/a ST. JOE GOLD

Application No. 1372-1



FIRST SET OF INTERROGATORIES
DIRECTED TO ST. JOE MINERALS CORPORATION

NOW COMES Intervenor, CITIZENS' LAW CENTER, in the above captioned matter and, pursuant to Rule 33 of the South Dakota Rules of Civil Procedure and any acts amendatory thereof, hereby requests the Applicant, ST. JOE MINERALS CORPORATION d/b/a ST. JOE GOLD, to respond in writing to the following written Interrogatories within thirty (30) days of service upon it of said interrogatories.

Definitions

In construing and responding to the following interrogatories the following words, unless otherwise indicated, shall have the following meanings:

1. "Person" means a natural person.
2. "Mine" means the Richmond Hill Project described in Water Appropriation Permit Application No. 1372-1.
3. "Documents" means the originals (or any copies when originals are not available), and any non-identical copies (whether different from the originals because of notes, underlines or highlighting made on such copies or otherwise), of writings or recordings of every kind and description, whether made by hand or by mechanical, electronic, microfilm, photographic or other means, and including, but not limited to, plans, blueprints, drawings, specifications, shop drawings, engineering drawings, photographs,

change orders, studies, analyses, data printouts, investigatory reports, expert memoranda or reports, test results, field notes, comments, correspondence of any kind, invoices, receipts, bills, statements, memoranda, diary notations, notes, contracts, cooperative agreements, books, pamphlets, manuals, bulletins, directives, policies, instructions, computer or business machine printouts, recorded recollections, and any other written, recorded, drawn, photographed, or reproduced material.

4. "Relate," "relating to" or "in relation to" means constituting, defining, concerning, embodying, reflecting, identifying, describing, stating, referring to, dealing with, or in any way pertaining to in whole or in part.

5. "And" as well as "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of these interrogatories any information which might otherwise be construed to be outside their scope.

6. The term "pollutant" means dredged spoil, solid wastes, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water. This term does not mean (A) "sewage from vessels" within the meaning of section 312 of the Federal Water Pollution Control Act; or (B) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in the degradation of ground or surface water resources.

7. "Hazardous substance" means (A) any substance designated pursuant to section 311(b)(2)(A) of the Federal Water Pollution Control Act, (B) any element, compound, mixture, solution, or substance designated pursuant to section 102 of said Act, (C) any hazardous waste having the characteristics identified under or listed

pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress), (D) any toxic pollutant listed under section 307(a) of the Federal Water Pollution Control Act, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act, and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Instructions

1. As used herein, "state all facts" or "describe" shall mean to state all facts discoverable under Rule 26 of the South Dakota Rules of Civil Procedure that are known to Applicant, its agents and attorneys.
2. "Identify," when used in reference to a document, means to state:
 - (a) the nature or types of document;
 - (b) a brief description of its contents;
 - (c) the name, business address, job title and responsibilities of the author and of each person who has made any notation thereon, or has signed or initialed the document;
 - (d) the date of the document;
 - (e) the name, business address, job title and responsibilities of each recipient and designated recipient of the document or any copy thereof;

- (f) the name, business address, job title and responsibilities of any person who now has (or is last known to have had) possession, custody or control of document; and
- (g) whether Applicant will claim the document as privileged or otherwise not a proper subject of discovery, and the legal or factual basis for any such claim.

3. "Identify," when used in reference to a:

- (a) person, means to state the person's full name, present or last known business and home addresses and telephone numbers, employer, or business or professional affiliation, job title, position or vocation;
- (b) business entity, means to state its full name, form of the business, whether a partnership, corporation or other, the address of its principal office or of business and the telephone number.

4. Use of documents in place of an answer. Whenever a full and complete answer to any interrogatory or part of an interrogatory is contained in a document or documents, the documents, if appropriately identified as answering a specific numbered interrogatory or part of an interrogatory, may be supplied in place of a written answer. Where anything has been deleted from a document produced in response to an interrogatory:

- (a) specify the nature of the material deleted;
- (b) specify the reason for the deletion; and
- (c) identify the person responsible for the deletion.

5. Sources of information. In answering these interrogatories every source of information to which Applicant has access should be consulted, regardless of whether the source is within Applicant's immediate possession or control. All documents or other information in the possession of experts or consultants should be consulted.

6. **Partial answers.** If any interrogatory cannot be answered fully, as full an answer as possible should be provided. State the reason for your inability to answer fully, and give any information, knowledge or belief Applicant has regarding the portion unanswered.

7. **Supplemental answers.** These interrogatories are continuing: supplemental answers must be filed pursuant to South Dakota Rules of Civil Procedure 26(c) between the date these interrogatories are answered and the time of trial.

8. **Claim of privilege.** If objection is made to answering any interrogatory or disclosing the substance of any document on the basis of any claim of privilege, Applicant is requested to specify in writing the nature of such information, along with the factual and legal nature of the privilege claimed.

Interrogatories

1. Describe with particularity each and every groundwater recharge source impacting the groundwater to be appropriated for the proposed Richmond Hill Project. Include in that description:

- a. an identification of the source,
- b. quantity of recharge,
- c. the aquifer recharged,

2. Identify the total quantity, by gallonage and by acre/feet, of groundwater to be withdrawn each year, by year, for the proposed Richmond Hill Project.

3. Describe with particularity each and every planned or potential discharge point to surface water from the proposed Richmond Hill Project. Include in that description :

- a. the source of the discharge,
- b. the location of the discharge,
- c. the nature of the discharge,

- d. the water quality of the discharge,
 - e. the volume of the discharge and
 - f. whether the discharge is continuous or periodic,
4. Describe with particularity any and all spill prevention and countermeasure plans developed for the proposed Richmond Hill Project.
5. Describe with particularity each and every design feature intended to prevent or contain spills suggested, reviewed or included in the planned construction specifications for the Richmond Hill Project.
6. Describe with particularity any spills of cyanide solution, whether pregnant or barren, experienced at any St. Joe Minerals Corporation heap or vat leach mining operation. Include in that description:
- a. the date of the spill,
 - b. the mine at which the spill occurred,
 - c. the location of that mine,
 - d. the quantity spilled,
 - e. the composition of the material or solution spilled,
 - f. any environmental impacts resulting from the spill, and
 - g. any remedial or corrective measures taken following the spill.
7. Describe with particularity all contaminants, pollutants, or hazardous substances which St. Joe Minerals Corporation has found or anticipates finding in heap or vat leach operation solutions or discharges, whether planned or accidental, operated or proposed for construction in Lawrence County, South Dakota.
8. Describe with particularity each and every sediment or suspended solids reduction or control methodology suggested, reviewed or included in the proposed operational details for the proposed Richmond Hill Project.
9. Describe with particularity each and every geologic layer or feature existing below the proposed Richmond Hill Project site. Include in those descriptions

- a. the nature of the features,
- b. the depth from the surface,
- c. the thickness,
- d. the locations of each feature in relation to others identified,
- e. location of any groundwater
- f. the locations of groundwater divides, and
- g. the relation of each feature identified to the Greenhorn Formation.

10. Describe with particularity the location and construction of each liner system suggested, reviewed or planned for installation at the proposed Richmond Hill Project.

11. Describe with particularity each and every leachate collection or control system suggested, reviewed or included in the planned construction of the proposed Richmond Hill Project.

12. Describe with particularity all emissions to air of any toxicant, particulate, pollutant or contaminant which may occur from the proposed Richmond Hill Project if it becomes operational. Include in those descriptions:

- a. the source of the emission,
- b. the substance(s) emitted,
- c. whether the emission is the result of normal operations or upset conditions,
- d. any contingency plans or procedures developed with respect to air emissions,
- e. any remedial or corrective actions taken as a result of air emissions and
- f. any actual or potential environmental impact of air emissions.

13. Describe with particularity all surface drainage and diversion systems suggested, reviewed or included in the construction plan for the proposed Richmond Hill Project. Include in those descriptions:

- a. construction details for any ditches to be used,
- b. construction details for any ponds or settling basins to be used,
- c. construction details for any piping to be used, and
- d. construction and location details for any discharge points.

14. Describe with particularity each and every containment or overflow pond to be constructed at the proposed Richmond Hill Project. Include in those descriptions:

- a. details of any liners to be used,
- b. location of each pond,
- c. size and capacity of each pond,
- d. connections of each pond to other elements of the heap leach operation and other containment ponds,
- e. and discharge points from each pond.

15. Describe with particularity each and every well to be used for extraction of groundwater for the proposed Richmond Hill Project. Include in those descriptions:

- a. the well location,
- b. well depth,
- c. well screen depth,
- d. drilling method to be used,
- e. well construction materials to be used, and
- f. details of the connection of each and every well to the heap leach process.

16. Describe with particularity the design for the construction of each heap and each heap leach pad to be used at the proposed Richmond Hill Project. Include in those descriptions:

- a. any liners,
- b. curbing,
- c. leachate collection systems,
- d. sprinkler systems,
- e. heap lifts,
- f. ripping systems and equipment, and
- g. drainage systems for each heap.

17. Describe with particularity each and every fact and identify each and every document which in whole or in part supports the statements made in Applicant's memorandum dated January 12, 1987, entitled *Memorandum Regarding Water Issues for Zoning Permit Application*, to wit: "The Richmond Hill mine area is located in a topographic saddle, with a restricted ground surface area lying upland from the mine. ... This topographic position limits the effect of mining activities on surface water runoff and ground-water recharge."

18. Describe with particularity each and every fact and identify each document which in whole or in part supports the statement in St Joe Minerals Corporation's memorandum dated January 12, 1987, entitled *Memorandum Regarding Water Issues for Zoning Permit Application* to wit: "The processing area is closely bounded on all sides by topographic and ground-water drainage divides."

19. Describe with particularity each and every mine site reclamation provision or plan, suggested, reviewed or included in proposals or permit applications for the Richard Hill Project. Include in those descriptions:

- a. area of land to be reclaimed;
- b. methods of reclamation;
- c. level or type of use for land after reclamation; and
- d. financial mechanisms in place to assure adequate funding for reclamation.

20. Identify each person answering these interrogatories and all other persons who participated in the preparation of the answers: include a delineation of each specific interrogatory each person answered or participated in answering.

21. Identify each person who has or claims to have personal knowledge of St Joe Minerals Corporation's heap leach gold mining operations or planned operations in the Black Hills region of South Dakota.

22. Identify each person with whom St. Joe Minerals Corporation, d/b/a St. Joe Gold anticipates or plans to call as an expert witness at the hearing on Permit Application 1372-1.

CITIZENS' LAW CENTER,
Intervenor

By _____
One of its attorneys

Reed Richards
Richards & Richards
Box 373
Deadwood, South Dakota 57732

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCIT005

CERTIFICATE OF SERVICE

I, Reed Richards, hereby certify that I served the foregoing **FIRST SET OF INTERROGATORIES DIRECTED TO ST. JOE MINERALS CORPORATION** on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on _____, 1987, and addressed below:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Reed Richards

JWCIT005

**STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD**

In The Matter Of The Application Of:

ST. JOE MINERALS CORPORATION,
d/b/a ST. JOE GOLD

Application No. 1372-1



**INTERVENOR CITIZENS' LAW CENTER'S
FIRST REQUEST FOR PRODUCTION OF DOCUMENTS**

NOW COMES Intervenor, **CITIZENS' LAW CENTER**, by its attorney, and pursuant to Rule 15-6-34 of the South Dakota Rules of Civil Procedure, hereby requests Applicant, **ST. JOE MINERALS CORPORATION d/b/a ST. JOE GOLD**, to produce and permit this Intervenor to inspect, copy or photograph each of the following documents to the extent that such documents are in the possession, custody or control of Applicant, its agencies or contractors. Production is requested within thirty (30) days after service of this Request at the offices of Richards & Richards, Box 373, Deadwood, South Dakota 57732.

Definitions

In construing and responding to the following requests for documents, the following words, unless otherwise indicated, shall have the following meanings:

1. "Documents" means the originals (or any copies when originals are not available), and any non-identical copies (whether different from the originals because of notes, underlines or highlighting made on such copies or otherwise), of writings or recordings of every kind and description, whether made by hand or by mechanical, electronic, microfilm, photographic or other means, and including, but not limited to, plans, blueprints, drawings, specifications, shop drawings, engineering drawings, photographs,

change orders, studies, analyses; data printouts investigatory reports, expert memoranda or reports, test results, field notes, comments, correspondence of any kind, invoices, receipts, bills, statements, memoranda, diary notations, notes, contracts, cooperative agreements, books, pamphlets, manuals, bulletins, directives, policies, instructions, computer or business machine printouts, recorded recollections, and any other written, recorded, drawn, photographed, or reproduced material.

2. "Relate," "relating to" or "in relation to" means constituting, defining, concerning, embodying, reflecting, identifying, describing, stating, referring to, dealing with, or in any way pertaining to in whole or in part.

3. "And" as well as "or" shall be construed either disjunctively or conjunctively as necessary to bring within the scope of these requests any information which might otherwise be construed to be outside their scope.

Instructions

1. Sources of documents. In responding to this request, every source of information to which Applicant has access should be consulted, regardless of whether the source is within Applicant's immediate possession or control. All documents or other information in the possession of Applicant's experts or consultants should be consulted.

2. Documents no longer in possession, custody or control. If any document requested is no longer in the possession, custody or control of Applicant, state:

- (a) what was done with the document;
- (b) when such disposition was made;
- (c) the identity, address and phone number of the current possessor or custodian of the document;
- (d) the identity, address and phone number of the person who made the decision to dispose of or transfer the document; and
- (e) the reasons for the disposition or transfer of the document.

3. Deletions from documents. Where anything has been deleted from a document produced in response to a request:

- (a) describe the nature of the material or information deleted;
- (b) specify the reason(s) for the deletion; and
- (c) identify the person responsible for the deletion.

4. Claim of privilege. If objection is made to the production of any document or section of a document on the basis of a claim of privilege, Applicant is requested to specify in writing the nature of such documents or sections, along with the nature of the privilege claimed so that the Water Management Board ("Board") may rule on the propriety of Applicant's objection to production. Applicant should state:

- (a) title or nature of the document or section;
- (b) type of document (i.e., report, memoranda, correspondence, contract, etc.);
- (c) author or sender of the document or section;
- (d) date of the document or section;
- (e) name of each person to whom the original or a copy was shown or circulated;
- (f) names appearing on any circulation or sign-off list relating to the document;
- (g) basis on which the privilege is claimed; and
- (h) summary statement of the content or subject matter of the document or section in sufficient detail to enable the Board to rule on the propriety of Applicant's objection to production.

5. Supplemental production. This request is continuing in nature; Applicant's response must be supplemented if Applicant obtains additional or different documents between the date of its initial production and the time of trial.

6. Inability to produce documents. Whenever Applicant is unable to produce requested documents, Applicant should describe all steps taken to identify and locate any responsive documents.

7. Relation to particular requests. For each document produced, indicate to which specific numbered request or requests it responds.

Requests for Production

1. Any and all documents which in whole or in part were identified or relied upon in responding to Intervenor's First Set Of Interrogatories.

2. Any and all documents which in whole or in part relate to the proposed design of the Richmond Hill Project, including heaps, pads, liners, leachate collection, ponds, diversion systems, and treatment systems.

3. Any and all documents which in whole or in part relate to proposed reclamation activities, including disposal of heap and any waste materials for the Richmond Hill Project site, including pond closure provisions and mining waste disposal plans.

4. Any and all documents which in whole or in part relate to well logs or boring logs for any wells within a six-mile radius of the Richmond Hill Project site.

5. Any and all document which in whole or in part relate to spill or accident reports or incidents at heap or vat leach operations in the Black Hills or at other St. Joe Minerals Corporation's leach mines.

6. Any and all documents which in whole or in part relate to discharges or releases to ground, groundwater or surface water from heap or vat leach mining operations in the Black Hills of South Dakota or at any St. Joe Minerals Corporation's heap or vat leaching mine operation.

7. Any and all documents which in whole or in part relate to emergency or contingency plans for handling or responding to unexpected or accidental incidents, spills, discharges or releases at heap or vat leach mining operations in the Black Hills or

St. Joe Minerals Corporation's heap or vat leach mining operations, including, but not limited to, the proposed Richmond Hill Project.

8. Any and all documents which in whole or in part relate to hydrogeology studies or investigations of the Lawrence County area of South Dakota.

9. Any and all documents which in whole or in part relate to surface water use or quantity in and around Lawrence County area of South Dakota.

10. Any and all documents which in whole or in part relate to groundwater quantity, quality and use of the Lawrence County area of South Dakota.

11. Any and all documents which in whole or in part relate to ground or surface water sampling data or results for waters in and around Lawrence County, South Dakota.

12. Any and all documents which in whole or in part relate to emissions to air, whether anticipated, planned or accidental, from heap or vat leach mining operations in the Black Hills or from St. Joe Minerals Corporation's mining operations, including, but not limited to, the proposed Richmond Hill Project.

13. Any and all documents which in whole or in part relate to existing ground or surface water use appropriation permits or rights in and around Lawrence County, South Dakota.

14. Any and all photographs or maps depicting the proposed Richmond Hill Project.

15. Any and all documents which in whole or in part relate to leachate collection systems, leachate treatment, storage or disposal proposed for the Richmond Hill Project or at use at other heap or vat leach gold mining operations.

16. Any and all documents which in whole or in part relate to land application of wastes from heap or vat leach gold mining operations in the Black Hills of South Dakota.

17. Any and all documents which in whole or in part relate to suspended solids or sediment control systems or measures suggested, reviewed or planned for the proposed Richmond Hill Project.

18. Any and all documents which in whole or in part relate to any wildlife or aquatic life surveys performed for or in Lawrence County, South Dakota.

CITIZENS' LAW CENTER,
Intervenor

By _____
One of its attorneys

Reed Richards
Richards & Richards
Box 373
Deadwood, South Dakota 57732

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCIT006

CERTIFICATE OF SERVICE

I, Reed Richards, hereby certify that I served the foregoing INTERVENOR CITIZENS' LAW CENTER'S FIRST REQUEST FOR PRODUCTION OF DOCUMENTS on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on _____, 1987, and addressed below:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Reed Richards

JWCIT006

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1. St. Joe Minerals Corporation d/b/a St. Joe Gold has filed an Application for a Permit to Appropriate Water, Application 1372-1, for a heap leach ore processing facility. The Permit Application seeks the appropriation of .89 cubic feet of groundwater per second for use in the gold mining operation.
2. In accordance with all procedural rules, on February 20, 1987 Citizens' Law Center filed a Petition to Intervene in that permit matter. That petition was granted.
3. As an Intervenor, Citizens' Law Center has and is continuing to review both the Permit Application and other documents respecting gold heap leaching operations. Given the complexity of the public interest issues and the vulnerability of the environment potentially impacted, Citizens' Law Center has invested a significant level of resources in evaluating and researching heap leaching and has retained counsel to represent the public interest in this matter.

4. Citizens' Law Center was not able to retain counsel until April 10, 1987. Prior to that time, St. Joe Minerals Corporation had filed Interrogatories and Production of Document Requests as well as a Notice of Deposition on Citizens' Law Center.

5. In order to adequately present its position, Citizens' Law Center must file various discovery on St. Joe Minerals Corporation. Copies of the Interrogatories, Requests for Production of Documents and Deposition Notice(s) are attached hereto for the Board's information.

6. Pursuant to the South Dakota Rules of Civil Procedure, St. Joe Minerals Corporation is entitled to thirty (30) days in which to respond to the Interrogatories and Production Requests. The hearing on this permit is now scheduled for May 6, 1987, less than thirty days after Citizens' Law Center was able to retain counsel and less than thirty days after discovery could be filed.

WHEREFORE, in order to enable Citizens' Law Center to both properly respond to St. Joe Minerals Corporation's discovery request and receive answers to its own discovery so that it can properly prepare its case, Citizens' Law Center hereby asks for a thirty (30) day continuance of the hearing date.

Respectfully submitted,

CITIZENS' LAW CENTER,
Intervenor

By _____
One of its attorneys

Reed Richards
RICHARDS & RICHARDS
Box 373
Deadwood, South Dakota 57732

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
KARAGANIS & WHITE LTD.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCIT004

CERTIFICATE OF SERVICE

I, Reed Richards, hereby certify that I served the foregoing **MOTION FOR CONTINUANCE OF HEARING DATE** on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on _____, 1987, and addressed below:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Reed Richards

JWCIT004

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD



In The Matter Of The Application Of:)

ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD)

Application No. 1372-1)

MOTION REQUESTING ADMISSION TO PRACTICE LAW

NOW COME Attorneys Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue, members of the law firm of Karaganis & White Ltd., and nonresidents attorneys, seeking admission to practice before the South Dakota Department of Water and Natural Resources, Water Rights Division, Water Management Board, and hereby state the following:

1. The office address of Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue is:

Karaganis & White Ltd.
414 North Orleans
Suite 810
Chicago, Illinois 60610

2. The office address of Reed Richards, the resident attorney, is:

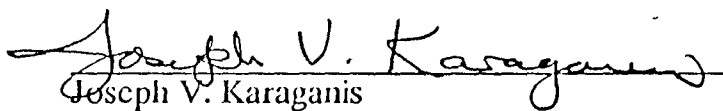
Richards & Richards
Box 373
Deadwood, South Dakota 57732

3. Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue are members in good standing of the Illinois State Bar.

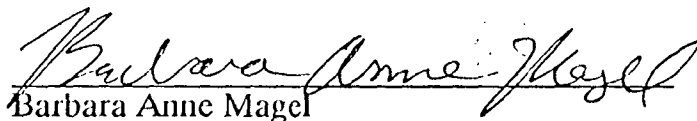
4. Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue have never been the subject of disciplinary action by the Illinois State Bar.

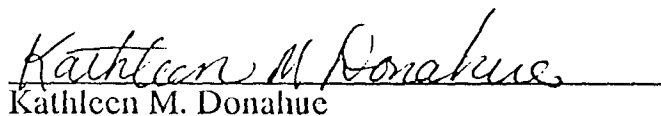
5. Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue have never been denied admission to the courts of any state or to any federal court.

6. Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue are familiar with the rules of the state bar of South Dakota governing the conduct of members of the state bar of South Dakota and will at all times abide by and comply with the same so long as the hearing is pending, and he or she has not withdrawn as counsel therein.


Joseph V. Karaganis


A. Bruce White


Barbara Anne Magel


Kathleen M. Donahue

SUBSCRIBED AND SWORN TO
before me on April 10, 1987.


Notary Public

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD



In The Matter Of The Application Of:)
)
ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD)
)
Application No. 1372-1)

**MOTION BY RESIDENT ATTORNEY TO ADMIT
NONRESIDENT ATTORNEYS TO PRACTICE IN SOUTH DAKOTA**

NOW COMES Reed Richards, Esq., of Richards & Richards, Box 373, Deadwood, South Dakota 57732, admitted to practice in the State of South Dakota, and hereby states that:

Nonresident attorneys Joseph V. Karaganis, A. Bruce White, Barbara Anne Magel and Kathleen M. Donahue are reputable attorneys and he recommends that the above-named attorneys be admitted to practice before the Department of Water and Natural Resources, Water Rights Division, Water Management Board.

Reed Richards, Esq.

**STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD**

<i>In The Matter Of The Application Of:</i>	)	
	)	
ST. JOE MINERALS CORPORATION,	)	
<i>d/b/a ST. JOE GOLD</i>	)	
	)	
Application No. 1372-1	)	MOTION FOR CONTINUANCE OF HEARING DATE

NOW COMES Intervenor, **CITIZENS' LAW CENTER**, by its attorneys, and moves the Water Management Board for a thirty (30) day continuance of the hearing date on the above captioned Permit Application. In support of this motion, Intervenor states as follows:

1. St. Joe Minerals Corporation d/b/a St. Joe Gold has filed an Application for a Permit to Appropriate Water, Application 1372-1, for a heap leach ore processing facility. The Permit Application seeks the appropriation of .89 cubic feet of groundwater per second for use in the gold mining operation.

2. In accordance with all procedural rules, on February 20, 1987 Citizens' Law Center filed a Petition to Intervene in that permit matter. That petition was granted.

3. As an Intervenor, Citizens' Law Center has and is continuing to review both the Permit Application and other documents respecting gold heap leaching operations. Given the complexity of the public interest issues and the vulnerability of the environment potentially impacted, Citizens' Law Center has invested a significant level of resources in evaluating and researching heap leaching and has retained counsel to represent the public interest in this matter.

4. Citizens' Law Center was not able to retain counsel until April 10, 1987. Prior to that time, St. Joe Minerals Corporation had filed Interrogatories and Production of Document Requests as well as a Notice of Deposition on Citizens' Law Center.

5. In order to adequately present its position, Citizens' Law Center must file various discovery on St. Joe Minerals Corporation. Copies of the Interrogatories, Requests for Production of Documents and Deposition Notice(s) are attached hereto for the Board's information.

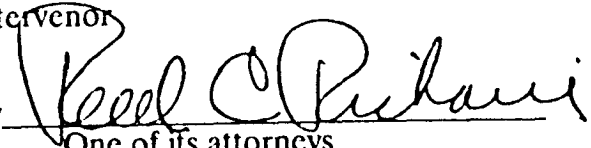
6. Pursuant to the South Dakota Rules of Civil Procedure, St. Joe Minerals Corporation is entitled to thirty (30) days in which to respond to the Interrogatories and Production Requests. The hearing on this permit is now scheduled for May 6, 1987, less than thirty days after Citizens' Law Center was able to retain counsel and less than thirty days after discovery could be filed.

WHEREFORE, in order to enable Citizens' Law Center to both properly respond to St. Joe Minerals Corporation's discovery request and receive answers to its own discovery so that it can properly prepare its case, Citizens' Law Center hereby asks for a thirty (30) day continuance of the hearing date.

Respectfully submitted,

CITIZENS' LAW CENTER,
Intervenor

By


One of its attorneys

Reed Richards
RICHARDS & RICHARDS
Box 373
Deadwood, South Dakota 57732

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
KARAGANIS & WHITE LTD.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCIT004

CERTIFICATE OF SERVICE

I, Reed Richards, hereby certify that I served the foregoing **MOTION FOR CONTINUANCE OF HEARING DATE** on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on April 15, 1987, 1987, and addressed below:

Mr. A.P. Fuller
Amundson, Fuller & Delancy
P.O. Box 898
203 West Main
Lead, South Dakota 57754

A handwritten signature in cursive script, appearing to read "Reed Richards", is written over a horizontal line.

Reed Richards

JWCIT004

**STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD**

In The Matter Of The Application Of:)
)
ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD)
)
Application No. 1372-1)



INTERVENOR'S REPLY IN SUPPORT OF MOTION FOR CONTINUANCE

In response to Applicant's "Resistance To Motion For Continuance," Intervenor Citizens' Law Center states as follows:

1. Counsel for Intervenor was first retained on or about April 13, 1987.
2. Counsel for Intervenor promptly prepared discovery requests and promptly served said requests on the Applicant.
3. Applicant has not yet responded to Intervenor's discovery and there is no way that Intervenor's counsel can review and analyze such material prior to the May 6th hearing, even if Applicant served its responses immediately.
4. From the limited material reviewed thus far, it appears that the proposed operation will likely have a significant effect on ground and/or surface water quality, and the public interest requires a full and thorough investigation of the application.

WHEREFORE, Intervenor Citizens' Law Center again requests a continuance of the scheduled May 6th hearing.

CITIZENS' LAW CENTER,
Intervenor

By Joseph Karaganis
One of its attorneys

Reed Richards
Richards & Richards
696 Main Street
Box 373
Deadwood, South Dakota 57732
(605) 578-2572

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCIT007

CERTIFICATE OF SERVICE

I, Reed Richards, hereby certify that I served the foregoing **INTERVENOR'S
REPLY IN SUPPORT OF MOTION FOR CONTINUANCE** on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on _____, 1987, addressed as follows:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Reed Richards

JWCIT007



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

May 18, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352 

SUBJECT: Continuance of Hearing on Water Permit Application No.
1372-1, St. Joe Minerals Corporation

The Water Management Board on May 6, 1987 continued the hearing on Permit Application No. 1372-1. The Board has directed that a status report on discovery and prehearing preparations be presented to the Board in July. Consideration of the status report will be at 1:15 pm on July 8, 1987 in Room 216, Joe Foss Building, 523 E Capitol, Pierre SD. The hearing on Permit Application No. 1372-1 will be held at 2:00 pm on September 9, 1987 in Room 216, Joe Foss Building, 523 E Capitol, Pierre SD and continue on September 10 if necessary. The agenda times in July and September are estimates. The actual time of the status report and hearing scheduled for 1:15 pm on July 8 and 2:00 on September 9, respectively, may be delayed due to prior agenda items. Applicable provisions of the Notice published December 31, 1986 and January 7, 1987 in the Lead Daily Call will still apply at this hearing.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

CERTIFICATION

I hereby certify that on May 18, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice of Continuance of Hearing on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

Karen Schlaak

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 18th day of May, 1987.

John Hatch
Notary Public

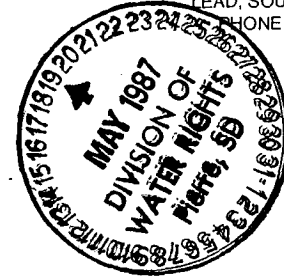


Amundson, Fuller & Delaney

ROBERT A. AMUNDSON
A.P. FULLER
JOHN J. DELANEY

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
PHONE (605) 584-2440

May 18, 1987



Mr. Joe Karaganis
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, IL 60610

Re: In the Matter of the Application of St. Joe
Minerals before Water Management Board

Dear Mr. Karaganis:

Enclosed please find copy of Answers to Interrogatories prepared by George Obeldobel of St. Joe. This is intended as service by mail.

Just to confirm our telephone conversation of last week wherein I advised since the Water Management Board hearing was postponed, I was expecting answers to the Interrogatories and Request for Production of Documents that I submitted to Mr. Meinhardt. Those are due any day.

Also enclosed please find St. Joe's Second Set of Interrogatories and Request for Production of Documents. This is intended as service by mail.

St. Joe provided to you at the time of the taking of Mssrs. Obeldobel, Cryer and Metzger's deposition, six boxes of Mr. Obeldobel's file plus a seventh box which contained a draft of the mine permit application. Your people have microfilmed those boxes. This was done by your people on May 13th and 14th. These boxes were produced pursuant to your request for production of documents. I am assuming that we have produced the documents pursuant to your request. If you disagree with that, please advise me immediately. If I don't hear from you I will assume that we have met your demand for production of documents. Obviously, if any other documents are generated or produced other than those already submitted to you, I will advise you as soon as they are created or produced.

Yours truly,

AMUNDSON, FULLER & DELANEY

A handwritten signature in dark ink, appearing to read 'Pete' or 'A. P. Fuller', written over the typed name.

A. P. Fuller

APF/slc
Enc.
cc: John Hatch

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION



In the Matter of the)
Application of)
ST JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD,)
Application No. 1372-1.)

SECOND SET OF INTERROGATORIES
AND REQUEST FOR PRODUCTION
OF DOCUMENTS

TO: NICK MEINHARDT:

YOU AND EACH OF YOU WILL PLEASE TAKE NOTICE AND BE ADVISED:

That St. Joe, pursuant to Rule 33 and 34 of the South Dakota Rules of Civil Procedure, and any acts amendatory thereof, demands answers and documents, under oath, to the following written interrogatories and request for production of documents within thirty (30) days of service upon you of said interrogatories and production of documents.

These interrogatories and request for production of documents shall be deemed to be continuing, and, if information is discovered by or becomes known to you or to your attorney or to anyone acting on your behalf after answering the same and before the hearing which would change or add to the answers given, and such additional or supplemental information is not timely furnished to the undersigned, then, and in that event, at the hearing or during the course thereof the undersigned will move the Board for an order suppressing the testimony of undisclosed witnesses and the use of undisclosed evidence should you, or any of you, attempt to use the same.

DEFINITIONS:

A. "You" or "your" means you, your attorney, agents, servants, employees, representatives, private investigators and all other persons acting or purporting to act on your behalf;

B. As used herein, the term "document" shall mean the original and any copy, regardless of origin or location, of any book, pamphlet, periodical, letter, memorandum, telegram, report, record, study, written note, working paper, chart, paper, index, tape, data sheet, data processing card, or any other written, recorded, transcribed, punched, taped, filmed, or graphic material, however produced or reproduced, to which you have or

have had access.

C. The terms "identify" or "identification" when used with reference to an individual person, shall mean to state his full name, present position, business affiliation, if know, address, and prior position or affiliation, if no longer connected with you. The terms "identify" or "identification" when used with reference to a document, shall mean to state the date and author or signor, as the case may be, the addressee, the type of document, its present or last known location or custodian and all means of identifying it with sufficient particularity to satisfy the requirements for its inclusion in a motion for its production, pursuant to Rule 34 of the South Dakota Rules of Civil Procedure. If any such document was, but is no longer in your possession or subject to your control, state the disposition which was made of it and the reason for such disposition and the date thereof.

REQUEST AND INTERROGATORY 1.

- A. When was the Citizen's Law Center created?
- B. When did the Citizen's Law Center incorporate, associate or become a partnership?
- C. In what State?
- D. Provide all articles of incorporation, association or the partnership documents creating the Citizen's Law Center.

REQUEST AND INTERROGATORY 2.

- A. Who are the officers of Citizen's Law Center?
- B. Provide their addresses and phone number.
- C. Provide copies of minutes or other such documents showing the election or appointment of such officers.

REQUEST AND INTERROGATORY 3.

- A. Who are the directors of Citizen's Law Center?
- B. Provide their address and phone numbers.
- C. Provide the documentation showing each directors election or appointment to the Citizen's Law Center.

REQUEST AND INTERROGATORY 4.

- A. How does the Citizen's Law Center generate income

for operating expenses to carry on its purpose or purposes?

B. List the names, addresses and phone numbers of all persons contributing money, services, income or operating expenses to the Citizen's Law Center or to Nick Meinhardt on behalf of the Citizen's Law Center.

C. Is this list of contributors filed with any local, state or federal agency.

D. If so, with whom, and when was such filing(s) made?

E. Provide copies of all such filings with any local, state or federal agency.

REQUEST AND INTERROGATORY 5.

A. Will you or your counsel be retaining any expert(s) to assist in the preparation of your case before the Water Board?

B. If so, who will you be retaining? List his/her/their name, address and phone number.

C. Provide copies of each such experts curriculum vitae or other document showing educational background, papers published, positions held and work history since graduation from high school.

REQUEST AND INTERROGATORY 6.

A. If you will be retaining an expert(s) to assist you in your case before the Water Management Board, list the documents, treatises, papers, applications or any other matters reviewed by such experts listing the experts name and the documents reviewed.

B. Set forth in detail and with particularity, the conclusions such expert or experts have drawn from such review or reviews.

REQUEST AND INTERROGATORY 7.

List the name, address and phone number of all experts which you plan on calling at the time of the hearing before the Water Board.

REQUEST AND INTERROGATORY 8.

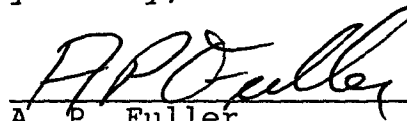
List all witnesses which you anticipate calling at the hearing before the Water Management Board. List their names,

addresses and phone numbers.

REQUEST AND INTERROGATORY 9.

For each such witness listed in the preceding Interrogatory and Request for Production of Document, state with particularity the testimony they will offer at the time of the hearing before the Water Management Board. Provide all written documents that such witnesses may rely upon or referred to or use in giving such testimony.

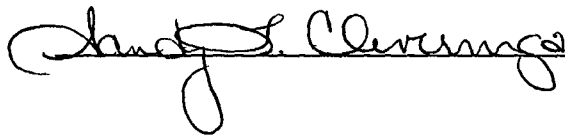
DATED this 18 day of May, 1987.



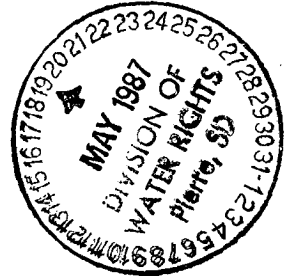
A. P. Fuller
AMUNDSON, FULLER & DELANEY
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Joe Karaganis, attorney for Citizen's Law Center, at Karaganis & White, Ltd., 414 North Orleans, Suite 810, Chicago, IL 60610, by first class mail, postage prepaid on the 18th day of May, 1987.



STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION



In the Matter of the)
Application of)
ST JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD,)
Application No. 1372-1.)

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AND REQUEST FOR PRODUCTION
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have had access.

C. The terms "identify" or "identification" when used with reference to an individual person, shall mean to state his full name, present position, business affiliation, if know, address, and prior position or affiliation, if no longer connected with you. The terms "identify" or "identification" when used with reference to a document, shall mean to state the date and author or signor, as the case may be, the addressee, the type of document, its present or last known location or custodian and all means of identifying it with sufficient particularity to satisfy the requirements for its inclusion in a motion for its production, pursuant to Rule 34 of the South Dakota Rules of Civil Procedure. If any such document was, but is no longer in your possession or subject to your control, state the disposition which was made of it and the reason for such disposition and the date thereof.

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REQUEST AND INTERROGATORY 8.

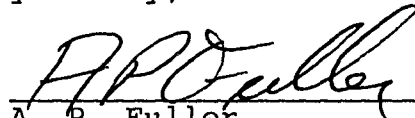
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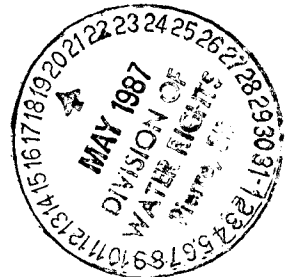
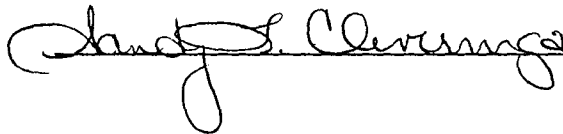
DATED this 18 day of May, 1987.



A. P. Fuller
AMUNDSON, FULLER & DELANEY
P. O. Box 898, 203 W. Main
Lead, SD 57754

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing document was mailed to Mr. Joe Karaganis, attorney for Citizen's Law Center, at Karaganis & White, Ltd., 414 North Orleans, Suite 810, Chicago, IL 60610, by first class mail, postage prepaid on the 18th day of May, 1987.



STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD



In the Matter of the)
Application of:)

ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD,)

Application No. 1372-1.)

ANSWERS TO
INTERROGATORIES

Comes now, George M. Obeldobel, of St. Joe Minerals Corporation, and in answer to Citizen's Law Center's First Set of Interrogatories to St. Joe, answers as follows:

1. Describe with particularity each and every groundwater recharge source impacting the groundwater to be appropriated for the proposed Richmond Hill Project. Include in that description:

- a. an identification of the source,
- b. quantity of recharge,
- c. the aquifer recharged.

ANSWER: Groundwater supply will be withdrawn from the lower portion of the upper member of the Cambrian-age Deadwood formation. Recharge to this aquifer is primarily from three sources: 1) rainfall infiltrating the outcrop of the formation, 2) snowmelt infiltrating the outcrop of the formation, and possibly, 3) upward flow from the lower saturated members of the Deadwood formation. The exact quantity of recharge from either infiltration or upward flow can not be determined except through actual development. Based on the initial pumping tests conducted in the Deadwood aquifer and described in Hydro-Search Inc., 1987,

(Volume III, Attachment 4 of the Richmond Hill Mine Permit Application) an adequate groundwater supply is expected for processing area operations.

2. Identify the total quantity, by gallonage and by acre/feet, of groundwater to be withdrawn each year, by year, for the proposed Richmond Hill Project.

ANSWER: See Table 2 of Volume I - Richmond Hill Mine Permit Application for estimates of monthly process water use associated with the Richmond Hill Mining Project. Ultimate annual use of groundwater has been estimated as follows:

<u>Month</u>	<u>Ultimate Freshwater Required (gal/min)</u>	<u>Gallons Per Month (Million Gal.)</u>	<u>Acre Feet Per Month (ac. feet)</u>
January	10	0.45	1.37
February	10	0.40	1.24
March	0	0	0
April	89	3.84	11.80
May	75	3.35	10.27
June	76	3.28	10.06
July	178	7.95	24.39
August	192	8.57	26.30
September	231	9.98	30.63
October	227	10.13	31.10
November	116	5.01	15.38
December	10	<u>0.45</u>	<u>1.37</u>
Total Annual		53.41	163.92

Year by year usage will vary somewhat from this average depending upon the weather, production rate, rock types treated, etc. for each year.

3. Describe with particularity each and every planned or potential discharge point to surface water from the proposed Richmond Hill Project. Include in that description:

- a. the source of the discharge,
- b. the location of the discharge,
- c. the nature of the discharge,
- d. the water quality of the discharge,
- e. the volume of the discharge and
- f. whether the discharge is continuous or periodic.

ANSWER: Based upon the State of South Dakota Permit Application filed with the Department of Water and Natural Resources, there are no point discharges to surface water associated with the Richmond Hill Project.

4. Describe with particularity any and all spill prevention and countermeasure plans developed for the proposed Richmond Hill Project.

ANSWER: While numerous containment and spill prevention measures have been designed into the project, these have not yet been summarized in a spill prevention and countermeasure plan. It is St. Joe's intention that a Spill Contingency Plan (SPC) be prepared prior to initiating construction and that a formal Spill Prevention Control Countermeasure Plan (SPCCP - 40 CFR 112.7) will be prepared and implemented within six months after the facility becomes operational, as required by Federal law.

5. Describe with particularity each and every design feature intended to prevent or contain spills suggested, reviewed or included in the planned construction specifications for the Richmond Hill Project.

ANSWER: The significant conceptual design features of the

Richmond Hill Project are listed below. The detailed design can only be completed following Board action on the application and ordering of equipment. However, the information submitted provides sufficient detail to evaluate containment strategy.

DESIGN FEATURES

Pad

- Double 60 mil FML lining with leak collection and recovery system (LCRS).
- Lined containment berms.
- Subsurface drainage line(s) overlying the shallow bedrock.
- Siting of pads in an area that has a deep and protected groundwater system.
- Internal heap drainage system to reduce the phreatic head on the liner.
- High level QA/QC program.
- Rapid, reliable leak detection system.

POND

- Double 60 mil lining with LCRS for process pond.
- 80 mil lining with seepage detection system for stormwater pond.
- Stormwater and process pond design includes sufficient volume for PMP containment with a freeboard safety factor.
- Carefully designed containment berms and retention structures.
- Double walled solution transport piping.

CHEMICAL HANDLING AREA

- All process chemical handling areas are to be paved (AC) or lined.
- All sealed areas will drain into a process pond.

- Cyanide to be handled in sealed systems.
- All fuel tanks will be above ground and provide safe transport of chemicals and fuel.

ROADS

- Access road will be improved to provide safe transport of chemicals and fuel.

6. Describe with particularity any spills of cyanide solution, whether pregnant or barren, experienced at any St. Joe Minerals Corporation heap or vat leach mining operation. Include in that description:

- a. the date of the spill,
- b. the mine at which the spill occurred,
- c. the location of that mine,
- d. the quantity spilled,
- e. the composition of the material or solution spilled,
- f. any environmental impacts resulting from the spill, and
- g. any remedial or corrective measures taken following the spill.

ANSWER: None.

7. Describe with particularity all contaminants, pollutants, or hazardous substances which St. Joe Minerals Corporation has found or anticipates finding in heap or vat leach operation solutions or discharges, whether planned or accidental, operated or proposed for construction in Lawrence County, South Dakota.

ANSWER: Other than fuel oil, gasoline, sodium cyanide,

lime and very minor amounts of other industrial chemicals (i.e., polymers for scale control, laboratory chemicals, etc.) the project will not require any significant amount of introduced chemicals. The anticipated process leach solution characteristics, based upon laboratory testing, is provided in the Richmond Hill Mine Permit Application, Volume IV, Attachment 1, Appendix 2. EP Toxicity testing was also completed on ore and waste rock. The results are shown below.

EP TOXICITY TESTING*
EP Toxicity Test Analyses (ppm)

<u>Constituent</u>	<u>Regulation</u>	<u>Leached Oxide</u>	<u>Ore Sulfide</u>	<u>Waste</u>		
				<u>Type 1</u>	<u>Type 2</u>	<u>Type 3</u>
CL	---	4.9	3.7	---	---	---
As	5	0.005	0.035	<0.01	<0.01	<0.01
Ba	100	0.10	0.10	0.16	0.59	0.1
Cd	1	0.005	0.005	<0.01	<0.01	<0.01
Cr	5	0.05	0.05	<0.01	<0.01	<0.01
Cu	---	0.01	0.01	---	---	---
Fe	---	0.06	0.01	---	---	---
Pb	5	0.05	0.05	0.1	0.1	0.1
Mn	---	0.17	7.3	---	---	---
Hg	0.2	0.010	0.004	<0.001	<0.001	<0.001
Se	1	0.005	0.008	<0.005	<0.005	<0.005
Ag	5	0.007	0.005	<0.01	<0.01	<0.01
Na	---	9.9	2.9	---	---	---
Zn	---	0.11	0.15	---	---	---

*This Toxicity Characteristic Leaching Procedure determine the mobility of inorganic contaminants in the waste. All results were at least a factor of 30 below regulatory limits.

8. Describe with particularity each and every sediment or suspended solids reduction or control methodology suggested, reviewed or included in the proposed operational details for the proposed Richmond Hill Project.

ANSWER: Please refer to Volume III, Attachment 5 (Surface

Water Hydrology and Water Management Report) of the Richmond Hill Permit Application for a detailed discussion of proposed suspended solids and sediment control strategies for the Richmond Hill Project.

9. Describe with particularity each and every geologic layer or feature existing below the proposed Richmond Hill Project site. Include in those descriptions

- a. the nature of the features,
- b. the depth from the surface,
- c. the thickness,
- d. the locations of each feature in relation to others identified,
- e. location of any groundwater,
- f. the locations of groundwater divides, and
- g. the relation of each feature identified in the Greenhorn Formation.

ANSWER: (9a-d) For affected area other than the mine, see Volume III, Attachment 4 of the Richmond Hill Mine Permit Application.

The basement rocks in the area of the mine are precambrian in age and consist of amphibolites, graphite schists, chlorite schists, mica schists, amphibolite schists, phyllites, and quartzites. These rocks have undergone extreme deformation resulting in near vertical orientation of the rock strata making estimates of the thicknesses of these rocks difficult. Metamorphism has affected this entire rock package to varying degrees throughout the project site. The precambrian rocks crop

out on the surface over most of the southern half of the area to be permitted for mining, including the areas surrounding the Richmond Hill and Turnaround mine sites. This outcrop pattern reflects the northwestern extent of the Lead dome.

Unconformably overlying this precambrian dome are a series of Paleozoic sedimentary rocks, consisting of the Deadwood, Winnipeg, Whitewood, Englewood, and Pahasapa Formations. This Paleozoic section crops out in the northern half of the permit area, with this stratigraphic section dipping off to the northwest ten to thirty degrees. The Deadwood Formation of Cambrian-Ordovician age is a complex intertidal sequence of sedimentary rocks composed of conglomerates, sandstones, siltstones, limestones, and mixed calcareous rocks essentially representing a transgressive-regressive sequence. The Deadwood formation is from 350 to 430 feet thick. The Winnipeg Formation of Ordovician age disconformably overlies the Deadwood Formation and is represented by two members. The Ice Box Shale member consists of greenish gray silting shale and is 25 to 60 feet thick. The upper Roughlock Member is 25 to 50 feet thick and consists of argillaceous siltstone, siltstone and quartzite. The Whitewood Formation of late Ordovician age overlies the Winnipeg Formation somewhat conformably. This formation grades at the base from a thin bedded, often silty limestone, to a thick bedded-massive limestone at the top and is 36 to 56 feet thick. Disconformably overlying the Whitewood Formation is the Englewood Formation of Lower Mississippian age.

The Formation is 35 to 50 feet thick, and consists of calcareous siltstone and slabby argillaceous carbonates. Conformably overlying the Englewood Formation is the Pahasapa Formation of Mississippian age, and has a total thickness of 500 to 600 feet. Only the Lodgepole Member (lower 60% of the formation) of the Pahasapa Formation exists in the project area, and consists of crystalline carbonate units varying from pure limestone to pure dolomite, including various combinations of the two.

All of these previously mentioned rock units have been extensively intruded by a number of igneous bodies of Tertiary age. These igneous bodies take the shape of dikes, sills, stocks, and breccia bodies and compositionally include primarily rhyolites, rhyolite porphyry, monzonite, quartz monzonite, phonolite, and grorodite. Because of this major intrusive event, the entire Paleozoic sedimentary sequence has a greatly inflated thickness in the field than the thickness stated above. Most of the ore in the Richmond Hill and Turnaround orebodies are hosted by a Tertiary Breccia pipe.

(9e-f) See Volume III, Attachment 4 of the Richmond Hill Mine Permit Application.

(9g) All of the above groundwater and geologic features lie within geological strata older than and stratigraphically lower than the Greenhorn formation.

10. Describe with particularity the location and construction of each liner system suggested, reviewed or planned for installation at the proposed Richmond Hill Project.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the liner systems proposed for the Richmond Hill Project.

11. Describe with particularity each and every leachate collection or control system suggested, reviewed or included in the planned construction of the proposed Richmond Hill Project.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the proposed leachate collection system for the process pads and ponds for the Richmond Hill Project. It should be noted that all leachate from the processed ore will be controlled until such time as the treated ore is determined to be suitable for reclamation. The process solution leachate collection system includes double flexible membrane liners with an active seepage detection, collection and recovery systems.

As shown in Volume III, Attachment 5 of the Permit Application, all drainage off the waste areas is managed to avoid surface runoff or stream discharge.

12. Describe with particularity all emissions to air of any toxicant, particulate, pollutant or contaminant which may occur from the proposed Richmond Hill Project if it becomes operational. Include in those descriptions.

- a. the source of emission,
- b. the substance(s) emitted,
- c. whether the emission is the result of normal operations or upset conditions,

- d. any contingency plans or procedures developed with respect to air emissions,
- e. any remedial or corrective actions taken as a result of air emissions and
- f. any actual or potential environmental impact of air emissions.

ANSWER: The following table provides a very preliminary estimate of particulate air emissions for the Richmond Hill Project. These estimates are based upon "typical" controlled emissions expected from the type of equipment normally associated with mining. Once the actual equipment (crushers, vehicles, etc.) are selected, a more detailed and specific analysis can be completed.

Based on PEDCO emission factors and best practicable design, the projected air quality emissions for Richmond Hill are as follows:

<u>Area</u>	<u>Emission (lb/hr)</u>	<u>%</u>
Crusher	12.5	11
Overburden and Ore Removal	11.2	10
Blasting	0.7	1
Wind Erosion	28.9	26
Ore Dumping	0.5	1
Overburden Dumping	0.2	0
Road Maintenance	5.0	4
Haul Road Traffic	52.0	46
Diesel Exhaust	0.9	1
Gasoline Exhaust	<u>0.04</u>	<u>0</u>
	111.9	100%

Each of the above emissions are a result of normal operation. Except in the case of diesel and gasoline exhaust, the emitted substance is ore, mine waste, or road aggregate. Please refer to Richmond Hill Mine Permit Application, Volume

III, and Volume III, Attachment 2 for a discussion of air quality and the expected impacts on air quality as a result of the proposed project.

Other, albeit insignificant, potential air emission could include vehicle emissions (NO_x , CO_2 , etc.), fuel volatilization, process chemical volatilization (Cl_2 , HCN , etc.) and volatilization and evaporation of water and naturally occurring substances in the water. The concentration of all of these are extremely minute and are beyond quantification and/or rational impact assessment.

13. Describe with particularity all surface drainage and diversion systems suggested, reviewed or included in the construction plan for the proposed Richmond Hill Project. Include in those descriptions:

- a. construction details for any ditches to be used,
- b. construction details for any ponds or settling basins to be used,
- c. construction details for any piping to be used, and
- d. construction and location details for any discharge points.

ANSWER: Please refer to Richmond Hill Mine Permit Application, Volume III, Attachment 3 and 5, and Volume IV for a description of the existing and proposed surface drainages and diversion structures for the Richmond Hill Project. Also, as it applies to this question, detailed plans and specifications have been prepared for the modification of the Richmond Hill Mining Project access road. The access road includes suitable drainage

ditches and culverts. Copies of these documents are available for review.

14. Describe with particularity each and every containment or overflow pond to be constructed at the proposed Richmond Hill Project. Include in those descriptions:

- a. details of any liners to be used,
- b. location of each pond,
- c. size and capacity of each pond,
- d. connections of each pond to other elements of the heap leach operation and other containment ponds, and
- e. discharge points from each pond.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the proposed containment ponds. Specifically Volume IV, Attachment 2 provides preliminary detailed drawing and design criteria for all three solution containment ponds and the two stormwater ponds. Additional details will be developed, as necessary, following conceptual approval of the Permit Application.

15. Describe with particularity each and every well to be used for extraction of groundwater for the proposed Richmond Hill Project. Include in those descriptions:

- a. the well location,
- b. well depth,
- c. well screen depth,
- d. drilling method to be used,
- e. well construction to be used, and

- f. details of the connection of each and every well to the heap leach process.

ANSWER: Four supply wells have been identified to withdraw groundwater from the upper member of the Deadwood formation. The well numbers, locations, and depths are presented in Volume III, Attachment 4, of St. Joe Gold's Mine Permit Application. Each well will be drilled by conventional, air-rotary water well methods and completed without well screen through the production aquifer. Steel casing will be installed and grouted into the overlying confining unit (impermeable porphyry sill). Submersible electric pumps suspended on galvanized steel drop pipes will lift the water to the surface where pipelines will convey the water to the process ponds.

16. Describe with particularity the design for the construction of each heap and each heap leach pad to be used at the proposed Richmond Hill Project. Include in those descriptions:

- a. any liners,
- b. curbing,
- c. leachate collection systems,
- d. sprinkler systems,
- e. heap lifts,
- f. ripping systems and equipment, and
- g. drainage systems for each heap.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume I and Volume IV for a detailed description of the heap leach pads and their construction. These two documents

provide information on the heap liners, containment appurtenances, leachate collection system(s), sprinkler spacing, and solution distribution piping.

Volume III, Attachment 1 (Soil/Geotechnical Report) provides information on recommended heap construction (heap lifts and heights).

17. Describe with particularity each and every fact and identify each and every document which in whole or in part supports the statements made in Applicant's memorandum dated January 12, 1987, entitled Memorandum Regarding Water Issues for Zoning Permit Application, to-wit: "The Richmond Hill mine area is located in a topographic saddle, with a restricted ground surface area lying upland from the mine. . . This topographic position limits the effect of mining activities on surface water runoff and groundwater recharge."

ANSWER: The Richmond Hill/Turnaround deposit area lies at a high elevation within the project area. Landforms in the mine area are represented by several closed topographically high areas connected by ridges (topographic saddles). This topographic position can be seen on any topographic map of the area showing the mine pit; for example, Figure 3, Volume III, Attachment 9, Monitoring Plan Report, Mine Permit Application.

This topographic position limits the effect of mining on surface water runoff because the volume of runoff discharged from restricted areas upland from the mine is small. This topographic position limits the effect of mining on groundwater

recharge for the same reason. There is little available runoff from the restricted area lying upland from the mine for groundwater recharge.

18. Describe with particularity each and every fact and identify each document which in whole or in part supports the statement of St. Joe Minerals Corporation's memorandum dated January 12, 1987, entitled Memorandum Regarding Water Issues for Zoning Permit Application to-wit: "The processing area is closely bounded on all sides by topographic and ground-water drainage divides."

ANSWER: The processing area is closely-bounded by topographic drainage divides, which form the uppermost reach of the Rubicon Gulch watershed. Rubicon Gulch drains all runoff from the processing area. Other nearby drainages are isolated from processing area runoff.

The potentiometric surface present on Figure 5 of the HSI Report Groundwater Investigation, Richmond Hill Project and dated March 4, 1987, shows that the groundwater divides and flow directions roughly correspond with the surface water divides and flow directions. Therefore, the groundwater underlying the processing area is expected to flow in the same direction as the surface flows in Rubicon Gulch.

19. Describe with particularity each and every mine site reclamation provision or plan, suggested, reviewed or included in proposals or permit applications for the Richmond Hill Project. Include in those descriptions:

- a. area of land to be reclaimed,
- b. methods of reclamation,
- c. level or type of use for land after reclamation,
and
- d. financial mechanisms in place to assure adequate
funding for reclamation.

ANSWER: Detailed information addressing the reclamation issues and concerns regarding the Richmond Hill Project are found in Volume II of the Richmond Hill Mine Permit Application. It is the intention of the St. Joe Gold Corporation to purchase a surety bond in favor of the State of South Dakota for insuring that the site is reclaimed as specified.

20. Identify each person answering these interrogatories and all other persons who participated in the preparation of the answers: include a delineation of each specific interrogatory each person answered or participated in answering.

ANSWER: Interrogatories were answered by:

- a. George M. Obeldobel
Project Manager - Richmond Hill
Director of Metallurgy - St. Joe Minerals Corporation
Business: 7733 Forsyth Blvd., Clayton, MO 63105
(314) 854-9612
Home: 16466 Saddlecreek Rd., Chesterfield, MO 63017
(314) 537-0308
Interrogatories: 1 - 22
- b. Edwin T. Cryer
Project Manager - James Montgomery, Consulting
Engineers, Inc.
Business: 161 Mallard Drive, Boise, ID 83706-3974
(208) 345-5865
Home addresses and phone numbers for Mr. Cryer and all
others are irrelevant and will not be divulged.
Interrogatories: 2, 3, 4, 5, 7, 8, 10, 11, 12, 13, 14,
16, 19, 20, 21, 22

- c. Chris W. Metzger
Senior Engineering Geologist - HSI Hydro-Search Inc.
Business: 350 Indiana Street, Suite 415, Golden CO
80401
(303) 279-7982
Interrogatories: 1, 9, 15, 17, 18
- d. Paul Hodges
President - Compania Minera San Jose Ltda.
Business: Las Urbinas 53 - Piso 11, Clasificador 45,
Correo 9, Santiago, Chile
011-562-231-9766
Interrogatory: 6
- e. Todd Duex
Project Geologist, St. Joe American Corporation
Business: 601 West Main, Lead, SD 57754
(605) 584-1210
Interrogatory: 9
- f. A. P. Fuller
Amundson, Fuller & Delaney Law Offices
Business: 203 W. Main, Lead, SD 57754
(605) 584-2440

21. Identify each person who has or claims to have personal knowledge of St. Joe Minerals Corporation's heap leach gold mining operations or planned operations in the Black Hills region of South Dakota.

ANSWER: Individuals who are knowledgeable on the Richmond Hill Project, in whole or in part, include:

- a. South Dakota DWR
Joe Foss Building
523 East Capitol
Pierre, SD 57501
(605) 773-3151
- 1. James Nelson - Mining Division Director
- 2. Robert Townsend - Exploration & Mining Program
Chief
- 3. Steve Pirner - Administrator of Office of Water
Quality
- 4. Ray Birchem - Staff Engineer
- 5. Dave Johnson - Engineer
- 6. Mike Cepak - Engineer
- 7. Mike Perkovich - Engineer

8. Nick Bugosh - Hydrologist

- b. Barrie Parrish
SD Department of Game, Fish & Parks
3305 West South Street
Rapid City, SD 57702
(605) 394-2391
- c. Paul Ries & Associates
District Ranger
U. S. Forest Service
320 Ryan Road
Spearfish, SD 57783
(605) 642-4622
- d. Lawrence County Planning & Zoning
Board and County Commissioners
78-80 Sherman Street
Deadwood, SD 57732
(605) 578-3871

In addition to those individuals cited in Question 20 and in addition to those federal, state, and county officials who have been given an appraisal of the project, the following individuals are generally knowledgeable on the project and are very knowledgeable in their areas of expertise.

- a. Gary E. Welch and Associates
Vice President-Environment-St. Joe Minerals Corporation
Business: 7733 Forsyth Boulevard, Clayton, MO 63105
(314) 726-9500
- b. Robert Gilmore
Vice-President - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- c. Joseph Rankin
Senior Geologist - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- d. Robert Reuss
Senior Mining Engineer - St. Joe Minerals Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766

- e. Bruce Davis
Geostatistical Engineer - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- f. Benjamin C. Koskiniemi, P.E.
Associate - Call & Nicholas, Inc.
Business: 3625 E. 42nd Street, Tucson, AZ 85713
(602) 745-8141
- g. Other Associates of Edward T. Cryer at
James Montgomery, Consulting Engineers, Inc.
Business: 161 Mallard Drive, Boise, ID 83706-3974
(208) 345-5865
- h. L. P. Gochnour
Reclamation Engineer - St. Joe American Corporation
Business: North 111 Vista, #3F, Spokane, WA 99206
(509) 928-7513
- i. Edward Depuitt
Environmental Consultant- University of Wyoming
Business: Department of Range Management
University Station, Box 3354
Laramie WY 82701
(307) 766-1121
- j. Other Associates of Chris Metzger at
HSI Hydro-Search, Inc.
Business: 350 Indiana St., Suite 415, Golden, CO 80401
(303) 279-7982
- k. Neil J. Stodolski
President - NJS Engineering
Business: 348 East Colorado Blvd., Spearfish, SD 57783
(605) 642-4772
- l. A. J. Brown
Senior Metallurgist - Fluor Corporation
Business: 10 Twin Dolphin Dr., Redwood City, CA 94605
(415) 595-6788
- m. Joseph H. New
Supervising Engineer, Construction-Fluor Corporation
Business: 10 Twin Dolphin Dr., Redwood City, CA 94605
(415) 595-6788
- n. Dirk J. A. Van Zyl
Associate Professor - Colorado State University
(Also Geotechnical Engineer - CH2M Hill)
Business: Fort Collins, CO 80523
(303) 491-6081

- o. John D. Welsh
President - John D. Welsh and Associates
Business: 247 Freeport Blvd., Sparks, NV 89431
(702) 358-2992
- p. Mark E. Smith
Civil Engineer - Vector Engineering, Inc.
Business: P. O. Box 1201, Nevada City, CA 95959
(916) 265-3009
- q. Steven A. Narkiewicz
Geotechnical Engineer - Northern Engineering & Testing
Business: P. O. Box 7867, Boise, ID 83707
(208) 377-2100

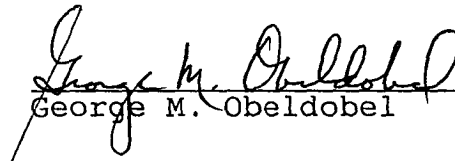
22. Identify each person with whom St. Joe Minerals Corporation, d/b/a St. Joe Gold anticipates or plans to call as an expert witness at the hearing on Permit Application 1372-1.

ANSWER: For the Permit Application 1372-1, St. Joe will use as expert witnesses:

- a. George Obeldobel
- b. Edwin T. Cryer
- c. Chris W. Metzger

See answer to Question 20 for further information.

DATED this 6th day of May, 1987.

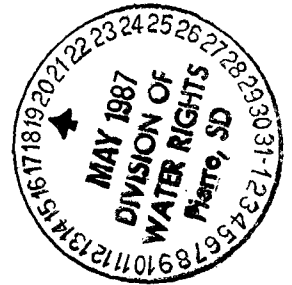

George M. Obeldobel

Subscribed and sworn to before me this 6th day of May, 1987.


Notary Public
My Commission Expires: July 19, 1992

(Seal)

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD



In the Matter of the
Application of:

ST. JOE MINERALS CORPORATION,
d/b/a ST. JOE GOLD,

Application No. 1372-1.

ANSWERS TO
INTERROGATORIES

Comes now, George M. Obeldobel, of St. Joe Minerals Corporation, and in answer to Citizen's Law Center's First Set of Interrogatories to St. Joe, answers as follows:

1. Describe with particularity each and every groundwater recharge source impacting the groundwater to be appropriated for the proposed Richmond Hill Project. Include in that description:

- a. an identification of the source,
- b. quantity of recharge,
- c. the aquifer recharged.

ANSWER: Groundwater supply will be withdrawn from the lower portion of the upper member of the Cambrian-age Deadwood formation. Recharge to this aquifer is primarily from three sources: 1) rainfall infiltrating the outcrop of the formation, 2) snowmelt infiltrating the outcrop of the formation, and possibly, 3) upward flow from the lower saturated members of the Deadwood formation. The exact quantity of recharge from either infiltration or upward flow can not be determined except through actual development. Based on the initial pumping tests conducted in the Deadwood aquifer and described in Hydro-Search Inc., 1987,

(Volume III, Attachment 4 of the Richmond Hill Mine Permit Application) an adequate groundwater supply is expected for processing area operations.

2. Identify the total quantity, by gallonage and by acre/feet, of groundwater to be withdrawn each year, by year, for the proposed Richmond Hill Project.

ANSWER: See Table 2 of Volume I - Richmond Hill Mine Permit Application for estimates of monthly process water use associated with the Richmond Hill Mining Project. Ultimate annual use of groundwater has been estimated as follows:

<u>Month</u>	<u>Ultimate Freshwater Required (gal/min)</u>	<u>Gallons Per Month (Million Gal.)</u>	<u>Acre Feet Per Month (ac. feet)</u>
January	10	0.45	1.37
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April	89	3.84	11.80
May	75	3.35	10.27
June	76	3.28	10.06
July	178	7.95	24.39
August	192	8.57	26.30
September	231	9.98	30.63
October	227	10.13	31.10
November	116	5.01	15.38
December	10	<u>0.45</u>	<u>1.37</u>
Total Annual		53.41	163.92

Year by year usage will vary somewhat from this average depending upon the weather, production rate, rock types treated, etc. for each year.

3. Describe with particularity each and every planned or potential discharge point to surface water from the proposed Richmond Hill Project. Include in that description:

- a. the source of the discharge,
- b. the location of the discharge,
- c. the nature of the discharge,
- d. the water quality of the discharge,
- e. the volume of the discharge and
- f. whether the discharge is continuous or periodic.

ANSWER: Based upon the State of South Dakota Permit Application filed with the Department of Water and Natural Resources, there are no point discharges to surface water associated with the Richmond Hill Project.

4. Describe with particularity any and all spill prevention and countermeasure plans developed for the proposed Richmond Hill Project.

ANSWER: While numerous containment and spill prevention measures have been designed into the project, these have not yet been summarized in a spill prevention and countermeasure plan. It is St. Joe's intention that a Spill Contingency Plan (SPC) be prepared prior to initiating construction and that a formal Spill Prevention Control Countermeasure Plan (SPCCP - 40 CFR 112.7) will be prepared and implemented within six months after the facility becomes operational, as required by Federal law.

5. Describe with particularity each and every design feature intended to prevent or contain spills suggested, reviewed or included in the planned construction specifications for the Richmond Hill Project.

ANSWER: The significant conceptual design features of the

Richmond Hill Project are listed below. The detailed design can only be completed following Board action on the application and ordering of equipment. However, the information submitted provides sufficient detail to evaluate containment strategy.

DESIGN FEATURES

Pad

- Double 60 mil FML lining with leak collection and recovery system (LCRS).
- Lined containment berms.
- Subsurface drainage line(s) overlying the shallow bedrock.
- Siting of pads in an area that has a deep and protected groundwater system.
- Internal heap drainage system to reduce the phreatic head on the liner.
- High level QA/QC program.
- Rapid, reliable leak detection system.

POND

- Double 60 mil lining with LCRS for process pond.
- 80 mil lining with seepage detection system for stormwater pond.
- Stormwater and process pond design includes sufficient volume for PMP containment with a freeboard safety factor.
- Carefully designed containment berms and retention structures.
- Double walled solution transport piping.

CHEMICAL HANDLING AREA

- All process chemical handling areas are to be paved (AC) or lined.
- All sealed areas will drain into a process pond.

- Cyanide to be handled in sealed systems.
- All fuel tanks will be above ground and provide safe transport of chemicals and fuel.

ROADS

- Access road will be improved to provide safe transport of chemicals and fuel.

6. Describe with particularity any spills of cyanide solution, whether pregnant or barren, experienced at any St. Joe Minerals Corporation heap or vat leach mining operation. Include in that description:

- a. the date of the spill,
- b. the mine at which the spill occurred,
- c. the location of that mine,
- d. the quantity spilled,
- e. the composition of the material or solution spilled,
- f. any environmental impacts resulting from the spill, and
- g. any remedial or corrective measures taken following the spill.

ANSWER: None.

7. Describe with particularity all contaminants, pollutants, or hazardous substances which St. Joe Minerals Corporation has found or anticipates finding in heap or vat leach operation solutions or discharges, whether planned or accidental, operated or proposed for construction in Lawrence County, South Dakota.

ANSWER: Other than fuel oil, gasoline, sodium cyanide,

lime and very minor amounts of other industrial chemicals (i.e., polymers for scale control, laboratory chemicals, etc.) the project will not require any significant amount of introduced chemicals. The anticipated process leach solution characteristics, based upon laboratory testing, is provided in the Richmond Hill Mine Permit Application, Volume IV, Attachment 1, Appendix 2. EP Toxicity testing was also completed on ore and waste rock. The results are shown below.

EP TOXICITY TESTING*
EP Toxicity Test Analyses (ppm)

Constituent	Regulation	Leached Oxide	Ore Sulfide	Waste		
				Type 1	Type 2	Type 3
CL	---	4.9	3.7	---	---	---
As	5	0.005	0.035	<0.01	<0.01	<0.01
Ba	100	0.10	0.10	0.16	0.59	0.1
Cd	1	0.005	0.005	<0.01	<0.01	<0.01
Cr	5	0.05	0.05	<0.01	<0.01	<0.01
Cu	---	0.01	0.01	---	---	---
Fe	---	0.06	0.01	---	---	---
Pb	5	0.05	0.05	0.1	0.1	0.1
Mn	---	0.17	7.3	---	---	---
Hg	0.2	0.010	0.004	<0.001	<0.001	<0.001
Se	1	0.005	0.008	<0.005	<0.005	<0.005
Ag	5	0.007	0.005	<0.01	<0.01	<0.01
Na	---	9.9	2.9	---	---	---
Zn	---	0.11	0.15	---	---	---

*This Toxicity Characteristic Leaching Procedure determine the mobility of inorganic contaminants in the waste. All results were at least a factor of 30 below regulatory limits.

8. Describe with particularity each and every sediment or suspended solids reduction or control methodology suggested, reviewed or included in the proposed operational details for the proposed Richmond Hill Project.

ANSWER: Please refer to Volume III, Attachment 5 (Surface

Water Hydrology and Water Management Report) of the Richmond Hill Permit Application for a detailed discussion of proposed suspended solids and sediment control strategies for the Richmond Hill Project.

9. Describe with particularity each and every geologic layer or feature existing below the proposed Richmond Hill Project site. Include in those descriptions

- a. the nature of the features,
- b. the depth from the surface,
- c. the thickness,
- d. the locations of each feature in relation to others identified,
- e. location of any groundwater,
- f. the locations of groundwater divides, and
- g. the relation of each feature identified in the Greenhorn Formation.

ANSWER: (9a-d) For affected area other than the mine, see Volume III, Attachment 4 of the Richmond Hill Mine Permit Application.

The basement rocks in the area of the mine are precambrian in age and consist of amphibolites, graphite schists, chlorite schists, mica schists, amphibolite schists, phyllites, and quartzites. These rocks have undergone extreme deformation resulting in near vertical orientation of the rock strata making estimates of the thicknesses of these rocks difficult. Metamorphism has affected this entire rock package to varying degrees throughout the project site. The precambrian rocks crop

out on the surface over most of the southern half of the area to be permitted for mining, including the areas surrounding the Richmond Hill and Turnaround mine sites. This outcrop pattern reflects the northwestern extent of the Lead dome.

Unconformably overlying this precambrian dome are a series of Paleozoic sedimentary rocks, consisting of the Deadwood, Winnipeg, Whitewood, Englewood, and Pahasapa Formations. This Paleozoic section crops out in the northern half of the permit area, with this stratigraphic section dipping off to the northwest ten to thirty degrees. The Deadwood Formation of Cambrian-Ordovician age is a complex intertidal sequence of sedimentary rocks composed of conglomerates, sandstones, siltstones, limestones, and mixed calcareous rocks essentially representing a transgressive-regressive sequence. The Deadwood formation is from 350 to 430 feet thick. The Winnipeg Formation of Ordovician age disconformably overlies the Deadwood Formation and is represented by two members. The Ice Box Shale member consists of greenish gray silting shale and is 25 to 60 feet thick. The upper Roughlock Member is 25 to 50 feet thick and consists of argillaceous siltstone, siltstone and quartzite. The Whitewood Formation of late Ordovician age overlies the Winnipeg Formation somewhat conformably. This formation grades at the base from a thin bedded, often silty limestone, to a thick bedded-massive limestone at the top and is 36 to 56 feet thick. Disconformably overlying the Whitewood Formation is the Englewood Formation of Lower Mississippian age.

The Formation is 35 to 50 feet thick, and consists of calcareous siltstone and slabby argillaceous carbonates. Conformably overlying the Englewood Formation is the Pahasapa Formation of Mississippian age, and has a total thickness of 500 to 600 feet. Only the Lodgepole Member (lower 60% of the formation) of the Pahasapa Formation exists in the project area, and consists of crystalline carbonate units varying from pure limestone to pure dolomite, including various combinations of the two.

All of these previously mentioned rock units have been extensively intruded by a number of igneous bodies of Tertiary age. These igneous bodies take the shape of dikes, sills, stocks, and breccia bodies and compositionally include primarily rhyolites, rhyolite porphyry, monzonite, quartz monzonite, phonolite, and granodiorite. Because of this major intrusive event, the entire Paleozoic sedimentary sequence has a greatly inflated thickness in the field than the thickness stated above. Most of the ore in the Richmond Hill and Turnaround orebodies are hosted by a Tertiary Breccia pipe.

(9e-f) See Volume III, Attachment 4 of the Richmond Hill Mine Permit Application.

(9g) All of the above groundwater and geologic features lie within geological strata older than and stratigraphically lower than the Greenhorn formation.

10. Describe with particularity the location and construction of each liner system suggested, reviewed or planned for installation at the proposed Richmond Hill Project.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the liner systems proposed for the Richmond Hill Project.

11. Describe with particularity each and every leachate collection or control system suggested, reviewed or included in the planned construction of the proposed Richmond Hill Project.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the proposed leachate collection system for the process pads and ponds for the Richmond Hill Project. It should be noted that all leachate from the processed ore will be controlled until such time as the treated ore is determined to be suitable for reclamation. The process solution leachate collection system includes double flexible membrane liners with an active seepage detection, collection and recovery systems.

As shown in Volume III, Attachment 5 of the Permit Application, all drainage off the waste areas is managed to avoid surface runoff or stream discharge.

12. Describe with particularity all emissions to air of any toxicant, particulate, pollutant or contaminant which may occur from the proposed Richmond Hill Project if it becomes operational. Include in those descriptions.

- a. the source of emission,
- b. the substance(s) emitted,
- c. whether the emission is the result of normal operations or upset conditions,

- d. any contingency plans or procedures developed with respect to air emissions,
- e. any remedial or corrective actions taken as a result of air emissions and
- f. any actual or potential environmental impact of air emissions.

ANSWER: The following table provides a very preliminary estimate of particulate air emissions for the Richmond Hill Project. These estimates are based upon "typical" controlled emissions expected from the type of equipment normally associated with mining. Once the actual equipment (crushers, vehicles, etc.) are selected, a more detailed and specific analysis can be completed.

Based on PEDCO emission factors and best practicable design, the projected air quality emissions for Richmond Hill are as follows:

<u>Area</u>	<u>Emission (lb/hr)</u>	<u>%</u>
Crusher	12.5	11
Overburden and Ore Removal	11.2	10
Blasting	0.7	1
Wind Erosion	28.9	26
Ore Dumping	0.5	1
Overburden Dumping	0.2	0
Road Maintenance	5.0	4
Haul Road Traffic	52.0	46
Diesel Exhaust	0.9	1
Gasoline Exhaust	<u>0.04</u>	<u>0</u>
	111.9	100%

Each of the above emissions are a result of normal operation. Except in the case of diesel and gasoline exhaust, the emitted substance is ore, mine waste, or road aggregate. Please refer to Richmond Hill Mine Permit Application, Volume

III, and Volume III, Attachment 2 for a discussion of air quality and the expected impacts on air quality as a result of the proposed project.

Other, albeit insignificant, potential air emission could include vehicle emissions (NO_x , CO_2 , etc.), fuel volatilization, process chemical volatilization (Cl_2 , HCN, etc.) and volatilization and evaporation of water and naturally occurring substances in the water. The concentration of all of these are extremely minute and are beyond quantification and/or rational impact assessment.

13. Describe with particularity all surface drainage and diversion systems suggested, reviewed or included in the construction plan for the proposed Richmond Hill Project. Include in those descriptions:

- a. construction details for any ditches to be used,
- b. construction details for any ponds or settling basins to be used,
- c. construction details for any piping to be used, and
- d. construction and location details for any discharge points.

ANSWER: Please refer to Richmond Hill Mine Permit Application, Volume III, Attachment 3 and 5, and Volume IV for a description of the existing and proposed surface drainages and diversion structures for the Richmond Hill Project. Also, as it applies to this question, detailed plans and specifications have been prepared for the modification of the Richmond Hill Mining Project access road. The access road includes suitable drainage

ditches and culverts. Copies of these documents are available for review.

14. Describe with particularity each and every containment or overflow pond to be constructed at the proposed Richmond Hill Project. Include in those descriptions:

- a. details of any liners to be used,
- b. location of each pond,
- c. size and capacity of each pond,
- d. connections of each pond to other elements of the heap leach operation and other containment ponds, and
- e. discharge points from each pond.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume IV for a detailed description of the proposed containment ponds. Specifically Volume IV, Attachment 2 provides preliminary detailed drawing and design criteria for all three solution containment ponds and the two stormwater ponds. Additional details will be developed, as necessary, following conceptual approval of the Permit Application.

15. Describe with particularity each and every well to be used for extraction of groundwater for the proposed Richmond Hill Project. Include in those descriptions:

- a. the well location,
- b. well depth,
- c. well screen depth,
- d. drilling method to be used,
- e. well construction to be used, and

- f. details of the connection of each and every well to the heap leach process.

ANSWER: Four supply wells have been identified to withdraw groundwater from the upper member of the Deadwood formation. The well numbers, locations, and depths are presented in Volume III, Attachment 4, of St. Joe Gold's Mine Permit Application. Each well will be drilled by conventional, air-rotary water well methods and completed without well screen through the production aquifer. Steel casing will be installed and grouted into the overlying confining unit (impermeable porphyry sill). Submersible electric pumps suspended on galvanized steel drop pipes will lift the water to the surface where pipelines will convey the water to the process ponds.

16. Describe with particularity the design for the construction of each heap and each heap leach pad to be used at the proposed Richmond Hill Project. Include in those descriptions:

- a. any liners,
- b. curbing,
- c. leachate collection systems,
- d. sprinkler systems,
- e. heap lifts,
- f. ripping systems and equipment, and
- g. drainage systems for each heap.

ANSWER: Please refer to the Richmond Hill Mine Permit Application, Volume I and Volume IV for a detailed description of the heap leach pads and their construction. These two documents

provide information on the heap liners, containment appurtenances, leachate collection system(s), sprinkler spacing, and solution distribution piping.

Volume III, Attachment 1 (Soil/Geotechnical Report) provides information on recommended heap construction (heap lifts and heights).

17. Describe with particularity each and every fact and identify each and every document which in whole or in part supports the statements made in Applicant's memorandum dated January 12, 1987, entitled Memorandum Regarding Water Issues for Zoning Permit Application, to-wit: "The Richmond Hill mine area is located in a topographic saddle, with a restricted ground surface area lying upland from the mine. . . This topographic position limits the effect of mining activities on surface water runoff and groundwater recharge."

ANSWER: The Richmond Hill/Turnaround deposit area lies at a high elevation within the project area. Landforms in the mine area are represented by several closed topographically high areas connected by ridges (topographic saddles). This topographic position can be seen on any topographic map of the area showing the mine pit; for example, Figure 3, Volume III, Attachment 9, Monitoring Plan Report, Mine Permit Application.

This topographic position limits the effect of mining on surface water runoff because the volume of runoff discharged from restricted areas upland from the mine is small. This topographic position limits the effect of mining on groundwater

recharge for the same reason. There is little available runoff from the restricted area lying upland from the mine for groundwater recharge.

18. Describe with particularity each and every fact and identify each document which in whole or in part supports the statement of St. Joe Minerals Corporation's memorandum dated January 12, 1987, entitled Memorandum Regarding Water Issues for Zoning Permit Application to-wit: "The processing area is closely bounded on all sides by topographic and ground-water drainage divides."

ANSWER: The processing area is closely-bounded by topographic drainage divides, which form the uppermost reach of the Rubicon Gulch watershed. Rubicon Gulch drains all runoff from the processing area. Other nearby drainages are isolated from processing area runoff.

The potentiometric surface present on Figure 5 of the HSI Report Groundwater Investigation, Richmond Hill Project and dated March 4, 1987, shows that the groundwater divides and flow directions roughly correspond with the surface water divides and flow directions. Therefore, the groundwater underlying the processing area is expected to flow in the same direction as the surface flows in Rubicon Gulch.

19. Describe with particularity each and every mine site reclamation provision or plan, suggested, reviewed or included in proposals or permit applications for the Richmond Hill Project. Include in those descriptions:

- a. area of land to be reclaimed,
- b. methods of reclamation,
- c. level or type of use for land after reclamation,
and
- d. financial mechanisms in place to assure adequate
funding for reclamation.

ANSWER: Detailed information addressing the reclamation issues and concerns regarding the Richmond Hill Project are found in Volume II of the Richmond Hill Mine Permit Application. It is the intention of the St. Joe Gold Corporation to purchase a surety bond in favor of the State of South Dakota for insuring that the site is reclaimed as specified.

20. Identify each person answering these interrogatories and all other persons who participated in the preparation of the answers: include a delineation of each specific interrogatory each person answered or participated in answering.

ANSWER: Interrogatories were answered by:

- a. George M. Obeldobel
Project Manager - Richmond Hill
Director of Metallurgy - St. Joe Minerals Corporation
Business: 7733 Forsyth Blvd., Clayton, MO 63105
(314) 854-9612
Home: 16466 Saddlecreek Rd., Chesterfield, MO 63017
(314) 537-0308
Interrogatories: 1 - 22
- b. Edwin T. Cryer
Project Manager - James Montgomery, Consulting
Engineers, Inc.
Business: 161 Mallard Drive, Boise, ID 83706-3974
(208) 345-5865
Home addresses and phone numbers for Mr. Cryer and all
others are irrelevant and will not be divulged.
Interrogatories: 2, 3, 4, 5, 7, 8, 10, 11, 12, 13, 14,
16, 19, 20, 21, 22

- c. Chris W. Metzger
Senior Engineering Geologist - HSI Hydro-Search Inc.
Business: 350 Indiana Street, Suite 415, Golden CO
80401
(303) 279-7982
Interrogatories: 1, 9, 15, 17, 18
- d. Paul Hodges
President - Compania Minera San Jose Ltda.
Business: Las Uribinas 53 - Piso 11, Clasificador 45,
Correo 9, Santiago, Chile
011-562-231-9766
Interrogatory: 6
- e. Todd Duex
Project Geologist, St. Joe American Corporation
Business: 601 West Main, Lead, SD 57754
(605) 584-1210
Interrogatory: 9
- f. A. P. Fuller
Amundson, Fuller & Delaney Law Offices
Business: 203 W. Main, Lead, SD 57754
(605) 584-2440

21. Identify each person who has or claims to have personal knowledge of St. Joe Minerals Corporation's heap leach gold mining operations or planned operations in the Black Hills region of South Dakota.

ANSWER: Individuals who are knowledgeable on the Richmond Hill Project, in whole or in part, include:

- a. South Dakota DWR
Joe Foss Building
523 East Capitol
Pierre, SD 57501
(605) 773-3151
 - 1. James Nelson - Mining Division Director
 - 2. Robert Townsend - Exploration & Mining Program Chief
 - 3. Steve Pirner - Administrator of Office of Water Quality
 - 4. Ray Birchem - Staff Engineer
 - 5. Dave Johnson - Engineer
 - 6. Mike Cepak - Engineer
 - 7. Mike Perkovich - Engineer

8. Nick Bugosh - Hydrologist

- b. Barrie Parrish
SD Department of Game, Fish & Parks
3305 West South Street
Rapid City, SD 57702
(605) 394-2391
- c. Paul Ries & Associates
District Ranger
U. S. Forest Service
320 Ryan Road
Spearfish, SD 57783
(605) 642-4622
- d. Lawrence County Planning & Zoning
Board and County Commissioners
78-80 Sherman Street
Deadwood, SD 57732
(605) 578-3871

In addition to those individuals cited in Question 20 and in addition to those federal, state, and county officials who have been given an appraisal of the project, the following individuals are generally knowledgeable on the project and are very knowledgeable in their areas of expertise.

- a. Gary E. Welch and Associates
Vice President-Environment-St. Joe Minerals Corporation
Business: 7733 Forsyth Boulevard, Clayton, MO 63105
(314) 726-9500
- b. Robert Gilmore
Vice-President - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- c. Joseph Rankin
Senior Geologist - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- d. Robert Reuss
Senior Mining Engineer - St. Joe Minerals Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766

- e. Bruce Davis
Geostatistical Engineer - St. Joe American Corporation
Business: 2002 North Forbes Blvd., Tucson, AZ 85745
(602) 622-4766
- f. Benjamin C. Koskiniemi, P.E.
Associate - Call & Nicholas, Inc.
Business: 3625 E. 42nd Street, Tucson, AZ 85713
(602) 745-8141
- g. Other Associates of Edward T. Cryer at
James Montgomery, Consulting Engineers, Inc.
Business: 161 Mallard Drive, Boise, ID 83706-3974
(208) 345-5865
- h. L. P. Gochmour
Reclamation Engineer - St. Joe American Corporation
Business: North 111 Vista, #3F, Spokane, WA 99206
(509) 928-7513
- i. Edward Depuitt
Environmental Consultant- University of Wyoming
Business: Department of Range Management
University Station, Box 3354
Laramie WY 82701
(307) 766-1121
- j. Other Associates of Chris Metzger at
HSI Hydro-Search, Inc.
Business: 350 Indiana St., Suite 415, Golden, CO 80401
(303) 279-7982
- k. Neil J. Stodolski
President - NJS Engineering
Business: 348 East Colorado Blvd., Spearfish, SD 57783
(605) 642-4772
- l. A. J. Brown
Senior Metallurgist - Fluor Corporation
Business: 10 Twin Dolphin Dr., Redwood City, CA 94605
(415) 595-6788
- m. Joseph H. New
Supervising Engineer, Construction-Fluor Corporation
Business: 10 Twin Dolphin Dr., Redwood City, CA 94605
(415) 595-6788
- n. Dirk J. A. Van Zyl
Associate Professor - Colorado State University
(Also Geotechnical Engineer - CH2M Hill)
Business: Fort Collins, CO 80523
(303) 491-6081

- o. John D. Welsh
President - John D. Welsh and Associates
Business: 247 Freeport Blvd., Sparks, NV 89431
(702) 358-2992
- p. Mark E. Smith
Civil Engineer - Vector Engineering, Inc.
Business: P. O. Box 1201, Nevada City, CA 95959
(916) 265-3009
- q. Steven A. Narkiewicz
Geotechnical Engineer - Northern Engineering & Testing
Business: P. O. Box 7867, Boise, ID 83707
(208) 377-2100

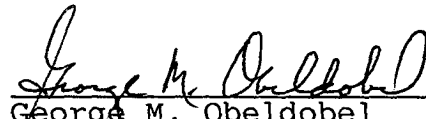
22. Identify each person with whom St. Joe Minerals Corporation, d/b/a St. Joe Gold anticipates or plans to call as an expert witness at the hearing on Permit Application 1372-1.

ANSWER: For the Permit Application 1372-1, St. Joe will use as expert witnesses:

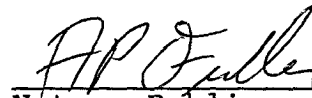
- a. George Obeldobel
- b. Edwin T. Cryer
- c. Chris W. Metzger

See answer to Question 20 for further information.

DATED this 6th day of May, 1987.


George M. Obeldobel

Subscribed and sworn to before me this 6th day of May, 1987.


Notary Public

My Commission Expires: July 19, 1992

(Seal)



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 10, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352 *John Hatch*

SUBJECT: Request for Continuance of Hearing on Water Permit
Application No. 1372-1, St. Joe Minerals Corporation

The Department of Water and Natural Resources will request a continuance of the scheduled September 9 and 10, 1987 hearing on Water Permit Application No. 1372-1. Governor Mickelson has requested that the Department of Water and Natural Resources temporarily suspend consideration of mining and related permit applications until new mining reclamation rules based on 1987 legislation are developed and promulgated. The Water Management Board will consider the request for a continuance following the status report on discovery and prehearing preparations at the July Board meeting. The hearing is scheduled for 1:15 pm on July 8, 1987 in Room 216, Joe Foss building, 523 E Capitol, Pierre SD.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

CERTIFICATION

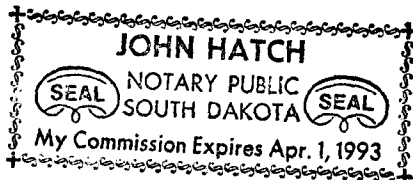
I hereby certify that on June 10, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice of Continuance of Hearing on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

Karen Schlaak
KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 10th day of June, 1987.

John Hatch
Notary Public





Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

June 26, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer 
Water Rights Division
605 773-3352

SUBJECT: Request for Permission to Advertise Proposed Rules

For your information John Smith, Secretary of the Department of Water and Natural Resources will request permission from the Water Management Board to advertise proposed rules for public hearing. The request will be made at 8:30 am on July 8, 1987 in Room 216, Joe Foss Building, 523 E Capitol, Pierre SD. The proposed rules to be advertised will concern areas including but not limited to: groundwater standards and permits, above ground tanks, underground tanks, surface water discharge permits, Whitewood Creek site specific water quality standards, and surface water quality standards. This is a request to advertise the proposed rules, NOT a review of the proposed rules. This request to advertise proposed rules is made pursuant to the Notice dated June 10, 1987 which requests a continuance of the September 9 & 10, 1987 hearing on Water Permit Application No. 1372-1.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

CERTIFICATION

I hereby certify that on June 26, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice of Continuance of Hearing on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 26th day of June, 1987.

~~Notary~~ Public



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

July 13, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer *John Hatch*
Water Rights Division
605 773-3352

SUBJECT: Continuance of Hearing on Water Permit Application No.
1372-1 and Deadlines for Submitting Witness Lists and
Ending Discovery Proceedings

Water Permit Application No. 1372-1, St. Joe Minerals Corporation will NOT be considered by the Water Management Board at the September 9 and 10, 1987 Board meeting. On July 8, 1987 the Board continued the scheduled hearing from the September meeting to the December 2 and 3, 1987 meeting. Notice will be given of the time and place.

The Board directed that witness lists be prepared by the Parties of Record and be mailed to be received by the Board and other Parties of Record prior to September 9, 1987. The Board further directed that all discovery proceedings be concluded by November 1, 1987.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

CERTIFICATION

I hereby certify that on July 13, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice of Continuance of Hearing on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

baren Schlack

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 13th day of July, 1987.



John Hatch
Notary Public

Amundson, Fuller & Delaney

ROBERT A. AMUNDSON
A.P. FULLER
JOHN J. DELANEY

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
PHONE (605) 584-2440

July 21, 1987

Mr. Joe Karaganis
Karaganis & White, Ltd.
414 North Orleans, Suite 810
Chicago, IL 60620



Re: St. Joe Water Rights

Dear Mr. Karaganis:

Witnesses St. Joe anticipates calling at the time of the hearing before the Water Board are:

1. George Obeldobel. You have his address and phone number;
2. Chris Metzger. You have his address and phone number; and
3. Ed Cryer. You have his address and phone number.

In addition, we may call Todd Duex, St. Joe geologist, at St. Joe's office, here in Lead, South Dakota, and Pat Gochmour, reclamation expert at James Montgomery, in Spokane, Washington.

Yours truly,

FULLER & CO., LTD.

/S/ A. P. FULLER

A. P. Fuller

APF/slc

cc: Client

Ms. Marian Gunderson
Mr. John Smith
Mr. John Hatch
Ms. Roxanne Gieed
Mr. John Guhin

Department of Water and Natural Resources

Hearing on Application No. 1372-1

WITNESS LIST

Division of Water Rights

John Hatch, Chief Engineer
Jim Goodman, Hydrologist III
Gale Selken, Hydrologist III
~~Tim Schaal, Natural Resources Engineer III~~
Kent Buhler, Natural Resources Engineer II
Ron Duvall, Natural Resources Engineer III

Division of Environmental Quality

~~Jim Nelson, Director of Environmental Quality~~
Steve Pirner, Office Administrator of Water Quality
~~Ray Birchem, Natural Resources Engineer IV~~
~~Leon Schochenmaier, Natural Resources Administrator~~
~~Dennis Rounds, Natural Resources Engineer III~~
~~Jeanne Goodman, Hydrologist III~~
~~Bill Markley, Natural Resources Engineer IV~~
~~Joel Smith, Natural Resources Administrator~~
~~Mike Cepak, Natural Resources Engineer I~~
~~Nick Bugosh, Natural Resources Engineer I~~
~~Joe Bower, Natural Resources Senior Scientist~~
~~Bob Townsend, Geologist III~~



**STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD**

In The Matter Of The Application Of:

**ST. JOE MINERALS CORPORATION,
d/b/a ST. JOE GOLD**

Application No. 1372-1

)
)
)
)
)
)

NOTIFICATION OF WITHDRAWAL OF COUNSEL

The law firm of Karaganis & White Ltd. hereby notifies the Water Management Board of the State of South Dakota and all parties in the above captioned matter that is withdrawing its legal representation of the Intervenor Citizens' Law Center as of September 8, 1987.

Respectfully submitted,

KARAGANIS & WHITE LTD.

By Barbara Magel

Reed Richards
Richards & Richards
696 Main Street
Box 373
Deadwood, South Dakota 57732
(605) 578-2572

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCLC008



CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing instrument was served upon the attorneys of record of all parties to the above cause by enclosing same in an envelope addressed to such attorneys at their business addresses as disclosed by the pleadings of record herein, via United States mail, first class and postage prepaid, on September 11, 1987, as follows:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Barbara Mozell

JWCLC008

**STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD**



In The Matter Of The Application Of:)
)
ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD)
)
Application No. 1372-1)

WITNESS LIST OF CITIZENS' LAW CENTER

NOW COMES CITIZENS' LAW CENTER, by its attorneys, and submits the following list of witnesses who may testify at hearing:

1. Nick Meinhardt -- address and phone number have previously been provided to the Board and other parties to this matter.
2. Debra Rogers -- address and phone number have previously been provided to the Board and other parties to this matter.
3. David Sandidge -- Deadwood, South Dakota. A more specific address and phone number shall be provided to the Board and other parties as soon as it is made available to Intervenor.
4. Dr. Philip LaMoreaux -- P.E. LaMoreaux and Associates, P.O. Box 2310, Tuscaloosa, Alabama 35403; (205) 752-5543. Dr. LaMoreaux is a hydrogeologist and is expected to testify concerning hydrogeologic risks and conditions at and around the proposed mining site.
5. Dr. Travis Hughes -- P.E. LaMoreaux and Associates, P.O.Box 2310, Tuscaloosa, Alabama 35403; (205) 752-5543. Dr. Hughes is a hydrogeologist who is expected to testify about hydrogeologic conditions and risks at and around the proposed mining site.

Citizens' Law Center reserves its right to call Mr. George Obeldobel, Mr. Chris Metzger, and Todd Duex of St. Joe Minerals Corporation, and Mr. Ed Cryer and Mr. Pat

Gochmour of James M. Montgomery Consulting Engineers, Inc., as possible witnesses if St. Joe Minerals does not call such witnesses on its own behalf.

Further, Citizens' Law Center reserves the right to submit the names of other witnesses if additional witnesses are identified through ongoing discovery.

CITIZENS' LAW CENTER,
Intervenor

By Kathleen M. Donahue
One of its attorneys

Reed Richards
Richards & Richards
696 Main Street
Box 373
Deadwood, South Dakota 57732
(605) 578-2572

Joseph V. Karaganis
A. Bruce White
Barbara Anne Magel
Kathleen M. Donahue
Karaganis & White Ltd.
414 North Orleans, Suite 810
Chicago, Illinois 60610
(312) 836-1177
JWCLC007

CERTIFICATE OF SERVICE

I, Kathleen M. Donahue, hereby certify that I served the foregoing **WITNESS LIST OF CITIZENS' LAW CENTER** on St. Joe Minerals Corporation by placing a copy of same in the United States mail, first class and postage prepaid, on September 4, 1987, addressed below:

Mr. A.P. Fuller
Amundson, Fuller & Delaney
P.O. Box 898
203 West Main
Lead, South Dakota 57754

Kathleen M. Donahue
Kathleen M. Donahue

JWCLC007

Fuller & Co., Ltd.

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
TELEPHONE (605) 584-2440
TELECOPIER (605) 584-2946

September 30, 1987

Mrs. Marian Gunderson, Chairman
Water Management Board
327 Idaho Street, SE
Huron, SD 57350



Re: St. Joe's Water Right Application

Dear Mrs. Gunderson:

As you know, Mr. Karaganis has withdrawn as counsel for the persons objecting to St. Joe's Application for a water right. As I understood the prior meetings with the Water Board, we will be meeting in early December with the Water Board in Rapid City. It was my clear understanding that there would be no further delays. We sincerely hope that the Board will not allow the withdrawal of Mr. Karaganis to be a reason for additional delay in this matter. St. Joe is prepared to go forth with the hearing and to meet the obligations of the statute.

Do you know of any reason why the hearing would not be held as scheduled? If you become aware of any reason, would you please advise me immediately. We are preparing to be present at the hearing and to proceed.

Sincerely yours,

FULLER & CO., LTD.

A handwritten signature in cursive script, appearing to read "A. P. Fuller".

A. P. Fuller

APF/slc

cc: John Smith
Mr. John Hatch
Ms. Roxanne Giedd
Nick Meinhardt
Joe Nelson
Dave Sandidge
George Obeldobel

WATER RIGHTS DIVISION
(605) 773-3352

October 29, 1987

Nick Meinhardt
Citizens Law Center
P.O. Box 9084
Rapid City, South Dakota 57709

Dear Mr. Meinhardt:

Enclosed is a copy of the public notice for Water Permit Application No. 1422-1, St. Joe Gold Corporation. The notice explains the relationship between Application Nos. 1372-1 and 1422-1.

Please contact us if you have any questions.

Sincerely,



Ron Duvall
Natural Resources Engineer

RD:ms
Enc.

SOUTH DAKOTA
Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

November 2, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer *John Hatch*
Water Rights Division
605 773-3352

SUBJECT: Consideration of Water Permit Application No. 1372-1
continued from the July 8, 1987 Water Management Board
meeting

The Water Management Board will consider Water Permit Application No. 1372-1 at 8:30 am, December 3, 1987 in the Roosevelt and Jefferson Rooms, Howard Johnson's, 2211 LaCrosse, Rapid City SD. Application No. 1372-1 was continued to allow completion of discovery proceedings and preparation of witness lists. Applicable provisions of Notice published December 31, 1986 and January 7, 1987 in the Lead Daily Call will still apply at this hearing. The agenda time is an estimate. The actual time of hearing may be later than 8:30 am due to prior agenda items.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

May 6, 1987
(date)

page 1 of 2

Parties of Record before Water Management Board on Water
Permit Application No. 1372-1

FOR:

1. George M. Obeldobel
St Joe Minerals Corp
7733 Forsyth Boulevard
Clayton MI 63105
2. A. Q. Fuller, attorney
PO Box 898
Lead SD 57754

AGAINST:

- Nick Meinhardt
Citizens Law Center
PO Box 9084
Rapid City SD 57709
- ~~Joseph Karaganis, Attorney
414 North Orleans St.
Suite 810
Chicago IL 60610~~

3. _____

4. _____

5. _____



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

July 13, 1987

NOTICE

TO: George M Obeldobel
St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352 

SUBJECT: Continuance of Hearing on Water Permit Application No. 1372-1 and Deadlines for Submitting Witness Lists and Ending Discovery Proceedings

Water Permit Application No. 1372-1, St. Joe Minerals Corporation will NOT be considered by the Water Management Board at the September 9 and 10, 1987 Board meeting. On July 8, 1987 the Board continued the scheduled hearing from the September meeting to the December 2 and 3, 1987 meeting. Notice will be given of the time and place.

The Board directed that witness lists be prepared by the Parties of Record and be mailed to be received by the Board and other Parties of Record prior to September 9, 1987. The Board further directed that all discovery proceedings be concluded by November 1, 1987.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

CERTIFICATION

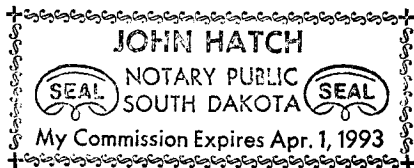
I hereby certify that on November 2, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice of Hearing on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

Karen Schlaak
KAREN SCHLAACK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 3rd day of November, 1987.

John Hatch
Notary Public



Bangs, McCullen, Butler, Foye & Simmons

Lawyers

818 St. Joe Street

Mailing Address P. O. Box 2670

Rapid City, South Dakota 57709

605-343-1040

Telecopier 605-343-1503

November 16, 1987

George A. Bangs
W. A. McCullen (1943-1987)
Joseph M. Butler
Thomas H. Foye
Thomas E. Simmons
Ronald E. Clabaugh
Charles L. Riter

Allen G. Nelson
James P. Hurley
Michael M. Hickey
Mark F. Marshall
Terry L. Hofer
Rebecca A. McMahon
Patrick K. Duffy



Department of Water and Natural Resources
Water Rights Division
Joe Foss building
523 East Capitol
Pierre, SD 57501

Re: In the Matter of the Application of
ST. JOE MINERALS CORPORATION, d/b/a ST. JOE GOLD
Application No. 1372-1

Gentlemen:

Enclosed please find Motion for Continuance regarding the
hearing set for December 3, 1987 on the above-referenced application.

Sincerely,

BANGS, McCULLEN, BUTLER, FOYE & SIMMONS

Michael M. Hickey
Michael M. Hickey

MMH:vaw

Enclosure

cc w/enc: Mr. A. Peter Fuller
Mr. John Guhin
Mr. Harold Deering
Mr. Nick Meinhardt

MOTION FOR CONTINUANCE

Dated this 16th day of November, 1987.

By

MICHAEL M. HICKEY
Attorneys for Citizens Law Center,
Objectors to Application No. 1872-1
818 St. Joe Street; P.O. Box 2670
Rapid City, SD 57709
(605) 343-1040

CERTIFICATE OF SERVICE

The undersigned hereby certifies that he served true copy of this legal instrument upon the persons herein next designated, all on the date below shown, by depositing copies thereof in the United States mail at Rapid City, South Dakota, postage prepaid, in envelopes addressed to said addressees, to-wit:

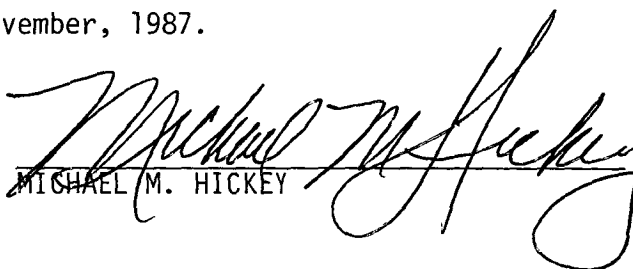
Mr. A. Peter Fuller
Attorney at Law
P.O. Box 898
Rapid City, SD 57709

Mr. John Guhin
Assistant Attorney General
Attorney General's Office
500 E. Capitol
Pierre, SD 57501

Mr. Harold Deering
Assistant Attorney General
Attorney General's Office
500 E. Capitol
Pierre, SD 57501

which addresses are the addresses of the addressees known to the subscriber.

Dated this 16th day of November, 1987.


MICHAEL M. HICKEY

Bangs, McCullen, Butler, Foye & Simmons

Lawyers

George A. Bangs
W. A. McCullen (1943-1987)
Joseph M. Butler
Thomas H. Foye
Thomas E. Simmons
Ronald E. Clabaugh
Charles L. Riter

818 St. Joe Street
Mailing Address P. O. Box 2670
Rapid City, South Dakota 57709
605-343-1040
Telecopier 605-343-1503

November 16, 1987



Allen C. Nelson
James P. Hurley
Michael M. Hickey
Mark F. Marshall
Terry L. Hofer
Rebecca A. McMahon
Patrick K. Duffy

Mrs. Marian Gunderson
Chairman
Water Management Board
327 Idaho Street, SE
Huron, SD 57350

Re: St. Joe Minerals Corporation, dba St. Joe Gold
Water Right Application

Dear Mrs. Gunderson:

Our office has been approached by Mr. Nick Meinhardt on behalf of the Citizens Law Center to appear on its behalf at the administrative hearing on the water rights application of St. Joe Gold Corporation which is set for December 3, 1987. This request was made by reason of the fact that Mr. Karaganis, the original attorney on the file, has withdrawn as counsel for the persons objecting to the application. While I do not have any desire to continue this matter, I would appreciate the Board granting a thirty day delay. I have just recently received a copy of the application and still have not as yet received all of the materials prepared by Mr. Karaganis in opposition thereto. It is virtually impossible for me to competently represent the position proposed by the various objectors to the application given the brief time between now and the hearing date. Accordingly, I would sincerely request that the matter be continued. I have prepared a formal motion of continuance which has been filed with the South Dakota Department of Water & Natural Resources, Water Rights Division. Copies of that motion have been served on all parties and a copy is enclosed for your information and review.

I would appreciate any consideration you could give to my request. If you have any questions or comments, please advise. Thank you.

Sincerely,

BANGS, McCULLEN, BUTLER, FOYE & SIMMONS

Michael M. Hickey

MMH:vaw

Enclosure

cc: Mr. Pete Fuller
Mr. John Hatch ✓

Mr. Harold Deering
Mr. John Guhin

Mr. Nick Meinhardt

STATE OF SOUTH DAKOTA
DEPARTMENT OF WATER AND NATURAL RESOURCES
WATER RIGHTS DIVISION
WATER MANAGEMENT BOARD



In the Matter of the Application of:)
)
ST. JOE MINERALS CORPORATION,)
d/b/a ST. JOE GOLD,)
)
Application No. 1372-1)
)

MOTION FOR CONTINUANCE

Comes now Michael M. Hickey, attorney for Citizens Law Center, and hereby requests the Water Management Board for an order continuing the hearing set for December 3, 1987, on Application No. 1372-1. This motion is based upon the grounds and for the reasons that the undersigned counsel has just recently been contacted concerning this representation and cannot adequately prepare a presentation of the objectors' case especially given the voluminous nature of the material submitted in support of the application. The undersigned further represents to the Board that this motion is not made for the purposes of delay and that the same is made in good faith.

Dated this 16th day of November, 1987.

BANGS, McCULLEN, BUTLER, FOYE & SIMMONS

By 18/
MICHAEL M. HICKEY
Attorneys for Citizens Law Center,
Objectors to Application No. 1372-1
818 St. Joe Street; P.O. Box 2670
Rapid City, SD 57709
(605) 343-1040

CERTIFICATE OF SERVICE

The undersigned hereby certifies that he served true copy of this legal instrument upon the persons herein next designated, all on the date below shown, by depositing copies thereof in the United States mail at Rapid City, South Dakota, postage prepaid, in envelopes addressed to said addressees, to-wit:

Mr. A. Peter Fuller
Attorney at Law
P.O. Box 898
Rapid City, SD 57709

Mr. John Guhin
Assistant Attorney General
Attorney General's Office
500 E. Capitol
Pierre, SD 57501

Mr. Harold Deering
Assistant Attorney General
Attorney General's Office
500 E. Capitol
Pierre, SD 57501

which addresses are the addresses of the addressees known to the subscriber.

Dated this 16th day of November, 1987.



MICHAEL M. HICKEY



OFFICE OF ATTORNEY GENERAL

STATE CAPITOL
Pierre, South Dakota 57501-5090
Phone (605) 773-3215



ROGER A. TELLINGHUISEN
ATTORNEY GENERAL

November 24, 1987

MEMORANDUM

TO: Members of the Water Management Board, Mr. Michael Hickey, Mr. A. Pete Fuller, Mr. Nick Meinhart, Mr. George Obeldobel, Chief Engineer John Hatch, and Mr. Harold Deering

FROM: John P. Guhin *John P. Guhin*
Assistant Attorney General

RE: St. Joe Minerals Corporation Water Right Application; November 16, 1987 Motion for Continuance

The purpose of this memo is to inform you that Chairman Marian Gunderson has directed that the November 16, 1987 Motion for Continuance submitted by Michael Hickey has been referred by her to the entire Board. Therefore, the Motion will be heard by the Board on December 3, 1987. Any party desiring to submit testimony on the issue will be allowed to do so at that time.

I am enclosing copies of the Motion for Continuance for the members of the Board who have not yet received them.

JPG:do

Enclosure



STATE OF SOUTH DAKOTA

BEFORE THE WATER MANAGEMENT BOARD

IN THE MATTER OF THE	)	CERTIFICATE
APPLICATION OF:	)	OF
ST. JOE MINERALS CORPORATION,	)	SERVICE
d/b/a ST. JOE GOLD,	)	
APPLICATION NO. 1372-1	)	

I hereby certify that a true and correct copy of the Memorandum dated November 24, 1987, to the following persons was served by First Class mail, postage prepaid, in envelopes addressed to Ms. Marian Gunderson, 327 Idaho SE, Huron, SD 57350; Mr. Joel Rickenbach, Box 97, Oelrichs, SD 57763; Ms. Bernita Loucks, 219 42nd St., Rapid City, SD 57702; Mr. Rodney Freeman, Jr., P.O. Box 176, Huron, SD 57350; Mr. Dwayne A. Rollag, 320 Lincoln Lane South, Brookings, SD 57006; Mr. Richard L. Lloyd, Star Route, Chamberlain, SD 57325; Mr. Francis E. Brink, 1214 South Well St., Aberdeen, SD 57401; Mr. John Hatch, Chief Engineer, Water Rights Division, Department of Water and Natural Resources, Joe Foss Building, Pierre, SD 57501; Mr. Harold H. Deering, Assistant Attorney General, Natural Resource Section, Office of Attorney General, State Capitol, Pierre, SD 57501; Mr. Michael Hickey, 818 St. Joe Street, P.O. Box 2670, Rapid City, SD 57709; Mr. Nick Meinhardt, Citizens Law Center, P.O. Box 9084, Rapid City, SD 57709; Mr. A. Pete Fuller, P.O. Box 898, Lead, SD 57709; and

Mr. George Obeldobel, St. Joe Minerals Corp., 7733 Forsyth
Boulevard, Clayton, Michigan 63105.

Dated and signed this 24th day of November, 1987.



John P. Guhin
Assistant Attorney General
Office of Attorney General
Natural Resource Section
State Capitol
Pierre, South Dakota 57501-5090
Telephone: (605) 773-3215

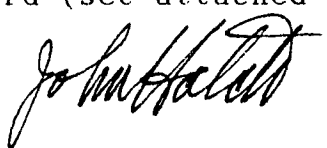
**SOUTH Dakota Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

November 25, 1987

NOTICE

TO: St. Joe Minerals Corporation
7733 Forsyth Boulevard
Clayton MI 63105
and other Parties of Record (see attached list)

FROM: John Hatch, Chief Engineer 
Water Rights Division
605 773-3352

SUBJECT: Revised Recommendation of Chief Engineer for Water
Permit Application No. 1372-1, St. Joe Minerals Corp.

Enclosed is a revised recommendation for Water Permit Application No. 1372-1. The purpose of the revised recommendation is an attempt to define and separate those issues which should not have to be considered during the hearing on Water Permit Application No. 1372-1.

Based upon the revised recommendation we are proposing to reduce the number of Department employees that will be available in Rapid_City as witnesses. If there is a problem with the revised list of witnesses, please advise.

cc: Harold Deering, Assistant Attorney General
Roxanne Giedd, Assistant Attorney General

CERTIFICATION

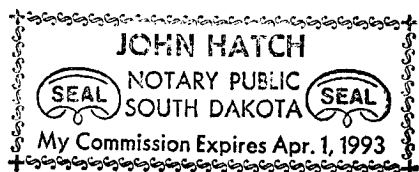
I hereby certify that on November 25, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice on the Revised Recommendation on Application No. 1372-1 addressed as stated on the Parties of Record sheet.

Karen Schlaak

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 30th day of November, 1987.



John B. Galt
Notary Public

 **Department of
Water & Natural Resources**
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

December 10, 1987

NOTICE

TO: Parties of Record to Water Permit Application No.
1372-1, St. Joe Minerals Corporation (see attached
list)

FROM: John Hatch, Chief Engineer
Water Rights Division
605 773-3352



SUBJECT: Preparation of Findings of Fact, Conclusions of Law and
Final Decision

The Water Management Board has directed John Guhin, the Board's attorney to prepare proposed Findings of Fact, Conclusions of Law and a Final Decision on approval of Water Permit Application No. 1372-1. The Board will consider the proposed Findings, Conclusions and Final Decision at 1:15 pm, March 2, 1988 in Room 216, Joe Foss Building, 523 E Capitol, Pierre SD. The agenda time is an estimate. The actual time of consideration may be delayed due to prior agenda items.

The Board has requested that a copy of the proposed Findings, Conclusions and Final Decision be mailed to each Board member and all Parties of Record and their attorneys (copy enclosed) by February 11, 1988. Any comments pertaining to the proposed Findings, Conclusions and Decision are to be mailed to each Board member, the Board attorney and all Parties of Record and their attorneys by February 19, 1988.

The public hearing on Application No. 1372-1 was completed December 3, 1987. No additional testimony on this application will be received on March 2, 1988.

cc: Harold Deering, Assistant Attorney General
John Guhin, Assistant Attorney General

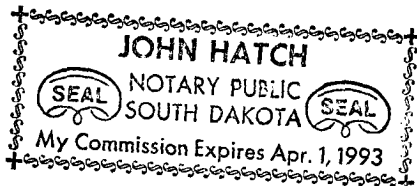
CERTIFICATION

I hereby certify that on December 10, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice for Preparation of Findings, Conclusions and a Final Decision on Water Permit Application No. 1372-1 addressed as shown on the Parties of Record sheet.

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 11th day of December, 1987.



John Hatch
Notary Public



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

December 18, 1987

NOTICE

TO: Parties of Record to Water Permit Application No.
1372-1, St. Joe Minerals Corporation (see attached
list)

FROM: John Hatch, Chief Engineer *John Hatch*
Water Rights Division
605 773-3352

SUBJECT: Notice of the Water Management Board's Intention To
Consider Amendment of Water Permit Application No.
1372-1 with an Environmental Bond Requirement

The Water Management Board Chairman has directed that Notice be given of the Board's intention to consider further amendment of Application No. 1372-1 when proposed Findings of Fact, Conclusions of Law and a Final Decision regarding No. 1372-1 are considered with the following Environmental Bond Requirement:

That prior to beginning construction of the St. Joe Minerals Project, an Environmental Bond in the form of either a performance bond or a cash deposit in the amount of \$ _____ shall be filed with the Chief Engineer to guarantee the performance of conditions to Permit No. 1372-1 that were imposed to protect the environment. In the event of Permit condition(s) violation, the Board, following a hearing may determine the cost of damage to the environment and the cost to comply with the condition violation(s). The costs shall be deducted from the Environmental Bond and used for compliance with violated condition(s) and to mitigate damages to the environment.

The dollar value of the Environmental Bond will be determined by the Board at the time of the hearing to consider further qualification of Application No. 1372-1 with an Environmental Bond requirement. The hearing will be at 1:15 pm, March 2, 1988, Room 216, Joe Foss Building, 523 East Capitol, Pierre SD.

Applicable provisions of the Notice published December 31, 1986 and January 7, 1987 in the Lead Daily Call will still apply at the hearing to further qualify No. 1372-1.

cc: Water Management Board
John Guhin, Assistant Attorney General
Harold Deering, Assistant Attorney General

CERTIFICATION

I hereby certify that on December 18, 1987 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice concerning an Environmental Bond Requirement on Water Permit Application No. 1372-1 addressed as shown on the Parties of Record sheet.

KAREN SCHLAAK
Senior Secretary

KAREN SCHLAAK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 21st day of December, 1987.



John Walch
Notary Public

 **Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

January 15, 1988

1372-1

A.P. Fuller
Fuller & Co., Ltd.
PO Box 898
Lead SD 57754

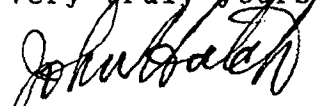
Dear Mr. Fuller:

I am writing in response to your December 22, 1987 letter on our notice to further amend Application No. 1372-1. Any amendment would be pursuant to SDCL 46-1-14.

Chairman Gunderson requested that I give notice that further amendment of No. 1372-1 would be considered at the March Water Management Board meeting. If No. 1372-1 is further amended, the amendment would be based upon any evidence received at the December 3 hearing or at the March amendment hearing.

The Board will also consider amendment of the City of Pierre Permit No. 5146-3 for water to supply the National Farms hog production unit with an environmental bond requirement at the March meeting. Let me know if I may answer additional questions.

Very truly yours,



JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

Fuller & Co., Ltd.

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
TELEPHONE (605) 584-2440
TELECOPIER (605) 584-2946

December 22, 1987



John Hatch
Chief Engineer, Water Rights Div.
Dept. of Water & Natural Resources
Joe Foss Building, 523 E. Capitol
Pierre, SD 57501

Dear Mr. Hatch:

Would you please advise by what authority you are considering further amendment to Application No. 1372-1 as proposed in your notice of December 18, 1987.

Also would you please advise what evidence given at the time of the hearing would compel or indicate to the board that such amendment is required or needed. Thank you very much for your cooperation. I remain

Yours truly,

FULLER & CO., LTD.

A.P. Fuller

APF/bac
CC: George Obeldobel



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

March 30, 1988

NOTICE

TO: Parties of Record to Water Permit Application No.
1372-1, St. Joe Minerals Corporation (see attached
list)

FROM: John Hatch, Chief Engineer *John Hatch*
Water Rights Division
605 773-3352

SUBJECT: Adoption of Findings of Fact, Conclusions of Law and
Final Decision

This is to notify you that a Final Decision, including Findings of Fact, Conclusions of Law were adopted by the Water Management Board for approval of Water Permit Application No. 1372-1 which was considered at the December 2, 1987 meeting.

The final Decision, Findings and Conclusion are on file in this office and signed copies will be furnished upon request. South Dakota Statutes provide that the decision of the Board may be appealed to the Courts.

May 6, 1987
(date)

page 1 of 2

Parties of Record before Water Management Board on Water
Permit Application No. 1372-1

FOR:

1. George M. Obeldobel
St Joe Minerals Corp
7733 Forsyth Boulevard
Clayton MI 63105

2. A. Q. Fuller, attorney
P.O. Box 898
Lead SD 57754

3.

4.

5.

AGAINST:

Nick Meinhardt
Citizens Law Center
P.O. Box 9084
Rapid City SD 57709

~~Joseph Karaganis, Attorney
414 North Orleans St.
Suite 810
Chicago IL 60610~~

Michael M. Hickey, Attorney
P.O. Box 2670
Rapid City 57709

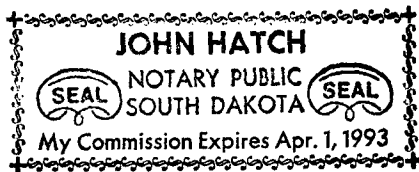
CERTIFICATION

I hereby certify that on March 30, 1988 I have personally deposited with the U.S. Mail, postage prepaid envelopes containing Notice on Adoption of Findings, Conclusions and a Final Decision on Water Permit Application No. 1372-1 addressed as shown on the Parties of Record sheet.

Karen Schlaak
KAREN SCHLAACK
Senior Secretary

STATE OF SOUTH DAKOTA)
) SS
COUNTY OF HUGHES)

Sworn to, before me, this 31st day of March, 1988.



John Hatch
Notary Public

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

Pierre, March 29, 1988, 19

RECEIVED OF Fuller & Co. LTD., PO Box 898, Lead, SD 57754

the following amount in fees for services rendered as provided for by law: for St. Joe Richmond Hill Inc.
4600 S. Ulster St. Suite 300

Fee for Application for Permit No. _____ to Appropriate Water, to construct works and to put water to beneficial use _____

Fee for Application for Permit No. _____ to Appropriate Water for Future Use _____

Fee to retain Future Use Permit No. _____ after period of seven years.

Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____

Fee for Filing Transfer Form 1372-1

Fee for Filing Extension Request _____

Fee for Certified Copy of _____

Fee for Print Copy of Map _____

Fee for Certifying _____

Fee for _____

(Any Other Work Provided by Law)

Total

2 50

2 50

Denver CO
80237

By

Chief Engineer

JOHN HATCH (MS)



NO. _____

NOTICE OF TRANSFER OF WATER PERMIT

TO: Water Rights
Foss Building
Pierre, SD 57501

Date: March 17, 1988

This is to notify you that the title to the lands described as follows:

NW 1/4, S1/2 NE 1/4, NE 1/4 NE 1/4, NE 1/4 SE 1/4, Sec 15; N1/2 SW 1/4, SW 1/4 NW 1/4, N 1/2 SE 1/4 SW 1/4, Section 14; NW 1/4 NW 1/4 Section 24; All in T5N-R2E

formerly owned by St. Joe Minerals Corporation

has been transferred to St. Joe Richmond Hill, Inc., 4600 S. Ulster St., Suite 300, Denver, CO 80237
(please include complete mailing address)

together with any rights to the beneficial use of water thereon as evidenced by

Water Right Permit No. 1372-1 as provided for in SDCL 46-5-32 and 46-5-33.

You are therefore hereby requested to file this "Notice of Transfer of Water Permit" in its appropriate file at the Div. of Water Rights, Water Management Board as evidence of the change of ownership.

A fee of Two Dollars and Fifty Cents (\$2.50) is hereto attached to cover filing fees as required under SDCL 46-2-13.

Colorado
STATE OF ~~XXXXXXXXXX~~)
City & County of DENVER) ss.

I, DESMOND P. KEARNS being first duly sworn on my oath despose and say: That my relation to the above described undertaking is that of Owner, that I have read the above foregoing statement, and I know of my own personal knowledge that the information herein stated is true.

[Signature]
(Signed)

Subscribed and sworn to before me this 22nd Day of MARCH, 19 88

[Signature]
(Notary Public)

My Commission Expires Nov 12, 1989

I called about \$5.00 fee for transfer - she said she would send the fee today - just forgot to enclose it the first time.



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

March 30, 1988

1372-1
1422-1

A.P. Fuller
Fuller & Co., Ltd.
PO Box 898
Lead SD 57754

Dear Mr. Fuller:

Enclosed are receipt Nos. 411182 and 411184, in the amount of \$2.50 each, which you paid for filing a "Notice of Transfer" for Water Permit No. 1372-1 and Water Permit Application No. 1422-1. Permit No. 1372-1 and Application No. 1422-1 are now listed in the name of St. Joe Richmond Hill, Inc.

If you have any questions concerning the transfers, please contact us.

Sincerely,

A handwritten signature in cursive script that reads "Genny McMATH".

GENNY MCMATH
Natural Resource Analyst
605 773-3352

enclosures

cc: St. Joe Richmond Hill, Inc.
4600 S Ulster St, Suite 300
Denver CO 80237

SOUTH DAKOTA Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

April 6, 1988

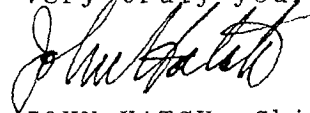
1372-1

A.P. Fuller
Fuller & Co., Ltd.
PO Box 898
Lead SD 57754

Dear Mr. Fuller:

As requested, enclosed is a certified copy of the Findings of Fact, Conclusions of Law and Final Decision adopted by the Water Management for Water Permit No. 1372-1.

Very truly yours,

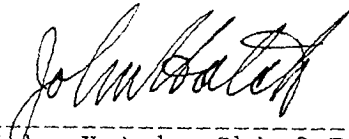


JOHN HATCH, Chief Engineer
Water Rights Division
605 773-3352

enclosure

CERTIFICATION

I hereby certify that the attached is a full, true and correct copy of the Findings of Fact, Conclusions of Law and Final Decision on Water Permit No. 1372-1 as adopted by the Water Management Board March 2, 1988.

A handwritten signature in cursive script, appearing to read "John Hatch", is written over a horizontal dashed line.

John Hatch, Chief Engineer
Water Rights Division
April 6, 1988

Fuller & Co., Ltd.

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
TELEPHONE (605) 584-2440
TELECOPIER (605) 584-2946

April 1, 1988

John Hatch
Dept. Water & Natural Resources
Joe Foss Building, 523 E. Capitol
Pierre, SD 57501-3181

RE: Water permit application 1372-1
St. Joe Mineral Corporation

Dear John:

Would you please send me a certified copy of the Final Decision, Findings and Conclusions which are on file in your office concerning the above captioned water right.

There is also one other water right which is 1422-1. What is the status of that water right?

Yours truly,

FULLER & CO., LTD.



A. P. Fuller

APF/bac



SOUTH DAKOTA Department of
Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181



November 10, 1988

Pat Gochnour
Manager of Permitting and Environmental Affairs
Bond Gold Corporation
4600 South Ulster Street, Suite 300
Denver, CO 80237

RE: Bond Gold's Operational Hydrologic Monitoring Program

Dear Pat:

This correspondence is in regard to our meeting on September 27, 1988, with Tom Durkin and Kevin Walsh. This letter outlines the surface and ground water monitoring plan requirements we discussed and agreed on during that meeting and subsequent telephone conversations. Although the Bond Gold Richmond Hill project is not yet operational, this plan will be referred to as the operational water monitoring plan. If deemed appropriate DWNR reserves the right to alter this plan.

TABLE 1

SAMPLING FREQUENCY - DEFINITIONS

<u>Quarterly</u>	<u>Bimonthly</u>	<u>Monthly</u>
mid January	early November	same as bimonthly
mid April	mid January	schedule except
mid May	mid April	remaining 6 months
late August	mid May	should be sampled
	early June	mid month
	late August	

Water sampling frequency shall comply with the above schedules based on the regional hydrograph.

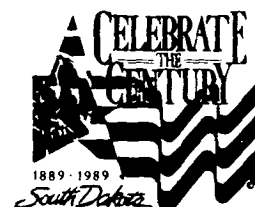


TABLE 2

WATER QUALITY PARAMETERS

<u>Groundwater</u>		<u>Surface Water</u>	
<u>Short list</u>	<u>Full Suite Baseline List</u>	<u>Short list</u>	
HCO ₃	As has been submitted	HCO ₃	All Baseline Completed
SO ₄	previously including	SO ₄	
Na	<u>Water Level</u>	Na	
pH	Field - pH	pH	
Conductivity	- conductivity	Conductivity	
CN Total	- temperature	CN Total	
CN WAD		CN WAD	
*Hardness		CN Free	
TDS		*Hardness	
As		TDS	
Cd		TSS	
*Cu		As	
Se		Cd	
Zn		*Cu	
NO ₃		Se	
NH ₃		Zn	
		NO ₃	
		NH ₄	
WATER LEVEL			
Field - pH		STREAM FLOW	
- Conductivity		Field - pH	
- Temperature		- Conductivity	
		- Temperature	

* Copper was selected instead of lead on the basis of the sample leach solution analysis presented in Table 2-8, volume IV of the Richmond Hill Mining Project permit application. Hardness is necessary to correctly calculate aquatic toxicity limits of metals such as cadmium, copper and zinc (EPA, 1986, Quality Criteria for Water).



TABLE 3

GROUNDWATER MONITORING PROGRAM

<u>Monitoring Station</u>	<u>Sampling Frequency</u>	<u>Parameters</u>
MW-1	Quarterly	Water Level Only
MW-8	Quarterly	Water Level Only
MW-12	Quarterly	Water Level Only
MW-5	Bimonthly	- Groundwater
MW-9	Bimonthly	Shortlist at
MW-11	Bimonthly	<u>all other</u>
*MW-13	Bimonthly	<u>wells</u>
*MW-14	Bimonthly	- see Table 2
*MW-15	Bimonthly	
*Supply Well-2	Bimonthly	
*Supply Well-8	Bimonthly	*also see exceptions below
*Supply Well-15	Bimonthly	

*Additional baseline data needed for these wells.

MW-13, MW-14, and MW-15

A total of four months of baseline data (Full suite - see Table 2) is needed for these wells. After these data are received, these wells shall be monitored bimonthly for the groundwater shortlist (see Table 2).

Supply Well - 8 and Supply Well - 15

At least four months of full suite baseline data are needed for these wells. After these data are received, these wells shall be monitored bimonthly for the groundwater shortlist (see Table 2).



TABLE 4

SURFACE WATER MONITORING PROGRAM

<u>Monitoring Station</u>	<u>Sampling Frequency</u>	<u>Parameters</u>
*FD-1 (French drain)	**Bimonthly/Monthly	Bimonthly - Surface Water shortlist Monthly - pH, Conductivity, TDS, WAD Cyanide
S-5 Rubicon Gulch	Bimonthly	
S-1 Chism Gulch	Quarterly	Surface water shortlist
S-3 lower Cole Creek	Quarterly	at all sites - see
S-4 Squaw above Cole Creek	Quarterly	Table 2
S-7 Squaw Creek below Eagle Bird Mine	Quarterly	
S-8 Squaw Creek above Eagle Bird Mine	Quarterly	
S-9 Burno Gulch	to be determined prior to initiation of land application.	

*Baseline data collected for surface water site #2 (upper Rubicon Gulch) will be considered sufficient as the baseline data for the French drain.

**Monthly sampling of the French drain pursuant to General Condition #6 in Bond Gold's Plans and Specifications Conditions (May 28, 1988). The surface water shortlist (Table 2) shall be sampled for bimonthly. Only pH, conductivity, TDS and WAD cyanide need to be sampled for during the other six months of the year.





GENERAL CONSIDERATIONS

Total and Dissolved Parameters

Both total and dissolved constituents shall be monitored in surface waters. Groundwater monitoring sites shall be monitored for both total and dissolved constituents until one years worth of data is collected. After such data is received by DWNR, groundwater samples may be analyzed for dissolved constituents only.

Additional Radionuclide Data

Pursuant to condition #6 of the Water Quality section of Bond Gold's Mine Permit conditions, Bond shall submit baseline data for total gamma radiation and uranium. These data shall be submitted once for the following water monitoring stations.

Groundwater Sites

MW-14

MW-15

Surface Water Sites

S-3 - Cole Creek

S-4 - Squaw Creek

Selection of the above sites was based on elevated values for other radionuclides in previously submitted baseline data.

In addition, SW-8 and SW-15 (supply wells) shall be analyzed for baseline radionuclides once. Uranium and total gamma radiation should be added to the baseline radionuclide suite that Bond Gold has sampled for recently.

Chloride

If Bond Gold elects to use chlorination to neutralize process solutions, chloride shall be added to the parameter lists for the following monitoring stations: FD-1, MW-13, MW-14 and MW-15.

Undetectable Total Cyanide

If lab analyses show that total cyanide is undetectable in a sample, there is no need to analyze for WAD or Free cyanide. Bond Gold may give its independent analytical lab instructions to follow the above procedure.

Receipt of Water Quality Data by DWNR

Bond Gold shall submit all water quality lab results to DWNR within ten days of Bond's receipt of the last data sheet from the lab for a given sampling set. In the future, DWNR would like to receive all water quality data on PC computer disk. Presently, we use Lotus compatible software to tabulate water quality data. This topic can be discussed further in the near future. As you

may be aware, Travis Labs is in the process of setting up its computer system to keep better track of water quality data. They are very interested in using a system that is compatible with ours and the mining companys'. A data base such as this will undoubtedly save all of us a lot of time in terms of data entry and retrieval.

MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8, MW-12

These wells shall not be plugged. Although some of the pumps may be pulled the wells shall be retained for future use if additional monitoring is deemed appropriate.

As we discussed during our meeting, the above referenced changes in the water monitoring plan must be treated as a technical revision pursuant to condition #1 in the Technical Revision section (p.4) of the Bond Gold Richmond Hill Mine Permit (#445) and ARSD 74:29:03:16. To expedite this process, you may reference this letter to comply with ARSD 74:29:03:03(3) when you submit the technical revision.

If you have any questions, please give me a call.

Sincerely,

Tim Olson
Hydrologist
Exploration and Mining Program
Telephone: (605) 773-4201

cc: Kevin Walsh, Bond Gold
Mike Erickson, DWNR

AO2403TO.sm



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501

Water Rights Division
605 773-3352

DEC 1 1988

St. Joe Richmond Hill, Inc.
4600 S. Ulster Street, Suite 300
Denver, Colorado 80237

Dear Sir:

Enclosed herewith is your Water Permit No. 1372-1 as approved by the Water Management Board authorizing you to construct your water diversion system and put the water to beneficial use, not exceeding the limits as specified in said Water Permit No. 1372-1.

Also enclosed is Form 10, Notice of Completion of Works and Application of Water to Beneficial Use, which you are to complete and submit to the Chief Engineer when you have completed the system and/or have put the water to beneficial use. An inspection can then be scheduled so that your Water License may be issued to you, thus completing your acquisition of a Water Right.

Very truly yours,

JOHN HATCH, Chief Engineer
Water Rights Division

JH:ms

enclosure

PLEASE NOTE: Certain changes can be made in your permit within the five year construction period, usually without affecting the priority date provided an application to amend your permit is made within the five year period-i.e. changes in location or number of diversion points (wells) or location of land to be irrigated. Well locations for wells into the same aquifer can be moved up to 660 feet without application.

Applications to amend a permit after the five year construction period will be assigned a new priority date. Applications to change water sources, to add lands or increase original diversion rates, if approved will usually receive the date of the new application as a priority date regardless of the five year construction period.



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

1372-1

1422-1

May 17, 1989

Max Main
618 State Street
Belle Fourche, SD 57717-1419

Dear Mr. Main:

Enclosed are the copies you requested of Water Permit Nos. 1372-1 and 1422-1. These permits are listed in the name of St. Joe Richmond Hill, Inc.

If you have any questions, please contact me.

Sincerely,

GENNY McMATH
Natural Resources Analyst
Water Rights Division
(605) 773-3352

enclosures



TECHNICAL INFORMATION PROJECT
P.O. Box 1371
Rapid City, South Dakota 57709
(605) 343-0439

June 27, 1989



Mr. John Hatch, Director
Division of Water Rights

Mr. Steve Pirner, Director
Division of Land and Water Quality

Department of Water and Natural Resources
Foss Building
Pierre, South Dakota 57501

Dear Sirs,

It has been brought to my attention that Bond Gold may be violating their permits at their Richmond Hill mine operation. It is my understanding that Bond (formerly St. Joe) stated that their operation would use drip lines to place their cyanide solution onto their ore heaps. If this was their representation at the time the mine and water permits were issued, then this would be the method they are permitted to use. I have been told that they instead have been using a sprinkling method which results in spray up into the air. On windy days this spray drifts downwind off the pad a considerable distance.

I hereby request the following:

- 1) The mine permit and water permit applications and representations during the hearings should be checked to see what was permitted-- if a drip system was not specified, then my apologies for a faulty memory.
- 2) An inspection of Bond's sprinkler system should be made immediately, without advance notice to Bond. Pictures should be taken, and appropriate enforcement actions if violations are found.

Large amounts of cyanide drift off the pad are not acceptable because they confuse the monitoring system (see Wharf water quality data, and explanations for high cyanide in some early data), make mass balance calculations very difficult, and contaminate surrounding vegetation and soils.

Your written response is requested. Thank you very much for checking into this.

Sincerely,


Deb Rogers



Department of Water & Natural Resources

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

July 14, 1989

Ms. Deb Rogers
Technical Information Project
P.O. Box 1371
Rapid City, South Dakota 57709

RE: Sprays on Bond Gold's Leach Pad

Dear Ms. Rogers:

This letter is in response to your letter of June 27, 1989. The Department was already aware of the situation with the sprays at Bond Gold and has conducted a recent inspection of the Bond Gold facility, including the leach pad sprays.

On May 31, 1989, Mike Cepak of our Department was contacted by Pat Gouchnour of Bond Gold regarding the use of sprays on their leach pad, primarily as means to evaporate excess process solution. Bond Gold subsequently submitted a letter to the Department dated June 2, 1989 (see attached letter), which included specifications on the sprays and a proposal for operating the sprays. The Department reviewed the letter and proposal, and sent a response letter back to Bond Gold on June 13, 1989. The Department's letter (see attached letter) stated that the use of the sprays would not be considered a technical revision, as sprays on the leach pad were mentioned specifically in the mine permit application (Volume I, Section IV). The Department approved the use of the sprays contingent upon Bond Gold taking precautions to minimize aerosol drift.

As they stated in their letter, Bond Gold would place the sprays near the center of the leach pad and would discontinue spraying under high wind conditions (over 25 mph). Bond Gold has also been reminded that they must also comply with the permit condition regarding overspray (condition 1 under General), which states:

"If aerosol drift monitoring indicates environmental damage is occurring from cyanide spray application, St. Joe (Bond Gold) shall mitigate."



On June 29, 1989, Mike Cepak and Mark Keenihan of the Department conducted an inspection of the Richmond Hill site and looked specifically inspected the sprays on the leach pad. Approximately 20-25 sprays were being used, near the center of the pad. The winds were calm during the inspection and no problems were noted with the overspray.

At the current time the Department does not have a problem with the sprays at Bond Gold. The Department also concurs with Bond Gold that the use of sprays to evaporate excess solution is preferable to land application.

Should you have any questions concerning this matter, please do not hesitate to contact this Office.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Pirner', with a stylized flourish at the end.

Steven M. Pirner, Director
Division of Land and Water Quality
Phone: (605) 773-3351

cc: John Hatch, Water Rights

Enclosures: Bond letter of June 2, 1989
DWNR letter of June 13, 1989

 **Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

September 7, 1989

Mike Carter
Bond Gold - Richmond Hill
PO Box 892
Lead SD 57754

Dear Mr. Carter:

This letter is in regard to Water Permit Nos. 1372-1 and 1422-1 for mining operations at the Richmond Hill project.

The permits were formerly held by St. Joe Gold Corporation and are currently under the name of St. Joe Richmond Hill, Inc. Enclosed is a copy of the transfer of ownership forms with blank forms to transfer the permits to Bond Gold - Richmond Hill. A \$2.50 transfer fee also needs to be submitted with each transfer form.

The Water Management Board approved Permit No. 1372-1 with a qualification that flows over Bridal Veil Falls be monitored for a period three years to establish an average monthly flow. I am writing to determine if Bond Gold - Richmond Hill is complying with the qualification. Please forward a copy of the flow data to the Division of Water Rights by September 15, 1989, or inform us that no flow data is being collected. Enclosed is a copy of Permit No. 1372-1 with the attached qualifications.

Please contact me if you have any questions.

Sincerely,



Ron Duvall
Natural Resources Engineer
605 773-3352

enc.

cc: Eric Holm
Pete Fuller





September 25, 1989

4600 South Ulster Street
Suite 300
Denver, Colorado 80237

303 220-9727
303 220-7219 Facsimile
446-150 Telex

Mr. Ron Duvall
Natural Resource Engineer
South Dakota Department of Water
and Natural Resources
Joe Foss Building
523 E. Capitol
Pierre, South Dakota 57501

Re: Richmond Hill Mining Project
Water Permit Nos. 1372-1
1422-1



Dear Mr. Duvall:

This letter is in reference to the above listed subject and your recent letter to Mike Carter dated 9/7/88. With regard to the flow monitoring of Rubicon Gulch (which discharges over Bridal Veil Falls) Bond Gold Richmond Hill Inc. began monthly monitoring of surface site number 5 on April 30, 1986.

On September 12, 1986 Bond Gold, formerly St. Joe American Corporation, requested that the sampling frequency be changed to allow for monitoring on a quarterly basis.

An October 15, 1986 letter from Robert Townsend approved this request and recommended that sample dates be set on a stream hydrograph. After discussions with DWNR personnel it was agreed that sampling frequencies would be; mid-January to measure end of low flow period, mid-April to measure during the rising limb of the hydrograph, mid-May to measure peak flows and late August to measure the beginning of the long period of low flow.

On November 10, 1988, Bond Gold received approval to begin an operational hydrologic monitoring program at the Richmond Hill project. Site number 5 on the Rubicon Gulch was agreed by the DWNR to be monitored on a bi-monthly schedule. This bi-monthly sampling schedule was determined to be an early November, mid-January, a mid-April, mid-May, early June and a late August sampling schedule.

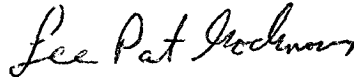
Mr. Ron Duvall
September 25, 1989
Page 2

All flow results for Rubicon Gulch are reported to the DWNR Exploration and Mining program after water quality analysis is complete. This information can be reviewed by contacting Tim Olson or Eric Holm of the Department.

I have begun the transfer process of water rights from St. Joe Richmond Hill Inc. to Bond Gold Richmond Hill Inc. You should be receiving these documents shortly.

I have enclosed a copy of all correspondences referenced above. If you have any questions or need to speak with me, please contact me at the above letterhead number.

Very truly yours,



Lee "Pat" Gochmour
Manager of Permitting and
Environmental Affairs

LPG/pc

Enclosures

Conversation or File Documentation

NAME OF PERSON OR FILE: Pat Gochmour - Bond Gold Corporation
ADDRESS: 4600 S Ulster Str., Suite 300, Denver COUNTY Lawrence
DATE: October 2, 1989 TELEPHONE 303-220-9727
RE: Compliance with qualification No. 3 on Permit No. 1372-1
COMMENTS:

Pat Gochmour was contacted in regard to my letter dated 9/7/89 and to follow-up Mr Gochmour's letter received 9/26/89.

Mr. Gochmour indicated that he believed the current sampling schedule had been approved by the DWNR. I informed Mr. Gochmour that sampling procedure approved by minerals & mining did not invalidate a qualification on Permit No. 1372-1. I informed Mr. Gochmour that Bond Gold was currently in violation of a permit qualification and needed to begin complying with the qualification. Mr. Gochmour wanted to know if it would be possible to locate a flow measuring station upstream from Bridal Veil Falls just below Bond Gold's operation. Mr. Gochmour was concerned that Bond Gold would be held responsible for activities that may decrease flow in side draws that Bond Gold does not control. I informed Mr. Gochmour that the concern was Bond Gold's effect on area spring flows due to pumping ground water; therefore, the flow measurements should be made immediately above Bridal Veil Falls. - continued

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: _____

Water Rights Division - DWNR

File No. 1372-1

Conversation or File Documentation

NAME OF PERSON OR FILE: Pat Gochnour - Bond Gold

ADDRESS: _____ COUNTY _____

DATE: October 2, 1989 TELEPHONE _____

RE: _____

COMMENTS:

Mr. Gochnour was still concerned about activities in side draws reducing flows over the falls and Bond Gold wrongly being accused of causing the problem. I informed Mr. Gochnour that Bond Gold could request the Water Management Board to either revise or delete the qualification. Mr. Gochnour indicated that Bond Gold would either begin flow monitoring immediately or request the Board to amend the qualification. I informed Mr. Gochnour that flows should be measured at least 5 times per week at about the same time each day to establish an average monthly flow. Mr. Gochnour also talked to Ken Buhler regarding this situation.

File in Permit or other file as necessary. Use to document conversations and what the other party was told; why action or decision was made.

NAME: Ron Duval



October 3, 1989

4600 South Ulster Street
Suite 300
Denver, Colorado 80237

303 220-9727
303 220-7219 Facsimile
446-150 Telex

Ms. Genny McMath
South Dakota Department of
Water and Natural Resources
Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181



Re: Bond Gold Richmond Hill Inc.

Dear Ms. McMath:

Pursuant to a telephone conversation with Ron Duvall of your office earlier today, enclosed are duly executed Notices of Transfer of Water Permits on behalf of the Corporation referred to above. Please note that Permit Number 1372-1 and Permit Number 1422-1 have not been transferred, however, we are filing the enclosed Notices as requested to reflect the change in the corporate name from St. Joe Richmond Hill, Inc. to Bond Gold Richmond Hill Inc. We have attached to each Notice for your information and files a copy of the Certificate issued by the Secretary of State of Delaware reflecting the change of corporate name. Also enclosed is our check in the amount of \$2.50 to cover the requisite filing fee.

Please send confirmation of the filing of the enclosed Notices to my attention at the address noted above. Thank you for your assistance.

Very truly yours,

Ellen A. Cerruti
Legal Assistant

EAC:jlh

Enclosures

cc: L. Pat Gochnour with enclosures
Mike Carter with enclosures

NOTICE OF TRANSFER OF WATER PERMIT



TO: Water Rights
Foss Building
Pierre, SD 57501

Date: October 3, 1989

This is to notify you that the title to the lands described as follows:

NW $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 15; N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$,
Sec. 14; NW $\frac{1}{4}$ NW $\frac{1}{4}$ Sec. 24; All in T5N-R2E

~~formerly~~ owned by St. Joe Richmond Hill, Inc., 4600 S. Ulster Street, Ste. 300,
Denver, CO 80237, which corporation has effected a change of
~~has been transferred to~~ name to Bond Gold Richmond Hill Inc.

(please include complete mailing address)

together with any rights to the beneficial use of water thereon as evidenced by

Water Right Permit No. 1372-1 as provided for in SDCL 46-5-32 and 46-5-33.

You are therefore hereby requested to file this "Notice of Transfer of Water Permit"
in its appropriate file at the Div. of Water Rights, Water Management Board as
evidence of the change of ownership. A copy of the change of corporation name, as filed with the Delaware Secretary of State
is attached hereto.
A fee of two Dollars and Fifty Cents (\$2.50) is hereto attached to cover filing fees
as required under SDCL 46-2-13.

COLORADO
STATE OF ~~SOUTH DAKOTA~~)
City and) ss.
County of Denver)

I, Douglas D. Foote being first duly sworn on my Vice President of oath dispose and say:
That my relation to the above described undertaking is that of owner, that I have read
the above foregoing statement, and I know of my own personal knowledge that the infor-
mation herein stated is true.

(Signed)
Douglas D. Foote, Vice President

Subscribed and sworn to before me this 3rd Day of October, 1989.

[SEAL]

Ellean A. Cerruti
(Notary Public)

My commission expires December 15, 1991.

State of Delaware



16855

PAGE 1

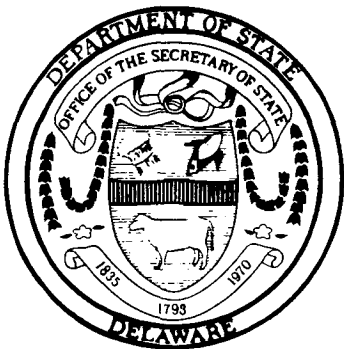
DOCUMENT
SURCHARGE
PAID \$3.00



Office of Secretary of State

I, MICHAEL HARKINS, SECRETARY OF STATE OF THE STATE OF
DELAWARE DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT
COPY OF THE CERTIFICATE OF AMENDMENT OF ST. JOE RICHMOND HILL,
INC. FILED IN THIS OFFICE ON THE TWENTY-FIFTH DAY OF APRIL, A.D.
1988, AT 1:15 O'CLOCK P.M.

1 1 1 1 1 1 1 1 1 1



888116057

Michael Harkins
Michael Harkins, Secretary of State

AUTHENTICATION: 11672353

DATE: 04/25/1988

FILED 1:15PM

CERTIFICATE OF AMENDMENT
OF THE
CERTIFICATE OF INCORPORATION
OF
ST. JOE RICHMOND HILL, INC.

APR 25 1988


 SECRETARY OF STATE

Pursuant to Section 242 of the
General Corporation Law of the State of Delaware

We, the undersigned, being the Vice President and Assistant Secretary of St. Joe Richmond Hill, Inc., a corporation organized and existing under the General Corporation Law of the State of Delaware (the "Corporation"), do hereby certify as follows:

FIRST: That the name of the Corporation is St. Joe Richmond Hill, Inc.

SECOND: That the Corporation was incorporated under the laws of the State of Delaware on January 25, 1988.

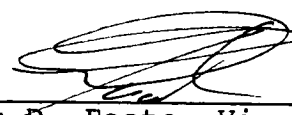
THIRD: That the Certificate of Incorporation of the Corporation is hereby amended to change the name of the Corporation.

FOURTH: To accomplish the foregoing amendment the entire first article of the Certificate of Incorporation is stricken out as it now exists and the following new article is inserted in lieu and instead thereof:

"1. Name. The name of the corporation is Bond Gold Richmond Hill Inc., hereinafter referred to as the "Corporation"."

FIFTH: That such amendment has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, we have signed this certificate this 21st day of April, 1988.


 Douglas D. Foote, Vice President

RECEIVED FOR RECORD

JUN -11 1988

WILLIAM A. Money, Recorder

Attest:


 Elizabeth R. Jarvis, Assistant Secretary

RECEIPT

Division of Water Rights

South Dakota Department of Water and Natural Resources

411929

Pierre, October 4, 1939

RECEIVED OF Bond Gold Richmond Hill, 4600 S. Ulster St., Suite 300, Denver,
the following amount in fees for services rendered as provided for by law: CO 80237

Fee for Application for Permit No. _____ to Appropriate Water, to construct works and to put water to beneficial use _____		
Fee for Application for Permit No. _____ to Appropriate Water for Future Use _____		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form <u>Water Right No. 1372-1</u>	2	50
Fee for Filing Extension Request _____		
Fee for Certified Copy of _____		
Fee for Print Copy of Map _____		
Fee for Certifying _____		
Fee for _____		
(Any Other Work Provided by Law)	Total	2 50

By *John H. H. H.*
Chief Engineer

 **Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

October 17, 1989

Ellen A. Cerruti, Legal Assistant
Bond Gold Richmond Hill
4600 S Ulster St.
Suite 300
Denver CO 80237

Dear Ms. Cerruti:

Enclosed are receipts which were paid for the transfer of Water Permit Nos. 1372-1 and 1422-1.

Our records now show Bond Gold Richmond Hill as the owner of these Water Rights.

Sincerely,



KAREN SCHLAAK
Senior Secretary
605 773-3352

enclosures



**Hydro-Search, Inc.**

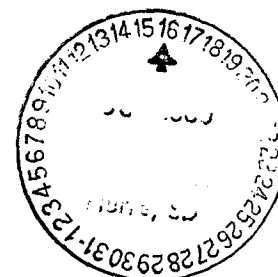
5250 So. Virginia Street, Suite 280 • Reno, Nevada 89502

HYDROLOGISTS - GEOLOGISTS - ENGINEERS

Phone (702) 829-1200

FAX (702) 829-1243

WATS (800) 347-4937

October 12, 1989
(17691-89)

Mr. Pat Gochnour
Bond Gold
4600 South Ulster #300
Denver, CO 80237

Subject: Stream Gauging, Rubicon Gulch, South Dakota

Dear Mr. Gochnour:

Included below is a description of equipment, installation, and operation of a stream gauging facility. The site being considered has a reported range of flow rates from about 2 cubic feet per second (cfs) to essentially zero. We have recommended a 90° V notch weir which can handle the peak flows and also accurately document the lower flows. The weir would be coupled with a recording device to allow continuous measurement of stream discharge.

The selection of the gauging site would be based on factors such as channel morphology and stream profile to minimize installation impact. The weir should be installed normal to the direction of flow. The weir would be installed so as to allow approximately two feet of drop from the outfall of the V notch. The weir would be five feet wide, three feet high with a one foot wide and deep 90° notch cut out of the center of the five foot dimension. Removable wings or sand bags would be used to complete the installation and create a shallow backwater pond upstream of the weir. Six mil plastic tarp and or gunny sacks are also used to provide a seal to prevent leakage. Native materials and bentonite can also be placed up- and downstream of the weir to secure it and eliminate leakage. The weir is held in place by driving "T-bar" fence posts into the streambed and securing to the weir. The weir can be made of approximately 1/8-inch thick metal or 3/4-inch plywood with a sharp edged metal insert at the notch. The plywood with insert is convenient in that various V notch inserts (22 1/2°, 45°, and 60°) can be used depending on anticipated flow range.

A continuous recording device would be installed in conjunction with the weir to allow periodic (monthly) retrieval of flow data. This would consist of 1) a stilling well (a 7-inch diameter, 4-feet long) installed on end adjacent to the pool upstream of the weir; 2) a 2-inch pipe connecting the stilling well with the pool; 3) a float in the stilling well which rises and falls with the water level; and 4) a recording device (i.e., Stevens type F) which records the water level. The recording apparatus is secured with tamper resistant enclosures,

Mr. Pat Gochmour
October 12, 1989
Page 2

17691\STRMGAUG.LTR

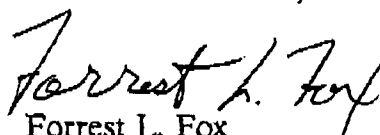
appropriate charts for recording water level data are installed and the installation is complete.

A streamflow hydrograph is generated by the gauging facility. This data can then be used to define daily, monthly, or annual flow rates and volumes. Base flow (ground-water component) and flood peak characteristics can also be defined. This data can be incorporated into resource management, or design flow decisions.

Installation of the facility will probably involve six to eight hours of field time for two people depending on site conditions. Equipment costs vary by manufacturer. Stevens recorders run around \$1300.00, a steel weir can be fabricated locally at a sheet metal shop for about \$150.00 and the additional items would run less than \$50.00.

Very truly yours,

HYDRO-SEARCH, INC.


Forrest L. Fox
Senior Hydrogeologist

FLF:rwk

17691\STRMGAUG.LTR

Hydro-Search, Inc.

HYDROLOGISTS - GEOLOGISTS - ENGINEERS

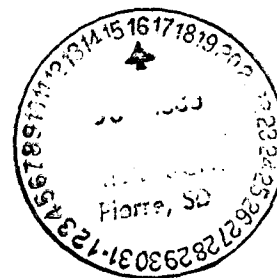


October 11, 1989

4600 South Ulster Street
Suite 300
Denver, Colorado 80237

303 220-9727
303 220-7219 Facsimile
446-150 Telex

Mr. Ron Duvall
Natural Resources Engineer
South Dakota Department of
Water and Natural Resources
523 East Capitol
Pierre, South Dakota 57501-3181



Subject: Water Right Permit \$#1372-1

Dear Ron:

Following my letter of September 25, 1989 and our subsequent telephone conversations, you indicated that another flow monitoring station, immediately above Bridal Veil Falls, on the Rubicon Drainage was needed in addition to our currently monitored sites #2 and #5.

I would like the Department of Water and Natural Resources' assistance in choosing this site. The land below Bond Gold's process facilities is controlled by the USFS. In order to set up a weir station for flow monitoring, a Special Use Permit will be required. I would like to pick a mutually agreeable site that is away from the general public (for vandalism purposes) that will satisfy the Department's objectives.

Bond Gold has consulted with Hydro-Search, Inc. on recommended methods for determining "Average Monthly Flows" (see enclosure for details). After you have had a chance to look at these plans, please give me a call so that I may set up a meeting with the Department and USFS in order to begin the permitting process.

Sincerely,

Lee "Pat" Gochnour
Manager of Permitting & Environmental Affairs

Enclosure

cc: Mike Carter
Pete Fuller

 **Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

November 20, 1989

MEMO TO: Del Brosz

FROM: Rassool Ahadi *RA*

**RE: Location of a Measuring Device on Bridal Veil Falls,
Bond Gold Richmond Hill Inc.**

On November 14, 1989, a meeting was held with Bond Gold and the US Forest Service locate a monitoring station on Bridal Veil Falls.

Roger Gross and Kevin Walsh from Bond Gold and Greg Lundorf from the Forest Service were present at this meeting.

At approximately 8:15 am local time, we arrived at the location of Bridal Veil Falls. The Falls were flowing approximately 25 gallons per minute.

The first monitoring station suggested by Bond Gold was a location just on the top of the Falls. The only way to get to the top of the Falls is to hike up from the bottom of the Falls. The trail is a very narrow path over loose rocks and soil. To get to the Falls, one must go around a cliff, to the top of it and then down a very steep grade to the top of the Falls. An effort was made to do so. After approximately a 20 minute hike we reached the top of the cliff. To get to the top of the Falls, one has to hike down a very steep slope which seemed impassible. The slope, the pine needles, and the snow on the ground made it impossible to get to the top of the Falls.

Since it was not practical to install and monitor the flow on the top of the Falls, I suggested that we consider the bottom of the Falls as an alternative site.

The advantage of having the measuring device at the bottom of the Falls is two fold: first, it is easy to install and second, due to the easy access monitoring of the flow is more feasible.

The question was brought up if the monitoring station would be located on the Forest Service's land or Homestake Mining Company's. Kevin Walsh stated that he did not see any problem getting permission from Homestake Mining Company to locate the measuring device on their land.

Greg Lundorf did not believe that it would be a problem to get a permit from the Forest Service to locate the monitoring station on Forest Service land.

The distance between the bottom of the Falls and Spearfish Creek is approximately 150 feet. Installation of a measuring device (a 90 degree V notch weir) measuring 0 to 2 cubic feet of water per second will not have any affect on the aesthetic values and the beauty of the area. The measuring device is small enough so that it would not be visible from the road.

cc: Bond Gold

Greg Lundorf, US Forest Service, Spearfish



P.O. Box 892
Lead, South Dakota 57754

November 27, 1989

605 584-1210
605 584-3210 Facsimile

Mr. Craig Lundorff
U.S.F.S.
320 Ryan Road
Spearfish, SD 57783



Dear Craig;

During our meeting on November 14th between Bond Gold, USFS, and DWNr, a site for installing a measuring device for flows over Bridal Veil Falls was agreed upon, and was to be directly below the falls, before the confluence with Spearfish Creek. Property boundary lines within this area are not well defined, and could be either Homestake land, USFS land or a combination of both.

I am requesting a letter of approval to install and maintain this measuring device, from the USFS, in the instance that it would encroach upon USFS property. We had discussed this in our telephone conversation of November 27th, and it was concluded that this letter of approval from the USFS would then become an addendum to Bond Gold's current operating Special Use Permit. The approximate dimensions of the device are as follows: 5' wide by 5' long and 3' deep. This will be a weir structure with a recording apparatus.

Should you require any additional information concerning this matter, please contact me at the letterhead address or telephone number. I would like to thank you in advance for expediting this request.

Sincerely,

Kevin K. Walsh

Kevin K. Walsh
Environmental Coordinator

CC: R. Gross - Bond Gold
P. Gochmour - Bond Gold
R. Ahadi - DWNR



P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

November 27, 1989



Mr. Bob Sliper
Homestake Mining Company
P.O. Box 777
Lead, SD 57754

Dear Bob;

During our telephone conversation of November 14th, you were informed of Bond Gold's intentions to install and maintain a measuring device for recording the flows over Bridal Veil Falls. It was agreed upon by Bond Gold, DWNR, and the USFS that the site selected for installing this device to be directly below the falls, before confluence with Spearfish Creek. Property boundary lines within this area are not well defined, and could be either Homestake land, U.S.F.S. land, or a combination of both.

I am requesting a letter of approval to install and maintain this measuring device from Homestake Mining Company, in the instance that it would encroach upon Homestake property. The approximate dimensions of this device are as follows: 5' wide by 5' long by 3' deep. This will be a weir structure with a recording apparatus.

Should you require any additional information concerning this matter, please contact me at the above letterhead address or phone number. I would like to express my thanks in advance for expediting this request.

Sincerely,

Kevin K. Walsh

Kevin K. Walsh
Environmental Coordinator

CC: R. Gross - Bond Gold
P. Gochmour - Bond Gold
F. Fox - Homestake
R. Ahadi - DWNR

BOND GOLD RICHMOND HILL INC.



July 3, 1990

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile



Mr. Rassool Ahadi
SD Depart. of Water and Nat. Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Ave.
Pierre, SD 57501

Dear Mr. Ahadi:

Please find enclosed the flow charts for the Bridal Veil Falls weir for the second quarter of 1990. I have marked the beginning and ending water levels on each chart.

Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me at (605)584-1210 if you have any questions.

Sincerely,

Mark W. Tieszen
Environmental Coordinator

enclosures

cc:Roger Gross

\KAB

START
4/26/90
3:00 p.m.
86 cm.

95 cm.
Water flowing
over structure
Flood at max. level
5-3-90
MT
10:15 a.m.

↑
min
max
↓

Bridal Veil Falls Wren

Bridal Veil Falls
Weir.

Start
5/3/90
10:15 a.m.
95 cm.

↑
max
Flow

End
10:30 a.m.
5-10-90
Thurs

93 cm.

↑
min
max
↓

Bridal Veil Falls

START
5/10/90
11:00 a.m.
95cm.

↑
min
max
↓

Horizontal Limit = 2 ft.
vertical Limit 1 cm.
Overflowing water
float marks
95cm. in stilling
column

End
5/17/90
4:00 pm



BRIDAL VEIL FALLS

START
5-17-90
4:00pm

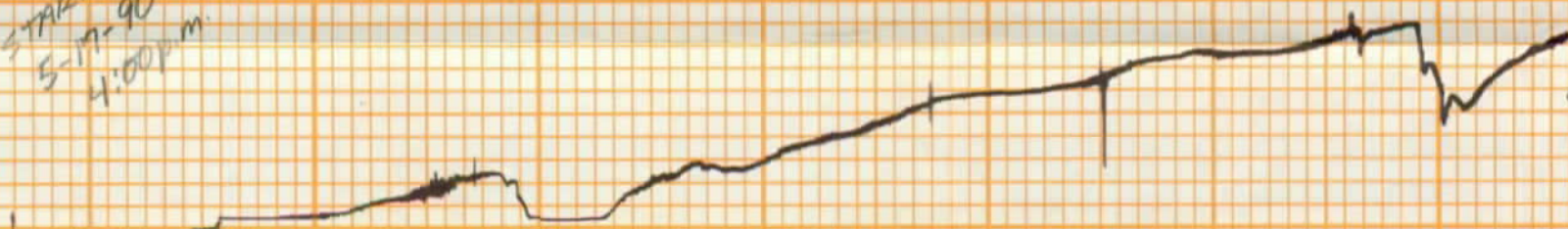
Water column = 34 in.

END 5/24/90
2:30pm

95m

↑
hum
mat
↓

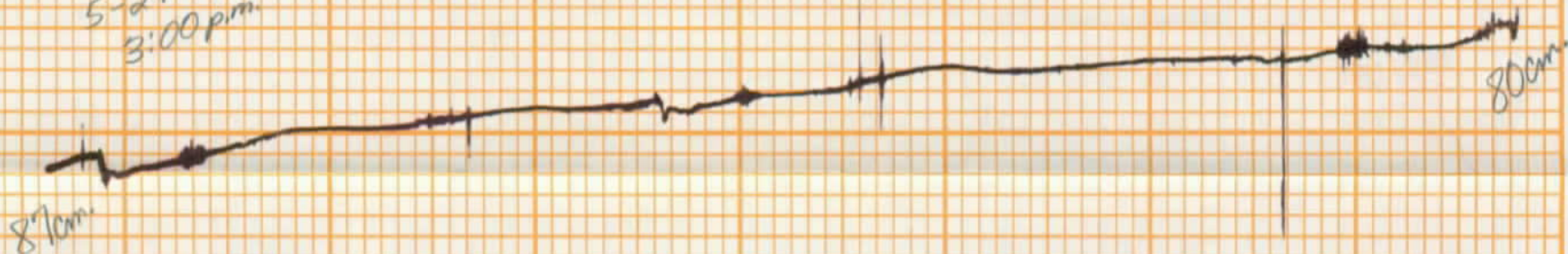
86.5m



BRIDAL VEIL FALLS

START
5-24-90
3:00 p.m.

END 6:50 p.m.
5-31-90
Water column = 33 in

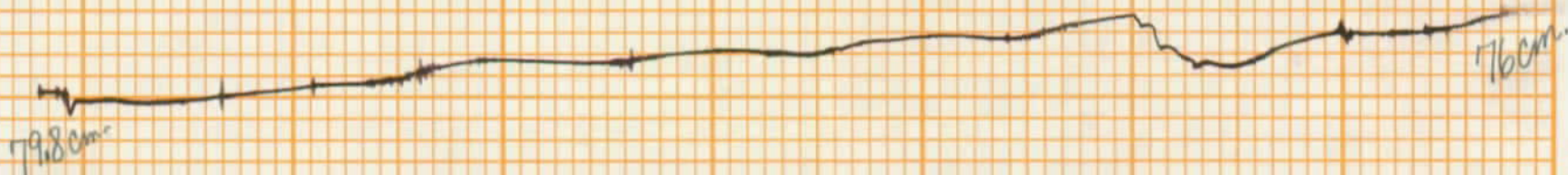


↑
min
max
↓

BRIDAL VEIL FALLS

START 7:00 p.m.
5-31-90

END
6-7-90
6:30 p.m.



↑
min
mat
↓

BRIDAL VEIL FALLS

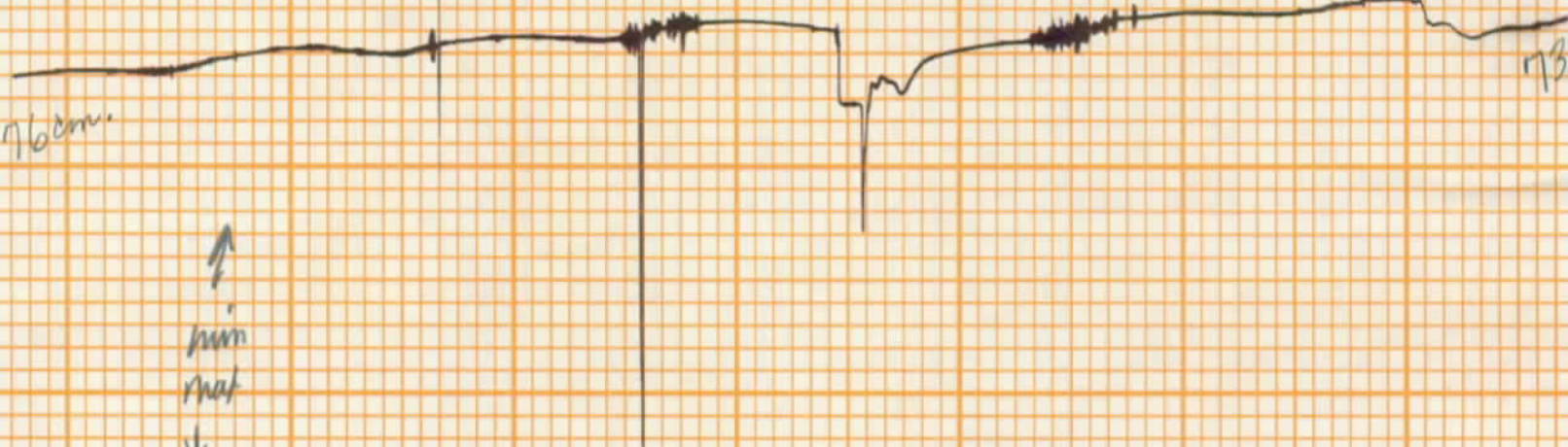
START
6-7-90
6:30 p.m.

END 6:00 pm
6/14/90

76 cm.

73.5 cm.

↑
mm
not
↓



BRIDAL VEIL FALLS

START
6:00 p.m.
6/14/90

73.6m

END 6:30 p.m.
6/21/90

Unobstructed
80cm

86.4cm.
obstructed

WEIR
OBSTRUCTED
DELIBERATELY.

↑
min.
not
↓



BRIDAL VEIL FALLS

START
6:30 P.M.
6/21/90

END 5:00 P.M.
6/22/90
30" stilling well

79.8 cm.

76.2 cm.

↑
Min
Max
↓



BOND GOLD RICHMOND HILL INC.



August 8, 1990

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

Mr. Rassool Ahadi
Natural Resources Engineer
Division of Water Rights
Joe Foss Building
Pierre, SD 57501

Dear Mr. Ahadi;

This letter is in reference to the ongoing problems with sabotage and vandalism at the wier constructed below Bridal Veil Falls. Although there has been no property damage, the incidents have caused temporary data loss.

The problems range from the placement of obstructions in the V notch of the weir to tripping the float cable off of the recorder pulley. Each incident is recorded on the chart upon discovery.

I would like to solicit any suggestions that you may have to deter this activity (e.g. signs, warnings, etc.).

Please let me know if you have any questions.

Sincerely,

Mark Tieszen
Environmental Coordinator

/glr

Fuller & Co., Ltd.

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
TELEPHONE (605) 584-2440
FAX (605) 584-4625

August 23, 1990

Mr. John Hatch
Chief Engineer
Department of Water & Natural Resources
Water Rights Division
Joe Foss Building
523 E. Capitol
Pierre, SD 57501



Re: Bond Gold Richmond Hill, Inc.
Water Permit No. 1422-1
Water Permit No. 1372-1

Dear Mr. Hatch:

As you know, Water Permit 1422-1 has been completed. This Water Permit authorizes storage capacities to be held by the storm water containment pond. This water is to be used for the purpose of containing excess run off from the heap leach pads due to participation events which will be recycled into the leach process.

The storm water pond which contains non contact water and is also designed to contain the upper ponds run off in case of excess precipitation is available for use in the heap leach process. By the use of water conservation and diversion designs, this water may be sufficient at the present time to meet Bond Gold's needs for process water.

South Dakota also issued Water Permit No. 1372-1. A copy of that Water Permit is attached for your easy reference. This Water Permit authorizes an appropriation of .89 cfs from up to fourteen wells, 300 to 600 feet deep located in Sections 14, 15 and 24 all in Township 5 North, Range 2 East of the Black Hills Meridian. This water is also needed by Bond Gold to supply the heap leach process facility and the open pit mine operations for industrial purposes.

One-fifth of the construction is to be completed on or before September 2, 1990, and all construction is to be completed on or before March 2, 1993, and the water is to be beneficially used for industrial purposes as outlined in the permit by March 2, 1997.

While Bond Gold needs this water right, they have taken and they could take additional measures to conserve this water

Mr. John Hatch
RE: Bond Gold Richmond Hill, Inc.
August 23, 1990
Page 2

right. Because of the drought conditions in the Black Hills and Western South Dakota postponed the necessity of appropriating this water if the State would agree.

Bond Gold would propose that the date for the construction and the beneficial use be extended for five years.

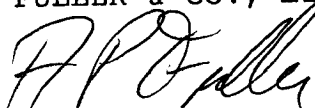
We would propose that one-fifth of the construction of Water Permit 1372-1 be completed on or before September 2, 1995. That all construction be completed on or before March 2, 1998. Finally, that water be put to beneficial use on or before March 2, 2002.

Bond Gold has determined that if they would invoke water conservation measures that the need for this water could be postponed and thus allow the water table to recharge. We do not wish to postpone this appropriation if the State will not agree. If the State would agree, we would request that an amended water permit be issued modifying paragraphs 5, 6 and 7 of the Water Permit 1372-1 by changing the dates that I have proposed.

We would appreciate your response to our request and also your counsel and advice concerning our request. Thank you very much.

Yours truly,

FULLER & CO., LTD.



A. P. Fuller

APF/slc
Enc.
c: Mike Carter

 **Department of
Water & Natural Resources**

Joe Foss Building
523 East Capitol
Pierre, South Dakota 57501-3181

September 7, 1990

A P Fuller
Fuller & Co., Ltd.
PO Box 898
Lead SD 57754-898

Dear Mr. Fuller:

I am writing in response to your letter dated August 23, 1990 regarding an extension of time to complete works and put water to beneficial use authorized by Permit No. 1372-1.

The procedure for amending a permit to extend the time periods to construct works and apply water to beneficial use requires approval of an application by the Water Management Board during a hearing. The application will need to identify the reasons for requesting an extension and the length of the proposed extension.

Statutes applicable to this situation are SDCL 46-5-25 and 46-5-26. The time period for one-fifth of the construction to be completed (September 2, 1990) may be extended only due to delays caused by operation of law pursuant to SDCL 46-5-25. An extension of the construction period (March 2, 1993) or the period to put water to beneficial use (March 2, 1997) may be allowed due to engineering difficulties, operation of law, or other exigent circumstances identified by the Board pursuant to SDCL 46-5-26.

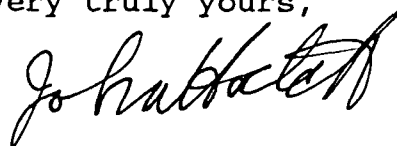
The reasons given for not developing Permit No. 1372-1 do not appear to meet the criteria outlined in SDCL 46-5-25 or 46-5-26 for the Board to grant an extension. Apparently, Bond Gold currently has an adequate water supply as authorized by Permit No. 1422-1 and does not need the water appropriated by Permit No. 1372-1 at the present time. The drought conditions are not a legal basis for not developing Permit No. 1372-1 since No. 1372-1 would likely be developed, if the water needs of the operation were not being satisfied under Permit No. 1422-1.

September 7, 1990
A P Fuller
page 2

Although I appreciate your efforts to conserve water, development of Permit No. 1372-1 would not mean that total use by Bond Gold would increase only the developed capacity would have been increased. Bond Gold may apply for an extension from the Board, but I will recommend denial of your request, unless additional information becomes available that warrants approval of the extension.

Please contact me if you have any questions.

Very truly yours,

A handwritten signature in black ink, appearing to read "John Hatch", with a stylized flourish at the end.

John Hatch, Chief Engineer
Water Rights Division
605 773-3352

cc: John Haak, Assistant Attorney General

Fuller & Co., Ltd.

203 W. MAIN - P.O. BOX 898
LEAD, SOUTH DAKOTA 57754
TELEPHONE (605) 584-2440
FAX (605) 584-4625

September 25, 1990



John Hatch, Chief Engineer
Water Rights Division
Department of Water & Natural Resources
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3181

Dear John:

Thank you very much for your letter of September 7, 1990. Bond Gold does not wish to amend their permit to extend the time periods to construct works and apply waters to beneficial use. It was Bond's clear intention that if the statutes and regulations allowed it, they would merely postpone the development of this water and the application of that water to beneficial use. The only reason for requesting an extension for the periods of time that I mentioned in my previous letter was as a conservation measure. Bond Gold could have done certain construction and reconstruction of surface drainage into the storm water pond and could have used that water. Bond Gold does not have adequate water and does in fact need the water appropriation. They were thinking of using surface water diversion and using that water instead of developing ground water. The water needs are not being satisfied by Permit No. 1422-1.

We have proceeded and we will be reporting to you the development of Permit No. 1372-1 and will meet schedules and will apply the water for beneficial use as the permit allows and as the statutes and regulations require.

Thank you very much for your assistance and your consideration.

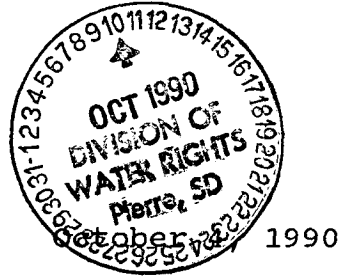
Yours truly,

FULLER & CO., LTD.

A.P. Fuller

APF/ljr
c: Client

BOND GOLD RICHMOND HILL INC.



P.O. Box 892
Lead, South Dakota 57754

605 584-1210

Mr. Rassool Ahadi
South Dakota Department of
Water and Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi;

Please find enclosed the flow charts for the Bridal Veil Falls weir for the Third Quarter of 1990. I have marked the beginning and ending water levels on each chart. The water level is measured along the side of the stilling well.

Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me at (605)584-1210 if you have any questions.

Sincerely,

Mark W. Tieszen
Environmental Coordinator

enclosures

cc: M. Carter

/glt

BRIDAL VEIL FALLS WATER LEVEL = 27"
 START 5:00 pm 9-24-90

WATER LEVEL 27 1/2" (Rock Removed)
 Rock found in weir notch
 END 5:00 pm
 10-1-90



BRIDAL VEIL FALLS

START 9-17-90 5:20pm

Water column = 28"

STOP 9-24-90
5:00pm

Water column = 27"
In weir = 2 1/2"

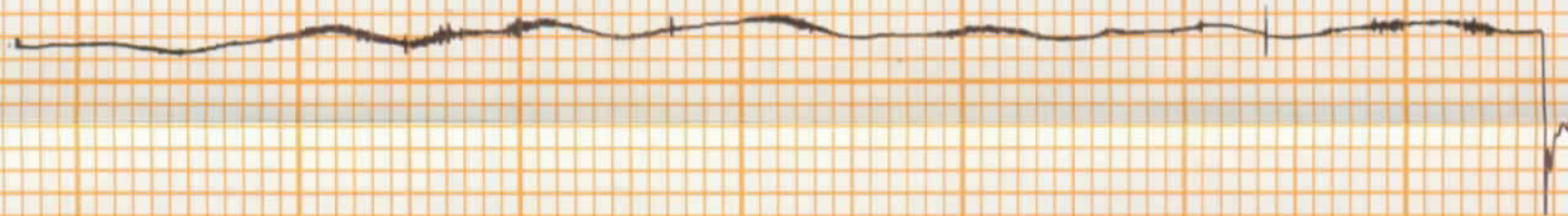




BRIDAL VEIL FALLS

START 5:00 pm 9/10/90
WATER COLUMN - 27"

END 9-17-90
5:20 pm
WATER LEVEL - 28"



BRIDAL VEIL FALLS

START 9/14/90
5:00 pm.
Water level 27"

WATER COLUMN = 27"
END 9/10/90
4:45 pm





BRIDAL VEIL FALLS
START 6:15 p.m.
Tuesday 8-28-90

End 5:00 p.m.
9/4/90 Tues
Water level 27"





BRIDAL VEIL FALLS
 START TUES 8/2/90
 10:45 a.m.

STOP
 TUES 8/28/90
 6:15 p.m.





BRIDAL VEIL FALLS

START 8/13/90
5:00 pm
Water column 28"

STILLING WELL
MAINTENANCE

END
Tues. 8/21/90
10:40 a.m.



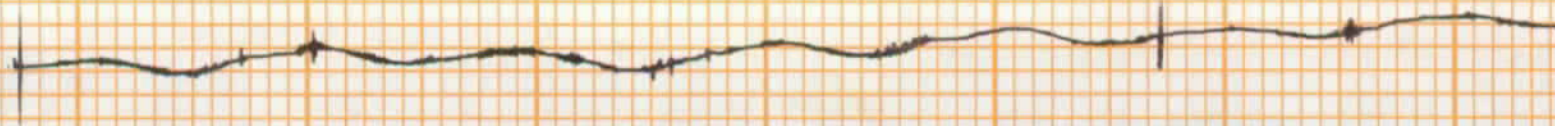
BRIDAL VEIL FALLS
 START 8-6-90
 10:55 a.m.
 Water column = 28"

WIRE TRIPPED OFF OF PULLEY
 PEN KNOCKED OFF

WATER COLUMN
 8/13/90
 5:00 pm
 28"

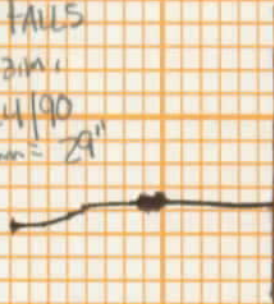
V notch = $2\frac{3}{4}$ "

BRIDAL VEIL FALLS
START 7-30-90
5:10 pm.



2 3/4" in Vertical of Water
STOP 8-6-90
10:50 am
Water column = 28"

BRIDAL VEIL FALLS
 START 8:00 a.m.
 Tues 7/24/90
 Water column = 29"



FLOAT HAS BEEN
 TAMPED WITH AND
 CABLE IS KNOCKED OFF
 RECORDED
 END 7-30-90





BRIDAL VEIL FALLS

START 10:00 a.m.

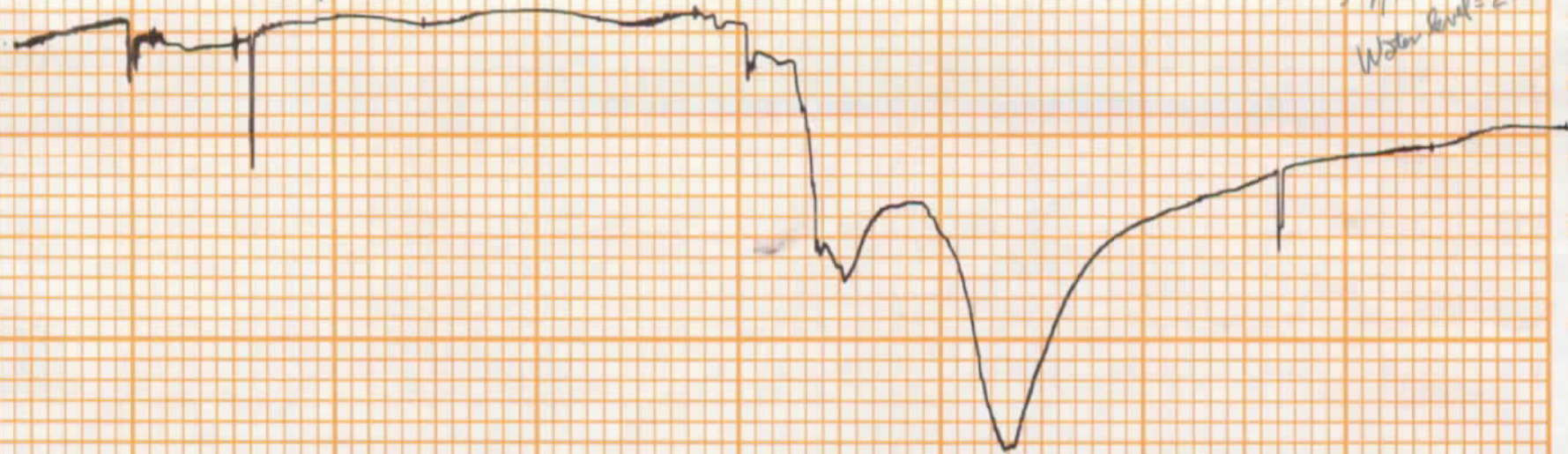
7-16-90 Monday
Water column 28"

$V = 3\frac{1}{2}"$

STOP 8:00 a.m.

7-24-90 Tuesday

Water level = 27"

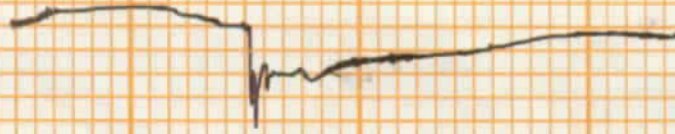




BRIDAL VEIL FALLS

START
12:00 noon
7/3/90
Water Column 28"

STOP
9:30 a.m.
7-6-90
Water Column 28"





BRIDAL VEIL FALLS

START

7/5/90

5:45pm

Water column

29"

73.66cm

3 1/2" through
V notch in weir

END 12:00pm horn

7/13/90

Water column

28"

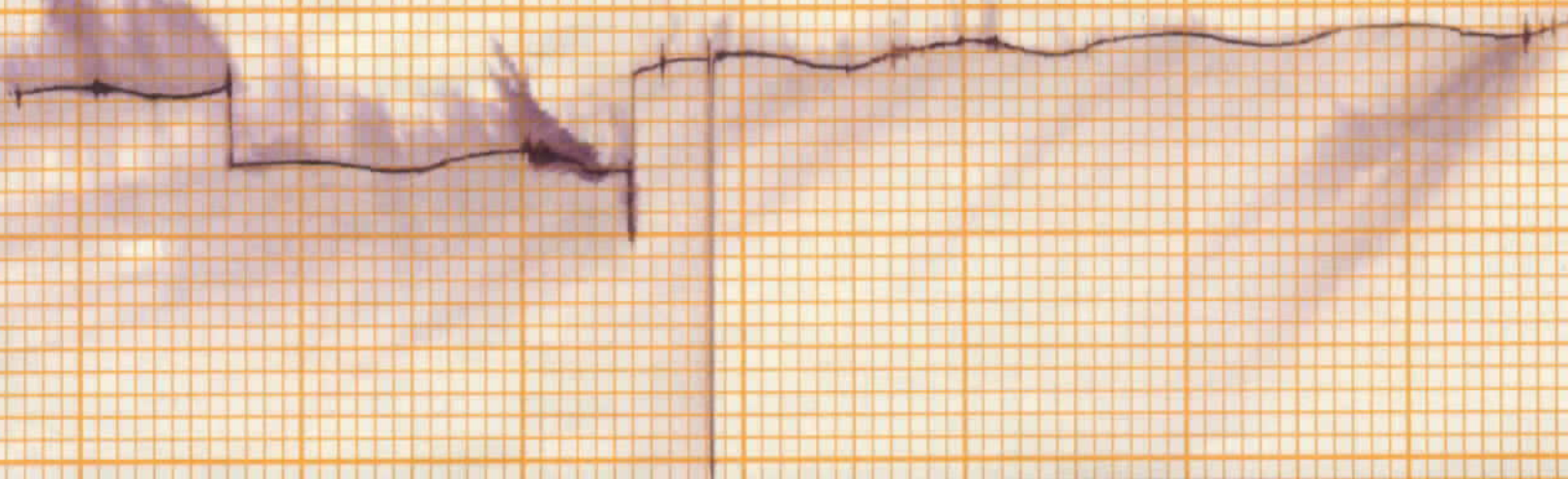
71.12cm



BRIDAL VEIL FALLS

START
5:00 pm
6/28/90

Water column 74cm
End 7/5/90
5:30 pm.





July 3, 1991

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

Mr. Rassool Ahadi
SD Department of Environment and Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the second quarter of 1991. I have marked the beginning and ending water levels on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me at (605) 584-1210 if you have any questions.

Sincerely,

BOND GOLD RICHMOND HILL INC.

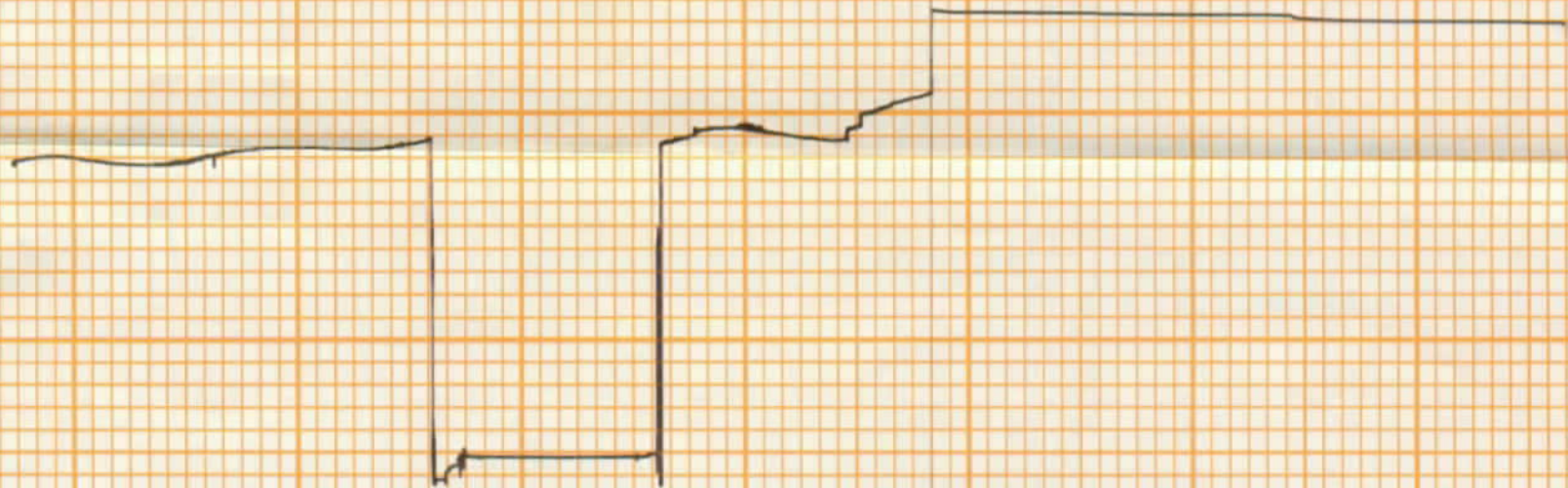
Mark W. Tieszen
Environmental Coordinator

/gl
enclosures

Bridal Veil Falls
6/20/91
6:00pm
WL = 30"

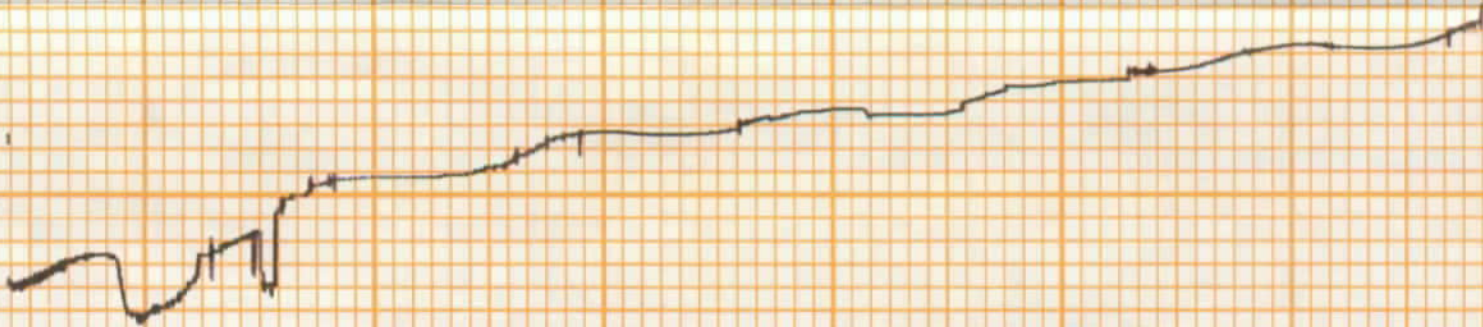
END 6/27/91 Thurs. 4:40pm
WIRE TRIPPED OFF RECORDER

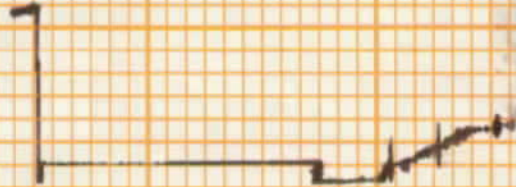
WL = 28 1/2"



Bridal Veil Falls
 06/18/91 Fri
 9:20 AM
 WL = 53"

END 6/29/91 Thurs
 5:50 PM
 WL = 30"





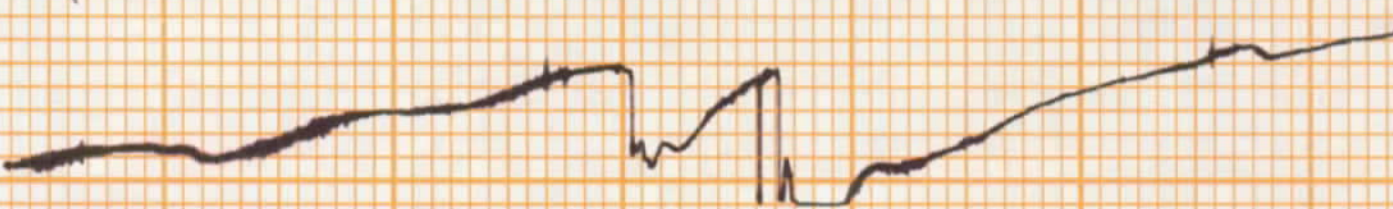
Brickley Falls
04/04/01
9:50 AM
WL=39.1

06/13/91
9:15 AM
WL=39.1



Bendal Vel Falls
05/31/91 RES.
7:45 a.m.
WL = 33 m.

05/31/91
7:45 AM
WL = 33"



BRIDAL VEIL FALLS
START FRT 5/24
4:30 pm.
WATER OVERFLOWING
WEIR

END 7:45 am. FRT
05/31/91
WL = 33 inches



Bridal Veil
6:10 pm
Water overflowing weir
5/18/91 SAT

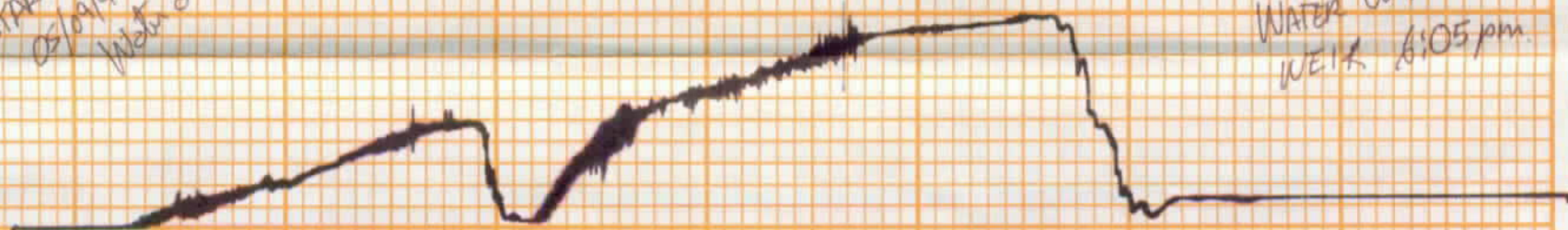
End of day 5/24/91
4:30 pm
Water overflowing weir



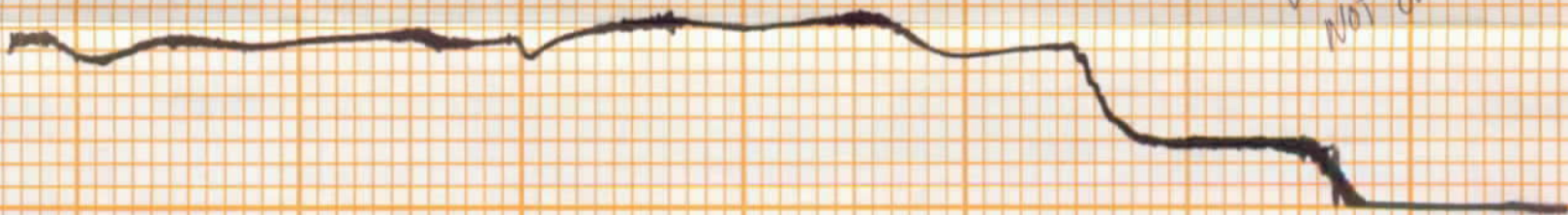


Bridal Veil
 START 5:30pm
 05/09/91 Thurs.
 Water at top of weir.

END SAT 5/12/91
 WATER OVERFLOWING
 WEIR 6:05pm.



BEAVER FALLS
START 4:55 PM THURS
05/09/91 W.L. = 32.0

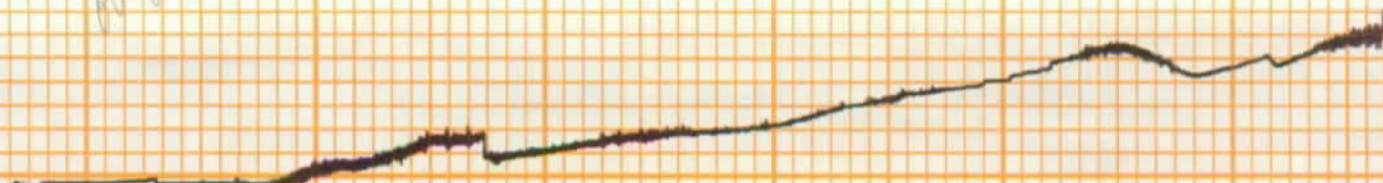


END 5:30 PM
05/09/91 Thurs.
Water at top of weir
NOT OVERFLOWING

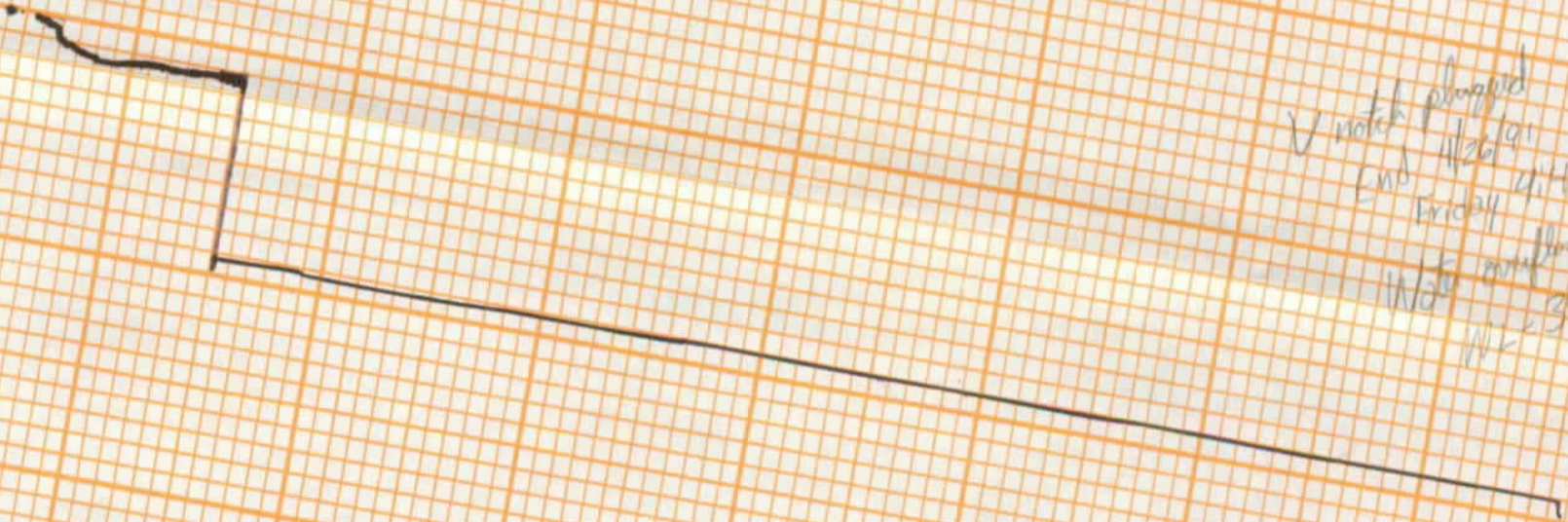


START REC. 4/26
4:50 pm
WL = 34 1/2"
100 ft. gauge

END 4:50 pm
05/02/41 Thurs.
WL = 32 1/2"



START 4/19/91
Friday
10:30 a.m.
WL = 3' 1/2"



V notch plugged
End 4/26/91
Friday 4:45 p.m.
Note: overflowing weir
WL = 3' 1/2"

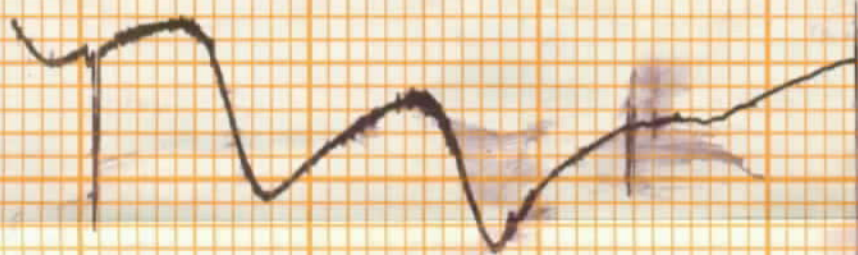
START 4:30 pm.
WL = 3 1/4" 4/11/91

END 4/19/91 10:30 am.
WL = 3 1/2"
Pen sum flipped up.
No flow data.

BRIDAL VEIL FALLS
START 4:45 pm
04/04/91

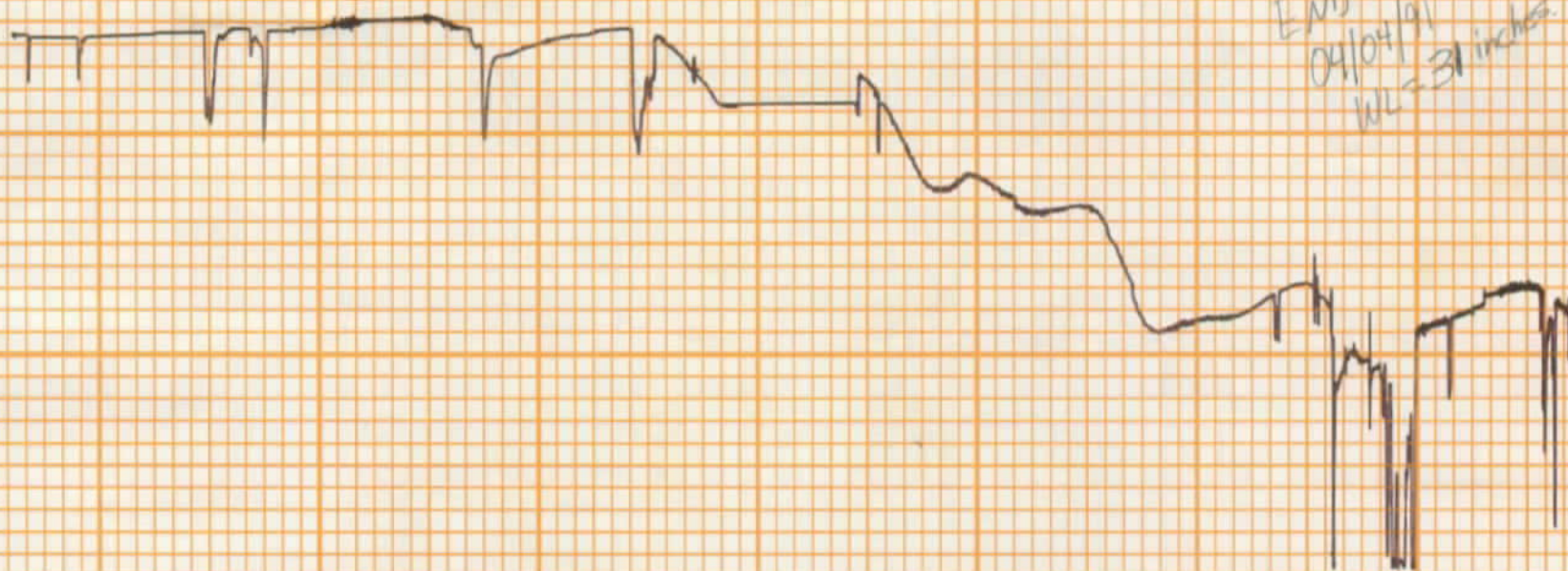
WL = 3 inches

WIRE TAPPED OFF
WL = 3 1/4"
END 4:28 pm
04/11/91





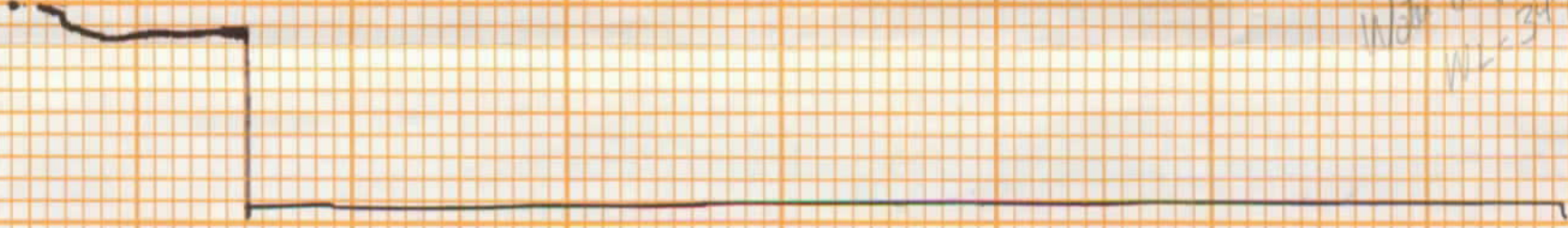
BRIDAL VEIL FALLS WEIR
 START 3/28/91
 8 day schedule 2:07 pm
 NO ICE IN WELL



END 4:45 pm
 04/04/91
 WL = 31 inches

START 4/9/91
Friday
10:30 a.m.
WL = 34 1/2

V notch plugged
End 4/26/91
Friday 4:45 p.m.
Water overflowing weir
WL = 34 1/2





January 7, 1991

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

Mr. Rassool Ahadi
SD Department of Water and Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Ave.
Pierre, SD 57501

Dear Mr. Ahadi:

Please find enclosed the flow charts for the Bridal Veil Falls weir for the fourth quarter of 1990. I have marked the beginning and ending water levels on each chart. However, the pond formed by the weir structure has been frozen for some time making it impossible to measure.

Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me at (605)584-1210 if you have any questions.

Sincerely,

Mark W. Tieszen
Environmental Coordinator

enclosures

cc: M. Carter

\glt



8 day schedule

BEAD VAL

START

12/17/90
5:00pm

ALL FROZEN OVER

FLOAT FROZEN IN

END 12/21/90
9:10 a.m.

ALL FROZEN OVER

FLOAT FROZEN IN

BRIDAL VEIL FALLS
 START 4:50pm
 12-10-90
 FROZEN OVER - FLOAT FROZEN

STOP 4:55pm
 12/17/90
 ALL FROZEN

Stevens Water Level Recorder — Type B

BRIDAL VEIL FALLS
START 8:50 a.m. 11/4/90
FROZEN OVER
FLOAT FROZEN

END 4:45 pm
12-10-90
FROZEN OVER
FLOAT CABLES tripped
WATER RUNNING
THROUGH WEIR

Frozen
BRIDAL VEIL
START 5:15 pm
11/26/90

Water over V-notch Frozen
Float FROZEN IN
Pond FROZEN over
END 8:45 a.m.
11/4/90

BRIDAL VEIL
START 11-20-90
4:55pm WL = 28"

WATER OVERFLOWING WEIR (through structure)
POND FROZEN OVER
FLOAT FROZEN
END 11-26-90
TIME:



Birdal Vail
27 1/2" WL
11-14-90
10:45 am

END
11-20-90
4:50pm
28" WL
Windy

BRIDAL VEIL FALLS
START 10-30-90
6:50 pm
WL = 26"

END
11-06-90
6:00 pm
HOLDING POND
ICED OVER





Birdal Veik
start 5:50 pm
10-23-90
27 1/4

END
10-30-90
6:50 pm
26"



BRIDAL VEIL FALLS
START 5:15 pm
10-15-90

end 5:50 pm
10-23-90
end level
27 3/4"





BRIDAL VEIL FALLS
START 5:00 pm
10-8-90
WATER LEVEL = 27"

STOP 5:15 pm
10-15-90



BRIDAL VEIL FALLS
START 5:00pm 10-1-90
WATER LEVEL 27 1/2"

END 5:00pm
10-8-90
WATER LEVEL 27"





April 2, 1991

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

Mr. Rassool Ahadi
SD Department of Water and Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Ave.
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the first quarter of 1991. Please note that the pond formed by the weir structure and the float system on the recorder were frozen during this quarter.

Feel free to contact me at (605)584-1210 if you have any questions.

Sincerely,

Mark W. Tieszen
Environmental Coordinator

enclosures

cc: M. Carter

\glt



All Frozen over
BRIDAL VEIL FALLS 32 day schedule
START FRIDAY 12/21/90
9:40 a.m.

STOP 01-21-91 10:00 a.m.
All Frozen
Ice level at top
of dike

BRIMM VEE FALLS
32 day schedule
START 01-21-91
10:00 am
All Frozen
ICE AT TOP OF WEIR

END 02-22-91
FRIDAY 5:00 pm.
All FROZEN ON SURFACE
FLOAT FROZEN
WATER RUNNING
OVER WEIR
ICE AT TOP OF WEIR



BRIDAL VEIL FALLS
ALL FROZEN
START 5:00pm
2/22/91

END 3/27/91 4:30pm.
ICE BROKE BEHIND DAM
FLOAT SYSTEM FROZEN



October 2, 1991

P.O. Box 892
Lead, South Dakota 57754

605 584-1210
605 584-3210 Facsimile

Mr. Rassool Ahadi
SD Department of Environment and Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the third quarter of 1991. I have marked the beginning and ending water levels on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me at (605) 584-1210 if you have any questions.

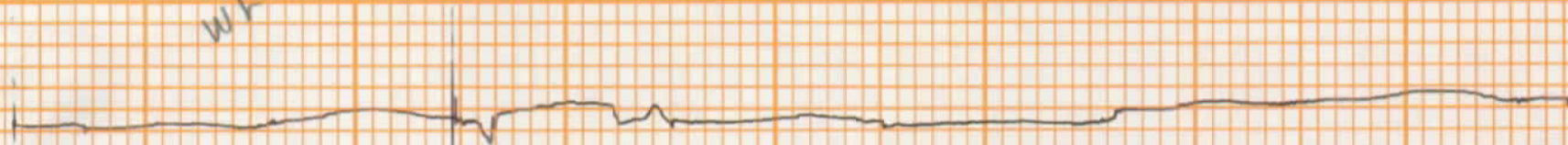
Sincerely,

Mark W. Tieszen
Environmental Coordinator

\glt
enclosures
cc: M. Carter

Bridle Veil
9:00 am
9/19/91 THURS
WL 22 1/4

END 7:00 pm
9/26/91 THURS
WL 22 1/4



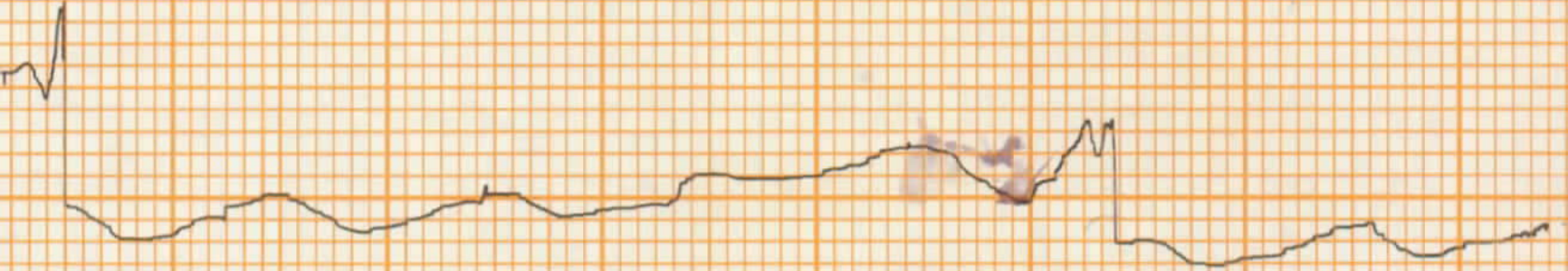
START 7:00pm
9/12/91 Thurs.
WL = 22 1/2

STOP 9:00am
9/19/91 Thurs.
WL 22 1/4



Bridal veil
STMT 2:30
9/12/91
WL 22 1/4"

End 9:00 PM
9/12/91 Thurs
WL = 22 1/4"



BRIDAL VEIL
START 2:30 PM
8/30/91
WL 22 1/4"

Bridal veil
STOP 2:15 PM
9/5/91
WL 22 1/4"



BROAD VENT
STOP 4:30 PM
8/23/91 WL 23"

BROAD VENT
STOP 2:18 PM
8/23/91 WL 22 1/4"



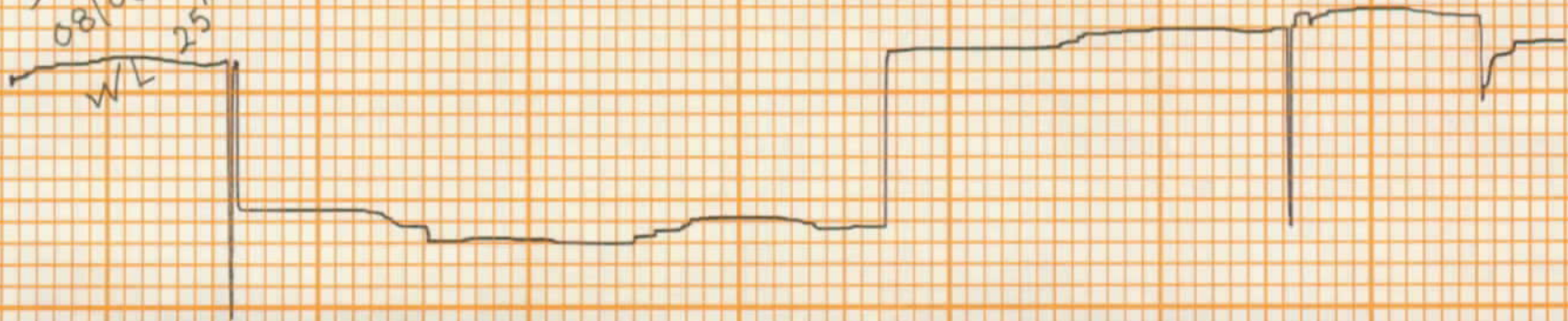
Bridal Veil Falls
 START 1:15pm
 08/16/91
 WL 24"

END
 8/23/91 4:30pm
 WL = 23"



Bridal Veil Falls
START 1:30 PM
08/08/91
W/L 25"

Bridal Veil Falls
STOP 1:15 PM
08/16/91
W/L 24"





Bridal veil Falls
start 9:48 am
08/02/91
WL 25 1/2"

Bridal veil Falls
stop 1:30 pm
08/08/91
WL 25"



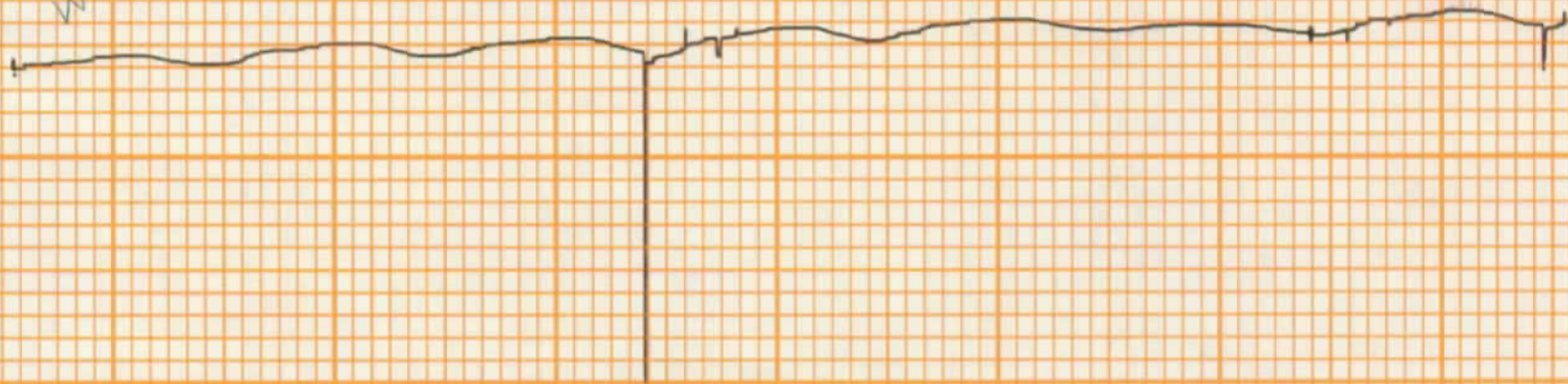
BRIDAL VEIL Falls
START 2:00 PM
07/25/91
WL 26"

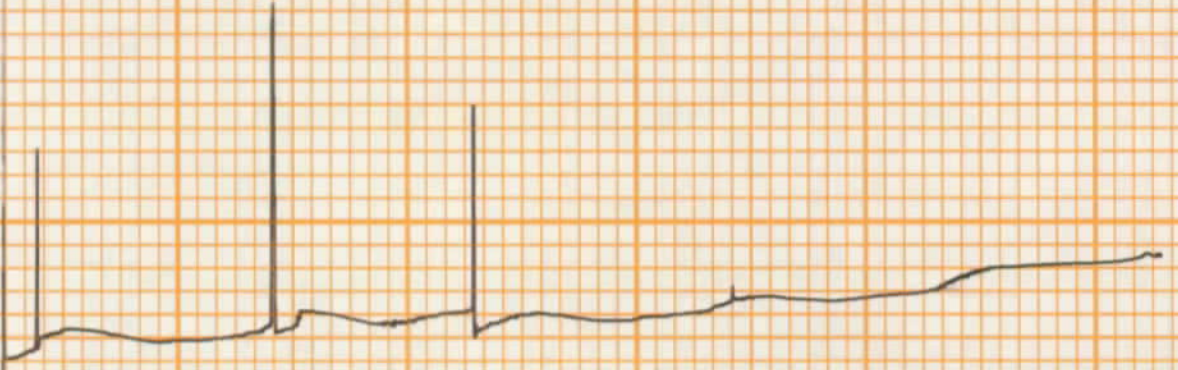
Bridal Veil Falls
STOP 9:45 AM
08/02/91
WL 25 1/2"



BRIDAL VEIL FALLS
START 1:30 PM
07/18/91
WL - 26 1/2"

Bridal Veil Falls
Stop 1 2:00 PM
7/25/91
WL 26"



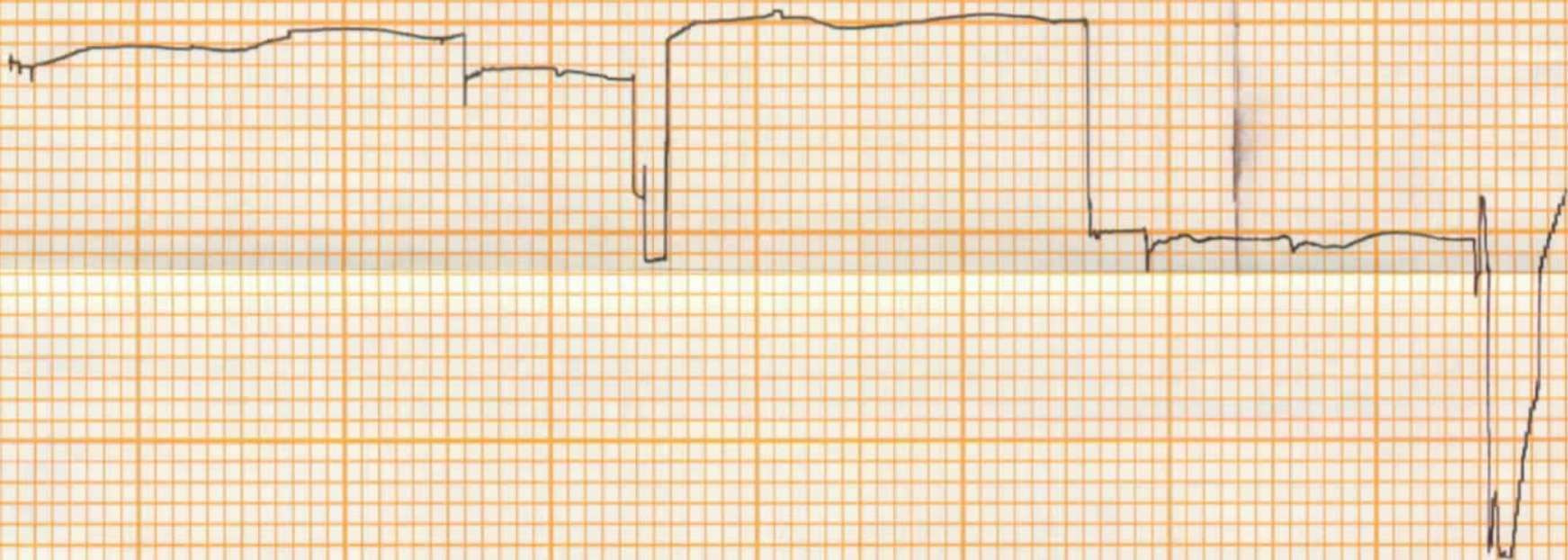


Bridge Vent Falls
Stop 9/11/91 5:00pm
Wt = 2 1/2"

BENTON VENT FALLS
STOP 7/18/91
1:30 PM
Wt = 2 1/2"
F10AT ADT
ATTACHED

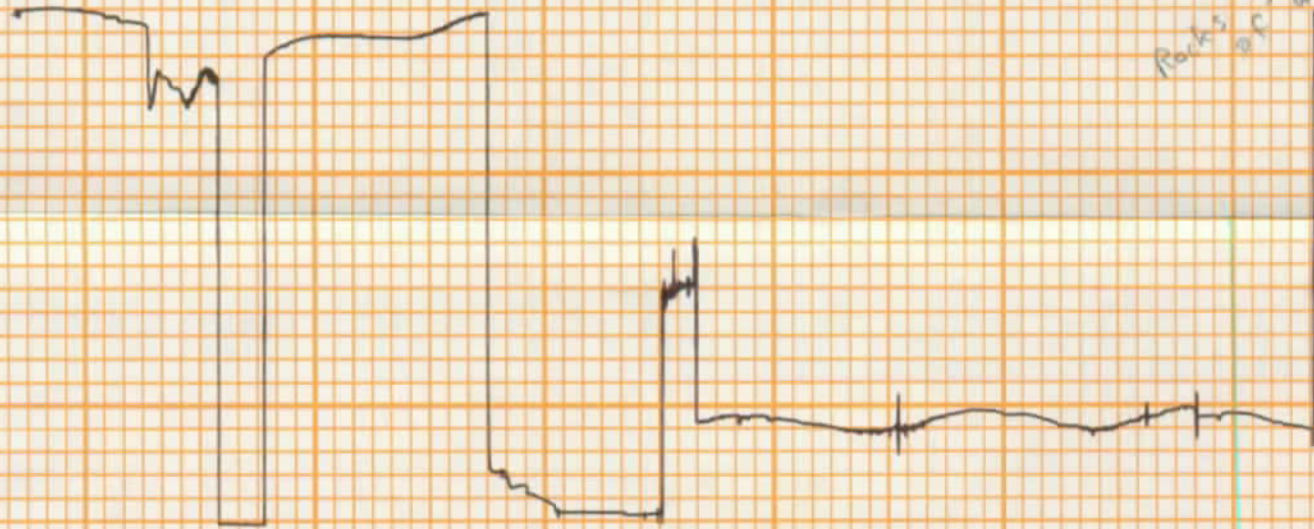
Birdi Veli Falt
Start 07/10/91
8:40 AM Lake 29

End 07/11/91
5:00 PM
WL = 27 1/2"



BRIDAL VEIL FALLS
 START 6/27/91 Thurs
 4:45 pm
 WL = 28' 1/2"

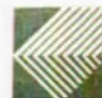
07/03/91
 8:35 AM
 WL = 29'



Rocks stacked in
 watch

Richmond Hill Inc.

A Subsidiary of LAC Minerals Ltd.



LAC

P.O. Box 892
Lead, SD 57754
(605) 584-1210



January 6, 1992

Mr. Rassool Ahadi
SD Department of Environment & Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the Fourth Quarter of 1991. The beginning and ending water levels are marked on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me if you have any questions.

Sincerely,

RICHMOND HILL INC.

Mark W. Tieszen
Environmental Coordinator

/glt

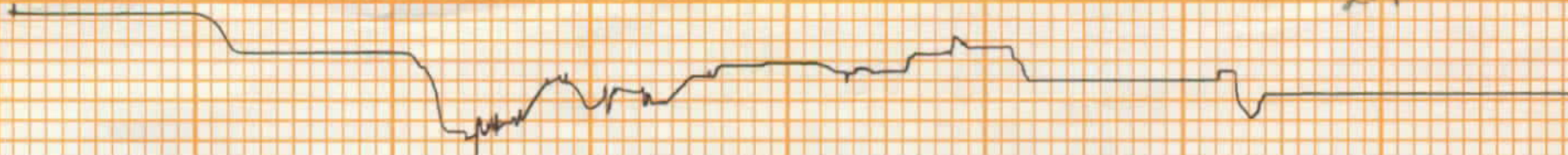
Bridal Veil
START 12/03/91
2:15 PM
FROZE



Bridal Veil
STOP 1/2/92
9:30 AM

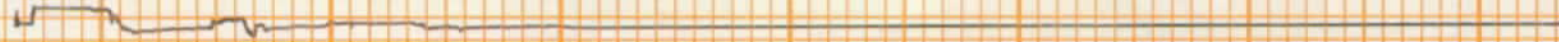
Brada Veil
START 11/1/91
8:15 am
All Frozen

Brada Veil
STOP 12/03/91
2:15 PM



BRIDAL VEIL
START 3:30 PM
10/25/91
WL = 21 1/4

END ~~12~~ 1/91
8:15 a.m.
FROZEN
SWITCH TO
32 day





BRIDAL VEIL
START 10/17/91
11:00 am
WL = 21 1/2"

BRIDAL VEIL
STOP 10/25/91
3:30 pm
WL 21 1/4"





BRIDAL VEIL
START 10/10/91
1:30 PM
WL = $2\frac{3}{4}$

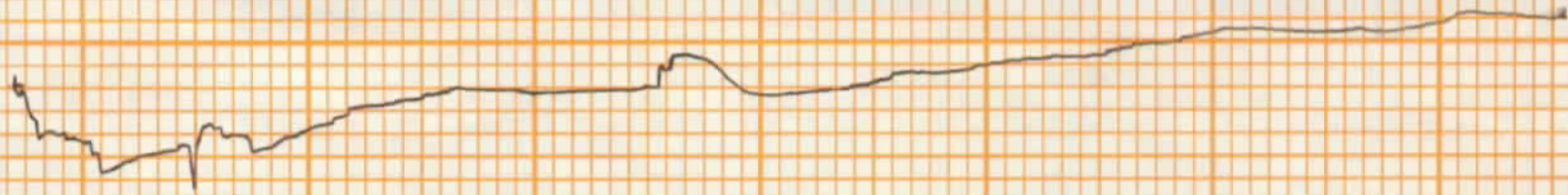
BRIDAL VEIL
STOP 10/17/91
11:00 AM
WL = $2\frac{1}{2}$





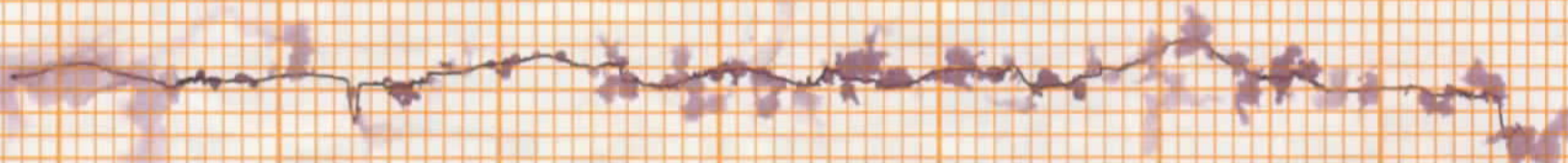
BRIDAL VEIL
STOP 10/10/91
4:20 PM
WL = 122

BRIDAL VEIL
STOP 10/10/91
1:30 PM
WL = 21³/₄



BRIDAL VEIL
START 7:00pm
9/20/91
WL = 22"

End 10/3/91
4:20pm
WL = 22"



Richmond Hill Inc.

A Subsidiary of LAC Minerals Ltd.



LAC

P.O. Box 892
Lead, SD 57754
(605) 584-1210

January 13, 1993

Mr. Rassool Ahadi
SD DENR
Division of Water Rights
Joe Foss Building
523 East Capitol Ave
Pierre, SD 57501



Dear Mr. Ahadi,

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the Fourth Quarter of 1992. The beginning and ending water levels are marked on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me if you have any questions.

Sincerely,

Mark W. Tieszen
Environmental Manager

enclosure

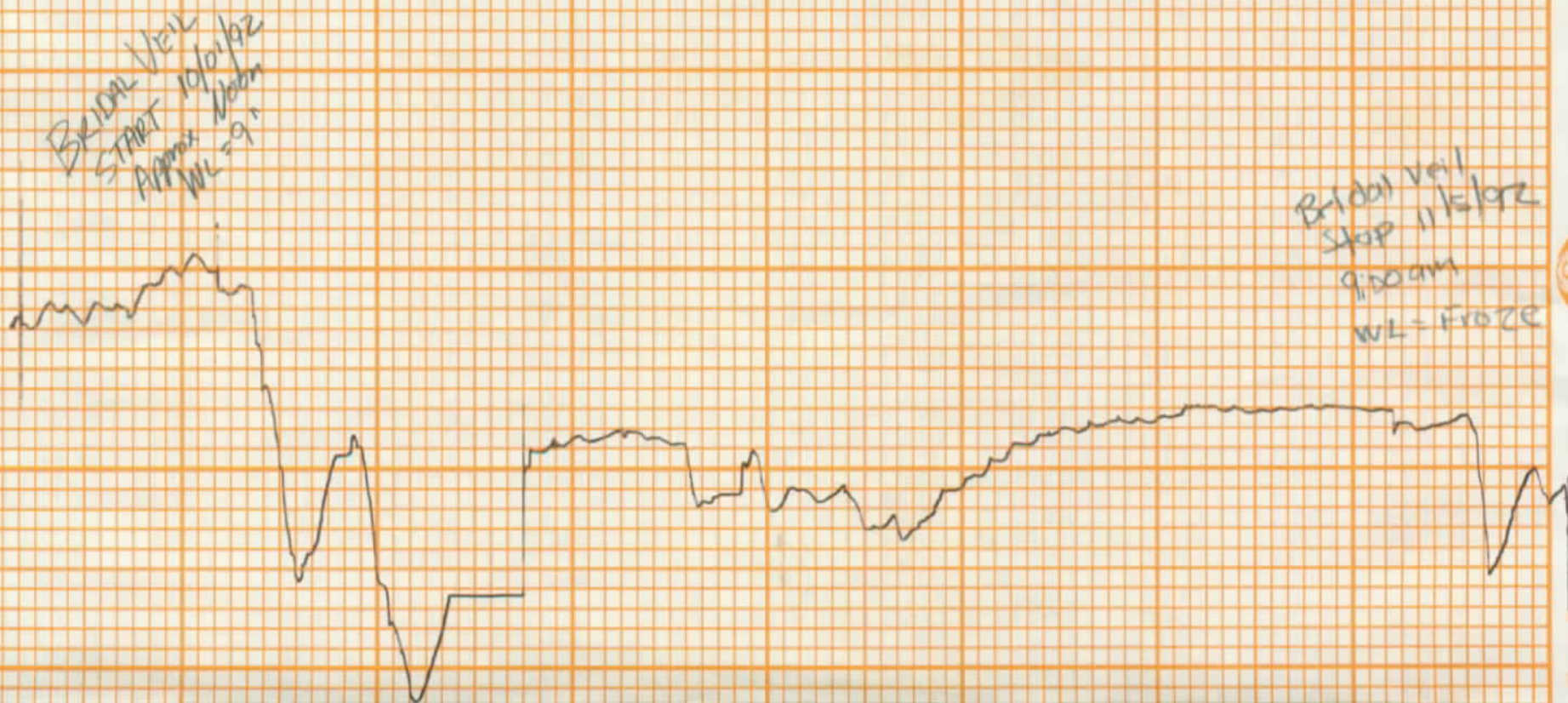
Bridal Veil
start 12/04/92
10:00 am
WL = Froze

Bridal Veil
stop 1/4/93
10:30 am
WL = Froze

Bridal Veil
start 11/5/92
9:00 am
WL: Froze on TOP

stop
12/4/92
10:00 am
WL: Froze





Richmond Hill Inc.

A Subsidiary of LAC Minerals Ltd.



LAC

P.O. Box 892
Lead, SD 57754
(605) 584-1210

April 1, 1992



Mr. Rassool Ahadi
SD Department of Environment & Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the First Quarter of 1992. The beginning and ending water levels are marked on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me if you have any questions.

Sincerely,

RICHMOND HILL INC.

Mark W. Tieszen
Environmental Coordinator

/gl
enclosures

any force

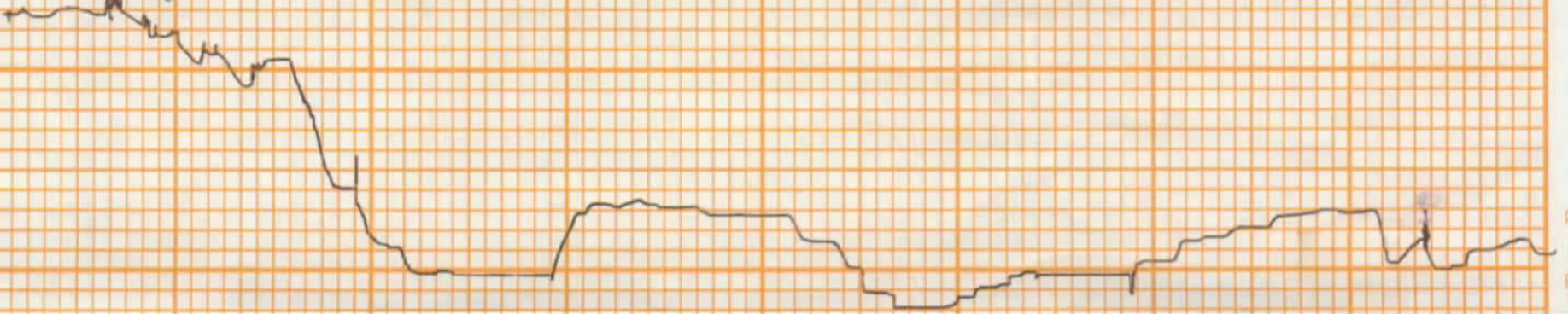
2:00 PM NL FROZE





Bridle veil Falls
start 02/28/92
12:30 PM
WL = Froze

Bridle veil Falls
stop 03/31/92
1:30 PM
WL = 28"



Bridle veil
START 01/28/92
2:00 PM
WL Froze

Bridle veil
STOP 02/28/92
12:30 PM
WL = Froze



Richmond Hill Inc.

A Subsidiary of LAC Minerals Ltd.



LAC

P.O. Box 892
Lead, SD 57754
(605) 584-1210



July 7, 1992

Mr. Rassool Ahadi
SD Department of Environment & Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the Second Quarter of 1992. The beginning and ending water levels are marked on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

Feel free to contact me if you have any questions.

Sincerely,

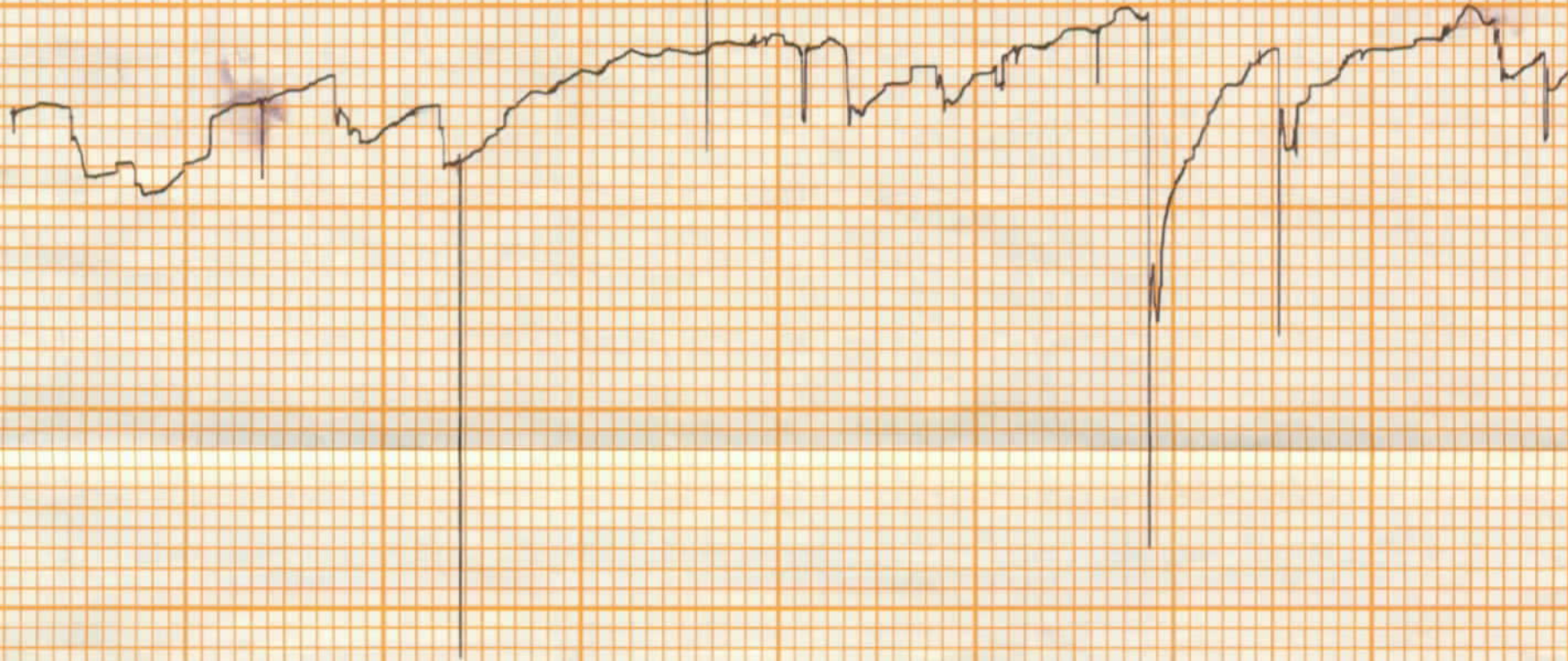
RICHMOND HILL INC.

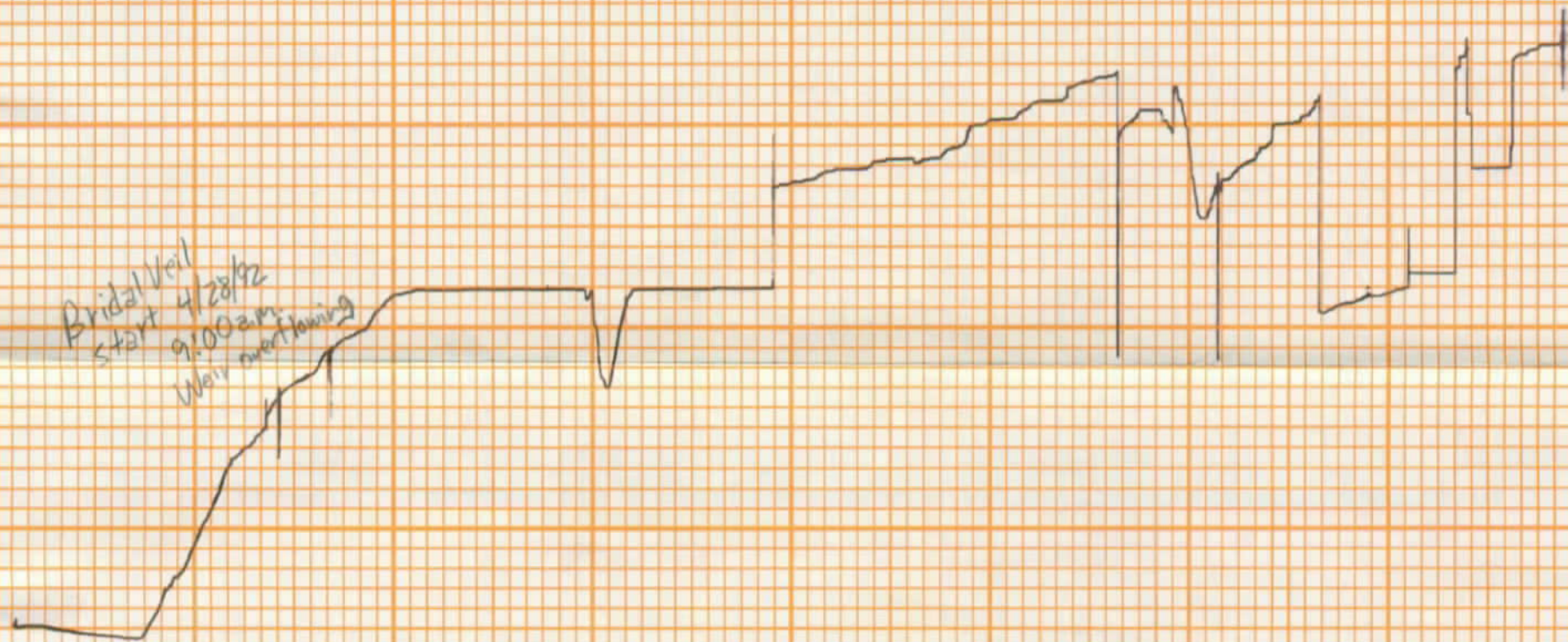
Mark W. Tieszen
Environmental Manager

/gl
enclosures

BRIDAL VEIL FALLS
START 5/29/92
1:00 pm

Bridal Veil
STOP 6/30/92
1:45 pm
WL 16"





Bridal Veil
start 4/28/92
9:00 a.m.
Well overflowing

END 5/29/92
1:00 p.m.

Bridge Vial Falls
START 0313/192
11:30 PM
WT = 28"

END
4/28/92
9:00 a.m.
Weir overflowing
First trapped air

Richmond Hill Inc.

A Subsidiary of LAC Minerals Ltd.



LAC

P.O. Box 892
Lead, SD 57754
(605) 584-1210

October 13, 1992

Mr. Rassool Ahadi
SD Department of Environment & Natural Resources
Division of Water Rights
Joe Foss Building
523 East Capitol Avenue
Pierre, SD 57501

Dear Mr. Ahadi:

Enclosed you will find the flow charts for the Bridal Veil Falls weir for the Third Quarter of 1992. The beginning and ending water levels are marked on each chart. Please note that the graphs are inverted with the maximum flows on the bottom and the minimum flows at the top.

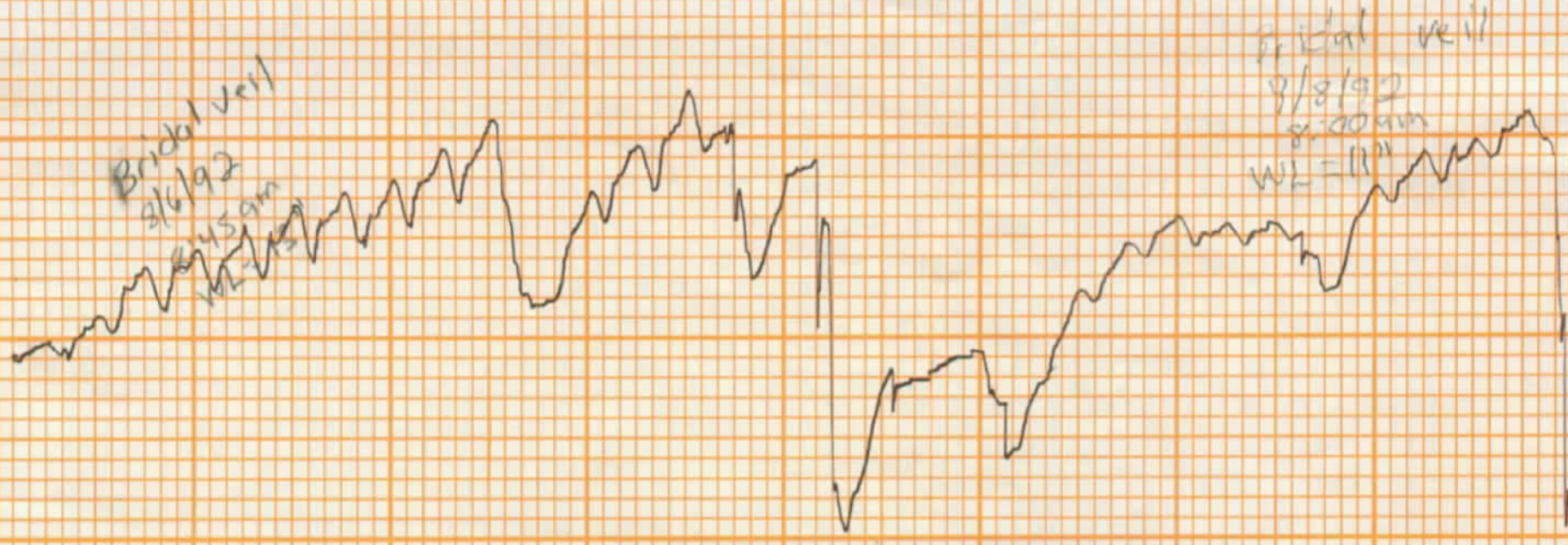
Feel free to contact me if you have any questions.

Sincerely,

RICHMOND HILL INC.

Mark W. Tieszen
Environmental Manager

/gl
enclosures



Bridal veil
9/8/92
8:00 am

END
10/01/92
12:00 pm
WL = 9"



Bridal veil
6/30/92
1:45 PM
WL 16"

Bridal veil
8/6/92
8:45 AM
WL 13"



LAC Minerals (USA) LLC

Richmond Hill Mine



LAC

P.O. Box 892
Lead, SD 57754
(605) 578-2138

March 30, 2000

Mr. Mike Cepak
Natural Resource Engineer
Minerals and Mining Program
SD DENR
Joe Foss Building
523 East Capitol
Pierre, SD 57501



Dear Mike:

This letter is to inform the SD Department of Environment and Natural Resources that LAC Minerals (USA) Inc. has changed from a Delaware Corporation to a Delaware Limited Liability Company. This change of name did not involve any assets exchanges. LAC will now be doing business as LAC Minerals (USA) LLC. Please notify the appropriate departments and note this change for your records.

In addition, as you know, I will no longer be working for LAC on a full time basis. For future correspondence, please address the letters to Gene Fuller, Field Engineer, at this address. I will continue to consult for LAC and plan to be involved on various aspects of the Richmond Hill project on an on-going basis for at least the next year.

Please feel free to contact me regarding any additional information you may need.

LAC MINERALS (USA) LLC



Todd A. Duex
General Manager

Report of Examination of Works and/or Application of Water to Beneficial Use For Permit No. 1372-1

I have this day, Aug 18, 2017 made a thorough examination of the water use system constructed by LAC Minerals LLC (formerly Bond Gold Richmond Hill), 11457 Bobtail Gulch St., Central City, SD 57754 of Permit No. 1372-1, bearing the priority of 10/31/1986 authorizing 0.89 cu. ft. per second water from up to 14 wells for industrial purposes, in Lawrence County.

Inspection contact & relationship to permit holder, if applicable: **Mark Tieszen, Environmental Manager**
Gene Fuller, Environmental Specialist
 correspondence: **% Jeff Burich, Closure Manager**
775-397-6819

A. Works used to divert the water:

Water Permit 1372-1 authorized up to 14 wells to be completed for supplying the open-pit heap-leach ore processing facility with a total diversion rate of 0.89 cfs (400 gpm). A total of 3 supply wells were developed (SW-2, SW-8 and SW-15) with a total estimated diversion rate of approximately **0.50 cfs**. The pump specifications for each well were not readily available but each of the three wells have an estimated developed capacity of 75 gpm. Other wells were drilled but not developed due to low yield or for use as monitoring wells.

Well Information:

	<u>Well SW-2</u>	<u>Well SW-8</u>	<u>Well SW-15</u>
1) Well Drilling Firm	<u>Taylor Drilling</u>	<u>Taylor Drilling</u>	<u>Taylor Drilling</u>
2) Date drilled	<u>4/15/88</u>	<u>5/7/88</u>	<u>6/8/88</u>
3) Depth	<u>720</u> ft.	<u>496</u> ft.	<u>770</u> ft.
4) Well log	<u>Yes</u>	<u>Yes</u>	<u>Yes</u>

Casing:

1) Diameter	<u>10 ¾ in.</u>	<u>10 ¾ in.</u>	<u>10 ¾ in.</u>
2) Length	<u>210</u> ft.	<u>95</u> ft.	<u>170</u> ft.
3) Type	<u>Steel</u>	<u>Steel</u>	<u>Steel</u>

Screen:

1) Type	<u>open hole</u>	<u>open hole</u>	<u>open hole</u>
2) Length	<u>510</u> ft.	<u>401</u> ft.	<u>600</u> ft.
3) Static water level	<u>212</u> ft.	<u>168</u> ft.	<u>168</u> ft.

Pump:

1) Capacity	<u>75</u> GPM	<u>75</u> GPM	<u>75</u> GPM
2) Air test @ completion:	150 GPM @ 623'	225 GPM @ 490'	300 GPM @ 770'

B. Works used to transport and apply water to beneficial use:

Each of the three wells supplied various uses at the mine until 2000. Mining ceased in 1993 and the actual gold processing continued into 1995. The heap leach pads were capped in 1996. Beginning in 2001 and continuing to the present, WS-2 and WS-15 are only used on an intermittent basis for weed spraying and dust control. All three wells were used for water quality monitoring until 2014. Well WS-8 has been the main supply well for the facility since 2001 and since 2009 has been supplying the biological water treatment plant.

C. Compliance with Permit Requirements:

- 1) Permit qualifications being abided by Yes
list any extended period of nonuse: none
- 2) Exceptions to compliance are: none

D. Condition and Location:

1. The system is in good condition. Diversion points are located as follows:

SW-2

2,576' S and 805' W of NE corner Section 15 T5N R2E (44.395415, -103.852735).

SW-8

1,723' S and 965' E of NW corner Section 14 T5N R2E (44.397812, -103.846008).

SW-15

807' S and 240' E of NW corner Section 14 T5N R2E (44.400266, -103.848806).

2. The works are capable of diverting and conveying to the place of use **0.50** cu. ft. per second (**225 gpm**) of water which is used for **industrial** use and the license should be issued for **0.50 cfs**.

3. All structures, wells and lands on map Yes

F. Comments or other permit(s) associated with the project: LAC Minerals also holds Permit No. 1422-1 for storm water runoff ponds at the facility.



Steven Quissell
Water Rights Inspector
DENR Water Rights Program

Date Report Completed: Aug 21, 2017



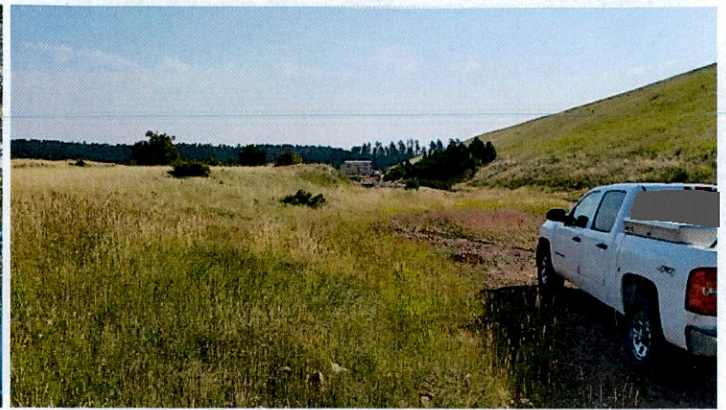
Water Supply Well WS-2



Water Supply Well WS-8



Water Supply Well SW-15



Leach pad with water treatment plant in background

Water Rights # 1372-1 and 1422-1
LAC Minerals LLC
August 18, 2017

Sec 10
T005N
R02E

Sec 11
T005N
R02E

Sec 12
T005N
R02E

Supply Well SW-15
Lat: 44.400266
Lon: -103.848806

Storm Water Pond diversion pt.
Lat: 44.401365 Lon: -103.848154

Water Treatment Plant Feed Pond
(former Preg Pond)

Storm Water Pond
Pond Crest Elev. 5540.0
Bottom of Pool El. 5480.0

Sludge Pond (former Barren Pond)

Water Treatment Plant

Leach Pad

Leach Pad

Supply Well SW-8
Lat: 44.397812
Lon: -103.846008

Sec 16
T005N
R02E

Sec 15
T005N
R02E

Sec 14
T005N
R02E

Sec 13
T005N
R02E

Supply Well SW-2
Lat: 44.395415
Lon: -103.852735

Steven Quissell
Water Rights Inspector
DENR Water Rights Program

Steven Quissell

Sec 22
T005N
R02E

Sec 23
T005N
R02E

Sec 24
T005N
R02E

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AFX, GeoMapping, AeroGRID, IGN, IGA, swisstopo, and the GIS User Community

1372-1



DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE SOUTH DAKOTA 57501-3182
www.state.sd.gov

October 2, 2017

1372-1
1422-1

Jeff Burich, Closure Mgr
LAC Minerals LLC
11457 Bobtail Gulch St
Central City SD 57754

Dear Mr. Burich:

On August 18, 2017 the investigation of the water use systems, including the extent of application of water to beneficial use, as developed under Water Permit Nos. 1372-1 and 1422-1, was completed by Steve Quissell, a staff engineer with our program.

The final water right document, the water license, can now be issued for both water permits. State law requires that we charge a \$50.00 fee (each) for the investigation and issuance of the water license. The licensed water rights will be similar to a property right that can not be lost as long as the water use continues and you abide by the permit requirements.

A review of the files found that although we were notified of the change between Bond Gold Richmond Hill to LAC Minerals LLC many years ago, no formal transfer of ownership or name change was filed and for some reason, no follow-up was done on our part. Prior to licensing, this needs to be taken care of so the files are up to date.

Enclosed are partially completed Notice of Transfer of Ownership forms for filing the ownership changes or in this case, name changes. Please review and make any necessary corrections. Upon completion, please sign the forms and return them to our office with a required filing fee of \$50.00 each.

The total due for the investigation and licensing of the water permits and for filing the ownership changes is \$200. The check or money order for the fee can be made payable to the Water Rights Program.

If you have any questions, please contact me.

Sincerely,

A handwritten signature in black ink that reads "Genny McMath". The signature is written in a cursive, flowing style.

Genny McMath
Water Rights Program
(605) 773-3352

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Environment and Natural Resources

Date October 30, 2017

RECEIVED OF LAC Minerals USAM Inc. 2270 Corporate Circle Suite 100 Henderson NV 89074

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. <u>1372-1</u> to Appropriate Water, to construct and to put water to beneficial use	50	00
Fee for Application for Permit No. _____ to Appropriate Water for Future use		
Fee to retain Future Use Permit No. _____ after period of seven years.		
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____		
Fee for Filing Transfer Form <u>1372-1</u>	50	00
Fee for _____		
Fee for Issuing New Well Driller's License No. _____ for C.Y. _____		
Fee for Renewal of Well Driller's License No. _____ for C.Y. _____		
Fee for Issuing Well Pump Installer's License No. _____ for C.Y. _____		
Fee for Renewal of Well Pump Installer's License No. _____ for C.Y. _____		
(Any Other Work Provided by Law)	TOTAL	100 00

No. **08370**

By

Jeanne Goodman
Chief Engineer
ZM1

RECEIVED

OCT 27 2017

WATER RIGHTS
PROGRAM

NOTICE OF TRANSFER OF OWNERSHIP

To: Chief Engineer
Water Rights Program, DENR
523 E. Capitol
Pierre, SD 57501-3181

No. 1372-1

Date: October 23, 2017

I/We request that Water Permit No. 1372-1

formerly owned by: Bond Gold Richmond Hill

be transferred to: (name & address) LAC Minerals (USA) LLC

Telephone No. (605) 722-4796

Title to the following described land(s)/property has been transferred as described above:

3 supply wells located in the E 1/2 Section 15 and W 1/2 Section 14, T5N, R2E

I/We understand that the validity of Water Permit No. 1372-1 has not been determined by this transfer action. If I/We have any questions on validity, I/We understand that only the Water Management Board has the authority to determine if a water permit/right is valid (see note).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is required to cover the filing fees as required under SDCL 46-2-13. This form must be signed by the new owner.

I/We Jeff Burch, the new ^{Closure Manager}~~owner~~, certify that the above information is true and correct.

Jeff Burch
(Signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five year construction period has expired. Once a water permit is developed and the water used, the permit becomes a right. A water right may be lost for three reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

Approval of Location Change of Diversion Point

NAME: LAC Minerals LLC (formerly Bond Gold Richmond Hill)

ADDRESS: 11457 Bobtail Gulch, Central City SD 57754

DATE: August 29, 2017 **COUNTY:** Lawrence **TELEPHONE:**

BACKGROUND

Water Permit No. 1372-1 appropriated 0.89 cubic feet of water per second (cfs) from up to 14 wells to be located in the NW 1/4, S 1/2 NE 1/4, SE 1/4 NE 1/4, NE 1/4 SE 1/4 Section 15; N 1/2 SW 1/4, N 1/2 SE 1/4 SW 1/4, SW 1/4 NW 1/4 Section 14 and NW 1/4 NW 1/4 Section 24; all in T5N, R2E. An inspection conducted by Steve Quissell, Water Rights Inspector, on August 18, 2017, found three wells completed and capable of supplying 0.50 cfs.

- Well SW-2 – located in the SE 1/4 NE 1/4 Section 15, T5N, R2E
- Well SW-8 – located in the SW 1/4 NW 1/4 Section 14, T5N, R2E
- Well SW-15 – located in the NW 1/4 NW 1/4 Section 14, T5N, R2E

Well SW-15 is not in a quarter-quarter section described on the permit.

AUTHORITY:

Pursuant to SDCL 46-5-13.1, the location of a diversion point may be changed or additional diversion points may be licensed provided the following conditions are met and the potential for interference with other existing diversions is not increased:

- **Developed water source same as permitted source and no additional water appropriated**

The well is in the permitted source of Crystalline Rock. An inspection by Steve Quissell found that the permitted diversion rate is not exceeded.

- **If irrigation, no new land is irrigated**

Not applicable.

- **Review of Existing Diversions**

The Water Rights Program database was reviewed for existing wells in one mile radius around Section 14. There are a number of monitoring wells in the area presumably installed to monitor mining activities. Also on file are wells constructed for industrial purposes which were used for mining activities. The nearest domestic wells on file are one mile or further to the east in Sections 13 and 24 of T005N-R02E. The nearest domestic well which is about one mile east is 340 feet deep. At this distance drawdown should not be significant. The well in the NW 1/4 NW 1/4 Section 14 and domestic wells have been in place for a number of years and there have not been complaints regarding impairment.

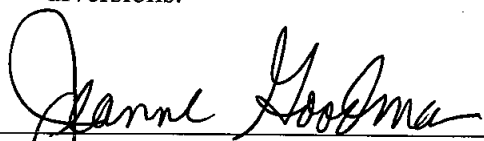
RECOMMENDED ACTION

Based on the above criteria, it is recommended that the diversion point(s) be licensed as developed.


Eric Gronlund, Natural Resource Engineer III
Water Rights Program

The Chief Engineer makes a finding pursuant SDCL 46-5-13.1 and ARSD 74:02:01:14.01 that:

This change in location of diversion point does not increase the potential for adverse effects to existing diversions.

A handwritten signature in black ink, appearing to read "Jeanne Goodman", written over a horizontal line.

Jeanne Goodman, Chief Engineer
Water Rights Program



1372-1
**DEPARTMENT of ENVIRONMENT
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182

denr.sd.gov

JUN 18 2018

1372-1
1422-1

Mark Tieszen
Environmental Manager
LAC Minerals (USA) LLC
11457 Bobtail Gulch St
Central City SD 57754

Dear Mr. Tieszen:

Enclosed are Water License Nos. 1372-1 and 1422-1. These are the final water right documents completing the process of obtaining Water Rights. Included with the licenses is a map prepared by the staff engineer who conducted the field investigation.

As long as you use the water beneficially, as stated in the Water License, State Water Laws provide that you have a continuing right to use the water.

Sincerely,

Jeanne Goodman, Chief Engineer
Water Rights Program
(605) 773-3352

enclosures

STATE OF SOUTH DAKOTA

WATER LICENSE NO. 1372-1

(1) LAC Minerals (USA) LLC, 11457 Bobtail Gulch St., Central City SD 57754 holds Water Permit No. 1372-1 authorizing diversion of 0.89 cubic feet of water per second (cfs) from ground water, Crystalline Rock (up to 14 wells), located in Lawrence County, South Dakota for industrial purposes. Permit No. 1372-1, with a priority date of October 31, 1986 was approved March 2, 1988 and issued to the applicant for diversion of water with construction of the described water supply system to be completed on or before March 2, 1993 and for the application to beneficial use of said water on or before March 2, 1997.

An investigation of the water use system found a total of three wells developed capable of supplying 0.50 cfs. One of the wells was developed outside of the permitted area. Pursuant to SDCL 46-5-13.1 and ARSD 74:02:01:14.01, the Chief Engineer made a finding the change in location of the diversion point did not increase the potential for adverse effects to existing diversions.

(2) It is certified that the permit holder has complied with the provisions of South Dakota State Law relating to completion of the construction of the water supply system and is entitled to divert 0.50 cubic feet of water per second for beneficial use. The wells are located as follows:

- SW-2: 2,576'S and 805'W of the NE corner of Section 15, T5N R2E (SE ¼ NE ¼ Sec 15); Latitude 44.395415, Longitude -103.852735
- SW-8: 1,723'S and 965'E of the NW corner of Section 14, T5N R2E (SW ¼ NW ¼ Sec. 14) Latitude 44.397812, Longitude -103.846008
- SW-15: 807'S and 240'E of the NW corner Section 14, T5N R2E (NW ¼ NW ¼ Sec. 14) Latitude 44.400266, Longitude -103.848806

(3) The permit holder has complied with the provisions of South Dakota State Law relating to the application of water to beneficial use.

(4) Pursuant to South Dakota Water Law 46-5-30.1 LAC Minerals (USA) LLC, 11457 Bobtail Gulch St., Central City SD 57754 the holder and/or owner of Water Right No. 1372-1 is issued a license to appropriate water, the right to use 0.50 cubic feet of water per second from ground water, Crystalline Rock (three wells) with a priority date of October 1, 1986 from the locations specified in (2) of this license for industrial purposes.

This license is subject to South Dakota Water Law, any limitations or conditions listed in Water Right No. 1372-1 and subject to the following qualifications:

- The casings of the wells to be constructed under Permit No. 1372-1 shall be pressure grouted with cement (bottom to top) from the producing formation to the surface, the wells constructed by a licensed well driller, and in compliance with Water Management Board Well Construction Rules, Chapter 74:02:04. *All three wells were drilled in 1988 by Taylor Drilling.*

continued

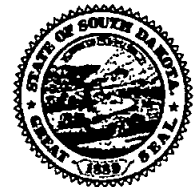
- The wells approved under this Permit may be located near domestic wells which may obtain water from the same formation. The well owner, under this permit shall control its withdrawals so there is not a reduction, of needed water supplies in domestic wells.
- The permit owner shall monitor flows over Bridal Veil Falls for a period of three years to establish an average monthly flow. If the actions of the permit holder cause a reduction in water flowing over Bridal Veil Falls, the permit holder shall either curtail its own water use or directly provide sufficient water so as to restore the flow to the level it would have been but for the permit holder's actions.
- Approval of Permit No. 1372-1 is subject to compliance with the following then existing and applicable Water Management Board Rules:
 - Chapter 74:03:15 Ground Water Quality Standards (*Transferred to Chapter 74:54:01*);
 - Chapter 74:03:16 Ground Water Discharge Permit (*Transferred to Chapter 74:54:02*);
 - Chapter 74:03:30 Heap Leach Design and Construction (*Transferred to Chapter 74:56:03*);
 - Chapter 74:03:02 Surface Water Quality Standards (*Transferred to Chapter 74:51:01*);
 - Chapter 74:03:04 Uses Assigned to Streams (*Transferred to Chapter 74:51:03*);
 - Chapter 74:03:17 Surface Water Discharge Permit-General Provisions (*Transferred to Chapter 74:52:01*);
 - Chapter 74:03:18 Surface Water Discharge Permit Application Requirements (*Transferred to Chapter 74:52:02*);
 - Chapter 74:03:19 Surface Water Discharge Permit Conditions (*Transferred to Chapter 74:52:03*);
 - Chapter 74:03:20 Transfer Modification, Revocation and Reissuance and Termination of Surface Water Discharge Permits (*Transferred to Chapter 74:52:04*);
 - Chapter 74:03:21 Procedure For Permit Processing (*Transferred to Chapter 74:52:05*);
 - Chapter 74:03:22 Secondary Treatment Standards (*Transferred to Chapter 74:52:06*);
 - Chapter 74:03:23 Criteria and Standards for Surface Water Discharge Permit (*Transferred to Chapter 74:52:07*);
 - Chapter 74:03:24 Toxic Pollutant Effluent Standards for Surface Water Discharge Permits (*Transferred to Chapter 74:52:08*);
 - Chapter 74:03:25 Effluent Guidelines and Standards for Surface Water Discharge Permits (*Transferred to Chapter 74:52:10*), and
 - Chapter 74:03:26 Pretreatment Regulations for Surface Water Discharge Permits (*Transferred to Chapter 74:52:11*).



Jeanne Goodman, Chief Engineer
Water Rights Program
Department of Environment and Natural Resources

JUN 18 2018

date



October 1, 2023

Delivered via Certified Mail

South Dakota Department of Agriculture and Natural Resources
Water Rights Program
523 East Capitol Avenue
Pierre, SD 57501-3182

Re: Notice of Transfer of Ownership of Water Right/Permit Nos. 1372-1 and 1422-1; Transfer to Homestake Mining Company of California

Water Rights Program,

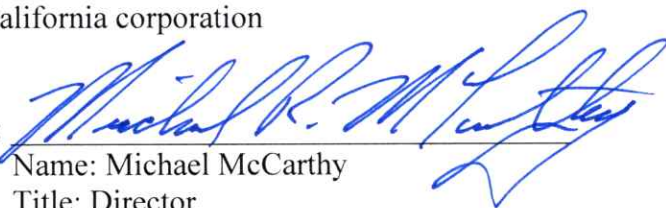
Barrick Gold Corporation has completed an internal corporate re-organization, wherein LAC Minerals (USA) LLC ("LAC") merged into Homestake Mining Company of California ("HMC"). The merger was complete on September 30, 2023. In furtherance of the merger, LAC and HMC request that Water Right/Permit Numbers 1372-1 and 1422-1 be transferred from LAC to HMC. Attached is a Notice of Transfer of Ownership of Water Right/Permit Numbers 1372-1 and 1422-1.

Should you have any questions about the corporate re-organization or the attached Notices of Transfer of Ownership, please contact Mark Tiezen at HMC at (605) 722-4860 or via email at mtiezen@barrick.com.

Sincerely,

HOMESTAKE MINING COMPANY OF CALIFORNIA,
a California corporation

By:


Name: Michael McCarthy
Title: Director

NOTICE OF TRANSFER OF OWNERSHIP

For assistance call (605) 773-3352

Mail to: SD DANR, Water Rights Program
523 E Capitol Ave
Pierre, SD 57501-3182

Water Right/Permit No. 1372-1

Date: October 1, 2023

I/We request that Water Right/Permit No. 1372-1 formerly owned by:
LAC Minerals (USA) LLC be transferred to:

New Owner Name: Homestake Mining Company of California
Address: 310 S. Main Street, Ste. 1150 mobile: 605-722-4680
City, State, Zip Salt Lake City, UT 84101 email: mtiezen@barrick.com

Title to the following described land(s)/property has been transferred as described above:

SW-2: 2,576'S and 805'W of the NE corner of Section 15, T5N R2E (SE 1/4 NE 1/4 Sec.15);
Latitude 44.395415, Longitude -103.825735

SW-8: 1,723'S and 965'E of the NW corner of Section 14, T5N R2E (SW 1/4 NW 1/4 Sec. 14);
Latitude 44.397812, Longitude -103.846008

SW-15: 807'S and 240'E of the NW corner of Section 14, T5N R2E (NW 1/4 NW 1/4 Sec. 14);
Latitude 44.400266, Longitude -103.848806

☒ I understand that the validity of Water Right/Permit No. 1372-1 has not been determined by this transfer action. If I have any questions on validity, I understand that only the Water Management Board has the authority to determine if a water right/permit is valid (see note below).

You are requested to file this "Notice of Transfer" in the appropriate file with the Water Rights Program, as evidence of the change of ownership.

A fee of Fifty Dollars (\$50.00) is included to cover the filing fee as required by SDCL 46-2-13.

Michael McCarthy, Director for Homestake
I, Mining Company of California, the new owner, certify that the above information is true and correct.


(signed by new owner)

NOTE: Water permits may be cancelled for nonconstruction after the five-year construction period has expired. Once a water permit is developed, an inspection is conducted to issue a water right license for the project as developed. A water permit/right may be cancelled for one or more of the following reasons:

1. Abandonment - no intent to use water and use is abandoned.
2. Forfeiture - no use of water for three-year period without legal excuse.
3. For a third violation of a condition of a water permit/right.

PAID

OCT 02 2023

Ck#

Rec't#

LAW OFFICES OF
BENNETT MAIN GUBBRUD & WILLERT, P.C.
A PROFESSIONAL CORPORATION
618 STATE STREET
BELLE FOURCHE, SOUTH DAKOTA 57717
TEL (605) 892-2011
Email: bellelaw@bellelaw.com

RECEIVED

OCT 02 2023

OFFICE OF
WATER

MAX MAIN, Associate Emeritus*
DWIGHT A. GUBBRUD*
*LICENSED in SOUTH DAKOTA and WYOMING

Est. 1908

KELLEN B. WILLERT**
**LICENSED in SOUTH DAKOTA, WYOMING and COLORADO

September 29, 2023

SD DANR, Water Rights Program
C/O Amanda Dewell
523 E. Capitol Ave.
Pierre, SD 57501

**RE: LAC Minerals (USA) LLC Transfer of Water Rights; Our File
No. 2365.315023.**

Dear Amanda:

Enclosed is our firm's check in the amount of \$100 to pay the fees to transfer Water Right Nos. 1372-1 and 1422-1 from LAC Minerals (USA) LLC to Homestake Mining Company California.

Thank you for your assistance.

Sincerely,

BENNETT MAIN GUBBRUD & WILLERT, P.C.

Dwight A. Gubbrud

DAG/ak

cc: Client (by email)

RECEIPT

WATER RIGHTS PROGRAM

South Dakota Department of Agriculture and Natural Resources

Date October 2, 2023

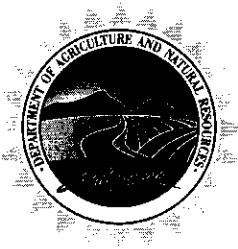
RECEIVED OF Bennett Main Gubbard & Willert PC Attorneys at Law 618 State Street, Belle Fourche SD 57717

The following amount in fees for services rendered as provided for by law:

Fee for Application for Permit No. _____ to Appropriate Water, to construct and to put water to beneficial use	\$ _____
Fee for Application for Permit No. _____ to Appropriate Water for Future use	\$ _____
Fee to retain Future Use Permit No. _____ after period of seven years.	\$ _____
Fee for Inspecting Constructed Works, confirming beneficial use and issuing Water License No. _____	\$ _____
Fee for Filing Transfer Form <u>1372-1</u>	<u>\$50.00</u>
Fee for _____	\$ _____
Fee for Issuing New Well Driller's License No. _____	\$ _____
Fee for Renewal of Well Driller's License No. _____	\$ _____
Fee for Issuing Well Pump Installer's License No. _____	\$ _____
Fee for Renewal of Well Pump Installer's License No. _____	\$ _____
(Any Other Work Provided by Law)	
TOTAL	<u>\$50.00</u>

By Eric Granlund
Chief Engineer

mm



**DEPARTMENT of AGRICULTURE
and NATURAL RESOURCES**

JOE FOSS BUILDING
523 E. CAPITOL AVE
PIERRE SD 57501-3182
danr.sd.gov

October 2, 2023

1372-1
1422-1

Homestake Mining Company of California
c/o Mark Tiezen
310 S Main St, Ste 1150
Salt Lake City UT, 84101

Dear Mr. Tiezen:

I have received your "Notice of Transfer of Ownership" forms and the required fees. Enclosed are receipts of payment for your records.

Water Right Nos. 1372-1 & 1422-1 previously owned by LAC Minerals (USA) LLC are now listed under Homestake Mining Company of California. I have also updated your contact information in our system.

As a reminder, so long as you use the water beneficially, as stated in the Water Rights, State Water Laws provide that you have a continuing right to use the water. Should the water not be put to beneficial use for a period longer than 3 consecutive years, without legal excuse, the Rights will be subject to cancellation.

If you have any questions, please contact me.

Sincerely,

Amanda Dewell
Water Rights Program
605 773-3352
Amanda.Dewell@state.sd.us

enclosures