

A G E N D A

OCONEE COUNTY COUNCIL MEETING

TUESDAY, DECEMBER 05, 1995

7:00 PM

1. Call to Order
2. Invocation
3. Approval of Minutes
4. Consideration of Request to Apply for Parks & Recreation Development Grant in an Amount Not to Exceed \$20,000 - Mr. Alex James PRT Director
5. Consideration of Request for Temporary Employee - Mrs. Peggy Hightower, Treasurer
6. Discussion Regarding Land Use in Oconee County - Mr. Tom Justice
7. Consideration of Request for Library to Join APPNET (A Resource Network for Upstate Libraries) - Mrs. Martha Baily, Library Director
8. Consideration of Bids for Copying Machines for Library System - Mrs. Martha Baily, Library Director & Ms. Marianne Dillard, Purchasing Agent
9. Consideration of Bids For the Sale & Removal of Surplus Used Tires - Mr. Lee Davis & Ms. Marianne Dillard, Purchasing Agent
10. Consideration of Bids for Wheel Loader for the Rock Crusher - Mr. Tommy Crumpton, Rock Crusher Director & Ms. Marianne Dillard, Purchasing Agent
11. Consideration of Engineering & Related Services to Close a Portion of Seneca Landfill - Mr. Jack Hirst, Solid Waste Director, Ms. Marianne Dillard, Purchasing Agent & Goldie & Associates
12. Consideration of Recommendation Not to Award Bid for Surveillance System for Sheriff's Department - Ms. Marianne Dillard - Purchasing Agent
13. Consideration of Adoption of Resolution Opposing Mining in Oconee County - SC Forest Watch

AGENDA

December 05, 1995

Page 2

14. Consideration of Funding for Planning Commission - Mr. Norman D. Crain, Supervisor-Chairman
15. Second Reading of Ordinance 95-10, "AN ORDINANCE TO ESTABLISH FOR OCONEE COUNTY PROVISION TO IDENTIFY AND MONITOR HAZARDOUS MATERIALS AND PROVIDE PENALTIES FOR VIOLATIONS OF THIS ORDINANCE"
16. Third & Final Reading of Ordinance 95-8, "AN ORDINANCE TO PROVIDE A MECHANISM FOR THE ALLOWANCE OF REFUNDS FOR QUALIFYING TAXPAYERS FOR THE COUNTY PORTION OF PROPERTY TAXES AS PROVIDED IN SECTION 12-43-220 (C) OF THE CODE OF LAWS OF SOUTH CAROLINA"
17. Old Business
18. New Business
19. Adjourn

\*\*\*6:45 pm\*\*\* Administrative Briefing

\*\*\*5:30 PM\*\*\* Purchasing, Contracting, Real Estate, Building & Grounds Committee Meeting for the purpose of discussing an in county purchasing policy to include a percentage and not to exceed cap.

\*\*\*6:00 PM\*\*\* Law Enforcement, Safety, Health, Welfare & Services Committee Meeting for the purpose of discussing:

- (1) Proposed Ordinance 95-10, "AN ORDINANCE TO ESTABLISH FOR OCONEE COUNTY PROVISION TO IDENTIFY AND MONITOR HAZARDOUS MATERIALS AND PROVIDE PENALTIES FOR VIOLATIONS OF THIS ORDINANCE"
- (2) The request of the PRT Commission to make the Director & Superintendents Code Enforcement Officers

**MEMBERS, OCONEE COUNTY COUNCIL**

Ms. M. Fran Burrell, District I    Mr. Harrison E. Orr, District II  
Mr. Harry R. Hamilton, District III    Mr. Roy B. Strickland, District IV  
Mr. Alton K. Williams, District V

**MINUTES, OCONEE COUNTY COUNCIL MEETING**

The regular meeting of the Oconee County Council was held Tuesday, December 5, 1995 at 7:00 pm in Council Chambers with all Council Members and the County Attorney present.

Members of the press notified (by mail):  
Journal/Tribune, Keowee Courier, Westminster News, Anderson Independent, Greenville News, WGOG Radio, WBFM Radio, WCCP Radio, WYFF TV, WLOS TV & SC Black Media Group.

**Press**

Members of the press present: Ashton Hester - Keowee Courier, Jennifer Barnett - Anderson Independent, Dick Mangrum - WGOG Radio & Angelia Davis - Journal/Tribune.

The meeting was called to order by Supervisor -Chairman Crain who welcomed the guests and media.

**Call to Order**

The invocation was given by Mr. Williams.

**Invocation**

Mr. Hamilton made a motion, seconded by Ms. Burrell, approved 5 - 0 that the minutes of the November 21, 1995 meeting be adopted as printed.

**Minutes**

Upon request of Mr. Alex James, Parks, Recreation & Tourism Department, Mr. Orr made a motion, seconded by Mr. Williams, approved 5 - 0 that PRT be allowed to apply for a Parks & Recreation Development Grant in an amount not to exceed \$20,000 for park improvements.

**PRT**

Upon request of Mrs. Peggy Hightower, Treasurer, Mr. Strickland made a motion, seconded by Ms. Burrell, approved 5 - 0 that \$5,438 be taken from contingency for a temporary employee in the Treasurer's Office beginning December 18, 1995 through March 24, 1996. (See attached request)

**Treasurer (Cont'cy)**

Upon request of Mrs. Martha Baily, Library Director, Mr. Strickland made a motion, seconded by Mr. Orr, approved 5 - 0 that the Library be allowed to join APPNET (a resource network for upstate libraries) at no cost to the county for this fiscal year.

**Library**

Council also went on record as expressing special appreciation to the Friends of the Library who funded approximately \$6,000 of the cost.

Upon recommendation of Mrs. Martha Baily & Ms. Marianne Dillard, Purchasing Agent, Mr. Williams made a motion, seconded by Mr. Hamilton, approved 5 - 0 that the bid for two (2) copying machines for the Library System be awarded to Kearns Corporation who was low bid at \$7,639.50. (See attached bid sheet)

**(Copy  
Machines)**

Upon recommendation of Mr. Lee Davis, Motor Pool Foreman & Ms. Dillard, Mr. Williams made a motion, seconded by Ms. Burrell, approved 5 - 0 that the bid for the sale and removal of surplus tires be awarded to Watson's Tires & Treds who was the only bidder at approximately \$445.75 per month for one (1) year and an option to renew for an additional year. (See attached bid sheet)

**Surplus  
Tires**

Ms. Marianne Dillard, Purchasing Agent, Mr. Jack Hirst, Solid Waste Director, Mr. Dave Devoe & Mr. Steve Goldie of Goldie & Associates addressed Council regarding engineering and related services to close a portion of the Seneca Landfill. See attached Seneca Landfill Closure Engineering Design & Phase I Construction Services, the proposal for closure of Seneca Landfill and proposed contract between Oconee County & Goldie & Associates for such services.

**Solid  
Waste**

Council discussed a special meeting Tuesday, December 12, 1995 to take action on this matter. After such discussion, Mr. Strickland made a motion that Goldie & Associates be engaged for these services as per Section B, Subsection 2. "When it is to the advantage of Oconee County to acquire goods and/or services on the basis of a previously awarded bids or contracts." This motion died for lack of a second.

Council then scheduled a special meeting Tuesday, December 12, 1995 at 3:00 pm to consider this matter.

Upon recommendation of Ms. Dillard, Mr. Hamilton made a motion, seconded by Mr. Orr, approved 5 - 0 that no award be made on surveillance equipment for the Sheriff's Department as the county acquired this equipment through the Division of General Services.

**No Award  
(Sheriff)**

Mr. Christopher Kempton, President, SC Forest Watch, addressed Council urging them to endorse a Resolution adopted by the City of Westminster opposing mining in the county.

**SC Forest  
Watch**

Mr. Orr made a motion, seconded by Mr. Strickland, approved 5 - 0 that \$10,000 be taken from contingency and placed in line item 10 061 00150 00032 to fund the Oconee County Planning Commission for the remainder of this fiscal year.

**Planning  
Commission  
(Cont'cy)**

Mr. Hamilton, Chairman, Law Enforcement, Safety, Health, Welfare & Services Committee, informed Council the committee was not ready to make a recommendation regarding the adoption of Ordinance 95-10, "AN ORDINANCE TO ESTABLISH FOR OCONEE COUNTY PROVISION TO IDENTIFY AND MONITOR HAZARDOUS MATERIALS AND PROVIDE PENALTIES FOR VIOLATIONS OF THIS ORDINANCE".

Ord. 95-10

Mr. Orr made a motion, seconded by Ms. Burrell, approved 5 - 0 that Ordinance 95-8, "AN ORDINANCE TO PROVIDE A MECHANISM FOR THE ALLOWANCE OF REFUNDS FOR QUALIFYING TAXPAYERS FOR THE COUNTY PORTION OF PROPERTY TAXES AS PROVIDED IN SECTION 12-43-220(C) OF THE CODE OF LAWS OF SOUTH CAROLINA" as amended, be adopted on third and final reading.

Ord. 95-8

Upon request of Mr. Rhett Smith, City of Westminster, & Ms. Gwen McCall, Pioneer Water, Mr. Strickland made a motion, seconded by Mr. Orr that Council endorse the Resolutions adopted by the City of Westminster & Pioneer Water opposing mining in Oconee County.

Res. 95-40

Mr. Orr made a motion, seconded by Mr. Williams, approved 5 - 0 that the motion be amended that Council adopt Resolution 95-40, "A RESOLUTION URGING ALL FEDERAL AND STATE AUTHORITIES TO DENY THE APPLICATION FOR A PERMIT TO CONDUCT PROSPECTING OR ANY OTHER COMMERCIAL MINING OR EXCAVATION ON PUBLIC LANDS IN THE CHAUGA RIVER WATERSHED" be adopted on first and final reading.

The motion as amended was adopted 5 - 0.

Mr. Orr made a motion, seconded by Mr. Hamilton, approved 5 - 0 that Ms. Carolyn Harris & Mr. Horace Craig be appointed to the Highway 11 Advisory Committee.

Hwy. 11  
Advisory  
Committee

Mr. Hamilton made a motion, seconded by Mr. Williams, approved 5 - 0 that Council adopt Resolution 95-41, "A RESOLUTION URGING THE NORFOLK SOUTHERN RAILWAY & THE SC DEPARTMENT OF TRANSPORTATION TO MAKE THE AREA NEAR THE BRIDGE ON RADIO STATION ROAD SAFE".

Res. 95-41

Mr. Strickland made a motion, seconded by Mr. Orr, approved 5 - 0 that Mrs. Frances Abbott's resignation as a member of the Library Board be accepted and she be sent a copy of Resolution 95-42, "A RESOLUTION OF APPRECIATION TO MRS. FRANCES ABBOTT, LIBRARY BOARD MEMBER".

Res. 95-42

Minutes, Oconee County Council Meeting  
December 5, 1995  
Page 4

Mr. Orr informed Council there were many interesting bills discussed at the SC Legislative Conference he recently attended and suggested Council watch the video "South Carolina Counties: Government That Works!" prior to the next Council Meeting.

**Leg. Conf.**

Council scheduled a meeting with the Health Department Tuesday, January 16, 1996 at 2:00 pm in Council Chambers to discuss the needs of the Seneca Health Clinic.

**Seneca  
Health  
Clinic**

Mr. Crain presented the following road repair recommendations to Council.

**Roads**

Pipe and rip-rap be installed on Brewer Roadway (WA 299) at a cost of \$25,337.34

Replace pipe and install rip-rap on Austin Edwards Roadway (WA 22) at a cost of \$16,588.69

Pipe and rip-rap be installed on Conley Roadway (PU 47) at a cost of \$12,696.98

Pipe and rip-rap be installed on Mud Creek Roadway (CE 27) at a cost of \$10,273.32

Ms. Dillard, Purchasing Agent, stated that if Council feels these roadways need to be taken care before winter sets in, then it would be her recommendation that the roadways be added to the previously awarded contract in the form of a change order. However, beginning the first of the year she felt the county should put out for bids a certain amount of work to be completed and other work that may come up.

Mr. Orr, Chairman, Roads & Transportation Committee Chairman, requested this be referred to committee, the committee scheduled a meeting Tuesday, December 12, 1995 at 12:00 pm to go out and review these roadways.

Upon request of Mr. Cain, County Attorney, Mr. Orr made a motion, seconded by Mr. Williams, approved 5 - 0 that Council go into executive session to receive legal advice.

**Executive  
Session**

When open session resumed, Mr. Crain informed Council it was the recommendation of the Purchasing, Contracting, Real Estate, Building & Grounds Committee that an in county purchasing procedure to include a percentage and cap be included in the proposed purchasing manual.

**Open  
Session  
(Purchase  
Procedure)**

Minutes, Oconee County Council Meeting  
December 5, 1995  
Page 5

Council also instructed the Council Clerk to inform anyone requesting a road name change that the first edit of the 911 maps has already been completed and it would be impractical to change any names before a revision takes place and the second map is produced.

**Changes To  
Road Names**

Adjourn: 9:30 pm

*Norman D. Crain*  
\_\_\_\_\_  
Norman D. Crain  
Supervisor-Chairman  
Oconee County Council

**Oconee County Treasurer's Office**  
Post Office Box 429 • Walhalla, South Carolina 29691  
Telephone 638-4162

Peggy T. Hightower  
Treasurer

December 5, 1995

Anne C. Dodd  
Chief Deputy Treasurer

I am requesting \$5,438.00 to hire a temporary employee to begin work on December 18th and work until March 24th. This employee would open mail, answer the telephone, assist customers as needed. This would greatly help relieve the pressure on the current staff that is working the counter.

Since the beginning of collections on October 2nd, there has been 116.5 hours overtime and 193.5 hours compensation time earned by the staff of the Treasurers Office. This does not include the Treasurers time, only time documented through the Personal Office.. This time amounts to eight weeks of 37.5 hour work weeks so you can readily see how busy we are just trying to stay abreast of collections, refunds and bookkeeping. When you work such long hours you are prone to make mistakes, so we really need someone to help out.



OCONEE COUNTY BID TABULATION

BID FOR: TWO COPIERS FOR LIBRARY

DATE: November 28, 1995 BID NO: 95-18

LOCATION: Walhalla, sc

TIME: 2:00 p.m.

	Modern Office Machines	Kearns Corp.	Acme Business Products	Holcomb's Office Supply	Plus, Inc.	Plus, Inc.	
Price for each copier	3,289.00	3,090.00	3,040.00	5,456.00	2,917.19	3,496.60	
Cabinet for each copier	126.00	100.00	100.00	incl.	140.00	140.00	
Trade-in allowance	(100.00)		(100.00)	(600.00)	incl.	incl.	
SC sales tax	165.75	159.50	152.00	242.80	152.86	181.83	
Total	3,480.75	3,349.50	3,192.00	5,098.80	3,210.05	3,818.43	
Warranty	90 days	90 days	90 days	3 years	90 days	90 days	
Make/Model	Canon NP2120	Mita 2155	Ricoh 4222	Xerox 5328	Konica 1120 does not include photo mode	Konica 2125	
Total for 2 copiers	\$6,795.75	\$6,539.50	\$6,384.00	\$9,954.80	\$6,420.10	\$7,636.86	
Maintenance	.014/copy 715.00/year	.01/copy 550.00/year	660.00/year	.015/copy 825.00/year	.014/copy 770.00/year	.013/copy 715.00/year	
Maintenance cost for 1 year	715x2=1,430.00	550x2=1,100.00	660x2=1,320.00	825x2=1,650.00	770x2=1,540.00	717x2=1,430.00	
Total cost for 2 copiers including maintenance	\$8,225.75	✓ \$7,639.50	\$7,704.00	\$11,604.80	\$7,960.10	\$9,066.86	

ATTENDING OPENING: Marianne Dillard, Jenny Peay, Martha Bailey, Les Buford-Kearns, Randy Smith-Plus, Inc.

BID NO. 95-18

(Use this number on envelopes and all related correspondence)

SELECTION FOR TWO COPIERS  
OF THE LIBRARY SYSTEM  
OCONEE COUNTY

PURCHASING DEPARTMENT

201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The MM/Modern Office Machines

submits herewith our Bid in response to bid request number shown above, and in compliance with the description(s) and/or specification(s) numbered one page and attached hereto for two copiers for Libery System  
two copiers of no less 200 sheets each

	UNIT	TOTAL
Price for each copier	Canon NP-2120	\$ 3,289.00
Cabinet for Copiers	Cabinet	\$ 126.00
Trade-in allowance	Canon NP120	\$ 100.00
S. C. Sales Tax		198.90
<b>TOTAL</b>		<b>\$ 3,513.90</b>

Warranty (please state) 90 days

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental Form attached hereto.

Delivery Date: within 7 days of receipt of order

BIDDING ORGANIZATION MM

ADDRESS: P.O. BOX 5615

CITY, STATE, ZIP CODE Greenville, SC 29606

SIGNATURE OF BIDDERS REPRESENTATIVE:

David George

TITLE: Regional Sales Manager

DATE: 11/21/95

TELEPHONE: (800) 476-6779 ext. 426

Full Service Contract \$715.00 per year includes 55,000 copies per year. Overages will be invoiced at \$ .014 per copy.

(Use this number on envelopes and all related correspondence)

BID FORM  
 OCONEE COUNTY  
 PURCHASING DEPARTMENT  
 201 WEST MAIN STREET  
 WALHALLA, SOUTH CAROLINA 29691

The KEARNS CORPORATION

submits herewith our Bid in response to bid request number shown above, and in compliance with the description(s) and/or specification(s) numbered one page and attached hereto for two copiers for Libery System

	<u>EACH UNIT</u>	<u>TOTAL FOR 2 WITH</u>
Price for <u>each copier</u> <i>1 MITA 2155 COPIER WITH XCP COIN OP JR. ACCEPTS NICKLES, DIMES, OR QUARTERS</i>	<u>\$ 3090.<sup>00</sup></u>	<u>\$ 6180.<sup>00</sup></u> <i>CABINETS AND COIN-OP UNITS</i>
Cabinet for Copiers	<u>100.<sup>00</sup></u>	<u>\$ 200.<sup>00</sup></u>
Trade-in allowance	<u>0</u>	<u>\$ 0</u>
S. C. Sales Tax		<u>329.<sup>00</sup></u>
TOTAL		<u>\$ 6609.<sup>00</sup></u> <i>Corrected by Les Benford</i>
Warranty (please state) <u>90 DAYS</u>		<u>\$ 6699.<sup>00</sup></u>

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental Form attached hereto.

Delivery Date: 2 WEEKS

BIDDING ORGANIZATION KEARNS CORPORATION

ADDRESS: P.O. BOX 337 WEST MAIN ST.

CITY, STATE, ZIP CODE EASLEY SC 29640

SIGNATURE OF BIDDERS REPRESENTATIVE: Les Benford

TITLE: SALES REP.

DATE: 11/21/95

TELEPHONE: 803-859-5013 / 1-800-768-6482 EXT. 204

(Use this number on envelopes and all related correspondence)

BID FORM  
 OCONEE COUNTY  
 PURCHASING DEPARTMENT  
 201 WEST MAIN STREET  
 WALHALLA, SOUTH CAROLINA 29691

The Acme Business Products

submits herewith our Bid in response to bid request number shown above, and in compliance with the description(s) and/or specification(s) numbered one page and attached hereto for two copiers for Libery System

	UNIT	TOTAL
Price for each copier	<u>3,040.<sup>00</sup></u>	\$ <u>6,080.<sup>00</sup></u>
Cabinet for Copiers	<u>100.<sup>00</sup></u>	\$ <u>200.<sup>00</sup></u>
Trade-in allowance	<u>100</u>	\$ <u>200</u>
S. C. Sales Tax		<u>304.<sup>00</sup></u>
TOTAL		\$ <u>6,384.<sup>00</sup></u>

Warranty (please state) 90 days

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental Form attached hereto.

Delivery Date: 12-4-95 or 48 hours notice

BIDDING ORGANIZATION Acme Business Products

ADDRESS: P.O. BOX 25 Garlington Rd.

CITY, STATE, ZIP CODE Greenville, S.C. 29

SIGNATURE OF BIDDERS REPRESENTATIVE: Tom Pickens

TITLE: Sales Manager

DATE: 11-27-95

TELEPHONE: 803-297-3560

BID SUPPLEMENTAL FORM

OCONEE COUNTY

PURCHASING DEPARTMENT

201 West Main Street

WALHALLA, SOUTH CAROLINA 29691

DATE Nov. 27, 1995

BID NO. 95-18

Service Contract for each Ricoh copier will be 660.<sup>00</sup> per year to include all parts & labor & supplies except paper for 55,000 copies per year.

Bid Price includes coin-op device that accepts nickels, dimes & quarters & makes change automatically.

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Holcomb's Office Supply  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered one page  
and attached hereto for two copiers for Libery System

	UNIT	TOTAL
Price for each copier	<u>\$ 5,456</u>	<u>\$ 10,912</u>
Cabinet for Copiers - Included at no extra charge		<u>\$ - 0 -</u>
Trade-in allowance	<u>- \$ 600.<sup>00</sup></u>	<u>- \$ 1200.<sup>00</sup></u>
S. C. Sales Tax		<u>\$ 485.<sup>60</sup></u>
TOTAL		<u>\$ 10,197.60 For Both</u>

Warranty (please state) Three year Warranty Service Supplies Total is \$ .015  
per copy

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: As needed

BIDDING ORGANIZATION Holcomb's Office Supply  
ADDRESS: P.O. BOX P.O. Box 579  
CITY, STATE, ZIP CODE West Union, S.C. 29696

SIGNATURE OF BIDDERS REPRESENTATIVE: Dellie B. Kester  
TITLE: Xerox Marketing Representative  
DATE: November 28, 1995  
TELEPHONE: (803) 638-5478

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Plus, Incorporated

submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered one page  
and attached hereto for two copiers for Libery System

	UNIT	TOTAL
Price for each copier	<u>2,917.19</u>	<u>\$ 5,834.38</u>
Cabinet for Copiers	<u>140.00</u>	<u>\$ 280.00</u>
Trade-in allowance	<u>Included</u>	<u>\$ Included</u>
S. C. Sales Tax		<u>305.72</u>
<b>TOTAL</b>		<u>\$ 6,420.10</u>

Warranty (please state) 90 Days

bid shall include delivery to location stated on Bid Notice.

show any exception, deviation, extra computation, or information on Bid Supplemental  
form attached hereto.

Delivery Date: 10 Working Days

BIDDING ORGANIZATION Plus, Inc.

ADDRESS: P.O. BOX 5643

CITY, STATE, ZIP CODE Greenville, SC 29606

SIGNATURE OF BIDDERS REPRESENTATIVE: *Rodney Smith*

TITLE: Sales Representative

DATE: 11-28-95

TELEPHONE: (803) 242-9090

BID SUPPLEMENTAL FORM

OCONEE COUNTY

PURCHASING DEPARTMENT

201 West Main Street

WALHALLA, SOUTH CAROLINA 29691.

DATE 11-28-95

BID NO. 95-18

Konica 1120 Copier

\*Does not have a photo mode key; however, with the automatic exposure control, it makes great copies of photographs.

Maintenance Plan

\*Includes all parts, labor, drums, toner, developer and travel time. Maintenance coverage is billed at .014¢ per copy. Excludes paper.



BID NO. 95-18  
(Use this number on envelopes  
and all related correspondence)

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Plus, Incorporated  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered one page  
and attached hereto for two copiers for Libery System

	UNIT	TOTAL
Konica 2125 Copier		
Price for each copier	<u>3,496.60</u>	<u>\$ 6,993.20</u>
Cabinet for Copiers	<u>140.00</u>	<u>\$ 280.00</u>
Trade-in allowance	<u>Included</u>	<u>\$ Included</u>
S. C. Sales Tax		<u>363.66</u>
TOTAL		<u>\$ 7,636.86</u>

Warranty (please state) 90 Days

Bid shall include delivery to location stated on Bid Notice.  
Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 10 Working Days  
BIDDING ORGANIZATION Plus, Inc.  
ADDRESS: P.O. BOX 5643  
CITY, STATE, ZIP CODE Greenville, SC 29606

SIGNATURE OF BIDDERS REPRESENTATIVE: *Randy Smith*  
TITLE: Sales Representative  
DATE: 11-28-95  
TELEPHONE: (803) 242-9090

BID SUPPLEMENTAL FORM

OCONEE COUNTY

PURCHASING DEPARTMENT

201 West Main Street

WALHALLA, SOUTH CAROLINA 29691

DATE 11-28-95

BID NO. 95-18

Konica 2125 Copier

\*Minimum recommended copy size: 5½" x 8½"

Maintenance Plan

\*Includes all parts, labor, drums, toner, developer and travel travel time. Maintenance coverage is billed at .013¢ per copy. Excludes paper.

OCONEE COUNTY BID TABULATION

BID FOR: Sale and Removal of Surplus Used Tires      DATE: November 30, 1995      BID NO: 95-19      LOCATION: Walhalla, SC      TIME: 2:00 p.m.

Tire Size	approx. # of tires/month	Watson's Tires & Treds	Black's Tire Service	Brook's Tire Service	Super Service Tire & Alignment	Dickson's Tire Service	Murphree Tire & Auto Center	Carolina Tire Company
P22570HR15	15	1.00    15.00	no bid	no bid	no bid	no bid	no bid	no bid
8-14.5	1	.25    .25						
700-15	10	.50    5.00						
31-10.50R15	1	1.00    1.00						
245-75R16	2	.50    1.00						
22575R16	2	.50    1.00						
1000-20	5	10.00    5.00						
1100R22.5	5	20.00    100.00						
11R24.5	5	20.00    100.00						
P17580R13	4	.50    2.00						
B78-13	1	.25    .25						
P22560VR15	2	1.00    2.00						
P23585R16	2	1.00    2.00						
L21585R16	2	1.00    2.00						
P23570HR15	2	.50    1.00						
P19575R14	2	.50    1.00						
10-50R15	1	1.00    1.00						

ATTENDING OPENING: Marianne Dillard, Jenny Peay, Lee Davis

BID FOR: Sale and Removal of Surplus Used Tires

DATE: November 30, 1995 BID NO: 95-19

LOCATION: Walhalla, SC

TIME: 2:00 p.m.

Tire Size	approx. # of tires/month	Watson's Tires & Treds	Black's Tire Service	Brook's Tire Service	Super Service Tire & Alignment	Dickson's Tire Service	Murphree Tire & Auto Center	Carolina Tire Company
1000r20	4	15.00 60.00						
1000R15	1	10.00 10.00						
P20575R14	4	1.00 4.00						
21565R15	2	1.00 2.00						
750-20	1	.50 .50						
950-16.5	1	.50 .50						
750-16	4	1.00 4.00						
875R16.5	2	.25 .50						
750-17	1	.25 .25						
P18575R14	1	.50 .50						
20570HR15	2	.50 1.00						
1100R22	2	10.00 20.00						
385-65R22.5	1	10.00 10.00						
900.20	2	10.00 20.00						
1100R20	6	12.00 72.00						
P16580R13	2	.50 1.00						
Approx. total per month		\$445.75						

ATTENDING OPENING:

BID FORM  
 OCONEE COUNTY  
 PURCHASING DEPARTMENT  
 201 WEST MAIN STREET  
 WALHALLA, SOUTH CAROLINA 29691

The Watson Tire Co.  
 submits herewith our bid in response to bid request number shown above, and in compliance  
 with the description(s) and/or specification(s) attached for sale and removal of  
surplus used recappable tires

Tire Size		Unit	Tire Size		Unit
P22570HR15.....		1.00	1000R15.....		10.00
8-14.5.....		.25	P20575R14.....		1.00
700-15.....		.50	21565R15.....		1.00
31-10.50R15.....		1.00	750-20.....		.50
245-75R16.....		.50	950-16.5.....		.50
22575R16.....		.50	750-16.....		1.00
1000-20.....		10.00	875R16.5.....		.25
1100R22.5.....		20.00	750-17.....		.25
11R24.5.....		20.00	P18575R14.....		.50
P17580R13.....		.50	20570HR15.....		.50
B78-13.....		.25	1100R22.....		10.00
P22560VR15.....		1.00	385-65R22.5.....		10.00
P23585R16.....		1.00	900.20.....		10.00
L21585R16.....		1.00	1100R20.....		12.00
P23570HR15.....		.50	P16580R13.....		.50
P19575R14.....		.50			
10-50R15.....		1.00			
1000R20.....		15.00			

Bid shall include delivery to location stated on Bid Notice. Show any exception,  
 deviation, extra computation, or information on Bid Supplemental Form attached hereto.

Delivery Date: \_\_\_\_\_

BIDDING ORGANIZATION: WATSON'S TIRES

ADDRESS: P. O. Box 308

CITY, STATE, ZIP CODE: SIMPSONVILLE SC 29681

SIGNATURE OF BIDDER'S REPRESENTATIVE: Walter F. Watson

DATE: 11/30/95 TITLE: V. Pres

TELEPHONE: 803-963-3407

OCONEE COUNTY BID TABULATION

BID FOR: New or Used 5 Yard Wheel Loader      DATE: December 1, 1995      BID NO: 95-20      LOCATION: Walhalla, SC      TIME: 2:00 p.m.

	Mitchell Distributing Co.	L.B. Smith, Inc. Alternate	L.B. Smith, Inc.	Weir At Your Service	Pioneer Machinery, Inc.	Blanchard Machinery Co.	Interstate Equipment Co.
Base Bid- used machine	no bid		\$164,812.94	did not meet	no bid	did not meet	\$183,397.00
Option: new rock bucket			10,215.00	specs		specs	incl.
Total			\$175,027.94				\$183,397.00
delivery			2 weeks				1 week
year			1994				1995
make			Volvo				Kawasaki
model			L180				90Z IV
no. of hours			1,796 hrs.				155 hrs.
warranty			30 day B to B 6 month P.T.				2 yrs-3,000 hrs
Base Bid- new machine	\$183,900.00	\$205,831.95	\$237,625.22	no bid	\$166,680.00	\$220,437.00	\$188,563.00
Option: extended warranty	(P.T.-4,360.00) B.B.-8,567.00(3yr)	3,325.00	3,800.00		+12 mth/3,000 hr 2,667.00	3,735.00	no bid
Total	\$192,467.00	\$209,156.95	\$241,425.22		\$169,347.00	\$224,172.00	\$188,563.00
delivery	2 weeks-in stock 8 wks-rock bucket	30 days	30 days		2-3 weeks 5 wks-rock bucket	30-75 days	2 weeks
make	Komatsu	Volvo	Volvo		Fiat Allis	CAT	Kawasaki
model	WA450-2	L150C	L180C		FR220.2	970F	902 IV
standard warranty	6 month-P.T.	2 yrs-3,000 hrs	2yrs-3,000 hrs		12 month	6 month	2 yr-3,000 hrs.

ATTENDING OPENING: Marianne Dillard, Jenny Peay, Tommy Crumpton, Lee Davis, B. Sullivan-Blanchard, M. Dantzler-Interstate, O. Dorroh-Mitchell, G. Kendrick-L.B. Smith, C. Gumby-Interstate, B. Owens-Pioneer

**USED MACHINE**

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The NO BID  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one used 5 cu. yd. wheel loader.

Base Bid \$ N/A  
year \_\_\_\_\_ make \_\_\_\_\_ model \_\_\_\_\_  
no. of hours \_\_\_\_\_  
warranty \_\_\_\_\_  
Option: new 5 cu. yd. rock bucket \$ N/A

Bid shall include delivery to location stated on Bid Notice.  
Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: \_\_\_\_\_  
BIDDING ORGANIZATION \_\_\_\_\_  
ADDRESS: P.O. BOX \_\_\_\_\_  
CITY, STATE, ZIP CODE \_\_\_\_\_

SIGNATURE OF BIDDERS REPRESENTATIVE: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
DATE: \_\_\_\_\_  
TELEPHONE: \_\_\_\_\_

BID NO. 95-20

(Use this number on envelopes  
and all related correspondence)

**NEW MACHINE**

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Mitchell Distributing Company  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \$ \$183,900.00

make Komatsu model WA450-2

standard warranty 6 months Power Train Only (see attached)

Option: extended warranty  
Etended Power Train & full bumper to bumper coverage \$8,567.00  
Extended Power Train only \$ \$4,360.00

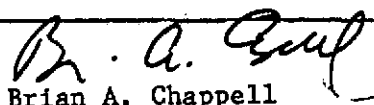
Bid shall include delivery to location stated on Bid Notice.  
Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 8 weeks - subject to prior sale (in stock)

BIDDING ORGANIZATION Mitchell Distributing Company

ADDRESS: P.O. BOX P.O. Box 1777

CITY, STATE, ZIP CODE Columbia, S.C. 29202

SIGNATURE OF BIDDERS REPRESENTATIVE:   
Brian A. Chappell

TITLE: Sales Office Coordinator

DATE: November 28, 1995

TELEPHONE: 803-794-6150



3109 Old Charleston Highway  
W. Columbia, SC 29169  
P.O. Box 1777  
Columbia, SC 29202  
803/794-6150

November 28, 1995

Deviations From Specifications

Engine: 264 HP @ 2150 RPM which exceeds specification.

Tipping load in full turn is 34,100 lbs.

Alternator is 45 AMP in lieu of 50 AMP.

Transmissions have forward and four reverse speeds.

There are separate levers for speed and direction.

Bucket edge to be equipped with your choice of blade (bolt-on edge) or teeth. Bolt-on-edge and teeth can not be installed at the same time.

CONSTRUCTION, MINING AND INDUSTRIAL EQUIPMENT

**MDC MITCHELL**  
DISTRIBUTING COMPANY3109 Old Charleston Highway  
W. Columbia, SC 29169  
P.O. Box 1777  
Columbia, SC 29202  
803/794-6150

December 4, 1995

Ms. Marianne Dillard  
Oconee County Purchasing Dept.  
201 West Main Street  
Walhalla, S.C. 29691

Re: Bid Number 95-20 Warranty

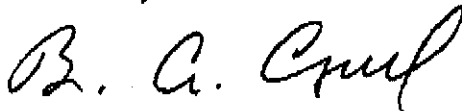
Warranty explanation Komatsu model WA450-2 Wheel Loader is as follows:

Standard Full Warranty: Period of 6 months after the date of delivery of the machine to the initial user, or a period of 1500 hours of use of the machine as shown on the service meter attached to it, whichever shall first expire.

Optional Power Train Warranty: Period of a total of 30 months or extended Power Train Warranty for a total of 36 months or 5000 hours, whichever first expires. For an additional cost of \$4,360.00.

Optional Full Power Train and Bumper to Bumper Warranty: Period of a total of 30 months of extended Power Train and Bumper to Bumper for a total of 36 months or 5000 hours, whichever shall first expire. For an additional cost of \$8,567.00.

Sincerely,

Brian A. Chappell  
Sales Coordinator

BID NO. 95-20

(Use this number on envelope  
and all related correspondence)

NEW MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The L.B. SMITH, INC.  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \* ALTERNATE \$ 205,831.95

make VOLVO model L150C

standard warranty 2 YEAR OR 3000 HOUR PARTS AND LABOR

Option: extended warranty

54 MONTH (TOTAL 60) \$ 3,325.00

OR 6000 (TOTAL) HOUR  
POWERTRAIN COVERAGE

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 30 DAYS SUBJECT TO PRIOR SALE

BIDDING ORGANIZATION L.B. SMITH, INC.

ADDRESS: P.O. BOX P.O. BOX 1453

CITY, STATE, ZIP CODE COLUMBIA, SC 29202

SIGNATURE OF BIDDERS REPRESENTATIVE: *Gene Kowalski*

TITLE: SALES REPRESENTATIVE

DATE: 11-29-95

TELEPHONE: 1-800-541-5744

BID SUPPLEMENTAL FORM

OCONEE COUNTY

PURCHASING DEPARTMENT

201 West Main Street

WALHALLA, SOUTH CAROLINA 29691

DATE 12-1-95

BID NO. 95-20

ALTERNATE BID INFORMATION

NEW VOLVO L150C

1. SAE FLY WHEEL hp IS 234 AT 2100 rpm
2. FULL TURN TIPPING LOAD IS 33,363 AS BID
3. OUR SERVICE BRAKES ARE STRAIGHT HYDRAULIC OIL COOLED DISC BRAKES
4. OUR PARKING BRAKE IS AUTOMATICALLY APPLIED

BID NO. 95-20

(Use this number on envelope  
and all related correspondence)

USED MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The L.B. SMITH, INC.  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one used 5 cu. yd. wheel loader.

One Volvo L180 Loader with 6 Cubic yard G.P. bucket

Base Bid \$ 164,812.94

year 1994 make Volvo model L180

no. of hours 1796

warranty 30 day Bumper to Bumper; 6 month power train

Option: new 5 cu. yd. rock bucket \$ 10,215.00

For 5.5 cu. yd. rock (new)  
Bucket in lieu of G.P.  
bucket

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 2 weeks subject to prior sale

BIDDING ORGANIZATION L.B. Smith, Inc.

ADDRESS: P.O. BOX P.O. Box 1453

CITY, STATE, ZIP CODE Columbia, SC 29202

SIGNATURE OF BIDDERS REPRESENTATIVE: *Gene Kendra*

TITLE: Sales Representative

DATE: 11-29-95

TELEPHONE: 1-800-541-5744

BID NO. 95-20

(Use this number on envelope  
and all related correspondence)

NEW MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The L.B. Smith, Inc.

submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \$ 237,625.22

make Volvo model L180C

standard warranty 2 year or 3000 hour parts and labor

Option: extended warranty

54 month (60 total) or \$ 3,800.00

6000 hour (total) power train  
coverage

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 30 days subject to prior sale

BIDDING ORGANIZATION L.B Smith, Inc.

ADDRESS: P.O. BOX P.O. Box 1453

CITY, STATE, ZIP CODE Columbia, SC 29202

SIGNATURE OF BIDDERS REPRESENTATIVE: *Mary Kendall*

TITLE: Sales Representative

DATE: 11-29-95

TELEPHONE: 1-800-541-5744

BID SUPPLEMENTAL FORM

OCONEE COUNTY

PURCHASING DEPARTMENT

201 West Main Street

WALHALLA, SOUTH CAROLINA 29691

DATE 12-1-95

BID NO. 95-20

Volvo L 180C Additional Information

1. We are Quoting a 5.5 cubic yard rock Bucket
2. Our service brakes are straight hydraulic oil cooled Disc brakes
3. Our parking brake is automatically applied.

BID NO. 95-20

(Use this number on envelopes and all related correspondence)

USED MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The \_\_\_\_\_  
submits herewith our Bid in response to bid request number shown above, and in compliance with the description(s) and/or specification(s) numbered Page 1 - 4 and attached hereto for one used 5 cu. yd. wheel loader.

Base Bid \$ 165,000.<sup>00</sup>  
year 1995 make KOMATSU model WA 42D-1  
no. of hours 5  
warranty \_\_\_\_\_  
Option: new 5 cu. yd. rock bucket \$ N/A  
HAVE USED BUCKET

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental Form attached hereto.

Delivery Date: DEC. 7TH OR TEN DAYS AFTER RECEIPT OF ORDER  
BIDDING ORGANIZATION WEIR AT YOUR SERVICE  
ADDRESS: P.O. BOX 1411 NORMAN DR.  
CITY, STATE, ZIP CODE VALDOSTA, GA 31601

SIGNATURE OF BIDDERS REPRESENTATIVE: (L.R. WEIR)  
TITLE: PRES  
DATE: 11-30-95  
TELEPHONE: 912-896-7961



BID NO. 95-20

(Use this number on envelopes  
and all related correspondence)

USED MACHINE


BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Pioneer Machinery Inc.  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one used 5 cu. yd. wheel loader.

Base Bid \$ NO BID  
year \_\_\_\_\_ make \_\_\_\_\_ model \_\_\_\_\_  
no. of hours \_\_\_\_\_  
warranty \_\_\_\_\_  
Option: new 5 cu. yd. rock bucket \$ NO BID

Bid shall include delivery to location stated on Bid Notice.  
Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: NO BID  
BIDDING ORGANIZATION Pioneer Machinery Inc.  
ADDRESS: P.O. BOX 405 Oak Road, P.O. Box 1098  
CITY, STATE, ZIP CODE Piedmont, S.C. 29673

SIGNATURE OF BIDDERS REPRESENTATIVE:   
TITLE: Sales Representative  
DATE: December 1, 1995  
TELEPHONE: (803) 269-7995

BID NO. 95-20

(Use this number on envelopes  
and all related correspondence

NEW MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Pioneer Machinery Inc.  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \$ 166,680.00

make Fiat Allis model FR 220.2

standard warranty 12 Months

Option: extended warranty Per Request

Additional 12 Mos./3,000 Hours \$ 2,667.00

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: Base Machine 2-3 Weeks ARO, Rock Bucket - 5 Weeks ARO

BIDDING ORGANIZATION Pioneer Machinery Inc.

ADDRESS: P.O. BOX 405 Oak Road, PO Box 1098

CITY, STATE, ZIP CODE Piedmont, SC 29673

SIGNATURE OF BIDDERS REPRESENTATIVE: 

TITLE: Sales Representative

DATE: December 1, 1995

TELEPHONE: (803) 269-7995

5 YARD WHEEL LOADER

OCCONEE  
Requested Specifications

PIONEER  
SPECIFICATIONS

Shall be a new, standard production wheel-type loader of the latest design in current production.

COMPLY

Basic operating weight w/ ROPS Cab and rock bucket, shall not be less than 47,800 lbs.

EXCEED

SAE NET Flywheel Power shall be at least 240HP @ 2100 RPM'S.

EXCEED

5 Cubic Yard Rock Bucket w/ straight edge and bolt on cutting edge and teeth and rock guard.

COMPLY

26.5x25, 20PR Rock L-3 Tires

COMPLY

Two front & rear working lights, Stop & tail lights.

COMPLY

Front and rear fenders & back up alarm.

COMPLY

Full turn static tipping load shall be at least 35,000 lbs.

EXCEED

Breakout force shall be at least 40,460 lbs

EXCEED

Engine shall be a diesel-type, 6 cylinder, water cooled, fully equipped with all operating accessories.

COMPLY

Two brake pedals, one actuating brake only and the other actuating brake and neutralizing the transmission.

Single Pedal  
has automatic declutch.

Parking brakes mounted on the transmission output shaft, which operator applies manually.

COMPLY

Hydraulic system shall be a fully filtered and closed-type system.

COMPLY

ROP cab shall be standard.

COMPLY

The cab shall be sound suppressed and meet both OSHA and MSHA standards for operator sound. (80DBA or better)

COMPLY

Cab shall have a pressurized and filtered air circulation system w/ heater and air conditioner.

COMPLY

Cab shall be mounted on the rear frame of the machine.

COMPLY

The front and rear windows shall be equipped with a washer/wiper.

COMPLY

Cab shall have rear-view mirrors, two outside side mirrors, and tinted sun shield.

COMPLY

Shall have an adjustable steering column.

COMPLY

The seat shall be a suspension seat which provides both fore, aft, and vertical adjustment.

COMPLY

Shall be equipped with multi-level warning system.

COMPLY

Engine shall be equipped with a 24-volt electrical system for both starting and operating.

COMPLY

Shall have at least a 50 amp alternator.

EXCEED

Transmission shall have 4 speeds forward and 3 speeds reverse.

COMPLY

Both speed and direction changes shall be actuated by a single control lever mounted on the steering column.

COMPLY

Shall have limited slip differentials.

COMPLY

Shall have center-point articulation.

COMPLY

Service brakes shall be air over hydraulic multi-disc brakes.

NO - HYDRAULIC ONLY

Secondary braking system shall have an audible alarm and red light to warn if service brake pressure drops below safe minimum operating level.

COMPLY

Transmission and engine shall be protected by belly guards.

COMPLY

A flashing red light or an audible alarm shall monitor at least the following:

Engine Coolant Temperature

COMPLY

Transmission Oil Temperature

COMPLY

Engine Oil Low Pressure

COMPLY

Parking brake application (if transmission engaged while parking brake applied)

COMPLY

WARRANTY: State Standard Factory

COMPLY

OPTIONAL: Please state cost of full 24 month or 3,000 hour Factory Warranty, to include all parts and labor.

**FIATALLIS** NORTH AMERICA

RECEIVED

DEC 05 1995

OCONEE COUNTY  
PURCHASING DEPT.

December 4, 1995

Dear Oconee County,

As a customer of Fiatallis construction equipment, I wanted to write you regarding Fiatallis parts, service and machinery marketed in North America.

A new channel of distribution for machinery is now in place which insures a long term commitment to the North American market. All major product categories will continue to be offered. Several new models were released in 1995, and more are slated for release in the future. FIATALLIS branded machines are imported from Fiat-Hitachi joint ventures and Fiatallis enterprises in Europe and South America. American produced equipment is also sold in the north american markets as well as exported to Europe.

Your Parts and Service Representative, Pioneer Machinery, Inc., is an authorized supplier of Fiatallis machinery, parts and service in the state of South Carolina for current, as well as previous, models.

Pioneer Machinery, Inc. has received documentation from Fiatallis North America which addresses other issues, such as our commitment to future parts and technical support, as well as our strong commitment to their company.

The Fiat worldwide organization is one of the largest and most financially sound companies in the world. I hope that we will find you profitably utilizing our equipment in the future.

Sincerely,

Robert W. Jones  
Director, Sales & Marketing

cc: John Savage - Pioneer Machinery, Inc.

BID NO. 95-20

(Use this number on envelopes  
and all related correspondence)

USED MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The Blanchard Machinery Company  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one used 5 cu. yd. wheel loader.

Base Bid \$ 161,064.38  
year 1994 make Caterpillar model 966F  
no. of hours approx. 1,900 hours  
warranty has powertrain warranty until 12/7/97 or 5,000 hours  
Option: new 5 cu. yd. rock bucket \$ 9,110.00

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: immediately

BIDDING ORGANIZATION Blanchard Machinery Company

ADDRESS: P.O. BOX 517, 224 Neely Ferry Road,

CITY, STATE, ZIP CODE Simpsonville, S. C. 29681

SIGNATURE OF BIDDERS REPRESENTATIVE: *Barry Sullivan*

TITLE: Sales Representative

DATE: December 1, 1995

TELEPHONE: (803) 963-3645 or 1 - 800 447-9301

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The BLANCHARD MACHINERY COMPANY  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \$ 220,437.00  
make Caterpillar model 970F  
standard warranty 6 months full machine warranty - detailed inside  
Option: extended warranty  
3 years, 5,000 hr. full machine warranty \$ 3,735.00  
detailed inside

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: 30 - 75 days

BIDDING ORGANIZATION BLANCHARD MACHINERY COMPANY  
ADDRESS: P.O. BOX 517, 224 Neely Ferry Road  
CITY, STATE, ZIP CODE Simpsonville, S. C. 29681

SIGNATURE OF BIDDERS REPRESENTATIVE: Barry Sullivan  
TITLE: Sales Representative  
DATE: December 1, 1995  
TELEPHONE: (803) 963-3645 or 1 800 447-9301



BID SUPPLEMENTAL FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 West Main Street  
WALHALLA, SOUTH CAROLINA 29691

Date 12/1/95

BID No. 95-20

EXCEPTIONS:

-The 966F is rated @ 235 HP.

-The 966F has a full turn static tipping load of 28,343 lbs.

We would like to price a new 966F & a 980G for your consideration along with the 970F.  
We also have included a non-appropriation lease payment annually over 3 yrs. @ 5.9%.

1 - 966FII Cat Wheel Loader w/ all standard equipment plus a crankcase guard, powertrain guard, outside mirrors, a 5 cu.yd. bucket, 26.5-R25 XHA L-3 Michelin tires & a no-spin differential. (extended warranty included in price) + A/C (JDS)

\$206,148.00 (3 annual payments of \$72,690.00)

1 - 970FII Cat Wheel Loader w/ all standard equipment plus a crankcase guard, powertrain guard, outside mirrors, a 5.6 cu.yd. bucket, 26.5-R25 XHA L-3 Michelin tires, ride control & a no-spin differential. (extended warranty included in price) + A/C (JDS)

\$224,172.00 (3 annual payments of \$79,046.00)

1 - 980G Cat Wheel Loader w/ all standard equipment plus guards, a 7.5 cu.yd. bucket, 29.5-R25 XHA L-3 Michelin tires & a no-spin differential. (extended warranty included in price) + A/C (JDS)

\$284,367.00 (3 annual payments of \$100,272.00)

**Warranty:** Standard warranty is 6 mos. full machine (not to include travel time after 1st 3 mos.)  
The extended warranty includes a full machine warranty (not to include abuse, normal wear, etc.)  
with a \$300.00 deductible per occurrence after the 1st 3 mos.

These machines are equipped identical to our normally stocked machines except for the no-spin differential. If this option is taken off, the availability of the 966F & the 970F can be greatly improved. (to delete no-spin diff. subtract \$1,082.00 from 966F and/or 970F price)

1 - 966F used Cat Wheel Loader that you have on rent set up like the 966F above without the no-spin diff. with approx. 1,900 hrs. Priced according to Oconee County having paid 9 rental payments up to 12/23/95. Has Powertrain Warranty until 12/7/97 or 5,000 hrs.

\$161,064.38 (3 annual payments of \$58,793.00)

BID NO. 95-20

(Use this number on envelopes  
and all related correspondence)

USED MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

The INTERSTATE EQUIPMENT COMPANY  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one used 5 cu. yd. wheel loader.

Base Bid \$ 183,397.00  
year 1995 make KAWASAKI model 90Z IV  
no. of hours 155  
warranty Two (2) Year / 3000 Hour  
Option: new 5 cu. yd. rock bucket \$ INCLUDED

Bid shall include delivery to location stated on Bid Notice.

Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

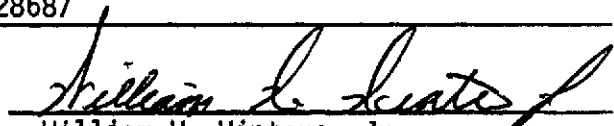
Delivery Date: ONE (1) WEEK

BIDDING ORGANIZATION INTERSTATE EQUIPMENT COMPANY

ADDRESS: P.O. BOX 868

CITY, STATE, ZIP CODE STATESVILLE, NC 28687

SIGNATURE OF BIDDERS REPRESENTATIVE:



TITLE: William W. Winters, Jr.  
VICE-PRESIDENT/GENERAL MANAGER

DATE: November 28, 1995

TELEPHONE: 704-873-9048

NEW MACHINE

BID FORM  
OCONEE COUNTY  
PURCHASING DEPARTMENT  
201 WEST MAIN STREET  
WALHALLA, SOUTH CAROLINA 29691

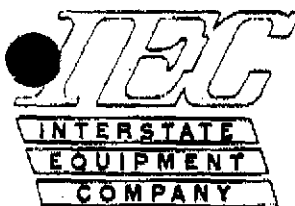
The INTERSTATE EQUIPMENT COMPANY  
submits herewith our Bid in response to bid request number shown above, and in  
compliance with the description(s) and/or specification(s) numbered Page 1 - 4  
and attached hereto for one new 5 cu. yd. wheel loader.

Base Bid \$ 188,563.00  
make KAWASAKI model 90Z IV  
standard warranty Two (2) YEAR/3000 HOUR  
Option: extended warranty  
TWO (2) YEAR/3000 HOUR AS SPECIFIED \$ INCLUDED

Bid shall include delivery to location stated on Bid Notice.  
Show any exception, deviation, extra computation, or information on Bid Supplemental  
Form attached hereto.

Delivery Date: TWO (2) WEEKS  
BIDDING ORGANIZATION INTERSTATE EQUIPMENT COMPANY  
ADDRESS: P.O. BOX P. O. BOX 868  
CITY, STATE, ZIP CODE STATESVILLE, NC 28687

SIGNATURE OF BIDDERS REPRESENTATIVE: *William W. Winters, Jr.*  
TITLE: VICE PRESIDENT/GENERAL MANAGER  
DATE: November 28, 1995  
TELEPHONE: 704-873-9048



P. O. BOX 868

PHONE (704) 873-9048

FAX (704) 872-6071

STATESVILLE, NORTH CAROLINA 28677

December 4, 1995

Maryanne Dillard  
Oconee County  
Purchasing Department  
201 West Main Street  
Walhalla, SC 29691


Dear Maryanne:

To clarify our Bid for one (1) used, and one (1) new 5 cu. yd. wheel loader on your Bid No. 95-20, both Kawasaki machines that were quoted include the bumper to bumper 2-Year 3000 Hour Warranty.

Thank you for this opportunity to offer our equipment, and if we can provide any further information, please don't hesitate to call.

Very truly yours,

INTERSTATE EQUIPMENT COMPANY



William W. Winters, Jr.

WWW:w1

cc: Frank Eller  
Walter Reese  
Mark Dantzler  
Cooper Gunby

P. O. Box 3061  
RALEIGH, N. C. 27602

Phone (919) 497-1801

"CONSTRUCTION AND INDUSTRIAL EQUIPMENT"

122 Gardens Terrace Road  
W. COLUMBIA, S. C. 29172

Phone (803) 794-7400

**PROPOSAL TO OCONEE COUNTY  
FOR CLOSURE OF THE SENECA LANDFILL  
PROJECT 22.15  
REVISED DECEMBER 4, 1995**

**I. BACKGROUND**

As required by State and Federal regulations, the Seneca Landfill will have to be closed through construction of an impermeable cap. The purpose of this cap will be to shed water off of the landfill thereby minimizing water infiltration through the waste and into ground water.

Presently, there is no impermeable cap on the landfill. Without this cap, rain water is allowed to infiltrate through the waste of the landfill, picking up contaminants which migrate further into the aquifer below the landfill. This ground water impact is occurring at the landfill as documented through ongoing assessment work by Goldie & Associates.

Besides protecting ground water and public health, the potential exists for a commercial benefit from the closure. Methane gas could be captured and resold to nearby industries. Methane gas is a by-product of decomposition of wastes in landfills. Presently at the Seneca Landfill, methane is being vented to the atmosphere. With the construction of the cap, methane venting will be restricted due to the low permeability of the cap. However, due to the size of the landfill, provisions should be made to construct the cap to continue to allow venting. Additional provisions can be made to not only allow venting, but to also promote flow of methane to locations that can be later utilized for commercial uses.

The Seneca Landfill is presently not required to be closed until the Tri-County Regional Landfill is constructed. However, because most of the Seneca landfill is filled to capacity and inactive, and ground water impact has been well documented, early closure of these inactive areas would decrease the impact to ground water from the landfill without disrupting the present operations. As a result, the landfill can be closed in two phases. Phase I will consist of inactive areas and will be done in 1996. Phase II closure will consist of areas presently active and will commence once the Tri-County Regional Landfill becomes operational.

In order for Phase I closure to be conducted during 1996, the engineering work must begin in December 1995. This will allow for construction to begin in late spring and continue into late summer and fall. This period is the optimum construction period when weather conditions are most favorable for successful completion of the project. Delay of the project until the later months of 1996 will lead to less moisture control of the soil which is one of the most critical aspects of constructing the cap to meet DHEC requirements.

The proposed work detailed below would provide the County with the following:

1. Revised Closure Plan to DHEC as required under new regulations;
2. Phase I and II Closure Design Drawings and Specifications
3. Phase I Construction Services.

\*Note: Phase II Construction Services and Bid Package Development are not included in this proposal.

Details on these services are provided below.

## **II. LANDFILL CLOSURE DESIGN SERVICES**

The Design Services will provide:

1. Revised Closure Plan to DHEC as required under new regulations
2. Phase I and II Closure Design Drawings and Specifications

These services are outlined as follows:

### **A. PLANNING**

To plan out preliminary design concept and design/construction schedule. Services will include:

- \* Initial site evaluation
- \* Design planning
- \* Design scheduling
- \* Review of schedule with Oconee County

**COST FOR PLANNING SERVICES**

**\$3,400.00**

### **B. REGULATORY**

To evaluate regulations to identify recent changes that could affect closure. Services will include:

- \* Evaluation of Air Regulations regarding methane
- \* Evaluation of Industrial Storm Water Regulations
- \* Evaluation of Erosion Control Regulations
- \* Evaluation of Solid Waste Regulations
- \* Liaison with State and Federal Regulatory Officials

**COST FOR REGULATORY SERVICES**

**\$2,300.00**

**C. CONCEPT PRESENTATION TO DHEC**

To present conceptual design plan to DHEC officials to work out overall closure details in relation to present and upcoming regulations. Services will include:

- \* Pre-meeting liaison with DHEC officials
- \* Meeting preparation
- \* Travel to Columbia, South Carolina for a one (1) day meeting
- \* Presentation of Design Concept to DHEC officials including:
  - \* "tree issue"
  - \* two phase approach
  - \* drainage
  - \* stormwater control
  - \* cap design
  - \* ground water impact
  - \* methane gas venting
- \* Follow-up letter to DHEC and Oconee County officials summarizing meeting and action to be taken in the design.

**COST FOR CONCEPT PRESENTATION TO DHEC** **\$2,700.00**

**D. EVALUATE EXISTING CONDITIONS**

An evaluation of the landfill will be conducted. Services will include:

- \* Field Measurements/Survey of portions of the landfill and affected areas
- \* Drafting to produce a drawing of existing conditions
- \* Incorporate other Design Drawings (Vertical Expansion, C&D)

**COST FOR EVALUATING EXISTING CONDITIONS** **\$8,500.00**

**E. GRADING AND EARTH WORK DESIGN**

Details related to earth work design and specifications will be conducted. This design work includes the core design services related to the final cap system. Also included is consideration of cap foundation requirements as well as alternatives (bridge lifts) in the event that existing cap foundations are found during construction to be inferior. Services will include:

- \* Soil Probing Investigation of landfill site to determine the volume of soil available at the site for grading (costs are assuming County will provide backhoe and operator at landfill site)
- \* Site grading design to maintain slopes > 3% and < 3:1 as required by DHEC
- \* Final Clay Cap Design
- \* Bridge Lift Design

**COST FOR GRADING AND EARTH WORK DESIGN** **\$22,300.00**

**F. DRAINAGE/EROSION CONTROL**

Evaluate drainage runoff and develop erosion control systems to minimize erosional effects. Services will include:

- \* Engineers postsurvey site evaluation
- \* Consideration of drainage between Phase I and Phase II closure areas
- \* Sediment Basin Evaluation and Design
- \* Other Erosional Control Measures Evaluation
- \* Ditch Design
- \* Evaluation of Ditch Design for planned vertical expansion/C+D areas
- \* Drainage/Erosion Control Specification Development

**COST FOR DRAINAGE/EROSION CONTROL**

**\$22,400.00**

**G. METHANE GAS SYSTEM DESIGN**

Due to the known presence of methane gas at the landfill, the Engineer recommends that a methane gas system be installed to, at a minimum, relieve pressure on the final cap. Relieving pressure will decrease the potential that the methane will migrate laterally offsite onto adjacent property. Two options are available at the Seneca Landfill regarding evaluation and design of methane gas systems. These are the passive and active systems. A passive system is designed with the intention of relieving pressure from the landfill cap and venting the methane to the atmosphere. The active system is typically designed such that a vacuum is placed on the landfill to prevent methane from migrating offsite. An active system can be utilized to recover methane for commercial use or to be burned in a flare. Current DHEC regulations allow passive venting of methane gas under the condition that the concentration of methane at the facility boundary or in any facility structure does not exceed twenty-five percent of the lower explosive limit of the gas. If the concentration of methane exceeds this limit, DHEC will require Oconee County to activate a remediation plan within sixty days. We propose designing a passive gas filter system that can be incorporated into an active gas filter system at a later time if needed or desired. This system will contain all necessary wells, piping, and filter material that will be necessary for an active system. The gas would be passively vented to the atmosphere. If it becomes necessary or desirable to place a vacuum on the landfill and switch to an active system, all the necessary underground appurtenances will be in place. For the system to become operational as an active system, it will be necessary to design and build all aboveground piping, pumps, and appurtenances. At additional costs, Goldie & Associates can provide design services for an active methane gas collection system if desired.



Design of only the subsurface system will include:

- \* Evaluate current technologies regarding methane gas systems
- \* Incorporate existing methane wells into proposed filter system
- \* Preparation of specifications and detail drawings

**COST OF METHANE GAS SYSTEM DESIGN** **\$6,800.00**

**H. OTHER DESIGN CONSIDERATIONS AND SPECIFICATION DEVELOPMENT**

Design services will also include items in addition to those previously listed. This will include development of site specific drawings and specifications. This will include the following areas:

- \* General Conditions
- \* Gravel Roads
- \* Fencing
- \* Temporary Facilities
- \* Grassing
- \* Cast In Place Concrete
- \* Signs

**COST FOR OTHER DESIGN CONSIDERATIONS AND SPECIFICATION DEVELOPMENT** **\$8,900.00**

**I. SUBMIT REVISED CLOSURE PLAN**

As required by DHEC, a revised closure plan must be submitted prior to beginning the closure construction activities. This task will consist of formatting the design material in a condensed format that will allow DHEC the opportunity to readily review the material.

**COST TO SUBMIT REVISED CLOSURE PLAN** **\$3,300.00**

**J. VALUE ENGINEERING/PEER REVIEW**

Following development of the design package, the Engineer, the Construction Management Specialist, a third party engineer, as well as Oconee County will review the design. The purpose of the review is to minimize the amount of change orders, cost overruns and delays during construction. Included in these costs are the review time, meeting time with County officials to present the design, and costs to revise the design following the review.

**COST OF VALUE ENGINEERING** **\$7,300.00**

**K. DESIGN PHASE: PROJECT MANAGEMENT AND ADMINISTRATION**

This will include engineering schedule tracking and liaison with Oconee County on the progress of the design.

**COST OF PROJECT MANAGEMENT AND ADMINISTRATION \$3,800.00**

**III. BORROW SITE INVESTIGATIONS**

The borrow site is the source area for the clay cap. Presently, preliminary investigations have been conducted on two sites to determine that some quantity of suitable clay exists at each site. If these sites are to be used for closure, further evaluation must be conducted to delineate the clay. However, preliminary cost estimates indicate that substantial costs will be involved in hauling soil from these sites due to the distance of both sites (5 miles and 13 miles) from the landfill. Thus, identification and testing of closer sites could lead to substantial reductions in construction costs. Below are details related to the costs of these further evaluations.

In the likely event that not all of the potential borrow sites are evaluated, the cost for the sites not evaluated will be deducted from the total price.

**Borrow Site #1 - Further Evaluation of Richardson Farm:**

- \* Conduct excavation of 15 soil pits
- \* Testing of soils
- \* Topographic survey of site
- \* Develop Storm Water/Erosion Control Plan
- \* Submit Plan to DHEC

**COST FOR BORROW SITE #1 EVALUATION \$14,700.00**

**Borrow Site #2 - Further Evaluation of Harris Farm:**

- \* Conduct excavation of 25 soil pits
- \* Testing of soils
- \* Topographic survey of site
- \* Develop Storm Water/Erosion Control Plan
- \* Submit Plan to DHEC

**COST FOR BORROW SITE #2 EVALUATION \$19,400.00**

**Borrow Site #3 - Unknown Site - Assume 40 Acres:**

- \* Conduct excavation of 40 soil pits
- \* Testing of soils
- \* Topographic survey of site
- \* Develop Storm Water/Erosion Control Plan
- \* Submit Plan to DHEC

**COST FOR BORROW SITE #3 EVALUATION \$25,200.00**

**Borrow Site #4 - Unknown Site - Assume 40 Acres:**

- \* Conduct excavation of 40 soil pits
- \* Testing of soils
- \* Topographic survey of site
- \* Develop Storm Water/Erosion Control Plan
- \* Submit Plan to DHEC

**COST FOR BORROW SITE #4 EVALUATION** **\$25,200.00**

**TOTAL COST FOR BORROW SITE EVALUATIONS** **\$84,500.00**

**IV. PHASE I PRECONSTRUCTION BID PACKAGE DEVELOPMENT**

**A. BID PACKAGE DEVELOPMENT**

Write and edit specification sections controlling how project will be bid and the relationship between the contractor and the County. Work includes writing the bid form and preparing the construction cost estimate.

**COST FOR BID PACKAGE DEVELOPMENT** **\$3,720.00**

**B. BID ADMINISTRATION**

Respond to questions from contractors and other concerned parties and issue addenda as required. Coordinate the advertisement for bids with the County. Coordinate and attend pre-bid and bid opening meetings with the County and the bidders. Coordinate the receipt of the bid bonds.

**COST FOR BID ADMINISTRATION** **\$2,720.00**

**C. BID EVALUATION**

Tabulate bids and discuss with the County. Evaluate bids and review contractor qualifications. Coordinate signing of the agreement between the Owner and the Contractor. Coordinate the receipt of the performance and payment bonds and Affidavits. Issue notice to proceed and notice of award. Attend a preconstruction meeting with the successful bidder and the owner.

**COST FOR BID EVALUATION** **\$3,400.00**

## V. PHASE I CONSTRUCTION SERVICES

Costs for construction services will vary depending upon the size of the area to close during Phase I. Closure size will depend upon issues related to previously closed (wooded) areas which will need to be resolved early in the design phase of the project. Two areas are presently being considered for Phase I closure. These are a 23 and 40 acre area. The details of the design are presently not known, therefore only estimates for construction schedules are available at this time. Therefore we recommend a contingency be added to the costs listed below due to the uncertainty related to actual closure time.

For estimate purposes we assume a 90 work day construction period for the 23 acre site and a 150 work day construction period for the 40 acre site. Because the rate of construction is anticipated to be rapid, we have budgeted a full time engineer's field representative plus a second field representative working half time. The construction services will include the following:

- \* Full-Time, On-Site Engineer's Representative for entire construction duration
- \* Half-Time, 2nd On-Site Engineers Representative for entire construction duration
- \* Project administration including pay request processing and change orders if required
- \* Topographic survey for as-built drawing
- \* Engineer's review

### **COST FOR PHASE I CONSTRUCTION SERVICES**

<b>23 ACRE CLOSURE SITE</b>	<b>\$61,000.00</b>
<b>40 ACRE CLOSURE SITE</b>	<b>\$102,000.00</b>

## VI. PHASE I SOIL TESTING

Soil testing is required by DHEC for closure acceptance. Testing services will include collection and testing using ASTM approved methods. The related costs are as follows:

<b>COST FOR SOIL TESTING OF 23 ACRE SITE</b>	<b>\$15,000.00</b>
<b>COST FOR SOIL TESTING OF 40 ACRE SITE</b>	<b>\$24,605.00</b>

## VII. POST CONSTRUCTION

Following construction activities at the landfill, administrative and regulatory activities will need to be conducted to complete the project. This will include the Engineer's Final Certification,

Development of a Punch List, Site Tour with the County, and Site Tour with DHEC officials and other administrative activities.

***COST FOR POST CONSTRUCTION ACTIVITIES***

***\$ 7,600.00***

**VIII. SUMMARY OF COSTS**

DESIGN SERVICES	91,700.00
BORROW SITE INVESTIGATIONS	84,500.00
PRECONSTRUCTION	9,840.00
PHASE I CONSTRUCTION SERVICES (Assuming 40 Acre Site)	102,000.00
PHASE I SOIL TESTING (Assuming 40 Acre Site)	24,605.00
POST CONSTRUCTION	7,600.00

**TOTAL PROJECT COSTS** \$ 320,245.00

**CONTINGENCY**

Due to the unknown circumstances that could arise during the course of the services outlined above, we recommend that a 15% contingency be set aside. This will help assure that if unplanned circumstances arise during the course of the work, that work can proceed.

**15% CONTINGENCY ON \$ 320,245.00 BUDGET** \$ 48,036.75

**SENECA LANDFILL CLOSURE  
ENGINEERING DESIGN & PHASE I CONSTRUCTION SERVICES  
OCONEE COUNTY COUNCIL MEETING DECEMBER 5, 1995  
GOLDIE & ASSOCIATES**

1. INTRODUCTION

- \* Now on the verge of beginning closure of the Seneca landfill
- \* Tonight present our proposal regarding how we plan to close the landfill.

2. LANDFILL CLOSURE

- \* Recall that Closure is no longer a simple matter
- \* Can't just cover up the last waste with dirt and lock gate with a sign that says "Landfill Closed"
- \* Environmental Regulations have changed
- \* Now Required to do extensive amounts of work to minimize the degree that the public health is affected
- \* Now have to construct an Impermeable Cap that will intercept rainwater and divert it off the landfill
- \* In addition, now have to consider additional items related to storm water drainage to protect cap and methane migration
- \* The effect of these regulations was first realized by the County in 1992 when we prepared the Seneca and Five Forks Landfill Closure Plans
- \* Since then we have assisted the County with closing of the Five Forks Landfill under these regulations

3. REGULATION CHANGE - DRIVING FORCE

- \* Driving force behind the regulatory changes => GROUND WATER
- \* EPA found that landfills contaminate ground water
- \* 50% of U.S. uses Ground Water for drinking water source
- \* Public Health Issue lead to regulation changes which have escalated Solid Waste Disposal costs dramatically in the past 5 years

4. PAYING FOR PAST PROBLEMS

- \* Landfills now have tighter controls on what enters the facility
- \* In addition, new landfills are now being constructed, at great expense, using systems that capture all the leachate prior to entering ground water
- \* However past problems, particularly at older landfills like the Seneca Landfill still persist
- \* At the Seneca landfill, as we have presented on earlier occasions, there is documented impact to the ground water from the landfill
- \* As part of our continuing work with the County, we are presently further evaluating the effects of that impact on area residents who use ground water as a water source as well as conducting further assessment

5. TWO PHASE CLOSURE

- \* The Seneca Landfill site is inactive except for the Vertical Expansion and C&D portions of the landfill
- \* PHASE I: To close inactive areas in 1996
- \* Purpose: To decrease future impact to ground water as soon as possible
- \* PHASE II: Close the areas that are now operational upon opening of the new Tri County Regional Landfill
- \* Closure of both phases could be done at the same time - However, delaying Phase I will lead to an increase in the amount of impact to ground water

6. PROPOSAL - Title Page = Proposal to Oconee County

- \* For Engineering Services - does not include construction costs
- \* SECTION II: Engineering Design - pages 2 thru 6
  - Preparation of Engineering Design Specifications and Drawings for General Contractor - both Phase I and II - entire site (appx 60 acres)
  - Liaison with DHEC on behalf of the County regarding specific technical and regulatory closure issues
  - Submission of Revised Closure Plan per new Regulations
  - Duration 3 to 4 months - Design Cost = \$ 91,700
- \* SECTION III: Borrow Site Investigation - pages 6 & 7
  - Need to find clay cap borrow site
  - Unlike Five Forks, no nearby source area
  - Have provisions for doing extensive testing on 4 Sites - 2 known; 2 unknown (made assumptions)
  - Total Investigation Cost = \$ 84,500 - includes testing costs
  - If only 2 Sites needed will only charge that amount
- \* SECTION IV: Bid Package Development
  - Conduct administration functions related to retaining a Contractor
  - Evaluate Bids including checking references; evaluating costs; ability to perform the job
  - Make recommendation to County on Contractor
  - Cost = \$ 9,840
- \* SECTION V: PHASE I CONSTRUCTION SERVICES
  - Full Time Technical Representative During Construction (estimated at 150 work days for 40 acre site)
  - 2nd Half Time Tech Rep During Construction
  - Administration/Pay Request Processing/Change Orders
  - Engineer's Review
  - Topographic As-Built Survey
  - Cost = \$ 102,000 (40 acre site)



- \* SECTION VI: PHASE I SOIL TESTING
  - Conducting soil testing to verify cap construction
  - Conduct tests as required by DHEC
  - \$ 24,605
  
- \* SECTION VII: PHASE I POST CONSTRUCTION
  - Final Site Tours with County and DHEC
  - Engineer's Final Certification
  - Other Post Construction Admin
  - \$ 7,600
  
- \* SUBTOTAL                   \$ 320,245.00
  
- \* 15% CONTINGENCY         \$ 48,036.75
  
- \* TOTAL                     \$ 368,281.75

STATE OF SOUTH CAROLINA

COUNTY OF OCONEE

This contract is entered into on this, the \_\_\_\_\_  
Day of \_\_\_\_\_, 1995 by and between Oconee County,  
hereinafter referred to as County, and Goldie & Associates, Inc.,  
hereinafter referred to as Goldie.

WHEREAS, Oconee County must proceed to close its Seneca  
Landfill in order to conform to governmental regulations and  
requirements;

WHEREAS, Goldie & Associates, Inc. is an independent  
consultant specializing in engineering, environmental, and  
laboratory services with a staff of licensed professionals  
capable of planning and supervising the landfill closure;

NOW THEREFORE, in consideration of the amounts paid to  
Goldie, and the mutual promises set forth herein, the County does  
hereby engage Goldie, and Goldie does agree to provide project  
planning and management upon the following terms and conditions:

1. Goldie, as independent consultant, agrees to  
provide the County with project planning, management, and  
consulting services as set forth in its Job Number 22.15 dated  
December 4, 1995, a copy of which is attached hereto and  
incorporated herein.

2. The contract documents shall consist of this  
Agreement, Job Number 22.15 as approved and all modifications  
executed subsequent to this Agreement. All such documents are  
considered to be as fully a part of this contract as if  
enumerated herein.

3. The work to be performed hereunder shall commence  
immediately upon the execution of this Agreement.

4. The County shall pay all invoices promptly upon  
receipt and upon verification by the County that the services and  
work shown upon the invoices have been completed.

5. Goldie shall maintain insurance coverage as follows  
and provide proof of said coverage to the County:

- a. Worker's Compensation Insurance-statutory
- b. Employees Liability Insurance-\$1,000,000.00

- c. Comprehension General Liability Insurance-  
\$1,000,000.00/\$2,000,000.00
- d. Automobile Liability Insurance  
\$1,000,000.00/\$2,000,000.00

6. In performing the services completed by the Agreement, Goldie acknowledges that it has no constructive use of County's site; and has no ongoing responsibility for construction site safety, (such being the responsibility of the general contractor). However, Goldie has a duty to preserve and protect public health, safety, and welfare. Further, Goldie has the duty to monitor construction activities in accordance with the terms of Job Number 22.15 and to determine if construction methods utilized by the contractor are satisfactory. Accordingly, it is Goldie's responsibility to take what it believes are prudent measures should they encounter situations that they believe create a danger to public health, safety, or welfare. If in the opinion of Goldie & Associates, the means and method of the construction are not in accordance with the terms of Job # 22.15, then Goldie & Associates shall have ability and authority to require immediate compliance or to dismiss the Contractor. The County understands this situation and agrees to defend Goldie and hold it harmless from claims arising from its exercise of professional responsibility in this regard.

7. The County will arrange for right-of-entry to properties for the purpose of performing studies, tests and evaluations pursuant to the agreed services. Goldie's field personnel are trained to initiate field testing, drilling and /or sampling within a reasonable distance of each designated location. Field personnel will avoid hazards or utilities, Goldie will give special instructions to its field personnel. Goldie is not responsible for any damage or losses due to undisclosed or unknown surface or subsurface conditions. Except as a result of Goldie's negligence, the County agrees to indemnify Goldie from any such claims, suits or losses, including reasonable attorney's fees, resulting therefrom.

8. The presence of Goldie's personnel, either full-time or part-time, will be for the purpose of providing the services set forth in Job Number 22.15 to include construction observation and testing for specific aspects of the project as authorized by the County. Should a Contractor, not retained by Goldie be involved in the project, the County will advise the contractor, that Goldie's services are for observation only and that Goldie is acting solely as agent for the County in the supervision of the Contractor's performance. The County will also inform Contractor that the presence of Goldie's field representative will not relieve the Contractor of his

responsibilities for performing the work in accordance with the County approved plans and specifications. Goldie will endeavor to insure that the Contractor proceeds with the work in a timely fashion and will advise the County if it appears that the Contractor is not performing the work in accordance with agreed upon time tables.

If a contractor (other than a subcontractor to Goldie) is involved in the project, the County agrees that, in accordance with generally accepted construction practices, the contractor will be responsible for working conditions on the jobsite, including safety of all persons and property during performance of the work. Goldie shall have no responsibility to see that the Contractor will comply with OSHA or any other governmental regulations, and requirements. It is agreed that Goldie will not be responsible for job or site safety on the project and that it does not have the duty or right to stop the work of the Contractor for safety related conditions, but Goldie shall promptly notify the Contractor and County if any condition which Goldie believes could affect the safety of the job site.

9. It is possible that unforeseen conditions or occurrences may be encountered which could substantially alter the necessary services or the risks involved in completing the services. If this occurs, Goldie will promptly notify and consult with the County but will act based on its sole judgement where risk to its personnel is involved. Possible actions could include:

- a. Complete the original Scope of services in accordance with the procedures originally intended in its Proposal, if practicable.
- b. Agree with Client to modify the Scope of Services and the estimate of charges to include study of the unforeseen conditions or occurrences with such revision agreed to in writing.
- c. Terminate the services with payment from the County for services performed to the date of termination.

10. The County agrees to advise Goldie upon execution of this Agreement of any hazardous substances or any condition, known of that should be known by the County existing in, on, or near the site that presents potential danger to human health, the environment, or equipment. The County and Goldie agrees to provide continuing information to each other as it becomes

available in the future. By virtue of entering into this Agreement or of providing services hereunder, Goldie does not assume control of or responsibility for the site or the person in charge of the site. Goldie will report to the County any conditions at the site that may present a potential danger to public health, safety or the environment. The County agrees to notify the appropriate federal, state or local agencies as required by law, or otherwise to disclose, in a timely manner, any information that may be necessary to prevent any danger to health, safety, or the environment.

11. Goldie will perform its services using that degree of care and skill ordinarily exercised under similar conditions by reputable members of its profession practicing in similar locality and in accordance with applicable law and regulations; however it is understood by the parties that Goldie cannot warrant DHEC approval or acceptance for additional requirements or changes in the law and regulations imposed by the County, DHEC, EPA, or any other governing agency instituted after the date of this contract. It is understood that Goldie will be responsible for keeping abreast of current legislative considerations and proposed changes being considered before the date of this contract.

12. It is acknowledged that time is important in the completion of the contract because of seasonal constraints. It is acknowledged by both parties that closure is a lengthy and meticulous process. It is also understood by both parties that if the closure deadline is not met, the result could cause an increase in work and materials required which would result in modifications to the original project and additional costs which could be substantial. It is understood that the County's contract between the County and the Contractor will include a requirement that the Contractor complete the project within a period specified by Goldie and that a penalty of at least \$1,000/day will be assessed to the contractor if he does not succeed in completing the project within the specified time period. Likewise, the Contractor will be awarded a bonus for early completion at a rate of \$1,000/day up to a maximum of \$30,000. Completion of the project will be defined as when both the County and Goldie & Associates accept the final punch list, with the exception of grassing which may not be apparent until a later time and would be handled as part of the Contractors warranty. Furthermore, Goldie will make a recommendation to the County regarding the selection of the Contractor and in doing so Goldie is not bound to select the lowest bidder nor is the recommendation a warrant of the contractors work. It is expressly understood between the parties that Goldie accepts no responsibility for delays caused by the County, the weather, the

contractor, or any unforeseen conditions which may be present on site. Unless caused by Goldie's negligence, Goldie accepts no responsibility for, and the County agrees to hold Goldie harmless from any fines or violations, which may be assessed to the County by any governmental agency or commission and from any increased costs or expenses necessitated by modification of the closure plan in order to meet additional governmental requirements and regulations instituted after the date of this contract. It is understood that Goldie will be responsible for keeping abreast of current legislative considerations and proposed changes being considered before the date of the contract.

13. The parties agree to attempt to resolve any dispute without resort to litigation. However, should a claim be made that results in litigation, and should the claimant fail to prevail, then the claimant shall pay all costs incurred in defending the claim, including a reasonable attorney's fees.

14. This Agreement shall be governed in all respects by the laws of the State of South Carolina. If a Court of competent jurisdiction at any time holds that a portion of this Agreement is invalid, the remainder shall not be affected thereby and shall remain in full force and effect.

15. This Agreement, the attached documents, and any documents incorporated herein constitute the entire Agreement between the parties and can be changed only by a written instrument signed by both parties.

16. The undersigned expressly acknowledge that they are authorized on behalf of Oconee County and Goldie & Associates, Inc. to execute this Agreement and to bind the parties to the terms and conditions of this Agreement. Nevertheless, however, it is understood and agreed by the parties that any communication between the parties concerning the terms, conditions, questions, or authority to act shall be addressed (verbally or in writing) to:

For the County:

Norman D. Crain, Supervisor/Chairman  
208 Booker Drive  
Walhalla, South Carolina 29691  
803-882-4242

For Goldie & Associates, Inc.

Stephen R. Goldie  
210-A W. North Second St.  
Seneca, South Carolina 29678  
803-882-8194

IN WITNESS WHEREOF the parties have hereunto set their  
hands and seals this                      day of                      , 1995.

WITNESSES:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Oconee County

By \_\_\_\_\_  
its  
Goldie & Associates, Inc.

By \_\_\_\_\_  
its President

December 4, 1995

Mr. Norman Crain  
Oconee County Supervisor  
208 Booker Drive  
Walhalla, SC 29691

**GOLDIE**  
&  
**ASSOCIATES**

*engineering, environmental  
and laboratory services*

Re: Trees at Seneca Landfill  
Project 22.13

Dear Mr. Crain:

As part of the Seneca Landfill closure, we have been assisting the County with evaluating whether trees planted several years ago can be left in place or should be removed to allow for construction of an impermeable cap. As we understand, the trees were planted on older filled portions of the landfill in the late 1970's.

The issue stems from the fact that the trees lead to greater infiltration of water through the soil and into the waste material, which can then pick up contaminants and leach into subsurface ground water.

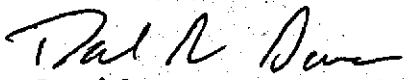
Based on the fact that ground water has been impacted as documented through regular monitoring and hydropunch assessment; that DHEC has indicated they do not want the trees to remain at the site if it will cause a possible impact to the ground water; and that the source of the ground water impact is most likely derived from both wooded and non wooded areas, we recommend that the trees be removed and these areas be covered with the impermeable cap along with the rest of the landfill.

Since we feel the impact to ground water is derived from throughout the landfill, covering these wooded areas with the impermeable cap should contribute to reducing the impact to ground water. As we have discussed before, impact to ground water is a public health issue since some area residents use ground water as their drinking water supply.

If you have any further questions regarding this, please call.

Sincerely,

**GOLDIE & ASSOCIATES**

  
David R. Devoe, P.G.  
Hydrogeologist

cc: Mr. Jack Hirst, Oconee County Solid Waste  
Ms. Marianne Dillard, Oconee County Purchasing



001

OCONEE COUNTY BID TABULATION

**BID FOR:** Surveillance system for patrol car **DATE:** 10/12/95

**BID NO:** 95-08 **LOCATION:** Walhalla, SC **TIME:** 2:00p.m.

BIDDERS	Kustom Signals, Inc.	MVS, Inc. d/b/a CMI/MPH	W.H. Platts Co.		
Surveillance system	11,070.00	5,400.00	no bid		
SC sales tax	553.50	270.00			
TOTAL	11,623.50	5,670.00			

**ATTENDING OPENING:** Jenny Peay, Ann Albertson, Lee Davis, Donnie Fricks

OCONEE CO PURCH

603 639 4142

12-01-95 13:34

FOREST SERVICE DOCUMENTS

FS Scoping Letter & Map ..... 1-3  
 FS Mineral Program Policy 8/95 ..... 4-5  
 Summary of Hard Rock Permitting ..... 6  
 Gold Prospecting in Oconee County ..... 7  
 Citizen's Comment in Favor of Permitting - Christopher Dial ..... 8-9  
 Citizen's Comment Opposed to Permitting - Philip Moore ..... 10-11  
 FS Response to Philip Moore ..... 12-13  
 Letter from Accipiter Exploration to Sen. Thurmond ..... 14  
 Letter from Sen Thurmond to FS ..... 15  
 Letter from FS to Sen Thurmond ..... 16-17  
 Letter from Accipiter Exploration Soliciting Support ..... 18  
 Reclamation Photos - Before/After ..... 19

MINING PROCESS

Cyanide Spring ..... 20-25  
 The Heap-Leach Method ..... 26  
 Guidelines for Responsible Mining ..... 27

ARTICLES

Heavy Rains Burst SC Dam ..... 28-29  
 Gold Rush Poses Threat to Land ..... 30  
 Sides Dig In on Mine Law Debate ..... 31  
 The Summitville Mining Disaster ..... 32-33  
 Taxpayers Get \$15 Million Shaft ..... 34  
 Mine's Toxic Leaks Render River Lifeless ..... 35

FOR MORE INFORMATION CALL - SC FOREST WATCH 647-8804  
 Forest Service - AP District - Beth Merz - 638-9568

STATE OF SOUTH CAROLINA )

COUNTY OF OCONEE )

RESOLUTION # 1995-12

NOW, Therefore, Be it

RESOLVED, That the Oconee County Council urges the US Forest Service to deny the applicant's permit to conduct prospecting or any commercial mining on public lands in the Chauga River watershed.

SIGNATURE:

Norman O. Cain  
OCONEE COUNTY SUPERVISOR

Alta K. Williams  
COUNCIL MEMBER

Fran Burrell  
COUNCIL MEMBER

[Signature]  
COUNCIL MEMBER

Ray B. Strickland  
COUNCIL MEMBER

Harry R. Hamilton  
COUNCIL MEMBER

W/A  
COUNCIL MEMBER

ATTEST:

Opal O. Breen  
CLERK

DATE:

12/5/95

STATE OF SOUTH CAROLINA )  
COUNTIES OF OCONEE AND ANDERSON ) RESOLUTION 95-12-0001  
PIONEER RURAL WATER DISTRICT )

WHEREAS, the Pioneer Rural Water District purchases drinking water from the City of Westminster for distribution throughout the district; and

WHEREAS, the City of Westminster obtains this drinking water from the Chauga River; and

WHEREAS, the quality of the water supply is directly impacted by the condition of lands in the Chauga River watershed upstream of the collection point; and

WHEREAS, an application for a permit to conduct mineral prospecting is under consideration by the US Forest Service; and

WHEREAS, it is possible that this will lead to an application for a permit to operate a commercial mine on public lands in the Chauga River watershed; and

WHEREAS, this type of commercial activity involves strip mining and the use of cyanide to process the ore; and

WHEREAS, soil conditions, steep terrain and high rainfall in the watershed will increase the potential for failure of containment structures; and

WHEREAS, failure of mining containment structures would create a devastating threat to the quality of water obtained from the Chauga River; and

WHEREAS, this Board of Directors has a concern for the health and welfare of the membership of the Pioneer Rural Water District;

**NOW, THEREFORE, BE IT**

**RESOLVED**, That the Board of Directors of the Pioneer Rural Water District urges the US Forest Service to deny the applicant's permit to conduct prospecting or any commercial mining on the public lands in the Chauga River watershed.

IN WITNESS WHEREOF, this resolution is hereby adopted and made a part of the Pioneer Rural Water District records on this first day of December, 1995.

*Robert J. Stevenson*

Robert Stevenson, Chairman of Directors

*Michael W. Foster*

Michael W. Foster, Director

*Clayborn Durham*

Clayborn Durham, Director

*Robert A. Reeves*

Robert A. Reeves, Director

*William H. Farmer*

W. Harold Farmer, Director

ATTEST:

*Sven M. McCall*

CLERK

Brewer Rd

11-21-95

WA - 299

Install Second Pipe

① Labor to install Pipe \$ 5,000.00

② Labor to install 600 TONS R.P.-RAP at \$23.00 per ton 13,800.00

③ pipe 142" x 91" x 4 1/4" 106 5990.16

@ \$136.14 235.88

~~Band~~ Pipe Band 311.30

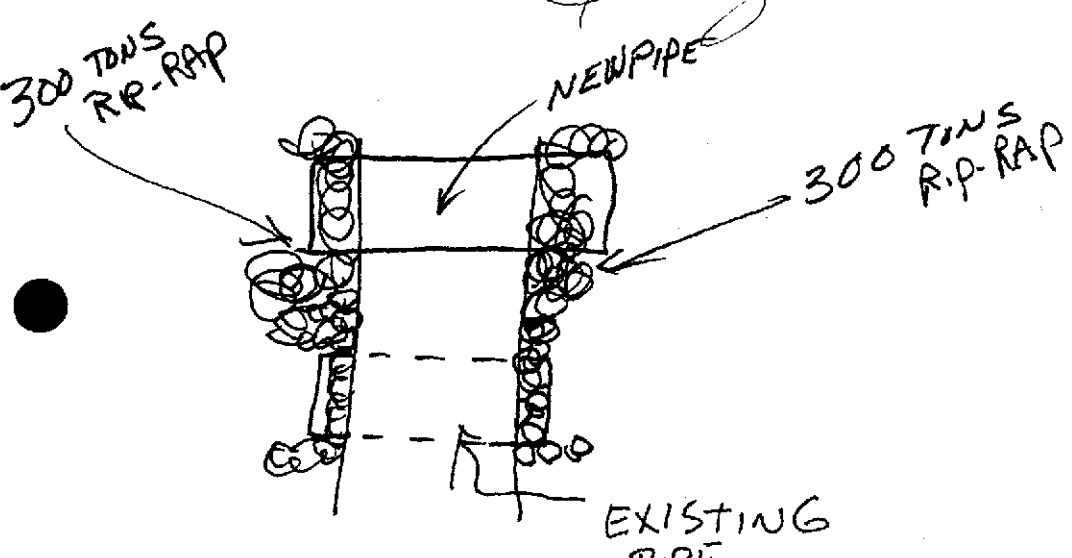
SALES TAX

TOTAL PIPE COST

\$6,537.34

TOTAL \$ 25,337.34

*[Signature]*  
Sully Hancock



To: Dennis Bauknight  
From: Al McNeill

106.44 - Floor of House

Re: County Road crossing Beaty Creek at Mr. Pafford's property

This is a comparison of estimated flood stage changes for various flood frequencies at the referenced site. The Assumption is that the present 96" X 178" corrugated metal arch will remain and that a 91" X 142" corrugated metal pipe arch will be added. Stages are elevations from field survey which used an assumed datum. The invert of the culvert should be at the creek bottom.

Curve Number = 60  
Time of concentration = 2 hours

Frequency	Rainfall (Inches)	Runoff (Inches)	Rate (CFS)	Present Elevation (Feet)	Future Elevation (Feet)	Difference (Feet)
1	3.5	0.53	271	96.5	95.9	0.6
2	4.6	1.07	645	100.0	98.2	1.8
5	5.8	1.79	1172	103.3	100.6	2.7
10	6.5	2.26	1518	104.2	102.1	2.1
25	7.5	2.96	2047	105.1	103.8	1.3
50	8.0	3.33	2326	105.4	104.4	1.0
100	9.0	4.10	2902	106.1	105.3	0.8

This table assumes that new arch culvert is installed at invert elevation 90.48, one foot lower than the existing culvert.

Frequency	Rainfall (Inches)	Runoff (Inches)	Rate (CFS)	Present Elevation (Feet)	Future Elevation (Feet)	Difference (Feet)
1	3.5	0.53	271	96.5	95.0	1.5
2	4.6	1.07	645	100.0	97.4	2.6
5	5.8	1.79	1172	103.3	99.9	3.4
10	6.5	2.26	1518	104.2	101.5	2.7
25	7.5	2.96	2047	105.1	103.5	1.6
50	8.0	3.33	2326	105.4	104.1	1.3
100	9.0	4.10	2902	106.1	105.0	1.1





Austin Edwards PD  
WA-22

1. Replace Pipe

3000.00

108" x 60' ft 10GA pipe cont  
County funds

7838.69 incl tax  
5%

2. Install 250 tons Rip Rap @  
\$2300 per ton

5750.00

---

TOTAL \$ 16,588.69

Shank  
11-30-95

To: O'CONNOR COUNTY

CONLEY RD

SUB: County Road Flooding

PU-47

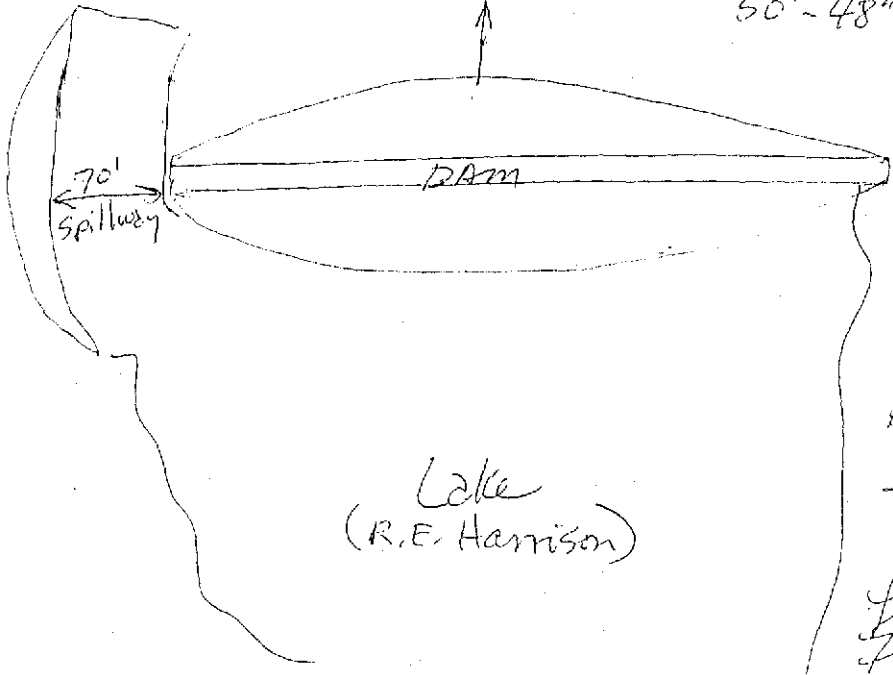
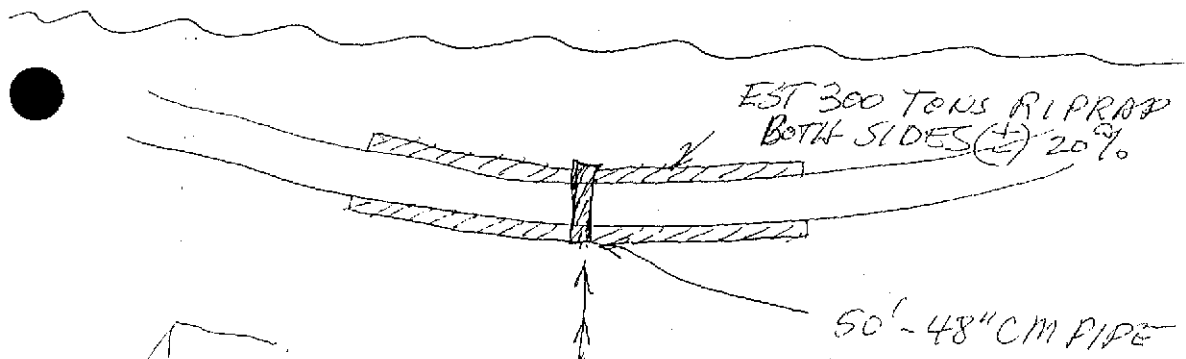
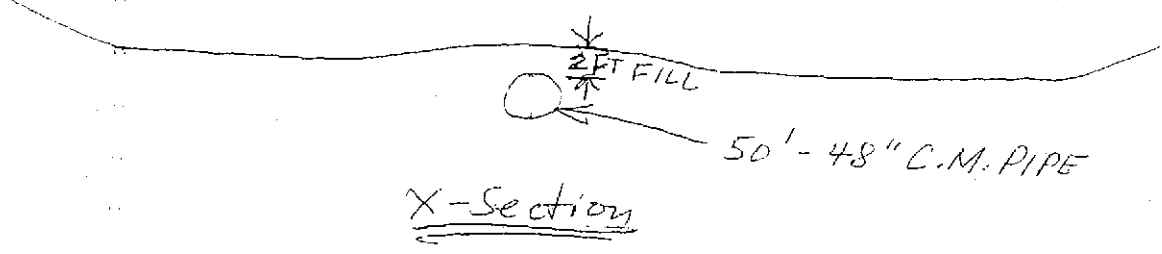
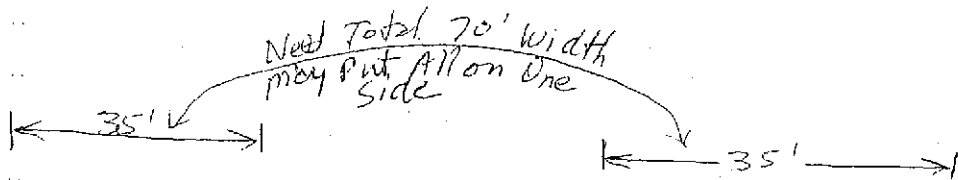
360 TONS OF Rip RAP @ \$23.00 = \$ 8280.00

Installation of Pipe = 3000.00

Pipe @ \$6.99 per ft = 1416.98 incl TAX

48" x 50'

TOTAL 12,696.98



PLAN VIEW

Summit  
Field Engineer  
NRES

Next

Mud Creek Rd

CE-27

1. Install Pipes \$ 2,000.00

2. Install 200 ton  
Rip - Rap @ 23.00  
Per ton 4,600.00

3. Cost of Pipe

96" x 40"

@ \$ 87 <sup>46</sup>/<sub>100</sub> per

126

3673.32 incl tax

\$ 10,273.32



**Above  
the  
Crowd!**<sup>®</sup>

NOV 22 1995  
11:15 AM  
PERRY

November 22, 1995

County Council  
208 Booker Drive  
Walhalla, SC 29691

This letter is a request for a street name change in the subdivision of Indian Oaks located in Seneca. Enclosed is a plat of the subdivision and the street (Holdievale) highlighted. As you can see there are only two lots (18 & 19) that front on Holdievale. Perry and Sally Rogers own lot 18 and Stephen and Kathryn Tompkins own lot 19, both lots are under construction at this time.

The name Holdievale is a family related name of the previous owners of these lots. Since we are now the owners of the property and the name has no family meaning to us, we are requesting the name be changed to Spinnaker Way.

Thank you for your consideration and please let us know your thoughts.

Sincerely,

*Perry & Sally Rogers*

Perry and Sally Rogers

*Stephen and Kathryn Tompkins*

Stephen and Kathryn Tompkins

*First edit of  
maps already  
completed*

enclosures

E. Perry Rogers, Jr., CRS, GRI

**RE/MAX** Foothills Real Estate

537 Highway 123 By-Pass  
Seneca, South Carolina 29678

Office: (803) 882-4200

Toll Free: (800) 95-PERRY

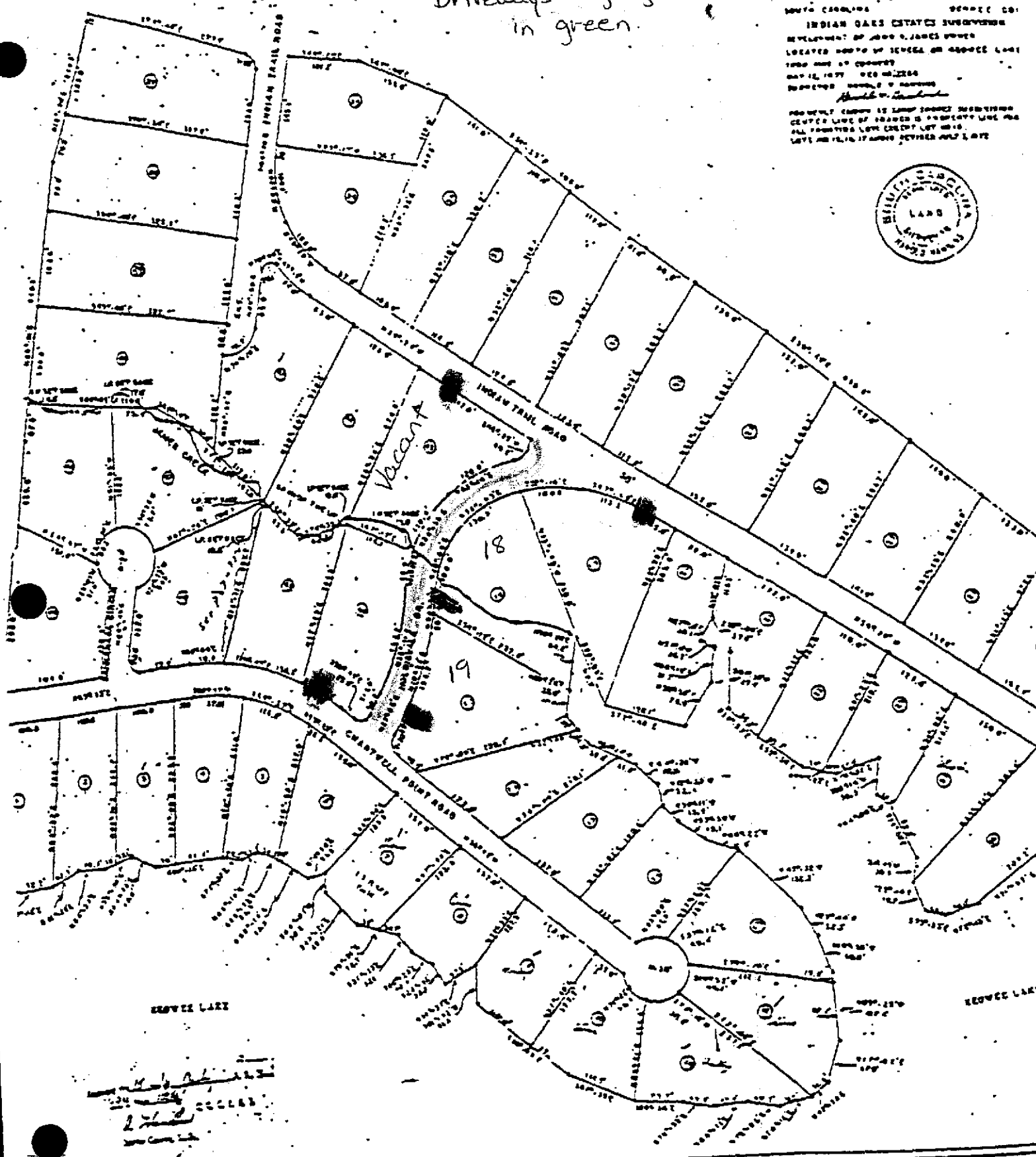
Each Office Independently Owned and Operated



**MLS**<sup>®</sup>

Driveways highlighted  
in green.

STATE OF CALIFORNIA      COUNTY OF  
INDIAN OAKS ESTATES SUBDIVISION  
DEVELOPMENT OF JOHN JAMES OWEN  
LOCATED PARTLY BY RECORD OF RECORDS BOOK  
1000 AND BY COUNTY  
MAY 12, 1977    000 002200  
REGISTERED    000000000000  
*John J. Owen*  
PROPERTY SHOWN IS LAND SUBJECT TO THE  
CENTER LINE OF ROAD IS PROPERTY LINE AND  
ALL FRONTING LOT CROWN LOT 18 IS  
LIVE AND 18, 17 ARE COVERED JULY 1, 1972



*John J. Owen*  
2000  
000000000000

United States  
Department of  
Agriculture

Forest  
Service

Andrew Pickens  
Ranger District

112 Andrew Pickens Circle  
Mountain Rest, SC 29664

File Code: 1950/2820

Date: March 29, 1995

The Forest Service proposes to authorize a request by an individual to prospect for minerals in the Crooked Creek area (see attached map). The project consists of the following actions:

-Drilling a well to a depth of about 200 feet with a truck-mounted drilling rig. Water would be pumped to the drilling rig by a pump adjacent to the creek about 500 feet east of the site. Hose would be laid from the pump to the drilling rig. No chemical drilling mud would be used. Drilling would take about two to three days. The spoil material from the well (approximately one half of a cubic yard) would be spread on the old road bed and vegetated.

-To access the drilling site, Road 743D would be opened. Trees and shrubs on the road would be cut. No excavation would be needed on the road. The road would be closed after drilling was completed.

-Six hand dug shovel trenches would be dug. The maximum length, width, and depth of the trenches would be 30 X 2 X 4 feet. The trenches would be filled in on the same day they were dug.

Before a decision is made on this project, a Biological Evaluation of its effect on proposed or listed threatened or endangered species, and sensitive species, will be prepared.

The project has been surveyed by a Forest Service Archaeologist. No significant cultural resources were identified which would be affected by this action, and the Deputy State Historic Preservation Officer's concurrence is on file. In accordance with the regulations prescribed in 36 CFR 200.4(d), the proposed action would have no effects on any National Register site or eligible property.

Environmental analysis is currently being conducted for this proposal. It is anticipated that a Decision Memo will be prepared in accordance with Forest Service Handbook 1909.15, Section 31.2. The Decision Memo will explain the final decision made for the project.

If you wish to provide comments on this proposal please mail them to me at the address listed in the letterhead by May 5, 1995. Your comments need to contain the following:

- (1) Your name, address, and (if possible) telephone number;
- (2) Title of the document(s) on which comment is being submitted (This document is titled "Commercial Prospecting Scoping Letter"); and

# Mine's toxic leaks render river lifeless

## Despite fines, promises, cyanide flowing into Alamosa River and downstream

By Kit Miniclier  
Denver Post Staff Writer

Deadly cyanide-laced water from a huge gold mine near Wolf Creek Pass has killed all aquatic life in 17 miles of the Alamosa River and the Terrace Reservoir, and it may have seeped downstream to the Rio Grande, say state and federal officials.

The leaks from Summitville Consolidated Mining Co. continue, despite a \$100,000

fine levied against the company this year, agreements to take remedial actions, closure of the once-popular fishing reservoir after a massive fish kill and complaints from downstream users.

"We went up to the mine last month to investigate reports of an environmental disaster and we found an environmental disaster," said Mark Hughes, an attorney with the Sierra Club's Legal Defense Fund.

"I was appalled. There seemed to be substantial leaks and runoff, and the mine operators didn't seem to know where it came from or what might be in it."

The sprawling open-pit mine is 11,700 feet above sea level and about 16 air miles southeast of the summit of Wolf Creek Pass in southern Colorado.

A Colorado Department of Health video of the seepage showed brilliant blue sludge and water — ranging in color from

orange to yellow to molasses — leaking into natural waterways from the mine site last summer.

"This ought to be on the 9 o'clock news," observed the filmmaker on the unedited video.

The company, a wholly owned subsidiary of Galactic Resources Inc. of Canada, is using 40 million to 50 million gallons of

Please see MINE on 7A

# Gold mine's leaks deadly for aquatic life

MINE from Page 1A

cyanide-laced water in the 45-acre heap leaching process to extract gold from several million tons of ore, said mine general manager Bill Williams.

"We've got problems, there is no question about that," Williams readily admits, explaining that about 100 gallons of water a minute are leaking from the leach heap.

An elaborate system of ditches and ponds is designed to catch the leaks and either pump the fluids back to the leach pad, or treat them and then spray the treated water on the landscape.

However, under an agreement between the company, state health department and Mined Land Reclamation Board, the company ceased landscaping applications on Oct. 30.

"At this point, there isn't any acid runoff from the heap," Williams said. "We feel we are on the right track, and we are going to clean this place up."

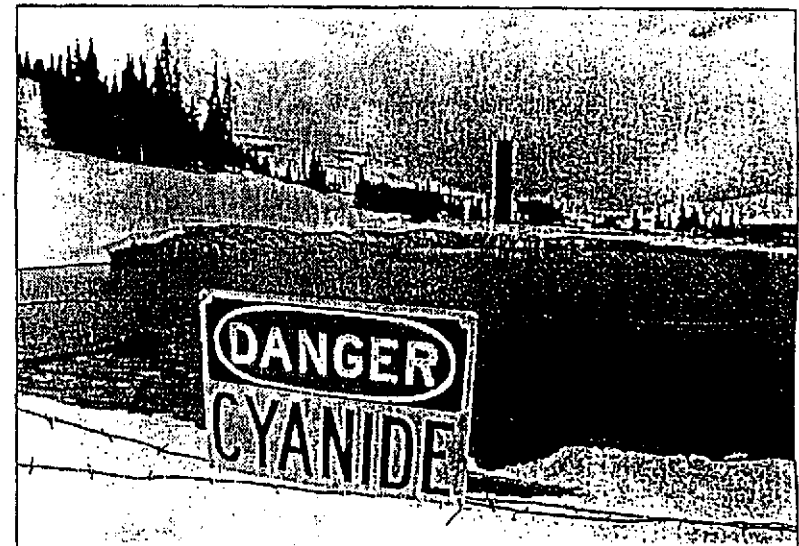
The company expects to continue leaching operations at least another six months, though it finished mining operations this fall.

State game officials stopped stocking the Terrace Reservoir with 15,000 trout fingerlings annually after a massive cyanide leak rolled down Whiteman Creek into the Alamosa River in 1990, killing all life in 17 miles of the river and in the reservoir, which is south of Del Norte, said Jerry Apker of the division of wildlife.

The fish kill extended 7 or 8 miles below the reservoir, killing fish in at least one private farm pond, and may have reached the Rio Grande.

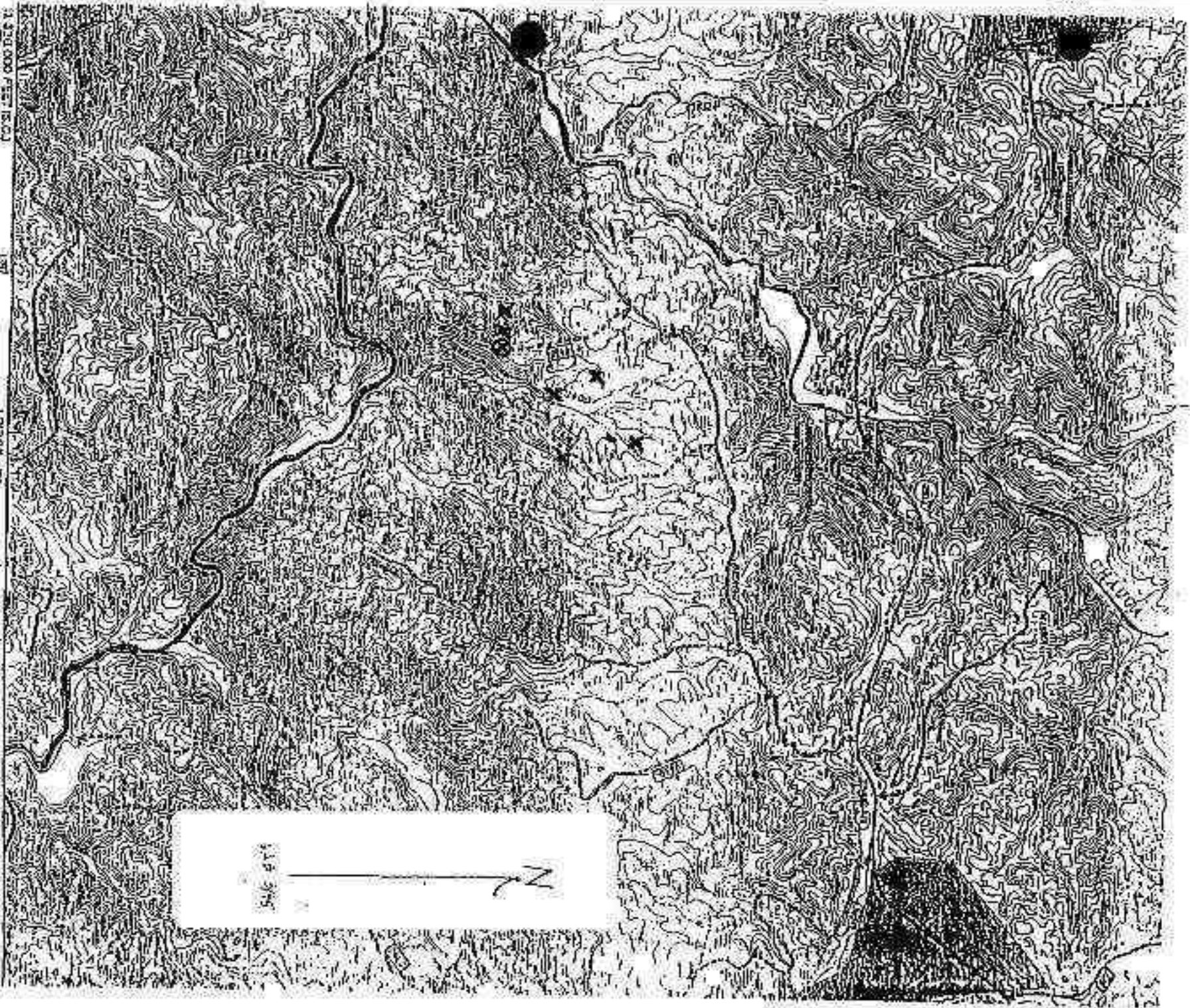
The first reported fish kill attributed to the mine occurred in 1986, shortly after the operation began. The most recent was six weeks ago, when 500 to 1,000 gallons of the cyanide-laced water spilled into Whiteman Creek.

EDUCATIONAL MATERIAL FROM  
MINERAL POLICY CENTER  
1325 MASSACHUSETTS AVE. NW, #550  
WASHINGTON, D.C. 20005



DEADLY WATER: A sign warns of the danger at one of the Summitville Consolidated Mining Co.'s holding ponds.

The Denver Post / Kari Gahring



1231000 FEET (EAD)

1231000

1231000

1231000

(HOLLY SPRINGS)

543345

**LEGEND**

- X Tracked Locations
- Drill Site



SCALE 1:24000

CONTOUR INTERVAL: 20 FEET

NATIONAL GEODETIC VEERTICAL DATUM OF 1982

(3)



phases of this work. In the late fall, the State went ahead and refunded 1/3 of the total bond despite continued site failures and a report issued in August 1992 estimating that site clean-up could cost up to \$70 million. Another report estimated clean up costs at a minimum of \$20.6 million. On 3 December, a few weeks after the bond refund, Summitville filed for bankruptcy. On 26 January 1993, Summitville's parent company, Galactic Resources, Ltd. filed for bankruptcy in Canada. A \$4.7 million bond is all that remains with the State.

On 16 December 1992, EPA's Superfund program took control of the site at the State's request. EPA currently spends approximately \$35,000 a day to treat the cyanide waste. Costs of treatment of the waste water alone total more than \$20 million. EPA expects to spend \$30 million more to clean all of the waste water. As a result of this catastrophe, Colorado legislators finally adopted stricter regulations hoping to prevent future environmental mining disasters like Summitville.

In an action that defies reason, the County of Rio Grande attempted, on 21 October 1994, to auction off the waste treatment and other equipment (previously owned by Galactic and now used by EPA). County officials wanted to prove their title to the equipment in order to recoup part of the \$1.3 million in back taxes owed by Galactic. EPA issued a unilateral administrative order which prevented the county and its agents from taking any action to remove property being used by the EPA. Without the use of the waste treatment equipment, severe environmental damage would undoubtedly result. If EPA were to discontinue treatment, weather and the elements would overwhelm the mine structures which would likely result in a massive spill of over 100 million gallons of cyanide laced water into the Alamosa River. The Alamosa supplies water to ranchers and farmers in the San Luis Valley and feeds into the Rio Grande River - 40 miles away.

Since 1986, Galactic Resources extracted 280,000 troy ounces of gold at the Summitville mine. On 31 May 1994, EPA officially listed the site on the Superfund programs' National Priority List. Total reclamation of the site will cost EPA and the US taxpayers around \$120 million.

For More Information Contact  
Jim Lyon, Mineral Policy Center  
202/887-1872

FOREST SERVICE  
MINERALS PROGRAM POLICY  
8/95

The Federal Government's policy for minerals resource management is expressed in the Mining and Minerals Policy Act of 1970, "foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs." Within this context, the National Forests and Grasslands have an essential role in contributing to an adequate and stable supply of mineral and energy resources while continuing to sustain the land's productivity for other uses and its capability to support biodiversity goals.

OBJECTIVES. Exploration, development, and production of mineral and energy resources and reclamation of activities are part of the Forest Service ecosystem management responsibility. The Forest Service will administer its minerals program to provide commodities for current and future generations commensurate with the need to sustain the long term health and biological diversity of ecosystems. Accordingly, the Forest Service will strive to:

Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sensitive manner and that these activities are integrated with the planning and management of other resources using the principles of ecosystem management.

Facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System on lands open to these activities or on withdrawn lands consistent with valid existing rights.

Maintain opportunities to access mineral and energy resources which are important to sustain viable rural economies and to contribute to the national defense and economic growth.

Ensure that lands disturbed by mineral and energy activities, both past and present, are reclaimed using the best scientific knowledge and principles and returned to other productive uses.

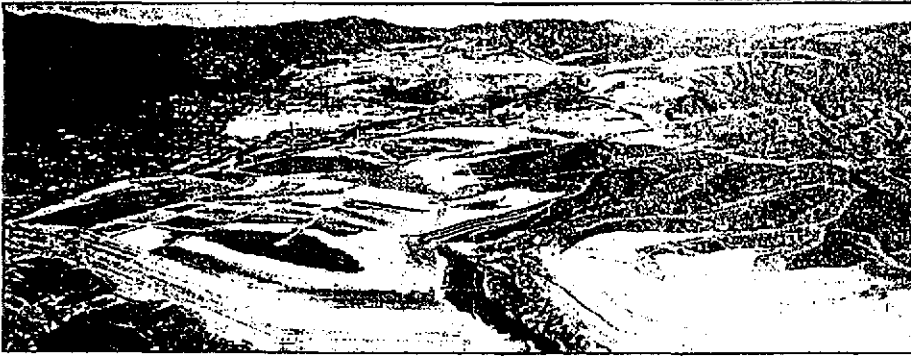
POLICY. The Forest Service will administer its minerals program within the overall context of the principles of ecosystem management. Accordingly, the Forest Service will:

Ensure that mineral-related activities are in accordance with our legal and regulatory authority.

Coordinate and cooperate with other Federal and State agencies having authority and expertise in mineral-related activities.

Coordinate and cooperate in a collaborative manner with interested public, industry, and community representatives. Foster partnerships with industry to increase knowledge of development potential of the mineral estate.

Ensure the integration of mineral resource programs and activities with the planning and management of renewable resources through the land and resource management planning process, recognizing that mineral development may occur concurrently or sequentially with other resource uses. How?



PHILIP M. HOCKER/MINERAL POLICY CENTER

**BIG DIG.** Mining reform centers on low-cost development rights afforded Western operations, such as this one in Arizona.

## Sides Dig In on Mine Law Debate

SALEM, ORE.

CONSERVATION groups, lawmakers, and federal agencies are wrestling over a 19th-century United States mining law that helped "win the West" but left a controversial legacy of environmental exploitation and private profit at public expense. The law is defended by the mining industry and some federal officials who say it does a good job of providing the nation with valuable minerals and the West with economic development, criticized by those who say it is as out of date as a single-action revolver.

Leading the charge for reform on Capitol Hill is Sen. Dale Bumpers (D) of Arkansas, who sums up the problem this way: "Why should the federal government give a deed to federal lands for \$2.50 an acre, allow billions of dollars worth of minerals to be removed from that land, not receive a penny in royalties, and in some cases be required to clean up the mess once the mining has been completed?"

Enacted when Ulysses S. Grant was president and Custer still thought he was a great Indian fighter, the Mining Law of 1872 said miners could stake a claim on potentially profitable federal land. If there was good evidence of valuable minerals on the land they could obtain a patent (legal title) and reap all the profits. The law lured thousands of prospectors to seek their fortune in gold, silver, and copper.

Later laws established restrictions on most forms of natural resource extraction. The Mineral Lands Leasing Act of 1920, for example, retained government title to lands with energy resources like coal, gas, and oil — and required developers to pay royalties on profits from lands they leased. Environmental laws passed in the 1970s set up reclamation requirements and other safeguards against the damages of strip mining.

But the 1872 hard-rock mining law remained largely unaffected by these changes. Claims still can be held for years by doing only \$100 worth of work a year on the land. Patents still can be obtained for as little as \$2.50 an acre if there is evidence of valuable minerals in the ground. The land can be sold off once title has been obtained. And no royalties need be paid to the public treasury.

Since the mining law was passed 119 years ago, 1.2 million claims totaling 35 million acres have been filed, and about 3.2 million acres in federal lands (an area the size of Connecticut) have been decided over to hard-rock miners.

Defenders of the law are quick to point out that miners typically must spend hundreds of thousands of dollars to develop a claim to the point where it can be patented.

"Without the assurance of a patent, many mining companies would not take the risk of fully

developing a claim, a claim which might offer valuable minerals vital to our national security," Sen. Harry Reid (D) of Nevada told his fellow lawmakers in debate last fall. Mr. Reid (whose father was a hard-rock miner) further asserted that "mining operations give enormous benefits to the typically rural areas where they are located ... further jobs, further revenue for the county, further development."

IN 1989, the US General Accounting Office (GAO) recommended that the patenting provision of the 1872 law be eliminated and that royalties be paid from mining revenues.

"Escalating land prices, primarily near expanding communities, resort areas, and tourist attractions, have made the act's patent provision an attractive means of acquiring title to valuable land for nonmining purposes," the GAO report states. Some patent holders reaped "huge profits at the government's expense," said the GAO. In one instance, the federal government sold 17,000 acres for \$42,500, only to have the owner turn around a few weeks later and sell it to major oil companies for \$37 million.

The GAO report brought stiff rebuttal — not only from the American Mining Congress, which cited "three dozen errors of fact," but also from the Bureau of Land Management (BLM), the federal agency that oversees mining. According to the BLM, just 29 percent of applicants for a patent are approved. GAO's recommendation that claim holders pay an annual holding fee of \$1,000, the BLM says, "would cripple the search for hard-rock minerals."

"This, in turn, could force exploration companies to look at foreign sources such as Australia, Asia, and Latin America," warned the BLM. "Such a reduction in minerals exploration would have significant effects on the general economy of the mining states of the West."

Last year Senator Bumpers lost by two votes an amendment that would have eliminated the patenting of mining claims. This year he's back with a "Mining Law Reform Act" that would give the federal government a royalty of 5 percent of the gross value of minerals found (one third to be set aside in trust to clean up abandoned mines), require reclamation plans along with bonds or other forms of security to see that reclamation was performed once mining was completed, give federal agencies new authority to protect the environment in mining areas, and eliminate patents.

Stewart Udall, former secretary of the interior and now board chairman of the Mineral Policy Center in Washington, D.C., calls such reform "the most important piece of unfinished business on the nation's natural resource agenda."

— Brad Knickerbocker

## The New Hieroglyphics

IN 1799, French soldiers stationed in Rosetta, Egypt, came across a curious block of basalt.

Greek was inscribed along the bottom third of the rock. The middle portion carried Egyptian script; along the top, the mysterious ancient hieroglyphics. Scholars quickly realized its significance.

The Rosetta stone became the key to deciphering Egyptian picture-writing 20 centuries old.

Today we are grappling with a new Rosetta stone. It is not rock this time but wires and plastic and blips of light. We didn't discover it. We're not using it to decipher an ancient culture. We are building it to understand each other.

On Wednesday afternoons in a New York City school in Harlem, Haitian schoolchildren log onto a personal computer to communicate with other Haitians. The language they use is Creole. Researchers hope these computer conversations will push students to strengthen their native writing skills and, one day perhaps, their English.

On the upper peninsula of Michigan, students at Michigan Technical University use computers to communicate around the world. These budding engineers, sometimes ill at ease in social settings, lose their inhibitions — even "date" — once they log on to a computer.

In Parsons, Kan., Charles Spellman has developed a picture language to teach learning-disabled



students how to cook, shop, and do everyday chores. So far computers help him put out his instruction books. In a few years, he hopes they'll train and help his students live more independently.

Quite a tool, this new Rosetta stone. No need to choose between hieroglyphics or Greek, pictures or text. The personal computer has it all — even sound in an increasing number of cases. Can't write a letter? Draw it. Or even say it. Then send it off to your friend.

But these machines do more than expand communications. They are changing the way we communicate.

Marcia Peoples Hedio first noticed it four years ago in her writing classes at the University of Delaware. Students who wrote with a graphics-based Macintosh computer used short sentences and various typefaces. Those with an IBM or IBM-compatible machine had a more word-reliant, literary style.

Her published observations set off howls of protest in the Macintosh community. But scholars agree that computers are causing inevitable change — particularly among young people. They will be the pioneers of the new hieroglyphics. For them, graphics is just the beginning.

At Michigan Tech, students recently asked to hand in their English papers on disk. Why? They had color-coded their arguments (something that wouldn't be visible in a printout). Some of them keep electronic journals in which graphics no longer support text — they are the text, says Cynthia Selfe, editor of an academic journal called *Computers and Composition*.

Students are also playing with hypertext, which links text and other kinds of documents. The possibilities of hypertext are endless. An author could write a novel (or a motion picture or some new hybrid form) with multiple plot lines. The reader/viewer would decide which branches to follow and which to ignore.

The new hieroglyphics represent a brave new world with some old, old pitfalls.

Will all these new languages build new meaning or a Tower of Babel? Could graphics and hypertext widen the gap between the super-educated and the uneducated? Are today's teachers ready to teach visual and oral literacy as well as the power of the written word?

On balance, scholars are upbeat about the possibilities as long as educators use this new tool wisely.

After the discovery of the Rosetta stone, it took 20 years for Jean-Francois Champollion to break the code of Egyptian hieroglyphics.

We will have to move more quickly. We need to ensure that our new tool enhances meaning instead of diluting it.

— Laurent Belsie

(31)

MESSAGE DISPLAY FOR GREG S. BORGEN

To G.BORGEN:RO8F12DO2A

From: THOMAS E. BERCHEM:RO8F12A

Postmark: Apr 07,95 9:08 AM

Delivered: Apr 07,95 9:09 AM

Subject: Forwarded: Hard Rock Prosp Permit Aplns

---

Comments:

From: THOMAS E. BERCHEM:RO8F12A

Date: Apr 07,95 9:08 AM

GREG, FOR YOUR ADDED INFORMATION. TOM.

Message:

From: Kenn L. Frye:R8

Date: Apr 07,95 8:22 AM

The regulations addressing hardrock prospecting permits applications are in 43 CFR 3560. A prospecting permit, if issued, is good for an initial 2-year term with an extension of 4 years available. The rental is 50 cents/acre/year with a minimum rental of no less than \$20 (43 CFR 3562.3-1). There is also a non-refundable filing fee of \$25. 43 CFR 3561.2-2 regarding royalties states "The production royalty shall be determined by the Authorized Officer on a case-by-case basis as provided in 3503.2-1 of this title." The AO is the Director of BLM and 3503.2-1 states the same as 3561.3-1. If a lease is issued, it is for a 20-year initial term with a 10-year renewal.

43 CFR 3560.3-1 refers to NFS lands: "With the consent of the Secretary of Agriculture and subject to such conditions as he/she may prescribe, the following lands administered by the Secretary of Agriculture are subject to lease: (then it goes on to list all the Acquire-land laws). Basically, the BLM cannot issue a permit or lease without our consent. However, any denial of consent will likely have to pass a court challenge.

According to BLM geologist, Richard Wallace, the royalty on gold as well as most hardrock minerals is 5%.

-----X-----

### Troy Mine

The Troy mine, operated by Asarco Inc., is an underground copper/silver mine located in the Cabinet Mountains in the northwestern corner of Montana. The site is located on private, patented, and unpatented land within the Kootenai National Forest. The mine is located in an alpine setting adjacent to several streams and is subject to significant snow and rainfall.

Copper/silver concentrate, produced by froth flotation, is shipped off-site for further refining. The milling operations produce almost three million tons of tailings annually and transport thickened tailings down a seven mile long pipeline to a 320 acre tailings pond. Water from the tailings pond is returned to the mill. Most waste rock is returned to the underground mine. Troy operates under a permit issued by the Montana Department of State Lands, which was concurrently approved by the U.S. Forest Service.

### Brewer Gold Mine

The Brewer Mine, operated by Brewer Gold Company, is located on a ridge between the Lynches River and Little Fork Creek near the town of Jefferson, South Carolina. The mine, located on private land, is subject to high precipitation.

At the Brewer Mine, ore is mined in an open pit, crushed, agglomerated, and conveyed to a cyanide heap leach. Gold is recovered on carbon columns. There are seven heaps, covering about 53 acres. Wastes include the heaps after leaching ceases, waste rock, and wastewater discharges. There have been several incidents of cyanide releases at Brewer. Most notable was the 1990 dam failure which released over 10 million gallons of 100 ppm cyanide solution into Little Fork Creek. Brewer was fined \$50,000 by the state. Brewer has a closure/reclamation bond of \$500,000.

### Colosseum Mine

The Colosseum Mine, operated by Lac Minerals, is located in the arid Clark Mountain Range in southeastern California. Most of the 284 acres of mining operations are on unpatented Federal land under the jurisdiction of the Bureau of Land Management.

Ore is mined from two open pits, crushed, and vat leached in a carbon-in-pulp cyanide circuit. Precious metals are stripped from the carbon, plated onto steel wool through an electrowinning process, and smelted on site to produce ~~dore~~. Wastes include waste rock that is disposed of in one of four waste rock piles and tailings discharged to a 150 acre tailings impoundment. Colosseum uses sulfur dioxide to destroy residual cyanide in the tailings slurry. Colosseum has a \$762,000 reclamation bond. Colosseum is subject to zero discharge requirements and has no NPDES permit. Colosseum has been

*Please Note:  
Will try to have copies  
of referenced articles at  
meeting.*

CHRISTOPHER M. DAIL  
7516 EDGEWATER DRIVE  
COLUMBIA, SOUTH CAROLINA 29223-6136  
(803) 788-0305

June 1, 1995  
VIA FAX

Both Merz  
District Ranger  
USFS, Andrew Pickens Ranger District  
Sumter National Forest  
Star Route  
Welhalla, South Carolina 29691

~~FILE~~  
~~BMA~~  
~~SILV~~  
~~ORA~~  
~~TMA~~  
~~RGR~~  
JUN - 1 1995  
ANDREW PICKENS  
RGR DIST

SUBJECT: HLM Sandrock Prospecting Permit Application-Clifford Leonard, Jr.

Dear Beth:

I have noted in two recent newspaper articles (Keowee Courier, April 15, 1995 and The State, June 1, 1995) that a considerable amount of controversy has arisen from the Prospecting Permit Application by Clifford Leonard Jr. to conduct preliminary exploration work in an area near Crooked Creek in Sumter National Forest in Oconee County, South Carolina. Because I have concerns about the possibility that the USFS may deny this prospecting permit application based on the negative comments received during public scoping I am writing this letter to inform you of my support and my hopes that you will approve the application, provided of course that it contains the normal reclamation procedures and other features typically required during this kind of exploration work.

From the comments I have seen in the two newspaper articles describing the controversy, problems seem to be centered around the supposedly illegal act of conducting mineral exploration on public lands and the assumptions that exploration of the sort proposed will have major impacts on the flora, fauna and environment. Most of the comments in the newspaper articles, many of which seem to be written in an inflammatory manner and with many misleading comments about the potential impacts of this kind of work, suggest that there is a gross misunderstanding about how exploration works and what the statistical chances are of actually finding a valuable, economic mineral deposit.

First, let me address the accusations of illegal activity. Of course I do not have the details of Mr. Leonard's background, credentials or his companies financial statements, but provided his application has been submitted properly and the appropriate clearances established then there is nothing illegal about conducting exploration on public lands. In fact, exploration and mining on public lands are an integral part of this country's history and Oconee County's heritage. A number of historic mines and prospects are scattered throughout the region, now long since forgotten by most except a few prospectors and the occasional exploration geologist. Yet, many of the towns in the region owe their very existence to early explorers and prospectors whose persistence and ability to derive a living off of the mineral resources in the area gave people a reason to settle there.

*Exploration not illegal, but procedural violations to application process are.  
Not so much exploration, but mining is.*

# MINERAL POLICY CENTER

• 1612 K STREET, NW, SUITE 808 • WASHINGTON, DC • 20006 • 202-887-1872 •

## \* \* GUIDELINES FOR RESPONSIBLE MINING \* \*

Adequate environmental protection for hardrock mines and cyanide-leaching facilities includes the following elements:

- ◆ Rainfall management, to prevent excessive rainwater that enters the cyanide-leaching system from causing overflow of leaching solution into streams and groundwater.
- ◆ Surface water control, through the diversion of all streams and runoff around the mine area and the prevention of silt from being washed into streams. This applies to many types of operations ranging from gold dredging in stream valleys to open-pit mines
- ◆ Leak monitoring under the leaching pad and in the entire piping system. In some parts of the U.S., double-lined pads are now required, with monitoring of the space between the synthetic liners to detect leaks. Two liners, a leak detection system, and a clay back-up liner below the lower synthetic liner should be required in all cases. Monitoring wells in the groundwater should be required, with frequent testing.
- ◆ Wildlife protection, including the prevention of wildlife access to cyanide-solution ponds and the treatment of all discharges to be safe for fish, as well as people.
- ◆ Reclamation and landscaping, with specific systems to prevent acid drainage and leaching of toxic metals from abandoned piles of mine waste and the spent leaching heaps. Runoff controls, treatment of runoff from streams from the waste, or capping of waste piles with impermeable clay layers may all be required. The post-ming landscape should be both usable and attractive.
- ◆ A long-term monitoring program should be required at all mine sites after completion of mining and closure of an operation. This should include surface and groundwater testing, and a plan for corrective action if acid or toxic leakage develops.
- ◆ All major mines should have a local citizen oversight board established as a condition of permit approval.

Funding for these factors should be guaranteed before a mining operation is permitted to start so that the public is not burdened with the costs of cleaning up after the mining companies leave.

Jim  
F.Y.I.

Thanks for your insights & assistance.  
Pam

112-C Fairway Ridge  
Aiken, SC 29803  
12 April 1995

ANDREW PICKENS  
RGR DIST

APR 17

RGP	<input checked="" type="checkbox"/>
TR	<input type="checkbox"/>
OP	<input checked="" type="checkbox"/>
SILV	<input type="checkbox"/>
BMA	<input type="checkbox"/>
FILE	<input checked="" type="checkbox"/>

Ms. Elizabeth Merz  
District Ranger  
Andrew Pickens Ranger District  
Sumter National Forest  
Star Route  
Walhalla, SC 29691

REFERENCE: Mr. Clifford Leonard's Application to Explore for Gold in Sumter National Forest, Oconee County, South Carolina

Dear Ms. Merz:

I am writing to express my concerns about Mr. Clifford Leonard's application for a permit to explore for gold on 20 acres near the Chauga River in the Sumter National Forest. Based on my conversations with Mr. Jim Kidd of your office, it's my understanding that the initial exploration activity will be limited to small areas outside of the floodplain with little or no potential for erosion and sedimentation. Mr. Kidd also indicated to me that your office had surveyed the area for threatened, endangered, and sensitive plant and animal species as well as cultural (archeological and historical) artifacts and had found none. This allayed my concerns about the possible impacts of the preliminary surveys.

However, the very fact that preliminary surveys are being conducted suggests that there is some potential for this work expanding and evolving into a full-scale mining operation. Clearly, Mr. Leonard would not be spending his money if he didn't think commercial opportunities existed. It would be naive to assume Mr. Leonard is simply a rockhound or hobbyist with no larger aspirations.

The danger, obviously, with allowing exploration for gold on a limited scale is that there will be incremental or phased expansion. Environmental impacts are often explained away or justified in this fashion: it's "just a couple of acres," and a couple of acres more, and a couple of acres more, ad infinitum. Given that any mining activity in the Sumter National Forest/Andrew Pickens District beyond the limited surveys proposed would be unacceptable, why even allow the preliminary surveys?

I am a fisheries scientist with more than 15 years of experience with the U. S. Fish and Wildlife Service, a commercial electric utility, and two southeastern consulting firms, and have spent my professional life evaluating environmental impacts of industrial facilities. I am intimately familiar with the flora and fauna of the Chauga River ecosystem and Sumter National Forest, having done fisheries research in the area (a study of redeye bass in the Chattooga River, circa 1979-1981) and having fished the Chauga and hunted in the Sumter National Forest-Pickens District since the early 1970s.

I am also familiar with some of the problems associated with gold mining, because I lived in Fairfield County, S.C., during the years the Ridgeway/British Petroleum gold mine was developed near Blythewood. The environmental impacts of gold mining (and particularly the potentially-disastrous impacts of heap leaching gold from ore using poisonous compounds such as potassium cyanide) to wildlife, surface-water, and groundwater resources are well known. The Ridgeway Mining/BP facility has had serious problems over the years with waterfowl



ing. Long-term problems from toxic metals leaching from heap-leach waste piles probably exceed the direct impact of cyanide itself. The low cost and wide applicability of heap-leaching, the rush to new ores and the general permissiveness of the Mining Law and the Federal managers, lead to a dangerous synergy. Hundreds of remote wilderness areas and wild-life routes are vulnerable to strip-mining for gold, thanks to heap-leaching.

But that is not directly the fault of leaching technology, or of cyanide. Rather, blame a set of laws and a set of mind which lets accidents of geology decide whether an area is mined, rather than using an intelligent multiple-use planning process to weigh mineral values against others.

VERDICT

Can cyanide and heap-leaching be environmentally safe? Yes, theoretically, they can. Is some of the alarm over cyanide's use in mining unwarranted? Yes, technically, it is.

Do we have enough knowledge to take the risks we are currently taking with this aggressive

poison? No, emphatically, we do not. Are the agencies on whom we rely to control the risks acting firmly and responsibly?

No, sadly, they are not.

The design requirements are inadequate, the agency inspection is nominal, the enforcement and penalties are less than lip-service. Because the spills have largely been remote, because the kills have been non-human species, we have not really awakened to this problem. We are spraying tens of thousands of tons of one of the most acute poisons known to man across the landscape.<sup>21</sup> There will be more deaths if this program is not strictly controlled, and the dead will not all be birds and animals.

The cyanide manufacturers, users, and regulators need to adopt an attitude of "Yes, we have a problem; here is how we are treating it; come look." But too often, the reaction is "There is no problem; go away." Expletive deleted. That will not reassure the public, and when the spills occur, the reaction will be bitter. It should not come to this. It need not. But I fear that it will. \*

CYANIDE SPRING NOTES:

Tons, throughout, refers to short tons, 2000 pounds. Mine production data and statistics generally are from U.S. Bureau of Mines publications.

1. Boliden: ENGINEERING AND MINING JOURNAL p.26 (July, 1989).
2. ELLENHORN & BARCELOUX, MEDICAL TOXICOLOGY, Elsevier Science Publishing Co., New York City, N.Y. (1983).
3. Skogerboe, *Research Update*. CYANIDE AND THE ENVIRONMENT, Colorado State University, p.552 (1985).
4. Engelhardt, *Long-Term Degradation of Cyanide in an Inactive Leach Heap*. CYANIDE AND THE ENVIRONMENT, *supra*, p.539.
5. LEWIS R. GOLDFRANK, ET.AL., GOLDFRANK'S TOXICOLOGIC EMERGENCIES, 3rd Ed., p.587 (1986).
6. Heming & Thurston, *Physiological and Toxic Effects of Cyanides to Fishes: A Review and Recent Advances*, CYANIDE AND THE ENVIRONMENT, *supra*, p.85.
7. OAK RIDGE NATIONAL LABORATORY, REVIEWS OF THE ENVIRONMENTAL EFFECTS OF POLLUTANTS: V.CYANIDE, p.139-45 (1978).
8. L. GOLDFRANK, *supra*, p.592.
9. OAK RIDGE NATIONAL LABORATORY, *supra*, p.8.
10. U. S. BUREAU OF MINES, GOLD AND SILVER LEACHING PRACTICES IN THE UNITED STATES, IC 8949, p.4 (1984).
11. G. M. Potter, *Recovering Gold From Stripping Waste and Ore by Percolation Cyanide Leaching*, U.S. Bureau of Mines TPR 20 (1969).
12. U. S. ENVIRONMENTAL PROTECTION AGENCY, REPORT TO CONGRESS, WASTES FROM THE EXTRACTION AND BENEFICIATION OF METALLIC ORES..., p.2-22 (1985).
13. OFFICE OF TECHNOLOGY ASSESSMENT, COPPER, TECHNOLOGY AND COMPETITIVENESS, OTA-E-367, p.73 (1988).
14. GOLD AND SILVER LEACHING PRACTICES, *supra*, p.8.
15. E.I. du Pont de Nemours & Company, *Is Gold's Growth in North America Facing a Cyanide Short-Fall?*, DUPONT MINING INDUSTRY ANALYSIS (April, 1989). Copies available from Mineral Policy Center.
16. Nevada Department of Wildlife, Cyanide Related Wildlife Mortalities, Departmental Memorandum (15 May 1988). Emphasis added.
17. Nevada Department of Wildlife, letter to Lee Delaney, Surprise Resource Area Manager (5 October 1988).
18. *Liner Design for Heap-Leach Pads*, MINING MAGAZINE, (May, 1988).
19. U. S. ENVIRONMENTAL PROTECTION AGENCY, COPPER DUMP LEACHING AND MANAGEMENT PRACTICES THAT MINIMIZE THE POTENTIAL FOR ENVIRONMENTAL RELEASES, Contract 68-02-3995 (undated).
20. A recent California State mining waste study (July, 1988) recommends that all mining wastes should be tested for their potential to generate acid runoff, as well as toxic metal content. I strongly agree. Unfortunately, the science in these areas is not well-developed. Additionally, the long-term life of cyanide in groundwater is not completely understood.
21. The Nevada Mining Association states that annual cyanide consumption in that state is 80 million pounds, and Nevada delivers half of current U.S. gold production. See also DuPont, *supra*.

File Code: 2820

Date: May 17, 1995

Mr. Philip R. Moore  
112-C Fairway Ridge  
Aiken, SC 29803

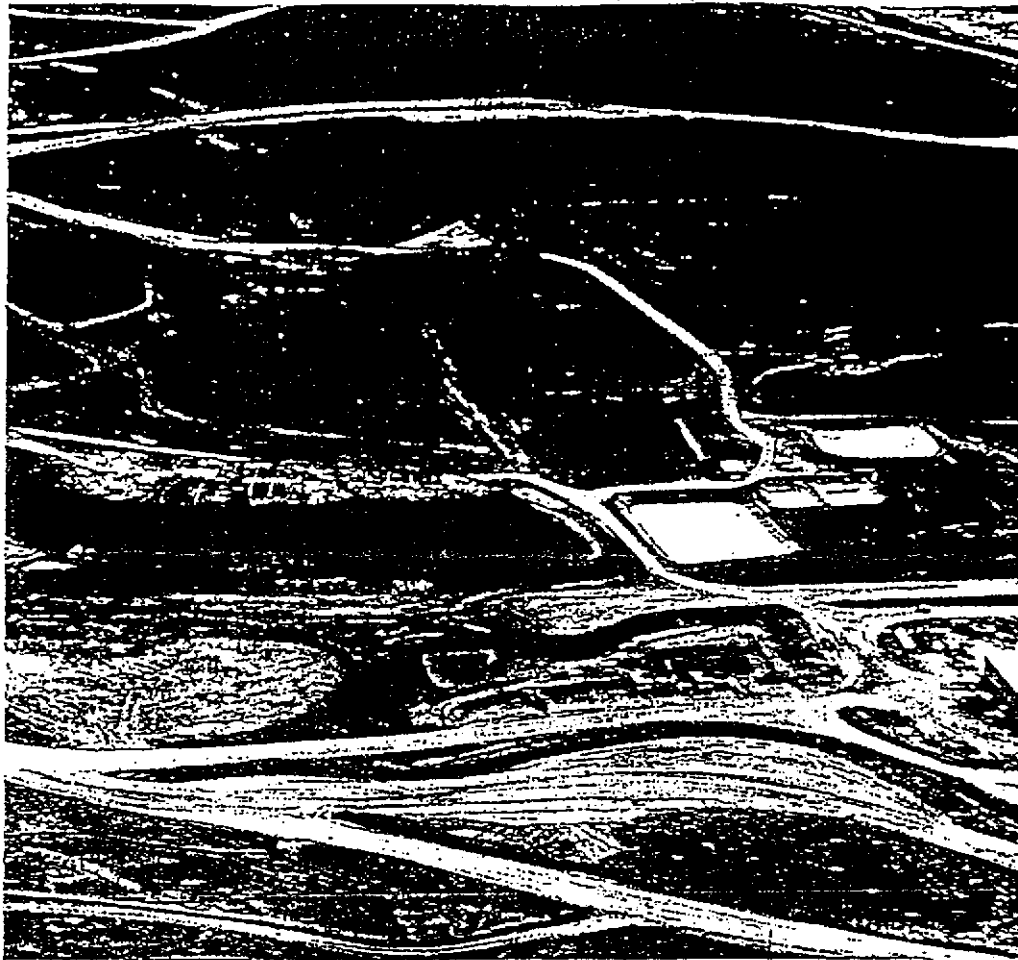
Dear Mr. Moore:

Thank you for forwarding me a copy of your letter, dated April 16, 1995, to Elizabeth Merz, Andrew Pickens District Ranger. Your concern was with some gold prospecting permit applications that were filed by Mr. Clifford Leonard. You explained that from your experience in the area and familiarity with gold mining on private lands in South Carolina, the Forest Service should deny consent to the Bureau of Land Management (BLM) to issue Mr. Leonard's permit.

The Forest Service has the responsibility to uphold two laws: 1) the Mineral Leasing Act for Acquired Lands (P.L. 80-382) of 1947 and 2) the National Environmental Policy Act (NEPA) of 1969. The first law allows for the leasing of Federally-owned mineral rights with acquired land status (e.g., lands the Federal government purchased from private individuals or companies). The process one must go through is to make application with the BLM. The BLM adjudicates the application, collects the necessary filing fee and first year's rental, and sends the case file to the surface managing agency. The Forest Service must give the BLM a decision on whether we consent to issuance of the prospecting permit and if so, with what operational stipulations.

The second law, NEPA, requires the Forest Service to make an assessment of the effects this prospecting will have on the other natural resource values. If the study shows that prospecting can be done without undue degradation of other resources, consent to issue the prospecting permit is given and the specific operating stipulations are attached to the consent. A prospecting permit has an initial term of two years with an additional 4-year extension available upon request.

At the end of the prospecting period, the Mineral Leasing Act requires that the permittee must either drop the permit or request that it be converted to a 20-year lease. In order to receive a lease, he/she must prove the discovery of an economically mineable deposit of mineral. That is, the costs for mining, milling, transportation to market, selling, and reclaiming the land to standard must be offset, plus a reasonable profit (usually 5-7%). If the permittee can show this, then the BLM will once again ask the surface managing agency for consent to lease. At this time, the Forest Service would generate an appropriate environmental study which looks at the environmental effects of full scale mining on the surface resources. The results of this study will give the decision maker the information he/she needs to determine whether or not to give consent to the BLM to lease the land for mining purposes.



*Pools of Poison sparkle on a gold leaching heap in Nevada. The cyanide solution is sprayed on top, percolates through the heap picking up gold as it goes, and flows to the pond at right. After the gold is removed from solution, the fluid is replenished and sprayed again.*

cyanide poisoning have been reported; more deaths are alleged to have been concealed, but we may never know. Even more troubling is the unknown number of sickened birds which have succeeded in flying from the poison ponds, only to succumb farther along their flyways.

The mining industry has tried to reduce the toll, largely by "hazing" birds from ponds with flags and noisemakers, and responds angrily that waterfowl deaths have now been reduced to insignificant numbers. However, discussions with wildlife officials indicate that cooperation is still limited and grudging. The State of Nevada has adopted a Memorandum which only requires that toxic solution ponds "be covered in a manner that will prevent *or at least inhibit* access by avian wildlife," and that the ponds "be made unattractive to wildlife."<sup>16</sup>

The looseness of this State wildlife agency policy may result from the fact that it was actually developed by the Nevada Mining Association.<sup>17</sup> Federal land managers, with similar laxness, routinely fail to notify wildlife agencies of proposals for new mines so preventive measures can be planned.

There are more subtle threats from widespread cyanide use, in addition to dead birds and wildlife. Numerous leaks in the liners underneath the "heaps" have been reported. In several cases, the leaks have resulted in contamination of drinking water supplies. But there are probably many more leaks which are steadily projecting cyanide solution toward and into groundwater, undetected.

A layer of impermeable material is placed beneath each gold ore heap, to ensure that the gold-bearing cyanide solution winds up in the

## Accipiter Exploration

P. O. Box 4092

Marietta, Georgia 30061

The Honorable Senator Strom Thurmond  
Senate Office Building  
Washington, D.C. 20001

In re.: Crooked Creek Prospect Permit

Dear Senator Thurmond,

I am writing to seek your support for my lease and prospecting permit application. Two and a half years ago I filed a prospecting lease on a 440 acre tract in Oconee County, where I had discovered a rich gold bearing strata of rock. The original site has values in excess of current industry trends and richer than the Ridgeway Mine ore values. Since then, the U. S. Forest Service has done an exhaustive series of studies on the biology, archeological past, cultural and environmental to clear the tract and find it suitable for prospecting.

Until May 5th there is a public comment period on the prospecting application. It would help very much, if your office could write a letter supporting my application in the Andrew Pickens Forest. This is not a mining permit application, which is an exhaustive study also. The prospecting permit is a survey, or evaluative process. In addition to gold deposits there is a possible Chrome deposit on the tract, a strategic mineral, as well as other potential ores like Copper, Zinc, and Titanium. Since this lease is on Forest Service land it would generate a 3-4% royalty on all minerals produced.

Hope you can write a brief letter of support. This project could generate 50-55 jobs in the area without a refinery being built.

Sincerely,

*Clifford Leonard, Jr.*  
Clifford Leonard, Jr.  
President  
██████████

*Attn: Mr. Ken Rentiers*

CL/EE

(14)

ment of many biological processes. Why get so excited?

They have a point. However, the story is more complicated. First, the general term "cyanide" covers many compounds. All have in common the fundamental ion  $CN^-$ , carbon combined with nitrogen, but beyond that the different combinations have widely varying properties. Most public and regulatory attention is paid to the extremely toxic gas hydrogen cyanide and the simple compound  $NaCN$ , sodium cyanide, the form used in mining as a solid or a water solution.

Unlike many other environmentally hazardous chemicals, cyanide is not known to bioaccumulate—to build up in animal tissues. It is not generally believed to be a mutagen or a carcinogen, though the research on this is inadequate.<sup>3</sup> Most ingested cyanide—some common foods contain traces—breaks down naturally; it is only fatal when a lethal dose is consumed at once; then it blocks the transport of oxygen across cell walls. In effect, the victim suffocates despite having fully-oxygenated blood; the central nervous system is the first organ to succumb.

In the natural environment, most cyanide breaks down harmlessly when exposed to sunlight or pH-neutral conditions. However, there is substantial evidence that cyanide persists in groundwater and in tailings or abandoned leach heaps, particularly where alkaline conditions are maintained.<sup>4,5</sup>

Given the chemical mechanism of its toxicity, it is not surprising that fish are particularly sensitive to cyanide in water solutions. Concentrations of hydrogen cyanide exceeding 0.1 milligram/liter can be fatal to sensitive fish species, and levels one-twentieth of that have been shown to prevent fish reproduction. The EPA's 1980 freshwater aquatic life criterion for free cyanide permits a maximum of 3.5 micrograms/liter for any 24-hour average, with a limit of 52 micrograms/liter at any time.<sup>6</sup>

Public attention, and the mining industry's response, have focused on the spectre of deaths to humans from cyanide. Its long-term health effects have been commonly assumed to be minor compared to the threat of immediate death, and ignored. However, there is good reason to suspect that a compound as aggressive as cyanide in lethal doses also has serious health effects in long-term chronic exposures at low levels. Correlations have been observed be-



*Strip-Mining for Gold: Heap-leaching areas of the Borealis Mine in Nevada are at left center, above the Freedom Flats open pit. Echo Bay Mines of Canada lists this as one of their "smaller" mines.*

\*  
tween chronic low-level cyanide uptake and specific diseases in humans, and experiments in animals have demonstrated progressive damage to nervous and other tissues.<sup>7,8</sup>

And there is a great deal we simply do not yet know about cyanide and its effects. The high price of this ignorance has already been seen: "There is surprisingly little information on the interactions of cyanide with birds," a comprehensive survey reported in 1978.<sup>9</sup>

Tragically, a great deal of empirical evidence has been acquired since then. Many thousands of birds have died from drinking from open cyanide ponds at mining sites, because we later learned that birds are highly sensitive to cyanide.

United States Forest Francis Marion 4931 Broad River Road  
Department of Service and Sumter Columbia, SC 29210-4021  
Agriculture National Forests (803) 561-4000

---

File Code: 1510/2880

Date: May 24, 1995

Honorable Strom Thurmond  
United States Senate  
Washington, DC 20510-4001

Dear Senator Thurmond:

Thank you for your inquiry dated April 28, 1995, on behalf of Clifford Leonard (Your reference) Case Number 5118280002. It is my understanding that Mr. Leonard wrote to you in support of his obtaining a prospecting permit.

Mr. Leonard has applied for three Bureau of Land Management (BLM) prospecting permits. The BLM is the agency responsible for minerals management. Consent to occupy the surface must be given by the Forest Service prior to the BLM permitting the prospecting for minerals. The Forest Service is currently evaluating the effects the proposed activity will have on surface management prior to providing BLM with a decision of consent or denial to occupy the affected lands.

Prior to consent or denial of occupancy on National Forest lands, we must comply with the National Environmental Policy Act (NEPA) requirements. These include a review of the specific actions proposed on the affected acreages in conjunction with scoping the interested publics concerning the proposed actions.

Mr. Leonard's proposal has existed for about two and a half years. Over that time, Mr. Leonard has made various changes in his proposal concerning affected acreage, the prospecting procedures intended, and the type of permits applied for. We met with Mr. Leonard on May 11, 1995 to further discuss the proposed permits and the information required for review of his proposal. We asked for detailed operating plans, locations, and maps with which to evaluate the environmental impacts to the surface. Upon the receipt of this data, the Forest Service will be in a position to complete the evaluation of impacts and make a decision of consent or denial to occupy National Forests lands. We have yet to receive this information.

Mr. Leonard uses the terms "lease" and "permit" interchangeably in his letter. The subject of concern at this point is Mr. Leonard's obtaining a prospecting permit. A mineral lease concerns the actual extraction or mining operation. Upon completion of the NEPA process, we will provide the BLM with our consent, stipulations, and restrictions, or our denial to the occupancy of the affected acreage for prospecting. If BLM issues Mr. Leonard a prospecting permit, and, through execution of this prospecting permit, he should find an economically operable mineral deposit, Mr. Leonard would then have to apply for a mineral lease from BLM. We would then have to conduct a second NEPA evaluation of the affected lands based on his mining and mineral extraction proposal and give our consent to occupy the surface before mineral extractions could begin.

9

# Accipiter Exploration

P. O. Box 4092  
Marietta, Georgia 30061

ANDREW PICKENS  
RGR DIST

MAY 10 1995

RGR

TMA

ORA

SILV

BMA

Re: Crooked Creek Project ~~Permit~~  
FILE

May 1, 1995

Dear Sirs,

The enclosed public comment letter concerns my company's prospecting permit request. I am writing in hopes you will send a brief note of support for mineral prospecting on the Crooked Creek forest land. This is a multi-purpose forest for camping, timbering and other activities. [Farther west, these activities include agriculture and mining.] ?

My company's preliminary surveys and assays have found industrial and precious metal rock bodies. Chrome and gold have been assayed along with other minerals.

*Ranks among the top 10 in the country.*

South Carolina is not a new frontier for mining and has significant mines and refineries in the state, as well as a good transportation infrastructure. If prospecting is successful, a mine could generate 50-55 jobs in the area for mining and transportation alone, as well as good royalties to the U. S. Forest Service. However, this would be an evaluative survey and not a mining permit.

Lastly, I've enclosed some pictures of an open-pit mine I visited 24 years ago in North Alabama. The picture on the left is the revegetated area, and the right hand picture is the unmined original mountain forest.

I hope you can write a brief note before May 5th. Many thanks for your time.

Sincerely,

*Clifford Leonard, Jr.*

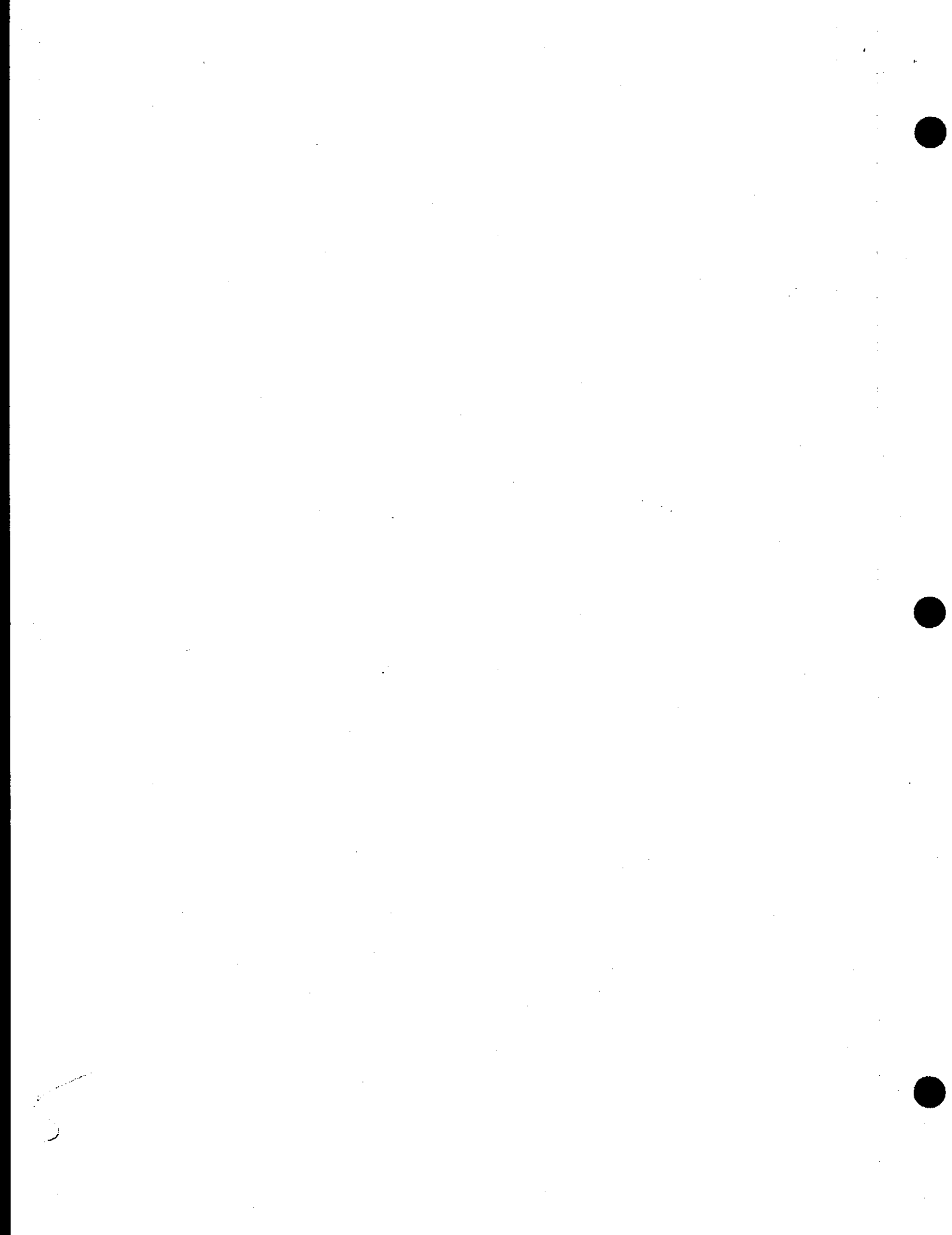
Clifford Leonard, Jr.  
President

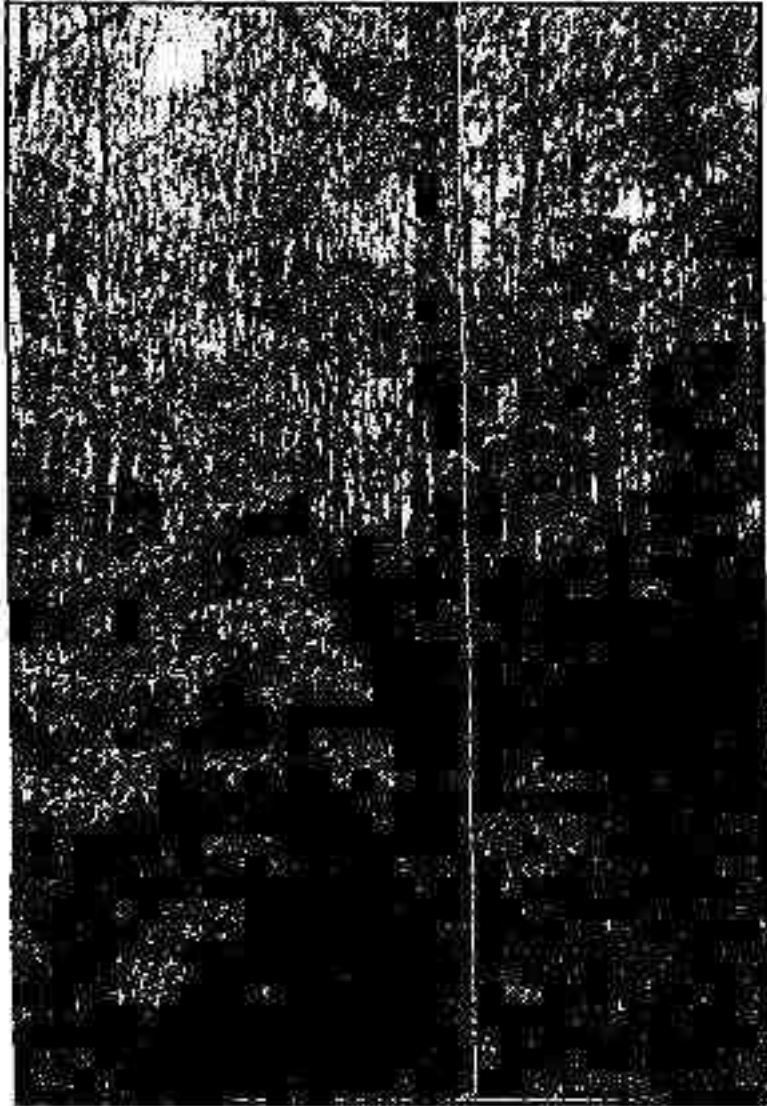
*Approximately 10 people commented in favor of Mr Leonard's request.*

*Nearly 70 opposed.*

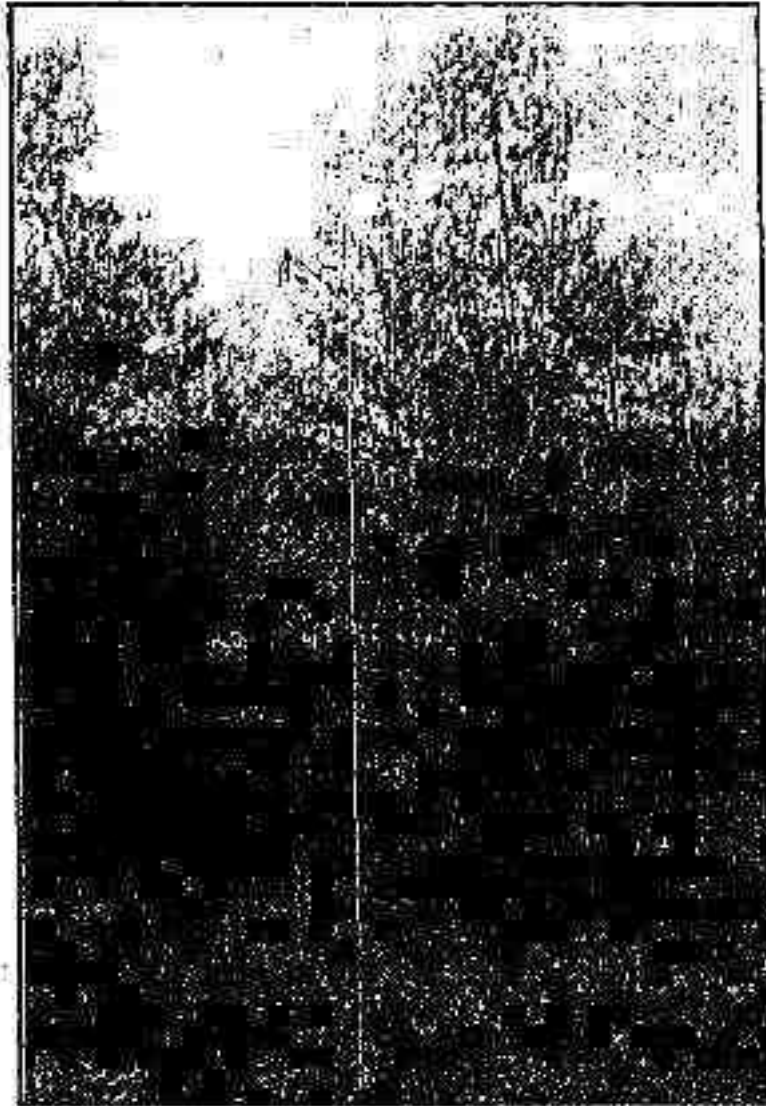
CL/rs





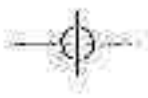


Unmined Mountain Forest



Reclaimed Mine Site

(b1)



Senator Strom Thurmond

2

The issue of prospecting permits and potential mining is of great importance to many interested publics. There have been many public inquiries and comments concerning the activities proposed by Mr. Leonard. We must adhere to the NEPA process by considering and responding to the inquiries and comments.

We appreciate your interest in the National Forests and look forward to your support in our future management endeavors. Should you or Mr. Leonard have additional questions or concerns on this matter, please do not hesitate to call on us.

Sincerely,

/s/Forrest L. Starkey (For)  
DAVID W. WILSON  
Forest Supervisor

cc: District Ranger, Andrew Pickens RD

(17)

**FORUM**

**Heaps of Gold, Pools of Poison**

**Cyanide Spring**

by Philip M. Hocker

*This article is the fruit of Mineral Policy Center research in Washington and at various mining sites over the past eighteen months. Sincere thanks are due to Frederick W. de Vries, of E. I. duPont de Nemours & Company, Susan van Kirk, Jim Jensen at MEIC, Dr. Glenn Miller, Steve Botts at Newmont, several anonymous agency officials (thanks, folks), and Congressional staff for their assistance and data sources. Congressman George Miller is particularly to be thanked for his efforts to reduce migratory bird mortalities. The opinions in this article are the author's, and in expressing my gratitude to these friends I do not intend to imply any endorsement or agreement by them.*

Canoes made of gold are too soft to run over rocks and too heavy to portage well. Gold makes lousy pitons and carabiners for climbing. Did you ever hear of a gold-filled sleeping bag?

Nevertheless, gold appeals to some people, and that appeal is propelling a new gold rush around the world. The rush raised the annual rate of world gold production from 31 million ounces in 1980 to 44 million in 1987, and is still accelerating.

The increase in the United States has been even more dramatic, from one million ounces mined in 1980 to five million in 1987, still rising to seven and one-half million ounces in 1989.

Nevada is the heart of this rush, as host to fully half of U.S. gold production, and the impacts are massive in California, Montana, and Colorado. Utah and Washington are active. New mines are planned in eastern Oregon, where a surge of interest last fall brought tens of thousands of new claim filings. In South Carolina, one of the largest tailings impoundments in the country has just been completed for newly-opened gold mining. Maine's Bald Mountain is being developed by Boliden of Sweden.<sup>1</sup>

While some of this boom has come from enlargement or re-opening of old mines, much is the result of a remarkable technological revolution: the new use on gold ores of an old mining technology called "heap-leaching," in which a cyanide solution is sprayed on vast open-air piles of ore to extract the gold. But there is a side to

heap-leaching which does not glitter: its environmental impacts.

**GOLD AND CYANIDE**

Gold mining always requires plucking the gold itself from a much larger mass of rocky ore. When the gold occurs in fairly coarse grains in a gravel streambed, "panning" will separate it by simple gravity. More sophisticated methods are needed as ores are mined from rockier sources. Most of the deeper mines of the nineteenth-century American rushes employed mercury amalgamation to concentrate the gold powder after quartz ores were crushed in a stamp mill. The environmental residues from mercury amalgamation still haunt many streams, both in the Appalachians and the west.

Besides being environmentally hazardous, the mercury process was inefficient. Recovery of 60% of the gold in an ore was typical. Inventors searched for a better method, and in 1887 a workable process using cyanide was developed in Scotland; it went into immediate use in the newly-developed Witwatersrand gold fields in South Africa. The much greater efficiency of cyanide extraction, better than 97% in mills, made it profitable to mine much lower grade ores than could be done otherwise.

**EXQUISITELY TOXIC**

But cyanide is better known as an extremely deadly poison than for its impact on the economic history of South African gold mining, and justly so. Sodium cyanide is "one of the most rapidly-acting lethal poisons and is well known to the public for such homicidal disasters as the Jonestown massacre and the cyanide-Tylenol deaths."<sup>2</sup> In lethal doses, which for humans can be as little as a teaspoon of 2% solution, the onset of symptoms is reckoned by seconds. Death follows swiftly.

Yet miners point out that there is no record of any person ever dying from a cyanide accident, that cyanide breaks down quickly in the environment, and that cyanide is a natural compo-

EDUCATIONAL MATERIAL FROM  
MINERAL POLICY CENTER  
1325 MASSACHUSETTS AVE. NW, #550  
WASHINGTON, D.C. 20005

STROM THURMOND  
SOUTH CAROLINA  
COMMITTEES

ARMED SERVICES  
JUDICIARY  
VETERANS' AFFAIRS  
LABOR AND HUMAN RESOURCES

# United States Senate

WASHINGTON, DC 20510-4001

April 28, 1995

ANDREW PICKENS  
RGR DIST

MAY 08 1995

_____	RGR
_____	TMA
<input checked="" type="checkbox"/>	ORA
_____	SILV
_____	BMA
_____	FILE

*Please FAX to D. Wilson  
Per Beth so will respond*

Ms. Elizabeth W. Merz, District Ranger  
USDA Forest Service  
Andrew Pickens Ranger District  
112 Andrew Pickens Circle  
Mountain Rest, South Carolina 29664

Dear Ms. Merz:

Enclosed is a copy of correspondence I have recently received from Mr. Clifford Leonard. I believe you will find it self-explanatory.

Your reviewing this material and providing any assistance or information possible under the governing statutes and regulations will be greatly appreciated. Thank you for your attention in this matter. I look forward to hearing from you soon.

With kindest regards and best wishes,

Sincerely,

*Strom Thurmond*

Strom Thurmond

ST/ha  
Enclosure

Please include in your response case number # 5118280002

## HEAP-LEACHING

For centuries, miners have sought ways to remove metal from an ore body without having to go to the expense of digging the ore from the ground, grinding it to a fine powder, and treating it in expensive facilities inside a mill.

At the limit, this ambition leads to "in-situ" mining, in which a chemical solution is injected into the ore body from wells drilled into the ground, and pumped out from extraction wells drilled in the ore some distance away. This process depends on the ore body being naturally porous, or being fractured in place by blasting.

Gold mining by injecting cyanide into the ground has been tried in Colorado, but is not in commercial use. The U.S. Bureau of Mines suggests that it would be a good thing to try; they gloss over the threats of massive groundwater contamination which could result.<sup>10</sup>

From a miner's viewpoint, the next best thing to in-situ mining is to pile the ore up in large mounds and soak the mounds with a solution which will remove the metal. Moving a metal-bearing liquid is much cheaper than moving masses of ore around, and the metal can be extracted to produce high-quality product. This technique, known as "dump leaching," has been used in copper mining since its initiation at the Rio Tinto area of Spain around 1750. For copper, sulfuric acid is the common leaching chemical. This brings its own set of environmental hazards... but that is another story.

In 1969, the U.S. Bureau of Mines proposed using open-air soaking with cyanide solution as a method of cheaply treating large volumes of low-grade gold ores.<sup>11</sup> The suggestion was timely. Rising manpower costs were making open-pit mines much more competitive with underground mines which required large amounts of hand labor, and new discoveries were made of low-grade gold ore in very large volumes. The low cost and ability to process immense amounts of material that characterized the new technique, which came to be known as "heap-leaching," attracted immediate attention. As skill at manipulating this new technology has developed, its use has accelerated.

Beginning at zero in the early '70s, heap leaching grew to an industry which treated almost four million tons of gold ore in 1980—one-third of all the ore processed in the country. By 1987 it had leapt to an annual rate of 65 million tons. Vat leaching (also using cyanide) had

tripled in those seven years, but heap leaching increased sixteen-fold. The growth rate is still increasing.

Still, for perspective, leaching of heaps and dumps of ore in the copper industry consumes several times as much ore as in gold—over 220 tons in 1980<sup>12</sup>—and is growing rapidly, though not as explosively as in gold.<sup>13</sup> (A "heap" is ore piled over an impermeable liner—or one *supposed* to be impermeable; a "dump" is simply placed on the ground surface.)

The concentration levels of cyanide used in heap-leaching are quite low: from .015% to .25% of sodium cyanide by weight in solution.<sup>14</sup> It is common mining industry folklore that the solutions are not really dangerous. In fact, managers of heap-leach mines are fond of telling visitors that they could take a drink out of the solution ponds without any ill effects. However, a little calculation shows that, in fact, less than a quart of the lower-concentration leach solution holds a lethal dose.

The rapidity of gold mining's expansion in the Eighties, and of the growing environmental exposure to unknown risks, can be gauged by the growth in the use of sodium cyanide itself: North American cyanide consumption—primarily for mining—has risen from 142 million pounds in 1988 to 215 million in 1989, a 51% increase in a single year. 1990 North American demand is projected at 254 million pounds. DuPont recently acknowledged that global demand will exceed production capacity at times in the next five years, despite the fact that it has tripled its manufacturing ability since 1986.<sup>15</sup>

## PROBLEMS

Because cyanide is so notoriously toxic, the mining industry is used to taking precautions. Any discussion of cyanide has to point out that there is no known instance of a human fatality from accidental cyanide poisoning in the mining business. This is a remarkable record, and a credit to the care and training of many users and the manufacturers, particularly DuPont.

However, to limit our concern over cyanide to human fatalities is to fall prey to what one biochemist calls the "dead bodies in the street" theory of toxicology: the attitude that if you don't see corpses, everything is okay. Despite the absence of human corpses, there is evidence that everything is not okay.

The most dramatic evidence has been the killing of birds from cyanide poisoning at mining sites. Thousands of waterfowl deaths from

Mr. Philip R. Moore

2

Just as the Forest Service cannot consent to permits and leases without doing the requisite NEPA analysis, neither can it reject a permit/lease application unless an adequate analysis is performed. A NEPA analysis must be done to use as a basis for giving or withholding consent.

Your main concern was: "why issue a prospecting permit when mining may not be allowed because of the adverse environmental impacts?" In order to follow the law (NEPA), the Ranger could only deny (or consent to) the prospecting permit after going through the NEPA analysis. Denial would require that an environmental study be done at the prospecting stage and that this document evaluate the effects of full scale mining. Currently, the value and extent of the mineralization is not known and it is impossible to be site specific on the size of the operation, the location of facilities, and to know if future mining could be done in an environmentally acceptable manner. There is simply not enough information available at this time to make a meaningful assessment of a mining operation that may never even be proposed.

I want to thank you for your concern over the prospecting activity and for taking the time to write me about it. Please continue to work with the Ranger District as this activity proceeds. Your personal knowledge of the area and its resources will be a great help to the District Ranger in assessing and managing its programs.

Sincerely,

/s/ Robert D. Bowers for

ROBERT C. JOSLIN  
Regional Forester

cc:  
Forest Supervisor, Francis Marion-Sumter National Forests  
District Ranger, Andrew Pickens Ranger District

treatment equipment, and not in the ground. After all, recovery of the gold is what the entire operation is about. However, while there is an incentive to recover the solution, there is another to minimize the expense of the liner. Shortcuts in liner construction save money in the short run. "Many pad liners are punctured during heap construction," one trade article observes.<sup>18</sup> Early heap-leaching operations often used liners of clay, which in practice are extremely difficult to keep leakproof.

Synthetic membranes are commonly used as liners today, usually of high-density polyethylene. But, because ore heaps for leaching are built up progressively to as much as 150 feet in height, many liners will fail due to progressive settlement and tearing from the massive weight of material bearing on their thin membrane.

---

"If you prick us, do we not bleed?  
if you tickle us, do we not laugh?  
if you poison us, do we not die?  
if you wrong us; shall we not revenge?"

— William Shakespeare,  
*The Merchant of Venice.*

---

There has been little practical study of membrane performance under these conditions. In copper leaching, "dumps," piles which are simply loaded on the ground with no liner, are sometimes used. When liners have been proposed under copper ore dumps to protect groundwater, the industry response has been that "...it has not been demonstrated that [liners] are applicable to practices covering hundreds of hectares and containing millions of tons of ore. The massive size of such practices may result in shear forces that would destroy the integrity of a liner."<sup>19</sup> If liners are unreliable under copper ore dumps, why then should we have confidence about liners under comparable gold ore heaps?

Cyanide can be spilled in much simpler ways. At a small mining operation, a barrel of chemical may be tipped into a creek. A careless operator may ignore a maladjusted valve in the complex piping circuitry of a large leaching site and not notice before tens of gallons of cyanide spill into the ground. A heavy rain may flood the

pond-and-piping system and flush toxic solutions down the valley. These examples have all been recorded.

To reliably prevent environmental damage, a mine and heap-leaching plant would have to address, at a minimum:

- Rainfall management, to prevent storm-water flow in the cyanide leaching system from causing overflow of leaching solution into streams and groundwater.

- Surface water control to permanently divert all streams and runoff around the mine area, and to prevent silt from being washed into streams.

- Leak monitoring under the leaching pad and in the entire piping system. A double synthetic liner, over an engineered clay substrate, should be required, with leak monitoring between each of the three liners. The system should be shut down once a leak through the first layer is detected, until it is repaired.

- Fail-safe design of the entire process system, so that any spills from operator error would be safely contained.

- Provision of monitoring wells in the groundwater, with frequent testing. Several wells should be placed downgradient, with at least one 'baseline' well upgradient.

- Wildlife protection, including absolute physical prevention of any wildlife access to cyanide solution ponds or tailings where the concentration exceeds the Federal ambient water quality standard.

- Reclamation and landscaping, with steps to prevent acid drainage and leaching of toxic metals from the abandoned piles of mine waste and the spent leaching heaps. This may require runoff controls, treatment of runoff streams from the waste, or capping of waste piles with impermeable clay layers.<sup>20</sup>

A long-term monitoring program should be required at all mine sites after completion of the mining and closure of the operation. This should include surface and groundwater testing, and a plan for corrective action if acid or toxic leakage develops.

Guaranteed funding for these steps should be required before mining is permitted to begin, so the public is not burdened with the costs of cleaning up after the mining companies once the glitter fades.

#### BEYOND CYANIDE

The impacts addressed in this article are only the immediate ones from heap-leach gold min-



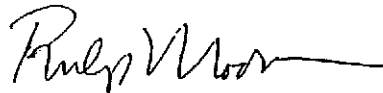
and wading birds being attracted to settling ponds and neutralization basins laden with poisonous chemicals. It's my understanding that leaks and spills from the Ridgeway Mining/BP facility have also resulted in degradation of water quality and fish kills downstream of the mine.

I urge the Forest Service to reject Mr. Leonard's application and to reject any such applications in the future. The Chauga and Chattooga River watersheds have been damaged over the years by poorly planned and executed logging operations, by indiscriminate spraying of pesticides and herbicides by apple growers, by dam building and real estate development in the watershed, and even by fires set by disgruntled off-road vehicle enthusiasts. Over the last five years or so, conditions appear to have improved, due in no small measure to the efforts of the Forest Service and multiple-use initiatives like "New Perspectives."

The Forest Service is doing an outstanding job of managing the natural resources of the Sumter National Forest and in balancing the competing interests of fishermen, hunters, hikers, birders, and local loggers. I commend you and your staff on a job well done. But permitting any kind of mining operations in the National Forest would be a terrible mistake, would threaten fish, wildlife, and water quality, and would ultimately benefit only out-of-state (and possibly out-of-country) mining interests. Please continue your good work and see that this is not allowed to happen.

Thank you for giving me an opportunity to comment on the permit application.

Sincerely,



Philip R. Moore  
Consulting Fisheries Biologist

cc: Mr. Robert Joslin, Regional Forester-USDA Forest Service  
Mr. David W. Wilson, Forest Supervisor-Sumter National Forest  
Rep. Lindsay Graham, 3rd Congressional District  
Mr. Russ Sherer, Bureau of Water Pollution Control, SCDHEC  
Mr. Brock Conrad, Division of Wildlife & Freshwater Fisheries, SCDNR

# The heap leach method

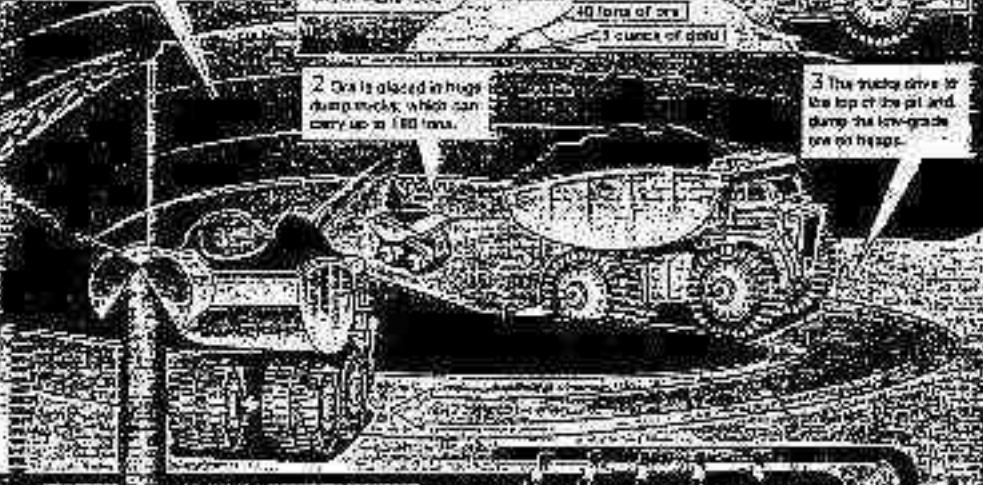
1 The ore is dug out of a pit by shovels and by cone crushers. Some of the pits, when fully excavated, will be more than 1,000 feet deep and a mile across.

Announce of gold from 200 tons of rock. When the price of gold is \$400 per ounce, it is economical to process ore that yields 1 ounce of gold for every 30-40 tons of ore that is, in fact, obtained after moving 1,500-200 tons of waste rock.



2 Ore is placed in huge dump trucks, which can carry up to 180 tons.

3 The trucks drive to the top of the pit and dump the low-grade ore on heaps.

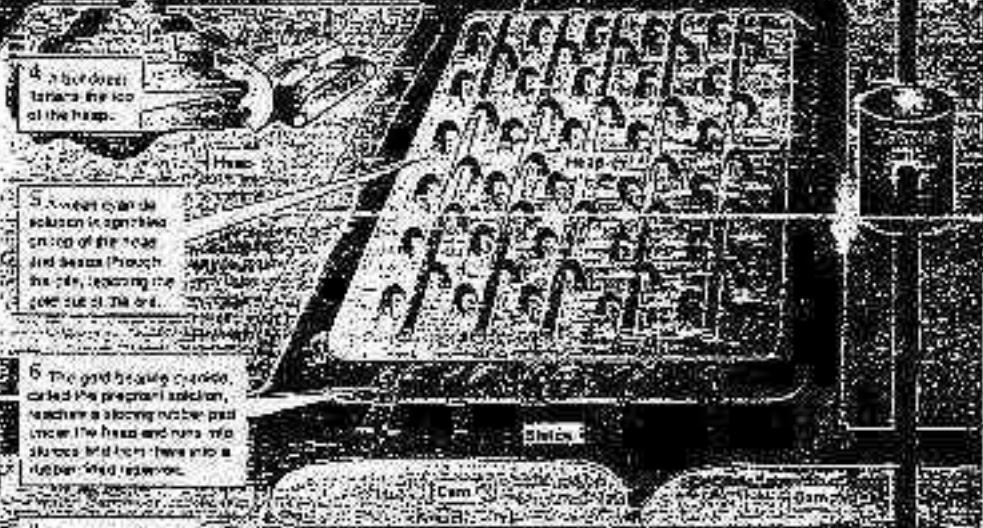


4 A tractor treads the top of the heap.

5 A weak cyanide solution is sprinkled onto the heap and seeps through the pile, leaving the gold out of the ore.

6 The gold-bearing cyanide, called the pregnant solution, reaches a sloping rubber pad under the heap and runs into skimmers and then flows into a rubber-lined reservoir.

7 The pregnant solution is pumped into the processing unit.



8 The cyanide solution is pumped into the processing unit to be used on other heaps.

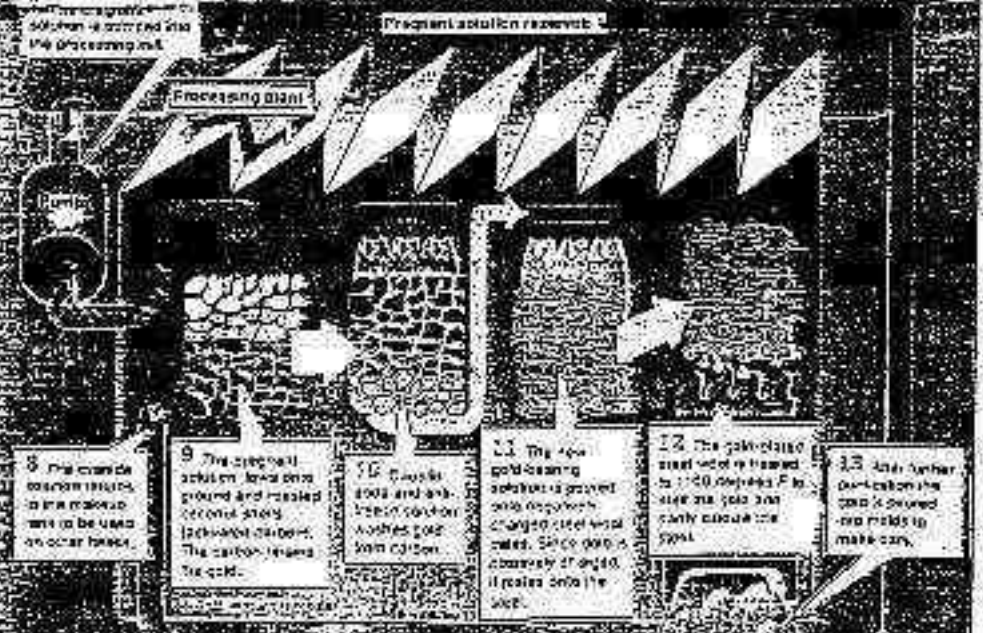
9 The pregnant solution flows over ground and roasted second-stage (activated) carbon. The carbon releases the gold.

10 Slurry goes to a filter and carbon washes gold from carbon.

11 The new gold-bearing solution is pumped into a separator. Charged steel wool pads catch the gold. Since gold is heavier than silver, it settles onto the steel wool.

12 The gold-laden steel wool is treated by 1:100 cyanide. It is used on gold and partly recycles the cyanide.

13 After further purification the gold is poured into molds to make bars.



Second, let me address the perceived negative environmental impacts of the preliminary prospecting work proposed in the permit application. Obviously, a few hand dug trenches and a bore hole do not pose any significant threat to the ecosystems in the area. If this kind of exploration is conducted using normal accepted exploration practices and proper reclamation procedures are followed the impacts are negligible. The assertion by several of the individuals opposing this application that this cursory kind of exploration poses a threat to the area's environmental health is not based on fact, just opinion. Exploration of this kind takes place all over the country... often on public lands... every day, and the impacts are not threatening either the health of our forests or the forests occupants.

Thirdly let me address the perceived fear that this exploration will automatically lead to a mine. It might, but in most cases it doesn't. Mineral deposits, particularly those that are considered economic, by their very nature are elusive to identify. Mining companies look at literally thousands of prospects each year... very, very few get past the preliminary prospecting stage (soil sampling, rock chip sampling, trenching and drilling) and even fewer become mines. Most companies in the exploration and mining business look at thousands of prospects every year and many years go by with no discoveries. And then, even when a promising mineralized zone is identified, usually by drilling, its identification still does not guarantee its economic feasibility. In fact, most prospects do not become mines.

Wouldn't this be nice... BUT please see letter to Strom Thurmond!

Again, let me state my support for approval of Mr. Leonard's BLM Harlock Prospecting Permit Application. If possible, could you please let me know how the USFS decides to handle this.

Since  
*Ch. Paul*  
Christopher Paul  
Geologist



**CASE STUDY****Heavy Rains Burst South Carolina Dam:****Major Cyanide Spill**

**A**pproximately 10 million gallons of cyanide solution flooded a South Carolina river on 28 October 1990, after a failure in an earthen dam at the Brewer Gold Mine near the city of Jefferson. The discharge began at about noon, and the cyanide-contaminated stormwater raced down from a reservoir at the mine into a tributary of the Lynches River.

Cyanide concentration of the spilled water was approximately 50 parts per million (ppm). Cyanide levels of 18 to 20 ppm were detected in the river near the Brewer mine, with levels of 0.3 ppm farther downstream. A cyanide concentration of just 0.005 ppm can have debilitating effects on fish, and 0.5 ppm is lethal to some species.

As many as 10,000 fish were killed by the spill, although a final total has not been determined. State officials are also concerned about the possible introduction of copper into the river. Copper is highly toxic to aquatic life.

Although the spill did not threaten any public drinking water supplies, the officials did issue warnings to residents against swimming in or drinking from the Lynches River.

The Brewer mine produces gold using the increasingly common cyanide heap-leach process. Gold ore is pulverized, spread out over a plastic liner, and sprayed with a dilute cyanide solution. The cyanide solution bonds to gold — and a host of other metals — present in small quantities in the ore. Gold is typically recovered from the resulting pregnant solution by adsorption onto carbon (charcoal) and the barren cyanide solution reapplied to the leach piles.

The damaged reservoir at the Brewer mine, which is designed to hold excess runoff cyanide solution until it can be processed, was only completed in February and had not been tested by high water levels. Extremely heavy rains in early October swelled the reservoir from about 200,000 to 13 million gallons; this heavy rainfall is being blamed for the accident. Although the reservoir has a double synthetic liner and leak detection equipment, the dam may have been susceptible to erosion by ground water, the level of which was

raised by the storm. The dam was not overtopped, and most of its structure remains intact.

Earlier in October, the same storm caused a 420,000-gallon spill of cyanide solution at the Brewer Mine when debris blocked a lined channel used to carry pregnant solution from the leach pads to a processing plant. Although flow of the pregnant solution was cut off almost instantaneously, it was seven hours before stormwater runoff containing 170 ppm of cyanide could be prevented from spilling into the river drainage.

---

**As many as 10,000 fish were killed by the spill, although a final total has not been determined. State officials are also concerned about the possible introduction of copper into the river. Copper is highly toxic to aquatic life.**

---

Brewer had been previously fined \$25,000 by the EPA for failure to notify federal officials of a spill that occurred at the mine in 1988.

In the aftermath of recent failure, Brewer constructed an emergency sump pond below the reservoir and a new emergency impoundment with a 4 million gallon capacity to contain further runoff. Brewer officials plan to discharge the water remaining in the damaged reservoir after treating it with oxidizing agents to destroy the cyanide.

Brewer is now required to study the impacts of the spill on the biota of the Lynches River and to hire a independent team of engineers to determine the cause of the dam failure. Brewer appears to have violated its Clean Water Act discharge permit, although it is unclear if the state will take action against the company. \*

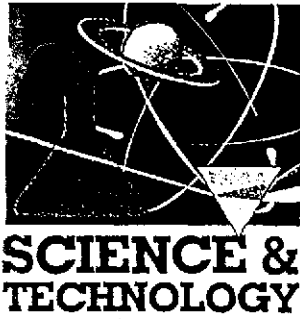
## Gold Prospecting in Oconee County

Jim Bates, Archeologist, USFS  
10/16/95

Several gold discoveries were made in Oconee County during the early nineteenth century. The period of most intensive prospecting and mining was in the 1850s. Gold was found along the Chattooga, Seneca, Keowee Rivers and on Coneross, Tomassee, and Cheohee Creeks. Most gold was located in placer deposits or in stringers or veins of auriferous quartz and in mica schists. Exploration was extensive. Old prospecting pits and sometimes tunnels are visible on ridgetops and flanks in those areas of Oconee County where gold traces were found. The prospectors generally dug holes to get ore samples from quartz or other potential gold bearing rock veins. An assay measured the gold and other mineral content of the sample helping to determine if the minerals could be profitably mined.

Very few deposits were found to be rich enough to be mined using the methods of the nineteenth century. Perhaps the most productive mine in Oconee County was the Kuhlman Mine on Cheohee Creek west of Salem. A placer deposit was worked there in the 1850s followed by shafts to excavate pyritic gold bearing quartz veins. Mining ceased in the early 1860s.

Prospectors are returning to Oconee County in recent years. Many old time methods such as gold panning in streams is still used to locate gold. Holes are drilled to explore buried mineral veins and obtain ore samples. Modern gold extractive methods make it economically feasible to mine some deposits which were once considered too poor to mine. Gold is currently being profitably mined near Ridgeway in Fairfield County, S. C. from deposits which contain 0.033 ounces of gold per ton of ore (from: Carolina Gold; A History of Gold Mining in South Carolina. Ridgeway Mining Company, no date).



## SCIENCE & TECHNOLOGY

■ 'These [cyanide mining] heaps are the toxic waste Superfund cleanup sites of the future.'

Andy Kerr,  
Oregon Natural  
Resources Council

# Gold Rush Poses Threat to Land

*Environmentalists push for reclamation regulations as industry turns to earth-disrupting 'cyanide heap-leach' mining*

By Brad Kalckerbocker

Staff writer of The Christian Science Monitor

MALHEUR COUNTY, ORE.

**A**CROSS the sparse, dry reaches of southeastern Oregon, a new species is proliferating among the rocks and sand and sagebrush. Specimens stand slim and still as cactuses, and upon closer inspection turn out to be lengths of white PVC pipe driven into the ground to mark mining claims — upward of 400,000 to establish the 65,000 claims that have been filed in recent years.

This is all part of the "new gold rush" that has swept the West, the result of three things: gold prices of \$300 to \$400 an ounce, a method of extraction that allows miners to separate microscopic bits of the precious metal from tons of hitherto worthless ore, and what critics say are lax government regulations.

The late 20th-century version of the grizzled codger with the dusty burro and pickax is a multimillion-dollar outfit with huge earth-moving vehicles and truckloads of cyanide pellets. The earth is dynamited, then bulldozed, and scooped into huge mounds. A weak solution of sodium cyanide is sprayed over the mountain of ore. Tiny bits of gold adhere to the cyanide, which drains off into "pregnant ponds,"

and it is then carried by pipe to a nearby plant for separation.

With production costs of \$200 an ounce, this "cyanide heap-leach" mining can be very profitable. (The price of gold is \$367.40 an ounce at this writing.) As such facilities sprouted up across the West over the past decade — about 160 gold mines now operate on public lands — United States production leapt from 1 million ounces a year to 9.5 million ounces.

But the process requires a large-scale operation that tears up the countryside. About 400 tons of earth are moved to obtain the 20 tons of ore necessary to produce a single ounce of gold. A proposal by the Atlas Corporation for Grassy Mountain near Vale, Ore., would create a pit 2,000 feet in diameter and 800 to 1,000 feet deep. Some 150 million tons of earth would be moved to produce 32 tons of gold — about enough to fill a pickup truck.

"We're looking at tremendously deep holes that will not be filled," says Gary Brown, leader of a grass-roots group called Concerned Citizens for Responsible Mining. Upward of a dozen heap-leach mining proposals are anticipated in the state, described by Mr. Brown as "the last frontier for the industry to conquer."

The environmental record for cyanide mining in other states is far from perfect. Last October, Echo Bay Minerals agreed to pay

\$500,000 in government fines and donations (to the Nature Conservancy) as part of a guilty plea on 25 counts of killing migratory birds at a tailings pond in central Nevada. This is said to be the largest fine ever for violations of the Migratory Bird Treaty Act. Also in October, about 10 million gallons of cyanide solution flooded a tributary of the Lynch River in South Carolina when an earth dam belonging to the Brewster Gold Mine failed. At least 10,000 fish were estimated to have been killed.

In the West, many of the cyanide mines are along the Pacific flyway. Especially in desert areas, thirsty, tired birds are attracted to what look like pristine ponds. Mining companies erect nets and fire noise cannons, but these are not foolproof. The cyanide ponds are lined with plastic sheets, but these frequently leak into streams and ground water.

When pits are dug, toxic heavy metals are exposed as well. Although records are incomplete, tens of thousands of birds and mammals are known to have died as a result.

"These heaps are the toxic waste Superfund cleanup sites of the future," warns Andy Kerr, conservation director for the Oregon Natural Resources Council.

The federal Surface Mining Act requires environmental protection and reclamation of open-pit coal mining, but does not apply to hard-rock minerals like gold. The US Bureau of Land Management is charged with overseeing mining on all federal lands (where most Western gold mines are located) and enforcing other environmental laws, but critics say the bureau is not doing its job.

"The agency's position right now can be summed up in three words: 'Can't Say No,'" says Phillip Hocker, president of the Mineral Policy Center, a private mining reform research and lobbying group in Washington, D.C.

Some mine-company executives acknowledge that their industry must do more to protect the environment. "We do need to encourage recycling to the maximum. We do need to encourage conservation," says R. K. Urnovitz, manager of government relations for the Northwest Mining Association in Spokane, Wash.

"We cannot restore the land, but we can reclaim it," says Mr. Urnovitz. "We can't put back every rock, but we can reclaim the land, and we can protect water

quality. In fact we should be required to."

A recent agreement between a Canadian company and environmental groups regarding a proposed gold mine in the East Mojave National Scenic Area of California may be a model for the future.

The Viceroy Gold Corporation will use enclosed storage tanks for the cyanide solution, place liners underneath the ore piles, install electronic monitors to warn of leaks, and put up fences to keep out wildlife. The company also will re-contour the landscape, plant native species of vegetation once the mining is complete, and pay \$2 million into a fund for environmental restoration.

**T**HE negotiated agreement does not fully satisfy critics who question the need for any degradation of nature to extract a mineral that is used mainly for jewelry. But the fact that Viceroy can do all of this and still make a profit is encouraging to those pushing for stricter state and federal regulations as well as tougher enforcement of existing land-use laws.

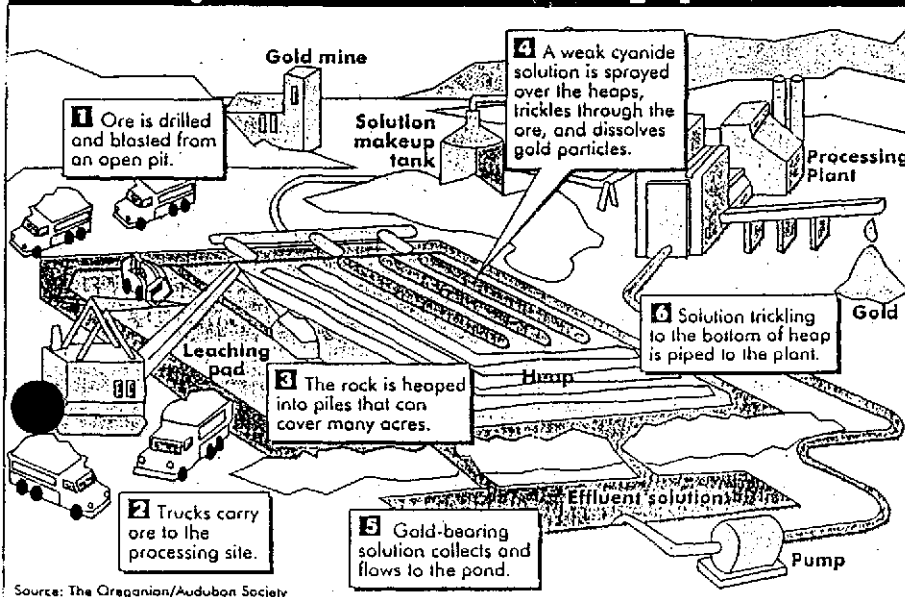
Although there has been no test case yet, the US Supreme Court has told states they may pass reclamation regulations. Another avenue may be reform of the 1872 US Mining Law (see related story), which at present says nothing about reclaiming hard-rock mining areas.

"We want up-front financial security on total reclamation," says Roy Elicker, an attorney for the National Wildlife Federation. "We want the pits to be back-filled, we want the land re-contoured and restored to pre-mining uses, we want the topsoil replaced and native vegetation successfully reseeded."

Here in Oregon, bills to protect the environment from the effects of mining are about to be considered. If the mining industry is able to fend off new legislation, environmentalists say they'll take the matter to the voters via an initiative. As the demography of the region changes from rural to urban, and with it comes greater concern for protecting the environment, the time may be ripe for change.

"My mother taught me if I made a mess I had to clean it up," says Andy Kerr of the Oregon Natural Resources Council. "We don't have any land to spare, even out West."

## How a Cyanide-Leach Gold-Processing System Works



Source: The Oregonian/Audubon Society

(30)

Maintain an effective professional, technical, and managerial work force that is knowledgeable of (a) the geologic characteristics of mineral deposits, (b) the techniques of mineral exploration and development, (c) the principles of ecosystem management, and (d) mineral laws, regulations, policy, and guidance.

Ensure that only certified mineral examiners perform investigations and prepare reports which require the examination of the mineral or geologic character of the land.

Certify personnel who perform or oversee the analysis, review and administration of plans of operations for mineral and energy operations and their reclamation.

Require reclamation plans for all proposed surface-disturbing activities to return the land to productive uses consistent with the ecological capability of the area and in accordance with land management goals.

Process mineral applications, operating plans, leases, licenses, permits, and other use authorizations efficiently and in a timely manner. Deal with applicants and operators in accordance with the principles of customer service.

Plan and provide for access to and occupancy of National Forest System lands for mineral resource activities, consistent with the overall management objectives and the rights granted through statutes, leases, licenses, and permits. Eliminate or prevent occupancy that is not reasonably incident to and required for the mineral operation.

Ensure that mineral or energy activities conducted in congressionally-designated or other withdrawn areas are supported by valid existing rights.

Prior to initiating the administrative withdrawal of National Forest System lands from mineral entry, ensure the full consideration of (a) the national interest in rural community development, (b) the value of the mineral resource foregone, (c) the value of the resource or improvement being protected, and (d) the risk that the renewable resources cannot be adequately protected pursuant to application of the Minerals Surface Use Regulations.

Ensure private rights are respected in all resource management decisions.

Ensure the uniform application of resource protection and reclamation standards for mineral-related exploration and development projects.

/s/ Jack Ward Thomas  
Chief, Forest Service  
03 AUG 1995

# MINERAL POLICY CENTER

• 1612 K STREET, NW, SUITE 808 • WASHINGTON, DC • 20006 • 202-887-1872 •

## THE SUMMITVILLE MINING DISASTER A Poisoned River Runs Through It

17 November 1994

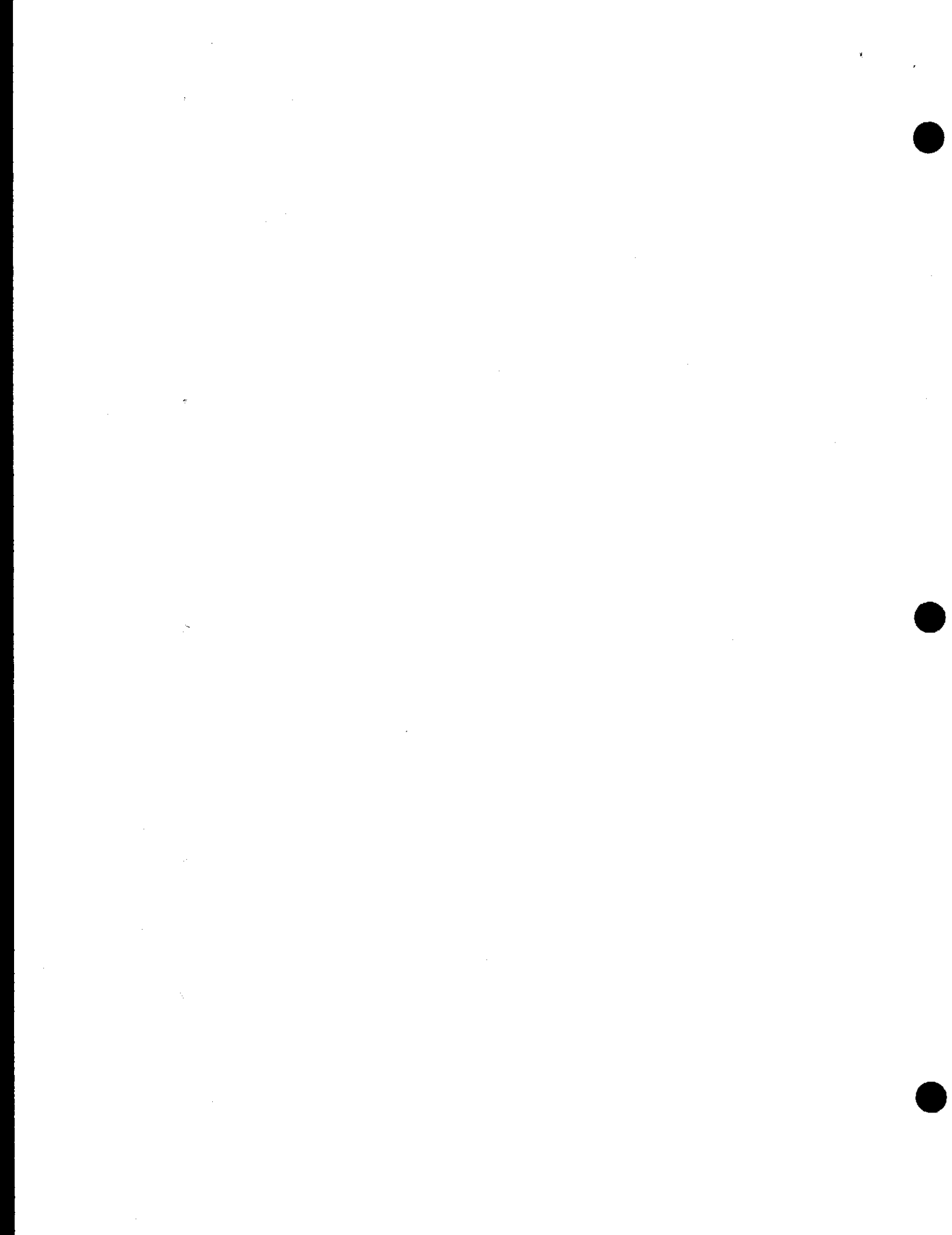
On 3 December 1992, the Summitville Consolidated Mining Company (whose Canadian based parent is Galactic Resources Ltd.) declared bankruptcy and walked away from its environmentally disastrous cyanide heap-leach gold mine in the San Juan Mountains of southern Colorado.

The Summitville mine's problems started from its very inception. The valley-fill design for the heap-leach was ill-conceived but quickly approved by the State of Colorado's Mined Land Reclamation Division (MLRD). State officials set the initial bond for the site at \$1.3 million. The State claimed it had little discretion and weak authority to deny deficient permits, require conditions to improve them, or require adequate bonds. This troubled beginning was further complicated in 1986, the year the mine opened, when the Colorado legislature temporarily eliminated the budget for MLRD. James Pendleton, Colorado's chief geologist, said this action primarily resulted in no state MLRD inspections being conducted on Colorado mines for one and a half years.

By the time inspectors came back, serious environmental problems prevailed throughout the site - the liner was leaking; too much water flowed into the mine; and periodic cyanide spills occurred, allegedly wiping out aquatic life in 17 miles of the Alamosa River. On several occasions, the State slapped the Company on the wrist with modest fines and remedial plans. However, the Company continued their operation and State ordered abatement activities aimed at correcting these severe problems continued to fail. These environmental problems eventually forced the State to require Summitville to raise its total bond to \$2.2 million in 1989.

In July of 1992, Summitville and the State signed a revised agreement whereby the company would complete remediation and reclamation of the site by 30 November 1992. The total bond was raised to \$7.2 million. A condition of the "clean-up settlement required the State to refund back to the Company \$2.5 million of the bond during different





# Taxpayers get \$15 million shaft in Summitville mine fiasco

**E**ver since Colorado voters approved the Amendment 1 tax-limitation measure, most government officials have been trying to cut costs and increase efficiencies. But Gov. Roy Romer's environmental regulators responded differently.

They wasted \$15 million.

In a pathetic series of stumbles and bumbles, state officials let a Canadian mine company transform a southern Colorado mountain into a festering toxic shaft — and then stick taxpayers with the cleanup bill.

State regulators knew from the very beginning that the Summitville gold mine posed a major environmental risk. Constructed near the headwaters of the Rio Grande near Wolf Creek Pass, the Summitville operation involved spraying millions of gallons of cyanide-laced fluids



onto huge piles of crushed ore.

The plan was for the cyanide to separate the gold chemically from the rock. The fear was that the cyanide might leak out and pollute the surrounding national forest.

It didn't take long for fear to become reality. Work crews built the Summitville heap-leaching pile with a faulty protective liner, officials say, and cyanide soon

began oozing out.

The first environmental violations were detected in June 1986, two years after Summitville began operations. State mine inspectors slapped the Vancouver-based company on the wrist with a \$3,600 fine for failing to do required cleanup work and hurting a nearby creek.

**THAT SAME MONTH**, the state found cyanide seeping through the protective liner. Regulators ordered mine executives to build a pumping system to contain the contamination.

In June 1987, Summitville's pumping system broke down. The mine operation dumped at least 85,000 gallons of cyanide-laced water into a Rio Grande feeder creek — and the Colorado Health Department slapped Summitville's wrist again with a \$27,000 fine.

By 1990, concentrations of several heavy metals had doubled in a creek downstream of Summitville. Cyanide pollution levels were 25 times greater.

Summitville's wrists were slapped again with a \$100,000 fine in 1991. But that penalty was couched further by a special state exemption that permitted Summitville to violate standards for silver pollution for another 16 months.

By then, though, the pollution had taken a heavy toll. State wildlife officials said almost all aquatic life was wiped out in 17 miles of the Alamosa River downstream of the leaking mine.

Once again, the mine managers promised to do better. Once again, the state regulators took them at their word. Instead of shutting down Summitville for repeated environmental law-breaking, the state gave the mine another chance.

But last week, Summitville went bust. Complaining of rising environmental costs, the mine company filed for Chapter 7 bankruptcy protection.

**ROMER'S WATCHDOGS** didn't anticipate this maneuver. All they required of Summitville was to post a \$47 million bond for cleanup. But officials say cleanup will cost \$20 million — a burden that usually falls on government.

So, Summitville will keep leaking more toxic wastes until taxpayers kick in the extra \$15 million.

Thanks to Romer's regulators, the mine operators got to haul off 280,000 troy ounces of gold.

Taxpayers got the shaft.

Mark Obmascik's environmental column appears on Saturday in Denver & The West.

- (3) Specific facts or comments along with supporting reasons that you believe the Responsible Official should consider in reaching a decision.

If you have questions regarding this proposal, please contact Greg Borgen at 803-638-9568.

When the Decision Memo is prepared, it will be mailed only to persons who:

- submit comments on the proposal, or
- request a copy of the Decision Memo by phone or letter.

Please keep in mind that this proposal includes only the prospecting activities described above. If the applicant finds a sufficient amount of recoverable minerals, he may apply for authorization to mine. Before the Forest Service would make a decision on a mining proposal, additional public involvement and environmental analysis would be conducted.

Sincerely,

*J. Kild*  
For ELIZABETH W. MERZ  
District Ranger

United States  
Department of  
Agriculture

Forest  
Service

Andrew Pickens  
Ranger District

112 Andrew Pickens Circle  
Mountain Rest, SC 29664

File Code: 1950/2820

Date: March 29, 1995

The Forest Service proposes to authorize a request by an individual to prospect for minerals in the Crooked Creek area (see attached map). The project consists of the following actions:

-Drilling a well to a depth of about 200 feet with a truck-mounted drilling rig. Water would be pumped to the drilling rig by a pump adjacent to the creek about 500 feet east of the site. Hose would be laid from the pump to the drilling rig. No chemical drilling mud would be used. Drilling would take about two to three days. The spoil material from the well (approximately one half of a cubic yard) would be spread on the old road bed and vegetated.

-To access the drilling site, Road 743D would be opened. Trees and shrubs on the road would be cut. No excavation would be needed on the road. The road would be closed after drilling was completed.

-Six hand dug shovel trenches would be dug. The maximum length, width, and depth of the trenches would be 30 X 2 X 4 feet. The trenches would be filled in on the same day they were dug.

Before a decision is made on this project, a Biological Evaluation of its effect on proposed or listed threatened or endangered species, and sensitive species, will be prepared.

The project has been surveyed by a Forest Service Archaeologist. No significant cultural resources were identified which would be affected by this action, and the Deputy State Historic Preservation Officer's concurrence is on file. In accordance with the regulations prescribed in 36 CFR 200.4(d), the proposed action would have no effects on any National Register site or eligible property.

Environmental analysis is currently being conducted for this proposal. It is anticipated that a Decision Memo will be prepared in accordance with Forest Service Handbook 1909.15, Section 31.2. The Decision Memo will explain the final decision made for the project.

If you wish to provide comments on this proposal please mail them to me at the address listed in the letterhead by May 5, 1995. Your comments need to contain the following:

- (1) Your name, address, and (if possible) telephone number;
- (2) Title of the document(s) on which comment is being submitted (This document is titled "Commercial Prospecting Scoping Letter"); and

# Mine's toxic leaks render river lifeless

## Despite fines, promises, cyanide flowing into Alamosa River and downstream

By Kit Miniclier  
Denver Post Staff Writer

Deadly cyanide-laced water from a huge gold mine near Wolf Creek Pass has killed all aquatic life in 17 miles of the Alamosa River and the Terrace Reservoir, and it may have seeped downstream to the Rio Grande, say state and federal officials.

The leaks from Summitville Consolidated Mining Co. continue, despite a \$100,000

fine levied against the company this year, agreements to take remedial actions, closure of the once-popular fishing reservoir after a massive fish kill and complaints from downstream users.

"We went up to the mine last month to investigate reports of an environmental disaster and we found an environmental disaster," said Mark Hughes, an attorney with the Sierra Club's Legal Defense Fund.

"I was appalled. There seemed to be substantial leaks and runoff, and the mine operators didn't seem to know where it came from or what might be in it."

The sprawling open-pit mine is 11,700 feet above sea level and about 16 air miles southeast of the summit of Wolf Creek Pass in southern Colorado.

A Colorado Department of Health video of the seepage showed brilliant blue sludge and water — ranging in color from

orange to yellow to molasses — leaking into natural waterways from the mine site last summer.

"This ought to be on the 9 o'clock news," observed the filmmaker on the unedited video.

The company, a wholly owned subsidiary of Galactic Resources Inc. of Canada, is using 40 million to 50 million gallons of

Please see MINE on 7A

# Gold mine's leaks deadly for aquatic life

MINE from Page 1A

cyanide-laced water in the 45-acre heap leaching process to extract gold from several million tons of ore, said mine general manager Bill Williams.

"We've got problems, there is no question about that," Williams readily admits, explaining that about 100 gallons of water a minute are leaking from the leach heap.

An elaborate system of ditches and ponds is designed to catch the leaks and either pump the fluids back to the leach pad, or treat them and then spray the treated water on the landscape.

However, under an agreement between the company, state health department and Mined Land Reclamation Board, the company ceased landscaping applications on Oct. 30.

"At this point, there isn't any acid runoff from the heap," Williams said. "We feel we are on the right track, and we are going to clean this place up."

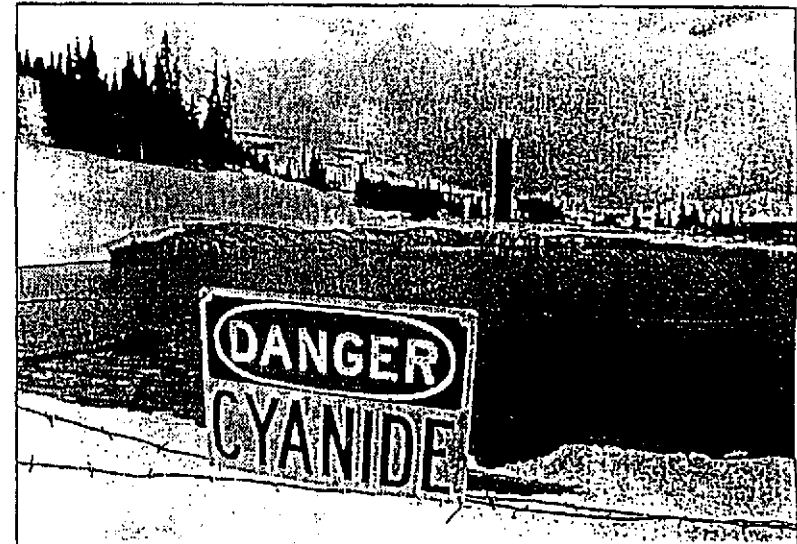
The company expects to continue leaching operations at least another six months, though it finished mining operations this fall.

State game officials stopped stocking the Terrace Reservoir with 15,000 trout fingerlings annually after a massive cyanide leak rolled down Whiteman Creek into the Alamosa River in 1990, killing all life in 17 miles of the river and in the reservoir, which is south of Del Norte, said Jerry Apker of the division of wildlife.

The fish kill extended 7 or 8 miles below the reservoir, killing fish in at least one private farm pond, and may have reached the Rio Grande.

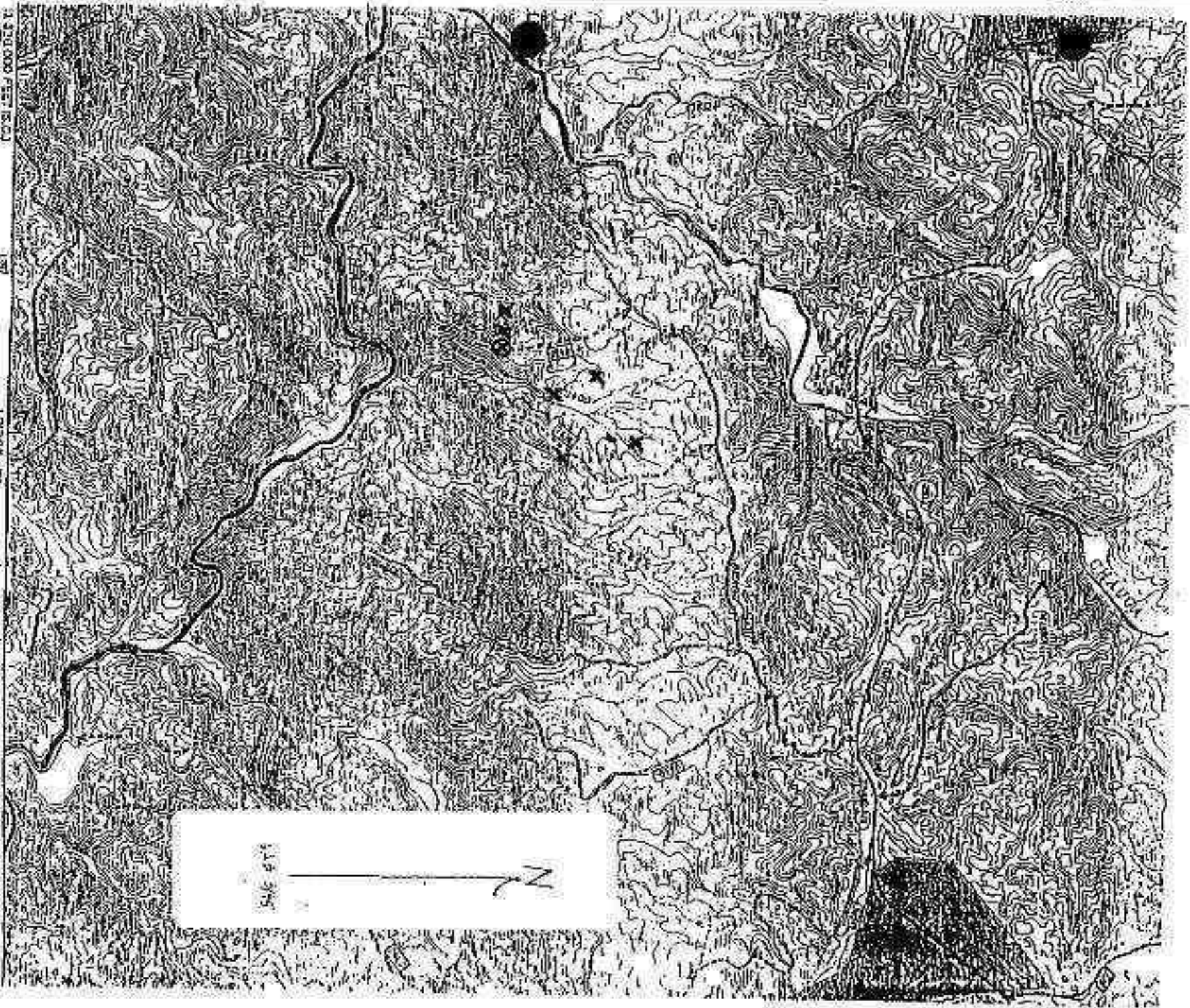
The first reported fish kill attributed to the mine occurred in 1986, shortly after the operation began. The most recent was six weeks ago, when 500 to 1,000 gallons of the cyanide-laced water spilled into Whiteman Creek.

EDUCATIONAL MATERIAL FROM  
MINERAL POLICY CENTER  
1325 MASSACHUSETTS AVE. NW, #550  
WASHINGTON, D.C. 20005



**DEADLY WATER:** A sign warns of the danger at one of the Summitville Consolidated Mining Co.'s holding ponds.

The Denver Post / Kari Gahring



1:24,000 FEET (SCAL)

1891

1231' 28"

1891

(MOLL'S SPAINISH)

543 345

**LEGEND**

- X Tracer Locations
- Drill Site



SCALE 1:24000

CONTOUR INTERVAL: 20 FEET  
NATIONAL GEODETIC VEERTICAL DATUM OF 1929  
LEGEND

(3)

phases of this work. In the late fall, the State went ahead and refunded 1/3 of the total bond despite continued site failures and a report issued in August 1992 estimating that site clean-up could cost up to \$70 million. Another report estimated clean up costs at a minimum of \$20.6 million. On 3 December, a few weeks after the bond refund, Summitville filed for bankruptcy. On 26 January 1993, Summitville's parent company, Galactic Resources, Ltd. filed for bankruptcy in Canada. A \$4.7 million bond is all that remains with the State.

On 16 December 1992, EPA's Superfund program took control of the site at the State's request. EPA currently spends approximately \$35,000 a day to treat the cyanide waste. Costs of treatment of the waste water alone total more than \$20 million. EPA expects to spend \$30 million more to clean all of the waste water. As a result of this catastrophe, Colorado legislators finally adopted stricter regulations hoping to prevent future environmental mining disasters like Summitville.

In an action that defies reason, the County of Rio Grande attempted, on 21 October 1994, to auction off the waste treatment and other equipment (previously owned by Galactic and now used by EPA). County officials wanted to prove their title to the equipment in order to recoup part of the \$1.3 million in back taxes owed by Galactic. EPA issued a unilateral administrative order which prevented the county and its agents from taking any action to remove property being used by the EPA. Without the use of the waste treatment equipment, severe environmental damage would undoubtedly result. If EPA were to discontinue treatment, weather and the elements would overwhelm the mine structures which would likely result in a massive spill of over 100 million gallons of cyanide laced water into the Alamosa River. The Alamosa supplies water to ranchers and farmers in the San Luis Valley and feeds into the Rio Grande River - 40 miles away.

Since 1986, Galactic Resources extracted 280,000 troy ounces of gold at the Summitville mine. On 31 May 1994, EPA officially listed the site on the Superfund programs' National Priority List. Total reclamation of the site will cost EPA and the US taxpayers around \$120 million.

For More Information Contact  
Jim Lyon, Mineral Policy Center  
202/887-1872

FOREST SERVICE  
MINERALS PROGRAM POLICY  
8/95

The Federal Government's policy for minerals resource management is expressed in the Mining and Minerals Policy Act of 1970, "foster and encourage private enterprise in the development of economically sound and stable industries, and in the orderly and economic development of domestic resources to help assure satisfaction of industrial, security, and environmental needs." Within this context, the National Forests and Grasslands have an essential role in contributing to an adequate and stable supply of mineral and energy resources while continuing to sustain the land's productivity for other uses and it's capability to support biodiversity goals.

OBJECTIVES. Exploration, development, and production of mineral and energy resources and reclamation of activities are part of the Forest Service ecosystem management responsibility. The Forest Service will administer its minerals program to provide commodities for current and future generations commensurate with the need to sustain the long term health and biological diversity of ecosystems. Accordingly, the Forest Service will strive to:

Ensure that exploration, development, and production of mineral and energy resources are conducted in an environmentally sensitive manner and that these activities are integrated with the planning and management of other resources using the principles of ecosystem management.

Facilitate the orderly exploration, development, and production of mineral and energy resources within the National Forest System on lands open to these activities or on withdrawn lands consistent with valid existing rights.

Maintain opportunities to access mineral and energy resources which are important to sustain viable rural economies and to contribute to the national defense and economic growth.

Ensure that lands disturbed by mineral and energy activities, both past and present, are reclaimed using the best scientific knowledge and principles and returned to other productive uses.

POLICY. The Forest Service will administer its minerals program within the overall context of the principles of ecosystem management. Accordingly, the Forest Service will:

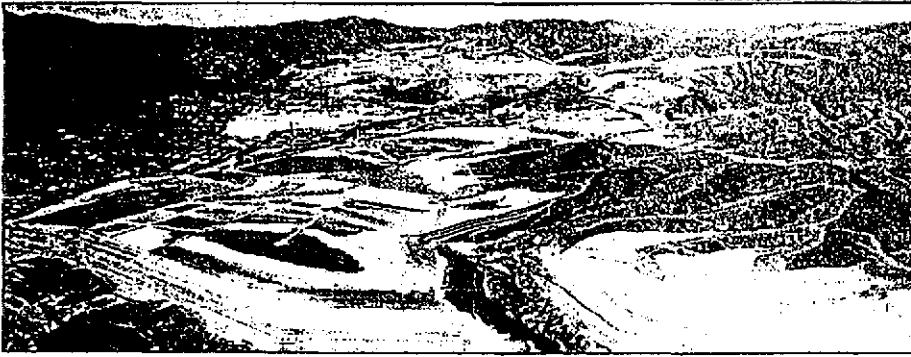
Ensure that mineral-related activities are in accordance with our legal and regulatory authority.

Coordinate and cooperate with other Federal and State agencies having authority and expertise in mineral-related activities.

Coordinate and cooperate in a collaborative manner with interested public, industry, and community representatives. Foster partnerships with industry to increase knowledge of development potential of the mineral estate.

Ensure the integration of mineral resource programs and activities with the planning and management of renewable resources through the land and resource management planning process, recognizing that mineral development may occur concurrently or sequentially with other resource uses. How?





PHILIP M. HOCKER/MINERAL POLICY CENTER

**BIG DIG.** Mining reform centers on low-cost development rights afforded Western operations, such as this one in Arizona.

## Sides Dig In on Mine Law Debate

SALEM, ORE.

CONSERVATION groups, lawmakers, and federal agencies are wrestling over a 19th-century United States mining law that helped "win the West" but left a controversial legacy of environmental exploitation and private profit at public expense. The law is defended by the mining industry and some federal officials who say it does a good job of providing the nation with valuable minerals and the West with economic development, criticized by those who say it is as out of date as a single-action revolver.

Leading the charge for reform on Capitol Hill is Sen. Dale Bumpers (D) of Arkansas, who sums up the problem this way: "Why should the federal government give a deed to federal lands for \$2.50 an acre, allow billions of dollars worth of minerals to be removed from that land, not receive a penny in royalties, and in some cases be required to clean up the mess once the mining has been completed?"

Enacted when Ulysses S. Grant was president and Custer still thought he was a great Indian fighter, the Mining Law of 1872 said miners could stake a claim on potentially profitable federal land. If there was good evidence of valuable minerals on the land they could obtain a patent (legal title) and reap all the profits. The law lured thousands of prospectors to seek their fortune in gold, silver, and copper.

Later laws established restrictions on most forms of natural resource extraction. The Mineral Lands Leasing Act of 1920, for example, retained government title to lands with energy resources like coal, gas, and oil — and required developers to pay royalties on profits from lands they leased. Environmental laws passed in the 1970s set up reclamation requirements and other safeguards against the damages of strip mining.

But the 1872 hard-rock mining law remained largely unaffected by these changes. Claims still can be held for years by doing only \$100 worth of work a year on the land. Patents still can be obtained for as little as \$2.50 an acre if there is evidence of valuable minerals in the ground. The land can be sold off once title has been obtained. And no royalties need be paid to the public treasury.

Since the mining law was passed 119 years ago, 1.2 million claims totaling 35 million acres have been filed, and about 3.2 million acres in federal lands (an area the size of Connecticut) have been decided over to hard-rock miners.

Defenders of the law are quick to point out that miners typically must spend hundreds of thousands of dollars to develop a claim to the point where it can be patented.

"Without the assurance of a patent, many mining companies would not take the risk of fully

developing a claim, a claim which might offer valuable minerals vital to our national security," Sen. Harry Reid (D) of Nevada told his fellow lawmakers in debate last fall. Mr. Reid (whose father was a hard-rock miner) further asserted that "mining operations give enormous benefits to the typically rural areas where they are located ... further jobs, further revenue for the county, further development."

IN 1989, the US General Accounting Office (GAO) recommended that the patenting provision of the 1872 law be eliminated and that royalties be paid from mining revenues.

"Escalating land prices, primarily near expanding communities, resort areas, and tourist attractions, have made the act's patent provision an attractive means of acquiring title to valuable land for nonmining purposes," the GAO report states. Some patent holders reaped "huge profits at the government's expense," said the GAO. In one instance, the federal government sold 17,000 acres for \$42,500, only to have the owner turn around a few weeks later and sell it to major oil companies for \$37 million.

The GAO report brought stiff rebuttal — not only from the American Mining Congress, which cited "three dozen errors of fact," but also from the Bureau of Land Management (BLM), the federal agency that oversees mining. According to the BLM, just 29 percent of applicants for a patent are approved. GAO's recommendation that claim holders pay an annual holding fee of \$1,000, the BLM says, "would cripple the search for hard-rock minerals."

"This, in turn, could force exploration companies to look at foreign sources such as Australia, Asia, and Latin America," warned the BLM. "Such a reduction in minerals exploration would have significant effects on the general economy of the mining states of the West."

Last year Senator Bumpers lost by two votes an amendment that would have eliminated the patenting of mining claims. This year he's back with a "Mining Law Reform Act" that would give the federal government a royalty of 5 percent of the gross value of minerals found (one third to be set aside in trust to clean up abandoned mines), require reclamation plans along with bonds or other forms of security to see that reclamation was performed once mining was completed, give federal agencies new authority to protect the environment in mining areas, and eliminate patents.

Stewart Udall, former secretary of the interior and now board chairman of the Mineral Policy Center in Washington, D.C., calls such reform "the most important piece of unfinished business on the nation's natural resource agenda."

— Brad Knickerbocker

## The New Hieroglyphics

IN 1799, French soldiers stationed in Rosetta, Egypt, came across a curious block of basalt.

Greek was inscribed along the bottom third of the rock. The middle portion carried Egyptian script; along the top, the mysterious ancient hieroglyphics. Scholars quickly realized its significance.

The Rosetta stone became the key to deciphering Egyptian picture-writing 20 centuries old.

Today we are grappling with a new Rosetta stone. It is not rock this time but wires and plastic and blips of light. We didn't discover it. We're not using it to decipher an ancient culture. We are building it to understand each other.

On Wednesday afternoons in a New York City school in Harlem, Haitian schoolchildren log onto a personal computer to communicate with other Haitians. The language they use is Creole. Researchers hope these computer conversations will push students to strengthen their native writing skills and, one day perhaps, their English.

On the upper peninsula of Michigan, students at Michigan Technical University use computers to communicate around the world. These budding engineers, sometimes ill at ease in social settings, lose their inhibitions — even "date" — once they log on to a computer.

In Parsons, Kan., Charles Spellman has developed a picture language to teach learning-disabled



students how to cook, shop, and do everyday chores. So far computers help him put out his instruction books. In a few years, he hopes they'll train and help his students live more independently.

Quite a tool, this new Rosetta stone. No need to choose between hieroglyphics or Greek, pictures or text. The personal computer has it all — even sound in an increasing number of cases. Can't write a letter? Draw it. Or even say it. Then send it off to your friend.

But these machines do more than expand communications. They are changing the way we communicate.

Marcia Peoples Hedio first noticed it four years ago in her writing classes at the University of Delaware. Students who wrote with a graphics-based Macintosh computer used short sentences and various typefaces. Those with an IBM or IBM-compatible machine had a more word-reliant, literary style.

Her published observations set off howls of protest in the Macintosh community. But scholars agree that computers are causing inevitable change — particularly among young people. They will be the pioneers of the new hieroglyphics. For them, graphics is just the beginning.

At Michigan Tech, students recently asked to hand in their English papers on disk. Why? They had color-coded their arguments (something that wouldn't be visible in a printout). Some of them keep electronic journals in which graphics no longer support text — they are the text, says Cynthia Selfe, editor of an academic journal called *Computers and Composition*.

Students are also playing with hypertext, which links text and other kinds of documents. The possibilities of hypertext are endless. An author could write a novel (or a motion picture or some new hybrid form) with multiple plot lines. The reader/viewer would decide which branches to follow and which to ignore.

The new hieroglyphics represent a brave new world with some old, old pitfalls.

Will all these new languages build new meaning or a Tower of Babel? Could graphics and hypertext widen the gap between the super-educated and the uneducated? Are today's teachers ready to teach visual and oral literacy as well as the power of the written word?

On balance, scholars are upbeat about the possibilities as long as educators use this new tool wisely.

After the discovery of the Rosetta stone, it took 20 years for Jean-Francois Champollion to break the code of Egyptian hieroglyphics.

We will have to move more quickly. We need to ensure that our new tool enhances meaning instead of diluting it.

— Laurent Belsie

(31)

MESSAGE DISPLAY FOR GREG S. BORGEN

To G.BORGEN:RO8F12DO2A

From: THOMAS E. BERCHEM:RO8F12A

Postmark: Apr 07,95 9:08 AM

Delivered: Apr 07,95 9:09 AM

Subject: Forwarded: Hard Rock Prosp Permit Aplns

---

Comments:

From: THOMAS E. BERCHEM:RO8F12A

Date: Apr 07,95 9:08 AM

GREG, FOR YOUR ADDED INFORMATION. TOM.

Message:

From: Kenn L. Frye:R8

Date: Apr 07,95 8:22 AM

The regulations addressing hardrock prospecting permits applications are in 43 CFR 3560. A prospecting permit, if issued, is good for an initial 2-year term with an extension of 4 years available. The rental is 50 cents/acre/year with a minimum rental of no less than \$20 (43 CFR 3562.3-1). There is also a non-refundable filing fee of \$25. 43 CFR 3561.2-2 regarding royalties states "The production royalty shall be determined by the Authorized Officer on a case-by-case basis as provided in 3503.2-1 of this title." The AO is the Director of BLM and 3503.2-1 states the same as 3561.3-1. If a lease is issued, it is for a 20-year initial term with a 10-year renewal.

43 CFR 3560.3-1 refers to NFS lands: "With the consent of the Secretary of Agriculture and subject to such conditions as he/she may prescribe, the following lands administered by the Secretary of Agriculture are subject to lease: (then it goes on to list all the Acquire-land laws). Basically, the BLM cannot issue a permit or lease without our consent. However, any denial of consent will likely have to pass a court challenge.

According to BLM geologist, Richard Wallace, the royalty on gold as well as most hardrock minerals is 5%.

-----X-----

### Troy Mine

The Troy mine, operated by Asarco Inc., is an underground copper/silver mine located in the Cabinet Mountains in the northwestern corner of Montana. The site is located on private, patented, and unpatented land within the Kootenai National Forest. The mine is located in an alpine setting adjacent to several streams and is subject to significant snow and rainfall.

Copper/silver concentrate, produced by froth flotation, is shipped off-site for further refining. The milling operations produce almost three million tons of tailings annually and transport thickened tailings down a seven mile long pipeline to a 320 acre tailings pond. Water from the tailings pond is returned to the mill. Most waste rock is returned to the underground mine. Troy operates under a permit issued by the Montana Department of State Lands, which was concurrently approved by the U.S. Forest Service.

### Brewer Gold Mine

The Brewer Mine, operated by Brewer Gold Company, is located on a ridge between the Lynches River and Little Fork Creek near the town of Jefferson, South Carolina. The mine, located on private land, is subject to high precipitation.

At the Brewer Mine, ore is mined in an open pit, crushed, agglomerated, and conveyed to a cyanide heap leach. Gold is recovered on carbon columns. There are seven heaps, covering about 53 acres. Wastes include the heaps after leaching ceases, waste rock, and wastewater discharges. There have been several incidents of cyanide releases at Brewer. Most notable was the 1990 dam failure which released over 10 million gallons of 100 ppm cyanide solution into Little Fork Creek. Brewer was fined \$50,000 by the state. Brewer has a closure/reclamation bond of \$500,000.

### Colosseum Mine

The Colosseum Mine, operated by Lac Minerals, is located in the arid Clark Mountain Range in southeastern California. Most of the 284 acres of mining operations are on unpatented Federal land under the jurisdiction of the Bureau of Land Management.

Ore is mined from two open pits, crushed, and vat leached in a carbon-in-pulp cyanide circuit. Precious metals are stripped from the carbon, plated onto steel wool through an electrowinning process, and smelted on site to produce ~~dore~~. Wastes include waste rock that is disposed of in one of four waste rock piles and tailings discharged to a 150 acre tailings impoundment. Colosseum uses sulfur dioxide to destroy residual cyanide in the tailings slurry. Colosseum has a \$762,000 reclamation bond. Colosseum is subject to zero discharge requirements and has no NPDES permit. Colosseum has been

*Please Note:  
Will try to have copies  
of referenced articles at  
meeting.*

CHRISTOPHER M. DAIL  
7516 EDGEWATER DRIVE  
COLUMBIA, SOUTH CAROLINA 29223-6136  
(803) 788-0305

June 1, 1995  
VIA FAX

Both Merz  
District Ranger  
USFS, Andrew Pickens Ranger District  
Sumter National Forest  
Star Route  
Welhalla, South Carolina 29691

SUBJECT: HLM Sandrock Prospecting Permit Application-Clifford Leonard, Jr.

Dear Beth:

I have noted in two recent newspaper articles (Keowee Courier, April 15, 1995 and The State, June 1, 1995) that a considerable amount of controversy has arisen from the Prospecting Permit Application by Clifford Leonard Jr. to conduct preliminary exploration work in an area near Crooked Creek in Sumter National Forest in Oconee County, South Carolina. Because I have concerns about the possibility that the USFS may deny this prospecting permit application based on the negative comments received during public scoping I am writing this letter to inform you of my support and my hopes that you will approve the application, provided of course that it contains the normal reclamation procedures and other features typically required during this kind of exploration work.

From the comments I have seen in the two newspaper articles describing the controversy, problems seem to be centered around the supposedly illegal act of conducting mineral exploration on public lands and the assumptions that exploration of the sort proposed will have major impacts on the flora, fauna and environment. Most of the comments in the newspaper articles, many of which seem to be written in an inflammatory manner and with many misleading comments about the potential impacts of this kind of work, suggest that there is a gross misunderstanding about how exploration works and what the statistical chances are of actually finding a valuable, economic mineral deposit.

First, let me address the accusations of illegal activity. Of course I do not have the details of Mr. Leonard's background, credentials or his companies financial statements, but provided his application has been submitted properly and the appropriate clearances established then there is nothing illegal about conducting exploration on public lands. In fact, exploration and mining on public lands are an integral part of this country's history and Oconee County's heritage. A number of historic mines and prospects are scattered throughout the region, now long since forgotten by most except a few prospectors and the occasional exploration geologist. Yet, many of the towns in the region owe their very existence to early explorers and prospectors whose persistence and ability to derive a living off of the mineral resources in the area gave people a reason to settle there.

FILE  
BMA  
SILV  
ORA  
TMA  
RGR  
JUN - 1 1995  
RGR DIST  
ANDREW PICKENS

Exploration not illegal, but procedural violations to application process are.  
Not so much exploration, but mining is.

# MINERAL POLICY CENTER

• 1612 K STREET, NW, SUITE 808 • WASHINGTON, DC • 20006 • 202-887-1872 •

## \* \* GUIDELINES FOR RESPONSIBLE MINING \* \*

Adequate environmental protection for hardrock mines and cyanide-leaching facilities includes the following elements:

- ◆ Rainfall management, to prevent excessive rainwater that enters the cyanide-leaching system from causing overflow of leaching solution into streams and groundwater.
- ◆ Surface water control, through the diversion of all streams and runoff around the mine area and the prevention of silt from being washed into streams. This applies to many types of operations ranging from gold dredging in stream valleys to open-pit mines
- ◆ Leak monitoring under the leaching pad and in the entire piping system. In some parts of the U.S., double-lined pads are now required, with monitoring of the space between the synthetic liners to detect leaks. Two liners, a leak detection system, and a clay back-up liner below the lower synthetic liner should be required in all cases. Monitoring wells in the groundwater should be required, with frequent testing.
- ◆ Wildlife protection, including the prevention of wildlife access to cyanide-solution ponds and the treatment of all discharges to be safe for fish, as well as people.
- ◆ Reclamation and landscaping, with specific systems to prevent acid drainage and leaching of toxic metals from abandoned piles of mine waste and the spent leaching heaps. Runoff controls, treatment of runoff from streams from the waste, or capping of waste piles with impermeable clay layers may all be required. The post-ming landscape should be both usable and attractive.
- ◆ A long-term monitoring program should be required at all mine sites after completion of mining and closure of an operation. This should include surface and groundwater testing, and a plan for corrective action if acid or toxic leakage develops.
- ◆ All major mines should have a local citizen oversight board established as a condition of permit approval.

Funding for these factors should be guaranteed before a mining operation is permitted to start so that the public is not burdened with the costs of cleaning up after the mining companies leave.

Jim  
F.Y.I.

Thanks for your insights & assistance.  
Pam

112-C Fairway Ridge  
Aiken, SC 29803  
12 April 1995

ANDREW PICKENS  
RGR DIST

APR 17

RGP	<input checked="" type="checkbox"/>
TR	<input type="checkbox"/>
OP	<input checked="" type="checkbox"/>
SILV	<input type="checkbox"/>
BMA	<input type="checkbox"/>
FILE	<input checked="" type="checkbox"/>

Ms. Elizabeth Merz  
District Ranger  
Andrew Pickens Ranger District  
Sumter National Forest  
Star Route  
Walhalla, SC 29691

REFERENCE: Mr. Clifford Leonard's Application to Explore for Gold in Sumter National Forest, Oconee County, South Carolina

Dear Ms. Merz:

I am writing to express my concerns about Mr. Clifford Leonard's application for a permit to explore for gold on 20 acres near the Chauga River in the Sumter National Forest. Based on my conversations with Mr. Jim Kidd of your office, it's my understanding that the initial exploration activity will be limited to small areas outside of the floodplain with little or no potential for erosion and sedimentation. Mr. Kidd also indicated to me that your office had surveyed the area for threatened, endangered, and sensitive plant and animal species as well as cultural (archeological and historical) artifacts and had found none. This allayed my concerns about the possible impacts of the preliminary surveys.

However, the very fact that preliminary surveys are being conducted suggests that there is some potential for this work expanding and evolving into a full-scale mining operation. Clearly, Mr. Leonard would not be spending his money if he didn't think commercial opportunities existed. It would be naive to assume Mr. Leonard is simply a rockhound or hobbyist with no larger aspirations.

The danger, obviously, with allowing exploration for gold on a limited scale is that there will be incremental or phased expansion. Environmental impacts are often explained away or justified in this fashion: it's "just a couple of acres," and a couple of acres more, and a couple of acres more, ad infinitum. Given that any mining activity in the Sumter National Forest/Andrew Pickens District beyond the limited surveys proposed would be unacceptable, why even allow the preliminary surveys?

I am a fisheries scientist with more than 15 years of experience with the U. S. Fish and Wildlife Service, a commercial electric utility, and two southeastern consulting firms, and have spent my professional life evaluating environmental impacts of industrial facilities. I am intimately familiar with the flora and fauna of the Chauga River ecosystem and Sumter National Forest, having done fisheries research in the area (a study of redeye bass in the Chattooga River, circa 1979-1981) and having fished the Chauga and hunted in the Sumter National Forest-Pickens District since the early 1970s.

I am also familiar with some of the problems associated with gold mining, because I lived in Fairfield County, S.C., during the years the Ridgeway/British Petroleum gold mine was developed near Blythewood. The environmental impacts of gold mining (and particularly the potentially-disastrous impacts of heap leaching gold from ore using poisonous compounds such as potassium cyanide) to wildlife, surface-water, and groundwater resources are well known. The Ridgeway Mining/BP facility has had serious problems over the years with waterfowl

ing. Long-term problems from toxic metals leaching from heap-leach waste piles probably exceed the direct impact of cyanide itself. The low cost and wide applicability of heap-leaching, the rush to new ores and the general permissiveness of the Mining Law and the Federal managers, lead to a dangerous synergy. Hundreds of remote wilderness areas and wild-life routes are vulnerable to strip-mining for gold, thanks to heap-leaching.

But that is not directly the fault of leaching technology, or of cyanide. Rather, blame a set of laws and a set of mind which lets accidents of geology decide whether an area is mined, rather than using an intelligent multiple-use planning process to weigh mineral values against others.

VERDICT

Can cyanide and heap-leaching be environmentally safe? Yes, theoretically, they can. Is some of the alarm over cyanide's use in mining unwarranted? Yes, technically, it is.

Do we have enough knowledge to take the risks we are currently taking with this aggressive

poison? No, emphatically, we do not. Are the agencies on whom we rely to control the risks acting firmly and responsibly?

No, sadly, they are not.

The design requirements are inadequate, the agency inspection is nominal, the enforcement and penalties are less than lip-service. Because the spills have largely been remote, because the kills have been non-human species, we have not really awakened to this problem. We are spraying tens of thousands of tons of one of the most acute poisons known to man across the landscape.<sup>21</sup> There will be more deaths if this program is not strictly controlled, and the dead will not all be birds and animals.

The cyanide manufacturers, users, and regulators need to adopt an attitude of "Yes, we have a problem; here is how we are treating it; come look." But too often, the reaction is "There is no problem; go away." Expletive deleted. That will not reassure the public, and when the spills occur, the reaction will be bitter. It should not come to this. It need not. But I fear that it will. \*

CYANIDE SPRING NOTES:

Tons, throughout, refers to short tons, 2000 pounds. Mine production data and statistics generally are from U.S. Bureau of Mines publications.

1. Boliden: ENGINEERING AND MINING JOURNAL p.26 (July, 1989).
2. ELLENHORN & BARCELOUX, MEDICAL TOXICOLOGY, Elsevier Science Publishing Co., New York City, N.Y. (1983).
3. Skogerboe, *Research Update*. CYANIDE AND THE ENVIRONMENT, Colorado State University, p.552 (1985).
4. Engelhardt, *Long-Term Degradation of Cyanide in an Inactive Leach Heap*. CYANIDE AND THE ENVIRONMENT, *supra*, p.539.
5. LEWIS R. GOLDFRANK, ET.AL., GOLDFRANK'S TOXICOLOGIC EMERGENCIES, 3rd Ed., p.587 (1986).
6. Heming & Thurston, *Physiological and Toxic Effects of Cyanides to Fishes: A Review and Recent Advances*, CYANIDE AND THE ENVIRONMENT, *supra*, p.85.
7. OAK RIDGE NATIONAL LABORATORY, REVIEWS OF THE ENVIRONMENTAL EFFECTS OF POLLUTANTS: V.CYANIDE, p.139-45 (1978).
8. L. GOLDFRANK, *supra*, p.592.
9. OAK RIDGE NATIONAL LABORATORY, *supra*, p.8.
10. U. S. BUREAU OF MINES, GOLD AND SILVER LEACHING PRACTICES IN THE UNITED STATES, IC 8949, p.4 (1984).
11. G. M. Potter, *Recovering Gold From Stripping Waste and Ore by Percolation Cyanide Leaching*, U.S. Bureau of Mines TPR 20 (1969).
12. U. S. ENVIRONMENTAL PROTECTION AGENCY, REPORT TO CONGRESS, WASTES FROM THE EXTRACTION AND BENEFICIATION OF METALLIC ORES..., p.2-22 (1985).
13. OFFICE OF TECHNOLOGY ASSESSMENT, COPPER, TECHNOLOGY AND COMPETITIVENESS, OTA-E-367, p.73 (1988).
14. GOLD AND SILVER LEACHING PRACTICES, *supra*, p.8.
15. E.I. du Pont de Nemours & Company, *Is Gold's Growth in North America Facing a Cyanide Short-Fall?*, DUPONT MINING INDUSTRY ANALYSIS (April, 1989). Copies available from Mineral Policy Center.
16. Nevada Department of Wildlife, Cyanide Related Wildlife Mortalities, Departmental Memorandum (15 May 1988). Emphasis added.
17. Nevada Department of Wildlife, letter to Lee Delaney, Surprise Resource Area Manager (5 October 1988).
18. *Liner Design for Heap-Leach Pads*, MINING MAGAZINE, (May, 1988).
19. U. S. ENVIRONMENTAL PROTECTION AGENCY, COPPER DUMP LEACHING AND MANAGEMENT PRACTICES THAT MINIMIZE THE POTENTIAL FOR ENVIRONMENTAL RELEASES, Contract 68-02-3995 (undated).
20. A recent California State mining waste study (July, 1988) recommends that all mining wastes should be tested for their potential to generate acid runoff, as well as toxic metal content. I strongly agree. Unfortunately, the science in these areas is not well-developed. Additionally, the long-term life of cyanide in groundwater is not completely understood.
21. The Nevada Mining Association states that annual cyanide consumption in that state is 80 million pounds, and Nevada delivers half of current U.S. gold production. See also DuPont, *supra*.

File Code: 2820

Date: May 17, 1995

Mr. Philip R. Moore  
112-C Fairway Ridge  
Aiken, SC 29803

Dear Mr. Moore:

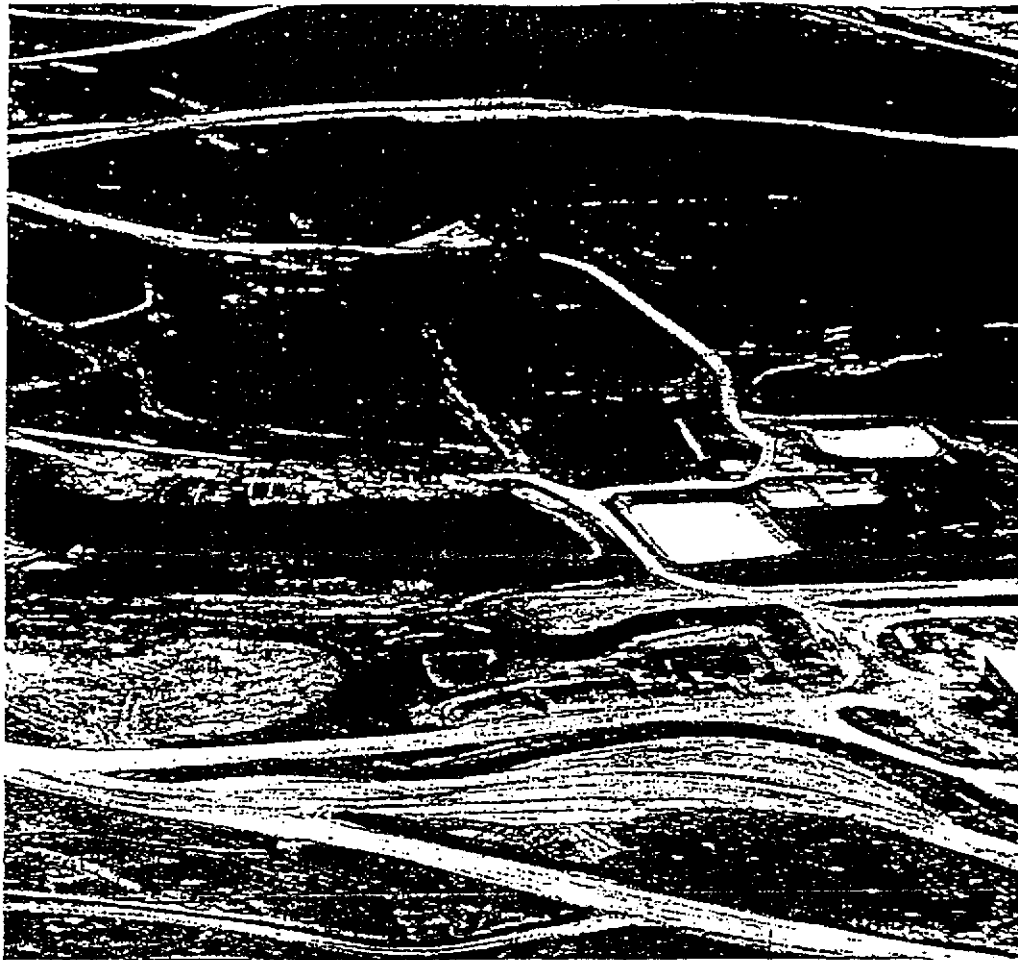
Thank you for forwarding me a copy of your letter, dated April 16, 1995, to Elizabeth Merz, Andrew Pickens District Ranger. Your concern was with some gold prospecting permit applications that were filed by Mr. Clifford Leonard. You explained that from your experience in the area and familiarity with gold mining on private lands in South Carolina, the Forest Service should deny consent to the Bureau of Land Management (BLM) to issue Mr. Leonard's permit.

The Forest Service has the responsibility to uphold two laws: 1) the Mineral Leasing Act for Acquired Lands (P.L. 80-382) of 1947 and 2) the National Environmental Policy Act (NEPA) of 1969. The first law allows for the leasing of Federally-owned mineral rights with acquired land status (e.g., lands the Federal government purchased from private individuals or companies). The process one must go through is to make application with the BLM. The BLM adjudicates the application, collects the necessary filing fee and first year's rental, and sends the case file to the surface managing agency. The Forest Service must give the BLM a decision on whether we consent to issuance of the prospecting permit and if so, with what operational stipulations.

The second law, NEPA, requires the Forest Service to make an assessment of the effects this prospecting will have on the other natural resource values. If the study shows that prospecting can be done without undue degradation of other resources, consent to issue the prospecting permit is given and the specific operating stipulations are attached to the consent. A prospecting permit has an initial term of two years with an additional 4-year extension available upon request.

At the end of the prospecting period, the Mineral Leasing Act requires that the permittee must either drop the permit or request that it be converted to a 20-year lease. In order to receive a lease, he/she must prove the discovery of an economically mineable deposit of mineral. That is, the costs for mining, milling, transportation to market, selling, and reclaiming the land to standard must be offset, plus a reasonable profit (usually 5-7%). If the permittee can show this, then the BLM will once again ask the surface managing agency for consent to lease. At this time, the Forest Service would generate an appropriate environmental study which looks at the environmental effects of full scale mining on the surface resources. The results of this study will give the decision maker the information he/she needs to determine whether or not to give consent to the BLM to lease the land for mining purposes.





*Pools of Poison sparkle on a gold leaching heap in Nevada. The cyanide solution is sprayed on top, percolates through the heap picking up gold as it goes, and flows to the pond at right. After the gold is removed from solution, the fluid is replenished and sprayed again.*

cyanide poisoning have been reported; more deaths are alleged to have been concealed, but we may never know. Even more troubling is the unknown number of sickened birds which have succeeded in flying from the poison ponds, only to succumb farther along their flyways.

The mining industry has tried to reduce the toll, largely by "hazing" birds from ponds with flags and noisemakers, and responds angrily that waterfowl deaths have now been reduced to insignificant numbers. However, discussions with wildlife officials indicate that cooperation is still limited and grudging. The State of Nevada has adopted a Memorandum which only requires that toxic solution ponds "be covered in a manner that will prevent *or at least inhibit* access by avian wildlife," and that the ponds "be made unattractive to wildlife."<sup>16</sup>

The looseness of this State wildlife agency policy may result from the fact that it was actually developed by the Nevada Mining Association.<sup>17</sup> Federal land managers, with similar laxness, routinely fail to notify wildlife agencies of proposals for new mines so preventive measures can be planned.

There are more subtle threats from widespread cyanide use, in addition to dead birds and wildlife. Numerous leaks in the liners underneath the "heaps" have been reported. In several cases, the leaks have resulted in contamination of drinking water supplies. But there are probably many more leaks which are steadily projecting cyanide solution toward and into groundwater, undetected.

A layer of impermeable material is placed beneath each gold ore heap, to ensure that the gold-bearing cyanide solution winds up in the

## Accipiter Exploration

P. O. Box 4092  
Marietta, Georgia 30061

The Honorable Senator Strom Thurmond  
Senate Office Building  
Washington, D.C. 20001

In re.: Crooked Creek Prospect Permit

Dear Senator Thurmond,

I am writing to seek your support for my lease and prospecting permit application. Two and a half years ago I filed a prospecting lease on a 440 acre tract in Oconee County, where I had discovered a rich gold bearing strata of rock. The original site has values in excess of current industry trends and richer than the Ridgeway Mine ore values. Since then, the U. S. Forest Service has done an exhaustive series of studies on the biology, archeological past, cultural and environmental to clear the tract and find it suitable for prospecting.

Until May 5th there is a public comment period on the prospecting application. It would help very much, if your office could write a letter supporting my application in the Andrew Pickens Forest. This is not a mining permit application, which is an exhaustive study also. The prospecting permit is a survey, or evaluative process. In addition to gold deposits there is a possible Chrome deposit on the tract, a strategic mineral, as well as other potential ores like Copper, Zinc, and Titanium. Since this lease is on Forest Service land it would generate a 3-4% royalty on all minerals produced.

Hope you can write a brief letter of support. This project could generate 50-55 jobs in the area without a refinery being built.

Sincerely,

*Clifford Leonard, Jr.*  
Clifford Leonard, Jr.  
President  
██████████

*Attn: Mr. Ken Rentiers*

CL/EE

(14)

ment of many biological processes. Why get so excited?

They have a point. However, the story is more complicated. First, the general term "cyanide" covers many compounds. All have in common the fundamental ion  $CN^-$ , carbon combined with nitrogen, but beyond that the different combinations have widely varying properties. Most public and regulatory attention is paid to the extremely toxic gas hydrogen cyanide and the simple compound NaCN, sodium cyanide, the form used in mining as a solid or a water solution.

Unlike many other environmentally hazardous chemicals, cyanide is not known to bioaccumulate—to build up in animal tissues. It is not generally believed to be a mutagen or a carcinogen, though the research on this is inadequate.<sup>3</sup> Most ingested cyanide—some common foods contain traces—breaks down naturally; it is only fatal when a lethal dose is consumed at once; then it blocks the transport of oxygen across cell walls. In effect, the victim suffocates despite having fully-oxygenated blood; the central nervous system is the first organ to succumb.

In the natural environment, most cyanide breaks down harmlessly when exposed to sunlight or pH-neutral conditions. However, there is substantial evidence that cyanide persists in groundwater and in tailings or abandoned leach heaps, particularly where alkaline conditions are maintained.<sup>4,5</sup>

Given the chemical mechanism of its toxicity, it is not surprising that fish are particularly sensitive to cyanide in water solutions. Concentrations of hydrogen cyanide exceeding 0.1 milligram/liter can be fatal to sensitive fish species, and levels one-twentieth of that have been shown to prevent fish reproduction. The EPA's 1980 freshwater aquatic life criterion for free cyanide permits a maximum of 3.5 micrograms/liter for any 24-hour average, with a limit of 52 micrograms/liter at any time.<sup>6</sup>

Public attention, and the mining industry's response, have focused on the spectre of deaths to humans from cyanide. Its long-term health effects have been commonly assumed to be minor compared to the threat of immediate death, and ignored. However, there is good reason to suspect that a compound as aggressive as cyanide in lethal doses also has serious health effects in long-term chronic exposures at low levels. Correlations have been observed be-



*Strip-Mining for Gold: Heap-leaching areas of the Borealis Mine in Nevada are at left center, above the Freedom Flats open pit. Echo Bay Mines of Canada lists this as one of their "smaller" mines.*

tween chronic low-level cyanide uptake and specific diseases in humans, and experiments in animals have demonstrated progressive damage to nervous and other tissues.<sup>7,8</sup>

And there is a great deal we simply do not yet know about cyanide and its effects. The high price of this ignorance has already been seen: "There is surprisingly little information on the interactions of cyanide with birds," a comprehensive survey reported in 1978.<sup>9</sup>

Tragically, a great deal of empirical evidence has been acquired since then. Many thousands of birds have died from drinking from open cyanide ponds at mining sites, because we later learned that birds are highly sensitive to cyanide.

United States Forest Francis Marion 4931 Broad River Road  
Department of Service and Sumter Columbia, SC 29210-4021  
Agriculture National Forests (803) 561-4000

---

File Code: 1510/2880

Date: May 24, 1995

Honorable Strom Thurmond  
United States Senate  
Washington, DC 20510-4001

Dear Senator Thurmond:

Thank you for your inquiry dated April 28, 1995, on behalf of Clifford Leonard (Your reference) Case Number 5118280002. It is my understanding that Mr. Leonard wrote to you in support of his obtaining a prospecting permit.

Mr. Leonard has applied for three Bureau of Land Management (BLM) prospecting permits. The BLM is the agency responsible for minerals management. Consent to occupy the surface must be given by the Forest Service prior to the BLM permitting the prospecting for minerals. The Forest Service is currently evaluating the effects the proposed activity will have on surface management prior to providing BLM with a decision of consent or denial to occupy the affected lands.

Prior to consent or denial of occupancy on National Forest lands, we must comply with the National Environmental Policy Act (NEPA) requirements. These include a review of the specific actions proposed on the affected acreages in conjunction with scoping the interested publics concerning the proposed actions.

Mr. Leonard's proposal has existed for about two and a half years. Over that time, Mr. Leonard has made various changes in his proposal concerning affected acreage, the prospecting procedures intended, and the type of permits applied for. We met with Mr. Leonard on May 11, 1995 to further discuss the proposed permits and the information required for review of his proposal. We asked for detailed operating plans, locations, and maps with which to evaluate the environmental impacts to the surface. Upon the receipt of this data, the Forest Service will be in a position to complete the evaluation of impacts and make a decision of consent or denial to occupy National Forests lands. We have yet to receive this information.

Mr. Leonard uses the terms "lease" and "permit" interchangeably in his letter. The subject of concern at this point is Mr. Leonard's obtaining a prospecting permit. A mineral lease concerns the actual extraction or mining operation. Upon completion of the NEPA process, we will provide the BLM with our consent, stipulations, and restrictions, or our denial to the occupancy of the affected acreage for prospecting. If BLM issues Mr. Leonard a prospecting permit, and, through execution of this prospecting permit, he should find an economically operable mineral deposit, Mr. Leonard would then have to apply for a mineral lease from BLM. We would then have to conduct a second NEPA evaluation of the affected lands based on his mining and mineral extraction proposal and give our consent to occupy the surface before mineral extractions could begin.

9

# Accipiter Exploration

P. O. Box 4092  
Marietta, Georgia 30061

ANDREW PICKENS  
RGR DIST

MAY 10 1995

RGR

TMA

ORA

SILV

BMA

Re: Crooked Creek Project ~~Permit~~  
FILE

May 1, 1995

Dear Sirs,

The enclosed public comment letter concerns my company's prospecting permit request. I am writing in hopes you will send a brief note of support for mineral prospecting on the Crooked Creek forest land. This is a multi-purpose forest for camping, timbering and other activities. [Farther west, these activities include agriculture and mining.] ?

My company's preliminary surveys and assays have found industrial and precious metal rock bodies. Chrome and gold have been assayed along with other minerals.

*Ranks among the top 10 in the country.*

South Carolina is not a new frontier for mining and has significant mines and refineries in the state, as well as a good transportation infrastructure. If prospecting is successful, a mine could generate 50-55 jobs in the area for mining and transportation alone, as well as good royalties to the U. S. Forest Service. However, this would be an evaluative survey and not a mining permit.

Lastly, I've enclosed some pictures of an open-pit mine I visited 24 years ago in North Alabama. The picture on the left is the revegetated area, and the right hand picture is the unmined original mountain forest.

I hope you can write a brief note before May 5th. Many thanks for your time.

Sincerely,

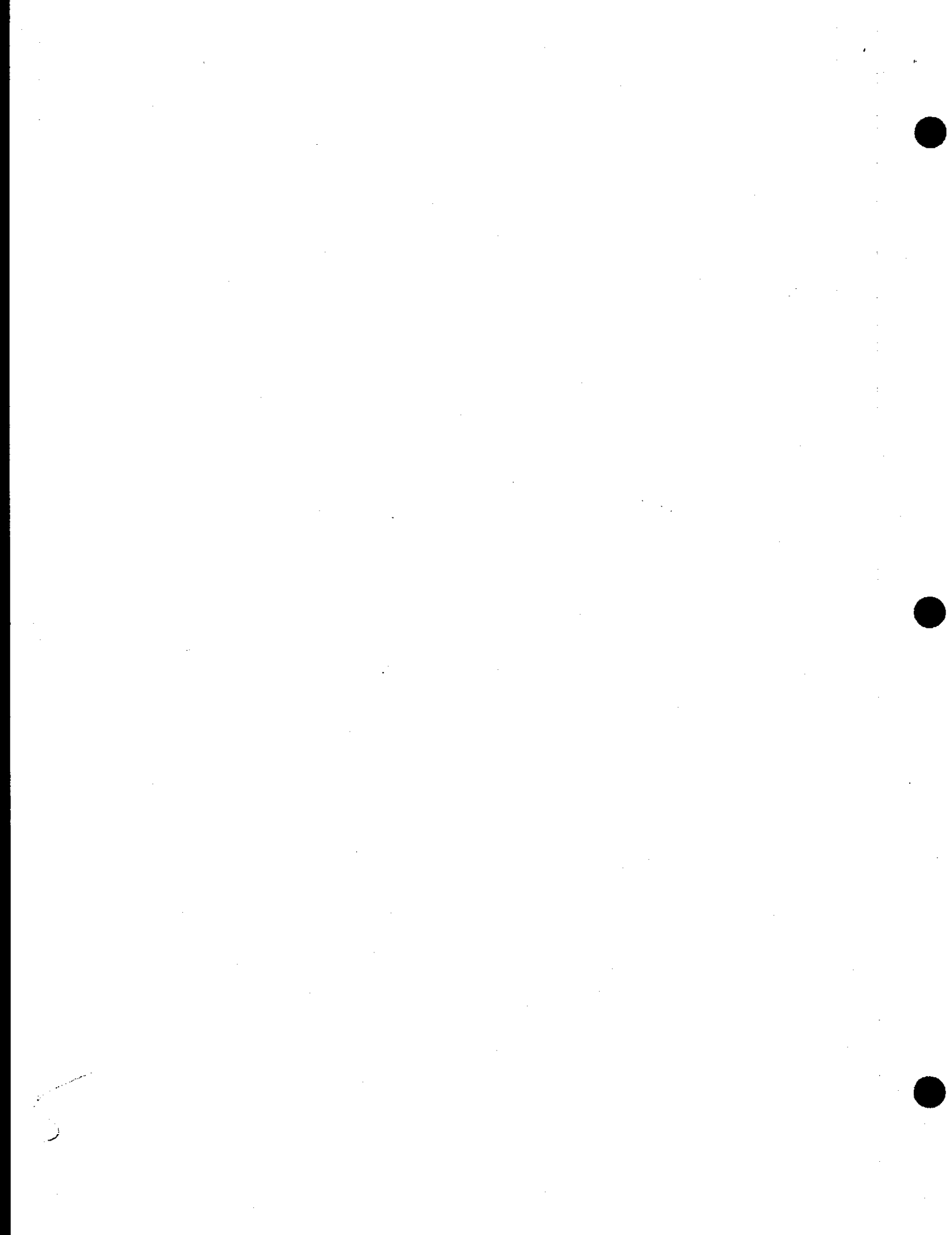
*Clifford Leonard, Jr.*

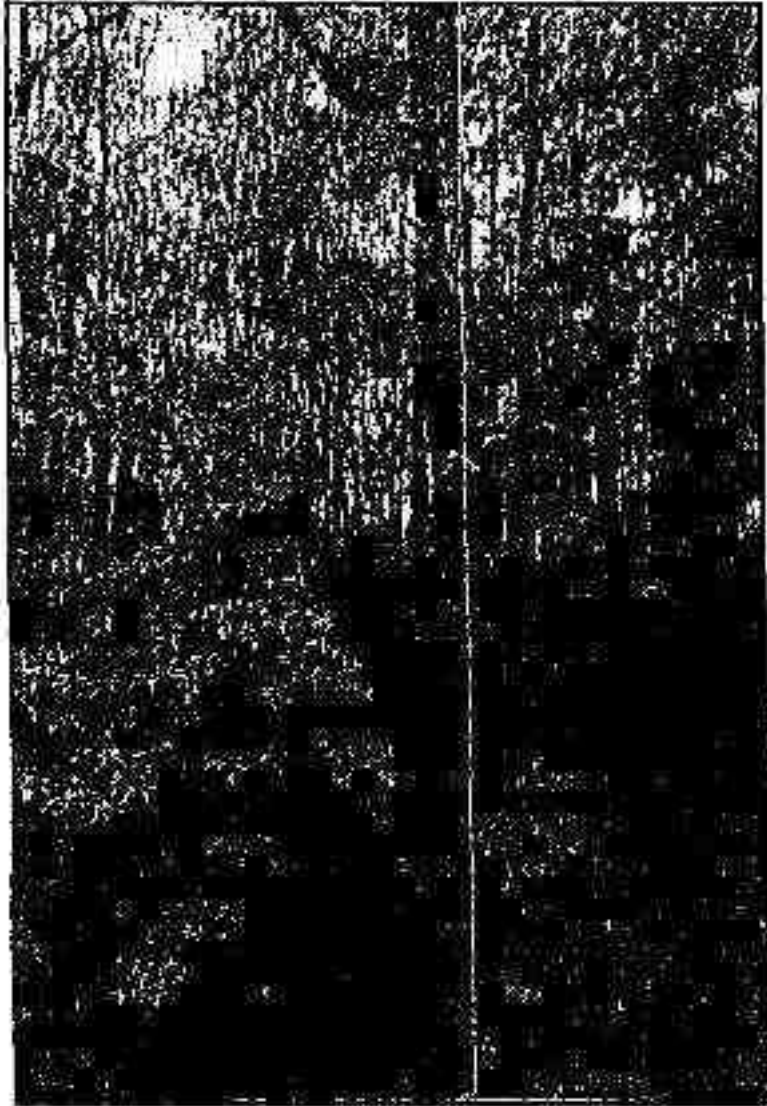
Clifford Leonard, Jr.  
President

*Approximately 10 people commented in favor of Mr Leonard's request.*

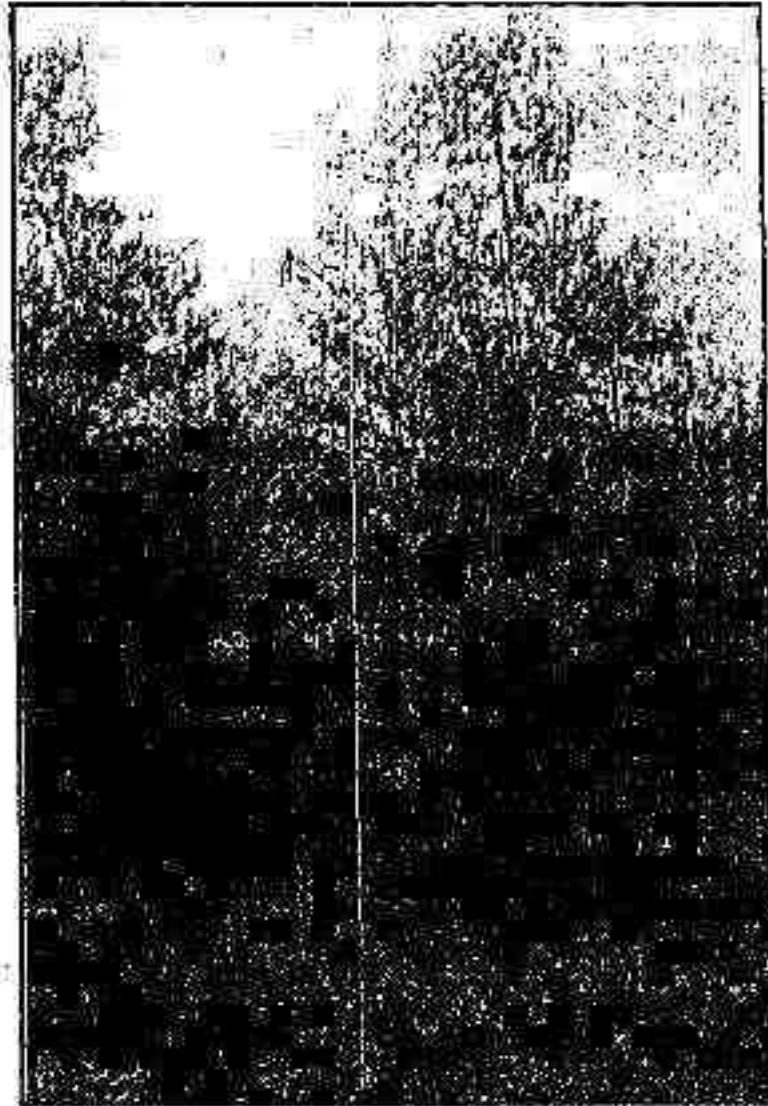
*Nearly 70 opposed.*

CL/rs



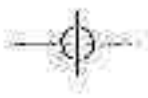


Unmined Mountain Forest



Reclaimed Mine Site

(b1)





Senator Strom Thurmond

2

The issue of prospecting permits and potential mining is of great importance to many interested publics. There have been many public inquiries and comments concerning the activities proposed by Mr. Leonard. We must adhere to the NEPA process by considering and responding to the inquiries and comments.

We appreciate your interest in the National Forests and look forward to your support in our future management endeavors. Should you or Mr. Leonard have additional questions or concerns on this matter, please do not hesitate to call on us.

Sincerely,

/s/Forrest L. Starkey (For)  
DAVID W. WILSON  
Forest Supervisor

cc: District Ranger, Andrew Pickens RD

(17)

**FORUM**

**Heaps of Gold, Pools of Poison**

**Cyanide Spring**

by Philip M. Hocker

*This article is the fruit of Mineral Policy Center research in Washington and at various mining sites over the past eighteen months. Sincere thanks are due to Frederick W. de Vries, of E. I. duPont de Nemours & Company, Susan van Kirk, Jim Jensen at MEIC, Dr. Glenn Miller, Steve Botts at Newmont, several anonymous agency officials (thanks, folks), and Congressional staff for their assistance and data sources. Congressman George Miller is particularly to be thanked for his efforts to reduce migratory bird mortalities. The opinions in this article are the author's, and in expressing my gratitude to these friends I do not intend to imply any endorsement or agreement by them.*

Canoes made of gold are too soft to run over rocks and too heavy to portage well. Gold makes lousy pitons and carabiners for climbing. Did you ever hear of a gold-filled sleeping bag?

Nevertheless, gold appeals to some people, and that appeal is propelling a new gold rush around the world. The rush raised the annual rate of world gold production from 31 million ounces in 1980 to 44 million in 1987, and is still accelerating.

The increase in the United States has been even more dramatic, from one million ounces mined in 1980 to five million in 1987, still rising to seven and one-half million ounces in 1989.

Nevada is the heart of this rush, as host to fully half of U.S. gold production, and the impacts are massive in California, Montana, and Colorado. Utah and Washington are active. New mines are planned in eastern Oregon, where a surge of interest last fall brought tens of thousands of new claim filings. In South Carolina, one of the largest tailings impoundments in the country has just been completed for newly-opened gold mining. Maine's Bald Mountain is being developed by Boliden of Sweden.<sup>1</sup>

While some of this boom has come from enlargement or re-opening of old mines, much is the result of a remarkable technological revolution: the new use on gold ores of an old mining technology called "heap-leaching," in which a cyanide solution is sprayed on vast open-air piles of ore to extract the gold. But there is a side to

heap-leaching which does not glitter: its environmental impacts.

**GOLD AND CYANIDE**

Gold mining always requires plucking the gold itself from a much larger mass of rocky ore. When the gold occurs in fairly coarse grains in a gravel streambed, "panning" will separate it by simple gravity. More sophisticated methods are needed as ores are mined from rockier sources. Most of the deeper mines of the nineteenth-century American rushes employed mercury amalgamation to concentrate the gold powder after quartz ores were crushed in a stamp mill. The environmental residues from mercury amalgamation still haunt many streams, both in the Appalachians and the west.

Besides being environmentally hazardous, the mercury process was inefficient. Recovery of 60% of the gold in an ore was typical. Inventors searched for a better method, and in 1887 a workable process using cyanide was developed in Scotland; it went into immediate use in the newly-developed Witwatersrand gold fields in South Africa. The much greater efficiency of cyanide extraction, better than 97% in mills, made it profitable to mine much lower grade ores than could be done otherwise.

**EXQUISITELY TOXIC**

But cyanide is better known as an extremely deadly poison than for its impact on the economic history of South African gold mining, and justly so. Sodium cyanide is "one of the most rapidly-acting lethal poisons and is well known to the public for such homicidal disasters as the Jonestown massacre and the cyanide-Tylenol deaths."<sup>2</sup> In lethal doses, which for humans can be as little as a teaspoon of 2% solution, the onset of symptoms is reckoned by seconds. Death follows swiftly.

Yet miners point out that there is no record of any person ever dying from a cyanide accident, that cyanide breaks down quickly in the environment, and that cyanide is a natural compo-

EDUCATIONAL MATERIAL FROM  
MINERAL POLICY CENTER  
1325 MASSACHUSETTS AVE. NW, #550  
WASHINGTON, D.C. 20005

STROM THURMOND  
SOUTH CAROLINA  
COMMITTEES

ARMED SERVICES  
JUDICIARY  
VETERANS' AFFAIRS  
LABOR AND HUMAN RESOURCES

# United States Senate

WASHINGTON, DC 20510-4001

April 28, 1995

ANDREW PICKENS  
RGR DIST

MAY 08 1995

_____	RGR
_____	TMA
<input checked="" type="checkbox"/>	ORA
_____	SILV
_____	BMA
_____	FILE

*Please FAX to D. Wilson  
Per Beth so will respond*

Ms. Elizabeth W. Merz, District Ranger  
USDA Forest Service  
Andrew Pickens Ranger District  
112 Andrew Pickens Circle  
Mountain Rest, South Carolina 29664

Dear Ms. Merz:

Enclosed is a copy of correspondence I have recently received from Mr. Clifford Leonard. I believe you will find it self-explanatory.

Your reviewing this material and providing any assistance or information possible under the governing statutes and regulations will be greatly appreciated. Thank you for your attention in this matter. I look forward to hearing from you soon.

With kindest regards and best wishes,

Sincerely,

*Strom Thurmond*

Strom Thurmond

ST/ha  
Enclosure

Please include in your response case number # 5118280002

## HEAP-LEACHING

For centuries, miners have sought ways to remove metal from an ore body without having to go to the expense of digging the ore from the ground, grinding it to a fine powder, and treating it in expensive facilities inside a mill.

At the limit, this ambition leads to "in-situ" mining, in which a chemical solution is injected into the ore body from wells drilled into the ground, and pumped out from extraction wells drilled in the ore some distance away. This process depends on the ore body being naturally porous, or being fractured in place by blasting.

Gold mining by injecting cyanide into the ground has been tried in Colorado, but is not in commercial use. The U.S. Bureau of Mines suggests that it would be a good thing to try; they gloss over the threats of massive groundwater contamination which could result.<sup>10</sup>

From a miner's viewpoint, the next best thing to in-situ mining is to pile the ore up in large mounds and soak the mounds with a solution which will remove the metal. Moving a metal-bearing liquid is much cheaper than moving masses of ore around, and the metal can be extracted to produce high-quality product. This technique, known as "dump leaching," has been used in copper mining since its initiation at the Rio Tinto area of Spain around 1750. For copper, sulfuric acid is the common leaching chemical. This brings its own set of environmental hazards... but that is another story.

In 1969, the U.S. Bureau of Mines proposed using open-air soaking with cyanide solution as a method of cheaply treating large volumes of low-grade gold ores.<sup>11</sup> The suggestion was timely. Rising manpower costs were making open-pit mines much more competitive with underground mines which required large amounts of hand labor, and new discoveries were made of low-grade gold ore in very large volumes. The low cost and ability to process immense amounts of material that characterized the new technique, which came to be known as "heap-leaching," attracted immediate attention. As skill at manipulating this new technology has developed, its use has accelerated.

Beginning at zero in the early '70s, heap leaching grew to an industry which treated almost four million tons of gold ore in 1980—one-third of all the ore processed in the country. By 1987 it had leapt to an annual rate of 65 million tons. Vat leaching (also using cyanide) had

tripled in those seven years, but heap leaching increased sixteen-fold. The growth rate is still increasing.

Still, for perspective, leaching of heaps and dumps of ore in the copper industry consumes several times as much ore as in gold—over 220 tons in 1980<sup>12</sup>—and is growing rapidly, though not as explosively as in gold.<sup>13</sup> (A "heap" is ore piled over an impermeable liner—or one *supposed* to be impermeable; a "dump" is simply placed on the ground surface.)

The concentration levels of cyanide used in heap-leaching are quite low: from .015% to .25% of sodium cyanide by weight in solution.<sup>14</sup> It is common mining industry folklore that the solutions are not really dangerous. In fact, managers of heap-leach mines are fond of telling visitors that they could take a drink out of the solution ponds without any ill effects. However, a little calculation shows that, in fact, less than a quart of the lower-concentration leach solution holds a lethal dose.

The rapidity of gold mining's expansion in the Eighties, and of the growing environmental exposure to unknown risks, can be gauged by the growth in the use of sodium cyanide itself: North American cyanide consumption—primarily for mining—has risen from 142 million pounds in 1988 to 215 million in 1989, a 51% increase in a single year. 1990 North American demand is projected at 254 million pounds. DuPont recently acknowledged that global demand will exceed production capacity at times in the next five years, despite the fact that it has tripled its manufacturing ability since 1986.<sup>15</sup>

## PROBLEMS

Because cyanide is so notoriously toxic, the mining industry is used to taking precautions. Any discussion of cyanide has to point out that there is no known instance of a human fatality from accidental cyanide poisoning in the mining business. This is a remarkable record, and a credit to the care and training of many users and the manufacturers, particularly DuPont.

However, to limit our concern over cyanide to human fatalities is to fall prey to what one biochemist calls the "dead bodies in the street" theory of toxicology: the attitude that if you don't see corpses, everything is okay. Despite the absence of human corpses, there is evidence that everything is not okay.

The most dramatic evidence has been the killing of birds from cyanide poisoning at mining sites. Thousands of waterfowl deaths from

Mr. Philip R. Moore

2

Just as the Forest Service cannot consent to permits and leases without doing the requisite NEPA analysis, neither can it reject a permit/lease application unless an adequate analysis is performed. A NEPA analysis must be done to use as a basis for giving or withholding consent.

Your main concern was: "why issue a prospecting permit when mining may not be allowed because of the adverse environmental impacts?" In order to follow the law (NEPA), the Ranger could only deny (or consent to) the prospecting permit after going through the NEPA analysis. Denial would require that an environmental study be done at the prospecting stage and that this document evaluate the effects of full scale mining. Currently, the value and extent of the mineralization is not known and it is impossible to be site specific on the size of the operation, the location of facilities, and to know if future mining could be done in an environmentally acceptable manner. There is simply not enough information available at this time to make a meaningful assessment of a mining operation that may never even be proposed.

I want to thank you for your concern over the prospecting activity and for taking the time to write me about it. Please continue to work with the Ranger District as this activity proceeds. Your personal knowledge of the area and its resources will be a great help to the District Ranger in assessing and managing its programs.

Sincerely,

/s/ Robert D. Bowers for

ROBERT C. JOSLIN  
Regional Forester

cc:  
Forest Supervisor, Francis Marion-Sumter National Forests  
District Ranger, Andrew Pickens Ranger District

treatment equipment, and not in the ground. After all, recovery of the gold is what the entire operation is about. However, while there is an incentive to recover the solution, there is another to minimize the expense of the liner. Shortcuts in liner construction save money in the short run. "Many pad liners are punctured during heap construction," one trade article observes.<sup>18</sup> Early heap-leaching operations often used liners of clay, which in practice are extremely difficult to keep leakproof.

Synthetic membranes are commonly used as liners today, usually of high-density polyethylene. But, because ore heaps for leaching are built up progressively to as much as 150 feet in height, many liners will fail due to progressive settlement and tearing from the massive weight of material bearing on their thin membrane.

---

"If you prick us, do we not bleed?  
if you tickle us, do we not laugh?  
if you poison us, do we not die?  
if you wrong us; shall we not revenge?"

— William Shakespeare,  
*The Merchant of Venice.*

---

There has been little practical study of membrane performance under these conditions. In copper leaching, "dumps," piles which are simply loaded on the ground with no liner, are sometimes used. When liners have been proposed under copper ore dumps to protect groundwater, the industry response has been that "...it has not been demonstrated that [liners] are applicable to practices covering hundreds of hectares and containing millions of tons of ore. The massive size of such practices may result in shear forces that would destroy the integrity of a liner."<sup>19</sup> If liners are unreliable under copper ore dumps, why then should we have confidence about liners under comparable gold ore heaps?

Cyanide can be spilled in much simpler ways. At a small mining operation, a barrel of chemical may be tipped into a creek. A careless operator may ignore a maladjusted valve in the complex piping circuitry of a large leaching site and not notice before tens of gallons of cyanide spill into the ground. A heavy rain may flood the

pond-and-piping system and flush toxic solutions down the valley. These examples have all been recorded.

To reliably prevent environmental damage, a mine and heap-leaching plant would have to address, at a minimum:

- Rainfall management, to prevent storm-water flow in the cyanide leaching system from causing overflow of leaching solution into streams and groundwater.

- Surface water control to permanently divert all streams and runoff around the mine area, and to prevent silt from being washed into streams.

- Leak monitoring under the leaching pad and in the entire piping system. A double synthetic liner, over an engineered clay substrate, should be required, with leak monitoring between each of the three liners. The system should be shut down once a leak through the first layer is detected, until it is repaired.

- Fail-safe design of the entire process system, so that any spills from operator error would be safely contained.

- Provision of monitoring wells in the groundwater, with frequent testing. Several wells should be placed downgradient, with at least one 'baseline' well upgradient.

- Wildlife protection, including absolute physical prevention of any wildlife access to cyanide solution ponds or tailings where the concentration exceeds the Federal ambient water quality standard.

- Reclamation and landscaping, with steps to prevent acid drainage and leaching of toxic metals from the abandoned piles of mine waste and the spent leaching heaps. This may require runoff controls, treatment of runoff streams from the waste, or capping of waste piles with impermeable clay layers.<sup>20</sup>

A long-term monitoring program should be required at all mine sites after completion of the mining and closure of the operation. This should include surface and groundwater testing, and a plan for corrective action if acid or toxic leakage develops.

Guaranteed funding for these steps should be required before mining is permitted to begin, so the public is not burdened with the costs of cleaning up after the mining companies once the glitter fades.

#### BEYOND CYANIDE

The impacts addressed in this article are only the immediate ones from heap-leach gold min-

and wading birds being attracted to settling ponds and neutralization basins laden with poisonous chemicals. It's my understanding that leaks and spills from the Ridgeway Mining/BP facility have also resulted in degradation of water quality and fish kills downstream of the mine.

I urge the Forest Service to reject Mr. Leonard's application and to reject any such applications in the future. The Chauga and Chattooga River watersheds have been damaged over the years by poorly planned and executed logging operations, by indiscriminate spraying of pesticides and herbicides by apple growers, by dam building and real estate development in the watershed, and even by fires set by disgruntled off-road vehicle enthusiasts. Over the last five years or so, conditions appear to have improved, due in no small measure to the efforts of the Forest Service and multiple-use initiatives like "New Perspectives."

The Forest Service is doing an outstanding job of managing the natural resources of the Sumter National Forest and in balancing the competing interests of fishermen, hunters, hikers, birders, and local loggers. I commend you and your staff on a job well done. But permitting any kind of mining operations in the National Forest would be a terrible mistake, would threaten fish, wildlife, and water quality, and would ultimately benefit only out-of-state (and possibly out-of-country) mining interests. Please continue your good work and see that this is not allowed to happen.

Thank you for giving me an opportunity to comment on the permit application.

Sincerely,



Philip R. Moore  
Consulting Fisheries Biologist

cc: Mr. Robert Joslin, Regional Forester-USDA Forest Service  
Mr. David W. Wilson, Forest Supervisor-Sumter National Forest  
Rep. Lindsay Graham, 3rd Congressional District  
Mr. Russ Sherer, Bureau of Water Pollution Control, SCDHEC  
Mr. Brock Conrad, Division of Wildlife & Freshwater Fisheries, SCDNR

# The heap leach method

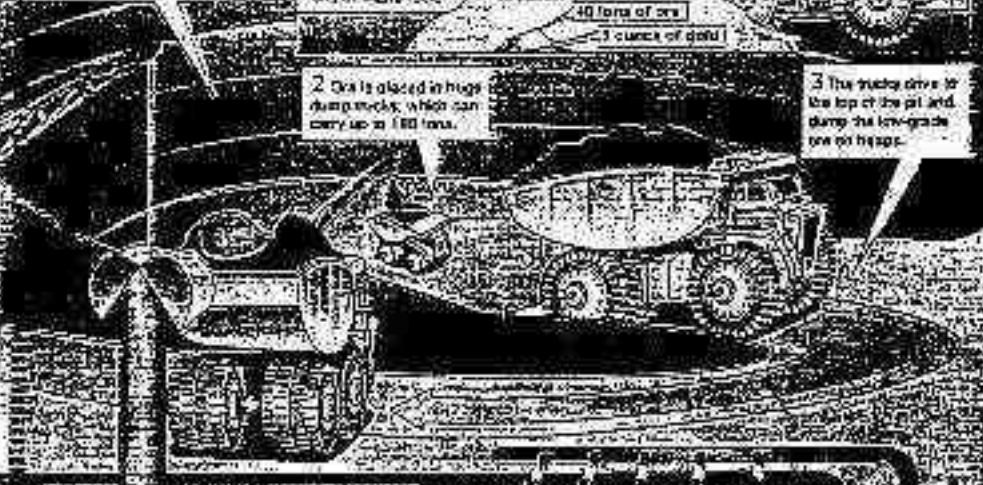
1 The ore is dug out of a pit by shovels and by cone crushers. Some of the pits, when fully excavated, will be more than 1,000 feet deep and a mile across.

Announce of gold from 200 tons of rock. When the price of gold is \$400 per ounce, it is economical to process ore that yields 1 ounce of gold for every 30-40 tons of ore that is, in fact, obtained after moving 150-200 tons of waste rock.



2 Ore is placed in huge dump trucks, which can carry up to 180 tons.

3 The trucks drive to the top of the pit and dump the low-grade ore on heaps.

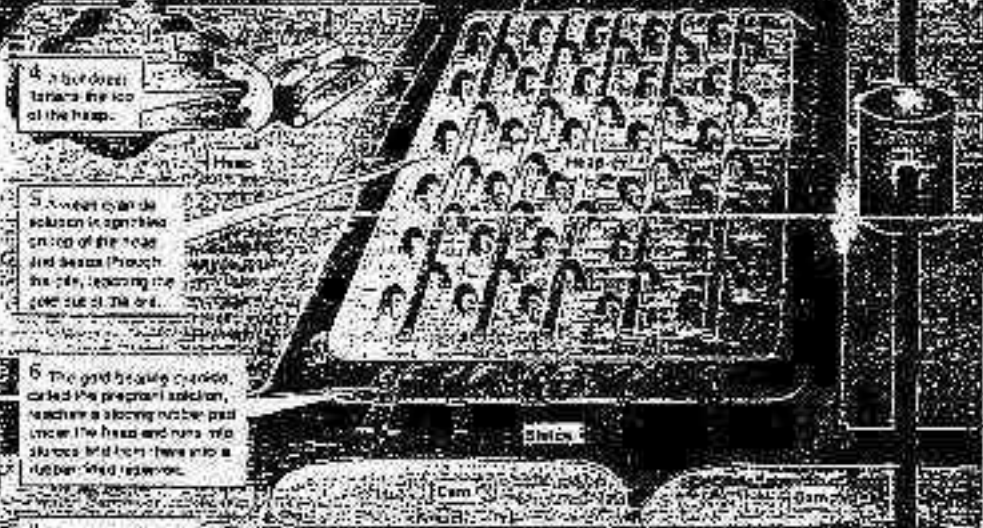


4 A tractor treads the top of the heap.

5 A weak cyanide solution is sprayed onto the heap and seeps through the pile, leaving the gold out of the ore.

6 The gold-bearing cyanide, called the pregnant solution, reaches a sloping rubber pad under the heap and runs into skimmers and then flows into a rubber-lined reservoir.

7 The pregnant solution is pumped into the processing unit.



8 The cyanide solution is pumped into the processing unit to be used on other heaps.

9 The pregnant solution flows over ground and roasted second-stage (activated) carbon. The carbon releases the gold.

10 Slurry goes to a filter and carbon washes gold from carbon.

11 The new gold-bearing solution is pumped into a separator. Charged steel wool pads catch the gold. Since gold is heavier than silver, it settles onto the wool.

12 The gold-laden steel wool is treated by 1:100 cyanide. It is used on gold and partly recycles the cyanide.

13 After further purification the gold is poured into molds to make bars.



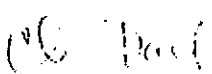


Second, let me address the perceived negative environmental impacts of the preliminary prospecting work proposed in the permit application. Obviously, a few hand dug trenches and a bore hole do not pose any significant threat to the ecosystems in the area. If this kind of exploration is conducted using normal accepted exploration practices and proper reclamation procedures are followed the impacts are negligible. The assertion by several of the individuals opposing this application that this cursory kind of exploration poses a threat to the area's environmental health is not based on fact, just opinion. Exploration of this kind takes place all over the country... often on public lands... every day, and the impacts are not threatening either the health of our forests or the forests occupants.

Thirdly let me address the perceived fear that this exploration will automatically lead to a mine. It might, but in most cases it doesn't. Mineral deposits, particularly those that are considered economic, by their very nature are elusive to identify. Mining companies look at literally thousands of prospects each year... very, very few get past the preliminary prospecting stage (soil sampling, rock chip sampling, trenching and drilling) and even fewer become mines. Most companies in the exploration and mining business look at thousands of prospects every year and many years go by with no discoveries. And then, even when a promising mineralized zone is identified, usually by drilling, its identification still does not guarantee its economic feasibility. In fact, most prospects do not become mines.

Wouldn't this be nice... BUT please see letter to Strom Thurmond!

Again, let me state my support for approval of Mr. Leonard's BLM Harlock Prospecting Permit Application. If possible, could you please let me know how the USFS decides to handle this.

Since  
  
Christopher D. ...  
Geologist



**CASE STUDY****Heavy Rains Burst South Carolina Dam:****Major Cyanide Spill**

**A**pproximately 10 million gallons of cyanide solution flooded a South Carolina river on 28 October 1990, after a failure in an earthen dam at the Brewer Gold Mine near the city of Jefferson. The discharge began at about noon, and the cyanide-contaminated stormwater raced down from a reservoir at the mine into a tributary of the Lynches River.

Cyanide concentration of the spilled water was approximately 50 parts per million (ppm). Cyanide levels of 18 to 20 ppm were detected in the river near the Brewer mine, with levels of 0.3 ppm farther downstream. A cyanide concentration of just 0.005 ppm can have debilitating effects on fish, and 0.5 ppm is lethal to some species.

As many as 10,000 fish were killed by the spill, although a final total has not been determined. State officials are also concerned about the possible introduction of copper into the river. Copper is highly toxic to aquatic life.

Although the spill did not threaten any public drinking water supplies, the officials did issue warnings to residents against swimming in or drinking from the Lynches River.

The Brewer mine produces gold using the increasingly common cyanide heap-leach process. Gold ore is pulverized, spread out over a plastic liner, and sprayed with a dilute cyanide solution. The cyanide solution bonds to gold — and a host of other metals — present in small quantities in the ore. Gold is typically recovered from the resulting pregnant solution by adsorption onto carbon (charcoal) and the barren cyanide solution reapplied to the leach piles.

The damaged reservoir at the Brewer mine, which is designed to hold excess runoff cyanide solution until it can be processed, was only completed in February and had not been tested by high water levels. Extremely heavy rains in early October swelled the reservoir from about 200,000 to 13 million gallons; this heavy rainfall is being blamed for the accident. Although the reservoir has a double synthetic liner and leak detection equipment, the dam may have been susceptible to erosion by ground water, the level of which was

raised by the storm. The dam was not overtopped, and most of its structure remains intact.

Earlier in October, the same storm caused a 420,000-gallon spill of cyanide solution at the Brewer Mine when debris blocked a lined channel used to carry pregnant solution from the leach pads to a processing plant. Although flow of the pregnant solution was cut off almost instantaneously, it was seven hours before stormwater runoff containing 170 ppm of cyanide could be prevented from spilling into the river drainage.

---

**As many as 10,000 fish were killed by the spill, although a final total has not been determined. State officials are also concerned about the possible introduction of copper into the river. Copper is highly toxic to aquatic life.**

---

Brewer had been previously fined \$25,000 by the EPA for failure to notify federal officials of a spill that occurred at the mine in 1988.

In the aftermath of recent failure, Brewer constructed an emergency sump pond below the reservoir and a new emergency impoundment with a 4 million gallon capacity to contain further runoff. Brewer officials plan to discharge the water remaining in the damaged reservoir after treating it with oxidizing agents to destroy the cyanide.

Brewer is now required to study the impacts of the spill on the biota of the Lynches River and to hire a independent team of engineers to determine the cause of the dam failure. Brewer appears to have violated its Clean Water Act discharge permit, although it is unclear if the state will take action against the company. \*

## Gold Prospecting in Oconee County

Jim Bates, Archeologist, USFS  
10/16/95

Several gold discoveries were made in Oconee County during the early nineteenth century. The period of most intensive prospecting and mining was in the 1850s. Gold was found along the Chattooga, Seneca, Keowee Rivers and on Coneross, Tomassee, and Cheohee Creeks. Most gold was located in placer deposits or in stringers or veins of auriferous quartz and in mica schists. Exploration was extensive. Old prospecting pits and sometimes tunnels are visible on ridgetops and flanks in those areas of Oconee County where gold traces were found. The prospectors generally dug holes to get ore samples from quartz or other potential gold bearing rock veins. An assay measured the gold and other mineral content of the sample helping to determine if the minerals could be profitably mined.

Very few deposits were found to be rich enough to be mined using the methods of the nineteenth century. Perhaps the most productive mine in Oconee County was the Kuhlman Mine on Cheohee Creek west of Salem. A placer deposit was worked there in the 1850s followed by shafts to excavate pyritic gold bearing quartz veins. Mining ceased in the early 1860s.

Prospectors are returning to Oconee County in recent years. Many old time methods such as gold panning in streams is still used to locate gold. Holes are drilled to explore buried mineral veins and obtain ore samples. Modern gold extractive methods make it economically feasible to mine some deposits which were once considered too poor to mine. Gold is currently being profitably mined near Ridgeway in Fairfield County, S. C. from deposits which contain 0.033 ounces of gold per ton of ore (from: Carolina Gold; A History of Gold Mining in South Carolina. Ridgeway Mining Company, no date).



## SCIENCE & TECHNOLOGY

■ 'These [cyanide mining] heaps are the toxic waste Superfund cleanup sites of the future.'

Andy Kerr,  
Oregon Natural  
Resources Council

# Gold Rush Poses Threat to Land

*Environmentalists push for reclamation regulations as industry turns to earth-disrupting 'cyanide heap-leach' mining*

By Brad Kalckerbocker

Staff writer of The Christian Science Monitor

MALHEUR COUNTY, ORE.

**A**CROSS the sparse, dry reaches of southeastern Oregon, a new species is proliferating among the rocks and sand and sagebrush: Specimens stand slim and still as cactuses, and upon closer inspection turn out to be lengths of white PVC pipe driven into the ground to mark mining claims — upward of 400,000 to establish the 65,000 claims that have been filed in recent years.

This is all part of the "new gold rush" that has swept the West, the result of three things: gold prices of \$300 to \$400 an ounce, a method of extraction that allows miners to separate microscopic bits of the precious metal from tons of hitherto worthless ore, and what critics say are lax government regulations.

The late 20th-century version of the grizzled codger with the dusty burro and pickax is a multimillion-dollar outfit with huge earth-moving vehicles and truckloads of cyanide pellets. The earth is dynamited, then bulldozed, and scooped into huge mounds. A weak solution of sodium cyanide is sprayed over the mountain of ore. Tiny bits of gold adhere to the cyanide, which drains off into "pregnant ponds,"

and it is then carried by pipe to a nearby plant for separation.

With production costs of \$200 an ounce, this "cyanide heap-leach" mining can be very profitable. (The price of gold is \$367.40 an ounce at this writing.) As such facilities sprouted up across the West over the past decade — about 160 gold mines now operate on public lands — United States production leapt from 1 million ounces a year to 9.5 million ounces.

But the process requires a large-scale operation that tears up the countryside. About 400 tons of earth are moved to obtain the 20 tons of ore necessary to produce a single ounce of gold. A proposal by the Atlas Corporation for Grassy Mountain near Vale, Ore., would create a pit 2,000 feet in diameter and 800 to 1,000 feet deep. Some 150 million tons of earth would be moved to produce 32 tons of gold — about enough to fill a pickup truck.

"We're looking at tremendously deep holes that will not be filled," says Gary Brown, leader of a grass-roots group called Concerned Citizens for Responsible Mining. Upward of a dozen heap-leach mining proposals are anticipated in the state, described by Mr. Brown as "the last frontier for the industry to conquer."

The environmental record for cyanide mining in other states is far from perfect. Last October, Echo Bay Minerals agreed to pay

\$500,000 in government fines and donations (to the Nature Conservancy) as part of a guilty plea on 25 counts of killing migratory birds at a tailings pond in central Nevada. This is said to be the largest fine ever for violations of the Migratory Bird Treaty Act. Also in October, about 10 million gallons of cyanide solution flooded a tributary of the Lynch River in South Carolina when an earth dam belonging to the Brewster Gold Mine failed. At least 10,000 fish were estimated to have been killed.

In the West, many of the cyanide mines are along the Pacific flyway. Especially in desert areas, thirsty, tired birds are attracted to what look like pristine ponds. Mining companies erect nets and fire noise cannons, but these are not foolproof. The cyanide ponds are lined with plastic sheets, but these frequently leak into streams and ground water.

When pits are dug, toxic heavy metals are exposed as well. Although records are incomplete, tens of thousands of birds and mammals are known to have died as a result.

"These heaps are the toxic waste Superfund cleanup sites of the future," warns Andy Kerr, conservation director for the Oregon Natural Resources Council.

The federal Surface Mining Act requires environmental protection and reclamation of open-pit coal mining, but does not apply to hard-rock minerals like gold. The US Bureau of Land Management is charged with overseeing mining on all federal lands (where most Western gold mines are located) and enforcing other environmental laws, but critics say the bureau is not doing its job.

"The agency's position right now can be summed up in three words: 'Can't Say No,'" says Phillip Hocker, president of the Mineral Policy Center, a private mining reform research and lobbying group in Washington, D.C.

Some mine-company executives acknowledge that their industry must do more to protect the environment. "We do need to encourage recycling to the maximum. We do need to encourage conservation," says R. K. Urnovitz, manager of government relations for the Northwest Mining Association in Spokane, Wash.

"We cannot restore the land, but we can reclaim it," says Mr. Urnovitz. "We can't put back every rock, but we can reclaim the land, and we can protect water

quality. In fact we should be required to."

A recent agreement between a Canadian company and environmental groups regarding a proposed gold mine in the East Mojave National Scenic Area of California may be a model for the future.

The Viceroy Gold Corporation will use enclosed storage tanks for the cyanide solution, place liners underneath the ore piles, install electronic monitors to warn of leaks, and put up fences to keep out wildlife. The company also will re-contour the landscape, plant native species of vegetation once the mining is complete, and pay \$2 million into a fund for environmental restoration.

**T**HE negotiated agreement does not fully satisfy critics who question the need for any degradation of nature to extract a mineral that is used mainly for jewelry. But the fact that Viceroy can do all of this and still make a profit is encouraging to those pushing for stricter state and federal regulations as well as tougher enforcement of existing land-use laws.

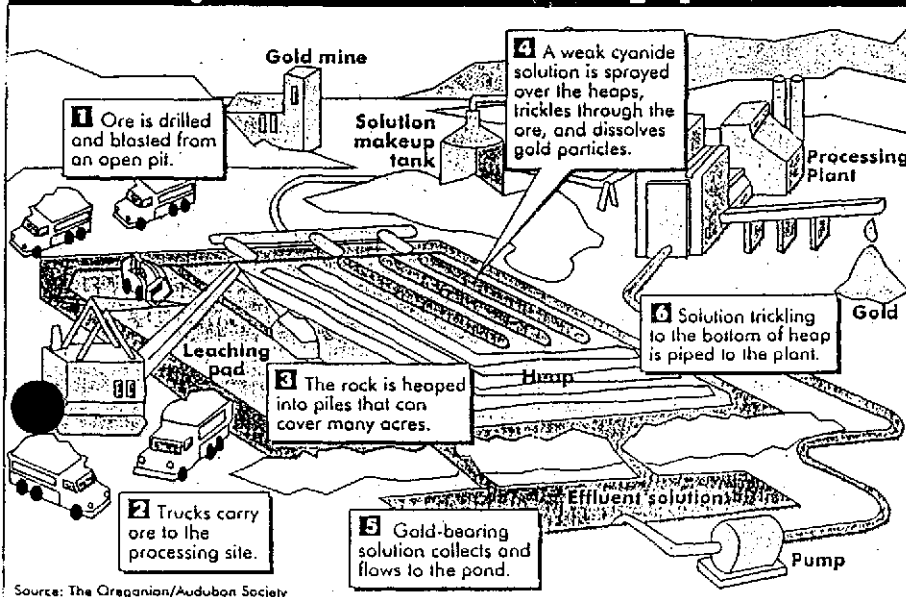
Although there has been no test case yet, the US Supreme Court has told states they may pass reclamation regulations. Another avenue may be reform of the 1872 US Mining Law (see related story), which at present says nothing about reclaiming hard-rock mining areas.

"We want up-front financial security on total reclamation," says Roy Elicker, an attorney for the National Wildlife Federation. "We want the pits to be back-filled, we want the land re-contoured and restored to pre-mining uses, we want the topsoil replaced and native vegetation successfully reseeded."

Here in Oregon, bills to protect the environment from the effects of mining are about to be considered. If the mining industry is able to fend off new legislation, environmentalists say they'll take the matter to the voters via an initiative. As the demography of the region changes from rural to urban, and with it comes greater concern for protecting the environment, the time may be ripe for change.

"My mother taught me if I made a mess I had to clean it up," says Andy Kerr of the Oregon Natural Resources Council. "We don't have any land to spare, even out West."

## How a Cyanide-Leach Gold-Processing System Works



Source: The Oregonian/Audubon Society

(30)

Maintain an effective professional, technical, and managerial work force that is knowledgeable of (a) the geologic characteristics of mineral deposits, (b) the techniques of mineral exploration and development, (c) the principles of ecosystem management, and (d) mineral laws, regulations, policy, and guidance.

Ensure that only certified mineral examiners perform investigations and prepare reports which require the examination of the mineral or geologic character of the land.

Certify personnel who perform or oversee the analysis, review and administration of plans of operations for mineral and energy operations and their reclamation.

Require reclamation plans for all proposed surface-disturbing activities to return the land to productive uses consistent with the ecological capability of the area and in accordance with land management goals.

Process mineral applications, operating plans, leases, licenses, permits, and other use authorizations efficiently and in a timely manner. Deal with applicants and operators in accordance with the principles of customer service.

Plan and provide for access to and occupancy of National Forest System lands for mineral resource activities, consistent with the overall management objectives and the rights granted through statutes, leases, licenses, and permits. Eliminate or prevent occupancy that is not reasonably incident to and required for the mineral operation.

Ensure that mineral or energy activities conducted in congressionally-designated or other withdrawn areas are supported by valid existing rights.

Prior to initiating the administrative withdrawal of National Forest System lands from mineral entry, ensure the full consideration of (a) the national interest in rural community development, (b) the value of the mineral resource foregone, (c) the value of the resource or improvement being protected, and (d) the risk that the renewable resources cannot be adequately protected pursuant to application of the Minerals Surface Use Regulations.

Ensure private rights are respected in all resource management decisions.

Ensure the uniform application of resource protection and reclamation standards for mineral-related exploration and development projects.

/s/ Jack Ward Thomas  
Chief, Forest Service  
03 AUG 1995

# MINERAL POLICY CENTER

• 1612 K STREET, NW, SUITE 808 • WASHINGTON, DC • 20006 • 202-887-1872 •

## THE SUMMITVILLE MINING DISASTER A Poisoned River Runs Through It

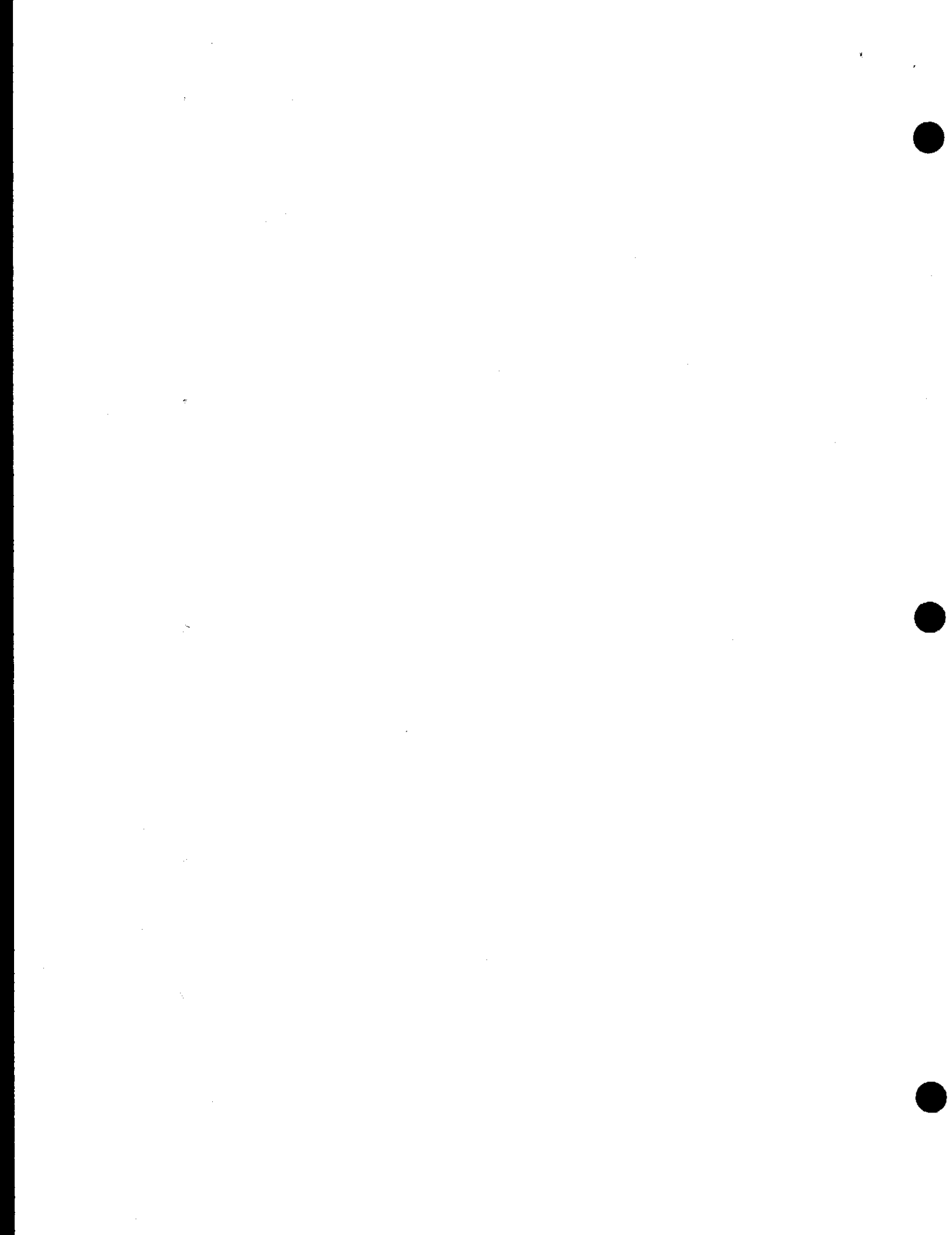
17 November 1994

On 3 December 1992, the Summitville Consolidated Mining Company (whose Canadian based parent is Galactic Resources Ltd.) declared bankruptcy and walked away from its environmentally disastrous cyanide heap-leach gold mine in the San Juan Mountains of southern Colorado.

The Summitville mine's problems started from its very inception. The valley-fill design for the heap-leach was ill-conceived but quickly approved by the State of Colorado's Mined Land Reclamation Division (MLRD). State officials set the initial bond for the site at \$1.3 million. The State claimed it had little discretion and weak authority to deny deficient permits, require conditions to improve them, or require adequate bonds. This troubled beginning was further complicated in 1986, the year the mine opened, when the Colorado legislature temporarily eliminated the budget for MLRD. James Pendleton, Colorado's chief geologist, said this action primarily resulted in no state MLRD inspections being conducted on Colorado mines for one and a half years.

By the time inspectors came back, serious environmental problems prevailed throughout the site - the liner was leaking; too much water flowed into the mine; and periodic cyanide spills occurred, allegedly wiping out aquatic life in 17 miles of the Alamosa River. On several occasions, the State slapped the Company on the wrist with modest fines and remedial plans. However, the Company continued their operation and State ordered abatement activities aimed at correcting these severe problems continued to fail. These environmental problems eventually forced the State to require Summitville to raise its total bond to \$2.2 million in 1989.

In July of 1992, Summitville and the State signed a revised agreement whereby the company would complete remediation and reclamation of the site by 30 November 1992. The total bond was raised to \$7.2 million. A condition of the "clean-up settlement required the State to refund back to the Company \$2.5 million of the bond during different



# Taxpayers get \$15 million shaft in Summitville mine fiasco

**E**ver since Colorado voters approved the Amendment 1 tax-limitation measure, most government officials have been trying to cut costs and increase efficiencies. But Gov. Roy Romer's environmental regulators responded differently.

They wasted \$15 million.

In a pathetic series of stumbles and bumbles, state officials let a Canadian mine company transform a southern Colorado mountain into a festering toxic shaft — and then stick taxpayers with the cleanup bill.

State regulators knew from the very beginning that the Summitville gold mine posed a major environmental risk. Constructed near the headwaters of the Rio Grande near Wolf Creek Pass, the Summitville operation involved spraying millions of gallons of cyanide-laced fluids



onto huge piles of crushed ore.

The plan was for the cyanide to separate the gold chemically from the rock. The fear was that the cyanide might leak out and pollute the surrounding national forest.

It didn't take long for fear to become reality. Work crews built the Summitville heap-leaching pile with a faulty protective liner, officials say, and cyanide soon

began oozing out.

The first environmental violations were detected in June 1986, two years after Summitville began operations. State mine inspectors slapped the Vancouver-based company on the wrist with a \$3,600 fine for failing to do required cleanup work and hurting a nearby creek.

**THAT SAME MONTH**, the state found cyanide seeping through the protective liner. Regulators ordered mine executives to build a pumping system to contain the contamination.

In June 1987, Summitville's pumping system broke down. The mine operation dumped at least 85,000 gallons of cyanide-laced water into a Rio Grande feeder creek — and the Colorado Health Department slapped Summitville's wrist again with a \$27,000 fine.

By 1990, concentrations of several heavy metals had doubled in a creek downstream of Summitville. Cyanide pollution levels were 25 times greater.

Summitville's wrists were slapped again with a \$100,000 fine in 1991. But that penalty was couched further by a special state exemption that permitted Summitville to violate standards for silver pollution for another 16 months.

By then, though, the pollution had taken a heavy toll. State wildlife officials said almost all aquatic life was wiped out in 17 miles of the Alamosa River downstream of the leaking mine.

Once again, the mine managers promised to do better. Once again, the state regulators took them at their word. Instead of shutting down Summitville for repeated environmental law-breaking, the state gave the mine another chance.

But last week, Summitville went bust. Complaining of rising environmental costs, the mine company filed for Chapter 7 bankruptcy protection.

**ROMER'S WATCHDOGS** didn't anticipate this maneuver. All they required of Summitville was to post a \$47 million bond for cleanup. But officials say cleanup will cost \$20 million — a burden that usually falls on government.

So, Summitville will keep leaking more toxic wastes until taxpayers kick in the extra \$15 million.

Thanks to Romer's regulators, the mine operators got to haul off 280,000 troy ounces of gold.

Taxpayers got the shaft.

Mark Obmascik's environmental column appears on Saturday in Denver & The West.



- (3) Specific facts or comments along with supporting reasons that you believe the Responsible Official should consider in reaching a decision.

If you have questions regarding this proposal, please contact Greg Borgen at 803-638-9568.

When the Decision Memo is prepared, it will be mailed only to persons who:

- submit comments on the proposal, or
- request a copy of the Decision Memo by phone or letter.

Please keep in mind that this proposal includes only the prospecting activities described above. If the applicant finds a sufficient amount of recoverable minerals, he may apply for authorization to mine. Before the Forest Service would make a decision on a mining proposal, additional public involvement and environmental analysis would be conducted.

Sincerely,

*J. Kild*  
For ELIZABETH W. MERZ  
District Ranger