

GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION  
SPONSORED PROJECT INITIATION

Date: 1/6/81

Project Title: Allotment Grant for the Georgia Mining and Mineral Resources Institute

Project No: E-19-502

Project Director: Dr. J. E. Husted

Sponsor: U. S. Department of the Interior, Office of Surface Mining; Washington, D.C. 20240

Agreement Period: From 12/4/80 Until 6/30/81 (Perf.)  
9/30/81 (Reports)

Type Agreement: Allotment Grant No. G5114003

Amount: \$64,200  
64,200 GIT (E-19-219)  
\$128,400 TOTAL

Reports Required: Quarterly Technical & Financial Status Reports;  
Final Technical & Financial Status Report

Sponsor Contact Person (s):

Technical Matters

Dr. Lawrence Chase  
Office of Surface Mining  
U. S. Department of the Interior  
1951 Constitution Avenue, N.W.  
Washington, D. C. 20240

Contractual Matters  
(thru OCA)

Dr. David R. Maneval  
Assistant Director, Technical  
Services and Research  
Office of Surface Mining  
U. S. Department of Interior  
1951 Constitution Avenue, N.W.  
Washington, D. C. 20240

Defense Priority Rating: None

Assigned to: Chemical Engineering (School/Department)

COPIES TO:

Project Director  
Division Chief (EES)  
School/Laboratory Director  
Dean/Director-EES  
Accounting Office  
Procurement Office  
Security Coordinator (OCA)  
~~Reports Coordinator (OCA)~~

Library, Technical Reports Section  
EES Information Office  
EES Reports & Procedures  
Project File (OCA)  
Project Code (GTRI)  
Other OCA Research Property Coordinator

SPONSORED PROJECT TERMINATION SHEETDate 3/2/82

Project Title: Allotment Grant for GA Mining &amp; Mineral Resources Institute

Project No: E-19-502

Project Director: Dr. J. E. Husted

Sponsor: U.S. DOI/OSM

Effective Termination Date: 9/30/81Clearance of Accounting Charges: 12/31/81 (Rpts)

Grant/Contract Closeout Actions Remaining:

- ☒ ~~Final Invoice~~ and Closing Documents (Financial Status Report sent by PD)
- ☐ Final Fiscal Report
- ☐ Final Report of Inventions
- ☒ Govt. Property Inventory & Related Certificate (see enclosed form required)
- ☐ Classified Material Certificate
- ☐ Other \_\_\_\_\_

Assigned to: Chemical Engineering (School/Laboratory)COPIES TO:

Administrative Coordinator  
Research Property Management  
Accounting  
Procurement/EES Supply Services

Research Security Services  
Reports Coordinator (OCA) ✓  
Legal Services (OCA)  
Library

EES Public Relations (2)  
Computer Input  
Project File  
Other \_\_\_\_\_



**U.S. Department of the Interior**  
Office of Surface Mining  
Division of Technical Services & Research  
**State Mining & Mineral Resources and Research Institutes**  
Washington, D.C. 20240

**Quarterly SMMRRI Reports**

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	12/4/81-3/31/81	G-05114003
Project Title/Program			
Investigator(s) / Fellowships Recipients			
John E. Husted, Director			
Performing Organization:			
Georgia Mining and Mineral Resources Institute			
<p>Summary:</p> <p>This report includes the latter part of December 1980 in order to put reporting on a quarterly calendar basis. December was primarily a month of Christmas Holidays, vacation and recuperation for the Director. Beginning in January the Director returned to work full time.</p> <p>On February 3rd, GMMRI served as hosts for a one day meeting. The first half was devoted to the Sunbelt Consortium of Mineral Institutes and the second half to OSM district business represented by states in the Sunbelt Consortium plus Iowa.</p> <p>The Director was a guest of the Crushed Stone Association of Georgia at their annual meeting. They had offered assistance to the GMMRI. Most equipment had been ordered by the end of the quarter.</p>			



**U.S. Department of the Interior**  
Office of Surface Mining  
Division of Technical Services & Research  
**State Mining & Mineral Resources and Research Institutes**  
Washington, D.C. 20240

**Quarterly SMMRI Reports**

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	1/1/81-3/31/81	G-51004001
Project Title/Program			
Scholarship - Fellowship Program			
Investigator(s) / Fellowships Recipients			
Mr. Jim Kimball (Met) Continuing fellowship in amount of \$1866 per quarter Mr. Randall Chapman (Cer. Engr.) Continuing fellowship in amount of \$1866 per quarter Ms. Teresa Bryan (Ch.E.) Fellowship in amount of \$1866 Ms. Carolyn Moore (C.E.) Scholarship in amount of \$291.50 *			
Performing Organization:			
Summary			
* Mr. Terry Patterson (Ch.E.) Scholarship in amount of \$291.50 Mr. Lee Mohnkern (Ch.E.) Continuing scholarship in amount of \$291.50 Mr. Jeffrey Reid (Geol.-Univ. of Ga.) Ph.D. candidate 2nd of 3 qtrs. @ \$5963 for 3 quarters Mr. Thomas Brazell (Geol.-Univ. of Ga.) M.S. candidate, 2nd of 3 qtrs. @ \$5600 for 3 quarters Mr. Daniel Lovingood (Geol.Univ. of Ga.) M.S. candidate, 2nd of 3 qtrs. @ \$5600 for 3 quarters Mr. William O'Leary (Geol.-Univ. of Ga.) M.S. candidate, 2nd of 3 qtrs. @ \$5600 for 3 quarters Mr. Phillip Potter (Geol.-Univ. of Ga.) M.S. candidate, 2nd of 3 qtrs. @ \$5600 for 3 quarters			

# FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved by Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted

U.S. Dept. of Interior - Office of Surface Mining

## 2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street :

City, State and ZIP Code: Atlanta, Georgia 30332

4. Federal grant or other identification number

See Attached

5. Recipient's account number or identifying number

6. Letter of credit number

14-18-0530

7. Last payment voucher number

10

Give total number for this period

8. Payment Vouchers credited to your account

9. Treasury checks received (whether or not deposited)

2

## 10. PERIOD COVERED BY THIS REPORT

3. FEDERAL EMPLOYER IDENTIFICATION NO. 58-6002023

FROM (month, day, year)

1/1/81

TO (month, day, year)

3/31/81

## 11. STATUS OF

FEDERAL

CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period

\$ 8,247.04

b. Letter of credit withdrawals

c. Treasury check payments

43,000.00

d. Total receipts (Sum of lines b and c)

43,000.00

e. Total cash available (Sum of lines a and d)

51,247.04

f. Gross disbursements

51,312.89

g. Federal share of program income

h. Net disbursements (Line f minus line g)

51,312.89

i. Adjustments of prior periods

j. Cash on hand end of period

\$ 65.85

12. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

1 Days

## 13. OTHER INFORMATION

a. Interest income

\$

b. Advances to subgrantees or subcontractors

\$

14. REMARKS (Attach additional sheets of plain paper, if more space is required)

## 5. CERTIFICATION

I certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED

CERTIFYING OFFICIAL

SIGNATURE

DATE REPORT SUBMITTED

4/20/81

TYPED OR PRINTED NAME AND TITLE

David V. Welch, Manager, Grants & Contracts Acctg.

TELEPHONE

(Area Code)

404

(Number)

894-4624

(Extension)

THIS SPACE FOR AGENCY USE

# FEDERAL CASH TRANSACTIONS REPORT

## CONTINUATION

(This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

**2. RECIPIENT ORGANIZATION** (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology  
Atlanta, Georgia 30332

Approved by Office of Management and Budget No. 80-RO182

**1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED**

U.S. Dept. of Interior  
Office of Surface Mining

**3. PERIOD COVERED BY THIS REPORT** (As shown on SF 272)

FROM (month, day, year) TO (Month, day, year)  
1/1/81 3/31/81

**4. List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.**

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER  (Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency) (a)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER (b)	FEDERAL SHARE OF NET DISBURSEMENTS	
		NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD (c)	CUMULATIVE NET DISBURSEMENTS (d)
G-51-06001	T-87-212/T-86-146/ AF-94381	\$ 16,659.54	\$ 33,408.83
G-5104003	E-19-584/E-18-584	9,494.59	68,498.26
G-5105019	E-18-624/G-41-614	4,586.14	4,586.14
G-5114003	E-19-502	20,572.62	20,572.62
<b>5. TOTALS</b> (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)		\$ 51,312.89	\$ 127,065.85

FINANCIAL STATUS REPORT <i>(Follow instructions on the back)</i>			1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER NUMBER G-5114003		IDENTIFYING	OMB Approved No. 80-RO180	PAGE 1	OF 1	PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332			4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER E-19-502 (E-19-219)		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL			
			8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT					
			FROM (Month, day, year) 12/4/80		TO (Month, day, year) 6/30/81		FROM (Month, day, year) 12/4/80		TO (Month, day, year) 3/31/81			
10.			STATUS OF FUNDS									
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)				
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ -0-				
b. Total outlays this report period								20,572.62 *				
c. Less: Program income credits												
d. Net outlays this report period (Line b minus line c)								20,572.62				
e. Net outlays to date (Line a plus line d)								20,572.62				
f. Less: Non-Federal share of outlays								-0-				
g. Total Federal share of outlays (Line e minus line f)								20,572.62				
h. Total unliquidated obligations								10,242.03				
i. Less: Non-Federal share of unliquidated obligations shown on line h												
j. Federal share of unliquidated obligations								10,242.03				
k. Total Federal share of outlays and unliquidated obligations								30,814.65				
l. Total cumulative amount of Federal funds authorized								64,200.00				
m. Unobligated balance of Federal funds								33,385.35				
11. INDIRECT EXPENSE	a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.			SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants & Contracts Acctg.		DATE REPORT SUBMITTED 4/20/81  TELEPHONE (Area code, number and extension) 404/894-4624		
	b. RATE 73%	c. BASE S&W	d. TOTAL AMOUNT \$7,558.40	e. FEDERAL SHARE \$7,558.40								
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation. *Represents charges recorded in the accounting records as of 3/31/81.												

<b>FINANCIAL STATUS REPORT</b> <i>(Follow instructions on the back)</i>		1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED  U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER  G-5105019		OMB Approved No. 80-RO180		PAGE 1 OF 1 PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)  Georgia Institute of Technology Atlanta, Georgia 30332		4. EMPLOYER IDENTIFICATION NUMBER  58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER  G-41-614/E-18-624		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS * <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
		8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
		FROM (Month, day, year) 9/1/80		TO (Month, day, year) 9/28/81		FROM (Month, day, year) 9/1/80		TO (Month, day, year) 3/31/81	
10. STATUS OF FUNDS									
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)	
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ -0-	
b. Total outlays this report period								4,586.14 *	
c. Less: Program income credits									
d. Net outlays this report period (Line b minus line c)								4,586.14	
e. Net outlays to date (Line a plus line d)								4,586.14	
f. Less: Non-Federal share of outlays								-0-	
g. Total Federal share of outlays (Line e minus line f)								4,586.14	
h. Total unliquidated obligations								1,998.22	
i. Less: Non-Federal share of unliquidated obligations shown on line h								-0-	
j. Federal share of unliquidated obligations								1,998.22	
k. Total Federal share of outlays and unliquidated obligations								6,584.36	
l. Total cumulative amount of Federal funds authorized								67,798.00	
m. Unobligated balance of Federal funds								61,213.64	
1. INDIRECT EXPENSE		a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants and Contracts Accounting	
		b. RATE 73%		c. BASE S&W					
2. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.  *Represents charges recorded in the accounting records								DATE REPORT SUBMITTED 4/20/81  TELEPHONE (Area code, number and extension) 404/894-4624	



# FINANCIAL STATUS REPORT

(Follow instructions on the back)

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED

U.S. Dept. of Interior - Office of Surface Mining

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER

G-5104003

OMB Approved  
No. 80-RO180

PAGE OF

1 1 PAGES

3. RECIPIENT ORGANIZATION (Name and complete address including ZIP code)

Georgia Institute of Technology  
Atlanta, Georgia 30332

4. EMPLOYER IDENTIFICATION NUMBER

58-6002023

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

E-19-584/E-18-584

6. FINAL REPORT

☐ YES ☒ NO

7. BASIS \*

☒ CASH ☐ ACCRUAL

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)

12/4/79

TO (Month, day, year)

2/3/81

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)

1/1/81

TO (Month, day, year)

3/31/81 \*

10.

## STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ▶	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 99,340.99
b. Total outlays this report period							9,494.59 *
c. Less: Program income credits							-
d. Net outlays this report period (Line b minus line c)							9,494.59
e. Net outlays to date (Line a plus line d)							108,835.58
f. Less: Non-Federal share of outlays							40,337.32
g. Total Federal share of outlays (Line e minus line f)							68,498.26
h. Total unliquidated obligations							41,020.00
i. Less: Non-Federal share of unliquidated obligations shown on line h							
j. Federal share of unliquidated obligations							41,020.00
k. Total Federal share of outlays and unliquidated obligations							109,518.26
l. Total cumulative amount of Federal funds authorized							110,000.00
m. Unobligated balance of Federal funds							481.74

11. INDIRECT  
EXPENSE

a. TYPE OF RATE

(Place "X" in appropriate box)

☐ PROVISIONAL

☒ PREDETERMINED

☐ FINAL

☐ FIXED

b. RATE

12/4/79-6/30/80 76% BASE

As of 7/1/80 73%

S&W

d. TOTAL AMOUNT

\$37,386.58

e. FEDERAL SHARE

\$20,949.74

13. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING  
OFFICIAL

TYPED OR PRINTED NAME AND TITLE  
David V. Welch, Manager  
Grants & Contracts Acctg.

DATE REPORT  
SUBMITTED  
4/20/81

TELEPHONE (Area code,  
number and extension)  
404/894-4624

12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.

\*Represents charges recorded in the accounting records as of 3/31/81. All charges were incurred prior to 2/3/81.

# FINANCIAL STATUS REPORT

(Follow instructions on the back)

3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code)

Georgia Institute of Technology  
Atlanta, Georgia 30332

1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED

U.S. Dept. of Interior - Office of Surface Mining

2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER

G-5106001

OMB Approved  
No. 80-RO180

PAGE 1 OF 1 PAGES

4. EMPLOYER IDENTIFICATION NUMBER

58-6002023

5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER

T-86-146/T-87-212/AF-94381

6. FINAL REPORT

☐ YES ☒ NO

7. BASIS

☒ CASH ☐ ACCRUAL

8. PROJECT/GRANT PERIOD (See instructions)

FROM (Month, day, year)

9/1/79

TO (Month, day, year)

9/30/82

9. PERIOD COVERED BY THIS REPORT

FROM (Month, day, year)

1/1/81

TO (Month, day, year)

3/31/81

10.

## STATUS OF FUNDS

PROGRAMS/FUNCTIONS/ACTIVITIES ►	(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)
a. Net outlays previously reported	\$	\$	\$	\$	\$	\$	\$ 16,749.29
b. Total outlays this report period							16,659.54 *
c. Less: Program income credits							
d. Net outlays this report period (Line b minus line c)							16,659.54
e. Net outlays to date (Line a plus line d)							33,408.83
f. Less: Non-Federal share of outlays							-0-
g. Total Federal share of outlays (Line e minus line f)							33,408.83
h. Total unliquidated obligations							12,602.50
i. Less: Non-Federal share of unliquidated obligations shown on line h							
j. Federal share of unliquidated obligations							12,602.50
k. Total Federal share of outlays and unliquidated obligations							46,011.33
l. Total cumulative amount of Federal funds authorized							160,000.00
m. Unobligated balance of Federal funds							113,988.67

11. INDIRECT  
EXPENSE

a. TYPE OF RATE

(Place "X" in appropriate box)

N/A

☐ PROVISIONAL ☐ PREDETERMINED ☐ FINAL ☐ FIXED

b. RATE

c. BASE

d. TOTAL AMOUNT

e. FEDERAL SHARE

13. CERTIFICATION

I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.

SIGNATURE OF AUTHORIZED CERTIFYING  
OFFICIAL

TYPED OR PRINTED NAME AND TITLE  
David V. Welch, Manager  
Grants & Contracts Accounting

DATE REPORT  
SUBMITTED

4/20/81

TELEPHONE (Area code,  
number and extension)  
404/894-4624

12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.

269-102

\*Represents charges recorded in the accounting records as of 3/31/81

STANDARD FORM 269 (7-76)  
Prescribed by Office of Management and Budget  
Cir. No. A-110



**U.S. Department of the Interior**  
Office of Surface Mining  
Division of Technical Services & Research  
**State Mining & Mineral Resources and Research Institutes**  
Washington, D.C. 20240

**Quarterly SMMRRI Reports**

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	4/1/81-6/30/81	G-05114003
Project Title/Program			
Investigator(s) / Fellowships Recipients			
John E. Husted, Director			
Performing Organization:			
Georgia Mining and Mineral Resources Institute			
Summary:			
<p>During the subject period the Director worked half time as Director, with the remaining time devoted to teaching a course each in Mineral Separation and Fossil Fuels.</p> <p>Time was spent on reviewing equipment needs and tracking progress of 1982 Congressional budget action in relation to the Mineral Institutes.</p> <p>On May 26th and 27th a meeting of the Association of Mineral Institute Directors was attended in Arlington, VA.</p> <p>Preparation for the GMMRI External Advisory Board meeting, July 8th, included circulating questionnaire and tabulating results. The results are attached.</p> <p>This contract was extended at no additional costs until September 30, 1981.</p>			

## Industry's Responses to GMRI Questionnaire

Questionnaire mailed March 23, 1981 to 140 companies.

107 - No response (No response from 28 Ga. Mining Assoc. Members)  
19 - Returned (Companies out of business)  
24 - Responses  
140

Of the responses:

15 have a need for mineral trained people  
13 have a need for Chemical Engineers trained in mineral processing with at least 1 annually - some periodically every 5 to 6 years  
17 have a need for Civil Engineers with geotechnical training with at least 1 annually - some periodically every 5 to 6 years  
5 have a need for Extractive Metallurgists with a background in mineral engineering course work

Number and kind of engineers employed:

Ceramic	13
Chemical	21
Civil	8
Comercial	1
Economic geologist	2
Electrical	4
Industrial	13
Mechanical	26
Mineral	<u>9</u>

Total \*123

(\*One company reported that it employed 25 engineers but did not specify which kind.)

Comments on brochure:

The few comments were favorable.

Suggestions:

More mining courses  
Courses related to mine reclamation need to be added  
Course in government and state regulations needs to be added



**U.S. Department of the Interior**  
Office of Surface Mining  
Division of Technical Services & Research  
**State Mining & Mineral Resources and Research Institutes**  
Washington, D.C. 20240

**Quarterly SMMRRI Reports**

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Quarterly Technical	4/1/81-6/30/81	G-51004001
<b>Project Title/Program</b> Scholarship - Fellowship Program			
<b>Investigator(s) / Fellowships Recipients</b> Mr. Jim Kimball (met.) Continuing fellowship in amount of \$1866 per quarter Mr. Randall Chapman (Cer.Engr.) Continuing fellowship in amount of \$1866 per quarter Ms. Teresa Bryan (Ch.E.) Continuing fellowship in amount of \$1866 per quarter Ms. Carolyn Moore (C.e.) Continuing scholarship in amount of \$291.50 per quarter			
<b>Performing Organization:</b>			
<b>Summary:</b> Mr. Terry Patterson (Ch.E.) Continuing scholarship in amount of \$291.50 per quarter Mr. Lee Mohnkern (Ch.E.) Continuing scholarship in amount of \$291.50 per quarter Mr. Jeffrey Redi (Geol.-Univ. of Ga.) Ph.D. candidate- \$5963 for 3 quarters Mr. Thomas Brazell (Geol.-Univ. of Ga.) M.S. candidate - \$5600 for 3 quarters Mr. Daniel Lovingood (Geol.-Univ. of Ga.) M.S. candidate - \$5600 for 3 quarters Mr. William O'Leary (Geol.-Univ. of Ga.) M.S. candidate - \$5600 for 3 quarters Mr. Phillip Potter (Geol.-Univ. of Ga.) M.S. candidate - \$5600 for 3 quarters			

# FEDERAL CASH TRANSACTIONS REPORT

(See instructions on the back. If report is for more than one grant or assistance agreement, attach completed Standard Form 272-A.)

Approved Office of Management and Budget, No. 80-RO182

1. Federal sponsoring agency and organizational element to which this report is submitted

U. S. Dept. of Interior - Office of Surface Mining

## 2. RECIPIENT ORGANIZATION

Name : Georgia Institute of Technology

Number and Street

City, State and ZIP Code: Atlanta, Georgia 30332

3. FEDERAL EMPLOYER IDENTIFICATION NO. 58-6002023

4. Federal grant or other identification number  
See Attached

5. Recipient's account number or identifying number

6. Letter of credit number  
14-18-0530

7. Last payment voucher number  
13

Give total number for this period

8. Payment Vouchers credited to your account

9. Treasury checks received (whether or not deposited)

## 10. PERIOD COVERED BY THIS REPORT

FROM (month, day, year)  
4/1/81

TO (month, day, year)  
6/30/81

## 11. STATUS OF FEDERAL CASH

(See specific instructions on the back)

a. Cash on hand beginning of reporting period	\$ (65.85)
b. Letter of credit withdrawals	
c. Treasury check payments	56,000.00
d. Total receipts (Sum of lines b and c)	56,000.00
e. Total cash available (Sum of lines a and d)	55,934.15
f. Gross disbursements	45,817.94
g. Federal share of program income	
h. Net disbursements (Line f minus line g)	45,817.94
i. Adjustments of prior periods	
j. Cash on hand end of period	\$ 10,116.21

## 12. THE AMOUNT SHOWN ON LINE 11J, ABOVE, REPRESENTS CASH REQUIREMENTS FOR THE ENSUING

3 Days

## 13. OTHER INFORMATION

a. Interest income	\$
b. Advances to subgrantees or subcontractors	\$

## 14. REMARKS (Attach additional sheets of plain paper, if more space is required)

## 15. CERTIFICATION

I certify to the best of my knowledge and belief that this report is true in all respects and that all disbursements have been made for the purpose and conditions of the grant or agreement

AUTHORIZED  
CERTIFYING  
OFFICIAL

SIGNATURE

DATE REPORT SUBMITTED

7/28/81

TYPED OR PRINTED NAME AND TITLE

David V. Welch, Manager, Grants & Contracts Acctg.

TELEPHONE (Area Code)

(Number)

(Extension)

404

894-4624

THIS SPACE FOR AGENCY USE

# FEDERAL CASH TRANSACTIONS REPORT

## CONTINUATION

(This form is completed and attached to Standard Form 272 only when reporting more than one grant or assistance agreement.)

2. RECIPIENT ORGANIZATION (Give name only as shown in item 2, SF 272)

Georgia Institute of Technology  
Atlanta, Georgia 30332

Approved by Office of Management and Budget No. 80-RO182

1. FEDERAL SPONSORING AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH THIS REPORT IS SUBMITTED

U. S. Dept. of Interior  
Office of Surface Mining

3. PERIOD COVERED BY THIS REPORT (As shown on SF 272)

FROM (month, day, year) TO (Month, day, year)  
4/1/81 6/30/81

4. List information below for each grant or other agreement covered by this report. Use additional forms if more space is required.

FEDERAL GRANT OR OTHER IDENTIFICATION NUMBER  (Show a subdivision by other identifying numbers if required by the Federal Sponsoring Agency)	RECIPIENT ACCOUNT NUMBER OR OTHER IDENTIFYING NUMBER	FEDERAL SHARE OF NET DISBURSEMENTS	
		NET DISBURSEMENTS (Gross disbursements less program income received) FOR REPORTING PERIOD	CUMULATIVE NET DISBURSEMENTS
(a)	(b)	(c)	(d)
G-5106001	T-87-212/T-86-146/ AF-94381	\$ 14,644.38	\$ 48,053.21
G-5104003	E-19-584/E-18-584	.00	68,498.26
G-5105019	E-18-624/G-41-614	10,285.66	14,871.80
G-5114003	E-19-502	20,887.90	41,460.52
5. TOTALS (Should correspond with amounts shown on SF 272 as follows: column (c) the same as line 11h; column (d) the sum of lines 11h and 11i of this SF 272 and cumulative disbursements shown on last report. Attach explanation of any differences.)		\$ 45,817.94	\$ 172,883.79

FINANCIAL STATUS REPORT <i>(Follow instructions on the back)</i>				1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER		OMB Approved No. 80-RO180		PAGE OF 1 1 PAGES					
3. RECIPIENT ORGANIZATION <i>(Name and complete address, including ZIP code)</i>  Georgia Institute of Technology Atlanta, Georgia 30332				4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER T-86-146/T-86-212/AF-94381		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL					
				8. PROJECT/GRANT PERIOD <i>(See instructions)</i>						9. PERIOD COVERED BY THIS REPORT					
				FROM <i>(Month, day, year)</i> 9/1/79			TO <i>(Month, day, year)</i> 9/30/82			FROM <i>(Month, day, year)</i> 4/1/81			TO <i>(Month, day, year)</i> 6/30/81		
10. STATUS OF FUNDS															
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)							
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 33,408.83							
b. Total outlays this report period								14,644.38							
c. Less: Program income credits															
d. Net outlays this report period <i>(Line b minus line c)</i>								14,644.38							
e. Net outlays to date <i>(Line a plus line d)</i>								48,053.21							
f. Less: Non-Federal share of outlays								.00							
g. Total Federal share of outlays <i>(Line e minus line f)</i>								48,053.21							
h. Total unliquidated obligations								.00							
i. Less: Non-Federal share of unliquidated obligations shown on line h															
j. Federal share of unliquidated obligations								.00							
k. Total Federal share of outlays and unliquidated obligations								48,053.21							
l. Total cumulative amount of Federal funds authorized								160,000.00							
m. Unobligated balance of Federal funds								111,946.79							
11. INDIRECT EXPENSE	a. TYPE OF RATE <i>(Place "X" in appropriate box)</i> N/A <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED			13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.				SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  David V. Welch, Manager Grants & Contracts Acctg.		DATE REPORT SUBMITTED 7/28/81  TELEPHONE <i>(Area code, number and extension)</i> 404/894-4624					
	b. RATE	c. BASE	d. TOTAL AMOUNT									e. FEDERAL SHARE			
12. REMARKS: <i>Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.</i>															



<b>FINANCIAL STATUS REPORT</b> <i>(Follow instructions on the back)</i>			<b>1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED</b> U. S. Dept. of Interior - Office of Surface Mining		<b>2. FEDERAL GRANT OR OTHER NUMBER</b> G-5104003		<b>IDENTIFYING</b>	<b>OMB Approved</b> No. 80-RO180	<b>PAGE</b> 1	<b>OF</b> 1	<b>PAGES</b>	
<b>3. RECIPIENT ORGANIZATION</b> <i>(Name and complete address, including ZIP code)</i>  Georgia Institute of Technology Atlanta, Georgia 30332			<b>4. EMPLOYER IDENTIFICATION NUMBER</b> 58-6002023		<b>5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER</b> E-19-584/E-18-584		<b>6. FINAL REPORT</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>7. BASIS</b> <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL			
			<b>8. PROJECT/GRANT PERIOD</b> <i>(See instructions)</i>					<b>9. PERIOD COVERED BY THIS REPORT</b>				
			<b>FROM</b> <i>(Month, day, year)</i> 12/4/79		<b>TO</b> <i>(Month, day, year)</i> 2/3/81		<b>FROM</b> <i>(Month, day, year)</i> 4/1/81		<b>TO</b> <i>(Month, day, year)</i> 6/30/81			
<b>10. STATUS OF FUNDS</b>												
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)				
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 108,835.58				
b. Total outlays this report period								71,676.47*				
c. Less: Program income credits												
d. Net outlays this report period <i>(Line b minus line c)</i>								71,676.47				
e. Net outlays to date <i>(Line a plus line d)</i>								180,512.05				
f. Less: Non-Federal share of outlays								112,013.79				
g. Total Federal share of outlays <i>(Line e minus line f)</i>								68,498.26				
h. Total unliquidated obligations								41,020.00*				
i. Less: Non-Federal share of unliquidated obligations shown on line h												
j. Federal share of unliquidated obligations								41,020.00				
Total Federal share of outlays and unliquidated obligations								109,518.26				
l. Total cumulative amount of Federal funds authorized								110,000.00				
m. Unobligated balance of Federal funds								481.74				
<b>11. INDIRECT EXPENSE</b>	<b>a. TYPE OF RATE</b> <i>(Place "X" in appropriate box)</i> <input type="checkbox"/> PROVISIONAL <input type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED			<b>13. CERTIFICATION</b> I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.			<b>SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL</b>  David V. Welch, Manager Grants & Contracts Acctg.			<b>DATE REPORT SUBMITTED</b> 7/28/81  <b>TELEPHONE</b> <i>(Area code, number and extension)</i> 404/894-4624		
	<b>b. RATE</b> 12/4/79-6/30/80-76% AS OF 7/1/80 -73%	<b>c. BASE</b> S&W	<b>d. TOTAL AMOUNT</b> \$67,707.13									<b>e. FEDERAL SHARE</b> \$20,949.74
<b>12. REMARKS:</b> <i>Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.</i> *Represents charges recorded in the accounting records as of 6/30/81. All charges were obligated as of 2/3/81.												

<b>FINANCIAL STATUS REPORT</b> (Follow instructions on the back)				1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5114003		OMB Approved No. 80-R0180		PAGE 1 OF 1 PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) Georgia Institute of Technology Atlanta, Georgia 30332				4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER E-19-502/E-19-219		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
				8. PROJECT/GRANT PERIOD (See instructions) FROM (Month, day, year) 12/4/80 TO (Month, day, year) 6/30/81		9. PERIOD COVERED BY THIS REPORT FROM (Month, day, year) 4/1/81 TO (Month, day, year) 6/30/81					
10.				STATUS OF FUNDS							
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)			
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 20,572.62			
b. Total outlays this report period								85,088.90			
c. Less: Program income credits											
d. Net outlays this report period (Line b minus line c)								85,088.90			
e. Net outlays to date (Line a plus line d)								105,661.52			
f. Less: Non-Federal share of outlays								64,201.00			
g. Total Federal share of outlays (Line e minus line f)								41,460.52			
h. Total unliquidated obligations								16,439.12			
i. Less: Non-Federal share of unliquidated obligations shown on line h											
j. Federal share of unliquidated obligations								16,439.12			
k. Total Federal share of outlays and unliquidated obligations								57,899.64			
l. Total cumulative amount of Federal funds authorized								64,200.00			
m. Unobligated balance of Federal funds								6,300.36			
11. INDIRECT EXPENSE		a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants & Contracts Acctg.		DATE REPORT SUBMITTED 7/28/81  TELEPHONE (Area code, number and extension) 404/894-4624	
b. RATE 73%		c. BASE S&W		d. TOTAL AMOUNT \$38,394.12		e. FEDERAL SHARE \$12,938.29					
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.											

<b>FINANCIAL STATUS REPORT</b> (Follow instructions on the back)		1. FEDERAL AGENCY AND ORGANIZATIONAL ELEMENT TO WHICH REPORT IS SUBMITTED U.S. Dept. of Interior - Office of Surface Mining		2. FEDERAL GRANT OR OTHER IDENTIFYING NUMBER G-5105019		OMB Approved No. 80-RO180		PAGE 1 OF 1 PAGES	
3. RECIPIENT ORGANIZATION (Name and complete address, including ZIP code) GEORGIA INSTITUTE OF TECHNOLOGY ATLANTA, GEORGIA 30332		4. EMPLOYER IDENTIFICATION NUMBER 58-6002023		5. RECIPIENT ACCOUNT NUMBER OR IDENTIFYING NUMBER G-41-614/E-18-624		6. FINAL REPORT <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		7. BASIS <input checked="" type="checkbox"/> CASH <input type="checkbox"/> ACCRUAL	
		8. PROJECT/GRANT PERIOD (See instructions)				9. PERIOD COVERED BY THIS REPORT			
		FROM (Month, day, year) 9/1/80		TO (Month, day, year) 9/28/81		FROM (Month, day, year) 4/1/81		TO (Month, day, year) 6/30/81	
10.		STATUS OF FUNDS							
PROGRAMS/FUNCTIONS/ACTIVITIES ►		(a)	(b)	(c)	(d)	(e)	(f)	TOTAL (g)	
a. Net outlays previously reported		\$	\$	\$	\$	\$	\$	\$ 4,586.14	
b. Total outlays this report period									
c. Less: Program income credits									
d. Net outlays this report period (Line b minus line c)								10,285.66	
e. Net outlays to date (Line a plus line d)								14,871.80	
f. Less: Non-Federal share of outlays									
g. Total Federal share of outlays (Line e minus line f)								14,871.80	
h. Total unliquidated obligations								80.00	
i. Less: Non-Federal share of unliquidated obligations shown on line h									
j. Federal share of unliquidated obligations								80.00	
k. Total Federal share of outlays and unliquidated obligations								14,951.80	
l. Total cumulative amount of Federal funds authorized								67,798.00	
m. Unobligated balance of Federal funds								52,846.20	
11. INDIRECT EXPENSE	a. TYPE OF RATE (Place "X" in appropriate box) <input type="checkbox"/> PROVISIONAL <input checked="" type="checkbox"/> PREDETERMINED <input type="checkbox"/> FINAL <input type="checkbox"/> FIXED				13. CERTIFICATION I certify to the best of my knowledge and belief that this report is correct and complete and that all outlays and unliquidated obligations are for the purposes set forth in the award documents.		SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL  TYPED OR PRINTED NAME AND TITLE David V. Welch, Manager Grants & Contracts Acctg.		DATE REPORT SUBMITTED 7/28/81  TELEPHONE (Area code, number and extension) 404/894-4624
	b. RATE 73%	c. BASE S&W	d. TOTAL AMOUNT \$4,003.34	e. FEDERAL SHARE \$4,003.34					
12. REMARKS: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation.									



E 11-502

**U.S. Department of the Interior**  
Office of Surface Mining  
Division of Technical Services & Research  
**State Mining & Mineral Resources and Research Institutes**  
Washington, D.C. 20240

**Quarterly SMMRRI Reports**

Grant Recipient	Type of Report	Reporting Period	Control Number(s)
Georgia Institute of Technology	Final Technical Report	12/4/80-9/30/81	G-5114003
<b>Project Title/Program</b> Allotment Grant for the Georgia Mining and Mineral Resources Institute			
<b>Investigator(s) / Fellowships Recipients</b> John E. Husted, Director			
<b>Performing Organization:</b>  Georgia Mining and Mineral Resources Institute			
<b>Summary:</b>  All personal services charged to this grant were completed during the initial grant period December 4, 1980-June 30, 1981 and are adequately covered without duplication in the two Quarterly Reports for this period.  Other expenditures on this grant were for travel expenses for which the personal services were charged on Grant G-5114017, materials and supplies, and capital expenditures for which prior permission was obtained.			