M 9-1648
ARCH 1961

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER For Month of April, 1973

Operator's Name Hicks Dome Account c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-6873

Contract 14-08-0001 2306

Contract Amount $95,450

Gov't. Participation %50 $47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs. Dozing	9	112.50	51	637.50	9	112.50	51	637.50
Rotary Drilling	-	-	816	3,182.40	-	-	816	3,182.40
Cored NX 0-500	-	-	1092	4,804.80	-	-	1,092	4,804.80
500-1000	-	-	840	4,032.00	-	-	840	4,032.00
1000-1500	-	-	230	1,242.00	-	-	230	1,242.00
Cored BX 0-500	-	-	92	386.40	-	-	92	386.40
500-1000	284'	1,306.40	1160	5,336.00	284	1306.40	1160	5,336.00
1000-1500	79'	410.80	1349	7,014.80	79	410.80	1349	7,014.80
1500-2000	-	-	1500	9,150.00	-	-	1500	9,150.00
2000-2500	-	-	903	6,591.90	-	-	903	6,591.90
Reaming	868'	2,604.00	1197	3,591.00	868	2604.00	1197	3,591.00
Water supply, mons.	1	300.00	6.7	2,010.00	1	300.00	6.7	2,010.00
Standby time, hrs.	-	-	16	224.00	-	-	16	224.00
Drilling mud, bags	-	-	114	419.71	-	-	114	419.71
Caustic Soda	-	-	1	10.85	-	-	1	10.85
Quebracho	-	-	1	20.78	-	-	1	20.78
Freight & Handling	-	-	21	22.59	-	-	21	22.59
BX Casing lost	110'	275.00	267	667.60	110	275.00	267	667.60
NX Casing lost	-	-	136	476.00	42 1/	147.00 1/	178 1/	623.00 1/
4" pipe lost	147'	147.00	147	147.00	1/	1/		
Category (2)								
Geol.-Supervisor	1	1,250.00	7	8,750.00	1	1,250.00	7	8,750.00
Sampler	-	-	5	458.98	-	-	5	458.98
Category (3)								
Road Rock, tons	-	-	199.9	327.73	-	-	199.9	327.73
Core Boxes	36	45.00	784	980.00	36	45.00	784	980.00
Sample Bags	-	-	86	27.10	-	-	81	27.10
Category (7)								
Office Expense	1	106.70	7	695.35	1	106.70	7	695.35
Trans. of samples	-	-	54	31.66	-	-	54	31.66
Prepare, assay CaF_2	-	-	108	351.00	-	-	108	351.00
Other assays	-	-	27	35.50	-	-	27	35.50
Spectro. anal.	-	-	32	301.00	-	-	32	301.00
TOTALS		$ 6,557.40		$ 61,925.65		$ 6,557.40		$ 61,925.65

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 2, '73 *Payee Hicks Dome Account

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kirkemo Chief, OME ~~Field Officer~~ Date 6/19/73

Approved for: $ (SUBJECT TO AUDIT)

Signature

Date Vou. No.

(SEE OTHER SIDE)

FOR OPERATOR'S USE	FOR GOVERNMENT USE
REMARKS	REMARKS
Category (1) ream In order to reeever BX casing down to 1079 it was first necessary to ream the NX casing to 385' to seal off the cavities that originally made it necessary to reduce to BX at 430'. The 4" pipe that was lost in Hole F-1 (OME-2) was surface casing through overburden. It was necessary to stablize the NX casing. Efforts to pull this were unsuccessful. The invoice for April includes $747.00 for bit costs for the month. An additional invoice in the amount of $5,555.00 was also received during the month for bit costs up to April. Clarification of several items is necessary for approval and payment. Bit costs will be submitted on the next voucher. Category (2) No sampler was used during the month.	1/ 4" pipe substituted for casing. Credit 42 feet of NX casing for 147 ft. of pipe.

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

OPERATOR'S MONTHLY REPORT

April 1973

Little progress was made during the month on OME-4. The hole was drilled 716 to 1079.

A cavity was encountered from 1052 to 1063 feet. The rest of the month was spent in dealing with the problems created by the cavity.

When the cavity was first encountered, the driller was able to get to the bottom and cored from 1063 to 1079. At this point the rods had to be pulled for a bit change. They were unable to reenter the hole on the bottom of the cavity. The rods did go down in the cavity beyond the bottom of the previous hole, indicating the floor of the cavity was at a steep angle. The rods twisted off leaving the core barrel and ten feet of rod in the hole.

The hole was subsequently reamed to accomodate BX casing to the bottom of the hole. Though set on bottom it apparently was quite crooked. A BX core barrel was badly bent trying to drill past the casing. While the bent barrel was being pulled out it lodged in the casing and the casing was inadvertently lifted several feet. When it dislodged the casing fell back to bottom and the casing joints sheared in the cavity, the end result being 110 feet of casing was lost.

In order to get around the cavity and steel lost in the hole, a wedge was set and the hole was deflected. The hole was subsequently completed.

Respectfully submitted,

Joseph A. Porter, Geologist
P.O. Box 447
Rosiclare, Illinois 62982

-1648
MAR 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER For Month of April, 1973

Operator's Name Hicks Dome Account c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-6373

Contract 14-08-0001 2306

Contract Amount $ 95,450

Gov't. Participation % 50 $47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
[illegible]	9	112.50	51	637.50	9	112.50	51	637.50
[illegible] Drilling	-	-	816	3,182.40	—	—	816	3182.40
[illegible] 0-500	-	-	1092	4,804.80	—	—	1092	4804.80
500-1000	-	-	840	4,032.00	—	—	840	4,032.00
1000-1500	-	-	230	1,242.00	—	—	230	1,242.00
[illegible] 0-500	-	-	92	386.40	—	—	92	386.40
500-1000	284'	1,306.40	1160	5,336.00	284	1306.40	1160	5,336.00
1000-1500	79'	410.80	1349	7,014.80	79	410.80	1349	7,014.80
1500-2000	-	-	1500	9,150.00	—	—	1500	9,150.00
2000-2500	-	-	903	6,591.90	—	—	903	6,591.90
[illegible]	868'	2,604.00	1197	3,591.00	868	2604.00	1197	3,591.00
[illegible] ly, mons.	1	300.00	6.7	2,010.00	1	300.00	6.7	2,010.00
[illegible] Lime, hrs.	-	-	16	224.00	—	—	16	224.00
[illegible] mud, bags	-	-	114	419.71	—	—	114	419.71
[illegible] Soda	-	-	1	10.85	—	—	1	10.85
[illegible]	-	-	1	20.78	—	—	1	20.78
[illegible] Handling	-	-	21	22.59	—	—	21	22.59
BX Cas[illegible] Joint	110'	275.00	267	667.60	110	275.00	267	667.60
NX C[illegible] Joint	-	-	136	476.00	42	147.00	178	623.00
[illegible] Joint	147'	147.00	147	147.00				
Category (2)								
[illegible] Supervisor	1	1,250.00	7	8,750.00	1	1,250.00	7	8,750.00
[illegible]	-	-	5	458.98	—	—	5	458.98
Category (3)								
Hard Rock, tons	-	-	199.9	327.73	—	—	199.9	327.73
[illegible] Boxes	36	45.00	784	980.00	36	45.00	784	980.00
Sample Bags	-	-	86	27.10	—	—	81	27.10
Category (7)								
Office Expense	1	106.70	7	695.35	1	106.70	7	695.35
[illegible] of samples	-	-	54	31.66	—	—	54	31.66
Prepare, assay CaF_2	-	-	108	351.00	—	—	108	351.00
Other assays	-	-	27	35.50	—	—	27	35.50
Spectro. anal.	-	-	32	301.00	—	—	32	301.00
TOTALS		$ 6,557.40		$ 61,925.65		$ 6,557.40		$ 61,925.65

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 2, '73 *Payee Hicks Dome Account

Joseph A. Porter

Per [signature] Title Geologist

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A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature _____ OME Field Officer _____ Date

Approved for: $ _____ (SUBJECT TO AUDIT)

Signature _____

Date _____ Vou. No. _____

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1) ream

In order to recover BX casing down to 1070 it was first necessary to ream the [illegible] casing to 385' to seal off the cavities that originally made it necessary to reduce to NX at 430'.

The 4" pipe that was lost in Hole [illegible]-1 (OME-2) was surface casing through overburden. It was necessary to stablize the NX casing. Efforts to pull this were unsuccessful.

The invoice for April includes $7,7.00 for bit costs for the month. An additional invoice in the amount of $[illegible],555.00 was also received during the month for bit costs up to April. Clarification of several items is necessary for approval and payment. Bit costs will be submitted on the next voucher.

Category (2)

No sampler was used during the month.

FOR GOVERNMENT USE

REMARKS

4" pipe substituted for casing. Credit 42 feet of NX casing for 147 ft. of pipe.

OPERATOR'S MONTHLY REPORT

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FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER For Month of March, 1973

Operator's Name Hicks Dome Account c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-3873

Contract 14-08-0001 2304

Contract Amount $ 95,150

Gov't. Participation % 50 $ 47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Fnr. Dozing	-	-	42	525.00	—	—	42	525.00
Rotary Drilling	-	-	816	3,182.40	—	—	816	3,182.40
Cored NX 0-500	-	-	1092	4,804.80	—	—	1092	4,804.80
500-1000	-	-	840	4,032.00	—	—	840	4,032.00
1000-1500	-	-	230	1,242.00	—	—	230	1,242.00
Cored BX 0-500	-	-	92	386.40	—	—	92	386.40
500-1000	88	404.80	876	4,029.60	88	404.80	876	4,029.60
1000-1500	22	114.40	1270	6,604.00	22	114.40	1270	6,604.00
1500-2000	500	3,050.00	1500	9,150.00	500	3,050.00	1500	9,150.00
2000-2500	377	2,752.10	903	6,591.90	377	2,752.10	903	6,591.90
Reaming	-	-	329	987.00	—	—	329	987.00
Water Supply, mons.	1	300.00	5.7	1,710.00	1	300.00	5.7	1,710.00
Standby time, hrs.	8	112.00	16	224.00	8	112.00	16	224.00
Drilling Mud, bags	6	22.80	114	419.71	6	22.80	114	419.71
Caustic Soda	-	-	1	10.85	—	—	1	10.85
Quebracho	-	-	1	20.78	—	—	1	20.78
Freight & Handling	-	-	21	22.59	—	—	21	22.59
BX Casing lost	-	-	157	392.60	—	—	157.04	392.60
NX Casing lost	136	476.00	136	476.00	136	476.00	136	476.00
Category (2)								
Geol.-Supervisor	1	1,250.00	6	7,500.00	1	1,250.00	6	7,500.00
Sampler	1	128.61	5	458.98	1	128.61	5	458.98
Category (3)								
Road Rock, tons	-	-	199.9	327.73	—	—	199.9	327.73
Core Boxes	103	128.75	748	935.00	103	128.75	748	935.00
Sample Bags	5	1.50	86	25.80	—	—	81	27.10
Category (7)								
Office Expense	1	103.62	6	588.65	1	103.62	6	588.65
Trans. of samples	-	-	54	31.66	—	—	54	31.66
Prepare, Assay CaF_2	14	56.00	108	351.00	14	56.00	108	351.00
Other Assays	-	-	27	35.50	—	—	27	35.50
Spectro. Anal.	-	-	32	301.00	—	—	32	301.00
TOTALS		$ 8,905.58		$ 55,356.95		$ 8,899.08		$ 55,368.25

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 20, '73 *Payee Hicks Dome Account
Joseph A. Porter

Per _____ Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature H K 5/8/73
Chief, OME ~~Field Officer~~ Date

Approved for: $ _____
(SUBJECT TO AUDIT)

Signature _____

Date _____ Vou. No. _____

(SEE OTHER SIDE)

1) Disallow. May be reclaimed upon submittal of receipts for all bags cleaned. Average cost per bag not to exceed 30 cents.

H. Kirkham

M447

FORM 9-1208 (REV. 12-1967)

37

ANALYTICAL LABORATORIES, GEOLOGICAL SURVEY, U.S.D.I.

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS

Report No. 73DS-203 9/10/73 For Allen V. Heyl Spec. Lab. No Date 8-28-73

Lot No. 11-069 Analyst M. Doll Plate No. 6335 6347 6373 6380 Job No. M 447

Si, Al, Fe, Mg, Ca, Na, K, Ti, and P are reported in %; all others in ppm. Results are to be identified with geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc., but are reported arbitrarily as mid-points of these brackets, 1., 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one bracket at 68%, or two brackets at 95% confidence.

Symbols used are:

G = Greater than 10%, or greater than value shown
* = Usual limits of determinations do not apply due to use of dilution techniques
– = Not looked for
H = Interference
N = Not detected, at limit of detection or at value shown
L = Detected, but below limit of determination or below value shown

Field No.	850	851	852	853	854	855	856	860
Lab No.	D161249	D161250	D161251	D161252	D161253	D161254	D161255	D161256
Fe %	.5	1.	1.	1.5	1.5	1.5	1.5	1.5
Mg %	2.	2.	2.	3.	2.	2.	2.	3.
Ca %	G	G	G	G	G	G	G	G
Ti %	.15	.3	.2	.3	.5	.5	.5	.5
Mn (ppm)	300	300	500	500	500	500	500	500
Ag	N	N	N	N	N	N	N	N
As	N	N	N	N	N	N	N	N
Au	N	N	N	N	N	N	N	N
B	L	L	L	L	20	20	20	30
Ba	5000	10000	10000	20000	15000	15000	20000	20000
Be	150	150	300	500	500	300	500	1500
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N	N
Co	N	N	5	5	7	5	7	5
Cr	20	30	30	50	50	50	70	50
Cu	7	10	10	20	20	15	20	20
La	100	100	100	150	150	150	150	150
Mo	7	7	7	7	7	7	7	5
Nb	300	500	300	1000	1000	1000	700	1000
Ni	7	7	10	15	20	20	20	15
Pb	150	150	200	300	300	200	500	300
Pd	N	N	N	N	N	N	N	N
Pt	N	N	N	N	N	N	N	N
Sb	N	N	N	N	N	N	N	N
Sc	100	150	150	200	200	150	200	200
Sn	N	N	N	N	N	N	N	N
Sr	3000	3000	7000	5000	5000	5000	7000	5000
Te	N	N	N	N	N	N	N	N
U	N1000	—	—	—	—	—	—	—
V	150	150	150	300	300	300	300	300
W	N	N	N	N	N	N	N	N
Y	700	1000	700	2000	1500	1500	2000	2000
Zn	N	N	N	L	500	N	L	N
Zr	70	100	70	100	100	100	100	150
	X	X	X	X	X	X	X	X

Approved Ray Havens Project Leader

Approved R. E. Mulholland Branch of Analytical Laboratories

U.S. GOVERNMENT PRINTING OFFICE: 1968 O-292-274 (633-440)

FORM 9-1242 B
(REV. 12-1967)

ANALYTICAL LABORATORIES, GEOLOGICAL SURVEY, U.S.D.I.

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS

Report No.	For	Spec. Lab. No	Date
	Allen V. Heyl		

Lot No.	Analyst	Plate No.	Job No.
11-069			M 447

Si, Al, Fe, Mg, Ca, Na, K, Ti, and P are reported in %; all others in ppm. Results are to be identified with geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc., but are reported arbitrarily as mid-points of these brackets, 1., 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one bracket at 68%, or two brackets at 95% confidence.

Symbols used are:

G = Greater than 10%, or greater than value shown
* = Usual limits of determinations do not apply due to use of dilution techniques
– = Not looked for
H = Interference
N = Not detected, at limit of detection or at value shown
L = Detected, but below limit of determination or below value shown

Field No.	861	862	863	864	865	866	867	868
Lab No.	D161257	D161258	D161259	D161260	D161261	D161262	D161263	D161264
Fe %	1.5	1.5	2.	1.5	1.5	1.5	1.5	1.5
Mg %	2.	2.	3.	5.	5.	5.	5.	5.
Ca %	G	G	G	G	G	G	G	G
Ti %	.3	.3	.5	.5	.3	.3	.3	.3
Mn (ppm)	500	500	500	500	500	500	500	500
Ag	N	N	N	N	N	N	N	N
As	N	N	N	N	N	N	N	N
Au	N	N	N	N	N	N	N	N
B	L	L	50	20	L	L	20	L
Ba	10000	10000	30000	30000	15000	15000	15000	15000
Be	500	500	1000	500	1000	300	500	200
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N	N
Co	5	7	7	7	5	L	5	L
Cr	50	50	70	50	50	30	30	30
Cu	15	15	30	20	15	15	15	15
La	150	100	150	200	100	70	100	100
Mo	5	5	7	7	7	3	5	3
Nb	500	500	2000	2000	500	700	700	700
Ni	15	10	20	15	15	10	10	10
Pb	200	200	700	700	300	500	500	700
Pd	N	N	N	N	N	N	N	N
Pt	N	N	N	N	N	N	N	N
Sb	N	N	N	N	N	N	N	N
Sc	100	150	300	300	150	100	150	100
Sn	N	N	N	N	N	N	N	N
Sr	7000	3000	3000	3000	5000	2000	3000	2000
Te	N	N	N	N	N	N	N	N
U	—	—	—	—	—	—	—	—
V	200	200	500	500	200	200	200	200
W	N	N	N	N	N	N	N	N
Y	1000	700	3000	5000	1000	1500	2000	1500
Zn	N	N	300	L	N	500	300	L
Zr	100	70	150	150	70	70	100	70
	X	X	X	X	X	X	X	X

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U.S. GOVERNMENT PRINTING OFFICE: 1968 O-292-274 (833-440)

FORM 9-1242 B
(REV. 12-1967)

ANALYTICAL LABORATORIES, GEOLOGICAL SURVEY, U.S.D.I.

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS

Report No. | For: Allen V. Heyl | Spec. Lab. No | Date

Lot No. 11-069 | Analyst | Plate No. | Job No. M 447

Si, Al, Fe, Mg, Ca, Na, K, Ti, and P are reported in %; all others in ppm. Results are to be identified with geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc., but are reported arbitrarily as mid-points of these brackets, 1., 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one bracket at 68%, or two brackets at 95% confidence.

Symbols used are:

G = Greater than 10%, or greater than value shown
* = Usual limits of determinations do not apply due to use of dilution techniques
– = Not looked for
H = Interference
N = Not detected, at limit of detection or at value shown
L = Detected, but below limit of determination or below value shown

Field No.	869	870	871	872	873	874	875	942
Lab No.	D161265	D161266	D161267	D161268	D161269	D161270	D161271	D161272
Fe %	1.5	1.	1.	1.	1.5	1.	1.	1.
Mg %	5.	10.	5.	10.	10.	10.	10.	2.
Ca %	G	G	G	G	G	G	G	G
Ti %	.3	.05	.1	.05	.15	.05	.05	.5
Mn (ppm)	500	500	500	500	500	500	500	300
Ag	N	N	N	N	N	N	N	N
As	N	N	N	N	N	N	N	N
Au	N	N	N	N	N	N	N	N
B	L	N	L	L	N	N	N	L
Ba	15000	3000	5000	5000	10000	7000	3000	30000
Be	300	300	150	500	500	100	100	500
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N	N
Co	L	N	N	N	N	N	N	5
Cr	30	30	50	20	30	20	20	30
Cu	15	7	10	7	7	5	7	10
La	100	N	L	N	N	L	N	N
Mo	L	L	5	3	L	L	L	7
Nb	1000	150	200	150	200	300	300	1500
Ni	10	L	5	5	L	L	L	7
Pb	700	200	300	70	70	30	30	700
Pd	N	N	N	N	N	N	N	N
Pt	N	N	N	N	N	N	N	N
Sb	N	N	N	N	N	N	N	N
Sc	100	15	20	20	20	10	10	300
Sn	N	N	N	N	N	N	N	N
Sr	2000	1000	1500	1000	2000	1500	1000	3000
Te	N	N	N	N	N	N	N	N
U	—	N1000	—	N1000	N1000	N1000	N1000	—
V	200	50	100	100	100	100	100	500
W	N	N	N	N	N	N	N	N
Y	2000	200	300	300	1000	300	200	3000
Zn	L	N	N	N	N	N	N	300
Zr	100	L	30	15	20	L	10	150
	X	X	X	X	X	X	X	X

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U.S. GOVERNMENT PRINTING OFFICE: 1968 O-292-274 (833-440)

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(REV. 12-1967)

ANALYTICAL LABORATORIES, GEOLOGICAL SURVEY, U.S.D.I.

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS

Report No. | For: Allen V. Heyl | Spec. Lab. No | Date

Lot No.: 11-069 | Analyst | Plate No. | Job No.: M 447

Si, Al, Fe, Mg, Ca, Na, K, Ti, and P are reported in %; all others in ppm. Results are to be identified with geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc., but are reported arbitrarily as mid-points of these brackets, 1., 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one bracket at 68%, or two brackets at 95% confidence.

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L = Detected, but below limit of determination or below value shown

Field No.	943	944	945	946	947	948	949	950
Lab No.	D161273	D161274	D161275	D161276	D161277	D161278	D161279	D161280
Fe %	1.5	1.	1.	1.5	1.5	1.	1.5	1.
Mg %	2.	2.	2.	2.	5.	5.	5.	5.
Ca %	G	G	G	G	G	G	G	G
Ti %	.5	.5	.5	.5	.5	.3	.3	.3
Mn (ppm)	500	500	300	500	500	500	500	500
Ag	N	N	N	3	N	N	N	N
As	N	N	N	N	N	N	N	N
Au	N	N	N	N	N	N	N	N
B	L	L	L	L	L	L	N	N
Ba	15000	30000	50000	30000	50000	30000	50000	30000
Be	500	1000	500	1000	1000	500	300	300
Bi	N	N	N	N	N	N	N	N
Cd	N	N	N	N	N	N	N	N
Co	5	5	L	5	5	5	L	N
Cr	30	30	30	50	50	50	50	50
Cu	15	15	15	200	30	15	10	10
La	100	N	N	L	70	50	L	L
Mo	7	7	5	5	5	5	5	5
Nb	1000	3000	1500	2000	1500	1500	1000	1000
Ni	15	10	10	10	15	7	5	5
Pb	700	1500	700	20000	1500	1000	700	700
Pd	N	N	N	N	N	N	N	N
Pt	N	N	N	N	N	N	N	N
Sb	N	N	N	N	N	N	N	N
Sc	200	300	300	200	150	150	150	100
Sn	N	N	N	L	N	N	N	N
Sr	3000	3000	3000	3000	3000	3000	2000	2000
Te	N	N	N	N	N	N	N	N
U	—	—	—	—	—	—	—	—
V	300	500	500	300	300	300	200	200
W	N	N	N	N	N	N	N	N
Y	2000	7000	5000	5000	7000	3000	2000	2000
Zn	L	L	L	1000	N	N	N	N
Zr	100	150	150	150	150	150	100	100
	X	X	X	X	X	X	X	X

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FORM 9-1242 B
(REV. 12-1967)

ANALYTICAL LABORATORIES, GEOLOGICAL SURVEY, U.S.D.I.

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS

Report No.	For Allen V. Heyl	Spec. Lab. No	Date
Lot No. 11-069	Analyst	Plate No.	Job No. M 447

Si, Al, Fe, Mg, Ca, Na, K, Ti, and P are reported in %; all others in ppm. Results are to be identified with geometric brackets whose boundaries are 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, etc., but are reported arbitrarily as mid-points of these brackets, 1., 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. The precision of a reported value is approximately plus or minus one bracket at 68%, or two brackets at 95% confidence.

Symbols used are:

G = Greater than 10%, or greater than value shown
* = Usual limits of determinations do not apply due to use of dilution techniques
– = Not looked for
H = Interference
N = Not detected, at limit of detection or at value shown
L = Detected, but below limit of determination or below value shown

Field No.	951	952	953	954	955			
Lab No.	D161281	D161282	D161283	D161284	D161285			
Fe %	1.	1.	1.	1.5	1.5			
Mg %	5.	5.	5.	5.	5.			
Ca %	G	G	G	G	G			
Ti %	.2	.3	.3	.3	.2			
Mn (ppm)	500	500	500	500	500			
Ag	N	N	N	N	N			
As	N	N	N	N	N			
Au	N	N	N	N	N			
B	N	N	N	N	N			
Ba	30000	30000	50000	30000	30000			
Be	150	300	500	300	100			
Bi	N	N	N	N	N			
Cd	N	N	N	N	N			
Co	N	L	L	N	N			
Cr	70	30	30	50	50			
Cu	10	15	15	15	10			
La	70	N	L	N	70			
Mo	7	5	3	3	5			
Nb	300	1000	1000	700	700			
Ni	7	L10	5	L	5			
Pb	700	1000	700	700	500			
Pd	N	N	N	N	N			
Pt	N	N	N	N	N			
Sb	N	N	N	N	N			
Sc	50	150	150	70	70			
Sn	N	N	N	N	N			
Sr	2000	2000	2000	2000	2000			
Te	N	N	N	N	N			
U	—	—	—	—	—			
V	150	200	200	200	150			
W	N	N	N	N	N			
Y	700	3000	3000	1500	1500			
Zn	N	N	N	N	N			
Zr	50	100	100	70	100			
	X	X	X	X	X			

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9-1242 B (CONT. SHEET)
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SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS (CONTINUED)

Report No. _____ Job. No. M 447

Field No.	850	851	852	853	854	855	856	860
Lab. No	D161249	D161250	D161251	D161252	D161253	D161254	D161255	D161256
Si %	2.	3.	3.	7.	5.	7.	7.	5.
Al %	1.5	1.5	3.	2.	3.	3.	3.	3.
Na %	.1	.07	.07	.1	.15	.1	.1	.15
K %	N	N	1.	1.	1.5	2.	1.5	1.5
P %	N	N	N	.3	.3	.3	.3	.3
Ce (ppm)	N500	N500	N500	N500	N500	N500	N500	N500
Ga	N	N	L	N	5	5	L	L
Ge	N	N	N	N	N	N	N	N
Hf	N	N	N	N	N	N	N	N
In	N	N	N	N	N	N	N	N
Li	N200	N200	N200	N200	N200	N200	N200	N200
Re	N	N	N	N	N	N	N	N
Ta	N	N	N	N	N	N	N	N
Th	1000	1000	1000	1500	1500	1500	2000	2000
Tl	N	N	N	N	N	N	N	N
Yb	70	100	70	150	100	100	150	150
Looked for only when La or Ce found								
Pr	—	—	—	—	—	—	—	—
Nd	N500	N500	N500	N500	N500	N500	N500	—
Sm	N	N	N	N	N	N	N	N
Eu	N	N	N	N	N	N	N	N
Looked for only when Y is found above 50 ppm								
Gd	50	100	70	150	150	100	150	150
Tb	N	N	N	N	N	N	N	N
Dy	100	200	150	300	200	200	200	300
Ho	30	70	50	100	50	50	70	100
Er	50	100	70	200	100	100	150	150
Tm	L	20	L	20	20	20	30	20
Lu	L	L	L	30	L	L	30	30
Looked for only when Pd or Pt found								
Ir								
Os								
Rh								
Ru								
Looked for only when requested								
Cs								
Rb								
F								
Hg								

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9-1242 B (CONT. SHEET)
(REV. 12-1967)

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS (CONTINUED)

Report No. _____ Job. No. M 447

Field No.	861	862	863	864	865	866	867	868
Lab. No	D161257	D161258	D161259	D161260	D161261	D161262	D161263	D161264
Si %	5.	5.	7.	5.	5.	2.	3.	3.
Al %	3.	2.	3.	2.	1.5	1.	1.5	1.
Na %	.1	.1	.15	.15	.1	.2	.15	.15
K %	.7	.7	1.	L	L	L	L	L
P %	.2	.3	.7	.7	.2	L	.3	L
Ce (ppm)	N500	N500	N500	N500	N500	N500	N500	N500
Ga	L	N	L	L	N	N	N	N
Ge	N	N	N	N	N	N	N	N
Hf	N	N	N	N	N	N	N	N
In	N	N	N	N	N	N	N	N
Li	N200	N200	N200	N200	N200	N200	N200	N200
Re	N	N	N	N	N	N	N	N
Ta	N	N	N	N	N	N	N	N
Th	1000	1000	3000	3000	1000	1000	1500	1000
Tl	N	N	N	N	N	N	N	N
Yb	70	50	200	200	100	100	150	100
Looked for only when La or Ce found								
Pr	—	—	—	—	—	—	—	—
Nd	—	—	L500	L500	N500	N500	N500	N500
Sm	N	N	N	N	N	N	N	N
Eu	N	N	L	L	N	N	N	N
Looked for only when Y is found above 50 ppm								
Gd	100	100	200	200	100	100	100	100
Tb	N	N	N	N	N	N	N	N
Dy	100	100	500	500	150	150	200	150
Ho	50	50	150	150	50	50	70	50
Er	100	70	200	200	100	100	100	70
Tm	L	L	50	50	L	L	20	L
Lu	L	L	50	30	L	L	L	L
Looked for only when Pd or Pt found								
Ir								
Os								
Rh								
Ru								
Looked for only when requested								
Cs								
Rb								
F								
Hg								

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SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS (CONTINUED)

Report No. _____ Job. No. M 447

Field No.	869	870	871	872	873	874	875	942
Lab. No	D161265	D161266	D161267	D161268	D161269	D161270	D161271	D161272
Si %	2.	2.	2.	1.5	1.5	.5	1.	3.
Al %	1.	.3	1.	.3	.3	.15	.3	1.5
Na %	.15	.1	.15	.1	.15	.1	.15	.1
K %	N	N	N	N	N	N	N	L1.
P %	L	N	L	N	L	N	N	.3
Ce (ppm)	N500	N500	N500	N500	N500	N500	N500	—
Ga	N	N	L	N	N	N	L	L
Ge	N	N	N	N	N	N	N	N
Hf	N	N	N	N	N	N	N	N
In	N	N	N	N	N	N	N	N
Li	N	N	N	N	N	N	N	N
Re	N	N	N	N	N	N	N	N
Ta	N	N	N	N	N	N	N	N
Th	1500	N	200	N	500	N	N	3000
Tl	N	N	N	N	N	N	N	N
Yb	150	7	30	15	20	10	7	300
Looked for only when La or Ce found								
Pr	—		—			—		
Nd	N500		N500			N500		
Sm	N		N			N		
Eu	N	N	N	N	N	N	N	N
Looked for only when Y is found above 50 ppm								
Gd	70	N	L	N	L	N	N	200
Tb	N	N	N	N	N	N	N	N
Dy	150	N	50	N	50	L	L	500
Ho	50	N	L	N	L	N	N	150
Er	70	N	N	N	L	N	N	200
Tm	L	N	N	N	N	N	N	50
Lu	L	N	N	N	N	N	N	30
Looked for only when Pd or Pt found								
Ir								
Os								
Rh								
Ru								
Looked for only when requested								
Cs								
Rb								
F								
Hg								

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9-1242 B (CONT. SHEET)
(REV. 12-1967)

SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS (CONTINUED)

Report No. _____ Job. No. M 447

Field No.	943	944	945	946	947	948	949	950
Lab. No	D161273	D161274	D161275	D161276	D161277	D161278	D161279	D161280
Si %	5.	3.	3.	5.	5.	5.	3.	5.
Al %	2.	1.5	1.5	1.5	1.5	1.5	1.	1.
Na %	.07	.15	.15	.15	.1	.07	.1	.15
K %	L1.	N1.	N1.	N1.	L	N1.	N1.	N1.
P %	.3	.7	.5	.3	.5	.2	L	L
Ce (ppm)	N500	N500	N500	N500	N500	N500	N500	N500
Ga	N	N	N	L	N	N	N	N
Ge	N	N	N	N	N	N	N	N
Hf	N	N	N	N	N	N	N	N
In	N	N	N	N	N	N	N	N
Li	N	N	N	N	L200	N	N	N
Re	N	N	N	N	N	N	N	N
Ta	N	N	N	N	N	N	N	N
Th	2000	5000	3000	3000	3000	2000	1500	1500
Tl	N	N	N	N	N	N	N	N
Yb	150	300	300	300	300	200	100	100
Looked for only when La or Ce found								
Pr	—			—	—	—	—	—
Nd	N500			N500	N500	N500	N500	N500
Sm	N			N	N	N	N	N
Eu	N	N	N	N	N	N	N	N
Looked for only when Y is found above 50 ppm								
Gd	150	300	200	200	500	200	150	150
Tb	N	N	N	N	N	N	N	N
Dy	300	700	500	500	700	500	200	200
Ho	100	200	150	150	200	100	70	50
Er	200	300	200	200	300	200	100	100
Tm	30	70	50	50	70	50	20	20
Lu	30	50	30	50	50	30	L	L
Looked for only when Pd or Pt found								
Ir								
Os								
Rh								
Ru								
Looked for only when requested								
Cs								
Rb								
F								
Hg								

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SEMIQUANTITATIVE 6-STEP SPECTROGRAPHIC ANALYSIS (CONTINUED)

Report No. _____ Job. No. M 447

Field No.	951	952	953	954	955			
Lab. No	D161281	D161282	D161283	D161284	D161285			
Si %	7.	3.	5.	3.	5.			
Al %	1.	1.	1.	.5	.7			
Na %	.15	.1	.1	.15	.1			
K %	N1.	N1.	N1.	N1.	N1.			
P %	N	.2	.2	N	L			
Ce (ppm)	N500	N500	N500	N500	N500			
Ga	N	N	N	N	N			
Ge	N	N	N	N	N			
Hf	N	N	N	N	N			
In	N	N	N	N	N			
Li	N	N	N	N	N			
Re	N	N	N	N	N			
Ta	N	N	N	N	N			
Th	1000	1500	2000	1500	1000			
Tl	N	N	N	N	N			
Yb	50	150	150	100	100			
Looked for only when La or Ce found								
Pr	—		—		—			
Nd	N500		N500		N500			
Sm	N		N		N			
Eu	N	N	N	N	N			
Looked for only when Y is found above 50 ppm								
Gd	70	150	150	50	100			
Tb	N	N	N	N	N			
Dy	150	300	300	100	150			
Ho	30	70	70	20	50			
Er	70	150	150	70	100			
Tm	1.	20	30	L	L			
Lu	L	L	L	N	L			
Looked for only when Pd or Pt found								
Ir						Copy to:	Heyl	
Os							Trace	
Rh							Kirkemo	
Ru							Flanagan - 2	
Looked for only when requested							GDS	
Cs							Spec. Lab.	
Rb								
F								
Hg								

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Geologic Report
OME-9 (Hamp 8)

This hole was drilled southwest of OME-4 (Hamp 6) in an attempt to extend the mineralization cut in earlier Hamp holes. Its location is shown on the 1" = 400' map.

The stratigraphic section is essentially normal. The hole was drilled rather high on the structure and intersected the base of the Maquoketa and continuous breccia considerably higher than the other Hamp holes. The base of the Maquoketa was intersected at -724 sea level elevation. Continuous breccia was intersected at -996 sea level elevation in the bottom part of the Kimmswick limestone. This is considerably higher stratigraphically than in the other Hamp holes.

The upper part of the breccia zone, from 1,378 feet to 1,777 feet (rods), consisted principally of coarse, medium and fine angular fragments, generally tightly interlocked with little matrix material. Traces of fluorite, sphalerite, galena and pyrite were scattered throughout. This unit graded into the unit below in the bottom 10 feet.

Gray rock flour breccia was encountered from 1,757 feet to 2,071 feet, a total of 314 feet. It consisted typically of small sub-angular fragments in a generally abundant gray to dark gray rock flour matrix. The upper 219 feet was calcareous and the bottom 96 feet generally dolomitic.

The rock flour was considered "favorable" in that it closely resembled the "purple breccia" in character. It was however, very poorly mineralized. The entire zone averaged 4.2% CaF_2. Highest assay in the zone was 6.0% CaF_2. The mineralization was typical of "purple breccia". It consisted of fine, disseminated purple fluorite, clear or pale green barite with trace of disseminated sphalerite and galena. Grade was slightly higher in the calcareous breccia.

Brecciation persisted from 2,071 feet to 2,392.5 feet, the bottom of the hole. It consisted principally of tightly interlocked dolomite fragments with some mixed quartzite. Fragments varied in size but it is probable that brecciation was somewhat more intense than is usually seen in this zone. Several of the finer zones were fairly well mineralized. One zone, from 2,274.5 feet to 2,291 feet assayed 10.3% CaF_2 and probably could be considered "purple breccia".

Since grade was so low the samples were assayed by McDonald only. Assays for Nb, Th, Y, Be and ReOs are being carried out under the current reassay program.

Included here are:

1. Summary log,
2. Detailed log of breccia zone,
3. Assay graph,
4. Assay certificates.

Respectfully submitted,

Joseph A. Porter

Joseph A. Porter

SUMMARY LOG
OME-9 (Hamp 8)

Started 10-25-73 Elevation 596.5

Completed 1-16-74 Depth 2392.5

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Chert residuum and red clay.	70	70
DEVONIAN Clear Creek ls.	Principally fine grained, light brownish gray, rather cherty.	180	250
250-266	Drilled with rotary, lost circulation, no sample.	426	676
Grassy Knob ls.	Chert, dark gray, fine grained, argillaceous limestone with abundant chert.	2.5	678.5
Bailey ls.	Very silty, very fine grained to sublithographic, light brownish gray, little irregular chert nodules.	175.5	854
SILURIAN Moccasin Sprgs.	Very fine grained, gray to light gray, little crystalline pyrite, fairly abundant brick red and pale green streaks.	99	953
St. Clair - Sexton Creek ls.	Very fine grained, gray and light gray, rather abundant coarse scattered pink grains, generally pyritic throughout, fairly abundant brick red streaks.	70	1023
Edgewood ls.	Gray and dark gray, finely crystalline, abundant interlaminated argillaceous streaks, fairly abundant chert.	88	1111
ORDOVICIAN Maquoketa sh.	Dark gray to black, well laminated, brittle, hard, little shaley sandstone and limestone toward bottom, fairly well fractured throughout with abundant calcite and fluorite in veinlets.	209	1320

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia	Coarse, medium, tightly interlocked fragments, well mixed, abundant Silurian and Maquoketa fragments, all rather tightly interlocked, very little matrix maerial, few fine zones, traces of fluorite, galena and sphalerite.	213.5	1592
Breccia	Principally tightly interlocked fragments Plattin limestone, medium, coarse, some fine, little shale, no Silurian fragments, very little matrix material, grades into below in bottom 10 feet.	165	1757
Gray rock flour breccia	Mostly fine, sub-angular fragments in a rock flour matrix, matrix commonly well replaced with purple fluorite, some zones purple, little barite and sphalerite throughout, generally typical of purple breccias, though more poorly replaced.	218	1975
Gray rock flour breccia	Mostly dolomitic, principally fine, sub-angular fragments in a dolomitic, rock flour matrix, little disseminated purple fluorite throughout, little calcareous material, generally poorly replaced, somewhat altered in appearance.	96	2071
Breccia	Mixed fine, medium and coarse, dolomitic, becoming more coarse toward bottom, dolomitic rock flour matrix sparingly replaced with purple breccia type mineralization, several zones appear altered, little quartzite.	321.5	2392.5

TOTAL DEPTH

Sheet No. 8 Hole No. H-8

Depth Feet	Formation	No.	
	Kimmswick ls.		
1313.5-1320	Limestone, coarsely crystalline, gray to light gray, stylolitic, appears to be very pure, upper parts fairly pyritic.		
1320-1340	Limestone, gray and light gray, fine and medium crystalline, finer portions has floating calcite rhombs and darker brown masses, rather stylolitic and pure throughout, somewhat fractured, slightly brecciated toward bottom, odd patch of crystalline sphalerite disseminated in limestone.		
1340-1378.5	Limestone, mostly coarsely crystalline, gray and light brownish gray, stylolitic, few finer zones, entire unit appears to be very pure, few fractured zones, bottom contact rather sharp and distinct.		
1378.5-1395	Breccia, fine, medium and coarse, tightly interlocked fragments, very little matrix material in general, fragments rather varied, consists principally of various limestones and shale, matrix commonly replaced by pale blue fluorite with traces of sphalerite and galena, little galena scattered throughout, pyrite scattered throughout, shale resembles Maquoketa.	H-338	10'
1395-1408.5	Breccia, rather tightly interlocked, coarse, medium and fine angular fragments in a fluoritic, calcite and rock flour matrix, several patches fairly rich in galena with associated fluorite, several odd patches well replaced by purple fluorite resemble purple breccias, shale fragments abundant and coarse, abundant coarse fragments toward bottom.		
1408.5-1417	Breccia, very fine, tightly interlocked, angular fragments, approximately 50% shale, rest mixture of various limestones, appears to be a dike dipping at about 70°, little sphalerite scattered throughout as distinct and isolated crystals, some pyrite and traces of fluorite throughout.		

Sheet No. 9 Hole No. H-8

Depth Feet	Formation	No.
1417-1440	Upper part essentially one thick block of limestone and the rest consists of medium sized angular fragments all rather tightly interlocked, numerous fragments probably Silurian, very little matrix material, matrix commonly fluoritic, fairly abundant pyrite scattered throughout particularly in Silurian fragments, fragments fairly well mixed as to character, gray and light gray, abundant interlaminated wavy streaks possibly dolomitic and silty, few zones somewhat more coarsely crystalline, few traces of purple fluorite in fractures, breccia zones and disseminated throughout, fairly pyritic in part particularly in pinker streaks.	
1440-1457	Coarse breccia as above, numerous large fragments plus 3" of Silurian units, both Mocassin Springs and Sexton Creek or St. Clair, little calcite matrix, little purple fluorite in matrix, shale fragments till fairly abundant, fragments generally rather angular, pyrite fairly common, core partly broken and vuggy.	
	Reduced hole to BX	
1457-1488.7	Breccia, principally tightly interlocked fragments of limestone, some shale, limestone fragments principally are Silurian fragments, some zones abundant coarse grained Kimmswick, little purple fluorite matrix throughout, few odd traces of galena, pyrite scattered throughout in Silurian limestones and matrix material, little white pasty mineral possibly sericite or barite, fragments still angular and rather tightly interlocked.	
1488.7-1491.3	Cavity	
1491.3-1506	Breccia, principally as before, bottom five feet all very fine with abundant small angular shale fragments giving a distinct speckled appearance.	
1506-1538	Breccia, principally as before, consists of fine, medium and coarse angular fragments, all rather tightly interlocked in a rock flour calcite matrix, matrix material small percent of total, abundant shale fragments, fairly abundant easily recognizable Silurian fragments and Kimmswick fragments, core slightly oxidized and partly	

Sheet No. 10 Hole No. H-8

Depth Feet	Formation	No.
1506-1538 cont.	broken, few calc veinlets, commonly traces of purple fluorite, little fluorite in matrix, moderately abundant pyrite scattered throughout.	
1538-1560	Breccia, principally as before, core somewhat broken, Silurian fragments still easily indentifiable.	
	Note: Amount of easily indentifiable Silurian fragments much greater in this hole than in previous seen.	
1560-1592	Breccia, mostly medium, little fine, little coarse, all tightly interlocked Silurian limestones, black shale and other limestones, Silurian rather abundant and easily identifiable, matrix principally calcite and rock flour but comprises very little of total, scattered pyrite throughout, few traces of galena, purple fluorite in matrix material, little soft pasty material in matrix.	
	Note: This appears to be a contact between different types of breccia, above this mixing is very evident and pronounced, beneath this mixing is far less evident and pronounced, the units below appear to consist principally of Plattin, there are some shale units but no easily recognizable Silurian.	
1592-1602	Breccia, as before, slightly more calcite, little soft pasty material in matrix.	
1602-1638	Brecciated limestone, fine, medium and coarse angular fragments, Plattin-type limestones, brecciation less intense, mixing much less evident in this zone, core broken in part, partly vuggy, fairly abundant stylolites, some nearly parallel to core.	

Sheet No. 11 Hole No. H-8

Depth Feet	Formation	No.
1638-1657	Brecciated Plattin limestone, principally as above, few zones and patches containing abundant smaller angular fragments of limestones and shales.	
1657-1661.5	Micro-breccia, tightly packed in small angular fragments of various limestones with few coarser fragments of shale, all very fine and uniform, little crystalline calcite, faint trace of purple fluorite.	
1661.5-1676	Mostly brecciated Plattin-type limestones, upper part has abundant angular shale fragments, almost no matrix material, limestone probably fairly well recrystallized, occasional calc veinlet, few vugs and cavities lined with crystalline calcite.	
1676-1705	Breccia, some fine with abundant black shale fragments, unit consists mostly of Plattin limestones with limited mixing, probably well recrystallized, few stylolites.	
1705-1724	Brecciated Plattin limestone, little mixed shale fragments and darker gray fragments, one possible igneous fragment, few veinlets with crystalline calcite, fairly pyritic in spots, traces of galena throughout, traces of purple fluorite in matrix, matrix material minor constituent.	
1724-1752	Breccia, mostly fine and fairly fine fragments of very tightly interlocked and possibly well recrystallized, few shale fragments scattered throughout, one distinct rounded igneous fragment, few traces of purple clear fluorite, odd traces of galena and sphalerite. Note: This unit probably represents a gradual transition into finer gray rock flour type breccias.	

Sheet No. 12 Hole No. H-8

Depth Feet	Formation	No.
1752-1781	Breccia, principally fine gray rock flour breccia, fine sub-angular sub-rounded fragments in a gray rock flour matrix, commonly fairly fluoritic, transition from the units above into gray rock flour breccias is fairly gradual and probably takes place over about the upper 10', purple fluorite occurs as disseminated in the rock flour matrix and in small veinlets and as rich sub-rounded fragments which appear to consist of high grade purple breccia, traces of sphalerite and galena, this unit is typical of the gray rock flour breccias.	
1781-1791	Purple-gray rock flour breccia, all very fine, little medium and coarse, rather abundant matrix material with fair shows of disseminated fluorite in matrix and some in veinlets, few specks and traces of sphalerite and galena, little clear barite.	H-339 10' 4.04 CaF_2, 0.00 $BaSO_4$
1791-1801	Gray-purple rock flour breccia, mostly very fine, abundant rock flour matrix with slightly disseminated purple fluoritic throughout, little purple fluorite in veinlets, traces of sphalerite and galena, few specks of clear barite, estimate fluorite at 2.5%.	H-340 10' 4.36 CaF_2, Tr $BaSO_4$
1801-1811	Gray rock flour breccia, essentially as above, seems to consist principally of Plattin, middle portion appears to have been rebrecciated and recemented with principally calcite but some fluorite, estimate fluorite at 2%, few traces of sphalerite and galena throughout, fairly abundant disseminated pyrite as distinct crystals and isolated patches.	H-341 10'

Sheet No. 13 Hole No. H-8

Depth Feet	Formation	No.
1811-1821	Purple-gray rock flour breccia, principally very fine with fair disseminated purple fluorite in matrix and small veinlets, traces of galena and sphalerite, fairly abundant disseminated pyrite, seems to be getting richer, estimate fluorite at 3.5%.	H-342 10' 5.05 CaF_2, 0.12 $BaSO_4$
1821-1831	Gray-purple rock flour breccia, principally very fine, essentially as before, all rather pyritic, few large crystals of sphalerite, estimate fluorite at 2.5%.	H-343 10' 4.41 CaF_2, 0.32 $BaSO_4$
1831-1841	Gray-purple rock flour breccia, all very fine, few small veinlets and seams with deep purple crystalline fluorite, bottom portions seem to be somewhat richer, few traces of sphalerite and galena throughout, estimate fluorite at 3.5%.	H-344 10' 5.05 CaF_2, 0.10 $BaSO_4$
1841-1851	Purple-gray rock flour breccia, essentially as before, seems to be getting slightly coarser crystalline fluorite in matrix material and in small veinlets and seams, estimate fluorite at 4%, traces of sulphides as before.	H-345 10' 5.80 CaF_2, 0.60 $BaSO_4$
1851-1861	Purple-gray rock flour breccia, very fine, principally as before, somewhat more purple fluorite and disseminated yellow sphalerite, purple fluorite disseminated in matrix and in isolated blebs and streaks, sphalerite generally associated with richer fluorite, scattered pyrite as before, traces of galena and barite, estimate fluorite at 5%.	H-346 10' 5.68 CaF_2, 0.16 $BaSO_4$
1861-1871	Purple-gray breccia, essentially as before, possibly somewhat richer with purple fluorite, few larger grains of barite, fairly abundant isolated patches of rich, deep purple crystalline spar, possibly making decent contribution to the grade, estimate fluorite at 6%.	H-347 10' 6.03 CaF_2, 0.50 $BaSO_4$

Sheet No. 14 Hole No. H-8

Depth Feet	Formation	No.
1871-1881	Purple-gray rock flour breccia, essentially as before, few rich patches of deep purple fluorite, commonly with good yellow sphalerite, pyritic throughout, few traces of galena, estimate fluorite at 5.5%.	H-348 10' 5.29 CaF_2, 0.34 $BaSO_4$
1881-1892	Purple-gray rock flour breccia, essentially as before with streaks, blebs and disseminated purple fluorite in matrix, commonly with good associated sphalerite, estimate fluorite at 5%, barite fairly common as clear crystals and richer crystalline fluorite.	H-349 11' 5.08 CaF_2, 0.80 $BaSO_4$
1892-1902	Purple-gray rock flour breccia, essentially as before, few zones and patches with rich deep purple fluorite, mineralization essentially as before, estimate fluorite at 5%.	H-350 10' 5.06 CaF_2, 0.92 $BaSO_4$
1902-1911	Purple-gray rock flour breccia, essentially as before, core broken in part, few fractures nearly parallel to core, estimate fluorite at 4%.	H-351 9' 5.04% CaF_2, 0.62 $BaSO_4$
1911-1920.5	Purple-gray rock flour breccia, mostly very fine with purple fluorite and rich deep purple fluorite in patches, veinlets and stringers, little sphalerite, little galena throughout, some clear pale barite, fairly abundant disseminated pyrite, estimate spar at 6%.	H-352 9.5' 5.93% CaF_2, 1.58 $BaSO_4$
1920.5-1929.5	Mostly core loss, core recovered essentially as above, only about 2' of core has been redrilled, loss due to core falling out of tube when retrieveing.	
1929.5-1941	Gray rock flour breccia, fair, disseminated and purple fluorite scattered throughout, little yellow soft barite, all rather pyritic, breccia generally fine, mostly tightly interlocked, purple fluorite replacing matrix material, disseminated in small veinlets and patches, few fragments of Silurian, estimate fluorite at 3.5%.	H-353 11.5' 4.41 CaF_2, 0.26 $BaSO_4$

Sheet No. 15 Hole No. H-8

Depth Feet	Formation	No.
1941-1952	Breccia, mixed, fine, medium and coarse, tightly interlocked fragments in a fluoritic rock flour matrix, disseminated purple fluorite scattered throughout principally in matrix, little disseminated pyrite, traces of sphalerite and galena, fairly numerous coarse fragments of black shale, few fragments of Silurian, estimate fluorite at 3%.	H-354 11' 2.77 CaF_2, 0.50 $BaSO_4$
1952-1959	Breccia, as before, few fragments possibly rebrecciated material, possibly dike material, estimate fluorite at 2.5%.	H-355 7' 2.52 CaF_2, 0.80 $BaSO_4$
1959-1975	Very fine grained, apparently well bedded silty dolomite, (possibly this unit represents the very fine micro-breccias that are commonly well replaced with purple fluorite), entire unit rather uniform, streaks and patches with fairly well replaced disseminated purple fluorite, possibly some clear fluorite, estimate fluorite at 5%.	H-356 16' 5.05 CaF_2, 0.86 $BaSO_4$
1975-1991	Gray to light greenish-gray, principally very fine, fragments all fairly well rounded, all have a distinct altered appearance, disseminated pyrite - fluorite throughout, fluorite sometimes in fairly rich patches, estimate fluorite at 4%.	H-357 16' 2.24 CaF_2, 0.92 $BaSO_4$
1991-2001	Breccia, essentially as before, still somewhat soft, slightly porous and altered in appearance, fairly rich and disseminated pyrite, very little calcium carbonate, unable to identify this material, it has certain visual affinities to the intrusive dikes, estimate fluorite at 3%.	H-358 10' 2.71 CaF_2, Tr $BaSO_4$

Sheet No. 16 Hole No. H-8

Depth Feet	Formation	No.
2001-2011	Gray breccia, mostly very fine, sub-rounded to sub-angular fragments in a gray fluoritic rock flour matrix, all has rather altered appearance, fair disseminated purple fluorite, some clear fluorite, rather rich and disseminated pyrite, some zones with small dark specks, too small to identify, looks to have better replacement by fluorite, unalbe to tell visually, all rather low in clacium carbonate, generally not reactive to HCL.	H-359 10' 3.02 CaF_2, 0.86 $BaSO_4$
2011-2021	Gray, rock flour breccia, principally as before, possibly somewhat less pyrite, estimate disseminated fluorite at 5%, unit has a rather granular appearance as if rock flour consisted of a high percentage of sand grains, has distinct altered appearance.	H-360 10' 4.03 CaF_2, 1.60 $BaSO_4$
2021-2031	Gray breccia, principally as before, somewhat richer in pyrite and fluorite, occasionally trace of galena particularly in small fluorite veinlets, a few traces of pale disseminated sphalerite.	H-361 10' 3.24 CaF_2, Tr $BaSO_4$
2031-2041	Gray, rock flour breccia, principally as before, somewhat more clear, small, angular fragments, possibly little grains of barite.	H-362 10' 2.58 CaF_2, Tr $BaSO_4$
2041-2051	Gray, rock flour breccia, principally as before, somewhat more pyrite, estimate fluorite at 5%, some core grinding here, only about 6' of core recovered, appears to have been either a mislatch or core dropped out of the inner tube.	H-363 10' 3.87 CaF_2, Tr $BaSO_4$
2051-2061	Gray, rock flour breccia, essentially as before, considerably less rock flour matrix material, fragments somewhat more larger and tightly interlocked, beginning to get more of a dolomitic appearance, estimate spar at 4%, few patches of purple breccia with traces of sphalerite, barite and galena.	H-364 10' 2.34 CaF_2, Tr $BaSO_4$

Sheet No. 17

Hole No. H-8

Depth Feet	Formation	No.
2061-2071	Breccia, coarse, medium and fine, principally fragments of gray dolomite, few large fragments of white crystalline limestone, some quartzite scattered throughout, appears to be little matrix material, in places resembles more of a crackle breccia, less disseminated fluorite and pyrite, estimate fluorite at 3%.	H-365 10' 1.53 CaF_2, 0.32 $BaSO_4$
2071-2081	Breccia, principally as before, somewhat more coarse fragments, few zones fine with fairly abundant rock flour matrix, sparingly mineralized, estimate fluorite at 2%, little pyrite, core somewhat broken in part.	H-366 10' 3.35 CaF_2, 1.08 $BaSO_4$
2081-2100	Dolomitic and silicious breccia, mostly fine, gray and dark brownish gray, sub-rounded to sub-angular fragments in a dolomitic rock flour matrix in a fairly hard, possibly partly silicified, has bleached appearance, fragments fairly mixed, little disseminated fluorite throughout, fair disseminated pyrite, possible faint trace of chalcopyrite, spar estimated at 1.5%.	
2100-2120	Breccia, principally as above, somewhat more disseminated pyrite throughout, possibly finer, unit has a slight green-gray cast, all rather suggestive of previously cited intrusive material.	H-367 6.5' 1.29 CaF_2, 0.38 $BaSO_4$
2120-2140	Greenish-gray, very fine breccia, principally as before, fairly abundant blebs and stringers of clear and purple fluorite, unit generally very pyritic, this unit is probably represents an intrusive.	H-368 8' Tr CaF_2, 0.30 $BaSO_4$
2140-2157	Gray to greenish-gray, very fine grained breccia, more pyritic, this unit strongly resembles intrusive material.	H-369 2151-2157.7 6.7' 11.01 CaF_2, 0.92 $BaSO_4$
2157-2171	Greenish gray, very pyritic, all very fine, principally as above, resembles intrusive.	H-370 13.3' 2.90 CaF_2, Tr $BaSO_4$
2171-2187	Breccia, all very fine, principally as above, appears to be igneous, little purple fluorite disseminated throughout and has distinct blebs, estimate fluorite at 1.5%.	H-371 2177-2187 10' 3.51 CaF_2, 0.00 $BaSO_4$

Sheet No. 18 Hole No. H-8

Depth Feet	Formation	No.
2187-2206	Breccia, as above, somewhat more pyrite as distinct elliptical patches, occasional small veinlet of pyrite.	H-372 9' 4.90 CaF_2, 0.00 $BaSO_4$
2206-2224	Breccia, principally as above, few zones and patches appear to be somewhat richer in fluorite, spar throughout at about 2%.	H-373 9' 3.07 CaF_2, 0.00 $BaSO_4$
2224-2244	Breccia, principally as above, less matrix material, correspondingly less pyrite, fragments seem to be fairly well rounded, zones and patches with rich purple breccia fragments, possibly indicating rebrecciation.	H-374 10' 2234-2244 6.72 CaF_2, 0.00 $BaSO_4$
2244-2264	Gray rock breccia, slightly greenish cast, principally fine, sub-angular fragments in a rock flour matrix, matrix dolomitic and sandy, partly replaced with purple fluorite, fairly pyritic throughout, few coarse fragments throughout, few traces of yellow sphalerite (looks less like intrusive material than some of that above), estimate spar 1.5%.	H-375 2253-2264 11' 4.51 CaF_2, 0.00 $BaSO_4$
2264-2274.5	Breccia, similar to previous breccia except matrix material very dark gray to black, considerable pyrite throughout as distinct crystals and blebs.	H-376 10.5' 7.47 CaF_2, 0.44 $BaSO_4$
2274.5-2291	Breccia, gray rock flour breccia, principally as above, little disseminated pyrite and fluorite throughout, few patches fairly well replaced, clear barite throughout, resembles breccia in Hamp 1.	H-377 2282-2291 9' 10.32 CaF_2, 0.70 $BaSO_4$
2291-2303	Breccia, appears to be low-grade purple breccia, particularly in upper portion, breccia principally as before, somewhat more coarse fragments, all sub-angular as was common in other holes. Note: Seems to indicate that the rich purple breccia did exist but was rebrecciated and the distinct purple breccia was obliberated and scattered.	H-378 12' 5.00 CaF_2, 0.30 $BaSO_4$

Sheet No. 19 Hole No. H-8

Depth Feet	Formation	No.
2303-2338	Medium to sub-angular rounded fragments of various dolomites and some limestone, all very tightly interlocked, very little matrix material throughout, mineralized, occasional rich patch of fluorite in matrix material, fragments seem fairly well mixed, less than 1%, very fine rock flour breccia to more tightly interlocked breccias.	
2338-2361	Breccia, very tightly interlocked, fine, medium and coarse sub-angular fragments ina rock flour matrix material, small percent of total sparingly mineralized throughout with disseminated pyrite and little disseminated fluorite, few fragments of quartz, zones rather vuggy, core occasionally tends to break into buttons.	H-379 10' 2338-2348 2.90 CaF_2, 0.33 $BaSO_4$
2361-2392.5	Brecciated quartzite and dolomite, coarse angular fragments, tightly interlocked, core badly broken throughout.	H-380 10' 2375-2385 1.61 CaF_2, 0.20 $BaSO_4$

TOTAL DEPTH

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, IL 62982

Re: Assay Results - Split Core
Hamp 8 (OME-9)

Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
H-338	4.42	28.88	0.22	24.82
H-339	4.04	6.10	0.00	31.95
H-340	4.36	6.22	Tr	33.00
H-341	2.55	6.40	0.10	33.95
H-342	5.05	10.42	0.12	32.32
H-343	4.41	6.88	0.32	32.61
H-344	5.05	7.00	0.10	32.76
H-345	5.80	8.30	0.60	32.40
H-346	5.68	8.24	0.16	32.28
H-347	6.03	10.30	0.50	31.22
H-348	5.29	9.16	0.34	30.49
H-349	5.08	18.46	0.80	30.36
H-350	5.06	10.08	0.92	29.82
H-351	5.04	10.50	0.62	28.83
H-352	5.93	12.92	1.58	27.17
H-353	4.41	17.14	0.26	23.46
H-354	2.77	19.84	0.50	23.62
H-355	2.52	13.44	0.80	24.79
H-356	5.05	13.16	0.84	19.22
H-357	2.24	20.08	0.92	17.10
H-358	2.71	22.56	Tr	16.04

Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
H-359	3.02	28.24	0.86	14.25
H-360	4.03	24.94	1.60	14.91
H-361	3.24	24.20	Tr	15.84
H-362	2.58	16.80	Tr	17.23
H-363	3.87	19.00	Tr	17.62
H-364	2.34	20.30	Tr	17.23
H-365	1.53	13.68	0.32	18.69
H-366	3.35	29.12	1.08	14.05
H-367	1.29	27.42	0.38	18.09
H-368	Tr	10.28	0.30	19.35
H-369	11.01	27.08	0.93	15.31
H-370	2.90	14.58	Tr	29.02
H-371	3.51	14.98	0.00	27.98
H-372	4.90	15.31	0.00	27.20
H-373	3.07	14.32	0.00	34.80
H-374	6.72	17.23	0.00	27.00
H-375	4.51	15.31	0.00	32.00
H-376	7.47	36.60	0.44	15.24
H-377	10.32	21.00	0.70	18.29
H-378	5.00	25.50	0.30	16.57
H-379	2.90	57.00	0.33	17.63
H-380	1.61	55.00	0.20	16.57

Respectfully submitted,

V.C. McDonald, Chemist

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER For Month of February, 1973

Operator's Name Hicks Dome Acct. c/o Gilbert Kerlin, Esq.
Address Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $ 95,450
Gov't. Participation % 50 $ 47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	42	525.00	—	—	42	525.00
Rotary Drilling	91'	354.90	816	3,282.40	91	354.90	816	3182.40
Cored NX 0-500'	264'	1,161.60	1086	4,804.80	264	1,161.60	1092	4804.80
500-1000'	201'	964.80	840	4,032.00	201	964.80	840	4,032.00
1000-1500'	-	-	230	1,242.00	—	—	230	1,242.00
Cored BX 0-500'	70'	294.00	92	386.40	70	294.00	92	386.40
500-1000'	379'	1,743.40	788	3,624.80	379	1,743.40	788	3,624.80
1000-1500'	478'	2,485.60	1208	6,489.60	478	2,485.60	1248	6489.60
1500-2000'	-	-	1000	6,100.00	—	—	1000	6,100.00
2000-2500'	-	-	526	3,839.80	—	—	526	3839.80
Reaming	-	-	329	987.00	—	—	329	987.00
Water Supply, Mons.	1	300.00	4.7	1,410.00	1	300.00	4.7	1,410.00
Standby time	-	-	8	112.00	—	—	8	112.00
Drilling Mud, Bags	29	110.20	108	396.91	29	110.20	108	396.91
Caustic Soda	-	-	1	10.85	—	—	1	10.85
Quebracho	-	-	1	20.78	—	—	1	20.78
Freight & Handling	-	-	21	22.59	—	—	21	22.59
BX casing lost	-	-	157	392.60	—	—	157.04	392.60
Category (2)								
Geologist-Supervisor	1	1,250.00	5	6,250.00	1	1,250.00	5	6,250.00
Sampler	1	95.26	4	330.37	1	95.26	4	330.37
Category (3)								
Road Rock, tons	-	-	199.9	327.73	—	—	199.9	327.73
Core Boxes	134	167.50	645	806.25	134	167.50	645	806.25
Sample Bags	29	-10.15	81	27.10	29	10.15	81	27.10
Category (7)								
Office Expense	1	85.03	5	485.03	1	85.03	5	485.03
Trans. of samples	29	15.83	54	31.66	29	15.83	54	31.66
Prepare & Assay Cal	2 50	156.50	94	295.00	50	156.50	94	295.00
Other Assays	-	-	27	35.50	—	—	27	35.50
Spectro. Anal.	13	130.00	32	301.00	13	130.00	32	301.00
TOTALS		$ 9,324.77		$ 46,470.17		$ 9,324.77		$ 46,469.17

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 3, 1973 Payee Hicks Dome Account

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Shirkomo Chief, OME ~~Field Officer~~ Date 4/9/73

(63) 14X0804

Approved for: $ 4,662.39 (SUBJECT TO AUDIT)

Signature Bm7

Date 13 APR 1973 Vou. No. R3363A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)
Considered casing shoe lost on hole OME-2 as equivalent to 37.04 feet of BX casing.

Category (7)
Consists of $75.26 Secretarial and $9.77 telephone.

FOR GOVERNMENT USE

REMARKS

160104

RECEIVED
U.S. GEOLOGICAL SURVEY

APR 11 3 25 PM '73

BUDGET & FINANCE

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

Operator's Monthly Report

February, 1973

Hole OME-3 was drilled from 548 feet to 1,478 feet for a total of 930 feet. Hole OME-4 was drilled from 75 feet to 628 feet, a total of 553 feet. Total footage for the month was 1,483 feet.

As of the end of the month OME-3 was still in breccia. Mixing of fragments seems to be more pronounced than previously encountered. Stratigraphic horizons are indefinite due to the mixing. The breccia is sparingly mineralized throughout. Mineralization consists of traces of fluorspar, pyrite, barite, galena and sphalerite. The hole will be discussed in greater detail in the March report.

Hole OME-4 was in very cherty lower Grassy Knob at the end of the month. Cavities were encountered from 335 feet to 360 feet and from 377 feet to 384 feet. Both were apparently open, but they may have contained some mud. The hole was drilled NX to 430 feet, 70 feet past the large cavity. It was then reduced to BX. The reduction in size was necessary because considerable pressure is used to drill the hard Grassy Knob. If unsupported by casing, the rods would bow out in the cavity and a twist-off would have been inevitable.

There has been a certain amount of difficulty in keeping adequate crews on the rigs. During the month two drillers quit. Because of repeated absence, one was removed at our request, leaving only two crews. Efforts to get additional drillers have been unsuccessful. The remaining two crews will finish OME-3 and move over to OME-4.

Respectfully submitted,

Joseph A. Porter
Geologist
April 4, 1973

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

3-5-73

Mr. Joe Porter
Geologist
Rosiclare, Ill.

Hole OME-1
(Fredericks #1)

RE: CORE SAMPLES FOR FEBRUARY 1973

Sample No.	CaF_2	SiO_2	Total Calcium	$BaSO_4$
863	12.13	17.58	21.51	4.20
864	12.26	14.24	21.85	4.40
865	8.06	12.12	21.16	2.92
866	10.20	11.26	23.42	3.26
867	9.32	12.26	21.99	2.36
868	9.45	12.96	22.40	1.44
869	7.15	11.50	21.94	2.60
870	3.88	12.60	20.21	1.30
871	5.10	9.10	20.41	2.80
872	4.3.	10.42	20.35	2.00
873	5/09	4.00	21.16	0.70
874	2.55	11.02	20.35	3.00
875	3.83	5.38	20.48	4.22
876	3.78	5.02	21.51	1.00
877	3.83	5.50	21.17	0.60
878	5.10	16.82	20.04	1.90
853	9.70	15.00	23.90	4.76
851	4.09	3.86	30.87	4.04
852	6.13	10;82	29.71	6.38
854	7.91	15.04	23.88	4.80
855	9.01	15.76	24.52	4,82

V.C. McDonald
Chemist

V.C. McDonald

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.

CONTRACT	CODE	DATE	AT SHIP POINT
	39 69 05 14 03 203		

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, N. Y. 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116627

INVOICE DATE 3-9-73

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,483' core drilling at Hicks Dome, Illinois for period ending February 25, 1973 as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST UNIT		TOTAL COST
	P-3-OME-3	NX	548.	749.		201.	4.80		$ 964.80
		BX	749.	1000.		251.	4.60		1,154.60
		BX	1000.	1478.		478.	5.20		2,485.60
	H-6 OME-4	6¼" R.B.	75.	157.		82.	3.90		319.80
		3-7/8" R.B.	157.	166.		9.	3.90		35.10
		NX	166.	430.		264.	4.40		1,161.60
		BX	430.	500.		70.	4.20		294.00
		BX	500.	628.		128.	4.60		588.50
									$7,004.30
	MUD USED UP								
		29 100-lb. bags drilling mud @ $3.80/bag							110.20
	CORE BOXES USED								
		134 Cardboard Core Boxes @ $1.25/ea.							167.50
	FURNISHING WATER								
		Jan. 26 through Feb. 25, 1973							
		One (1) month @ $300.00/mo.							300.00

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4133-6 4/67
4134-SINGLE 4/67

09007

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr [illegible]

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05015627

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	MISCELLANEOUS CHARGES (DETAIL ATTACHED)							
			Joy A. Stacy for tractor service					$ 180.00
								$7,770.00

CERTIFIED TRUE COPY

[signature]

FORM P138A

INVOICE (CONTINUATION)

Paid Roy A Stoney 2-24-73 Ck #481

Jay Co.

1-27-73	hauled mud sniper	2 hrs
1-30-73	hauld mud & oil	4 hrs
1-31-73	hauled oil, casing, Core Barrels to Lamars rig. pipes to Buck	8 hrs
~~1-31-73~~	~~3 hrs @ 75 each $225~~	
2-1-73	hauled 700 lbs mud	2 hrs
2-2-73	hauled core barrels, oil	3 hrs
2-5-73	hauled mud to Sucksings	
	" core barrels to Carls Rigs	3 hrs
2-6-73	" oil to Smith rig	4 hrs
	~~3 hrs @ 75 $225~~	
2-7-73	hauled casing to drills	3 hrs
2-8-73	hauled pipes	3 hrs
	" core Barrels & oil	
2-9-73	" drill barrels	2 hrs
2-14-73	pull pump with tractor pipe & Gas	7 hrs
2-17-73	pull truck	2 hrs
2-18-73	hauled oil	2 hrs
Feb 20-73	" "	2 hrs
~~Feb 22 73~~	~~pulled out motor board~~	~~3 hrs~~
		~~50 hrs~~
	~~6 trips @ 75 $450~~	47 hrs.
	~~50 hrs @ 4.00 $200.00 + $450 $650.00~~	

47 hrs @ 4.00 = $188.00

CERTIFIED TRUE COPY

TRAIN CABOT INC 004100525

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		7[illegible]	FICA TAX	4095	FED.TAX	10067	GROSS PAY	260000
			STATE TX	1333	GRP INS	1057	FICA	16380
							FED TAX	40268
							STATE TAX	5332

FOR PERIOD ENDING
02-20-73

NET PAY

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 16552 534.48

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

TRAIN CABOT INC 004059930

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	210000
			STATE TX	1333	GRP INS	1057	FICA	12285
							FED TAX	30201
							STATE TAX	3999

FOR PERIOD ENDING
02-15-73

NET PAY

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 16552 534.48

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

Note: This for labor only - sewing of bags

Ruth McClendon 1-27-73

40 Bags @ 50¢ per bag —
Amt. $20.00

ck #863 - $20.00
1/30/73

CERTIFIED TRUE COPY

STATEMENT

FROM V.C. McDonald (Laboratory)
Hosiclare, Ill.

TO Mr. Joe Porter (Geologist
ADD: Hosiclare, Ill.
CITY
TERMS

21 Samples of 4 determinations each		$ 84.00
	V.C. McDonald Chemist	
Chk #[illegible] - $[illegible] 3/5/73		

CERTIFIED TRUE COPY

SKYLINE LABS, INC.
SPECIALISTS IN GEOCHEMICAL EXPLORATION
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033
TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 9296
JOB NO.: M-1799
P.O. NO.:

DATE: February 12, 1973

TERMS: NET 30 DAYS

SOLD TO: Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 29 Rock Chip Samples

13 Semi-quant spectrographic analysis @ $10.00	$ 130.00
29 Fluorine @ $2.00	58.00
29 Samples crushed, split and pulverized @ $.50	14.50
Sub Total	$ 202.50
Shipping charges advanced	15.83
TOTAL	$ 218.33

Paid ch#873-$218.33
2/22/73

CERTIFIED TRUE COPY

ORIGINAL INVOICE

March 2, 1973

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Sir:

Enclosed is check for $178.28, representing wages earned for 86 hours during the month of February, 1973. Amount due was calculated as follows:

86 hrs. @ $2.25		$193.50
Fed. I. C.	$3.20	
State I. C.	.70	
S.S.	11.32	15.22
		$178.28

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

Charge OME
40. hrs x 2.25 = $90.00
5.85% S.S. 5.24
Total OME — $95.24

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Roy A. Stacey
Name, S.S. No., Dependents

Feb., 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
2-6-73			4 hrs	hauled cars to Louisiana	
2-7-73			2 hrs	hauled cars from Carl	
2-8-73			2 hrs	"	" to house
2-12-73			4 hrs	"	" " from field
2-13-73			4 hrs	"	" " " "
2-15-73			4 hrs	trip to Evansville	
2-17-73			2 hrs	hauled cars	
2-19-73			4 hrs	trip to Paducah	
2-20-73			6 hrs	hauled cars to Louisiana	
2-22-73			2 hrs	cars to house	
2-23-73			2 hrs	"	" "
2-24-73			2 hrs	"	" "
2-26-73			2 hrs	"	" "
2-27-73			8 hrs	hauled cars to Louisiana	
			48 hrs		
Below listed hours worked in Surveying					
2-9-73			6 hrs	help	Surveying
2-10-73			8 hrs	"	"
2-12-73			4 hrs	"	"
2-13-73			4 hrs	"	"
2-16-73			8 hrs	"	"
2-17-73			4 hrs	"	"
2-19-73			4 hrs	"	"
			38 hrs	CERTIFIED TRUE COPY	

48
38
86

Roy A. Stacey

Box 21

Phone (618) 285-6685

Joseph A. Porter
Geologist
Rosiclare, Illinois
62982

March 1, 1973

Mrs. Vera Bishop
Elizabethtown
Illinois:

Dear Vera:

Enclosed find a check in the amount of $61.67, representing wages earned during the month of February.

39½ hrs.	x	$1.80	=	$71.10
S.S.	4.16			
State I.T.	1.37			
Fed. I. T.	3.40			9.43
				$61.67

Sincerely,

Joseph A. Porter

JAP:vb
Encl.

Chg all to OME

71.10
— 4.16
Total $75.26

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537-0
Name, S.S. No., Dependents

February, 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Thurs. 2/1	10:30	3:30	5		
Fri. 2/2	11:15	12:15	1		
Mon. 2/5	12:00	4:30	4 ½		
Tues. 2/6	11:30	3:30	4		
Wed. 2/7	2:30	4:00	1 ½		
Thurs. 2/8	11:00	4:00	5		
Wed. 2/14	11:15	3:15	4		
Tues. 2/20	12:45	2:45	2		
Thurs. 2/22	11:30	3:30	4		
Fri. 2/23	8:00	11:00	3		
Tues 2/27	11:30	3:30	4		
Wed 2/28	10:30	12:00	1 ½		
			39 ½		

CERTIFIED TRUE COPY

Telephone Expenses
February, 1973
OME-HDA

Date	To	Person	Amount
1/19	Washington, D.C.	Kirkemo	$5.20
1/23	Carmi, IL	Dikor	1.62
1/25	Carmi, IL	Dikor	.50
1/25	Carmi, IL	Dikor	.55
2/5	LaPorte IN	Joy Mfg.	.90
2/8	Princeton KY	Trace	1.00
		Total	$9.77

CERTIFIED TRUE COPY

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

RECEIVED
OCT 26 1973
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

Stage I

OPERATOR'S MONTHLY VOUCHER

For Month of June-August (Final)

Docket No. OME- OME-6873

Contract 14-08-0001 2306

Contract Amount $ 95,450

Gov't. Participation % 50 $ 47,725

Operator's Name Hicks Dome Account c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St. New York, NY 10005

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	51	637.50	-	-	51	637.50
Rotary Drilling	-	-	816	3,182.40	-	-	816	3,182.40
Cored, NX 0-500	-	-	1092	4,804.80	-	-	1092	4,804.80
500-1000	-	-	840	4,032.00	-	-	840	4,032.00
1000-1500	-	-	230	1,242.00	-	-	230	1,242.00
Cored, BX 0-500	-	-	92	386.40	-	-	92	386.40
500-1000	-	-	1160	5,336.00	-	-	1160	5,336.00
1000-1500	-	-	1770	8,951.40	-	-	1770	8,951.40
1500-2000	-	-	2000	11,750.00	-	-	2000	11,750.00
2000-2500	-	-	1103	7,811.90	-	-	1103	7,811.90
Reaming	-	-	1197	3,591.00	-	-	1197	3,591.00
Water Supply, mos.	-	-	7.7	2,310.00	-	-	7.7	2,310.00
Standby time, hrs.	-	-	24	336.00	-	-	24	336.00
Drilling Mud	-	-	114	419.71	-	-	114	419.71
Caustic Soda	-	-	1	10.85	-	-	1	10.85
Quebracho	-	-	1	20.78	-	-	1	20.78
Freight & Handling	-	-	21	22.59	-	-	21	22.59
BX Casing lost	-	-	267	667.60	-	-	267	667.60
NX Casing lost	-	-	223	780.00	-	-	223	780.00
Excess Bit Costs, Total	8287	5000.00	8287	5,000.00	8287	4,143.50	8287	4,143.50
Category (2)								
Geologist-Supervisor	-	-	7	8,750.00	-	-	7	8,750.00
Sampler	-	-	6	563.77	-	-	6	563.77
Category (3)								
Road Muck	-	-	199.9	327.73	-	-	199.9	327.73
Core Boxes	-	-	909	1,136.25	-	-	909	1,136.25
Sample Bags	-	-	81	27.10	-	-	81	27.10
Category (7)								
Office Expense	-	-	8	795.35	-	-	8	795.35
Tran. of Samples	-	-	54	31.66	-	-	54	31.66
Prepare & Assay CaF_2	81	224.00	189	575.00	50 ~~81~~	700.00 ~~224.00~~	158 ~~189~~	451.00 ~~575.00~~ *
Other Analysis	29	45.80	56	81.30	60 ~~29~~	1,000.00 ~~45.80~~	87 ~~56~~	960.38 ~~81.30~~
Spectro. Analysis	40	360.00	72	661.00	40	360.00	72	661.00
TOTALS		$ 5,629.80		$ 74,242.09		$ 4,773.30		$ 73,385.59

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Aug. 28, 1973 *Payee Hicks Dome Account
Joseph A. Porter

Per [signature] Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Hirbara Chief, OME ~~Field Officer~~ 10/10/73 Date

(63) 14X0804

Approved for: $ 2,386.65
(SUBJECT TO AUDIT)

Signature BMT

Date OCT 23 1973 Vou. No. 04562A
(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Accounting of bit costs has been delayed because it was felt some of the charges were incurred because of driller negligence and should not have been for our account. In the final accounting, Joy adjusted the amount due accordingly. The attached Invoice #05116948 shows the complete bit cost accounting for Stage I.

No bit costs have been submitted to OME. Costs paid by HDA are summarized as follows:

April, '73	Inv. #	05116745	$747.00
May, '73	Inv. #	05116815	301.00
			$1,048.00
Sept., '73	Inv. #	05116948	4,339.00
	TOTAL PAID		$5,387.00
	ALLOWABLE		$5,000.00

FOR GOVERNMENT USE

REMARKS

Unit cost of $0.50/ft. is the maximum allowable under category (1) Stage I. Therefore, 8287 ft. x $0.50 = $4,143.50

Claimed	**$5,000.00**
Allowable	**4,143.50**
Disallow	**$ 856.50 This amount may be applied to costs in Stage II.**

* Per phone conversation with Harold Kirkemo ≈ 10/16/73 BM7

RECEIVED
U.S. GEOLOGICAL SURVEY
OCT 11 1 53 PM '73
BUDGET & FINANCE

283344

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

FINAL STAGE I

Operator's Monthly Report

Results of holes OME 3 and 4 have been previously discussed without assay results. The assay results are presented here.

The intersection in OME-4 consists essentially of three zones of mineralized breccia, best shown on the assay graph attached. The upper low grade zone consisted of 44 feet averaging 9.05% CaF_2. The "purple breccia" consisted of 87 feet averaging 11.26% CaF_2. An additional mineralized "purple breccia" zone 29 feet thick occurred approximately 70 feet beneath the zones cited above. This averaged 9.38% CaF_2.

Sections assayed which exceed 10% CaF_2 totalled 77 feet, 59% of the total intersection of 131 feet. Average of these totalled 12.04% CaF_2.

McDonald averages are generally slightly lower.

Spectrographic analysis were generally similar to previous results.

Assay certificates are attached.

Respectfully submitted,

Joseph A. Porter
August 28, 1973

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05115948

INVOICE DATE 8-29-73

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

NAL TITY RED	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
To bill for diamond bit loss in excess of $1.00 per foot.							
		Total diamond loss through March 25					$11,896.00
		Diamond loss for month of April					1,110.00
		Diamond loss for month of May					1,422.00
							$14,428.00
		Total footage drilled through month of May		9,103 ft.			
		Less open hole drilling		816 ft.			
				8,287 ft.			
		8,287 ft. @ $1.00/ft.					8,287.00
							$6,141.00
LESS EXCESS LOSS PREVIOUSLY BILLED							
See receipts with April Voucher		Invoice # 05116745		$747.00			
" " " May "		Invoice # 05116815		301.00			1,048.00
							$5,093.00
		(Continued)					

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(a)

4133-6 4/67
4134-SINGLE 4/67

09007

JOY MANUFACTURING COMPANY

PAGE NO. 2

OLD TO Mr. Gilbert Kerlin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				005116948

Y O	UNIT	PART NUMBER		DESCRIPTION	SALES CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
LESS COST OF ITEMS INCLUDED IN DIAMOND LOSS NOT CHARGEABLE TO CUSTOMER									
		H-5	2	NX W.L. Bits @ $206.00		$412.00			
		H-5	2	NX W.L. Reaming Shells @ $95.00 ea.		190.00			
		F-1	1	BX W.L. Bit		152.00			754.00
									$4,339.00

CERTIFIED TRUE COPY

James G. Rose

INVOICE (CONTINUATION)

STATEMENT

To: Joseph A. Porter
P.O. Box 447
Rosiclare, IL 62982

DATE 7-17-73

From: V.C. McDonald
P.O. Box 592
Rosiclare, IL 62982

800 & 00 Series OME-4 (Hamp 6)
900 Series OME-3 (Pankey 3)

Please detach and return upper portion with your remittance. $ 124.00

DATE	CHARGES AND CREDITS	BALANCE
	31 CaF_2 assays @ $4.00 each	124.00
	CERTIFIED TRUE COPY	
	Respectfully submitted,	
	V.C. McDonald	
	Chemist	
		$124.00

GrayLine "SNAP-A-WAY" FORM 44-501 2-PARTS

Your Check Is Your Receipt

WILSON JONES COMPANY © 1961 PRINTED IN U.S.A.

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033
TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 0146
JOB NO.: M-1982
P.O. NO.:

DATE: July 5, 1973

TERMS: NET 30 DAYS

SOLD TO: Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 51 Pulp Samples

1	Lead @ $1.00	$ 1.00
40	Semi-quant spectrographic analysis @ $9.00	$360.00
28	Lead, and Zinc (single digestion) @ $1.60	$ 44.80
50	Fluorine @ $2.00	$100.00
	Total	$505.80

CERTIFIED TRUE COPY

INVOICE COPY

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF ANALYSIS

Job No. M-1982
July 5, 1973

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

800 & 00 Series OME-4 (Hamp 6)

50 Pulp Samples

900 Series OME-3 (Pankey 3)

Item	Sample No.	CaF_2 (%)	Pb (ppm)	Zn (ppm)
1.	879	3.3	240	130
2.	880	3.9	280	190
3.	881	6.2	390	440
4.	882	8.2	240	360
5.	883	10.5	460	600
6.	884	7.4	470	680
7.	885	11.5	540	360
8.	886	8.6	430	760
9.	887	12.	360	720
10.	888	11.	300	620
11.	889	13.	170	680
12.	890	14.5	320	400
13.	891	13.	410	440
14.	892	11.5	190	340
15.	893	9.4	260	440
16.	894	7.8	210	380
17.	895	12.5	220	460
18.	896	11.5	230	240
19.	897	9.0	290	300
20.	898	5.6	1,050	50
21.	899	3.7	220	45
22.	900	7.2	110	35
23.	961	.26	2,700	*
24.	962	2.9	*	*
25.	963	3.5	*	*

Item	Sample No.	CaF_2 (%)	Pb (ppm)	Zn (ppm)
26.	964	4.9	*	*
27.	965	2.0	*	*
28.	966	5.8	*	*
29.	967	4.7	*	*
30.	968	5.4	*	*
31.	969	2.9	*	*
32.	970	3.7	*	*
33.	971	2.7	*	*
34.	972	2.9	*	*
35.	973	3.3	*	*
36.	974	2.5	*	*
37.	975	2.7	*	*
38.	976	5.5	*	*
39.	977	4.9	630	550
40.	978	7.9	*	*
41.	980	8.2	*	*
42.	981	9.4	*	*
43.	982	9.4	*	*
44.	983	10.5	*	*
45.	984	3.5	*	*
46.	001	11.5	440	35
47.	002	9.0	660	25
48.	003	7.2	180	30
49.	004	4.7	400	35
50.	2	.35	8,400	50

*Analysis not requested

Charles E. Thompson
Charles E. Thompson
Chief Chemist

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMI
12090 WEST 50TH PLACE • WHEA GE, COL DO 80033 • TEL.: (303) 424-7718

REP OF SP OGRAPHIC ANALYSIS

Mr. Joseph A. Porte
P.O. Box 447
Rosiclare, Illinoi 2982

Job No. M-1982
July 5, 1973

Values reported in ts p r million except where noted otherwise, to the nearest num in e series 1, 1.5, 2, 3, 5, 7 etc.

Element	Sample Number 878	882	883	884	888	889	890	891
Fe	5%	1.5%	2%	1.5%	1%	2%	1%	2%
Ca	20%	>20%	>20%	>20%	15%	20%	20%	20%
Mg	5%	1.5%	2%	2%	1.5%	2%	2%	2%
Ag	<1	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	10	10	20	15	20	30	20	30
Ba	100	5,000	10,000	5,000	7,000	7,000	5,000	5,000
Be	10	300	500	300	200	300	500	300
Bi	<10	10	10	10	10	10	10	10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	20	<5	<5	<5	<5	<5	<5	<5
Cr	100	10	50	30	30	50	50	50
Cu	20	7	7	7	7	10	7	5
Ga	10	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	200	50	50	50	70	100	100	100
Mn	700	200	500	300	500	500	300	300
Mo	5	<2	<2	<2	<2	2	2	2
Nb	100	700	500	700	700	500	200	200
Ni	30	5	5	10	15	20	10	15
Pb	1,500	500	700	1,000	300	300	700	300
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	50	150	200	200	200	200	200	150
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	500	1,500	2,000	1,500	1,000	1,000	1,000	700
Ti	5,000	5,000	5,000	5,000	5,000	5,000	2,000	3,000
V	200	200	200	200	200	300	100	150
W	<50	70	<50	<50	<50	<50	<50	<50
Y	200	2,000	3,000	2,000	2,000	2,000	2,000	1,500
Zn	<200	<200	<200	<200	<200	<200	<200	<200
Zr	100	150	150	100	100	100	100	100

Element	Sample Number 892	893	894	895	896	897	898	899
Fe	1%	2%	2%	2%	1%	2%	2%	1%
Ca	>20%	20%	>20%	>20%	20%	>20%	10%	15%
Mg	2%	2%	2%	2%	2%	1.5%	2%	5%
Ag	<1	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	20	20	20	30	20	20	20	10
Ba	5,000	5,000	7,000	5,000	7,000	7,000	2,000	1,000
Be	500	200	300	500	300	500	700	100
Bi	10	10	10	10	10	10	10	<10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5	<5	<5
Cr	30	50	30	50	30	50	20	50
Cu	7	7	7	7	10	7	5	3
Ga	<10	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	100	100	50	150	150	100	50	200
Mn	300	300	500	500	500	500	500	500
Mo	2	<2	2	2	2	2	2	<2
Nb	300	200	500	500	500	700	500	50
Ni	15	15	15	20	15	15	5	<5
Pb	200	300	200	200	200	500	500	100
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	150	150	200	150	150	200	50	<10
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	700	1,000	1,000	1,000	1,000	1,000	300	300
Ti	2,000	3,000	3,000	3,000	3,000	5,000	2,000	200
V	100	100	150	100	100	200	100	15
W	<50	<50	<50	<50	<50	70	<50	<50
Y	1,500	2,000	3,000	2,000	2,000	3,000	2,000	100
Zn	<200	<200	<200	<200	<200	<200	<200	<200
Zr	100	100	100	100	100	150	100	<20

Element	Sample Number 900	961	962	963	964	965	966	967
Fe	1.5%	2%	2%	5%	5%	2%	3%	3%
Ca	10%	10%	>20%	>20%	>20%	7%	15%	20%
Mg	2%	2%	2%	5%	5%	1.5%	2%	2%
Ag	<1	1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	10	15	15	30	20	10	20	20
Ba	7,000	50	2,000	1,500	100	70	10,000	2,000
Be	100	<2	5	10	70	10	300	150
Bi	10	<10	<10	<10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	10	<5	10	10	5
Cr	30	70	70	500	70	150	150	100
Cu	5	7	10	20	10	20	20	10
Ga	<10	10	<10	15	10	15	10	10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	100	20	150	150	150	100	150	150
Mn	300	200	500	700	500	300	500	500
Mo	<2	<2	3	10	2	2	3	5
Nb	100	70	100	70	200	100	150	200
Ni	5	15	10	50	20	70	50	30
Pb	200	2,000	300	200	70	100	1,000	100
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	30	20	50	50	50	20	70	70
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	500	100	1,500	1,000	700	200	2,000	700
Ti	2,000	1,000	5,000	5,000	5,000	2,000	3,000	5,000
V	30	100	200	200	100	200	200	200
W	<50	<50	<50	<50	<50	<50	<50	<50
Y	1,000	200	500	200	2,000	200	1,500	1,000
Zn	<200	<200	<200	<200	<200	<200	<200	<200
Zr	100	70	100	200	100	200	100	100

Element	Sample Number 970	971	973	975	976	977	978	980
Fe	3%	2%	3%	3%	3%	3%	2%	5%
Ca	15%	20%	20%	20%	>20%	>20%	>20%	20%
Mg	2%	2%	5%	2%	5%	7%	5%	7%
Ag	<1	<1	<1	<1	1.5	<1	1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	20	15	15	20	20	20	20	20
Ba	1,000	700	70	2,000	3,000	2,000	2,000	5,000
Be	100	100	150	100	200	150	500	200
Bi	<10	<10	<10	<10	<10	<10	<10	10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	5	7	5	10	5	<5	<5	<5
Cr	100	150	100	150	100	70	70	70
Cu	10	15	10	20	30	10	10	10
Ga	10	10	10	15	10	10	10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	100	150	150	200	200	150	200	200
Mn	500	500	700	500	500	700	500	1,000
Mo	3	3	5	5	5	2	2	2
Nb	300	70	300	100	100	100	50	200
Ni	30	30	30	50	20	20	10	20
Pb	50	70	70	500	7,000	1,000	1,000	500
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	50	30	50	50	50	50	50	70
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	500	700	500	700	700	500	1,000	1,000
Ti	2,000	2,000	2,000	3,000	3,000	3,000	2,000	2,000
V	150	100	100	150	100	200	50	50
W	<50	<50	<50	<50	<50	<50	<50	<50
Y	1,000	300	1,000	500	1,500	500	1,000	7,000
Zn	<200	<200	<200	<200	1,000	200	200	<200
Zr	100	100	100	150	100	100	100	200

Element	Sample Number 981	982	983	984	001	002	003	004
Fe	5%	5%	3%	3%	3%	3%	3%	2%
Ca	>20%	20%	>20%	>20%	15%	15%	15%	5%
Mg	7%	7%	7%	10%	5%	3%	5%	2%
Ag	<1	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	20	20	20	10	20	20	20	10
Ba	5,000	7,000	7,000	5,000	10,000	10,000	10,000	3,000
Be	700	300	200	70	1,000	1,000	1,000	200
Bi	10	10	10	<10	10	10	10	10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5	<5	<5
Cr	70	70	50	30	70	70	50	100
Cu	10	10	10	5	10	10	10	10
Ga	<10	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	200	200	150	150	100	100	50	100
Mn	700	700	700	700	500	500	500	200
Mo	2	2	5	2	<2	<2	<2	2
Nb	200	300	500	500	300	500	700	500
Ni	20	20	10	<5	10	15	5	10
Pb	700	500	500	300	3,000	5,000	700	200
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	70	70	70	20	<20	<20	<20	<20
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	1,000	1,000	1,500	500	2,000	1,500	1,500	300
Ti	2,000	2,000	3,000	1,000	3,000	3,000	3,000	2,000
V	70	100	100	50	200	200	150	100
W	<50	<50	<50	<50	<50	<50	50	<50
Y	7,000	5,000	5,000	500	2,000	2,000	3,000	1,500
Zn	<200	<200	<200	<200	<200	<200	<200	<200
Zr	200	150	150	50	150	150	150	100

Charles E. Thompson
Chief Chemist

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

July 17th, 1973

Mr. Joe Porter
Geogelogist
Rosiclare, Illinois

800 & 00 Series OME-4 (Hamp 6)
900 Series OME-3 (Pankey 3)

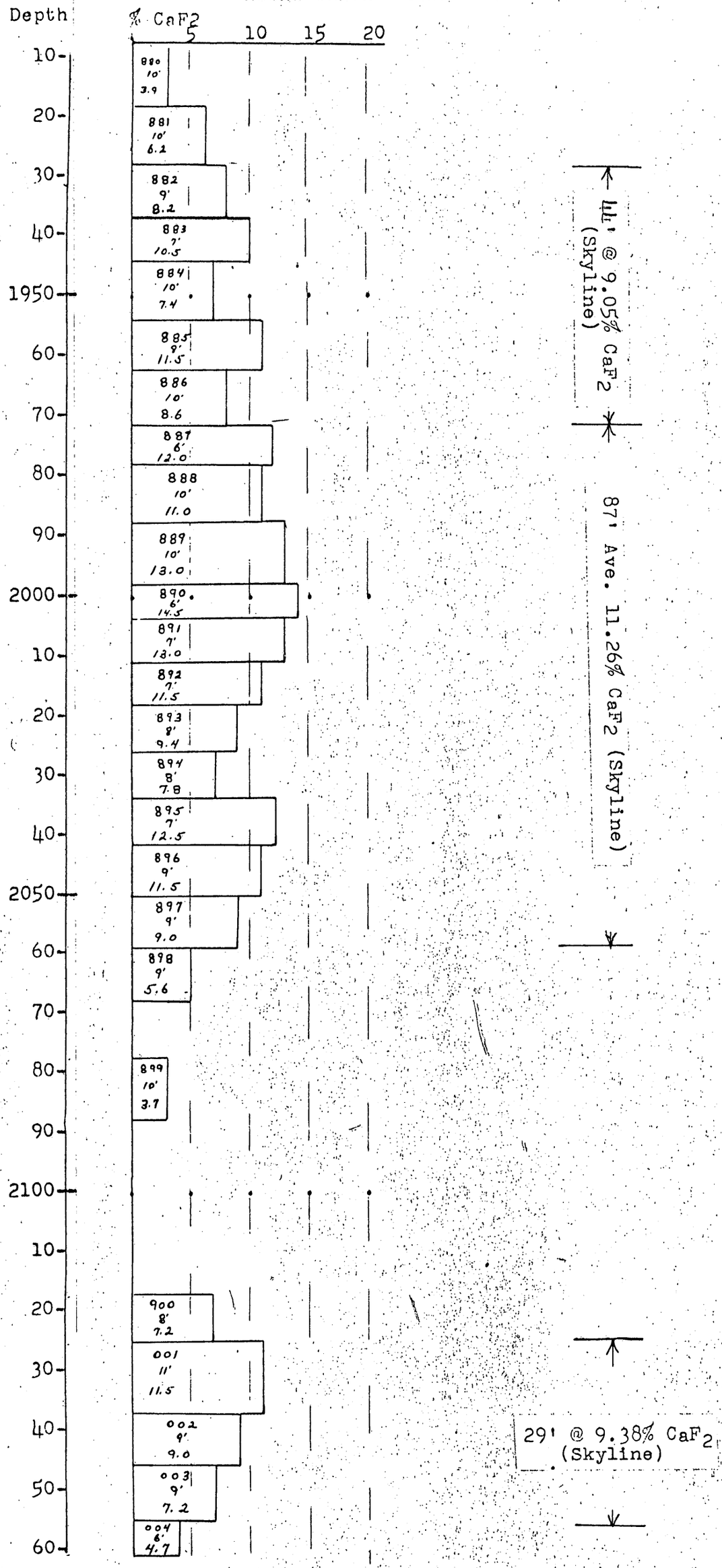
CORE SAMPLES 800 & 900 Series

Sample No.	CaF_2	SiO_2	Total Calcium	$BaSO_4$
896	10.12	11.94	26.37	4.50
987	8.08	11.98	24.77	4.50
898	4.32	15.80	19.46	0.50
900	6.57	19.38	17.80	2.44
001	10.70	20.02	20.06	1.98
002	8.85	14.32	21.72	3-50
003	5.06	67.92	17.79	2.10
004	5.06	16.60	27.44	3.40
879	2.78	2.92	35.00	1.50
880	3.29	4.98	20.59	1.42
881	5.56	6.78	31.75	1.92
882	77559	9.02	31.76	2.46
883	9.61	11.36	25.90	4.38
884	5.79	10.46	27.90	2.96
885	10.67	10.82	27.50	0.12
886	7.08	1.12	28.36	1.46
887	10.64	11.10	27.30	1.80
888	10.47	12.44	25.11	4.06
889	12.50	12.36	25.24	3.34
890	13.66	11.86	28.10	2.68
891	13.20	12.78	25.54	3.20
892	10.12	10.18	25.68	2.52
893	9.49	8.94	26.10	2.80
894	7.33	12.48	25.89	3.70
895	11.56	12.40	25.97	3.20
896	4.38	19.19	16.27	5.52
897	5.49	14.76	17.00	8.96
898	3.79	25.56	16.69	3.21
989	3.03	35.76	11.88	1.54
990	4.42	27.42	20.22	2.36
991	5.74	5.84	15.93	3.46

V.C.McDonald
Chemist

V. C. McDonald

ASSAY GRAPH - HAMP 6 (OME-4)



UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Branch of Budget and Finance
Washington, D. C. 20242

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee:

Hicks Dome Account
c/o Gilbert Kerlin, Esq.
Shearman and Sterling
53 Wall Street
New York, NY 10005

Amount Claimed:	Differences (Explained Below)	Amount Approved
$ 5,629.80	$ 856.50	$ 4,773.30 2,386.65 (Govt Part 50%)
Bu. Voucher No.	**Payee's Invoice No.**	**Period**
	Contract #2306 Docket #6873	June-August 1973

EXPLANATION

Actual Costs
Category (1) Indepedent Contracts
Bit Costs

Claimed	$ 5,000.00	
Allowed 8,287ft @ $.50/ft	4,143.50	$ 856.50

* This amount may be applied to costs in Stage II.

Any reclaim for items deducted must be included as a separate item on subsequent monthly voucher and supported by the original of this statement.

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Branch of Budget and Finance

Duplicate copy

Geologic Report
OME-8 (FSB-3)

OME-8 was drilled northeast of OME-5 (FSB-1) in an attempt to extend the better mineralization cut in OME-5. The location is shown on the 1" = 400' map.

A normal stratigraphic sequence was encountered to 1,294 feet where a fault zone was encountered in the lower part of the Maquoketa shale. The zone consisted of 96 feet of fault breccia and included a 33 foot cavity. The hole was lost in the cavity and subsequently wedged and redrilled at 1,255 feet. In the redrilled portion of the hole the Maquoketa was rather fractured but the base was clearly distinguished at 1,322 feet (rods), a sea level elevation of -700 feet. This was somewhat higher than anticipated.

Normal Kimmswick and Plattin were encountered down to 1,984 feet where continuous breccia was intersected. In general the breccia differed somewhat from usual in that in volume it was mostly coarse with lesser amounts of fine rock flour breccia.

The breccia can essentially be divided into an upper calcareous zone and a lower dolomitic zone. The upper zone, from 1,984 feet to 2,165 feet consisted of coarse, medium and fine angular fragments, all tightly interlocked. Lithologies were well mixed. Pink limestone fragments resembling Silurian rocks were fairly common. This zone contained two relatively thin zones of finer breccia with subangular fragments and a rock flour matrix which was replaced by purple fluorite.

The upper most zone, at the top of the breccia zone, from 1,986 feet to 2,008.5 feet averaged 12.34% CaF_2, 2.7% $BaSO_4$, 0.20% Nb and 0.16% Th over 22.5 feet. A similar zone from 2,070 feet to 2,089 feet averaged 12.8% CaF_2, 1.9% $BaSO_4$, 0.12% Nb and 0.15% Th over 19 feet. Several other thin finer breccia zones were sparingly mineralized.

The breccia became dolomitic at 2,165 feet. It was similar in character as above to 2,300 feet except that dolomite was the principal constituent. From 2,300 feet to 2,366 feet rich "purple breccia" was encountered. The 66.2 feet averaged 22.2% CaF_2, 2.89% $BaSO_4$ and 0.25% Nb. This zone correlated fairly well with the better zone in OME-5 (FSB-1).

Beneath this zone the breccia was more or less coarse to the bottom of the hole. It consisted principally of dolomitic breccia and brecciated dolomite with sparse mineralization in the zones of the finer breccia.

The hole was drilled to 2,997 feet as a test for deeper sulphide mineralization in the Knox group. No significant mineralization was encountered. Due to the brecciation, no stratigraphic interpretation could be made.

More thorough assay work is required on the mineralized zone.

Included here are:

1. Summary log,
2. Detailed log of the breccia zone,
3. Assay graph,
4. Assay certificates.

Respectfully submitted,

Joseph A. Porter

Joseph A. Porter

SUMMARY LOG
OME-8 (FSB-3)

Started 10-8-73 Elevation 622.0

Completed 2-1-74 Depth 2997

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Bedded chert residuum.	105	105
DEVONIAN Clear Creek ls.	Mostly finely crystalline, light gray and light brownish gray, cherty.	282	387
Backbone ls.	Finely crystalline, light brownish gray, rather pure.	43.5	430.5
Upper Grassy Knob ls.	Fine, crystalline, gray to dark gray, very silty, argillaceous.	62.5	493
Lower Grassy Knob ls.	Dark gray, fine, very silty, very argillaceous, very cherty, probably 50% chert as bands and irregular nodules.	208	701
Bailey ls.	Fine, gray, very silty, little argillaceous, little breccia and intrusive material at bottom.	171	872
SILURIAN Moccasin Sprs. ls.	Light gray, fine, scattered pyrite throughout, few pink streaks, little argillaceous material.	97	969
St. Clair - Sexton Creed ls.	Very fine, light gray with dolomitic, wavy streaks, disseminated pyrite, disseminated pink grains.	49.5	1018.5
Edgewood ls.	Principally fine, little crystalline, dark gray, fairly abundant argillaceous streaks, abundant irregular dark chert nodules.	98.5	1117
ORDOVICIAN Maquoketa sh.	Dark gray to black, hard and brittle, well fractured, fairly abundant calc-fluorite veinlets.	177	1294

FORMATION	DESCRIPTION	THICK.	DEPTH
Fault zone?	Mixed coarse breccia, shale and limestone, probably fault breccia, cavity from 1333-1363.	96	1390
Kimmswick ls. ?	Very fine, finely crystalline, light brownish gray.	67.5	1457.5

NOTE: Hole lost, wedged back at 1255 in an attempt to avoid cavity.

Maquoketa sh.	All highly fractured, some limestone, somewhat brecciated.	67	1322
Kimmswick ls.	Fine, medium and coarsely crystalline, very pure, gray to light gray, fairly abundant cavities.	61	1383
Decorah-Plattin ls.	Fine and medium, gray, dark wavy dolomitic or silty bands, little interbedded light gray crystalline, few patches of breccia with purple fluorite.	601	1984
Purple-gray rock flour br.	Fine, sub-angular fragments in a fluoritic rock flour matrix, fairly well replaced with purple fluorite, little pale green barite, trace of disseminated galena and sphalerite, average 12.3% CaF_2.	24.5	2008.5
Breccia	Mixed fine, medium and coarse angular fragments, tightly interlocked, little matrix material, little mineralization in finer portions.	61.5	2070
Purple breccia	As described above, average 12.8% CaF_2.	19.0	2089
Breccia	Principally angular, tightly interlocked, medium, coarse and fine sub-angular fragments of various limestones and dolomites, tightly interlocked, little matrix material, Silurian fragments common.	76	2165
Breccia	Principally as above, mostly dolomite fragments, little mineralization in finer portions, better mineralization toward bottom in finer portions, bottom contact rather sharp.	135	2300

FORMATION	DESCRIPTION	THICK.	DEPTH
Purple breccia	As described above, fluorspar considerably richer throughout, matrix very well replaced, fairly abundant barite throughout, grades rather quickly into dolomitic breccia below. Unit averages 22.2% CaF_2, 2.8% $BaSO_4$ and .25% Nb.	66	2366
Breccia	Mostly dolomitic breccia and brecciated dolomite, mostly coarse, little fine and medium scattered throughout, traces of mineralization in finer portions, little quartzite throughout.	631	2997
	TOTAL DEPTH		

Sheet No. 14 Hole No. FSB-3

Depth Feet	Formation	No.
1870-1880	Limestone, darker gray, fine crystalline, some scattering of dolomite, spotty white limestone "ovals", purple spar is common infractures, scattered pyrite; 1877-1879, quite broken, coarse white calcite abundant, purple spar associated.	
1880-1903.5	Limestone as (1802-1841), trace of pyrite.	
1903.5-1911	Limestone, gray, very fine crystalline, slightly dolomitic, stylolites are common.	
1911-1917.5	Mixture of argillaceous streaked limestone and gray limestone with large silty dark gray blocks, very broken, coarse calcite is common, some limonite.	
1917.5-1937	Limestone, gray, fine crystalline, abundant irregular argillaceous streaks, trace to some hydrocarbons, slightly dolomitic, 4" breccia at 1925 contains some spar, barite and 2-3% pyrite.	
1937-1954	Limestone, gray, fine crystalline, abundant dolomitic streaks, limestone more dolomitic than above, some darker silty patches and argillaceous streaks, stylolites are common.	
1954-1965	As above, transition to breccia, much local brecciation, well fractured throughout, stylolites are common, purple spar and barite up to 2% is found in brecciated zones, pyrite is common.	
1965-1984	Limestone, principally as above, few patches fairly well brecciated, few streaks purple and clear fluorite in brecciated portions, occasional vug in calcite veinlets, breccia more abundant toward bottom, bottom contact rather distinct, grades into below in a vertical range of about 1 foot.	
1984-1986	Gray breccia, principally fine to sub-angular fragments of limestone in a fluoritic rock flour matrix, disseminated sphalerite throughout, blebs of purple fluorite in matrix material and small fractures, estimate fluorite at 2%.	

Sheet No. 15 Hole No. FSB-3

Depth Feet	Formation	No.
	McDonald assays are underlined; Skyline assays are in parenthesis	
1986-1994	Purple-gray rock flour breccia, mostly fine angular, sub-angular limestone fragments in a rock flour matrix, few fragments of quartzite, traces of galena and sphalerite throughout, some clear pale green barite streaks in places, in places well replaced with deep purple fluorite, estimate spar at 5%.	SB-092 8' 12.61 CaF_2, 4.80 $BaSO_4$ (12.0 CaF_2, 3.4 $BaSO_4$)
1994-2002	Purple breccia mostly in rock flour matrix, fluorite occurs as disseminated specks of purple, few clear and purple blebs, some pyrite throughout, few traces of lead and zinc, clear and fluorite at 12%.	SB-093 8' 12.86 CaF_2, 2.10 $BaSO_4$ (11.5 CaF_2, 2.7 $BaSO_4$)
2002-2008.5	Purple-gray rock flour breccia, quartzite in a fluoritic gray rock flour matrix, principally as above, few patches fairly rich, generally lower in grade, estimate fluorite at 7%.	SB-094 6.5' 13.62 CaF_2, .50 $BaSO_4$ (11.5 CaF_2, 2.2 $BaSO_4$)
2008.5-2020	Breccia, mixed, fine, medium and coarse angular fragments of various limestones in a rock flour matrix, fragments generally tightly interlocked, matrix material small percent of total, finer portions and other mineralizations as above, estimate whole unit at 1% or less.	
2020-2050	Tightly interlocked angular fragments, principally as above, few zones and patches of fine breccia with purple fluoritic rock flour matrix, finer portions consistly carry most spar, few blebs and stringers of spar scattered throughout, pyrite, trace of sphalerite and galena, estimate spar at 1% or less.	
2050-2070	Breccia as above, finer and richer in purple fluorite, fairly rich in sphalerite in bottom 5'.	
2070-2080	Breccia, principally gray rock flour breccia, fragments-fairly tightly interlocked, matrix commonly well replaced with purple fluorite, estimate spar at 11%.	SB-095 10' 12.06 CaF_2, 1.20 $BaSO_4$ (9.4 BaF_2, 3.0 $BaSO_4$)

McDonald assay underlined

Skyline assay parenthesis

Sheet No. 16 Hole No. FSB-3

Depth Feet	Formation	No.
2080-2089	Breccia, purple, fairly tightly interlocked, small sub-angular fragments in a fluoritic rock flour matrix, fair disseminated sphalerite throughout, particularly with richer fluorite, estimate spar at 10%, transition to below rather abrupt.	SB-096 9' 15.14 CaF_2, 1.30 $BaSO_4$ (14.5 CaF_2, 2.2 $BaSO_4$)
2089-2110	Breccia, tightly interlocked fragments of limestone and dolomite ina dolomitic, calcareous matrix, fragments fine, medium and few coarse, few zones very fine, breccia fragments well mixed, fairly abundant shale fragments, fairly numerous fragments probably Silurian, traces of purple fluorite in matrix material and fractures, estimate fluorite at 1%, disseminated pyrite throughout.	SB-097 (2095-2106) 11' 5.04 CaF_2, 0.50 $BaSO_4$ (6.0 CaF_2, 1.1 $BaSO_4$)
2110-2140	Breccia, tightly interlocked, various colored fragments of limestone, dolomite and shale in a rock flour matrix, matrix material small percent of total, matrix partly replaced with fluorite, few traces disseminated sphalerite throughout, fiarly abundant pink fragments, probably Silurian, estimate throughout at 1%.	
2140-2165	Breccia, principally as before, more abundant patches of fine breccia, seems to be somewhat more disseminated, yellow and ruby sphalerite throughout, few finer zones with few traces of galena, Silurian fragments still fairly common, fluorite estimate at 1%.	SB-098 (2155-2165) 10' 6.98 CaF_2, 1.20 $BaSO_4$ (7.4 CaF_2, 1.2 $BaSO_4$)
2185-2205	Mixed breccia as above, dolomitic breccia, probably consists mostly of dolomite, fragments noticeably more granular than before, noticeably less mixed, probably continues to represent transition to Joachim, fluorite in matrix material probably less than 1%, traces of galena and sphalerite.	
2205-2232	Breccia, principally fine, little medium and coarse, appears to be very dolomitic, rock flour matrix sparingly replaced with purple fluorite, few blebs of purple fluorite, few zones and patches rather pyritic, traces of galena and sphalerite, consists principally of dolomite.	

Sheet No. 17 Hole No. FSB-3

Depth Feet	Formation	No.
2232-2241	Breccia, principally as above, probably finer with correspondingly more rock flour matrix, few patches fairly well replced with purple fluorite, estimate total spar at 1.5-2%, seems to grade into unit below.	
2241-2258	Breccia, principally fine, gray, dolomitic breccia with sub-rounded, sub-angular fragments in a slightly fluoritic rock flour matrix, few traces of galena and sphalerite throughout, patches fairly rich in pyrite, somewhat richer in fluorite, estimate fluoirite at 2%.	SB-099 11' 6.81 CaF_2, 0.50 $BaSO_4$ (8.2 CaF_2, 1.0 $BaSO_4$)
2258-2269	Breccia, mixed, coarse, medium and fine in a fluoritic rock flour matrix, fairly abundant pyrite throughout.	SB-100 11' 7.08 CaF_2, 2.50 $BaSO_4$ (8.2 CaF_2, 1.6 $BaSO_4$)
2269-2284	Breccia, coarse and medium, angular fragments of a dolomite and limestone matrix, matrix fairly well replaced with deep purple fluorite but matrix makes up small percent of total, fairly abundant quartzite fragments, estimate spar at 3%.	
2284-2299.8	Breccia, fine, medium and coarse angular fragments of dolomite and quartzite, some limestone in a fluoritic rock flour matrix, quartzite fairly abundant, matrix material rather well replaced with deep purple fluorite, matrix makes up small percent of total, contact rather sharp, estimate spar at 3%.	SB-101 13.8' 5.06 CaF_2, 1.32 $BaSO_4$ (6.4 CaF_2, .49 $BaSO_4$)
2299.8-2305	Purple breccia zones, rather rich deep purple fluorite with crystalline barite, disseminated pyrite, trace of sphalerite and galena, few coarse fragments relatively unreplaced, few rather distinct fragments relatively of quartzite, estimate spar at 10%, both upper and lower contacts appear to be distinct, considered to be part of the purple breccia zone.	SB-085 5.2' 18.75 CaF_2, 1.20 $BaSO_4$
2305-2309.5	Purple breccia, little mixed breccia as above, consists principally of sub-angular fragments of dolomite in a fluoritic rock flour matrix, matrix has abundant disseminated barite, fair show of galena, trace of sphalerite, few large unreplaced fragments, estimate spar at 12%.	SB-086 4.5' 19.55 CaF_2, 2.22 $BaSO_4$ (22.5 CaF_2, 3.2 $BaSO_4$)

Sheet No. 18 Hole No. FSB-3

Depth Feet	Formation	No.
2309.5-2315	Rather rich purple breccia, all very fine with sub-angular fragments of white limestone and dolomite, little quartzite, fluorine in a purple rock flour matrix, abundant crystalline pale green barite, good show of galena, some nearly coarsely crystalline and finely disseminated throughout, all rather pyritic, estimate fluorite at 18.5%, barite 3%.	SB-087 5.5' 25.24 CaF_2, 4.16 $BaSO_4$ (29.0 CaF_2, 4.8 $BaSO_4$)
2315-2325	Purple breccia, principally as before, probably richer, contains significant clear barite, mostly fine matrix, material, few larger fragments floating, estimate fluorite at 20%, barite at 4%, fair traces of galena, all rather pyritic.	SB-088 10' 25.48 CaF_2, 1.23 $BaSO_4$ (29.0 CaF_2, 4.2 $BaSO_4$)
2325-2335	Purple breccia, principally as above, fairly abundant larger fragments, bottom part appears to be somewhat altered and porous, estimate fluorite at 19%.	SB-089 10' 23.72 CaF_2, 4.50 $BaSO_4$ (26.5 CaF_2, 4.8 $BaSO_4$)
2335-2345	Purple breccia, essentially as before, matrix well replaced with deep purple fluorite, few large fragments, abundant clear and pale barite, estimate fluorite at 21%, barite at 4%, little galena and sphalerite, fairly abundant pyrite.	SB-090 10' 22.00 CaF_2, 1.20 $BaSO_4$ (26.5 CaF_2, 5.4 $BaSO_4$)
2345-2354	Deep purple breccia, matrix fairly well replaced with deep purple fluorite, some blebs and streaks of crystalline clear fluorite, abundant barite, traces of galena, sphalerite and fairly abundant pyrite, estimate fluorite at 26%, barite at 6%, bottom contact very sharp and abrupt.	SB-091 9' 22.72 CaF_2, 2.80 $BaSO_4$ (25.5 CaF_2, 5.1 $BaSO_4$)
2354-2366	Dolomite, very fine grained, gray, abundant blebs and streaks of purple and clear fluorite, abundant disseminated pyrite throughout, bedding appears to be rather well preserved might be considered a crackle breccia.	SB-102 12' 11.98 CaF_2, 1.30 $BaSO_4$ (12.5 CaF_2, .59 $BaSO_4$)

Sheet No. 19

Hole No. FSB-3

Depth Feet	Formation	No.
2354-2366	Dolomite, very fine grained, gray, abundant blebs and streaks of purple and clear fluorite, abundant disseminated pyrite throughout, bedding appears to be rather well preserved, might be considered a crackle breccia.	SB-102 12' 11.98 CaF_2, 1.30 $BaSO_4$ (12.5 CaF_2, .59 $BaSO_4$)
2366-2376	Breccia, principally as above, somewhat lighter gray in bottom portion, possibly somewhat more brecciated, matrix material fairly well replaced, but constitutes small part of total, estimate fluorite at 3%.	
2376-2395	Brecciated dolomite, fine grained, gray and light gray, more or less crackle breccia, fairly abundant small blebs of purple fluorite and small fractures, little disseminated purple fluorite commonly with barite, estimate fluorite at 1%.	
2395-2413	Breccia, dolomitic, principally coarse angular fragments of tan and gray dolomite in a fluoritic rock flour matrix, matrix makes up a small percent of total, fairly abundant pyrite throughout principally in matrix material, material fairly well replaced but constitutes small part of total, odd patch of rather rich purple breccia, estimate overall at 2%.	
2413-2420	Breccia, fairly well mixed, principally coarse and medium angular fragments in a fluoritic rock flour matrix, partly fairly well replaced with deep purple fluorite, little disseminated galena and sphalerite, rather bleached appearance.	SB-103 7' 4.41 CaF_2, 0.94 $BaSO_4$ (4.1 CaF_2)
2420-2428	Breccia, principally large fragments of dolomite, dark brownish gray, very fine grained, abundant small seams and veinlets of white calcite, little purple fluorite, few argillaceous zones with abundant disseminated pyrite.	

Sheet No. 20 Hole No. FSB-3

Depth Feet	Formation	No.
2428-2452	Breccia, principally fine, consists principally of rather rounded small fragments in a rock flour matrix, matrix appears granular possibly sandy, fairly abundant shows of clear fluorite as irregular blebs in matrix material, little pyrite scattered throughout, more calcareous than above, in general lighter zones are more calcareous and more granular in appearance.	SB-104 (2437-2448) 11' 2.52 CaF_2, 1.76 $BaSO_4$ (3.3 CaF_2)
2452-2480	Brecciated dolomite, principally as above, few patches fine, mostly coarse breccia, probably discribed best as mega-breccia, fluorite in small seams and finer brecciated portions, little dark chert, little quartzite scattered throughout, estimate fluorite at 1%, few traces of clear pale barite.	
2480-2498	Brecciated dolomite, gray, light gray and dark gray, few patches fairly fine breccia, few blebs of purple fluorite in matrix, little zones with fairly large fragments that appear to be intrusive igneous material which has been rebrecciated, little quartzite scattered throughout.	
2498-2516	Breccia, principally as before, little finer breccia at bottom, some dark gray brecciated shaly material in lower part, very little mineralization throughout.	
2516-2535	Breccia, principally small, angular fragments of dolomite in a dolomitic rock flour matrix, few dark gray fragments and light gray fragments, odd fragment of oolitic dolomite, suspect secondary dolomitization very significant here, few quartzite fragments throughout.	SB-105 (2522-2531) 9' 1.53 CaF_2, 0.36 $BaSO_4$ (2.7 CaF_2)
2535-2552	Breccia, as above.	
2552-2562	Breccia, principally as before, somewhat more dark gray argillaceous shaly dolomite stringers, very little mineralization evident.	

ASSAY GRAPH FSB-3 (OME-8)

HICKS DOME ACCT. - OME
Assay Graph
OME-8 (FSB-3)

Vertical Scale 1" = 20'
Values 1" = 10%

Sheet No. 21 Hole No. FSB-3

Depth Feet	Formation	No.
2562-2570	Brecciated limestone, dolomite and quartzite in a rock flour matrix commonly replaced by clear white calcite, little pyrite scattered throughout, few traces of purple fluorite throughout, quartzite possibly somewhat more abundant.	SB-106 8' 2.06 CaF_2, 1.06 $BaSO_4$ (2.7 CaF_2)
2570-2592	Breccia, fine, medium and coarse, principally sub-angular fragments of dolomite, some quartzite and limestone in a dolomitic rock flour matrix, rock flour matrix minor constituent, little pyrite throughout, occasional blebs of purple fluorite, occasional calc veinlet and calcite in matrix.	
2592-2621	Breccia, mostly dolomite, some limestone and quartzite fragments in a sandy, dolomitic matrix, few zones with calcite, commonly with purple fluorite and traces of chalcopyrite, little scattered pyrite throughout, few patches with peculiar yellow staining, minor zones appear to be fairly well mixed.	
2621-2646	Brecciated dolomite, gray, very fine grained, very little mixing evident, probably well recrystallized, few patches of white calcite, traces of pyrite scattered throughout, few blebs of purple fluorite, partly very vuggy.	
2646-2665	Breccia, principally fine, little medium angular fragments of various colored fine grained dolomite, occasional fragment of limestone and shale, little clear fluorite throughout in matrix, matrix material appears to be rather sandy.	SB-107 (2651-2665) 14' 1.80 CaF_2, 0.44 $BaSO_4$ (3.3 CaF_2)
2665-2688	Breccia, fine, medium and coarse, dolomitic breccia, consists principally of crystal and light gray dolomite, probably recrystallized, partly vuggy throughout, fair amounts of disseminated pyrite and light gray crystal material.	

Sheet No. 22 Hole No. FSB-3

Depth Feet	Formation	No.
2688-2713	Brecciated, dolomitic limestone, light gray, coarsely crystalline, few fragments of quartzite and dolomite scattered throughout, particularly from about 2695-2697, little scattered pyrite throughout, few zones and patches with faint yellowish tinge.	SB-108 (2695-2697) 2' 5.16 CaF_2, 0.36 $BaSO_4$ (6.0 CaF_2)
2713-2734	Brecciated dolomite and chert, mostly coarse mega-breccia, few streaks and patches fine, occasional intermixed large quartzite fragments, little purple fluorite scattered throughout principally in blebs, sometimes disseminated, fairly abundant disseminated pyrite, few traces of pale yellow sphalerite.	SB-109 (2726-2734) 8' 2.77 CaF_2, 0.48 $BaSO_4$ (3.3 CaF_2)
2734-2755	Breccia, mixed, coarse, mostly coarse, little mixed fine and medium, upper portion principally large fragments of quartzite, mostly dolomite in lower part, little purple fluorite in matrix, fairly abundant calc veinlets and seams, traces of white barite principally in vugs.	
2755-2774	Brecciated dolomite, gray to brownish gray, fine and medium crystalline grained, little quartzite scattered throughout, more brecciated portions have calcite matrix, little matrix material in total, traces fluorite throughout, little scattered pyrite throughout, all fairly vuggy, core partly broken.	SB-110 (2765-2774) 9' 4.85 CaF_2, 0.48 $BaSO_4$ (3.7 CaF_2)
2774-2800	Brecciated dolomite and quartzite principally as above, somewhat calcite, matrix fairly abundant zones of rather fine breccia with sub-angular fragments, partly vuggy, fairly well broken in part.	SB-111 (2790-2800) 10' 2.00 CaF_2, 0.32 $BaSO_4$ (3.0 CaF_2)
2800-2828	Brecciated dolomite and quartzite, principally as before, little purple fluorite in vugs scattered throughout particularly in lighter gray to white dolomites, somewhat broken, tends to break into buttons, sparse mineralization, few traces of pyrite.	
2828-2848	Brecciated dolomite and quartzite, principally as above, purple fluorite in fractures and in vugs, odd traces and zones with faint yellowish tinge in fractures, somewhat lighter in color than above.	

Sheet No. 23 Hole No. FSB-3

Depth Feet	Formation	No.
2848-2870	Brecciated dolomite and quartzite as before, possibly somewhat less quartzite.	
2870-2882	Breccia, fine, medium, sub-angular fragments of dolomite in a fluoritic sandy, rock flour matrix, disseminated clear fluorite throughout in matrix, fairly abundant large crystals of clear barite.	SB-112 2' 1.29 CaF_2, .60 $BaSO_4$
2882-2997	Brecciated dolomite, little quartzite, mostly light gray, very fine grained, little clear barite, some pyrite.	SB-113 (2886-2997) 11' 1.47 CaF_2, .20 $BaSO_4$

TOTAL DEPTH

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, IL 62982

Re: Assay Results - Split Core
FSB-3 (OME-8)

Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
SB-084	12.62			
SB-085	18.75	12.88	1.20	21.43
SB-086	19.55	13.28	2.22	24.30
SB-087	25.24	9.12	4.16	20.04
SB-088	25.48	8.12	1.28	24.28
SB-089	23.72	10.10	4.50	24.30
SB-090	22.00	11.20	1.20	23.12
SB-091	22.72	14.40	2.80	23.50
SB-092	12.61	23.62	4.80	21.00
SB-093	12.86	19.08	2.10	23.20
SB-094	13.62	20.90	0.50	22.87
SB-095	12.06	17.02	1.20	25.52
SB-096	15.14	21.20	1.30	23.53
SB-097	5.04	22.00	0.50	23.66
SB-098	6.98	19.38	1.20	19.55
SB-099	6.81	16.72	0.50	19.02
SB-100	7.08	24.78	2.50	18.69
SB-101	5.06	20.96	1.32	18.09
SB-102	11.98	16.04	1.30	21.28

Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
SB-103	4.41	10.54	0.94	20.55
SB-104	2.52	12.40	1.76	19.22
SB-105	1.53	23.84	0.36	16.57
SB-106	2.06	21.68	1.06	14.91
SB-107	1.80	14.78	0.44	18.56
SB-108	5.16	13.56	0.36	18.49
SB-109	2.77	20.72	0.48	16.23
SB-110	4.85	15.52	0.48	18.43
SB-111	2.00	13.68	0.32	18.82
SB-112	1.29	26.50	0.60	16.23
SB-113	1.47	12.30	0.20	19.55

Respectfully submitted,

V.C. McDonald, Chemist

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF ANALYSIS

Job No. M-2378
March 1, 1974

Mr. Joseph A. Porter
P.O. Box 447
Rosiclaire, Illinois 62982

Analysis of 6 Pulp Samples

Item	Sample No.	CaF_2 (%)	$BaSO_4$ (%)	Pb (ppm)	Nb (ppm)
1.	SB-086	22.5	3.2	3,800	2,100
2.	087	29.	4.8	4,360	2,700
3.	088	29.	4.2	300	4,100
4.	089	26.5	4.8	50	3,200
5.	090	26.5	5.4	70	4,500
6.	Sb-091	25.5	5.1	150	3,200

Charles E. Thompson
Chief Chemist

SKYLINE LABS, INC.
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REPORT OF SPECTROGRAPHIC ANALYSIS

Job No. M-2378
March 1, 1974

Mr. Joseph A. Porter
P.O. Box 447
Rosiclaire, Illinois 62982

Values reported in parts per million, except where noted otherwise, to the nearest number in the series 1, 1.5, 2, 3, 5, 7 etc.

Element	Sample Number SB-086	SB-087	SB-088	SB-089	SB-090	SB-091
Fe	2%	3%	2%	2%	3%	2%
Ca	20%	20%	>20%	20%	20%	20%
Mg	7%	5%	7%	5%	7%	10%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	10	20	20	20	20	15
Ba	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000
Be	50	100	150	700	1,000	1,000
Bi	<10	10	10	10	10	10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5
Cr	30	30	30	30	30	30
Cu	30	20	20	15	15	20
Ga	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20
La	70	100	100	70	100	100
Mn	1,000	1,000	1,000	1,000	1,000	1,500
Mo	<2	<2	<2	<2	<2	<2
Nb	1,500	2,000	3,000	3,000	3,000	2,000
Ni	20	20	15	10	5	5
Pb	5,000	5,000	200	50	70	150
Sb	<100	<100	<100	<100	<100	<100
Sc	50	70	70	50	50	50
Sn	<10	<10	<10	<10	<10	<10
Sr	1,500	2,000	2,000	2,000	3,000	2,000
Ti	3,000	5,000	7,000	5,000	5,000	5,000
V	150	200	100	100	150	50
W	<50	50	50	50	<50	<50
Y	1,500	2,000	2,000	1,500	2,000	1,500
Zn	<200	<200	<200	<200	<200	<200
Zr	50	100	150	100	100	70

Charles E. Thompson
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REPORT OF ANALYSIS

Job No. M-2426
April 11, 1974

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 20 Pulp Samples

Item	Sample No.	CaF_2 (%)	$BaSO_4$ (%)	Nb (ppm)	Th (ppm)
1.	SB-092	12.	3.4	3,000	1,600
2.	093	11.5	2.7	1,400	1,600
3.	094	11.5	2.2	1,500	1,500
4.	095	9.4	3.0	900	1,300
5.	096	14.5	2.2	1,500	1,700
6.	097	6.0	1.1	650	410
7.	098	7.4	1.2	750	650
8.	099	8.2	1.0	1,300	580
9.	100	8.2	1.6	1,000	410
10.	101	6.4	.49	550	170
11.	102	12.5	.59	225	180
12.	103	4.1	*	*	350
13.	104	3.3	*	*	*
14.	105	2.7	*	*	*
15.	106	2.7	*	350	60
16.	107	3.3	*	*	*
17.	108	6.0	*	1,500	2,100
18.	109	3.3	*	*	*
19.	110	3.7	*	275	330
20.	SB-111	3.0	*	*	*

Charles E. Thompson
Chief Chemist

* Analysis not requested

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REPORT OF SPECTROGRAPHIC ANALYSIS

Job No. M-2426
April 11, 1974

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Values reported in parts per million, except where noted otherwise, to the nearest number in the series 1, 1.5, 2, 3, 5, 7 etc.

	Sample Number							
Element	SB-092	SB-093	SB-094	SB-095	SB-096	SB-097	SB-098	SB-099
Fe	2%	3%	3%	5%	7%	2%	3%	5%
Ca	>20%	>20%	>20%	>20%	>20%	>20%	20%	15%
Mg	3%	5%	2%	2%	2%	2%	5%	5%
Ag	<1	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500
B	20	30	30	50	70	20	20	15
Ba	>10,000	>10,000	10,000	>10,000	>10,000	2,000	3,000	3,000
Be	1,500	500	500	1,000	2,000	300	500	100
Bi	10	10	10	10	<10	<10	<10	<10
Cd	<50	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	5	<5	<5	<5	10
Cr	70	50	70	70	200	30	50	50
Cu	10	10	10	10	5	5	10	10
Ga	<10	<10	<10	<10	<10	<10	10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20
La	70	70	50	100	50	70	100	200
Mn	700	700	500	700	1,500	700	1,000	1,000
Mo	<2	<2	2	2	<2	<2	3	3
Nb	2,000	1,000	1,000	700	1,000	500	500	1,000
Ni	10	15	15	15	10	10	10	10
Pb	300	700	150	200	500	100	150	50
Sb	<100	<100	<100	<100	<100	<100	<100	<100
Sc	200	200	200	200	500	50	50	50
Sn	<10	<10	<10	<10	<10	<10	<10	<10
Sr	3,000	3,000	2,000	5,000	10,000	1,500	2,000	5,000
Ti	5,000	3,000	3,000	5,000	10,000	1,500	2,000	5,000
V	100	150	200	200	300	70	200	300
W	<50	<50	<50	<50	<50	<50	<50	<50
Y	3,000	2,000	2,000	3,000	7,000	1,000	1,500	300
Zn	<200	<200	<200	300	500	<200	<200	<200
Zr	150	100	100	100	50	100	100	30

Element	Sample Number SB-100	SB-101	SB-102	SB-103	SB-106	SB-108	SB-110
Fe	5%	3%	2%	3%	2%	7%	3%
Ca	20%	15%	>20%	20%	>20%	>20%	15%
Mg	7%	7%	7%	10%	10%	10%	7%
Ag	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500
B	20	30	30	10	10	10	20
Ba	7,000	1,000	1,500	1,500	700	10,000	700
Be	50	10	3	<2	<2	15	10
Bi	<10	<10	<10	<10	<10	10	<10
Cd	<50	<50	<50	<50	<50	<50	<50
Co	5	<5	<5	<5	<5	10	<5
Cr	50	50	70	30	70	70	50
Cu	10	7	7	5	7	10	10
Ga	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20
La	200	30	<20	200	20	500	20
Mn	1,000	1,000	500	1,500	700	3,000	700
Mo	3	5	<2	70	10	10	10
Nb	700	300	150	300	300	1,000	150
Ni	10	5	7	5	5	10	5
Pb	30	50	10	30	20	50	10
Sb	<100	<100	<100	<100	<100	<100	<100
Sc	30	10	20	10	15	50	10
Sn	<10	<10	<10	<10	<10	<10	<10
Sr	2,000	500	700	500	700	1,500	300
Ti	2,000	1,500	1,000	1,500	1,000	700	500
V	100	100	50	100	150	150	100
W	<50	<50	<50	<50	<50	<50	<50
Y	300	200	300	150	150	300	200
Zn	<200	<200	<200	<200	<200	<200	<200
Zr	50	<20	50	<20	20	50	20

Charles E. Thompson
Chief Chemist

Duplicate copy

Geologic Report
OME-7 (FSB-2)

OME-7 was drilled approximately 800 feet southwest of OME-5 (FSB-1) in an attempt to duplicate the intersection in that hole. The location is given on the 1" = 400' scale map.

The stratigraphic section was essentially normal to the depth of 1889 feet where continuous breccia was intersected in the Plattin limestone. Base of the Maquoketa was intersected at a sea level elevation of -830 feet.

The breccia can essentially be divided into three zones. They consist of 344 feet of coarse limestone breccia at the top, 261 feet of fine rock flour breccia and "purple" breccia and 51 feet of dolomite megabreccia at the bottom of the hole. The distinctions of the individual zones are not entirely clear-cut and are subject to interpretation.

The upper zone, from 1889 to 2233, consisted principally of coarse and medium, tightly interlocked fragments of Plattin limestone with very little matrix material. This zone contains several zones of finer breccia with more matrix material which was rather well replaced by purple fluorite. Best zone was from 2097.5 to 2106.5. This zone averaged 8.67% CaF_2 and 1.35% $BaSO_4$ over 57 feet.

The rock flour and purple breccia zone was encountered from 2233 to 2494, a total of 261 feet. It consisted principally of fine, medium and some coarse sub-angular fragments in a fluoritic, rock flour matrix. Finer portions generally contain more matrix material and more purple fluorite. Character of the mineralization is similar to that encountered in other purple breccia zones.

The entire 261 feet averaged 10.76% CaF_2 and 2.00% $BaSO_4$. On the basis of assay results this zone can be divided essentially into three separate zones. These are shown on the attached assay graph. The upper zone consisted of 107 feet which averaged 10.25% CaF_2 and 1.96% $BaSO_4$. This middle zone was generally finer and included several zones of "microbreccia". It contained more matrix material and mineralization was more intense. This averaged 13.83% CaF_2, 2.38% $BaSO_4$ and .22% Nb over 62 feet. This zone correlates fairly well with the better intersection in OME-5. The bottom 92 feet was rather dolomitic and uniformly mineralized. Though fragments were the dominant constituent, the matrix was rather well replaced. This zone averaged 9.27% CaF_2 and 2.02% $BaSO_4$.

Sphalerite and galena were frequently noted throughout but assays indicate insignificant amounts. Various spectrographic analysis indicated portions with significant amounts of niobium, thorium, beryllium and yttrium. Additional assays will be made for these elements.

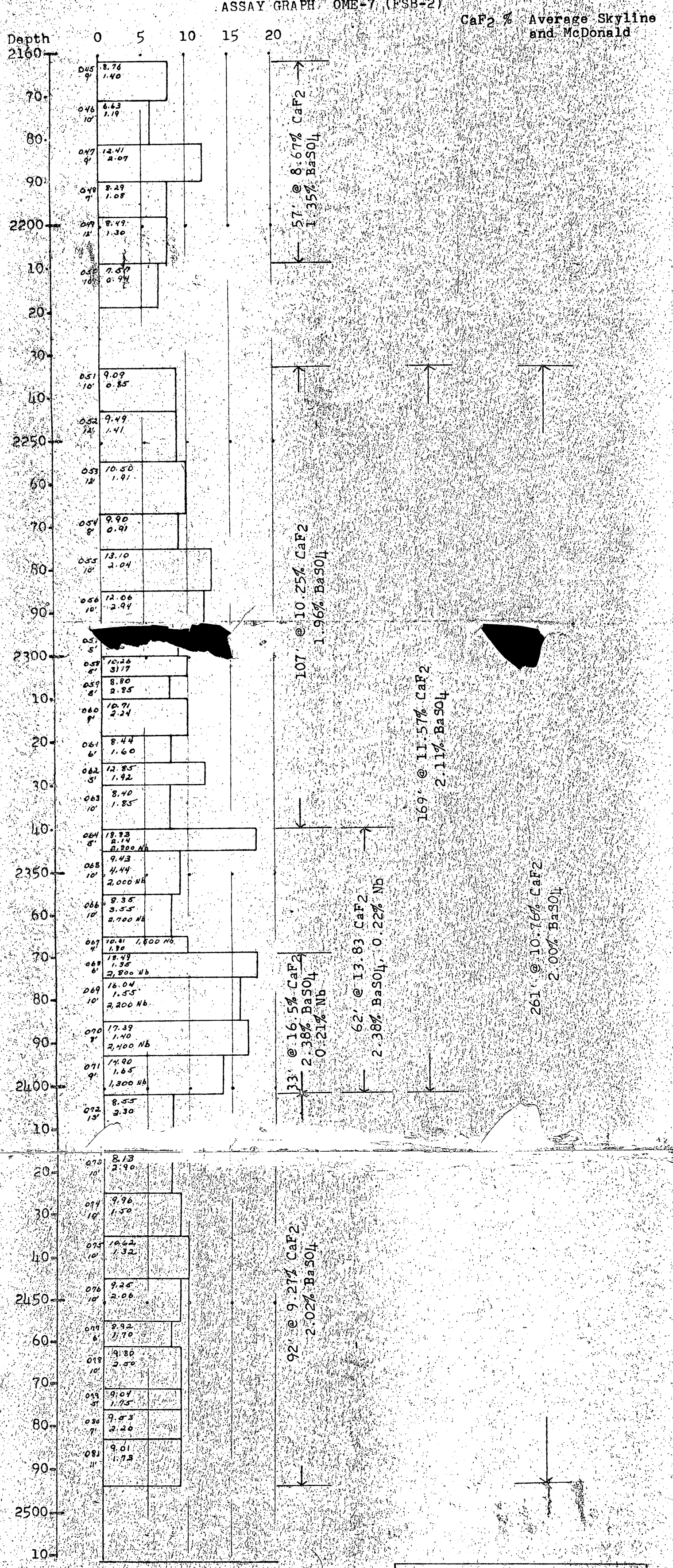
Attached are:

1. Summary log,
2. Assay graph,
3. Detailed log of breccia zone,
4. Assay certificates.

Respectfully submitted,

Joseph A. Porter

ASSAY GRAPH OME-7 (FSB-2)



ASSAY GRAPH
OME-7 (FSB-2)

045 Sample No.
9' Thickness
8.76 % CaF_2
1.40 % $BaSO_4$
Nb in ppm

Vertical Scale 1" = 20'
Horizontal Scale 1" = 10%

SUMMARY LOG
OME-7 (FSB-2)

Started 9-10-73 Elevation 596.3

Completed 10-6-73 Depth 2545

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Bedded chert residuum and red mud.	73	73
DEVONIAN Clear Creek ls.	Fine grained, light gray, somewhat cherty.	327	400
Backbone ls.	Light gray, fine grained, crystalline.	30	430
Grassy Knob ls.	Dark gray, argillaceous limestone and abundant chert, lost samples at 770, end rotary drill.	375	805
Bailey ls.	Gray and dark gray, very fine grained to sublithographic, very silty, somewhat siliceous.	174	979
SILURIAN Moccasin Sprs. ls.	Very fine grained, principally light gray, pyritic, few pink streaks throughout, few wavy argillaceous or dolomitic partings.	75	1054
St. Clair - Sexton Creek ls.	Light gray, very fine grained, little medium crystalline, scattered pink rhombs throughout, few brick red streaks, abundant pyrite.	89	1143
Edgewood ls.	Very fine grained, gray to dark gray, abundant interlaminated argillaceous streaks, somewhat cherty.	104	1247
ORDOVICIAN Maquoketa sh.	Dark gray to black, hard, brittle, fairly well laminated, bottom part calcareous with little interbedded limestone and very sandy shale.	179	1426
Kimmswick ls.	Light gray, medium crystalline, rather pure, stylolitic.	69	1495
Decorah-Plattin ls.	Principally very fine grained, somewhat sugary texture, dark brownish gray, abundant interlaminated irregular dolomitic or silty streaks, little interbedded, light gray crystalline.	394	1889

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia and limestone	Mixed coarse breccia and unbrecciated limestone, breccia consists principally of angular Plattin fragments, tightly interlocked, very little matrix material, matrix sometimes contains calcite, little purple breccia from 2097.5-2106.5 with associated slickensides, little Silurian at top, at least part of this might be fault breccia.	260	2149
Coarse br. with mixed rock flour br.	Mixed fine, medium and coarse angular fragments in a rock flour matrix, matrix generally fluoritic, purple breccia type mineralization throughout in matrix, several finer breccia zones replaced to purple breccia, zone from 2162-2219 averages 8.67% CaF_2, 1.35% $BaSO_4$ over 57 feet.	84	2233
Purple br.	Fine, medium and coarse sub-angular fragments in a fluoritic rock flour matrix, matrix fairly well replaced with purple fluorite, little disseminated sphalerite and barite throughout, traces of galena, matrix rather well replaced, lower grade possibly due to abundance of coarser fragments, spec. analysis indicates abundant Nb and Y, averages 10.25% CaF_2 and 1.96% $BaSO_4$.	107	2340
Purple br.	Mostly fine, sub-rounded to sub-angular fragments in a fluoritic rock flour matrix, matrix generally well replaced with purple fluorite, bottom 30' very fine, averages 13.83% CaF_2, 2.38% $BaSO_4$, 0.22% Nb, bottom 33' at 16.5% CaF_2, 1.5% $BaSO_4$ and .21% Nb.	62	2402
Low-grade purple br.	Fine, medium and little coarse, angular to sub-angular fragments in a fluoritic, rock flour matrix, matrix fairly well replaced with purple fluorite, fair yttrium on spec. analysis, averages 9.27% CaF_2 and 2.02% $BaSO_4$.	92	2494
Dolomite megabreccia	Principally coarse, monolithologic, little mineralization on fractures and matrix, mineralized intrusive 2525-2531.	51	2545

TOTAL DEPTH

Sheet No. 10 Hole No. FSB-2

Depth Feet	Formation	No.
1712-1735	Limestone, very fine grained, sugary texture, gray to dark gray, fairly abundant interbedded argillaceous streaks, few stylolites, core badly broken in part, entire unit rather dense.	
1735-1752	Limestone as above.	
1752-1767	Limestone, very finely granular, sugary texture, gray to light gray, rather dense, stylolitic, fairly numerous interlaminated wavy argillaceous streaks, unit appears to be rather pure.	
1767-1807	Limestone, principally as before, abundant dark gray interwavy argillaceous or dolomitic streaks, fairly abundant dark gray chert nodules.	
1807-1821	Limestone, light gray, very fine grained, grades to medium crystalline, all rather pure, upper parts somewhat stylolitic with few wavy interlaminated argillaceous streaks, bottom part somewhat vuggy.	
1821-1841	Limestone, very fine grained, sugary, gray and dark gray, fairly abundant dark gray interlaminated streaks, core somewhat broken in part, occasional calc veinlets, few fractures commonly with oxidiation.	
1841-1883	Limestone as before, bottom part well fractured, partly oxidized, little crystalline calcite on fractures.	
1883-1889	Shaly gouge, shale appears to be dipping at about 80°, little igneous appearing breccia at top, core all badly broken, little mud in cavity at bottom.	
1889-1891	Breccia, mostly medium, little coarse, little fine, consists of tightly interlocked gray angular fragments of limestones, some few fragments of shale, very little matrix material, matrix material somewhat fluoritic, this unit contains abundant angular fragments of pink limestone, commonly pyritic, which are clearly Silurian limestones, other fragments resemble Bailey, these fragments are so angular that it is hard to visulize them moving that distance required; the only way it could be accounted for would be to have had brecciation in the Silurian with some mixing, recementing of the breccia and moving of one very large fragment to this stratigraphic position.	

Sheet No. 11 Hole No. FSB-2

Depth Feet	Formation	No.
1891-1935	Breccia, coarse, mostly large +6" fragments of limestones, all angular and tightly interlocked, little matrix material, matrix material is generally calcite, breccia fragments principally resemble Plattin limestones, some lighter gray and finer grained than ordinarly seen in the Plattin, calcite matrix material less than 7% of total, bottom 3 feet coarse crystalline limestone.	
1937-1965	Brecciated limestone, all coarse, little fine and medium, fragments appear to be mostly ordinary Plattin-type, few fragments resemble Kimmswick, all fragments angular, tightly interlocked, very little matrix material, calcite common in matrix, odd speck of fluorite.	
1965-1990	Breccia, coarse, principally as before, few zones fairly fine, calcite matrix more abundant in fine brecciated portions, fragments appear to consist principally of Plattin fragments.	
1990-2010	Breccia as before, possibly more fine zones, few large fragments of coarsely crystalline light gray limestone.	
2010-2027	Breccia, principally as before, seems to be containing increasingly amounts of medium breccia with more abundant matrix material and calcite, bottom part fairly fine, occasional stylolite throughout.	
2027-2046	Breccia, medium and coarse, some fine, principally tightly interlocked angular fragments in a calcite matrix, matrix material minor constituent, probably 10%, fairly abundant traces of purple fluorite in a calcite matrix, fragments are dominantly Plattin.	
2046-2067	Breccia, essentially as before, few very large fragments and few zones rather fine, matrix still principally calcite with traces of clear and light blue fluorite, few blebs and stringers of fluorite scattered throughout, pasty blue material common on fractures, possibly very fine fluorite, calcite matrix in places fairly well replaced with fluorite, bottom 3' very fine breccia.	

Sheet No. 12 Hole No. FSB-2

Depth Feet	Formation	No.
2067-2092	Limestone, difficult to tell if this is coarse breccia or just one unit of limestone, somewhat fractured throughout with a few traces of purple fluorite throughout, generally typical Plattin limestone except for several zones which are coarsely crystalline, also few zones appear to be somewhat argillaceous, grades quickly into below.	
2092-2097.5	Breccia, upper parts fragments of above, little mixing toward bottom, occasional fragment fairly well replaced with purple fluorite, all rather tightly interlocked and very little matrix material, bottom contact rather distinct, appears to be dipping at about 50-60°.	
2097.5-2106.5	Purple breccia, all very fine, sub-rounded to sub-angular fragments in a fluoritic rock flour matrix, this unit typical of previous purple breccias, good disseminated purple fluorite, yellow sphalerite and clear barite scattered throughout, upper contact and bottom contact sharp, some slickensides on bottom contact, appears to be dipping at about a 55-60° angle to core, possibly within a fault plane.	SB-044 9' 11.0 CaF_2, 2.9 $BaSO_4$ (8.69 CaF_2, 1.96 $BaSO_4$)
2106.5-2119	Limestone, principally very fine grained, gray, sugary texture, typical Plattin, few patches brecciated with calcite matrix, some brecciation rather fine.	

Sheet No. 13 Hole No. FSB-2

Depth Feet	Formation	No.
2119-2149	Breccia, mostly coarse, angular, tightly interlocked fragments of Plattin-type limestones, few patches medium with calcite matrix, several patches of fine purple breccia, 5-8% fluorspar, over 2', grades rather quickly into below.	
2149-2162	Breccia, principally fine, sub-angular to sub-rounded fragments in a rock flour matrix, Plattin fragments appear to dominate, generally fairly well interlocked, traces of purple fluorite throughout, estimate 1%.	
2162-2171	Purple breccia, mostly very fine, sub-rounded fragments in a fluoritic rock flour matrix, rather abundant purple fluorite disseminated throughout in matrix material with clear barite and yellow sphalerite, few traces of galena, estimate spar at 12%, some patches rather rich.	SB-045 9' 9.5 CaF_2, 1.8 $BaSO_4$ (8.02 CaF_2, 1.00 $BaSO_4$)
2171-2181	Breccia, fine and medium, little coarse, sub-rounded to sub-angular fragments, limestone, dolomite and quartzite, all rather tightly interlocked in a fluoritic rock flour matrix, good show of purple fluorite throughout in matrix material, estimate 5%, good traces of yellow sphalerite and shows of galena throughout, occasional sub-angular or rounded fragment of rather rich purple fluorite.	SB-046 10' 7.2 CaF_2, 1.3 $BaSO_4$ (6.05 CaF_2, 1.08 $BaSO_4$)
2181-2190	Purple breccia, mostly very fine fragments in a fluoritic rock flour matrix, fairly abundant seams and blebs of deep purple crystalline spar, good shows of yellow sphalerite throughout, fairly abundant barite, estimate spar at 12%.	SB-047 9' 13.5 CaF_2, 1.7 $BaSO_4$ (11.31 CaF_2, 2.44 $BaSO_4$) Spec. 10,000 Ba, 1,000 Nb, 3,000 Y

Assays sampled by Skyline are underlined, by McDonald in parenthesis.
Spectrographic analysis by Skyline, parts per million.

Sheet No. 14

Hole No. FSB-2

Depth Feet	Formation	No.
2190-2197	Breccia, fine and medium angular fragments in a fluoritic rock flour matrix, generally rather tightly interlocked, fair disseminated purple fluorite in matrix material, fair barite, little disseminated sphalerite throughout, estimate spar at 6%.	SB-048 7' 9.5 CaF_2, 1.2 $BaSO_4$ (7.07 CaF_2, 0.96 $BaSO_4$)
2197-2209	Breccia, medium and coarse with some fine, rather tightly interlocked fragments of limestone in black shale in a calcite rick flour fluoritic matrix, few zones and patches clearly purple breccia, purple fluorite scattered throughout replacing calcite matrix and rock flour, fair traces of sphalerite, this unit and those above have rather abundant pyrite, estimate spar at 7%.	SB-049 12' 9.9 CaF_2, 1.1 $BaSO_4$ (7.08 CaF_2, 1.50 $BaSO_4$)
2209-2219	Breccia, tightly interlocked, medium and coarse angular fragments in a rock flour matrix sometimes fluoritic occasional patch of purple breccia, fairly abundant dark gray to black fragments of hard pyritic shale resembling Maquoketa, estimate fluorite at 4%, little fluorite on fractures.	SB-050 10' 7.2 CaF_2, .92 $BaSO_4$ (7.94 CaF_2, .96 $BaSO_4$) Spec. 7,000 Ba, 300 Nb, 1,000 Y
2219-2226	SB-005	SB-005 7' 5.0 CaF_2, .46 $BaSO_4$ (4.28 CaF_2, 1.00 $BaSO_4$)
2219-2233	Breccia, similar to as before, mostly coarse angular fragments of dark shale and limestone, few fragments of igneous appearing material, little fine scattered throughout, trace of purple fluorite in matrix and disseminated in pieces of crystalline limestone, several patches hint at being purple breccia, few fine Silurian fragments e vident, estimate spar at 2%.	

Sheet No. 15 Hole No. FSB-2

Depth Feet	Formation	No.
2233-2243	Breccia, medium, some fine, some coarse, consists principally of tightly interlocked fragments of limestone, fairly abundant fragments of dark gray to black pyritic shale, matrix probably less than 15% of total, commonly well replaced with purple fluorite, little sphalerite throughout, little barite with fluorite, estimate spar at 4%.	SB-051 10' 9.0 CaF_2, .98 $BaSO_4$ (9.17 CaF_2, .72 $BaSO_4$)
2243-2255	Purple breccia, low grade, sub-angular fragments, various limestones, dolomite, some shale, in a fine fluoritic rock flour matrix, matrix fairly well replaced in part with purple fluorite and coarse clear crystals of barite, little disseminated zinc throughout, few traces of galena, unit typical of purple breccias except low in grade, estimate spar at 7%.	SB-052 12' 9.9 CaF_2, 1.9 $BaSO_4$ (9.07 CaF_2, .92 $BaSO_4$)
2255-2267	Purple breccia, mostly fine angular fragments in a fluoritic rock flour matrix, somewhat more matrix material in this unit than above, particularly bottom 4', fairly abundant disseminated dark gray to black specks scattered throughout, unable to identify, fluorite estimated at 10%, bottom 4' possibly 15%, whole unit very typical of purple breccias.	SB-053 12' 11.0 CaF_2, 2.7 $BaSO_4$ (10.0 CaF_2, 1.12 $BaSO_4$) Spec. > 10,000 Ba, 1,500 Nb, 3,000 Y
2267-2275	Breccia, principally fine, little medium, rather tightly interlocked sub-angular fragments of gray and dark gray limestone, few zones very finely comminuted, all somewhat fluoritic with purple fluorite principally in the matrix, few zones rather pyritic, traces of sphalerite throughout, dark gray, very fine grained mineral still evident, possibly very fine, very dark fluorite, estimate fluorite at 5%.	SB-054 8' 10.5 CaF_2, 1.5 $BaSO_4$ (9.29 CaF_2, .32 $BaSO_4$)

Sheet No. 16 Hole No. FSB-2

Depth Feet	Formation	No.
2275-2285	Purple breccia, fine, medium, some coarse fragments as before, somewhat better fluorite throughout, fairly abundant large (+1/8") crystals of clear barite, fairly abundant dark, very fine mineral as cited before, traces of sphalerite and galena, estimate spar throughout at 10%, bottom one foot fairly rich, possibly 25%.	SB-055 10' 13.0 CaF_2, 3.2 $BaSO_4$ (13.20 CaF_2, .88 $BaSO_4$) Spec. >10,000 Ba, 1,500 Nb, 2,000 Y
2285-2295	Purple breccia, essentially as before, fairly abundant large crystals of pale green barite, somewhat more sphalerite, estimate .3% sphalerite, .3% galena, fluorite estimated at 12%, purple breccia so far has all been pyritic.	SB-056 10' 12.5 CaF_2, 4.0 $BaSO_4$ (11.61 CaF_2, 1.88 $BaSO_4$) Spec. >10,000 Ba, 1,500 Nb, 2,000 Y
2295-2300	Purple breccia as above, estimate spar at 9%.	SB-057 5' 9.0 CaF_2, 3.8 $BaSO_4$ (9.01 CaF_2, 2.90 $BaSO_4$) Spec. >10,000 Ba, 2,000 Nb, 5,000 Y
2300-2305	Purple breccia, mostly very fine with fine sub-rounded fragments floating in a very fine rock flour, fluoritic matrix, whole unit deeper purple, contains clear barite, sphalerite, galena as before, fairly pyritic, estimate fluorite at 14%.	SB-058 5' 10.0 CaF_2, 3.3 $BaSO_4$ (10.51 CaF_2, 3.04 $BaSO_4$) Spec. >10,000 Ba, 1,500 Nb, 3,000 Y
2305-2310	Purple breccia, mostly very fine, few medium, sub-rounded to sub-angular fragments in a fluoritic rock flour matrix, fairly abundant disseminated purple and clear fluorite throughout, traces of sphalerite and galena, fairly abundant pale green barite, estimated spar at 11%, appears to be relatively poorly replaced considering the fineness of the rock flour matrix.	SB-059 5' 9.5 CaF_2, 3.8 $BaSO_4$ (8.09 CaF_2, 1.90 $BaSO_4$) Spec. >10,000 Ba, 5,000 Nb, 7,000 Y

Sheet No. 17 Hole No. FSB-2

Depth Feet	Formation	No.
2310-2319	Purple breccia, fine, medium fragments in a fluoritic rock flour matrix, fragments sub-angular to sub-rounded, fair disseminated purple fluorite throughout, some zones rather well replaced, may locally be up to 20% spar, purple fluorite disseminated throughout in the matrix with fairly common pale and clear green barite crystals, traces of galena and sphalerite, estimate spar at 13%.	SB-060 9' 11.0 CaF_2, 3.1 $BaSO_4$ (10.42 CaF_2, 1.38 $BaSO_4$) Spec. >10,000 Ba, 1,500 Nb, 3,000 Y
2319-2325	Purple breccia, principally tightly interlocked, fine fragments in a fine fluoritic rock flour matrix, clearly lower grade then above, few coarse, fragments, little disseminated sphalerite and galena throughout, little clear barite, several fragments appear to be Silurian, this and the units above all contain some disseminated pyrite, fluorite estimated at 7%.	SB-061 6' 7.8 CaF_2, 3.0 $BaSO_4$ (9.08 CaF_2, .20 $BaSO_4$)
2325-2330	Purple breccia, mostly fine with sub-rounded to sub-angular, fine and medium fragments, rock flour matrix fairly well replaced with purple fluorite, fair shows of disseminated sphalerite and galena throughout, little clear barite, estimate fluorite at 13%.	SB-062 5' 12.5 CaF_2, 2.7 $BaSO_4$ (13.20 CaF_2, 1.04 $BaSO_4$)
2330-2340	Purple breccia, fairly abundant medium and fine sub-angular fragments in a fluoritic rock flour matrix, fragments somewhat more abundant in this unit, matrix fairly well replaced with purple fluorite, some zones fairly rich, little disseminated sphalerite and galena and clear barite throughout, estimate fluorite at 8%.	SB-063 10' 9.7 CaF_2, 2.8 $BaSO_4$ (7.09 CaF_2, 1.00 $BaSO_4$)

Sheet No. 19

Hole No. FSB-2

Depth Feet	Formation	No.
2369-2375	Appears to be silty dolomite, possibly very fine micro-breccia, few patches of ordinary breccia scattered throughout, good disseminated fluorite throughout, fairly common dendritic streaks of dark gray to black sulphides, unable to determine whether or not this unit is breccia, this unit is fairly common in the purple breccia zones, was noticed in most of the holes but never this distinct, possibly this represents one very large fragment that has been only partially brecciated as sedimentary features appear to be evident, contains few fragments of rather rich purple breccia scattered throughout, estimate fluorite at 8%.	SB-068 6' 18.5 CaF_2, 1.7 $BaSO_4$ 2,800 (ppm) Nb (18.47 CaF_2, 1.00 $BaSO_4$) Spec. 10,000 Ba, 3,000Nb, 3,000 Y
2375-2385	Very fine grained as above, few more patches of coarser breccia, estimate fluorite at 8%.	SB-069 10' 16.0 CaF_2, 2.0 $BaSO_4$ 2,200 (ppm) Nb (16.08 CaF_2, 1.10 $BaSO_4$) Spec. 10,000 Ba, 3,000 Nb, 3,000 Y
2385-2393	As above, few interbedded zones of coarser breccia, all fairly well replaced with purple fluorite, few patches fairly rich, estimate fluorite at 11%, traces of sphalerite and galena throughout, fairly numerous interlaminated argillaceous streaks commonly pyritic, "these very fine breccia zones appear to be bedded".	SB-070 9' 16.5 CaF_2, 1.8 $BaSO_4$ 2,400 (ppm) Nb (18.27 CaF_2, 1.00 $BaSO_4$) Spec. 10,000 Ba, 2,000 Nb, 3,000 Y
2393-2402	Interbedded (?) fine breccia as above and tightly interlocked fragments of coarse breccia, fair fluorite replacement of matrix material throughout, coarse and fine breccia again, very strong impression of being bedded, coarse fragments fairly varied, few shale fragments, some rather distinct appearing Silurian fragments (?), pyrite throughout, estimate spar at 8%.	SB-071 9' 15.0 CaF_2, 1.8 $BaSO_4$ 1,300 (ppm) Nb (14.80 CaF_2, 1.50 $BaSO_4$) Spec. 10,000 Ba, 1,000 Nb, 3,000 Y

Sheet No. 20 Hole No. FSB-2

Depth Feet	Formation	No.
2402-2415	Breccia, few zones fine breccia as before, mostly consists of medium, rather tightly interlocked, sub-angular to sub-rounded fragments in a fluoritic rock flour matrix, few zones fairly well replaced but generally fairly low in CaF_2, few zones pyritic, distinct pink fragments throughout, possibly Silurian, few traces of sphalerite and galena, little barite, estimate fluorite at 7%.	SB-072 13' 9.0 CaF_2, 2.70 $BaSO_4$ (8.09 CaF_2, 2.70 $BaSO_4$) Spec. > 10,000 Ba, 500 Nb, 2,000 Y
2415-2425	Breccia as above, fragments fine, medium and little coarse, very little matrix material throughout, matrix commonly fairly well replaced with fluorite, fair shows of clear green barite, little sphalerite and galena, several zones contain very small dark black sulphides, unable to identify, possibly galena, fairly abundant pyrite throughout, estimate fluorite at 6%.	SB-073 10' 8.2 CaF_2, 3.0 $BaSO_4$ (8.06 CaF_2, 2.80 $BaSO_4$)
2425-2435	Breccia, fine and medium, little coarse, sub-angular to sub-rounded fragments in a fluoritic rock flour matrix, fragments fairly tightly interlocked, matrix material approximately 25% of total, fair traces of sphalerite and galena throughout, fairly pyritic throughout, few coarse blebs of clear barite, fluorite principally purple and disseminated in matrix, few fairly rich patches, estimate fluorite at 6%.	SB-074 10' 8.6 CaF_2, 2.2 $BaSO_4$ (11.31 CaF_2, .80 $BaSO_4$) Spec. > 10,000 Ba, 500 Nb, 1,000 Y
2435-2445	Breccia, fine and medium, sub-rounded to sub-angular fragments in a fluoritic rock flour matrix, matrix material more abundant than above, somewhat more fluoritic, contains fair traces of galena and sphalerite throughout, sphalerite principally as coarse crystals, few large crystals of clear to pale green barite, fluorite disseminated in matrix and in blebs and small patches, pyrite common throughout, sometimes in fairly rich patches, would consider this unit low-grade purple breccia, estimate fluorite at 9%.	SB-075 10' 10.0 CaF_2, 1.7 $BaSO_4$ (11.24 CaF_2, .94 $BaSO_4$) Spec. > 10,000 Ba, 700 Nb, 2,000 Y

Sheet No. 21 Hole No. FSB-2

Depth Feet	Formation	No.
2445-2455	Breccia, principally fine, little medium sub-rounded fragments, several large coarse fragments in a fluoritic, purple, rock flour matrix, matrix material probably 40-50% of total, some coarse disseminated sphalerite throughout, few coarse crystals of barite, finely disseminated galena and pyrite throughout, in this unit and those above there are odd specks and traces of very fine, dark gray to black sulphide, ~~that~~ possibly galena, estimate fluorite at 11% in this unit.	SB-076 10' 9.0 CaF_2, 3.3 $BaSO_4$ (9.50 CaF_2, .32 $BaSO_4$)
2455-2461	Breccia, mostly fine, little medium, little coarse, sub-rounded and sub-angular fragments in a gray fluoritic rock flour matrix, several zones rather well replaced and form purple matrix, little disseminated sphalerite and glaena throughout, fairly pyritic, estimate spar at 7%.	SB-077 6' 9.0 CaF_2, 2.5 $BaSO_4$ (8.83 CaF_2, .90 $BaSO_4$) Spec. > 10,000 Ba, 500 Nb, 1,500 Y
2461-2471	Purple breccia, fairly low-grade, mostly fine, sub-rounded to sub-angular fragments in a fluoritic rock flour matrix, few coarse fragments, some coarse fragments refractured with fluorite veinlets, fair shows of zinc throughout, possibly .3%, traces of disseminated galena, all rather pyritic, fluorite partly rather rich, estimate entire zone at 11%.	SB-078 10' 9.5 CaF_2, 3.9 $BaSO_4$ (10.10 CaF_2, 1.10 $BaSO_4$) Spec. > 10,000 Ba, 500 Nb, 2,000 Y
2471-2476	Low-grade, purple breccia, principally as before, somewhat less fluorite, fair disseminated, coarse crystals of yellow sphalerite, traces of galena throughout, estimate spar at 8%.	SB-079 5' 9.0 CaF_2, 3.4 $BaSO_4$ (9.08 CaF_2, .10 $BaSO_4$)
2476-2483	Purple breccia, mostly fine, sub-rounded, sub-angular fragments in a rather fluoritic matrix, matrix fairly well replaced throughout, fairly abundant coarse barite crystals, zinc possibly as much as .3%, traces of galena, estimate barite at 4%, fluorite at 14%.	SB-080 7' 10.0 CaF_2, 4.2 $BaSO_4$ (9.05 CaF_2, .20 $BaSO_4$)

Sheet No. 22 Hole No. FSB-2

Depth Feet	Formation	No.
2483-2494	Low-grade, purple breccia, fine, medium, little coarse, angular to sub-rounded fragments in a fluoritic rock flour matrix, whole unit appears more dolomitic than before, few fragments of quartzitic sandstone, matrix fairly well replaced, some zones quite rich, good disseminated sphalerite, barite throughout, traces of very fine galena and pyrite throughout, some dark black mineral, possibly very dark fluorite, estimate spar at 9%. Note: Bottom of this zone probably represents the bottom of the mineralized zone.	SB-081 11' 9.0 CaF_2, 3.1 $BaSO_4$ (9.02 CaF_2, .36 $BaSO_4$) Spec. > 10,000 Ba, 300 Nb, 1,500 Y
2494-2506	Dolomitic, mega-breccia, various sized dolomitic zones separated by zones of fine breccia with purple fluoritic matrix, all rather well fractured, larger pieces resemble crackle breccias, fluoritic zones contain sphalerite and barite as above, little galena throughout in finer breccia zones, unit consists principally of very fine grained, light gray dolomite, bottom one foot well replaced with purple fluorite.	SB-082 12' 4.5 CaF_2, 1.70 $BaSO_4$ (5.00 CaF_2, 1.00 $BaSO_4$)
2506-2525	Dolomitic, mega-breccia, principally as before, somewhat more darker dolomite, some of which bedding is readily apparent, few fractures nearly parallel to core, little white pasty barite in some of the finer brecciated zones.	
2525-2531	Intrusive dike, fine grained, somewhat porphyritic in appearance with numerous white blebs, possibly calcite which has been altered, few green minerals scattered throughout, entire thing well fluoritized and very pyritic, possible traces of chalcopyrite, estimate fluorite at 10%.	SB-083 6' 16.0 CaF_2, .42 $BaSO_4$ (17.67 CaF_2, 1.90 $BaSO_4$) Spec. 2,000 Ba, 700 Nb, 500 Y
2531-2545	Dolomitic, mega-breccia, dark brownish gray, very fine grained, crackle brecciated throughout with abundant thin veinlets of purple fluorite, all rather well fractured. TOTAL DEPTH	

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OME-7 (FSB-2)
Re: Assay Results - Split Core

Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
SB 044	8.69	17.70	1.96	23.82
SB 045	8.02	13.84	1.00	20.62
SB 046	6.05	13.55	1.08	21.87
SB 047	11.31	16.60	2.44	21.99
SB 048	7.07	16.08	0.96	19.88
SB 049	7.08	20.72	1.50	23.44
SB 050	7.94	23.62	0.96	25.42
SB 005	4.28	26.96	1.00	25.03
SB 051	9.17	22.64	0.72	24.50
SB 052	9.07	19.10	0.92	25.40
SB 053	10.00	19.28	1.12	25.04
SB 054	9.29	23.00	0.32	25.48
SB 055	13.20	21.00	0.88	24.37
SB 056	11.61	19.62	1.88	22.09
SB 057	9.01	17.30	2.90	23.93
SB 058	10.51	16.36	3.04	23.19
SB 059	8.09	18.84	1.90	22.48
SB 060	10.42	16.66	1.38	24.63
SB 061	9.08	18.06	0.20	25.25
SB 062	13.20	14.46	1.04	23.93
SB 063	7.09	18.00	1.00	25.40

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Sample #	CaF_2	SiO_2	$BaSO_4$	T. Ca
SB 064	19.66	19.22	1.78	24.78
SB 065	9.05	14.32	5.08	26.51
SB 066	8.09	19.20	2.90	21.72
SB 067	10.72	19.78	1.00	21.79
SB 068	18.47	24.00	1.00	25.50
SB 069	16.08	28.90	1.10	24.30
SB 070	18.27	28.50	1.00	21.72
SB 071	14.80	26.90	1.50	22.31
SB 072	8.09	25.50	2.70	22.90
SB 073	8.06	27.10	2.80	23.93
SB 074	11.31	25.28	0.80	24.28
SB 075	11.24	25.10	0.94	23.56
SB 076	9.50	25.80	0.82	23.41
SB 077	8.83	25.10	0.90	23.56
SB 078	10.10	25.80	1.10	23.19
SB 079	9.08	27.18	0.10	22.97
SB 080	9.05	26.18	0.20	23.27
SB 081	9.02	25.74	0.36	22.00
SB 082	5.00	7.00	1.00	21.72
SB 083	17.67	10.16	1.90	21.78

Respectfully submitted,

V.C. McDonald, Chemist

SKYLINE LABS, INC.
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REPORT OF ANALYSIS

Job No. M-2304
January 10, 1974

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

41 Pulp Samples

Item	Sample No.	CaF_2 (%)	$BaSO_4$ (%)	Pb (ppm)	Zn (ppm)	Nb (ppm)
1.	SB-005	5.0	.46	120	20	*
2.	044	11.	2.9	520	500	*
3.	045	9.5	1.8	360	290	*
4.	046	7.2	1.3	940	280	*
5.	047	13.5	1.7	320	500	*
6.	048	9.5	1.2	200	180	*
7.	049	9.9	1.1	180	40	*
8.	050	7.2	.92	40	20	*
9.	051	9.0	.98	80	30	*
10.	052	9.9	1.9	480	130	*
11.	053	11.	2.7	380	290	*
12.	054	10.5	1.5	420	230	*
13.	055	13.	3.2	600	410	*
14.	056	12.5	4.0	740	500	*
15.	057	9.0	3.8	500	750	*
16.	058	10.	3.3	460	380	*
17.	059	9.5	3.8	360	440	*
18.	060	11.	3.1	420	430	*
19.	061	7.8	3.0	540	560	*
20.	06~~2~~3A	9.7	2.8	520	370	*
21.	06~~2~~4B	12.5	2.7	440	360	*
22.	064	18.5	2.5	440	230	2,800
23.	065	9.9	3.8	620	680	2,000
24.	066	8.6	4.2	720	870	2,700
25.	SB-067	9.9	2.6	680	600	1,500

Item	Sample No.	CaF_2 (%)	$BaSO_4$ (%)	Pb (ppm)	Zn (ppm)	Nb (ppm)
26.	SB-068	18.5	1.7	240	350	2,800
27.	069	16.	2.0	340	320	2,200
28.	070	16.5	1.8	300	270	2,400
29.	071	15.	1.8	280	340	1,300
30.	072	9.0	1.9	280	300	*
31.	073	8.2	3.0	580	600	*
32.	074 A	8.6	2.2	360	370	*
33.	075 B	10.	1.7	300	400	*
34.	076	9.0	3.3	560	480	*
35.	077	9.0	2.5	460	530	*
36.	078	9.5	3.9	680	750	*
37.	079	9.0	3.4	600	800	*
38.	080	10.	4.2	680	960	*
39.	081	9.0	3.1	720	180	*
40.	082	4.5	1.7	1,150	45	*
41.	SB-083	16.	.42	40	80	*

*Analysis not requested

Edwin V. Post
for Charles E. Thompson
Chief Chemist

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REPORT OF ANALYSIS

Job No. M-2304-A
March 24, 1975

Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 40 Pulp Samples

Item	Sample No.	Be (ppm)	Nb (ppm)	Item	Sample No.	Be (ppm)	Nb (ppm)
1.	SB-044	1,550	2,100	21.	SB-064	510	*
2.	045	200	750	22.	065	460	*
3.	046	300	300	23.	066	590	*
4.	047	580	500	24.	067	185	*
5.	048	105	600	25.	068	600	*
6.	049	85	600	26.	069	630	*
7.	050	65	700	27.	070	590	*
8.	051	95	600	28.	071	520	*
9.	052	205	1,250	29.	072	330	700
10.	053	190	2,150	30.	073	140	650
11.	054	250	600	31.	074A	85	550
12.	055	230	1,400	32.	074B	310	400
13.	056	275	1,550	33.	076	210	875
14.	057	340	2,150	34.	077	55	600
15.	058	340	2,800	35.	078	300	1,050
16.	059	380	3,000	36.	079	310	850
17.	060	560	2,400	37.	080	290	800
18.	061	450	1,300	38.	081	185	850
19.	062A	450	1,750	39.	082	180	400
20.	SB-062B	980	2,000	40.	SB-083	80	500

* Analysis not requested.

for Edwin U. Post
Charles E. Thompson
Chief Chemist

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REPORT OF SPECTROGRAPHIC ANALYSIS

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Job No. M-2304
January 10, 1974

Values reported in parts per million except where noted otherwise, to the nearest number in the series 1, 1.5, 2, 3, 5, 7 etc.

	Sample Number					
Element	SB-047	SB-050	SB-053	SB-055	SB-056	SB-057
Fe	5%	3%	5%	5%	5%	5%
Ca	>20%	>20%	>20%	>20%	>20%	>20%
Mg	5%	2%	5%	5%	5%	7%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	30	20	20	20	20	20
Ba	10,000	7,000	>10,000	>10,000	>10,000	>10,000
Be	700	30	100	150	200	200
Bi	10	<10	10	<10	10	10
Cd	<50	<50	<50	<50	<50	<50
Co	5	<5	<5	<5	<5	<5
Cr	100	70	50	50	50	50
Cu	10	10	10	10	10	10
Ga	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20
La	200	100	100	50	100	150
Mn	1,000	700	1,000	1,000	1,000	1,500
Mo	3	<2	<2	<2	<2	<2
Nb	1,000	300	1,500	1,500	1,500	2,000
Ni	15	10	5	5	5	5
Pb	200	30	500	500	1,000	300
Sb	<100	<100	<100	<100	<100	<100
Sc	100	30	70	50	70	100
Sn	<10	<10	<10	<10	<10	<10
Sr	>10,000	>10,000	>10,000	>10,000	10,000	>10,000
Ti	5,000	7,000	10,000	7,000	7,000	7,000
V	200	50	100	100	100	150
W	<50	<50	<50	<50	<50	<50
Y	3,000	1,000	3,000	2,000	2,000	5,000
Zn	500	<200	500	500	500	<200
Zr	150	150	150	100	100	200

Element	Sample Number SB-058	SB-059	SB-060	SB-071	SB-072	SB-074A
Fe	5%	5%	5%	5%	5%	3%
Ca	>20%	>20%	>20%	>20%	>20%	>20%
Mg	7%	7%	5%	5%	5%	5%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	20	20	20	70	50	20
Ba	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000
Be	200	200	500	500	300	50
Bi	15	15	10	10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5
Cr	50	50	50	100	70	50
Cu	10	20	10	15	10	10
Ga	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20
La	200	200	200	150	20	50
Mn	1,500	1,500	1,000	1,000	700	700
Mo	<2	2	2	2	<2	3
Nb	1,500	5,000	1,500	1,000	500	500
Ni	10	15	10	20	10	7
Pb	300	200	300	200	200	200
Sb	<100	<100	<100	<100	<100	<100
Sc	100	150	100	70	50	50
Sn	<10	<10	<10	<10	<10	<10
Sr	10,000	10,000	7,000	7,000	3,000	5,000
Ti	7,000	10,000	10,000	5,000	7,000	7,000
V	200	200	150	100	150	50
W	50	70	<50	<50	<50	<50
Y	3,000	7,000	3,000	3,000	2,000	1,000
Zn	<200	<200	<200	200	<200	<200
Zr	200	150	100	200	150	150

Element	Sample Number SB-075B	SB-077	SB-078	SB-081	SB-083	SB-064
Fe	3%	3%	3%	5%	15%	3%
Ca	>20%	>20%	>20%	>20%	20%	>20%
Mg	3%	3%	2%	3%	5%	2%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	30	20	20	20	100	30
Ba	>10,000	>10,000	>10,000	>10,000	2,000	>10,000
Be	200	20	200	200	100	2,000
Bi	<10	<10	<10	<10	<10	10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	70	<5
Cr	50	50	50	100	200	30
Cu	10	10	10	10	50	7
Ga	<10	<10	<10	<10	10	<10
Ge	<20	<20	<20	<20	<20	<20
La	50	50	50	50	200	100
Mn	700	700	700	700	1,500	1,000
Mo	<2	<2	<2	<2	2	<2
Nb	700	500	500	300	700	1,500
Ni	10	5	5	10	50	10
Pb	200	500	700	1,000	20	500
Sb	<100	<100	<100	<100	<100	<100
Sc	30	50	50	50	20	100
Sn	<10	<10	<10	<10	<10	<10
Sr	3,000	7,000	3,000	3,000	2,000	2,000
Ti	7,000	7,000	7,000	5,000	10,000	5,000
V	100	50	50	70	150	50
W	<50	<50	<50	<50	<50	<50
Y	2,000	1,500	2,000	1,500	500	2,000
Zn	<200	<200	200	<200	<200	<200
Zr	150	150	150	150	100	150

Element	Sample Number SB-065	SB-066	SB-067	SB-068	SB-069	SB-070
Fe	2%	5%	3%	5%	5%	7%
Ca	>20%	20%	>20%	>20%	>20%	>20%
Mg	2%	1.5%	1.5%	1.5%	2%	2%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	20	20	30	100	100	100
Ba	>10,000	>10,000	>10,000	10,000	10,000	10,000
Be	500	700	200	500	500	500
Bi	10	10	<10	15	10	10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	5	5	5
Cr	20	30	50	70	70	70
Cu	5	10	7	15	15	20
Ga	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20
La	100	100	20	100	100	100
Mn	1,000	1,500	1,000	1,000	1,000	1,000
Mo	<2	<2	<2	3	5	2
Nb	1,500	2,000	1,000	3,000	3,000	2,000
Ni	5	10	10	30	20	20
Pb	700	1,000	500	300	200	300
Sb	<100	<100	<100	<100	<100	<100
Sc	100	100	70	150	100	100
Sn	<10	<10	<10	<10	<10	<10
Sr	1,500	2,000	2,000	2,000	3,000	3,000
Ti	5,000	7,000	5,000	5,000	5,000	5,000
V	100	150	100	200	200	150
W	50	<50	<50	70	70	<50
Y	2,000	2,000	2,000	3,000	3,000	3,000
Zn	500	500	500	200	<200	<200
Zr	150	150	100	200	200	200

per Edwin V. Post
Charles E. Thompson
Chief Chemist

Box 447

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

OFFICIAL COPY
O. M. E.
RECEIVED
JUL 2 1973
INITIALS CODE
HR

June 26, 1973

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U.S. Geological Survey
Matomic Building
Room 865
1717 H. Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are copies of the Monthly Voucher and Operator's Monthly Report for May, 1973. I would appreciate it if you would let me know of any errors or disallowances.

Sincerely yours,

Joseph A. Porter

JAP:kt
Encl.

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OFFICIAL COPY
O. M. E.
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HK

OPERATOR'S MONTHLY VOUCHER

For Month of May, 1973

Operator's Name: Hicks Dome Account c/o Gilbert Kerlin, Esq.

Address: Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-6873

Contract 14-08-0001 2306

Contract Amount $ 95,450

Gov't. Participation % 50 $47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	51	637.50	-	-	51	637.50
Rotary Drilling	-	-	816	3,182.40	-	-	816	3,182.40
Cored NX 0-500	-	-	1092	4,804.80	-	-	1,092	4,804.80
500-1000	-	-	840	4,032.00	-	-	840	4,032.00
1000-1500	-	-	230	1,242.00	-	-	230	1,242.00
Cored BX 0-500	-	-	92	386.40	-	-	92	386.40
500-1000	-	-	1160	5,336.00	-	-	1,160	5,336.00
1000-1500	421'	1,936.60	1770	8,951.40	421	1,936.60	1,770	8,951.40
1500-2000	500'	2,600.00	2000	11,750.00	500	2,600.00	2,000	11,750.00
2000-2500	200'	1,220.00	1103	7,811.90	200	1,220.00	1,103	7,811.90
Reaming	-	-	1197	3,591.00	-	-	1,197	3,591.00
Water supply, mons.	1	300.00	7.7	2,310.00	1	300.00	7.7	2,310.00
Standby time, hrs.	8	112.00	24	336.00	8	112.00	24	336.00
Drilling mud, bags	-	-	114	419.71	-	-	114	419.71
Caustic Soda	-	-	1	10.85	-	-	1	10.85
Quebracho	-	-	1	20.78	-	-	1	20.78
Freight & Handling	-	-	21	22.59	-	-	21	22.59
BX Casing lost	-	-	267	667.60	-	-	267	667.60
NX Casing lost	42'	157.00	220	780.00	45 1/	157.00	223	780.00
Category (2)								
Geologist-Supervisor	.75	937.50	7.75	9,687.50	2/	2/	7	8,750.00
Sampler	1	104.79	6	563.77	1	104.79	6	563.77
Category (3)								
Road Rock, tons	-	-	199.9	327.73	-	-	199.9	327.73
Core Boxes	125	156.25		1,136.25	125 3/	156.25	909	1,136.25
Sample Bags	26	7.80	107	34.90		-	81	27.10
Category (7)								
Office Expense	1	100.00	8	795.35	1	100.00	8	795.35
Trans. of samples	-	-	54	31.66	-	-	54	31.66
Prepare, assay CaF_2	-	-	108	351.00	-	-	108	351.00
Other Analysis	-	-	27	35.50	-	-	27	35.50
Spectro. analysis	-	-	32	301.00	-	-	32	301.00
TOTALS		$ 7,631.94		$ 69,557.59		$ 6,686.64		$ 68,612.29

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 21, '73 *Payee Hicks Dome Account
Joseph A. Porter

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kirkham Chief, OME ~~Field Officer~~ 7/5/73 Date

(63) 14X0804

Approved for: $ 3,343.32
(SUBJECT TO AUDIT)

Signature BMT

Date JUL 11 1973 Vou. No. 04048A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)

1. 157' of 4" pipe taken as NX casing.
2. Billed for core boxes in inventory at end of job. These will be charged as used. 125 boxes billed here.
3. Reconciliation of all bit charges to follow.

Category (2)

Geologist-Supervisor at 3/4 time.

Category (7)

Two part time secretarial helpers used during month. One helping with drafting. Total charged $100.00.

Charges for assay work to follow.

FOR GOVERNMENT USE

REMARKS

1/ 4" pipe substituted for casing. Credit 45 feet NX casing at $3.50/ft. for 157 feet of pipe as follows: $\frac{157}{3.50} = 45$

2/ Disallow claim ($937.50) because all elements under Category (2)(a) of Article 6 of the contract are maximums. Contract allows 7 months at $1,250/month for a total of $8,750 for Supervisor-Engineer.

3/ Disallow claim for $7.80 for 25 bags because receipt not furnished. May be reclaimed upon submittal of receipt.

RECEIVED
U.S. GEOLOGICAL SURVEY
JUL 6 10 02 AM '73
BUDGET & FINANCE
6 8 2 6 3 3

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Vouch

OPERATOR'S MONTHLY REPORT

May 1973

Hole CME-4 was drilled from 1079 feet to 2200 feet, its total depth, during May. This essentially completed the independent contract portion of the exploration contract. Some assay work remains to be done.

This hole also is considered a partial success. Continuous brecciation was encountered from 1850 feet to the bottom of the hole. Mineralized "purple breccia" was intersected from 1978 to 2056 for a total of 86 feet. The zone correlates very well with the intersections in nearby holes. As with previous holes, grade is estimated to be low, approximately 11% CaF_2. Assays are pending.

A dolomitic "purple breccia" zone was encountered from 2126 to 2155, a total of 29 feet. This zone was also low in grade. It is estimated at 9% CaF_2. It differs from the zone above in that it contains a fair showing of galena.

Attached is a summary log which shows the general geology encountered in the hole. Also included here is a copy of the geologist's log in detail and a section showing the relationship of the intersections to those in the other holes.

Respectfully submitted,

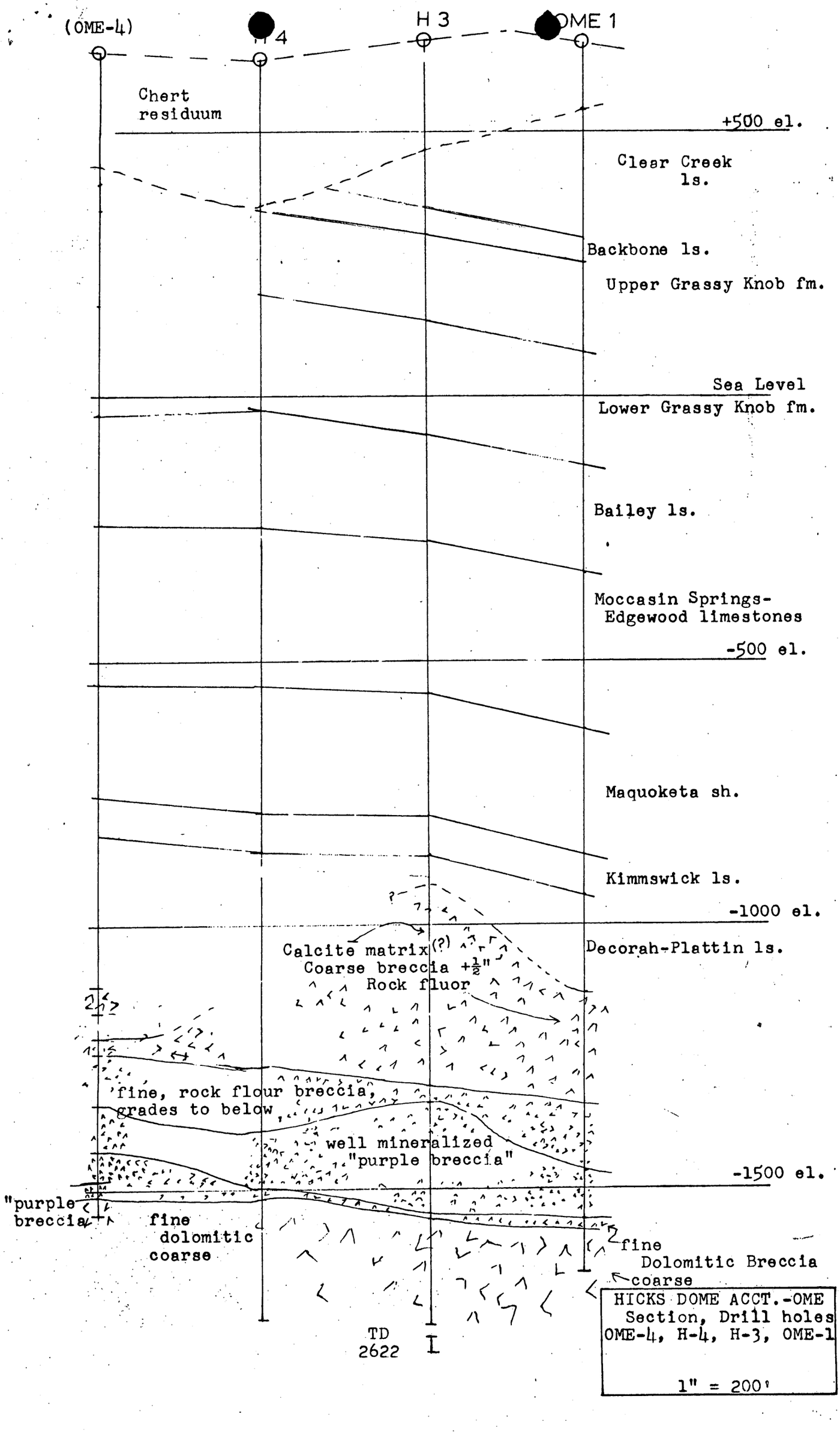
Joseph A. Porter, Geologist
P.O. Box 447
Rosiclare, IL 62982

SUMMARY LOG
OME-4

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Bedded chert residuum	166	166
Clear Creek ls.	Generally fine grained, light brownish gray, locally abundant irregular cream colored nodules	75	241
Backbone ls.	Crystalline, light gray	39	280.5
Upper Grassy Knob	Crystalline, fine grained, gray and dark brownish gray, similar to Clear Creek, contains more chert, more argillaceous material	185	465
Lower Grassy Knob	Very cherty, light gray to white and dark gray chert nodules, average 50% chert throughout, some as much as 70%	207	672
Bailey ls.	Very fine grained, very silty and siliceous, abundant interlaminated argillaceous streaks	216	888.5
SILURIAN Moccasin Springs ls.	Gray to light gray, generally fine grained, brick red and light green streaks, somewhat pyritic throughout	95	983
St. Clair - Sexton Creek ls.	Fine grained, very dense, abundant brick red and pink streaks throughout, pink portions very pyritic	94	1077
Edgewood ls.	Gray to dark gray, medium and fine, fairly abundant interlaminated argillaceous streaks throughout, cherty throughout as gray and dark gray chert nodules	96	1173

FORMATION	DESCRIPTION	THICK.	DEPTH
ORDOVICIAN			
Maquoketa sh.	Dark gray, some black, fairly well laminated throughout, generally fairly hard and brittle, bottom part somewhat sandy, slightly pyritic throughout	217	1390
Kimmswick ls.	Medium and coarsely crystalline, gray and brownish gray, very stylolitic, very pure	80	1470
Decorah-Plattin	Very fine grained, gray to brownish gray, regularly spaced interlaminated argillaceous streaks, generally quite pure	297	1767
Brecciated ls.	Tightly interlocked fragments of Plattin, little rock flour matrix, bottom portions with occassional blebs of purple fluorite and pale green barite	35	1802
Limestone	Typical Plattin, becomes brecciated toward bottom	48	1850
Breccia	Fine, medium and coarse, all tightly interlocked, very little matrix material, traces of fluorite and pyrite	28	1878
Breccia	Gray rock flour, generally very fine with rock flour matrix, seems to be better spar toward bottom, fairly abundant disseminated pyrite throughout, occassional speck of galena, little disseminated yellow sphalerite, particularly with richer fluoritic portions, this zone approaching low grade purple breccia	50	1928

FORMATION	DESCRIPTION	THICK.	DEPTH
Mixed breccia	Low grade, purple breccia and gray rock flour breccia, all very fine, few streaks with fairly rich purple spar, contains some disseminated sphalerite and traces of galena throughout plus clear to pale green barite which is typical of purple breccias, spar probably averages about 5-6%, tends to be richer toward bottom	50	1978
Purple breccia	Mostly fine, angular fragments in a purple fluoritic matrix with fairly abundant stringers and blebs and patches of rich purple fluorite, entire zone estimated at 12%, scattered sphalerite throughout, estimate .2% with rather abundant, clear pale barite crystals scattered throughout as is typical of purple breccia zone, tends to become sandy and dolomitic toward bottom.	81	2059
Brecciated dolomite	Mixed, fine, medium and coarse fragments, dolomites unlike gray quartzite, matrix generally dolomitic and sandy, some purple fluorite scattered throughout, somewhat richer at the bottom	67	2126
Dolomitic purple breccia	Rather low grade, zone estimated at 9%, breccia generally fine with fairly abundant quartzite, some disseminated zinc throughout, fairly abundant disseminated galena throughout, parts rather soft and vuggy, clear barite crystals fairly abundant, odd speck of chalcopyrite seen toward bottom.	29	2155
Brecciated dolomite and quartzite	Fine, medium and coarse angular fragments in a dolomitic, sandy matrix, slightly fluoritic throughout, little galena and sphalerite.	45	2200
	TOTAL DEPTH		


(OME-4)
H 4
H 3
OME 1
Chert residuum
+500 el.
Clear Creek ls.
Backbone ls.
Upper Grassy Knob fm.
Sea Level
Lower Grassy Knob fm.
Bailey ls.
Moccasin Springs-Edgewood limestones
-500 el.
Maquoketa sh.
Kimmswick ls.
-1000 el.
Decorah-Plattin ls.
Calcite matrix (?)
Coarse breccia +½"
Rock fluor
fine, rock flour breccia, grades to below
well mineralized "purple breccia"
-1500 el.
"purple breccia"
fine
dolomitic
coarse
fine
Dolomitic Breccia
coarse
TD 2622
HICKS DOME ACCT.-OME
Section, Drill holes
OME-4, H-4, H-3, OME-1
1" = 200'

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

INVOICE NO. 05116815

INVOICE DATE 6-15-73

DATE SHIPPED

SHIPPED VIA

SHIPPED TO
Hicks Dome, Illinois

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,121' core drilling at Hicks Dome, Illinois as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST	UNIT	TOTAL COST
	H-6	BX	1079.	1500.		421.	4.60		$1,936.60
		BX	1500.	2000.		500.	5.20		2,600.00
		BX	2000.	2200.		200.	6.10		1,220.00
									$5,756.60
	CORE BOXES USED								
		341 Cardboard Core Boxes @ $1.25/ea.							426.25
	CASING LOST OR REQUESTED IN PLACE								
	H-6	157 feet 4" Pipe @ $1.00/ft.							157.00
		220' BX W. L. Rods and Casing Cutter lost in cavity							N/C
	FURNISHING WATER								
		April 26 through May 25, 1973							300.00
	DIAMOND BIT LOSS	IN EXCESS OF $1.00/FT.							
		April 26 through May 25, 1973.							
		Attached detail listing shipments, returns, and foreman's inventory.							301.00
		1 Well Pump and Wiring per agreement							500.00

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4134 4/67
(P133A)

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Kerlin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05116815

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	SALES CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	SURVEY TIME							
		H-6	May 29 5 hours May 30 3 hours					
			8 hours @ $16.00/hr.					$ 128.00
								$7,568.85

CERTIFIED TRUE COPY

INVOICE (CONTINUATION)

FORM P138A

June 2, 1973

Mr. Roy A. Stacey
Elizabethtown
Illinois

Dear Roy:

Enclosed is a check for $93.21 for wages earned during the month of May, 1973. Also enclosed is a check for $7.00 for welding. Amount due was calculated as follows:

44 hrs. x $2.25 =		$99.00
Income Tax	$0.00	
State Tax	0.00	
Social Security	5.79	- 5.79
		$93.21

Thank you.

Sincerely,

Joseph A. Porter, Geologist
P.O. Box 447
Rosiclare, IL 62982

JAP/kt
Encl. 2

CERTIFIED TRUE COPY

Joseph A. Porter

Amount Earned $ 99.00
Employee S.S. 5.79
104.79

RECORD OF TIME WORKED

Name, S. S. No., Dependents 2. Month May

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
5-4-73			8 hrs		disc hauling cars to Louisiana
5-5-73			6 hrs		Sanding & disking
5-8-73			2 hrs		cars to house
5-10-73			4 hrs		cars to Louisiana
5-18-73			4 hrs		" " "
5-19-73			2 hrs		cars to house
5-21-73			2 hrs		" " "
5-23-73			4 hrs		" " Louisiana
5-26-73			4 hrs		" " "
5-29-73			8 hrs		Graded road - work at Louisiana
		Copy made for case files			
			44 hrs.		

June 1, 1973

Mrs. Vera Bishop
Elizabethtown, Illinois

Dear Vera:

Enclosed find a check in the amount of $50.07, representing wages earned during the month of May, 1973.

31 hrs.	x	$1.80	=	$55.80
S. S.	$3.26			
State I. T.	1.37			
Fed. I. T.	1.10			5.73
				$50.07

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

CERTIFIED TRUE C

55.80
55 3.26
159.06

Change one 100%

RECORD OF TIME WORKED

Vera Bishop 178-18-8537 0 — Name, S. S. No., Dependents

May, 1973 — Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Mon. 5/14	11:30	3:30	4		
Tues 5/15	11:30	3:30	4		
Wed 5/16	11/30	3:30	4		
Thurs 5/17	11:30	3:30	4		
Mon 5/21	11:45	3:15	3 ½		
Tues 5/22	11:30	3:30	4		
Thurs. 5/24	11:45	3:15	3 ½		
Tues 5/29	11:30	3:30	4		
			31		

June 1, 1973

Mrs. Kay Thornberry
Rosiclare
Illinois

Dear Kay:

Enclosed find a check in the amount of $84.87 representing payment of wages for May 16-31, 1973. Also included is $12.00 for mileage.

43 hrs. x $1.80 =		$ 77.40
S.S.	$4.53	
I.T.	0.00	
S.T.	0.00	- 4.53
		$ 72.87
120 mi. x $0.10 =		12.00
	Total	$ 84.87

CERTIFIED TRUE COPY

Sincerely,

Joseph A. Porter
Rosiclare, IL

~~84.00~~

Earned 77.40
Employee SS 4.53
Total 81.93

Charge OME - 100%

RECORD OF TIME WORKED

Kay Thornberry 330-44-2095 — Name, S. S. No., Dependents

May 1-15, 1973 — Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
5-10	8:30	4:00	7		B & HDA
5-11	8:30	4:00	7		B
5-14	8:30	4:00	7		B
5-15	8:30	3:00	6		B
				May 16-31, 1973	
5-21	8:30	4:30	7½	Trip to Marion & Cable site	HDA
5-22	8:30	3:30	6½		HDA
5-24	8:30	3:30	6½		HDA + B
5-25	8:30	4:30	7½		HDA
5-29	8:30	4:30	7½		HDA
5-30	8:30	4:30	7½		HDA

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Branch of Budget and Finance
Washington, D. C. 20242

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee:

Hicks Dome Account
c/o Gilbert Kerlin, Esq.
Shearman and Sterling, 53 Wall St.
New York, NY 10005

Amount Claimed:	Differences (Explained Below)	Amount Approved
$ 7,631.94	$ 945.30	$6,686.64 $3,343.32 (Govt Part) 50%
Bu. Voucher No.	Payee's Invoice No.	Period
	Docket #6873 Contract #2306	May 1973

EXPLANATION

Category (2) Personal Services

Supervisor - Geologist			
Claimed	3/4 month @ $1,250.00	937.50	
Allowed	maximum allowable for this item already claimed. All elements under Category (2) (a) of Article 6 of the contract are maximums	-0-	937.50

Category (3) Operating Materials and Supplies

Sample bags			
Claimed	26 bags @ .30	7.80	
Allowed	- receipt not furnished. May be replaimed upon submittal of receipt.	-0-	7.80
			945.30

Any reclaim for items deducted must be included as a separate item on subsequant monthly voucher and supported by the original of this statement.

Branch of Budget and Finance

BMF

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER

For Month of May, 1973

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $ 95,450
Gov't. Participation % 50 $47,725

Operator's Name Hicks Dome Account
c/o Gilbert Kerlin, Esq.
Address Shearman and Sterling, 53 Wall St.
New York, NY 10005

FOR OPERATOR'S USE					FOR GOVERNMENT USE ONLY			
COST ITEMS (FROM EXHIBIT A)	THIS MONTH		TO DATE		THIS MONTH		TO DATE	
	UNITS	COSTS	UNITS	COSTS	UNITS	COSTS	UNITS	COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	51	637.50				
Rotary Drilling	-	-	816	3,182.40				
Cored NX 0-500	-	-	1092	4,804.80				
500-1000	-	-	840	4,032.00				
1000-1500	-	-	230	1,242.00				
Cored BX 0-500	-	-	92	386.40				
500-1000	-	-	1160	5,336.00				
1000-1500	421'	1,936.60	1770	8,951.40				
1500-2000	500'	2,600.00	2000	11,750.00				
2000-2500	200'	1,220.00	1103	7,811.90				
Reaming	-	-	1197	3,591.00				
Water supply, mons.	1	300.00	7.7	2,310.00				
Standby time, hrs.	8	112.00	24	336.00				
Drilling mud, bags	-	-	114	419.71				
Caustic Soda	-	-	1	10.85				
Quebracho	-	-	1	20.78				
Freight & Handling	-	-	21	22.59				
BX Casing lost	-	-	267	667.60				
NX Casing lost	42'	157.00	220	780.00				
Category (2)								
Geologist-Supervisor	.75	937.50	7.75	9,687.50				
Sampler	1	104.79	6	563.77				
Category (3)								
Road Rock, tons	-	-	199.9	327.73				
Core Boxes	125	156.25		1,136.25				
Sample Bags	26	7.80	107	34.90				
Category (7)								
Office Expense	1	100.00	8	795.35				
Trans. of samples	-	-	54	31.66				
Prepare, assay CaF2	-	-	108	351.00				
Other Analysis	-	-	27	35.50				
Spectro. analysis	-	-	32	301.00				
TOTALS		$ 7,631.94		$ 69,557.59		$		$

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 21, '73 *Payee Hicks Dome Account
Joseph A. Porter

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature _____ OME Field Officer Date

Approved for: $ _____
(SUBJECT TO AUDIT)

Signature _____

Date _____ Vou. No. _____
(SEE OTHER SIDE)

FOR OPERATOR'S USE	FOR GOVERNMENT USE
REMARKS	REMARKS

Category (1)

1. 157' of 4" pipe taken as NX casing.
2. Billed for core boxes in inventory at end of job. These will be charged as used. 125 boxes billed here.
3. Reconciliation of all bit charges to follow.

Category (2)

Geologist-Supervisor at 3/4 time.

Category (7)

Two part time secretarial helpers used during month. One helping with drafting. Total charged $100.00.

Charges for assay work to follow.

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

Box 447

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois
62982

June 2, 1973

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 14 1973

INITIALS	CODE
Coe	120
HK	120

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U.S. Geological Survey
Matomic Building
Room 865
1717 H. Street NW
Washington, D. C., 20006

Re: OME-6873 (Fluorspar et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are copies of the Monthly Voucher and Operator's Monthly Report for April, 1973. I would appreciate it if you would let me know of any errors or disallowances.

Sincerely yours,

Joseph A. Porter

JAP:kt

Enc.

FORM 9-1668
MARCH 1968

OFFICIAL COPY O. M. E. RECEIVED JUN 25 1973 INITIALS CODE Cac 120 mu HK 120

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER

For Month of April, 1973

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $95,450
Gov't. Participation %50 47,725

Operator's Name Hicks Dome Account
Address c/o Gilbert Kerlin, Esq.
Shearman and Sterling, 53 Wall St.
New York, NY 10005

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs. Dozing	9	112.50	51	637.50	9	112.50	51	637.50
Rotary Drilling	-	-	816	3,182.40	-	-	816	3,182.40
Cored NX 0-500	-	-	1092	4,804.80	-	-	1,092	4,804.80
500-1000	-	-	840	4,032.00	-	-	840	4,032.00
1000-1500	-	-	230	1,242.00	-	-	230	1,242.00
Cored BX 0-500	-	-	92	386.40	-	-	92	386.40
500-1000	284'	1,306.40	1160	5,336.00	284	1306.40	1160	5,336.00
1000-1500	79'	410.80	1349	7,014.80	79	410.80	1349	7,014.80
1500-2000	-	-	1500	9,150.00	-	-	1500	9,150.00
2000-2500	-	-	903	6,591.90	-	-	903	6,591.90
Reaming	868'	2,604.00	1197	3,591.00	868	2604.00	1197	3,591.00
Water supply, mons.	1	300.00	6.7	2,010.00	1	300.00	6.7	2,010.00
Standby time, hrs.	-	-	16	224.00	-	-	16	224.00
Drilling mud, bags	-	-	114	419.71	-	-	114	419.71
Caustic Soda	-	-	1	10.85	-	-	1	10.85
Quebracho	-	-	1	20.78	-	-	1	20.78
Freight & Handling	-	-	21	22.59	-	-	21	22.59
BX Casing lost	110'	275.00	267	667.60	110 1/	275.00 1/	267 1/	667.60 1/
NX Casing lost	-	-	136	476.00	42 1/	147.00 1/	178 1/	623.00 1/
4" pipe lost	147'	147.00	147	147.00	1/	1/		
Category (2)								
Geol.-Supervisor	1	1,250.00	7	8,750.00	1	1,250.00	7	8,750.00
Sampler	-	-	5	458.98	-	-	5	458.98
Category (3)								
Road Rock, tons	-	-	199.9	327.73	-	-	199.9	327.73
Core Boxes	36	45.00	784	980.00	36	45.00	784	980.00
Sample Bags	-	-	86	27.10	-	-	81	27.10
Category (7)								
Office Expense	1	106.70	7	695.35	1	106.70	7	695.35
Trans. of samples	-	-	54	31.66	-	-	54	31.66
Prepare, assay CaF_2	-	-	108	351.00	-	-	108	351.00
Other assays	-	-	27	35.50	-	-	27	35.50
Spectro. anal.	-	-	32	301.00	-	-	32	301.00
TOTALS		$6,557.40		$61,925.65		$ 6,557.40		$61,925.65

I certify that the above bill is correct and just and that payment therefor has not been received.

Date June 2, '73 *Payee Hicks Dome Account
Joseph A. Porter

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kirkemo 6/9/73
Chief, OME ~~Field Officer~~ Date

(63) 14X0804

Approved for: $3,278.76
(SUBJECT TO AUDIT)

Signature BMT

Date JUN 22 1973 Vou. No. R8711A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1) Ream

In order to reeever BX casing down to 1079 it was first necessary to ream the NX casing to 385' to seal off the cavities that originally made it necessary to reduce to BX at 430'.

The 4" pipe that was lost in Hole F-1 (OME-2) was surface casing through overburden. It was necessary to stablize the NX casing. Efforts to pull this were unsuccessful.

The invoice for April includes $747.00 for bit costs for the month. An additional invoice in the amount of $5,555.00 was also received during the month for bit costs up to April. Clarification of several items is necessary for approval and payment. Bit costs will be submitted on the next voucher.

Category (2)

No sampler was used during the month.

FOR GOVERNMENT USE

REMARKS

1/ 4" pipe substituted for casing. Credit 42 feet of NX casing for 147 ft. of pipe.

OPERATOR'S MONTHLY REPORT

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The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

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OPERATOR'S MONTHLY REPORT

April 1973

Little progress was made during the month on OME-4. The hole was drilled 716 to 1079.

A cavity was encountered from 1052 to 1063 feet. The rest of the month was spent in dealing with the problems created by the cavity.

When the cavity was first encountered, the driller was able to get to the bottom and cored from 1063 to 1079. At this point the rods had to be pulled for a bit change. They were unable to reenter the hole on the bottom of the cavity. The rods did go down in the cavity beyond the bottom of the previous hole, indicating the floor of the cavity was at a steep angle. The rods twisted off leaving the core barrel and ten feet of rod in the hole.

The hole was subsequently reamed to accomodate BX casing to the bottom of the hole. Though set on bottom it apparently was quite crooked. A BX core barrel was badly bent trying to drill past the casing. While the bent barrel was being pulled out it lodged in the casing and the casing was inadvertently lifted several feet. When it dislodged the casing fell back to bottom and the casing joints sheared in the cavity, the end result being 110 feet of casing was lost.

In order to get around the cavity and steel lost in the hole, a wedge was set and the hole was deflected. The hole was subsequently completed.

Respectfully submitted,

Joseph A. Porter, Geologist
P.O. Box 447
Rosiclare, Illinois 62982

OPERATOR'S MONTHLY REPORT

April 1973

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A cavity was encountered from 1052 to 1063 feet. The rest of the month was spent in dealing with the problems created by the cavity.

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Respectfully submitted,

Joseph A. Porter

Joseph A. Porter, Geologist
P.O. Box 447
Rosiclare, Illinois 62982

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 152

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116745

INVOICE DATE 5-3-73

SHIPPED TO
Hicks Dome, Illinois

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUN
	To 363' core drilling at Hicks Dome, Illinois for period ending April 25, 19 as per agreement								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST	UNIT	TOTAL C
	H-6	BX	716.	1000.		284.	4.60		$1,306
		BX	1000.	1079.		79.	5.20		410
									$1,717
	REAMING								
	H-6	NX	166.	385.		219.			
		BX	430.	1079.		649.			
						868. @ $3.00/ft.			2,604
	CORE BOXES USED								
	H-6	36 Core Boxes @ $1.25/ea.							45
	CASING LOST								
	H-6	110 feet BX Casing @ $2.50/ft.							275
	H-3	147 feet 4" Pipe @ $1.00/ft.							147
	FURNISHING WATER								
		March 26 through April 25, 1973.							300

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4134 4/67
(P133A)

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Kaplin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05176240

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	SALES CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
			DIAMOND LOSS IN EXCESS OF $1.00/FT.					
			March 26 through April 25, 1973 per					
			attached detail listing shipments,					
			returns, and foreman's inventory					$ 747
			RENTAL - R. A. STACEY					
			Farm Tractor & Wagon per attached					81
								$5,915

CERTIFIED TRUE COPY

INVOICE (CONTINUATION)

FORM P138A

May 11, 1973

Mrs. Vera Bishop
Elizabethtown, Illinois

Dear Vera:

Enclosed find a check in the amount of $84.38, representing wages earned during the month of April, 1973.

56 hrs.	x	$1.80	=	$100.80
S. S.	$5.90			
State I. T.	2.62			
Fed. I. T.	7.90			16.42
				$ 84.38

Sincerely

Joseph A. Porter

JAP:vb
Enc.

Total $100.80
Soc. Sec. 5.90
Total 106.70

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Vera Bishop 178-18-8537 0 — April, 1973

Name, S. S. No., Dependents — Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Mon 4/2	11:30	3:30	4		
Tues. 4/3	11:30	3:30	4		
Wed. 4/4	10:30	3:30	5		
Thurs. 4/5	11:15	3:45	4 ½		
Fri. 4/6	10:00	3:30	5 ½		
Mon 4/9	8:00	12:00	4		
Tues. 4/10	11:30	3:00	3 ½		
Wed. 4/11	11:30	3:30	4		
Thurs 4/12	12:45	3:45	3		
Fri. 4/13	12:30	3:30	3		
Tues. 4/17	11:30	3:00	3 ½		
Wed. 4/18	11:30	3:30	4		
Thurs 4/19	11:30	3:30	4		
Tues 4/24	11:30	3:30	4		
			56		

STATEMENT

FROM Larry G. Robenson
For: use of D-4 tractor moving Drill
& equipment. March 19 73
TO Hicks Dome account C/o Joseph A. Porter
ADDRESS Box 447
CITY Rosiclare, Ill.

	hrs	Moving Drill	12	50	112	50

Larry Robenson
ck # 896 - $112.50
4/10/73

CERTIFIED TRUE COPY

Recieved from Joe Porter $25.00 for (50) Sample bags.
Ruth Mackendon

CERTIFIED TRUE COPY

9-011
(Rev. July 1962)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
LABORATORY REPORT

REPORT NO.	73DG-107	FOR	Allen V. Heyl	DATE	June 6, 1973
JOB NO.	M 447	PROJECT OR ORGANIZATION	MR-Central 9350-00182 Research min. dep. of central states		
LOT NO.	11-069	REFER TO OTHER REPORTS	SQ analyses pending		

Thirty-seven (37) samples from Hardin County, Illinois.

Serial No.	Field No.	F %	eU ppm	U ppm
D161249	850	1.4	120	10
D161250	851	2.1	200	20
D161251	852	2.9	200	10
D161252	853	4.2	500	20
D161253	854	3.8	400	20
D161254	855	4.2	350	10
D161255	856	3.8	440	20
D161256	860	5.5	460	20
D161257	861	2.9	220	10
D161258	862	3.2	200	10
D161259	863	5.4	740	30
D161260	864	5.9	770	30
D161261	865	5.0	290	10
D161262	866	4.1	350	10
D161263	867	4.2	440	10
D161264	868	4.6	320	10
D161265	869	3.5	400	10
D161266	870	1.7	50	<10
D161267	871	2.3	80	<10
D161268	872	2.4	70	<10
D161269	873	2.4	170	<10
D161270	874	0.70	120	<10
D161271	875	1.6	70	10
D161272	942	2.5	650	20
D161273	943	3.4	500	20

9-011
(Rev. July 1962)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
LABORATORY REPORT

REPORT NO. 73DG-107 FOR Allen V. Heyl DATE June 6, 1973

JOB NO. M 447 PROJECT OR ORGANIZATION

LOT NO. 11-069 REFER TO OTHER REPORTS

Serial No.	Field No.	F %	eU ppm	U ppm
D161274	944	3.0	1100	30
D161275	945	3.1	530	30
D161276	946	2.7	850	30
D161277	947	6.8	730	20
D161278	948	3.4	540	10
D161279	949	6.7	380	10
D161280	950	5.1	380	10
D161281	951	2.9	180	<10
D161282	952	4.1	450	20
D161283	953	5.2	520	20
D161284	954	3.2	320	10
D161285	955	6.2	330	10

F determined by specific ion electrode method by Johnnie Gardner.
eU determined by Beta-gamma scaler by G. D. Shipley.
U determined fluorometrically by E. J. Pennelly.

REVan Loenen:ip
Copy to: Heyl
Trace
Kirkemo
Flanagan - 2
GDS

BY Analytical Services and Research

Project Leader: Claude Huffman, Jr.

APPROVED

R. E. Van Loenen
Sample Control
Branch of Analytical Laboratories

Box 447 Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

OFFICIAL COPY
O. M. E.
RECEIVED
MAY 16 1973
INITIATED BY
Cal 120 M
HK ~~120~~

May 10, 1973

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed is a signed copy of the vouchers for March. Please accept my apologies for causing the extra trouble.

Sincerely,

Joseph A. Porter

Joseph A. Porter

Sent to Brian Flynn, Br. of Financial Management May 16, 1973 as per agreement made earlier.

H. Kirkemo

JAP/kt
Encl.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

MAY 8 1973

Mr. Joseph A. Porter
Geologist
Rosiclare, Illinois 62982

Re: OME-6873 (Fluorspar, et al)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois
Contract 2306

Dear Mr. Porter:

You overlooked signing the voucher for March 1973. Please sign the enclosed copy and return it to this office because a signed copy must be on file for each voucher. Payment will not be delayed as we are processing the voucher on hand.

Please note the disallowance, totals, and footnote that I entered on the March voucher. The only receipt we have for sample bags is dated January 27, 1973, for 40 bags at 50 cents per bag, which was paid by check no. 863.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's reading file
Mineral Resources
OME reading file
Mr. Kirkemo

HKirkemo/cac 5/8/73

447

Phone (618) 285-6685

Joseph A. Porter
Geologist
Rosiclare, Illinois
62982

April 23, 1973

OFFICIAL COPY
O. M. E.
RECEIVED
APR 30 1973
INITIALS | CODE
ac | 120
| 120

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H. Street NW
Washington, D. C., 20006

Re: OME-6873 (Fluorspar et al)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are copies of the Monthly Voucher and Operator's Monthly Report for March, 1973. I would appreciate it if you would let me know of any errors or disallowances.

Sincerely yours,

Joseph A. Porter

JAP:vb
Enc.

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

COPY RECEIVED MAY 11 1973 INITIALS CODE

OPERATOR'S MONTHLY VOUCHER For Month of March, 1973

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $95,450
Gov't. Participation % 50 $47,725

Operator's Name Hicks Dome Account
Address c/o Gilbert Kerlin, Esq.
Shearman and Sterling, 53 Wall St.
New York, NY 10005

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	42	525.00	-	-	42	525.00
Rotary Drilling	-	-	816	3,182.40	-	-	816	3,182.40
Cored NX 0-500	-	-	1092	4,804.80	-	-	1092	4,804.80
500-1000	-	-	840	4,032.00	-	-	840	4,032.00
1000-1500	-	-	230	1,242.00	-	-	230	1,242.00
Cored BX 0-500	-	-	92	386.40	-	-	92	386.40
500-1000	88	404.80	876	4,029.60	88	404.80	876	4,029.60
1000-1500	22	114.40	1270	6,604.00	22	114.40	1270	6,604.00
1500-2000	500	3,050.00	1500	9,150.00	500	3,050.00	1500	9,150.00
2000-2500	377	2,752.10	903	6,591.90	377	2,752.10	903	6,591.90
Reaming	-	-	329	987.00	-	-	329	987.00
Water Supply, mons.	1	300.00	5.7	1,710.00	1	300.00	5.7	1,710.00
Standby time, hrs.	8	112.00	16	224.00	8	112.00	16	224.00
Drilling Mud, bags	6	22.80	114	419.71	6	22.80	114	419.71
Caustic Soda	-	-	1	10.85	-	-	1	10.85
Quebracho	-	-	1	20.78	-	-	1	20.78
Freight & Handling	-	-	21	22.59	-	-	21	22.59
BX Casing lost	-	-	157	392.60	-	-	157.04	392.60
NX Casing lost	136	476.00	136	476.00	136	476.00	136	476.00
Category (2)								
Geol.-Supervisor	1	1,250.00	6	7,500.00	1	1,250.00	6	7,500.00
Sampler	1	128.61	5	458.98	1	128.61	5	458.98
Category (3)								
Road Rock, tons	-	-	199.9	327.73	-	-	199.9	327.73
Core Boxes	103	128.75	748	935.00	103	128.75	748	935.00
Sample Bags	5	1.50	86	25.80	-	-	81	27.10
Category (7)								
Office Expense	1	103.62	6	588.65	1	103.62	6	588.65
Trans. of samples	-	-	54	31.66	-	-	54	31.66
Prepare, Assay CaF_2	14	56.00	108	351.00	14	56.00	108	351.00
Other Assays	-	-	27	35.50	-	-	27	35.50
Spectro. Anal.	-	-	32	301.00	-	-	32	301.00
TOTALS		$8,905.58		$55,386.95		$8,899.08		$ 55,368.25

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 20, '73 *Payee Hicks Dome Account
Joseph A. Porter

Per _____ Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kirkham 5/9/73
Chief, OME ~~Field Office~~ Date

(63) 14X0804

Approved for: $4,449.54
(SUBJECT TO AUDIT)

Signature BM7

Date 11 MAY 1973 Vou. No. R 3493 A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)
Acid surveys billed at $16/hr. by Joy. Charged here at standby rate of $14/hr.

Category (3)
Sample bags. Have inadvertently been charging 35¢ instead of 30¢. Total charge to date reduced by 5¢ per bag for each bag used.

Category (7)
Office includes $98.12 Secretarial and $5.50 telephone.

RECEIVED
U.S. GEOLOGICAL SURVEY
MAY 9 12 55 PM '73
BUDGET & FINANCE

FOR GOVERNMENT USE

REMARKS

1 Disallow. May be reclaimed upon ~~receipt~~ submittal of receipts for all bags claimed. Average cost per bag not to exceed 30 cents.

H. Kirkpatrick

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered; illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116676

INVOICE DATE 4-4-73

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 987' core drilling at Hicks Dome, Illinois for period ending March 25, 1973 as per agreement						
	PROSPECT NO.	FROM TO		TOTAL FT.	COST	UNIT	TOTAL COST
	P-3-OME-3	BX 1478. 1500.		22.	5.20		$ 114.40
		BX 1500. 2000.		500.	6.10		3,050.00
		BX 2000. 2377.		377.	7.30		2,752.10
	H-6-OME-4	BX 628. 716.		88.	4.60		404.80
							$6,321.30
	MUD USED UP						
		6 100-lb. bags drilling mud @ $3.80/bag					22.80
	CORE BOXES USED						
		103 Cardboard Core Boxes @ $1.25/ea.					128.75
	CASING LOST OR REQUESTED IN PLACE						
	P-3	136 feet NX Casing @ $3.50/ft.					476.00
	FURNISHING WATER						
		Feb. 26 through Mar. 25, 1973.					
		One (1) month @ $300.00/mo.					300.00

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4134 4/67
(P133A)

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Kerlin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05116676

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	SALES CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		ACID SURVEYS						
		P-3	Mar. 19 3 hours					
			Mar. 20 5 hours					
			8 hours @ $16.00/hr.					$ 128.00
		TRANSPORTATION CHARGES						
			Hauling 4" pipe from Di-Kor,					
			Carmi, Illinois to job site.					
			Round trip - 100 miles @ 40¢/mi.					40.00
								$7,416.85

INVOICE (CONTINUATION)

FORM P138A

TRAIN CABOT INC 004217736

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	420000
			STATE TX	1333	GRP INS	1057	FICA	24570
							FED. TAX	60402
							STATE TAX	7998
							FOR PERIOD ENDING	03-31-73
							NET PAY	
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			16552		534.48

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

TRAIN CABOT INC 004166574

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	350000
			STATE TX	1333	GRP INS	1057	FICA	20475
							FED. TAX	50335
							STATE TAX	6665
							FOR PERIOD ENDING	03-15-73
							NET PAY	
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			16552		534.48

JOSEPH A PORTER 501 1 020 00044

5755

STATEMENT OF EARNINGS AND DEDUCTIONS

April 2, 1973

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Sir:

Enclosed is check for $114.39, representing wages earned for 54 hours during the month of March, 1973. Amount due was calculated as follows:

54 hrs. @ $2.25		$121.50
Fed. I. T.	$0.00	
State I. T.	0	
S. S.	7.11	7.11
		$114.39

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

CERTIFIED TRUE COPY

Totals 121.50
+ Social Sec. 7.11 (ex Employers share)
Total $128.61

Chase HOR. OME $112.64 (88%)

RECORD OF TIME WORKED

T. Stacey — March

Name, S.S. No., Dependents — Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
3-1-73			2 hrs hauled cores	to house	
3-2-73			4 hrs	hauled cores to Rosiclare	
3-3-73			4 hrs	cores to house (Sunday	
3-6-73			2 hrs	" " "	"
3-7-73			2 hrs	" " "	"
3-12-73			3 hrs	"	" " "
3-13-73			2 hrs	"	" " "
3-14-73			2 hrs	"	" " "
3-15-73			3 hrs	bladed road	
3-18-73			2 hrs	hauled cores to house	
3-19-73			2 hrs	"	" " "
3-21-73			6 hrs	"	cores to house + Rosiclare
3-23-73			4 hrs	"	" to house + bulldozer
3-26-73			2 hrs	"	" " house
3-28-73			2 hrs	"	" " "
3-29-73			6 hrs	"	" " " " trip to Paducah
3-30-73			6 hrs	"	" " house + Rosiclare
	Total		54 hrs		

April 2, 1973

Mrs. Vera Bishop
Elizabethtown, Illinois

Dear Vera:

Enclosed find a check in the amount of $78.21, representing wages earned during the month of March, 1973.

51½ hrs.	x	$1.80	=	$92.70
S. S.	$ 5.42			
State I. T.	2.37			
Fed. I. T.	6.70			14.49
				$78.21

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

CERTIFIED TRUE COPY

Joseph A. Porter

Total 92.70
Soc. Sec. 5.42 (Employee)
Total 98.12
Check total to income
jat

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537 - 0 March, 1973

Name, S.S. No., Dependents Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Thurs - 3/1	12:00	3:30	3 ½		
Fri. - 3/2	11:30	2:30	3		
Wed. 3/7	11:00	3:30	4 ½		
Thurs. 3/8	10:30	3:30	5		
Fri. 3/9	11:30	4:00	4 ½		
Sat 3/10	11:00	5:30	6 ½		
Tues 3/13	11:30	3:30	4		
Wed 3/14	11:30	3:30	4		
Thurs 3/15	11:30	3:30	4		
~~Sat~~ Fri 3/16	12:00	3:30	3 ½		
Sat. 3/17	12:30	5:00	4 ½		
Mon. 3/19	11:30	4:00	4 ½		
			51 ½		

March, 1973

Telephone Expense

OME - HDA

Date	To	Person	Amount
2/21	Carmi	DiKor	$ .50
2/21	LaPorte, Ind.	Joy	2.52
2/22	LaPorte, Ind.	Joy	1.98
			$ 5.00
			+ .50%
		Total	$ 5.50

CERTIFIED TRUE COPY

STATEMENT

April 1st 1973

FROM V.C.McDonald
Hosiclare, Ill.

19

TO Mr. Joe Porter (Geogologist)

ADDRESS Hosiclare, Ill.

CITY

TERMS

14 Samples @ $4.00 Each	$ 56.00

V. C. McDonald
Chemist

#895 - $56.00
4/4/73

Sent - $23 total (OME-2)
Gal - $4 (OME-3)

Invoice No.

M. L. CONN & SONS

TRUCKING SERVICE

ELIZABETHTOWN, ILLINOIS

From ..... Date January 27, 1973

At ..... City ..... County ..... State

Consigned to Mr. Joe Porter

Destination ..... Street Rosiclare, Ill. City

..... County, ... State

DATE	DESCRIPTION	WEIGHT	RATE	TOTAL
1-27-73	Road Rock to Hicks Dome	169 Tons		$273.65

CERTIFIED TRUE COPY

..... Shipper ..... Agent

Per ..... Per .....

OPERATOR'S MONTHLY REPORT

March 1973

During March OME-3 was drilled from 1478 feet to its total depth of 2377 feet, total of 899 feet. After finishing OME-3 the two crews moved to the rig sitting over OME-4 and advanced the hole 88 feet to a depth of 716 feet.

OME-3 was completed with considerable difficulty. Numerous cavities, soft gougey shale zones and several silicified zones were encountered. All contributed to bit cost particularly the broken material caving into the hole from cavities. Caving material from cavities necessitated drilling through caved material to get back to bottom when bits were changed. The result was a considerable amount of wear on the bit before it was ever on bottom. In several instances in the upper parts of the hole this caved cherty material caused almost complete destruction of the bit before any drilling was done. Also contributing to bit cost were several silicified zones that were encountered.

Factors cited above will cause a substantial excess bit cost for the hole. Bit cost for the hole in the excess of the $1.00 per foot are presently estimated to be between $2600 and $3000.

A summary log of OME-3 and a cross section showing the general relationship to the other holes are attached.

Hole OME-3 was considerably different from all the others. It is presently interpreted to have been collared and drilled along the margin or edge of the central breccia core or diatreme which penetrates to the surface.

This hole was drilled 371 feet with rock bits before solid rock was encountered. Intense weathering and numerous cavities were encountered down to 750 feet. Other cavities, though less frequent were encountered throughout the hole. Weathering of this character might be expected along the contact of the breccia body and the unbrecciated country rocks.

The hole was essentially in breccia throughout except for a zone from 477 feet to about 687 feet. This zone consisted principally of altered or weathered Grassy Knob chert and limestone, a rather distinct formation. It is possible that the base of the Lower Grassy Knob chert may have been at 662. If this is so the base of the Maquoketa could be projected at somewhere between -820 and -840 foot contour interval.

Brecciation throughout the hole is generally similar to that in other holes. It consisted principally of coarse, medium and fine angular fragments, generally tightly interlocked in a rock flour and calcite matrix. The breccia down to 2000 feet was similar to that previously encountered except that there may have been somewhat more mixing in the fragments involved. Silurian, Bailey and Maquoketa fragments were still identified below 1800 feet.

The breccia was slightly mineralized throughout. Most zones contained at least traces of fluorite in the matrix and in vugs. Pyrite was common. Several zones contained small amounts of disseminated galena and sphalerite.

Mineralization was encountered similar in character and stratigraphic position to that encountered in the previous holes. From about 2000 feet to 2038 feet the brecciation was noticeably much finer and contained much more rock flour matrix material. Fairly well mineralized, low grade, purple breccia was encountered from 2038 feet to 2110.5 feet. In this zone assays ranged from 12 feet of 4.5% CaF_2 to 10 feet of 12.03% CaF_2. The entire 73 foot zone averaged 8.83%. The bottom 30.5 feet was somewhat better and averaged 10.4% CaF_2.

This zone is remarkedable similar to those previously encountered. It also contained characteristic light yellow and pale sphalerite disseminated throughout and the fairly coarse, crystalline, clear and yellow barite scattered throughout. This zone differed from those in previous holes only in that the bottom 30 feet was somewhat more sandy and dolomitic and lighter in color. The unit was also thinner and lower in grade.

From 2110 feet to the total depth of 2377 feet breccia fragments consisted principally of light gray, fine grained, crystalline dolomite and quartzites probably representing brecciated Joachim dolomite. This zone is somewhat more brecciated than was encountered in previous holes. There were frequent patches of fine brecciation with the distinct purple matrix and fairly abundant zones with purple and clear disseminated fluorite. There were several zones which were rather pyritic. This mineralization was sufficiently encouraging to justify drilling of the hole somewhat deeper than anticipated.

Even through the mineralization encountered was low grade, the results of this hole are extremely significant. Unlike the previous hole in the breccia pipe (Pankey 2) this hole encountered "purple breccia" at the favored stratigraphic position. The implications are that the north side of the dome may be mineralized in a manner similar to that which has been encountered in the Hamp holes on the southeast side. This adds considerable possible lateral dimensions to the known mineralization.

Respectfully submitted,

Joseph A. Porter, Geologist
April 20, 1973

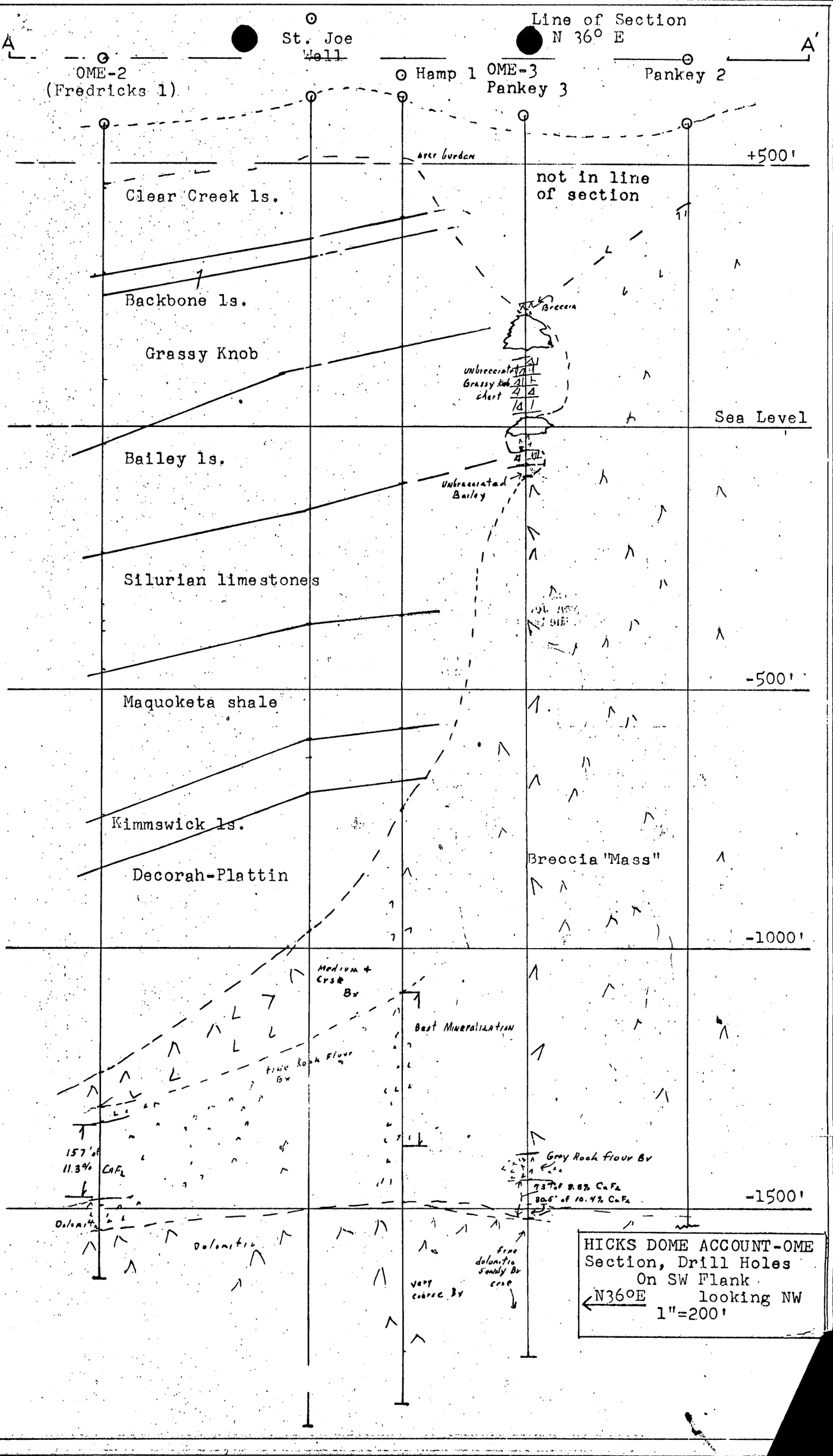
SUMMARY LOG
OME-3

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Drilled with rotary, all drilled soft possibly some intrusive material	370	370
Breccia	Breccia and cavities, all deeply weathered, essentially cavity from 378-447	77	447
Grassy Knob chert	Frequent cavities and few patches of breccia, all well fractured and well oxidized	131	578
	Mud filled cavities	28	606
Breccia	Generally coarse, tightly interlocked fragments	29	635
Grassy Knob chert	Chert approximately 50%	27	662
Bailey ls. (?)	Highly sheared, deeply oxidized some gouge, possible contact Grassy Knob - Bailey at top, only stratigraphic marker in hole	25	687
Breccia	Breccia and cavities, mostly Grassy Knob and Bailey, few Silurian, cavity 715-750	63	750
Breccia	Mostly coarse and medium, some fine, angular fragments, little matrix, mostly Bailey	200	950
Breccia	Medium, some fine and coarse, principally Silurian fragments, locally abundant Maquoketa shale	300	1250

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia	Fairly abundant shale, partly silicified, few shows of galena and sphalerite, may be bottom of Maquoketa	200	1450
Breccia	Coarse at top, principally fine, few patches of purple breccia, mostly considered gray rock flour breccia, better fluorite in matrix	85	1535
Breccia	Fine, medium and coarse, fragments of Bailey, Silurian still evident	99	1634
Breccia	Fine, medium and coarse, little matrix, still some shale, identifiable Bailey and Silurian fragments	296	1930
Breccia	Generally more intensively brecciated and more rock flour matrix, few zones up to 2% spar	56	1986
Breccia	Gray rock flour breccia, fine, some medium and coarse, disseminated spar in matrix	52	2038
Breccia	Gray rock flour breccia, low grade "purple breccia", fine, clear and purple disseminated and blebs of spar, traces of galena, light yellow sphalerite and clear barite and purple spar. 4.52%	12	2050
Purple breccia	Low grade very fine, little medium in rock flour matrix, spar 7.36%	11	2061
Purple breccia	Low grade, little medium, traces of yellow sphalerite and clear barite, spar 8.91%	10	2071

FORMATION	DESCRIPTION	THICK.	DEPTH
Purple breccia	Low grade, few zones fairly rich, scattered sulphides and barite, sandy and dolomitic, becoming more spar, 7.03%	10	2081
Breccia	Sandy, dolomitic, purple breccia, lighter in color than above, spar, sulphides and barite as before, spar 12.04%	10	2091
Purple breccia	Dolomitic and sandy, mineralized as before, spar 9.31%	10	2100
Purple breccia	Dolomitic purple breccia as before, bottom contact fairly distinct, spar 10.07%	10.5	2010.5
Dolomite	Brecciated dolomite, fine at top, bottom coarse, fair spar in finer portions, spar 2.80%	9.5	2020
Breccia	Mixed coarse and fine with fairly abundant patches of fine breccia with purple, flouritic matrix, fragments principally dolomite and sandstone	357	2377
	TOTAL DEPTH		

Note: All assays cited are McDonald's. Other assays are pending. Some will be submitted to Skyline for CaF_2 and spectrographic.


A
A'
Line of Section
N 36° E
St. Joe
Well
OME-2
(Fredricks 1)
Hamp 1
OME-3
Pankey 3
Pankey 2
over burden
+500'
not in line
of section
Clear Creek ls.
Backbone ls.
Grassy Knob
Breccia
Unbreccia
Grassy Knob
chert
Sea Level
Bailey ls.
Unbreccia
Bailey
Silurian limestones
-500'
Maquoketa shale
Kimmswick ls.
Decorah-Plattin
Breccia "Mass"
-1000'
Medium +
Crse
Bx
Best Mineralization
Fine Rock Flour
Bx
157' of
11.3% CaF2
Grey Rock Flour Bx
73' of 9.8% CaF2
30.5' of 10.4% CaF2
-1500'
Dolomite
Dolomitic
very
coarse Bx
fine
dolomitic
Sandy Bx
crse
HICKS DOME ACCOUNT-OME
Section, Drill Holes
On SW Flank
N36°E
looking NW
1"=200'

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

4-1-73

Mr. Joe Porter
Geogologist
Rosiclare, Ill.

CORE SAMPLES FOR MARCH 1973

No.	CaF_2	SiO_2	T- $CaCO_3$	$BaSO_4$
850	3.11	6.30	31.02	1.24
856	8.04	15.40	23.76	2.60
857	11.36	14.00	24.51	5.00
858	11.80	15.58	24.17	4.52
859	11.88	13.20	25.27	4.00
860	10.32	15.66	23.83	4.66
861	6.00	11.94	28.82	1.98
862	9.07	10.30	28.95	2.30
981	12.04	18.12	17.54	3.72
982	9.31	19.44	19.09	3.40
983	10.07	17.18	18.90	2.20
984	2.80	9.28	20.28	0.62
979	8.91	20.60	18.18	3.80
980	7.03	18.10	18.99	2.80

V.C.McDonald
Chemist

V. C. McDonald

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Branch of Budget and Finance
Washington, D. C. 20242

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee: Hicks Dome Account
c/o Gilbert Kerlin, Esq.
Shearman and Sterling, 53 Wall St.
New York, N.Y. 10005

Amount Claimed:	Differences (Explained Below)	Amount Approved
$ 8,900.58	$ 1.50	$ 8,899.08 $ 4,449.54 (Govt Part) 50%
Bu. Voucher No.	Payee's Invoice No.	Period
	Docket #6873 Contract #2306	March, 1973

EXPLANATION

Category (3)

Sample Bags

Claimed 5 bags at .30 per bag	$ 1.50	
Allowed none. (May be reclaimed upon submittal of receipts for all bags claimed. Average cost per bag not to exceed $.30	-0-	$ 1.50

Any reclaim for items deducted must be included as a separate item on subsequent monthly voucher and supported by the original of this statement.

bmf

Branch of Budget and Finance

OPERATOR'S MONTHLY REPORT

March 1973

During March OME-3 was drilled from 1478 feet to its total depth of 2377 feet, total of 899 feet. After finishing OME-3 the two crews moved to the rig sitting over OME-4 and advanced the hole 88 feet to a depth of 716 feet.

OME-3 was completed with considerable difficulty. Numerous cavities, soft gougey shale zones and several silicified zones were encountered. All contributed to bit cost particularly the broken material caving into the hole from cavities. Caving material from cavities necessitated drilling through caved material to get back to bottom when bits were changed. The result was a considerable amount of wear on the bit before it was ever on bottom. In several instances in the upper parts of the hole this caved cherty material caused almost complete destruction of the bit before any drilling was done. Also contributing to bit cost were several silicified zones that were encountered.

Factors cited above will cause a substantial excess bit cost for the hole. Bit cost for the hole in the excess of the $1.00 per foot are presently estimated to be between $2600 and $3000.

A summary log of OME-3 and a cross section showing the general relationship to the other holes are attached.

Hole OME-3 was considerably different from all the others. It is presently interpreted to have been collared and drilled along the margin or edge of the central breccia core or diatreme which penetrates to the surface.

This hole was drilled 371 feet with rock bits before solid rock was encountered. Intense weathering and numerous cavities were encountered down to 750 feet. Other cavities, though less frequent were encountered throughout the hole. Weathering of this character might be expected along the contact of the breccia body and the unbrecciated country rocks.

The hole was essentially in breccia throughout except for a zone from 477 feet to about 687 feet. This zone consisted principally of altered or weathered Grassy Knob chert and limestone, a rather distinct formation. It is possible that the base of the Lower Grassy Knob chert may have been at 662. If this is so the base of the Maquoketa could be projected at somewhere between -820 and -840 foot contour interval.

Brecciation throughout the hole is generally similar to that in other holes. It consisted principally of coarse, medium and fine angular fragments, generally tightly interlocked in a rock flour and calcite matrix. The breccia down to 2000 feet was similar to that previously encountered except that there may have been somewhat more mixing in the fragments involved. Silurian, Bailey and Maquoketa fragments were still identified below 1800 feet.

The breccia was slightly mineralized throughout. Most zones contained at least traces of fluorite in the matrix and in vugs. Pyrite was common. Several zones contained small amounts of disseminated galena and sphalerite.

Mineralization was encountered similar in character and stratigraphic position to that encountered in the previous holes. From about 2000 feet to 2038 feet the brecciation was noticeably much finer and contained much more rock flour matrix material. Fairly well mineralized, low grade, purple breccia was encountered from 2038 feet to 2110.5 feet. In this zone assays ranged from 12 feet of 4.5% CaF_2 to 10 feet of 12.03% CaF_2. The entire 73 foot zone averaged 8.83%. The bottom 30.5 feet was somewhat better and averaged 10.4% CaF_2.

This zone is remarkedable similar to those previously encountered. It also contained characteristic light yellow and pale sphalerite disseminated throughout and the fairly coarse, crystalline, clear and yellow barite scattered throughout. This zone differed from those in previous holes only in that the bottom 30 feet was somewhat more sandy and dolomitic and lighter in color. The unit was also thinner and lower in grade.

From 2110 feet to the total depth of 2377 feet breccia fragments consisted principally of light gray, fine grained, crystalline dolomite and quartzites probably representing brecciated Joachim dolomite. This zone is somewhat more brecciated than was encountered in previous holes. There were frequent patches of fine brecciation with the distinct purple matrix and fairly abundant zones with purple and clear disseminated fluorite. There were several zones which were rather pyritic. This mineralization was sufficiently encouraging to justify drilling of the hole somewhat deeper than anticipated.

Even through the mineralization encountered was low grade, the results of this hole are extremely significant. Unlike the previous hole in the breccia pipe (Pankey 2) this hole encountered "purple breccia" at the favored stratigraphic position. The implications are that the north side of the dome may be mineralized in a manner similar to that which has been encountered in the Hamp holes on the southeast side. This adds considerable possible lateral dimensions to the known mineralization.

Respectfully submitted,

Joseph A. Porter, Geologist
April 20, 1973

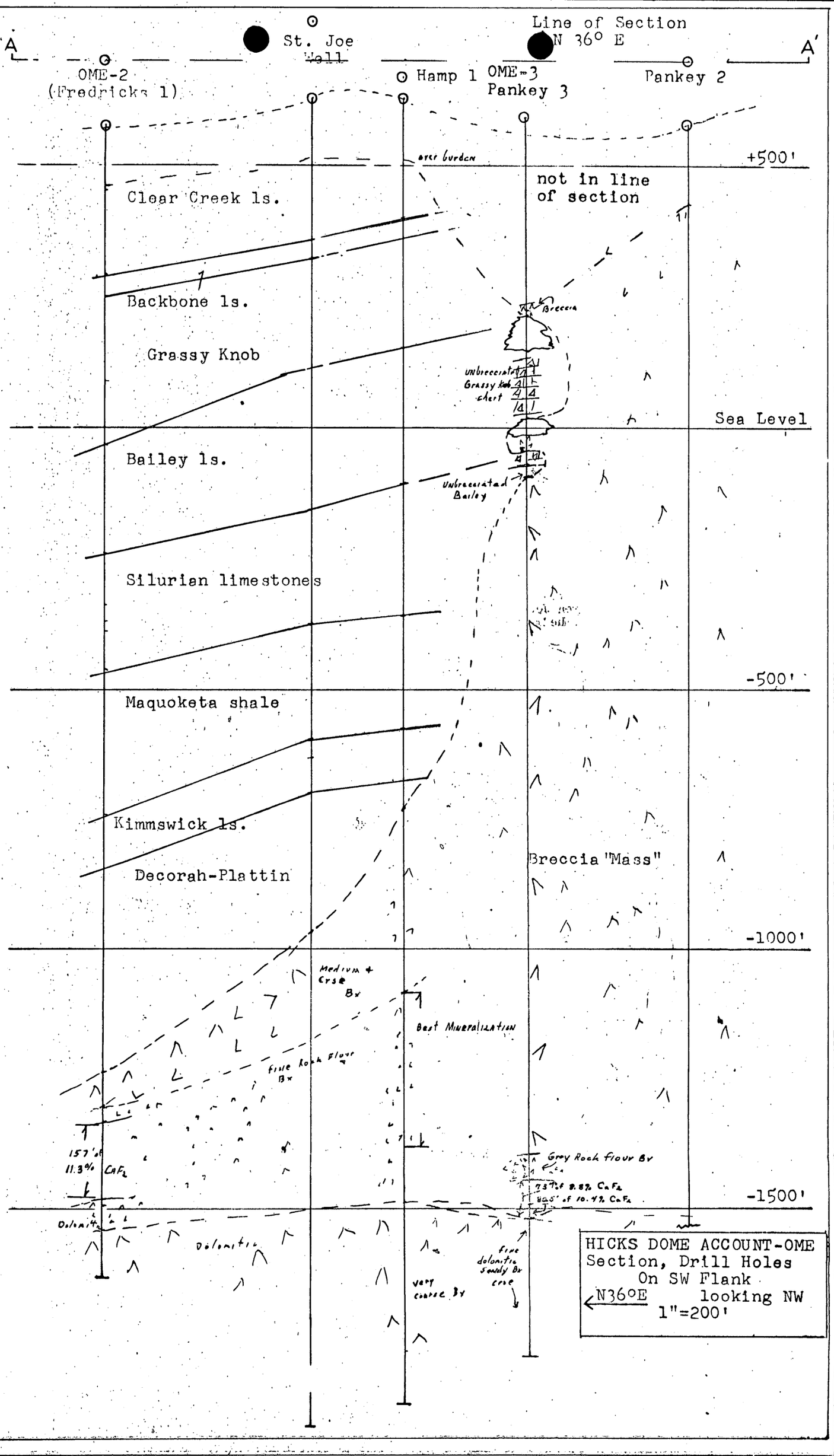
SUMMARY LOG
OME-3

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Drilled with rotary, all drilled soft possibly some intrusive material	370	370
Breccia	Breccia and cavities, all deeply weathered, essentially cavity from 378-447	77	447
Grassy Knob chert	Frequent cavities and few patches of breccia, all well fractured and well oxidized	131	578
	Mud filled cavities	28	606
Breccia	Generally coarse, tightly interlocked fragments	29	635
Grassy Knob chert	Chert approximately 50%	27	662
Bailey ls. (?)	Highly sheared, deeply oxidized some gouge, possible contact Grassy Knob - Bailey at top, only stratigraphic marker in hole	25	687
Breccia	Breccia and cavities, mostly Grassy Knob and Bailey, few Silurian, cavity 715-750	63	750
Breccia	Mostly coarse and medium, some fine, angular fragments, little matrix, mostly Bailey	200	950
Breccia	Medium, some fine and coarse, principally Silurian fragments, locally abundant Maquoketa shale	300	1250

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia	Fairly abundant shale, partly silicified, few shows of galena and sphalerite, may be bottom of Maquoketa	200	1450
Breccia	Coarse at top, principally fine, few patches of purple breccia, mostly considered gray rock flour breccia, better fluorite in matrix	85	1535
Breccia	Fine, medium and coarse, fragments of Bailey, Silurian still evident	99	1634
Breccia	Fine, medium and coarse, little matrix, still some shale, identifiable Bailey and Silurian fragments	296	1930
Breccia	Generally more intensively brecciated and more rock flour matrix, few zones up to 2% spar	56	1986
Breccia	Gray rock flour breccia, fine, some medium and coarse, disseminated spar in matrix	52	2038
Breccia	Gray rock flour breccia, low grade "purple breccia", fine, clear and purple disseminated and blebs of spar, traces of galena, light yellow sphalerite and clear barite and purple spar. 4.52%	12	2050
Purple breccia	Low grade very fine, little medium in rock flour matrix, spar 7.36%	11	2061
Purple breccia	Low grade, little medium, traces of yellow sphalerite and clear barite, spar 8.91%	10	2071

FORMATION	DESCRIPTION	THICK.	DEPTH
Purple breccia	Low grade, few zones fairly rich, scattered sulphides and barite, sandy and dolomitic, becoming more spar, 7.03%	10	2081
Breccia	Sandy, dolomitic, purple breccia, lighter in color than above, spar, sulphides and barite as before, spar 12.04%	10	2091
Purple breccia	Dolomitic and sandy, mineralized as before, spar 9.31%	10	2100
Purple breccia	Dolomitic purple breccia as before, bottom contact fairly distinct, spar 10.07%	10.5	2010.5
Dolomite	Brecciated dolomite, fine at top, bottom coarse, fair spar in finer portions, spar 2.80%	9.5	2020
Breccia	Mixed coarse and fine with fairly abundant patches of fine breccia with purple, flouritic matrix, fragments principally dolomite and sandstone	357	2377
	TOTAL DEPTH		

Note: All assays cited are McDonald's. Other assays are pending. Some will be submitted to Skyline for C_aF_2 and spectrographic.


A
A'
St. Joe Well
Line of Section N 36° E
OME-2 (Fredricks 1)
Hamp 1
OME-3 Pankey 3
Pankey 2
+500'
over burden
not in line of section
Clear Creek ls.
Backbone ls.
Grassy Knob
Breccia
unbreccia Grassy Knob chert
Sea Level
Bailey ls.
Unbreccia Bailey
Silurian limestones
-500'
Maquoketa shale
Kimmswick ls.
Decorah-Plattin
Breccia "Mass"
-1000'
Medium + Crse Bx
Best Mineralization
fine Rock flour Bx
157' of 11.3% CaF2
Grey Rock flour Bx
-1500'
Dolomite
Dolomitic
very coarse Bx
fine dolomitic sandy Bx crse
HICKS DOME ACCOUNT-OME
Section, Drill Holes
On SW Flank
N36°E looking NW
1"=200'

Box 592
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(Area Code 618)

4-1-73

Mr. Joe Porter
Geogologist
Rosiclare, Ill.

CORE SAMPLES FOR MARCH 1973

No.	CaF_2	SiO_2	T- Calcium	$BaSO_4$
850	3.11	6.30	31.02	1.24
856	8.04	15.40	23.76	2.60
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859	11.88	13.20	25.27	4.00
860	10.32	15.66	23.83	4.66
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979	8.91	20.60	18.18	3.80
980	7.03	18.10	18.99	2.80

V.C.McDonald
Chemist

V. C. McDonald

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER

For Month of February, 1973

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $95,450
Gov't. Participation % 50 $47,725

Operator's Name Hicks Dome Acct.
c/o Gilbert Kerlin, Esq.
Address Shearman and Sterling, 53 Wall St.
New York, NY 10005

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs. Dozing	-	-	42	525.00	—	—	42	525.00
Rotary Drilling	91'	354.90	816	3,282.40	91	354.90	816	3,182.40
Cored NX 0-500'	264'	1,161.60	1086	4,804.80	264	1161.60	1092	4,804.80
500-1000'	201'	964.80	840	4,032.00	201	964.80	840	4,032.00
1000-1500'	-	-	230	1,242.00	—	—	230	1,242.00
Cored BX 0-500'	70'	294.00	92	386.40	70	294.00	92	386.40
500-1000'	379'	1,743.40	788	3,624.80	379	1,743.40	788	3,624.80
1000-1500'	478'	2,485.60	1208	6,489.60	478	2,485.60	1248	6,489.60
1500-2000'	-	-	1000	6,100.00	—	—	1000	6,100.00
2000-2500'	-	-	526	3,839.80	—	—	526	3,839.80
Reaming	-	-	329	987.00	—	—	329	987.00
Water Supply, Mons.	1	300.00	4.7	1,410.00	1	300.00	4.7	1,410.00
Standby time	-	-	8	112.00	—	—	8	112.00
Drilling Mud, Bags	29	110.20	108	396.91	29	110.20	108	396.91
Caustic Soda	-	-	1	10.85	—	—	1	10.85
Quebracho	-	-	1	20.78	—	—	1	20.78
Freight & Handling	-	-	21	22.59	—	—	21	22.59
BX casing lost	-	-	157	392.60	—	—	157.04	392.60
Category (2)								
Geologist-Supervisor	1	1,250.00	5	6,250.00	1	1,250.00	5	6,250.00
Sampler	1	95.26	4	330.37	1	95.26	4	330.37
Category (3)								
Road Rock, tons	-	-	199.9	327.73	—	—	199.9	327.73
Core Boxes	134	167.50	645	806.25	134	167.50	645	806.25
Sample Bags	29	-10.15	81	27.10	29	10.15	81	27.10
Category (7)								
Office Expense	1	85.03	5	485.03	1	85.03	5	485.03
Trans. of samples	29	15.83	54	31.66	29	15.83	54	31.66
Prepare & Assay CaF_2	50	156.50	94	295.00	50	156.50	94	295.00
Other Assays	-	-	27	35.50	—	—	27	35.50
Spectro. Anal.	13	130.00	32	301.00	13	130.00	32	301.00
TOTALS		$9,324.77		$46,470.17		$9,324.77		$46,469.17

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 3, 1973 *Payee Hicks Dome Account
Joseph A. Porter

Per [signature] Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kishemo Chief, OME ~~Field Officer~~ Date 4/9/73

(63) 14X0804

Approved for: $4,662.39
(SUBJECT TO AUDIT)

Signature [signature]

Date 13 APR 1973 Vou. No. R3363A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)
Considered casing shoe lost on hole OME-2 as equivalent to 37.04 feet of BX casing.

Category (7)
Consists of $75.26, Secretarial and $9.77 telephone.

FOR GOVERNMENT USE

REMARKS

160103

RECEIVED
U.S. GEOLOGICAL SURVEY

APR 11 3 25 PM '73

BUDGET & FINANCE

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

Operator's Monthly Report

February, 1973

Hole OME-3 was drilled from 548 feet to 1,478 feet for a total of 930 feet. Hole OME-4 was drilled from 75 feet to 628 feet, a total of 553 feet. Total footage for the month was 1,483 feet.

As of the end of the month OME-3 was still in breccia. Mixing of fragments seems to be more pronounced than previously encountered. Stratigraphic horizons are indefinite due to the mixing. The breccia is sparingly mineralized throughout. Mineralization consists of traces of fluorspar, pyrite, barite, galena and sphalerite. The hole will be discussed in greater detail in the March report.

Hole OME-4 was in very cherty lower Grassy Knob at the end of the month. Cavities were encountered from 335 feet to 360 feet and from 377 feet to 384 feet. Both were apparently open, but they may have contained some mud. The hole was drilled NX to 430 feet, 70 feet past the large cavity. It was then reduced to BX. The reduction in size was necessary because considerable pressure is used to drill the hard Grassy Knob. If unsupported by casing, the rods would bow out in the cavity and a twist-off would have been inevitable.

There has been a certain amount of difficulty in keeping adequate crews on the rigs. During the month two drillers quit. Because of repeated absence, one was removed at our request, leaving only two crews. Efforts to get additional drillers have been unsuccessful. The remaining two crews will finish OME-3 and move over to OME-4.

Respectfully submitted,

Joseph A. Porter
Geologist
April 4, 1973

Please request
supporting universities
from Bangalore Hogan.
This is the second
unusually novel
claiming this item
without supporting
documentation.

Brian Flynn

Did so by
phone call to Porter

H. Kirkham

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

3-5-73

Mr. Joe Porter
Geologist
Rosiclare, Ill.

Hole OME-1
(Fredericks #1)

RE: CORE SAMPLES FOR FEBRUARY 1973

Sample No.	CaF_2	SiO_2	Total Calcium	$BaSO_4$
863	12.13	17.58	21.51	4.20
864	12.26	14.24	21.85	4.40
865	8.06	12.12	21.16	2.92
866	10.20	11.26	23.42	3.26
867	9.32	12.26	21.99	2.36
868	9.45	12.96	22.40	1.44
869	7.15	11.50	21.94	2.60
870	3.88	12.60	20.21	1.30
871	5.10	9.10	20.41	2.80
872	4.3.	10.42	20.35	2.00
873	5/09	4.00	21.16	0.70
874	2.55	11.02	20.35	3.00
875	3.83	5.38	20.48	4.22
876	3.78	5.02	21.51	1.00
877	3.83	5.50	21.17	0.60
878	5.10	16.82	20.04	1.90
853	9.70	15.00	23.90	4.76
851	4.09	3.86	30.87	4.04
852	6.13	10;82	29.71	6.38
854	7.91	15.04	23.88	4.60
855	9.01	15.76	24.52	4,82

V6C.McDonald
Chemist

V.C. McDonald

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 39 69 05 14 03 203			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, N. Y. 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116627

INVOICE DATE 3-9-73

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,483' core drilling at Hicks Dome, Illinois for period ending February 25, 1973 as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST UNIT		TOTAL COST
	P-3-OME-3	NX	548.	749.		201.	4.80		$ 964.80
		BX	749.	1000.		251.	4.60		1,154.60
		BX	1000.	1478.		478.	5.20		2,485.60
	H-6 OME-4	6¼" R.B.	75.	157.		82.	3.90		319.80
		3-7/8" R.B.	157.	166.		9.	3.90		35.10
		NX	166.	430.		264.	4.40		1,161.60
		BX	430.	500.		70.	4.20		294.00
		BX	500.	628.		128.	4.60		588.80
									$7,004.30
	MUD USED UP								
		29 100-lb. bags drilling mud @ $3.80/bag							110.20
	CORE BOXES USED								
		134 Cardboard Core Boxes @ $1.25/ea.							167.50
	FURNISHING WATER								
		Jan. 26 through Feb. 25, 1973							
		One (1) month @ $300.00/mo.							300.00

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4133-6 4/67
4134-SINGLE 4/67

09007

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr Gilbert Martin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05125627

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	MISCELLANEOUS CHARGES (DETAIL ATTACHED)							
			Joy A. Stacy for tractor service					$ 180.00
								$7,770.00

CERTIFIED TRUE COPY

FORM P138A

INVOICE (CONTINUATION)

Paid Roy A. Stone 2-24-73 Ck #481

Jay Co.

1-27-73	hauled mud pipe	2 hrs
1-30-73	hauled mud & oil	4 hrs
1-31-73	hauled oil, casing, Core Barrels to Lamars Veg. pipe to Butler	8 hrs
~~1-31-73~~	~~2 Bales hay @ 75 each $2.25~~	
2-1-73	hauled 700 lbs mud	2 hrs
2-2-73	hauled core barrels, oil	3 hrs
2-5-73	hauled mud to Sucksings	
	" core barrels to Carls Lugs	3 hrs
2-6-73	" oil to Smith rig	4 hrs
	~~3 bales hay @ 75 $2.25~~	
2-7-73	hauled casing to drills	3 hrs
2-8-73	hauled pipe	3 hrs
	" Core Barrels & oil	
2-9-73	" drill barrels	2 hrs
2-14-73	pull pump with tractor pipe & Gas	7 hrs
2-17-73	pull truck	2 hrs
2-18-73	hauled oil	2 hrs
Feb 20-73	" "	2 hrs
~~Feb 22-73~~	~~pulled out motor & board~~	~~3 hrs~~
		~~50 hrs~~
	~~6 tires @ 75 $4.50~~	47 hrs.
	~~50 hrs @ 4.00 $200.00 + $4.50 $204.50~~	

47 hrs @ 4.00 = $188.00

CERTIFIED TRUE COPY

TRAIN CABOT INC 004100525

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		7[illegible]	FICA TAX	4095	FED.TAX	10067	GROSS PAY	200000
			STATE TX	1333	GRP INS	1057	FICA	16360
							FED TAX	40268
							STATE TAX	3332

FOR PERIOD ENDING 02-28-7[illegible]

NET PAY

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 16552 534.48

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

TRAIN CABOT INC 004059930

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	210000
			STATE TX	1333	GRP INS	1057	FICA	12285
							FED TAX	30201
							STATE TAX	3999

FOR PERIOD ENDING 02-15-73

NET PAY

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 16552 534.48

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

Note: This for labor [illegible] sewing of bags

Ruth McClendon 1-27-73

40 Bags @ 50¢ per bag —
Amt. $20.00

ck #863 - $20.00
1/30/73

CERTIFIED TRUE COPY

STATEMENT

FROM V.C. McDonald (Laboratory)
Hosiclare, Ill.

19

TO Mr. Joe Porter (Geologist
ADDR. Hosiclare, Ill.
CITY
TERMS

21 Samples of 4 Determinations each		$ 84.00
	V.C. McDonald Chemist	
Ck #[illegible] - $[illegible] 3/5/73		

CERTIFIED TRUE COPY

SKYLINE LABS, INC.
SPECIALISTS IN GEOCHEMICAL EXPLORATION
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033
TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 9296
JOB NO.: M-1799
P.O. NO.:

DATE: February 12, 1973

TERMS: NET 30 DAYS

SOLD TO: Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 29 Rock Chip Samples

13 Semi-quant spectrographic analysis @ $10.00	$ 130.00
29 Fluorine @ $2.00	58.00
29 Samples crushed, split and pulverized @ $.50	14.50
Sub Total	$ 202.50
Shipping charges advanced	15.83
TOTAL	$ 218.33

Paid ch #1873 $218.33
2/22/73

CERTIFIED TRUE COPY

ORIGINAL INVOICE

March 2, 1973

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Sir:

Enclosed is check for $178.28, representing wages earned for 86 hours during the month of February, 1973. Amount due was calculated as follows:

86 hrs. @ $2.25		$193.50
Fed. I. C.	$3.20	
State I. C.	.70	
S.S.	11.32	15.22
		$178.28

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

Charge OME
40. hrs x 2.25 = $90.00
5.85% S.S. 5.24
Total OME — $95.24

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Roy A. Stacey
Name, S.S. No., Dependents

Feb., 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
2-6-73			4 hrs	hauled cars to Louisville	
2-7-73			2 hrs	hauled cars from Paris	
2-8-73			2 hrs	"	" to home
2-12-73			4 hrs	"	" " from Paris
2-13-73			4 hrs	"	" " "
2-15-73			4 hrs	trip to Evansville	
2-17-73			2 hrs	hauled cars	
2-19-73			4 hrs	trip to Paducah	
2-20-73			6 hrs	hauled cars to Louisville	
2-22-73			2 hrs	cars to home	
2-23-73			2 hrs	"	" "
2-24-73			2 hrs	"	" "
2-26-73			2 hrs	"	" "
2-27-73			8 hrs	hauled cars to Louisville	
			48 hrs		
Below listed hours worked in Surveying					
2-9-73			6 hrs	help	Surveying
2-10-73			8 hrs	"	"
2-12-73			4 hrs	"	"
2-13-73			4 hrs	"	"
2-16-73			8 hrs	"	"
2-17-73			4 hrs	"	"
2-19-73			4 hrs	"	"
	48		38 hrs	CERTIFIED TRUE COPY	
	38				
	86				

Roy A Stacey

Box

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

March 1, 1973

Mrs. Vera Bishop
Elizabethtown
Illinois:

Dear Vera:

Enclosed find a check in the amount of $61.67, representing wages earned during the month of February.

39½ hrs.	x	$1.80	=	$71.10
S.S.	4.16			
State I.T.	1.97			
Fed. I. T.	3.40			9.43
				$61.67

Sincerely,

Joseph A. Porter

JAP:vb
Encl.

Chg 201 to DME

71.10
- 4.16
Total $75.26

CERTIFIED TRUE COPY

Joseph A. Porter

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537-0
Name, S.S. No., Dependents

February, 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Thurs. 2/1	10:30	3:30	5		
Fri. 2/2	11:15	12:15	1		
Mon. 2/5	12:00	4:30	4 ½		
Tues. 2/6	11:30	3:30	4		
Wed. 2/7	2:30	4:00	1 ½		
Thurs. 2/8	11:00	4:00	5		
Wed. 2/14	11:15	3:15	4		
Tues. 2/20	12:45	2:45	2		
Thurs. 2/22	11:30	3:30	4		
Fri. 2/23	8:00	11:00	3		
Tues 2/27	11:30	3:30	4		
Wed 2/28	10:30	12:00	1 ½		
			39 ½		

CERTIFIED TRUE COPY

Telephone Expenses
February, 1973
OME-HDA

Date	To	Person	Amount
1/19	Washington, D.C.	Kirkemo	$5.20
1/23	Carmi, IL	Dikor	1.62
1/25	Carmi, IL	Dikor	.50
1/25	Carmi, IL	Dikor	.55
2/5	LaPorte IN	Joy Mfg.	.90
2/8	Princeton KY	Trace	1.00
		Total	$9.77

CERTIFIED TRUE COPY

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

APR 1 1 1973

Memorandum

To: Allen V. Heyl, Geologist

From: Harold Kirkemo, Chief, Office of Minerals Exploration

Subject: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois
Contract 2306

Enclosed are copies of the Operator's Monthly Report for Oct-Dec. 1972, Jan.-Feb. 1973, and accompanying maps, cross sections, and analyses.

This material should bring you up-to-date on the Hicks Dome project. OME - Drill Hole 4 is not yet finished.

In our telephone discussion yesterday concerning amending the contract to allow additional drilling, I neglected to mention that Joe Porter had suggested rotary drilling the upper portions of the new holes. He feels confident that he can predict the depths where we would want core drilling to start, and some cost savings would be possible. I favor this idea but would like opinions from you and Bob before drafting the plan and costs for the amendment.

I hope that you can go to the meeting in Paducah, and can arrange to visit the Hicks Dome project sometime in the last week of April.

As I mentioned to you and Bob yesterday, I would appreciate your views, comments, and recommendations for additional drilling on this project. Porter is submitting very shortly a proposal for about six more holes.

We may have about $58,000 available for obligation on OME contracts by June 30, 1973. If Porter's proposal, after review by you and Bob, has merit, we could obligate most, if not all, of this amount to the Hicks Dome Project.

Harold Kirkemo

Harold Kirkemo

Copy to: Robert A. Trace
U. S. Geological Survey
Princeton, Kentucky 42445

cc: Director's reading file
OME reading file
Mineral Resources

Mr. Laurence R-IV
Mr. Kirkemo
HKirkemo/cac 4/11/73

Box 447 Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois
62982

April 5, 1973

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 9 1973

INITIALS	CODE
Cal	120
	120

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are original and three copies of Operator's Monthly Voucher and Monthly Report for February, 1973. Due to difficulties in getting copy work done, I have included only one copy of documents substantiating the voucher. I trust that this is sufficient.

Updated cross sections and maps will be included with the March reports.

Sincerely,

Joseph A. Porter

JAP:vb
Encs.

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OPERATOR'S MONTHLY VOUCHER For Month of February, 1973

Operator's Name Hicks Dome Acct. c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St. New York, NY 10005

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $95,450
Gov't. Participation % 50 $47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
Category (1)		$		$		$		$
Hrs. Dozing	-	-	42	525.00	—	—	42	525.00
Rotary Drilling	91'	354.90	816	3,282.40	91	354.90	816	3182.40
Cored NX 0-500'	264'	1,161.60	1086	4,804.80	264	1161.60	1092	4804.80
500-1000'	201'	964.80	840	4,032.00	201	964.80	840	4,032.00
1000-1500'	-	-	230	1,242.00	—	—	230	1,242.00
Cored BX 0-500'	70'	294.00	92	386.40	70	294.00	92	386.40
500-1000'	379'	1,743.40	788	3,624.80	379	1743.40	788	3,624.80
1000-1500'	478'	2,485.60	1208	6,489.60	478	2485.60	1248	6489.60
1500-2000'	-	-	1000	6,100.00	—	—	1000	6,100.00
2000-2500'	-	-	526	3,839.80	—	—	526	3,839.80
Reaming	-	-	329	987.00	—	—	329	987.00
Water Supply, Mons.	1	300.00	4.7	1,410.00	1	300.00	4.7	1,410.00
Standby time	-	-	8	112.00	—	—	8	112.00
Drilling Mud, Bags	29	110.20	108	396.91	29	110.20	108	396.91
Caustic Soda	-	-	1	10.85	—	—	1	10.85
Quebracho	-	-	1	20.78	—	—	1	20.78
Freight & Handling	-	-	21	22.59	—	—	21	22.59
BX casing lost	-	-	157	392.60	—	—	157.04	392.60
Category (2)								
Geologist-Supervisor	1	1,250.00	5	6,250.00	1	1,250.00	5	6,250.00
Sampler	1	95.26	4	330.37	1	95.26	4	330.37
Category (3)								
Road Rock, tons	-	-	199.9	327.73	—	—	199.9	327.73
Core Boxes	134	167.50	645	806.25	134	167.50	645	806.25
Sample Bags	29	-10.15	81	27.10	29	10.15	81	27.10
Category (7)								
Office Expense	1	85.03	5	485.03	1	85.03	5	485.03
Trans. of samples	29	15.83	54	31.66	29	15.83	54	31.66
Prepare & Assay CaF_2	50	156.50	94	295.00	50	156.50	94	295.00
Other Assays	-	-	27	35.50	—	—	27	35.50
Spectro. Anal.	13	130.00	32	301.00	13	130.00	32	301.00
TOTALS		$9,324.77		$46,470.17		$9,324.77		$46,469.17

I certify that the above bill is correct and just and that payment therefor has not been received.

Date April 3, 1973 *Payee Hicks Dome Account
Joseph A. Porter

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Kishomo Chief, OME ~~Field Officer~~ 4/9/73 Date

Approved for: $
(SUBJECT TO AUDIT)

Signature

Date Vou. No.

(SEE OTHER SIDE)

FOR OPERATOR'S USE	FOR GOVERNMENT USE
REMARKS	REMARKS
Category (1) Considered casing shoe lost on hole OME-2 as equivalent to 37.04 feet of BX casing. Category (7) Consists of $75.26 Secretarial and $9.77 telephone.	

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 152[illegible]

CUSTOMER ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	J.O. NO.

CONTRACT	CODE	DATE	AT SHIP POINT
	23 [illegible] 03 14 03 [illegible]		

SOLD TO
[illegible]80
Mr. Gilbert Kerlin
[illegible] Wall Street
New York, N. Y. 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. [illegible]

INVOICE DATE 3-[illegible]-73

SHIPPED TO
Hicks Dome, Illinois

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,483' core drilling at Hicks Dome, Illinois for period ending February 1973 as per agreement.								
	PROSPECT No.		FROM	TO		TOTAL FT.	COST PER FT.		TOTAL
	P-3-OME-3	NX	540.	749.		201.	4.[illegible]		$ [illegible]
		BX	749.	1000.		251.	4.[illegible]		[illegible]
		BX	1000.	1478.		478.	5.[illegible]		[illegible]
	M-6 OME-4	6¼" R.B.	75.	157.		82.	3.[illegible]		[illegible]
		3-7/8" R.B.	157.	166.		9.	3.[illegible]		[illegible]
		NX	166.	430.		264.	[illegible]		[illegible]
		BX	430.	500.		70.	[illegible]		[illegible]
		BX	500.	628.		128.	4.[illegible]		[illegible]
									$[illegible]
	MUD USED UP								
		29 100-lb. bags drilling mud @ $3.80/bag							[illegible]
	CORE BOXES USED								
		134 Cardboard Core Boxes @ $1.[illegible]5/ea.							
	FURNISHING WATER								
		Jan. 26 through Feb. 25, 1973							
		One (1) month @ $[illegible].00/mo.							300

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(a).

4133-6 4/67
4134-SINGLE 4/67

JOY MANUFACTURING COMPANY

PAGE NO.

OLD
O

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
[illegible]		[illegible]	[illegible] (DETAIL ATTACHED)					
			by A. Stacy for travel service					$ [illegible]
								$[illegible] 00

CERTIFIED TRUE COPY

[signature]

JOM FIGLR

INVOICE (CONTINUATION)

Paid Forf & Stow
2-24-73
Ck #481

Jay Co.

1-27-73	hauled mud mixer	2 hrs
1-30-73	hauled mud & oil	4 hrs
1-31-73	hauled oil, casing, Core Barrels to Lamars rig.	
	pipe to Bulk	8 hrs
~~1-31-73~~	~~2 Bdrm @ 75 each $2.25~~	
2-1-73	hauled 700 lbs mud	2 hrs
2-3-73	hauled core barrels, oil	3 hrs
2-5-73	hauled mud to Sucks rig	
	" core barrels to Carls Rig	3 hrs
2-6-73	" oil to Smith rig	4 hrs
	~~3 bdrm @ 75 $2.25~~	
2-7-73	hauled casing to Dills	3 hrs
2-8-73	hauled pipe	3 hrs
	" Core Barrels & oil.	
2-9-73	" drill barrels	2 hrs
2-14-73	pull pump with tractor pipe & Gas	7 hrs
2-17-73	pull tank	2 hrs
2-18-73	hauled oil	2 hrs
Feb 22-73	" "	2 hrs
~~Feb 22-73~~	~~pulled out motor to road~~	~~2 hrs~~
		50 hrs
	~~6 trailers @ 75 $450~~	47 hrs
	~~Labor @ 4.00 200.00 + 400 $2,450~~	
	47 hrs @ 4.00 =	$188.00

CERTIFIED TRUE COPY

TRAIN CABLE INC

REG	[illegible]	FICA TAX	[illegible] FED.TAX	10067	[illegible]
		STATE TX	[illegible] GRP INS	[illegible]	[illegible]
					[illegible]
					[illegible]

2-28-7[illegible]

TOTAL EARNINGS [illegible] TOTAL DEDUCTIONS 165[illegible]2 [illegible]

JOSEPH A PORTER 501 1 020 [illegible]

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

TRAIN CABLE INC 0040[illegible]

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	[illegible] 11000
			STATE TX	1335	GRP INS	1057	[illegible] 12[illegible]
							[illegible] 30201
							[illegible] 3999

02-15-73

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 16552 [illegible]4.48

JOSEPH A PORTER 501 1 020 00044

5755

STATEMENT OF EARNINGS AND DEDUCTIONS

STATEMENT

FROM V.C.McDonald (Laboratory)
Mosiclare, Ill.

19

TO Mr. Joe Porter (Geologist
ADDRESS Mosiclare, Ill.
CITY
TERMS

	21 Samples of 4 Determinations each		$ 84.00

V.C. McDonald
Chemist

Ck # 863 - $84.00
3/5/73

CERTIFIED TRUE COPY

Mr. Clendon

1-27-73

To Paper @ $2.00 per hour
Chem.

Ck # 863 - $20.00
1/30/73

CERTIFIED TRUE COPY

SKYLINE LABS, INC.
SPECIALISTS IN GEOCHEMICAL EXPLORATION
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033
TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 9296
JOB NO.: M-1799
P.O. NO.:

DATE: February 12, 1973

TERMS: NET 30 DAYS

SOLD TO: Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 29 Rock Chip Samples

13 Semi-quant spectrographic analysis @ $10.00	$ 130.00
29 Fluorine @ $2.00	58.00
29 Samples crushed, split and pulverized @ $.50	14.50
Sub Total	$ 202.50
Shipping charges advanced	15.83
TOTAL	$ 218.33

Paid ch #1873 $218.33
2/22/73

CERTIFIED TRUE COPY

ORIGINAL INVOICE

March 2, 1973

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Sir:

Enclosed is check for $178.28, representing wages earned for 86 hours during the month of February, 1973. Amount due was calculated as follows:

86 hrs. @ $2.25		$193.50
Fed. I. C.	$3.20	
State I. C.	.70	
S.S.	11.32	15.22
		$178.28

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

Charge DME.
40. hrs x 2.25 = $90.00
5.85% S.S. 5.22
Total DME — $95.22

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Roy A. Stacey
Name, S.S. No., Dependents

Feb., 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
2-6-73			4 hrs	hauled cars to Louisville	
2-7-73			2 hrs	hauled cars from Carlisle	
2-8-73			2 hrs	" " to Louisville	
2-12-73			4 hrs	" " " from Lil'S	
2-13-73			4 hrs	" " " "	
2-15-73			4 hrs	trip to Evansville	
2-17-73			2 hrs	hauled cars	
2-19-75			4 hrs	trip to Paducah	
2-20-73			6 hrs	hauled cars to Louisville	
2-22-73			2 hrs	cars to Louisville	
2-23-73			2 hrs	" " "	
2-24-73			2 hrs	" " "	
2-26-73			2 hrs	" " "	
2-27-73			8 hrs	hauled cars to Louisville	
			48 hrs		
Below listed hours worked in surveying					
2-9-73			6 hrs	help surveying	
2-10-73			8 hrs	" "	
2-12-73			4 hrs	" "	
2-13-73			4 hrs	" "	
2-16-73			8 hrs	" "	
2-17-73			4 hrs	" "	
2-19-73			4 hrs	" "	
	48		38 hrs	CERTIFIED TRUE COPY	
	38				
	86				

Roy A Stacey

Box 447

Phone (618) 28[illegible]385

Joseph A. Porter
Geologist
Rosiclare, Illinois
62982

March 1, 1973

Mrs. Vera Bishop
Elizabethtown
Illinois:

Dear Vera:

Enclosed find a check in the amount of $61.67, representing wages earned during the month of February.

39½ hrs.	x	$1.80	=	$71.10
S.S.	4.16			
State I.T.	1.87			
Fed. I. T.	3.40			9.43
				$61.67

Sincerely,

Joseph A. Porter

JAP:vb
Encl.

Chg to OME

71.10
- 4.16
Total 75.26

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537-0
Name, S.S. No., Dependents

February, 1973
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Thurs. 2/1	10:30	3:30	5		
Fri. 2/2	11:15	12:15	1		
Mon. 2/5	12:00	4:30	4 ½		
Tues 2/6	11:30	3:30	4		
Wed. 2/7	2:30	4:00	1 ½		
Thurs. 2/8	11:00	4:00	5		
Wed. 2/14	11:15	3:15	4		
Tues. 2/20	12:45	2:45	2		
Thurs. 2/22	11:30	3:30	4		
Fri. 2/23	8:00	11:00	3		
Tues 2/27	11:30	3:30	4		
Wed 2/28	10:30	12:00	1 ½		
			39 ½		

CERTIFIED TRUE COPY

Telephone Expenses
February, 1973
OME-HDA

Date	To	Person	Amount
1/19	Washington, D.C.	Kirkemo	$5.20
1/23	Carmi, IL	Dikor	1.62
1/25	Carmi, IL	Dikor	.50
1/25	Carmi, IL	Dikor	.55
2/5	LaPorte IN	Joy Mfg.	.90
2/8	Princeton KY	Trace	1.00
		Total	$9.77

CERTIFIED TRUE COPY

Operator's Monthly Report

February, 1973

Hole OME-3 was drilled from 548 feet to 1,478 feet for a total of 930 feet. Hole OME-4 was drilled from 75 feet to 628 feet, a total of 553 feet. Total footage for the month was 1,483 feet.

As of the end of the month OME-3 was still in breccia. Mixing of fragments seems to be more pronounced than previously encountered. Stratigraphic horizons are indefinite due to the mixing. The breccia is sparingly mineralized throughout. Mineralization consists of traces of fluorspar, pyrite, barite, galena and sphalerite. The hole will be discussed in greater detail in the March report.

Hole OME-4 was in very cherty lower Grassy Knob at the end of the month. Cavities were encountered from 335 feet to 360 feet and from 377 feet to 384 feet. Both were apparently open, but they may have contained some mud. The hole was drilled NX to 430 feet, 70 feet past the large cavity. It was then reduced to BX. The reduction in size was necessary because considerable pressure is used to drill the hard Grassy Knob. If unsupported by casing, the rods would bow out in the cavity and a twist-off would have been inevitable.

There has been a certain amount of difficulty in keeping adequate crews on the rigs. During the month two drillers quit. Because of repeated absence, one was removed at our request, leaving only two crews. Efforts to get additional drillers have been unsuccessful. The remaining two crews will finish OME-3 and move over to OME-4.

Respectfully submitted,

Joseph A. Porter
Geologist
April 4, 1973

Box 592
Rosiclare, Ill. 62982

V. C. McDonald
Chemist Assayer
Lab. Flotation Research

Telephone 285-6823
(Area Code 618)

3-5-73

Mr. Joe Porter
Geologist
Rosiclare, Ill.

Hole OME-1
(Fredericks #1)

RE: CORE SAMPLES FOR FEBRUARY 1973

Sample No.	CaF_2	SiO_2	Total Calcium	$BaSO_4$
863	12.13	17.58	21.51	4.20
864	12.26	14.24	21.85	4.40
865	8.06	12.12	21.16	2.92
866	10.20	11.26	23.42	3.26
867	9.32	12.26	21.99	2.36
868	9.45	12.96	22.40	1.44
869	7.15	11.50	21.94	2.60
870	3.88	12.60	20.21	1.30
871	5.10	9.10	20.41	2.80
872	4.3.	10.42	20.35	2.00
873	5/09	4.00	21.16	0.70
874	2.55	11.02	20.35	3.00
875	3.83	5.38	20.48	4.22
876	3.78	5.02	21.51	1.00
877	3.83	5.50	21.17	0.60
878	5.10	16.82	20.04	1.90
853	9.70	15.00	23.90	4.76
851	4.09	3.86	30.87	4.04
852	6.13	10;82	29.71	6.38
854	7.91	15.04	23.88	4.60
855	9.01	15.76	24.52	4,82

V6C.McDonald
Chemist

V.C. McDonald

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

MAR 14 1973

Mr. Joseph A. Porter
Geologist
Box 447
Rosiclare, Illinois 62982

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois
Contract 2306

Dear Mr. Porter:

Enclosed is a copy of the front and back sides of the voucher for January 1973 as I have approved it for transmittal to the Branch of Financial Management for processing.

As you see the total disallowance from your claim is only $53.56, and that is for Office Expense. I have justified in the Remarks the other claims we discussed by phone on March 13. Hopefully, these will be acceptable to the Branch of Financial Management, and the voucher approved for payment as submitted.

I hope this will be useful to you in preparing the voucher for February.

Sincerely yours,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Enclosures

cc: Director's reading file
Mineral Resources
OME reading file
Region IV
Mr. Kirkemo

HKirkemo/cac 3/14/73

Box 447

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

March 9, 1973

COPY

R 13 1973

CODE

HK 120

Mr. Harold Kirkemo
Chief, Office Of Minerals Exploration
U.S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are copies of two items inadvertently left out when the January Voucher was submitted. Would you please add these previously submitted receipts. to the

Sincerely yours,

Joseph A. Porter

Joseph A. Porter

JAP/vb

Encl. 8

Box 447

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

March 8, 1973

COPY
O. M. E.
RECEIVED
MAR 12 1973
INITIALS | CODE
Cac | 120 m
| 120
| BW

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed find the Monthly Voucher and Operator's Narrative Report for January, 1973. Part of the material was prepared early in February, but various delays in copy work caused delay in completing the report.

Copies of the detailed geologic log referred to in the Narrative Report are not included. Copy will be forwarded when all assay information is in and added to the log. Attached but not referred to is a table comparing the assay results of Skyline and McDonald for Hole OME-1.

I trust the material is in order. Please advise if this is not the case.

Sincerely yours,

Joseph A. Porter

JAP:vb
Enc.

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OFFICIAL COPY O. M. E. RECEIVED 1973 MAR 26 AM 10:24

OPERATOR'S MONTHLY VOUCHER For Month of January, 1973

Hicks Dome Account

Operator's Name c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St.
New York, New York 10005

Docket No. OME 46873
Contract 14-08-0001-2306
Contract Amount 95,450
Gov't. Participation 50 / 47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs. Dozing	14	175.00	42	525.00	14	175.00	42	525.00
Rotary Drilling	103'	401.70	725	2,827.50	103	401.70	725	2827.50
Cored, NX 0-500'	89'	391.60	828'	3,643.20	89	391.60	~~824~~ 828	3643.20
500-1000	48'	230.40	639	3,067.20	48	230.40	639	3067.20
1000-1500	-	-	230	1,242.00	—	—	230	1242.00
Cored, BX 0-500'	22'	92.40	22	92.40	22	92.40	22	92.40
500-1000'	273'	1,255.80	409	1,881.40	273	1,255.80	409	1881.40
1000-1500'	500'	2,600.00	770	4,004.00	500	2600.00	~~735~~ 770	4004.00
1500-2000'	500'	3,050.00	1000	6,100.00	500	3,050.00	1000	6100.00
2000-2500'	200'	1,460.00	526	3,839.80	200	1,460.00	526	3839.80
Reaming	101'	303.00	329	987.00	101	303.00	329	987.00
Water Supply, mons.	1	300.00	3.7	1,110.00	1	300.00	3.7	1110.00
Standby time, hrs.	6	84.00	8	112.00	6	84.00	8	112.00
Drilling Mud, bags	45	171.00	79	286.71	45	171.00	79	286.71
Caustic Soda	-	-	1	10.85	—	—	1	10.85
Quebracho	-	-	1	20.78	—	—	1	20.78
Freight & Handling	-	-	21	22.59	—	—	21	22.59
BX Casing lost	120'	300.00	120	320.00	120	300.00	120	300.00
Casing Shoe lost	1	92.60	1	92.60	37.04	92.60	37.04	92.60
Category (2)								
Geologist-Supervisor	1	1,250.00	4	5,000.00	1	1250.00	4	5,000.00
Sampler	2	126.33	4	235.11	2	126.23	3	235.11
Category (3)								
Tons Road Rock	169	273.65	199.9	327.73	169	273.65	199.9	327.73
Core Boxes	231	288.75	511	638.75	231	288.75	511	638.75
Sample Bags	27	9.45	52	16.95	27	9.45	52	16.95
Category (7)								
Office Expense	1	139.02	4	455.56	1	83.46	4	400.00
Trans. of Samples	-	-	25	15.83	—	—	25	15.83
Prepare & Assay CaF_2	19	76.00	44	138.50	19	76.00	44	138.50
Other Assays	-	-	27	35.50	—	—	27	35.50
Spectro. Anal.	-	-	19	171.00	—	—	19	171.00
TOTALS		13,070.60		37,199.96		$13,015.04		$37,144.40

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Feb. 6, 1973 *Payee Hicks Dome Account

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Okabomo Chief, OME ~~Field Office~~ Date 3/14/73

(63) 14X0804

Approved for: $6,507.52
(SUBJECT TO AUDIT)

Signature 28m7

Date 23 MAR 1973 Vou. No. R3238A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)
A total of 120' of casing and a casing shoe was lost in OME-2. A casing shoe was necessary in setting the casing because of caving ground. The shoe is considered a lost casing expense.

Category (2)
Since a small amount was earned by sampler in December payment was deferred till January.

14 U 90
RECEIVED
U.S. GEOLOGICAL SURVEY
MAR 16 11 43 AM '73
BUDGET & FINANCE

FOR GOVERNMENT USE

REMARKS

1/ Includes approval of 28 ft. of rotary bit (R.B.) drilling from 410' to 438' in Hole 3. Contractor billed at the $3.90/ft. price allowed for the 0-300' depth category for rotary drilling instead of the $4.40/ft. price for core drilling. This resulted in savings to the Government, and R.B. enabled completion of hole. Absence of core was not critical to geologic evaluation of the hole.

2/ Allow on per-foot price basis equivalent to BX casing. This device is a steel sleeve threaded to bottom end of casing as cutting head when casing is advanced through broken rock.

3/ Allow $83.46, disallow $55.56 in order to bring charges to date to a monthly allowable average of $100.00.

Harold Kirkham

4/ Allow $300.00. Operator's total in error.
HK.

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

STATEMENT

FROM Larry G. Robinson

Route 1, Herod, Ill.

January 1973

TO Joseph A. Porter (Hicks Dome Account)

ADDRESS Box 447

CITY Rosiclare, Ill.

TERMS Use of D-4 tractor dozing drill site

Jan	19	5½ hrs.	@12	.50	68	75
	20	6 hrs.	@12	50	75	00
	23	2½ hrs.	@12	50	31	25
			TOTAL		175.00	

Larry G. Robinson

Larry G. Robinson

paid ck # 865
2/2/73 - $ 175.00

CERTIFIED TRUE COPY

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116563

INVOICE DATE 2-7-73

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,735' core drilling at Hicks Dome, Illinois for period ending January 25, 1973 as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST	UNIT	TOTAL COST
	F-1 (OME-2)	BX	727.	1000.		273.	4	60	$1,255.80
		BX	1000.	1500.		500.	5	20	2,600.00
		BX	1500.	2000.		500.	6	10	3,050.00
		BX	2000.	2200.		200.	7	30	1,460.00
	H-6 (OME-4)	6¼" R.B.	0.	75.		75.	3	90	292.50
	P-3 (OME-3)	NX	361.	410.		49.	4	40	215.60
		3-7/8" R.B.	410.	438.		28.	3	90	109.20
		NX	438.	478.		40.	4	40	176.00
		BX	478.	500.		22.	4	20	92.40
		NX	500.	548.		48.	4	80	230.40
									$9,481.90
	REAMING								
	P-3 (OME-3)		361.	410.		49.			
			438.	490.		52.			
						101.' @	$3.00	/ft.	303.00
	MUD USED UP								
		45 100-lb. bags drilling mud @ $3.80/bag							171.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4134 4/67
(P133A)

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Rodin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05116563

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	CORE BOXES USED							
		F-1(OME-2)	166 Cardboard Core Boxes					
		H-5(OME-1)	57 Cardboard Core Boxes					
		P-3(OME-3)	8 Cardboard Core Boxes					
			231 Cardboard Core Boxes @ $1.25/ea.					$ 288.75
	CASING LOST							
		F-1(OME-2)	120 Feet BX Casing @ $2.50/ft.					300.00
			1 BX Diamond Set Casing Shoe		$185.20			
			Less 50% for usage		92.60			92.60
	FURNISHING WATER							
			Dec. 26 through Jan. 25					
			One (1) month @ $300.00/mo.					300.00
	SURVEY TIME							
		F-1(OME-2)	Jan. 18 6 hours @ $16.00/hr.					96.00
								$11,033.25

CERTIFIED TRUE COPY

FORM P138A

INVOICE (CONTINUATION)

TRAIN CABOT INC 003952170

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	70000
			STATL TX	1333			F.I.C.A.	4095
							FED. TAX	10067
							STATE TAX	1333
							FOR PERIOD ENDING	01-15-73
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			15495	NET PAY	545.05

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

TRAIN CABOT INC 004006690

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FICA TAX	4095	FED.TAX	10067	GROSS PAY	140000
			STATE TX	1333			F.I.C.A.	8190
							FED. TAX	20134
							STATE TAX	2666
							FOR PERIOD ENDING	01-31-73
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			15495	NET PAY	545.05

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

February 2, 1973

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Sir:

Enclosed is check for $112.27, representing wages earned for 21 hours during December and 32 hours during January. Amount due was calculated as follows:

53 hrs. @ $2.25	$119.25
S.S.	6.98
	$112.27

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Enc.

Total Earned 119.25
Social Security 6.98
Total Check $112.23

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Roy A. Stacey

December, 1972

Name, S.S. No., Dependents 2

Month

551-12-5269

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
12-14-72			4 hrs		hauled cares from bath reigo to house
12-19-72			2 hrs		cares to house
12-21-72			2 hrs		hauled cares to house
12-22-72			4 hrs		" " " house from bath rego
12-28-72			4 hrs		hauled cares to Rosiclare
12-29-72			3 hrs		" " to house
12-30-72			2 hrs		" " " "
		Total	21 hrs		

CERTIFIED TRUE COPY

Joan G Smith

Roy A Stacey

RECORD OF TIME WORKED

Roy A. Stacey

January, 1973

Month

Name, S.S. No., Dependents 2

351-12-5269

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
1-4-73			4 hrs		hauled cores to Quickers
1-17-73			4 hrs		" " graded road
1-18-73			2 hrs		" " to house
1-19-73			8 hrs		work, while bulldozer fixing pits
1-20-73			8 hrs		moved rig
1-30-73			2 hrs		hauled core to house
1-31-73			4 hrs		hauled cores to Rosiclare
		Total	32 hrs		

CERTIFIED TRUE COPY

James A. Stacey

Roy A. Stacey

Invoice No.

M. L. CONN & SONS

TRUCKING SERVICE

ELIZABETHTOWN, ILLINOIS

From ..... Date 1-27-73, 196

At ..... City ..... County ..... State

Consigned to Joe Porter

Destination ..... Street Rosiclare, Ill. City

County, State

DATE	DESCRIPTION	WEIGHT	RATE	TOTAL
	Road Rock to Hicks Dome Road	169.00 Tons	$0.85	$143.65
	Hauling Only	13 Loads	$10/Load	130.00
	Total			$273.65

ck #861 - $273.65
1/30/73

CERTIFIED TRUE COPY

Shipper ..... Glenn Conn Agent

Per ..... Per .....

February 5, 1973

Mrs. Vera Bishop
Elizabethtown
Illinois

Dear Vera:

Enclosed find a check in the amount of $114.22, representing wages earned during the month of January.

77 hrs.	x	$1.80	=	$138.60
S.S.		$8.11		
State I.T.		3.37		
Fed. I. T.		12.90		24.38
				$114.22

Sincerely,

JAP:vb
Encl.

Chg. OMC
70 hrs x $1.80 $126.00
5.8% S.S. 7.30
$133.30

CERTIFIED TRUE COPY

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537 0 January, 1973
Name, S.S. No., Dependents Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Fri. 12/29/72	11:00	5:00	6		2 hrs Accounting
Sat. 12/30/72	11:30	3:30	4		
Wed. 1/3	11:30	3:30	4		
Thurs. 1/4	11:30	3:30	4		
Fri. 1/5	11:30	3:30	4		
Mon. 1/8	11:30	3:30	4		
Tues. 1/9	11:30	3:30	4		
Wed 1/10	11:30	3:30	4		
Thurs. 1/11	10:30	3:30	5		3 hrs File
Mon. 1/15	10:30	3:30	5		2 hrs File
Tues. 1/16	11:00	3:30	4 ½		
Thurs. 1/18	11:30	3:30	4		
Fri. 1/19	12:00	3:30	3 ½		
Mon. 1/22	11:30	3:30	4		
Tues. 1/23	11:30	3:30	4		
Wed. 1/24	11/30	3:30	4		
Thurs. 1/25	11:00	4:00	5		
Tues. 1/30	11:30	3:30	4		
			77		

CERTIFIED TRUE COPY

January Phone Expenses
Chargeable OME-HDA

Date	Place	Person	Amount
12/20	LaPorte, Ind.	Joy	$2.40
1/3	Princeton, Ky.	Trace	.40
1/5	Washington	Kirkemo	1.00
1/5	LaPorte, Ind.	Joy	1.40
		Total Toll	$5.20
		Tax	.52
			$5.72

CERTIFIED TRUE COPY

James G. Potts

STATEMENT

FROM V.C.McDonald (Chemist)

Rosiclare, Illinois 62982

19

TO Mr. Joe Porter (Geogologist)

ADDRESS Rosiclare, Illinois

CITY Illinois 62982

TERMS

		CORE SAMPLES FOR JANUARY 1973	
1-31-73		56 Determinations @ $1.00 Each	$ 56.00

V.C.McDonald
Chemist

V.C. McDonald

paid- ck # 864
2/2/73 . $56.00

CERTIFIED TRUE COPY

STATEMENT

FROM V.C.McDonald (Chemist)

Rosiclare, Ill.

19

TO Mr. Joe Porter (Geogelogist)

ADDRES Rosiclare, Ill.

CITY

TERMS

RE: SORE SAMPLES

Sample No.	Date Run	Determinations
946	12-11-72	4
947	"	4
948	17	4
949	20	4
950	27	4
		20

20 Determinations @ $1.00 each $20.00

V.C.McDonald

V.C. McDonald

CERTIFIED TRUE COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey
Branch of Budget and Finance
Washington, D. C. 20242

ADMINISTRATIVE SUSPENSION STATEMENT

Name and Address of Payee: Hicks Dome Account
c/o Gilbert Kerlin, Esq.
Shearman and Sterlin
53 Wall Street
New York, New York 10005

Amount Claimed:	Differences (Explained Below)	Amount Approved
$ 13,070.60	$ 55.56	$ 13.015.04 $ 6,507.52 (Govt Part 50%)
Bu. Voucher No.	**Payee's Invoice No.**	**Period**
	Docket #6873 Contract #2306	January 1973

EXPLANATION

Category (7)

Office and Accounting Services

Claimed	$ 139.02
Allowed - in order to bring monthly charges to an allowable average of $ 100.00	83.46
	$ 55.56

Any reclaim for items deducted must be included as a separate item on subsequent monthly voucher and supported by the original of this statement.

Branch of Budget and Finance

OPERATOR'S MONTHLY REPORT

January, 1973

During the month OME-2 was drilled from 878' to a total depth of 2200'. Total footage was 1322'. OME-3 was drilled from 361' to 548', and OME-4 was started and rotary drilled to 75'.

A map showing the location of the subject holes is attached.

OME-2 is considered to have been reasonably successful and encouraging. The main breccia body was intersected at 1812', 490' beneath the base of the Maquoketa, approximately where projected. Fine gray rock flour breccia was encountered from 1928' to 2108'. Below 2108' the breccia was rather coarse and very dolomitic.

A mineralized zone was encountered within the fine breccia. It consisted of 157' of 11.3% CaF_2. This mineralization occurred between 1908' and 2065', 594' and 751' respectively beneath the base of the Maquoketa shale. This zone coincides with the lower part of the Plattin limestone. It correlates very well with the intersections in previous holes.

This mineralized zone had all the characteristics of the zone previously encountered. Fluorite consisted principally of fine grained purple disseminations and replacements in the matrix. Richer portions contained distinct coarse clear barite crystals as is usually encountered. Additionally, it had the fine disseminated yellow sphalerite and galena and spectographic analysis indicated lower but anomolous amounts of other metallics as previously encountered. It differed slightly from the other intersections in that there were increased amounts of coarse crystalline spar in small fractures and patches. Though this feature is usually seen, it was more prominent in this hole.

Though marginal in grade, considerable importance can be attached to this intersection. This occurrence at the same stratigraphic horizon where it was previously encountered offers rather conclusive proof that this is a favored horizon within the breccia mass surrounding Hicks Dome. This intersection also demonstrates that the mineralization is occurring over a very wide area. The nearest previously drilled hole was approximately 1500' to the east.

Assays cited are those of Skyline. Some McDonald assays are presently in. As was the previous case, McDonald's assays are consistently 1.5% to 2% lower than Skyline.

Attached are:

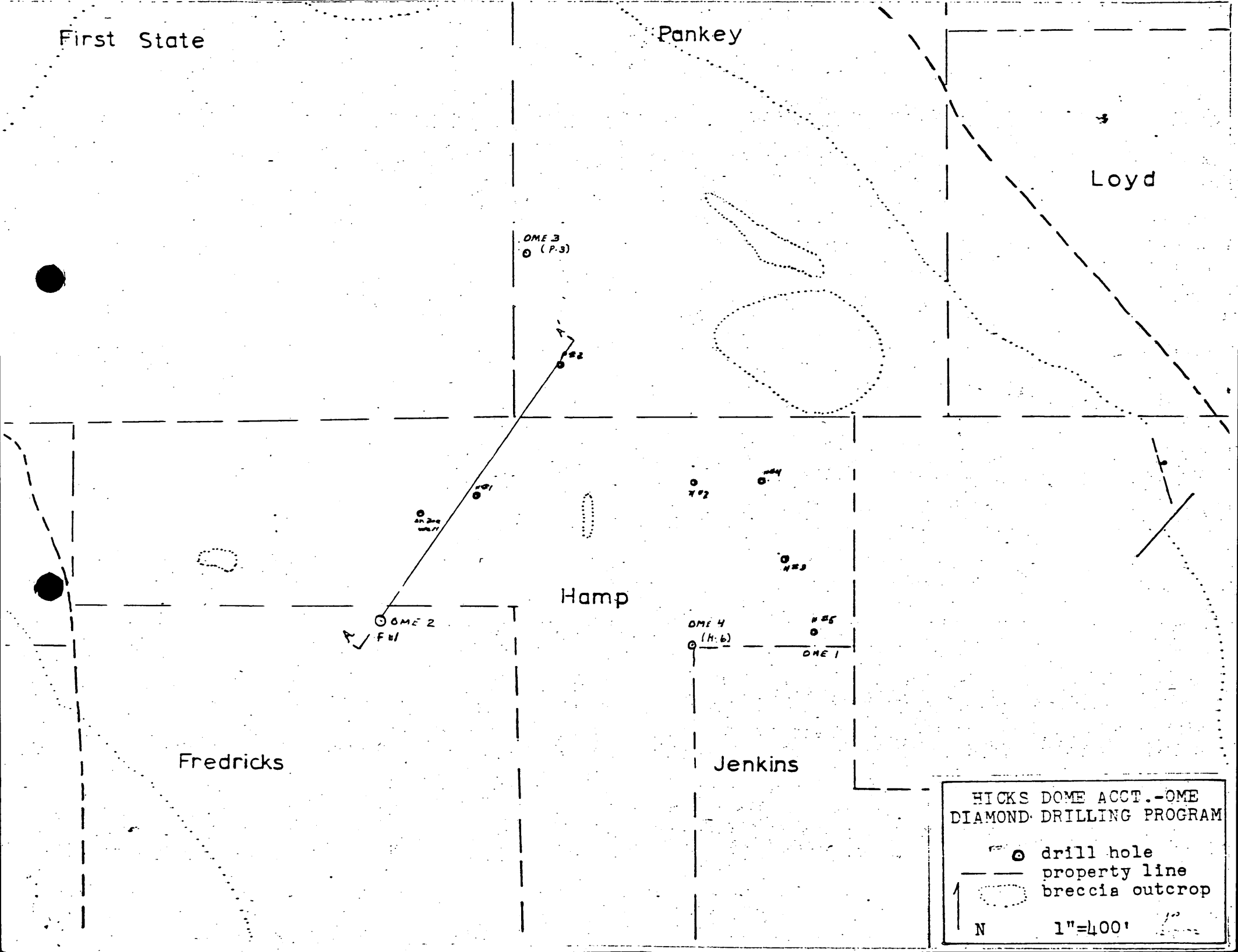
1. Summary Geologic Log
2. Cross section showing the relationship of OME-2 to the other holes on the southwest limb of Hicks Dome
3. Copies of assay certificates and spectrographic analyses
4. Detailed geologic log of the breccia zone
5. Columnar section and assay graph of the breccia zone.

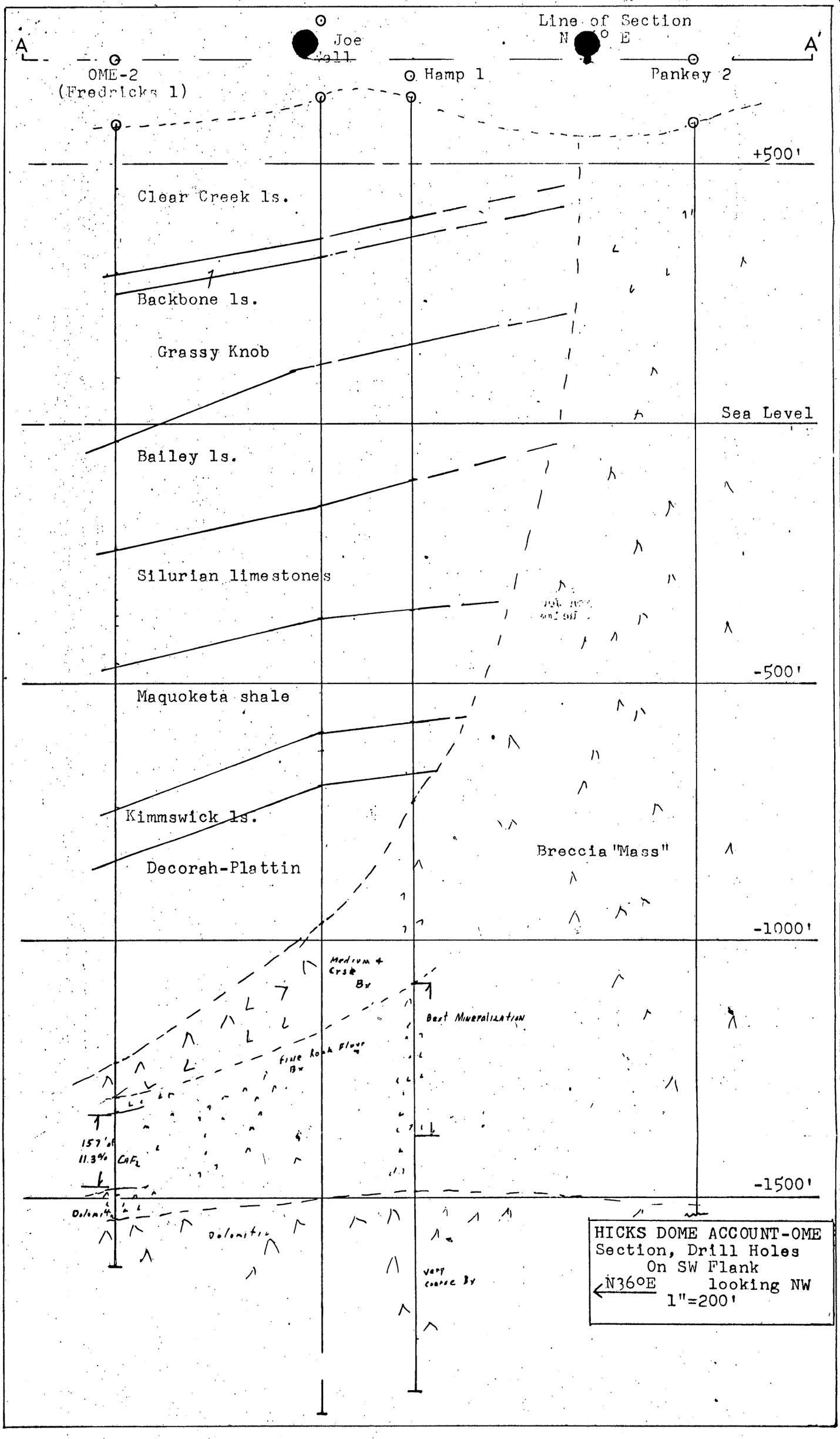
OME-3 was drilled from 361' to 548'. Substantial difficulties were encountered throughout. Difficulties were due principally to cavities and caving ground. The hole was reduced several times. At 361' the casing was pulled, and the hole was reamed to 410'. It was then drilled with a rock bit from 410' to 438'. The hole was subsequently cored from 438' to 478' where caving ground necessitated reduction to BX. It was then drilled BX to 490', where again caving ground required that all casing be pulled and the hole was reamed with a rock bit to 490'. NX casing was set at 490', and the hole was drilled NX to 548' by the end of the month.

Hole OME-4 was started at the northwest corner of the Jenkins property (Proposed Hole-B). The hole was drilled with a rock bit to a total of 75'. While pulling rods to unplug a stopped up bit, the drill collars and 10' of NX wireline rods were dropped down the hole. The rest of the month was spent in attempting to fish out the collars. These attempts were unsuccessful, and the hole was abandoned. The rig was subsequently moved over 5' and the hole restarted.

Respectfully submitted,

Joseph A. Porter
Geologist
March 2, 1973


First State
Pankey
Loyd
Hamp
Fredricks
Jenkins
OME 3
(P.3)
OME 2
F #1
OME 4
(H.6)
OME 1
HICKS DOME ACCT.-OME
DIAMOND DRILLING PROGRAM
drill hole
property line
breccia outcrop
N
1"=400'


A
A'
Line of Section
N 36° E
Joe Well
OME-2
(Fredricks 1)
Hamp 1
Pankey 2
+500'
Clear Creek ls.
Backbone ls.
Grassy Knob
Sea Level
Bailey ls.
Silurian limestones
-500'
Maquoketa shale
Kimmswick ls.
Decorah-Plattin
Breccia "Mass"
-1000'
Medium + Crse Bx
Best Mineralization
Fine Rock Flour Bx
157' of 11.3% CaF2
-1500'
Dolomite
Dolomitic
very coarse Bx
HICKS DOME ACCOUNT-OME
Section, Drill Holes
On SW Flank
N36°E looking NW
1"=200'

SUMMARY LOG
OME-2 (Fredericks Property)

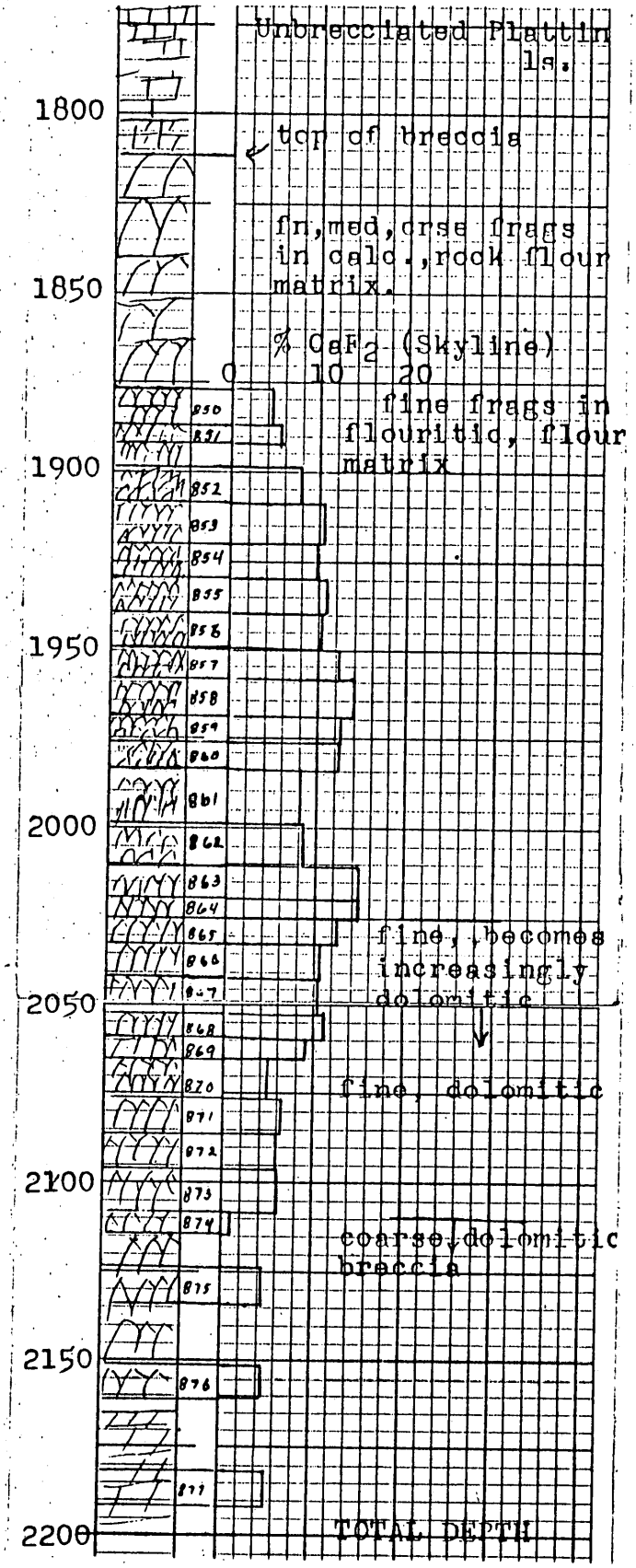
FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Cherty residuum	120	120
DEVONIAN			
Clear Creek ls.	Crystalline, light gray and light tan limestone, mostly fine grained, somewhat cherty throughout, few zones very cherty, slightly dolomitic	163	283
Backbone ls.	Light gray, crystalline, fine, medium, some coarse, very pure, stylolitic	40	323
Upper Grassy Knob	Mostly very fine, gray and brownish gray, similar to above in part, somewhat siliceous and argillaceous throughout, few zones fairly cherty, unit contains fairly abundant intrusive dike material and deeply weathered breccia zones	162	485
Lower Grassy Knob	Dark gray, very fine grained, very argillaceous and very cherty, 30% to 60% chert	123	608
Bailey ls.	Very fine grained, very silty and siliceous throughout, gray, somewhat speckled	203	811
SILURIAN			
Moccasin Springs ls.	Extra fine, dense, gray to light gray with streaks and patches of pink and green, wavy argillaceous streaks, disseminated pyrite	103	914

FORMATION	DESCRIPTION	THICK.	DEPTH
St. Clair ls.	Very fine grained, light gray, distinct isolated pink crystals, streaks with abundant pink crystals, stylolitic	31	945
Sexton Creek ls.	Abundant interlaminated, dolomitic, argillaceous streaks, all rather pink and pyritic, few interbedded silty and dolomitic streaks	16	961
Edgewood ls.	Fine grained, dark gray, partly cherty, somewhat nodular in appearance	76	1037
ORDOVICIAN			
Maquoketa shale	Dark gray to black, partly calcareous, fairly hard, bottom part sandy, fairly well fractured throughout	277	1314
Kimmswick ls.	Crystalline, fine, medium, and coarse, rather pure, light gray, stylolitic	68	1382
Decorah-Plattin ls.	Very fine grained, gray, dense, abundant irregular dolomitic argillaceous streaks, slightly silty and dolomitic	41	1423
Breccia and brecciated ls.	Tightly interlocked fragments in a calcareous matrix, traces of fluorite	66	1489
Plattin ls.	Limestone as above	323	1812
Breccia	Fine, medium and coarse, tightly interlocked, fragments of limestone and dolomite in calcite and rock flour matrix, very little matrix material, traces of fluorite, pyritic throughout	65	1877

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia	Gray rock flour breccia, consists of mostly fine angular fragments in a gray rock flour matrix, a little coarse, gradually increasing clear and purple spar, estimated from 1% to 3%, fair amounts of clear barite, yellow sphalerite, typical of purple breccia zone	51	1928
Breccia	Considered low grade "purple breccia", mostly very fine, angular fragments in a fluoritic rock flour matrix, spar estimated 5% to 7% throughout, rather abundant disseminated barite and sphalerite, as typical in purple breccia zone	48	1976
Breccia	Gray rock flour breccia, fine, medium and coarse angular fragments in a somewhat fluoritic rock flour matrix, spar, barite, and zinc throughout, estimated at 2% to 3%, bottom contact rather sharp	34.5	2010.5
Purple breccia	Fine angular fragments in a purple fluoritic matrix, generally typical of previous purple breccias, contains associated sphalerite and barite, spar estimated at 12%	14.5	2025
Breccia	Mostly very fine, little medium, consists of angular fragments of limestone and dolomite in a calcareous, dolomitic, sandy rock flour matrix, tends to be increasingly dolomitic toward bottom, grades from above, contains abundant isolated purple fragments which appear to have been well replaced by crystalline fluorite, possibly before brecciation, generally resembles low grade purple breccia throughout, except more dolomitic, spar averages 8% to 10%	34	2059

FORMATION	DESCRIPTION	THICK.	DEPTH
Breccia	Generally fine, angular fragments of dolomite limestone and some sandstone in a dolomitic gray rock flour matrix, some coarse fragments tending to be more coarse toward bottom, blebs of purple and clear fluorite scattered throughout, spar estimated at 1% to 2%	49	2108
Dolomite	Finely crystalline, light gray to white, shattered and brecciated throughout, occasional sandstone fragments, principally light gray in color, with fairly abundant streaks, patches of fine breccia with a purple fluoritic matrix	92	2200
	TOTAL DEPTH		

COLUMNAR SECTION & ASSAY GRAPH
BRECCIA ZONE
OME-2 (FREDRICKS #1)



Vertical 1"=50'
Assay 1"=20% CaF_2

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF ANALYSIS

Job No. M-1799
February 12, 1973

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

Analysis of 29 Rock Chip Samples DIAMOND DRILL HOLE - Fredericks 1 (OME-2)

Item	Sample No.	CaF_2 (%)	Item	Sample No.	CaF_2 (%)
1.	850	4.4	16.	865	12.5
2.	851	5.5	17.	866	10.5
3.	852	7.8	18.	867	10.5
4.	853	10.5	19.	868	11.
5.	854	9.9	20.	869	8.8
6.	855	11.	21.	870	4.9
7.	856	10.5	22.	871	6.2
8.	857	12.5	23.	872	6.0
9.	858	14.	24.	873	6.0
10.	859	12.5	25.	874	1.2
11.	860	12.5	26.	875	4.5
12.	861	8.2	27.	876	4.5
13.	862	8.6	28.	877	5.1
14.	863	14.5	29.	878	6.6
15.	864	14.5			

Charles E. Thompson
Chief Chemist

CC: John L. Carroll

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF SPECTROGRAPHIC ANALYSIS

Job No. M-1799
February 12, 1973

Mr. Joseph A. Porter
P.O. Box 447
Rosiclare, Illinois 62982

DIAMOND DRILL HOLE F-1 (OME-2)

Values reported in parts per million except where noted otherwise, to the nearest number in the series 1, 1.5, 2, 3, 5, 7 etc.

Element	Sample Number 853	854	860	862	863	864	865
Fe	2%	3%	1.5%	2%	2%	2%	2%
Ca	20%	20%	20%	20%	10%	7%	10%
Mg	3%	3%	2%	2%	2%	2%	3%
Ag	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500
B	20	20	30	20	50	30	30
Ba	>10,000	10,000	10,000	5,000	>10,000	>10,000	10,000
Be	200	200	500	200	300	300	500
Bi	15	15	15	10	20	20	10
Cd	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5	<5
Cr	30	300	30	50	50	50	30
Cu	15	10	10	7	15	10	10
Ga	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20
La	200	200	200	200	200	200	200
Mn	700	700	700	500	1,000	700	700
Mo	2	<2	2	<2	2	<2	2
Nb	700	500	700	300	500	700	700
Ni	10	100	10	10	15	15	10
Pb	700	500	300	300	300	500	300
Sb	<100	<100	<100	<100	<100	<100	<100
Sc	200	200	200	150	300	300	200
Sn	<10	<10	<10	<10	<10	<10	<10
Sr	7,000	10,000	5,000	5,000	3,000	3,000	5,000
Ti	5,000	3,000	3,000	3,000	5,000	5,000	3,000
V	300	100	300	150	150	200	200
W	70	<50	50	<50	50	50	50
Y	2,000	1,500	1,500	1,000	3,000	2,000	1,000
Zn	300	300	200	<200	300	500	200
Zr	200	150	150	100	200	150	100

Element	Sample Number 866	869	870	873	877	878
Fe	1%	1%	1%	1%	.7%	2%
Ca	10%	7%	7%	15%	15%	5%
Mg	3%	3%	5%	7%	5%	1.5%
Ag	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500
B	30	20	15	15	15	50
Ba	10,000	7,000	2,000	5,000	1,000	70
Be	300	300	200	300	30	10
Bi	15	15	<10	10	<10	<10
Cd	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	30
Cr	20	20	15	20	10	150
Cu	10	10	5	5	2	70
Ga	<10	<10	<10	<10	<10	30
Ge	<20	<20	<20	<20	<20	<20
La	200	200	50	100	<20	500
Mn	700	700	700	700	700	1,000
Mo	<2	<2	2	2	2	2
Nb	700	500	200	500	70	100
Ni	7	7	5	5	5	70
Pb	500	500	300	20	10	70
Sb	<100	<100	<100	<100	<100	<100
Sc	200	100	20	50	30	20
Sn	<10	<10	<10	<10	<10	<10
Sr	1,500	1,500	1,000	2,000	500	1,500
Ti	3,000	3,000	1,500	2,000	1,000	7,000
V	150	150	100	100	100	100
W	50	50	<50	50	<50	50
Y	1,500	1,500	200	700	150	100
Zn	500	<200	<200	<200	<200	<200
Zr	100	150	30	100	30	300

Charles E. Thompson
Charles E. Thompson
Chief Chemist

CC: John L. Carroll

Comparison and Summary
Skyline and McDonald Assays
Hole OME-1

Sample	McDonald		Skyline
	$BaSO_4$	CaF_2	CaF_2
944	5.60	6.41	8.6
945	5.18	6.76	9.4
946	4.12	5.26	8.6
947	7.40	19.19	18.5
948	2.20	7.07	9.9
949	3.70	13.55	16.0
950	2.60	10.96	12.5
951	2.00	6.45	8.6
952	3.00	8.25	11.0
953	4.40	9.00	14.5
954	3.12	7.00	9.4
955	1.60	13.40	17.5
956	4.26	14.68	18.0
957	1.54	2.55	5.3

Box 447

Phone (618) 285-6685

Joseph A. Porter

Geologist

Rosiclare, Illinois

62982

January 22, 1973

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 2 1973

INITIALS	CODE
CAC	120 M
HR	120
Dw	B-40

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed find the Monthly Voucher and Operator's Narrative Report for December, 1972. I trust the material is all in order. Please advise if this is not the case.

Sincerely yours,

Joseph A. Porter

Joseph A. Porter

JAP:vb
Encs.

OFFICIAL COPY
O. M. E.
RECEIVED
JAN 26 1973

INITIALS	CODE
CAC	120 M
	~~130~~
HR	120
Dw	B-40

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

AR 1/29/73

OPERATOR'S MONTHLY VOUCHER For Month of December, 1972

Operator's Name: Hicks Dome Account
Address: c/o Gilbert Kerlin, Esq.
Shearman and Sterling, 53 Wall St.
New York, New York 10005

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $ 95,450
Gov't. Participation % 50 $ 47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs Dozing	9	112.50	28	350.00	9	112.50	28	350.00
Rotary Drilling	361'	1407.90	622'	2,425.80	361 ft	1,407.90	622	2,425.80
Cored, NX 0'-500'	285'	1254.00	739'	3,251.60	285 ft	1,254.00	739	3,251.60
500-1000	91'	436.80	591'	2,836.80	91 ft	436.80	591	2,836.80
1000-1500	-	-	230'	1,242100	—	—	230	1,242.00
Cored, BX 500-1000	136'	625.60	136'	625.60	136 ft	625.60	136	625.60
1000-1500	-	-	270'	1,404.00	—	—	270	1,404.00
1500-2000	-	-	500'	3,050.00	—	—	500	3,050.00
2000-2500	62'	452.60	326'	2,379.80	62 ft	452.60	326	2,379.80
Reaming	-	-	228'	684.00	—	—	228	684.00
Water Supply, mons.	1	300.00	2.7	810.00	1 mo.	300.00	2.7	810.00
Standby time, hrs.	2	28.00	2	28.00	2 hr.	28.00	2	28.00
Drilling Mud, bags	15	57.00	34	115.71	15 bgs	57.00	36	169.93
Caustic Soda	-	-	1	10.85				
Quebracho	-	-	1	20.78				
Freight & Handling	-	-	21	22.59				
Category (2)								
Geologist-Supervisor	1	1250.00	3	3,750.00	1 mo.	1,250.00	3	3,750.00
Sampler	-	-	2	108.88	—	—	1	108.88
Category (3)								
T., Coarse Rock	-	-	30.9	54.08	—	—	30.9	54.08
Core Boxes	57	71.25	280	350.00	57 bx	71.25	280	350.00
Sample Bags	25	7.50	25	7.50	25 bg	7.50	25	7.50
Category (7)								
Office Expense	1	133.50	3	316.54	1 mo	133.50	3	316.54
Trans. of Samples	25	15.83	25	15.83	25	15.83	25	15.83
Prepare, Assay BaF_2	25	62.50	25	62.50	25	62.50	25	62.50
Other assays, metals	27	35.50	27	35.50	27	35.50	27	35.50
Spectrographic Anal.	19	171.00	19	171.00	19	171.00	19	171.00
TOTALS		$ 6,421.48		$ 24,129.36		$ 6,421.48		$ 24,129.36

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Jan. 10, 1973 *Payee Hicks Dome Account

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Robert Wilcox Asst Chief OME ~~Field Officer~~ Date 1-29-73

(63) 14X0804

Approved for: $ 3,210.74
(SUBJECT TO AUDIT)

Signature 83m7

Date FEB 3 1973 Vou. No. 0 3890A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)

Two hours rig time at $16.00 were charged for tropari surveying of ~~[illegible]~~ OME. It is charged here as standby time at $14.00.

Freight and handling of the drilling mud was included in the charge per bag.

Category (2)

Some time was worked by the part time sampler but was not turned in. It will be included in the January time.

Category (3)

We still have not received and invoice for most of the road rock used. The supplier was contacted but as yet no bill has been received.

Category (7)

Office expense is made up of $109.73 for secretarial and $23.77 for telephone. Bills for copy work are pending.

FOR GOVERNMENT USE

REMARKS

1/ allow tropari survey as standby time at $14.00/hr. Rcw 1-29-78

RECEIVED
U.S. GEOLOGICAL SURVEY

JAN 29 3 16 PM '78

BUDGET & FINANCE

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

STATEMENT

FROM Larry Robinson

FOR Use of D-4 tractor dozing drill site and moving equipment

DATE December 1972

TO Hicks Dome Account c/o Joseph A. Porter

STREET Box 447

CITY Rosiclare, Illinois

9 hrs. @$12.50/hr.	$112.50
Total	$112.50

Ck #856
$112.50
1/10/73

Larry Robinson
Larry Robinson

CERTIFIED TRUE COPY

Operator's Monthly Report

December, 1972

During the month Hole OME-1 was completed to a depth of 2326', OME-2 was advanced from 215' to 878' and OME-3 was started and rotary drilled to a depth of 361'.

Geology of OME-1 was discussed in the previous reports. First assay results have been received from Skyline Labs and are attached. Assay indicates grade of the "purple breccia" zone to be somewhat less than previously encountered. The entire 87' zone averages 13.1% CaF_2. Spectrographic analysis indicates anomolous amounts of niobium, yttrium, and berylium, but again, they are lower than previously encountered. Copies of assay data and spectrographic analysis are attached.

Some check assays have been received from McDonald, a local assayer. His CaF_2 assays are consistently lower than those of Skyline. A summary of McDonald assays, which have been received verbally, is attached to the Skyline certificates. Additional check assays will be required.

Hole OME-2 was plagued with mechanical problems for the first part of the month. Part of the lack of progress was due to the very hard, cherty Grassy Knob which was encountered at 323.0. A cavity was intersected from 427.0 to 437.0. Chert gravel coming into the hole from this cavity was causing loss of progress and excessive bit wear and diamond loss. Efforts to continue with NX size were stopped at 591' and the hole was reduced to BX.

Diamond loss in the above cited zones will probably be high. There may be some diamond costs in excess of $1.00 per foot which will be for our account. This will be determined after the salvage reports are returned and the total costs are received for the entire hole.

Stratigraphy encountered to date in OME-2 is a normal Devonian sequence. A summary log will be submitted when more data are available. It is possible that this hole is encountering more intrusive material than seen in OME-1. The rock is possibly somewhat more fractured.

Hole OME-3 is located 600 feet north, 30 feet east of the SW corner of the Pankey-Antaeus property. It was started on December 11. Drilling was principally on only one shift. Problems were encountered on reaching solid rock. Casing was set at 361' and was drilled NX to 398'. A cavity was encountered from 378' to 410'. The hole was then drilled to 438' with a 3 7/8" rock bit and NX casing was set at the end of the month. As of this writing, they are still experiencing extreme difficulty due to loose, broken Grassy Knob chert.

Respectfully submitted,

Joseph A. Porter

Joseph A. Porter
January 11, 1973

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF ANALYSIS

Job No. M-1751
December 26, 1972

Mr. Joseph Porter
P.O. Box 506
Rosiclare, Illinois 62982

Analysis of 25 Crushed Drill Core Samples

Item	Sample No.	CaF_2 (%)	Zn (ppm)	Pb (ppm)	Au (ppm)	Ag (ppm)	Cu (ppm)
1.	933	.33	35	*	*	*	*
2.	934	.23	30	215,000	<.02	32	2,650
3.	935	.49	10	*	*	*	*
4.	936	4.5	115	*	*	*	*
5.	937	7.2	280	*	*	*	*
6.	938	8.2	300	*	*	*	*
7.	939	6.8	1,000	*	*	*	*
8.	940	9.4	580	*	*	*	*
9.	941	7.0	680	*	*	*	*
10.	942	7.8	810	*	*	*	*
11.	943	10.5	440	*	*	*	*
12.	944	8.6	695	*	*	*	*
13.	945	9.4	550	*	*	*	*
14.	946	8.6	1,700	*	*	*	*
15.	947	18.5	50	850	*	*	*
16.	948	9.9	45	900	*	*	*
17.	949	16.	35	850	*	*	*
18.	950	12.5	40	800	*	*	*
19.	951	8.6	45	600	*	*	*
20.	952	11.	35	800	*	*	*
21.	953	14.5	30	950	*	*	*
22.	954	9.4	40	900	*	*	*
23.	955	17.5	40	1,100	*	*	*
24.	956	18.	40	550	*	*	*
25.	957	5.3	35	200	*	*	*

for Charles E. Thompson
Chief Chemist

* Analysis not requested

CC: John L. Carroll

SKYLINE LABS, INC.
SPECIALISTS IN EXPLORATION GEOCHEMISTRY
12090 WEST 56TH PLACE • WHEAT RIDGE, COLORADO 80033 • TEL.: (303) 424-7718

REPORT OF SPECTROGRAPHIC ANALYSIS

Job No. M-1751
December 26, 1972

Mr. Joseph Porter
P.O. Box 506
Rosiclare, Illinois 62982

Values reported in parts per million except where noted otherwise, to the nearest number in the series 1, 1.5, 2, 3, 5, 7 etc.

Element	Sample Number 933	934	935	936	939	941	943	946	947
Fe	3%	5%	.2%	.5%	.7%	.7%	2%	2%	1%
Ca	3%	5%	>20%	7%	10%	20%	20%	7%	7%
Mg	.2%	2%	.5%	.3%	1%	1%	1%	1.5%	3%
Ag	<1	50	<1	<1	<1	<1	<1	<1	<1
As	<500	500	<500	<500	<500	<500	<500	<500	<500
B	<10	10	<10	10	10	10	15	20	15
Ba	200	200	500	2,000	5,000	7,000	7,000	10,000	>10,000
Be	5	3	30	100	100	150	200	500	500
Bi	<10	<10	<10	<10	10	10	10	15	10
Cd	<50	<50	<50	<50	<50	<50	<50	<50	<50
Co	10	<5	<5	<5	<5	<5	<5	<5	<5
Cr	50	<10	<10	10	10	10	20	15	10
Cu	15	2,000	5	5	3	5	5	10	10
Ga	20	<10	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20	<20
La	50	<20	70	<20	<20	<20	100	<20	20
Mn	300	200	150	100	300	300	500	500	700
Mo	<2	<2	<2	<2	2	2	<2	<2	<2
Nb	50	70	50	200	300	500	500	1,000	700
Ni	30	<5	<5	<5	<5	<5	5	10	5
Pb	200	>10,000	700	500	700	1,000	500	1,000	500
Sb	<100	200	<100	<100	<100	<100	<100	<100	<100
Sc	10	10	<10	50	150	200	100	150	70
Sn	<10	<10	30	<10	<10	<10	<10	<10	<10
Sr	300	70	1,000	1,500	2,000	2,000	2,000	2,000	2,000
Ti	3,000	500	500	1,500	2,000	3,000	3,000	5,000	3,000
V	200	70	30	100	200	200	200	300	200
W	<50	<50	<50	<50	<50	<50	<50	<50	<50
Y	150	50	70	300	1,000	1,500	1,000	2,000	2,000
Zn	<200	<200	<200	<200	1,000	<200	<200	1,500	<200
Zr	100	20	20	50	150	200	200	200	200

Element	Sample Number 948	949	950	951	952	953	954	955	956	957
Fe	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Ca	7%	15%	10%	7%	10%	7%	7%	7%	20%	10%
Mg	2%	3%	3%	3%	2%	2%	3%	3%	5%	5%
Ag	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
As	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
B	10	10	10	10	10	10	10	10	10	10
Ba	10,000	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000	>10,000	10,000
Be	300	200	200	100	200	500	200	150	200	50
Bi	10	10	10	10	10	10	10	10	10	<10
Cd	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Co	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cr	10	10	10	10	10	10	10	10	20	10
Cu	20	7	7	7	7	7	10	7	5	3
Ga	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Ge	<20	<20	<20	<20	<20	<20	<20	<20	<20	<20
La	20	<20	20	50	<20	20	20	100	100	100
Mn	500	500	500	700	500	500	700	700	700	700
Mo	<2	<2	2	2	2	<2	2	2	<2	<2
Nb	700	500	700	300	1,000	700	500	300	300	100
Ni	5	<5	<5	<5	<5	5	5	<5	5	<5
Pb	1,000	700	500	500	500	700	1,000	1,000	500	150
Sb	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Sc	100	70	50	50	70	70	50	30	20	10
Sn	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Sr	2,000	2,000	2,000	1,500	1,500	1,500	1,500	2,000	1,500	700
Ti	3,000	2,000	2,000	1,500	3,000	3,000	2,000	1,500	1,500	1,500
V	200	200	200	150	200	200	200	100	100	100
W	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Y	1,500	1,000	700	500	1,000	1,000	700	500	500	100
Zn	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Zr	200	100	100	100	200	150	100	100	100	50

for Edwin O. Pratt
Charles E. Thompson
Chief Chemist

CC: John L. Carroll

Comparison and Summary
Skyline and McDonald Assays
Hole OME-1

Sample	McDonald		Skyline
	$BaSO_4$	CaF_2	CaF_2
944	5.60	6.41	8.6
945	5.18	6.76	9.4
946	4.12	5.26	8.6
947	7.40	19.19	18.5
948	2.20	7.07	9.9
949	3.70	13.55	16.0
950	2.60	10.96	12.5
951	2.00	6.45	8.6
952	3.00	8.25	11.0
953	4.40	9.00	14.5
954	3.12	7.00	9.4
955	1.60	13.40	17.5
956	4.26	14.68	18.0
957	1.54	2.55	5.3

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 02 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116501

INVOICE DATE 1-10-73

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 935' core drilling at Hicks Dome, Illinois for period ending December 25, 1972 as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST	UNIT	TOTAL COST
	H-5 (OME-1)	BX	2264.	2326.		62.	7.30		$ 452.60
	P-3 (OME-3)	Rotary	0.	361.		361.	3.90		1,407.90
	F-1 (OME-2)	NX	215.	500.		285.	4.40		1,254.00
		NX	500.	591.		91.	4.80		436.80
	B	BX	591.	727.		136.	4.60		625.60
									$4,176.90
	MUD USED UP								
		15 100-lb. bags drilling mud @ $3.80/bag							57.00
	CORE BOXES USED								
		57 Cardboard Core Boxes @ $1.25/ea.							71.25
	FURNISHING WATER								
		Nov. 26 through Dec. 25, 1972.							
		One (1) month @ $300.00/mo.							300.00

CERTIFIED TRUE COPY

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4133-6 4/67
4134-SINGLE 4/67

09007

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Kerlin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05 76501

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	YRD	FIELD SURVEY						
		H-5 (OME-1)	Dec. 7 2 hours @ $16.00/hr.					$ 32.00
								$4,637.15

FORM P138A

INVOICE (CONTINUATION)

TRAIN CABOT INC 003855808

EARNINGS	HOURS	AMOUNT	DEDUCTIONS			YEAR TO DATE	
REGULAR		70000	FED.TAX	10067	STATE TX 1333	GROSS PAY	1535000
						F.I.C.A.	46800
						FED. TAX	213541
						STATE TAX	28789

FOR PERIOD ENDING 12-15-72

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 11400 NET PAY 586.00

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
IMM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

TRAIN CABOT INC 003903237

EARNINGS	HOURS	AMOUNT	DEDUCTIONS			YEAR TO DATE	
REGULAR		70000	FED.TAX	10067	STATE TX 1333	GROSS PAY	1605000
						F.I.C.A.	46800
						FED. TAX	223608
						STATE TAX	30122

CERTIFIED TRUE COPY

FOR PERIOD ENDING 12-31-72

TOTAL EARNINGS 70000 TOTAL DEDUCTIONS 11400 NET PAY 586.00

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
IMM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

AES-19 (10-65)
Printed in U.S.A.

AIR EXPRESS
division of REA EXPRESS

Destination Office: Wheat Ridge, Colorado	Via Final Airport: Den	Date Shipped: ____196__	Hour: A.M. / P.M.
Consignee: 12090 W. 50th Place		Receipt Number: A E 25 63 23	
Street Address: Skyline Labs Mr. Chas. Thompson	Declared Value: $	RAIL CHARGES	AIR CHARGES
Forwarding Office: HERRIN, ILL.	Code No.: 12324 / 1st Arpt.: / RZ No.: 272	Value Charge To Airport	Air Value Charge
Pieces: 1 / Article: Otn / Nature of Contents: Rock Samples	Actual Weight: 35 / Dimensional Weight	Rail Exp. Chgs. To Airport	Air Express Charges: 15 50
Dimensions	SCALE NOS.: Rail / Air / Orig. / Dest. / Priced by	Value Charge From Airport	Total Air Charges: 15 82
Shipper: Joseph Porter	Class: Rail / Air / Paid Beyond: XXX / XX	Rail Exp. and Other Chgs. From Airport	Total Rail and Air
Address of Shipper or Actual Point of Origin: Rosedale, Ore	SHIPPER'S RECEIPT Prepaid Air Express	Total Rail Charges	Other Charges
			Total
			C. O. D.
			C. O. D. Service Charges

NOTE—The Company will not pay over $50, in case of loss, or 50 cents per pound, actual weight, for any shipment in excess of 100 pounds, unless a greater value is declared and charges for such greater value paid.

Received shipment described hereon, subject to the Air Tariff in effect on the date hereof. Value herein declared by Shipper to be that entered in space hereon, reading, "Declared Value," subject to the terms and conditions of the uniform express receipt on file with the Civil Aeronautics Board and in effect on the date of shipment and to which the parties hereto agree to be bound. *(See Reverse side).*

	Number Pieces	Date	Hour
Bee Cutrell	1	12/11 1972	1150 A.M. / P.M.

for Railway Express Agency, Inc.

CERTIFIED TRUE COPY
James G. Porter

SKYLINE LABS, INC.
SPECIALISTS IN GEOCHEMICAL EXPLORATION
12090 WEST 50TH PLACE • WHEAT RIDGE, COLORADO 80033
TEL.: (303) 424-7718

INVOICE

INVOICE NO.: 9078
JOB NO.: M-1751
P.O. NO.:

DATE: December 26, 1972

TERMS: NET 30 DAYS

SOLD TO: Mr. Joseph Porter
P.O. Box 506
Rosiclare, Illinois 62982

Analysis of 25 Crushed Drill Core Samples

1	Gold (.02 ppm) @ $2.00	$ 2.00
1	Silver @ $1.50	1.50
13	Zinc @ $1.00	13.00
19	Semi-quant spectrographic analysis @ $9.00	171.00
1	Copper, Lead, & Zinc (single digestion) @ $2.10	2.00
11	Lead & Zinc (single digestion) @ $1.60	17.60
25	Fluorine @ $2.00	50.00
25	Samples split and pulverized @ $.50	12.50
	TOTAL	$ 269.70

Pd 12/29/72
Ck # 850

CERTIFIED TRUE COPY

ORIGINAL INVOICE

HDA - OME
Telephone Expenses
11/15 - 12/15, 1972

Date	Place	Person	Amount
10/27	Lakewood, Cal.	Heyl	$ 9.80
11/15	Boss, Mo.	Donithan	1.45
11/16	" "	"	.95
11/16	Washington	Kirkemo	3.10
11/30	Princeton, Ky.	Trace	.41
12/1	Washington	Kirkemo	4.90
12/13	"	"	1.00
			$21.61
		Tax	2.16
			$23.77

CERTIFIED TRUE COPY

December 28, 1972

Mrs. Vera Bishop
Elizabethtown
Illinois

Dear Vera:

Enclosed find a check in the amount of $110.93, representing wages earned during the month of December.

70 hrs.	x	$1.80	=	$126.00
S. T.	$3.12			
S. S.	6.55			
I. T.	5.40			- 15.07
				$110.93

Sincerely,

Joseph A. Porter

JAP:vb
Encl.

CERTIFIED TRUE COPY

$126.00 earned
6.55 social Security Contri.
132.55 Charge Total

Charge OME 58 hrs @ 1.80 = 104.40
+ 5.2% S.S. contri 5.33
Total OME charge 109.73

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537, 0 — December, 1972

Name, S.S. No., Dependents — Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Fri. 1	11:30	3:30	4		
Mon. 4	11:30	4:30	5		
Tues. 5	12:45	3:15	2 ½		
Wed. 6	11:45	3:45	4		
Thurs. 7	11:45	3:15	3 ½		
Fri. 8	11:00	3:30	4 ½		
Sat. 9	9:10	2:10	5		
Mon. 11	11:40	3:10	3 ½		
Tues 12	11:30	1:30	2		
Wed. 13	11:45	3:45	4		
Fri. 15	11:30	3:30	4		
Mon. 18	11:30	3:30	4		
Tues. 19	11:30	3:30	4		
Wed. 20	11:30	3:30	4	Accounting	
Thurs. 21	11:30	3:30	4		
Fri. 22	11:30	3:30	4		
Wed. 27	11:30	3:30	4	Accounting	
Thurs. 28	11:30	3:30	4	Accounting	
			70		

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

January 19, 1973

Mr. Joseph A. Porter
Geologist
Rosiclare, Illinois 62982

Re: OME-6873 (Fluorspar, et al)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois
Contract 2306

Dear Mr. Porter:

This is to confirm approval of the site for proposed drill hole OME-4 as discussed by phone with you today. This hole will be located at the northwest corner of the Jenkins property, and may reach an approximate depth of 2,300 feet.

Sincerely yours,

Harold Kirkemo
Chief, Office of
Minerals Exploration

cc: OME file
Mr. Laurence

HKirkemo/cac 4/16/73

Box 447 Phone (618) 285-6685

Joseph A. Porter
Geologist
Rosiclare, Illinois
62982

December 19, 1972

OFFICIAL COPY
O. M. E.
RECEIVED
DEC 26 1972
INITIALS CODE
CW 120 NW
HK 122
Dan 130W

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed is Operator's Monthly Voucher form for the month of November, 1972, for the drilling being done on Hicks Dome. Attached and included are all pertinent invoices and an Operator's Narrative Report for the month of November, 1972. The narrative report includes several maps and a section, plus copies of various drill hole logs.

I would appreciate it if you would let me know if this is in order or if you need any additional documentation.

Very sincerely yours,

Joseph A. Porter

JAP:vb
Encs.

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

HR 12/27/72

OPERATOR'S MONTHLY VOUCHER For Month of November, 1972

Hicks Dome Account

Operator's Name c/o Gilbert Kerlin, Esq.

Address Shearman and Sterling, 53 Wall St.
New York, New York 10005

Docket No. OME- OME-6873
Contract 14-08-0001 (2306)
Contract Amount $ 95,450
Gov't. Participation % 50 $ 47,725

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
Hrs. Dozing	8.0	100.00	19	237.50	8 hrs	100.00	19 hrs	237.50
Rotary Drilled	120'	468.00	261'	1,017.90	120 ft	468.00	261 ft	1,017.90
Cored, NX 0'-500'	95'	418.00	454'	1,997.60	95 ft	418.00	454 ft	1,997.60
500'-1,000'	-	-	500'	2,400.00			500 ft	2,400.00
1,000'-1,500'	-	-	230'	1,242.00			230 ft	1,242.00
Cored, BX								
1,000'-1,500'	270'	1404.00	270'	1,404.00	270 ft	1,404.00	270 ft	1,404.00
1,500'-2,000'	500'	3050.00	500'	3,050.00	500 ft	3,050.00	500 ft	3,050.00
2,000'-2,500'	264'	1927.20	264'	1,927.20	264 ft	1,927.00	264 ft	1,927.20
Reaming	228'	684.00	228'	684.00	228 ft	684.00	228 ft	684.00
Wter Supply, Mons.	1	300.00	510	510.00	1 mo.	300.00	1.7 mo.	510.00
Drilling Mud, bags	-	-	19	58.71			21 bags	112.93
Caustic Soda	-	-	1	10.85				
Quebracho	-	-	1	20.78				
Freight & Handling	-	-		22.59				
Category (2)								
Geol.-Supervisor	1	1250.00	2	2,500.00	1 mo	1,250.00	2 mo	2,500.00
Sampler (part time)	1	108.88	2	108.88	1 mo	108.88	1 mo	108.88
Category (3)								
T., Crse Rock	-	-	30.9	54.08			30.9 tons	54.08
Core Boxes	113	141.25	223	278.75	113 bx	141.25	223 bx	278.75
Category (7)								
Office Expenses	1	88.81	2	183.04	1 mo	88.81	2 mo.	183.04
TOTALS		$ 9,940.14		$ 17,707.88		$ 9,940.14		$ 17,707.88

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Dec. 15, 1972 *Payee Hicks Dome Account

Per Joseph A. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Robert A. Beck Asst Chief, OME Field Officer Date 12-27-72

(63) 14X0804

Approved for: $ 4,970.07
(SUBJECT TO AUDIT)

Signature 0 37 68A

Date 1-3-73 Vou. No.

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)
Two machines were used during the month to drill holes OME-1 (H-5) and OME-2 (F-1).

Category (2)
Due to bad weather and volume of core it was necessary to employ the local land-owner on an as needed basis to help handle the core.

Category (3)
Office charge included $66.28 for secretarial andaaccounting and $22.53 for phone.

FOR GOVERNMENT USE

REMARKS

639600

RECEIVED
U.S. GEOLOGICAL SURVEY

DEC 27 3 13 PM '72

BUDGET & FINANCE

"OPERATOR'S MONTHLY REPORT"

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 25 [illegible] 05 14 03 [illegible]			DATE	AT SHIP POINT	

31180

SOLD TO
[illegible] Gilbert Kerlin
[illegible] Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116413

INVOICE DATE 12-4-72

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION			CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	To 1,249' core drilling at Hicks Dome, Illinois for period ending November 30, 1972 as per agreement.								
	PROSPECT NO.		FROM	TO		TOTAL FT.	COST UNIT		TOTAL COST
	H-5	1X	1230.	1500.		270.	5.20		$1,404.00
		2X	1500.	2000.		500.	6.10		3,050.00
		1X	2000.	2264.		264.	7.30		1,927.20
	F-1	Rotary	0.	120.		120.	3.90		468.00
		1X	120.	215.		95.	4.30		408.00
									$7,267.20
	REAMING								
	F-1		120	214.		94.	3.00		282.00
			105[illegible]	1190.		134.	3.00		402.00
	CORE BOXES USED								
		113 Cardboard Core Boxes @ $1.25/ea.					✓		141.25
	FURNISHING WATER								
		Oct. 26 through Nov. 25, 1972.							
		One (1) month @ $300.00/mo.						1	300.00
		Certified True Copy							$8,392.45

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4133-6 4/67
4134-SINGLE 4/67

09007

December 4, 1972

Mr. Roy A. Stacey
Elizabethtown, Illinois

Dear Roy:

Enclosed is a check for $98.12, representing wages earned during November, 1972. Amount due was calculated as follows:

46 hrs. @ $2.25	$103.50
S.S.	5.38
	$ 98.12

Thank you.

Sincerely,

Joseph A. Porter

JAP:vb
Encl.

Certified True Copy

103.50
5.38 (Social Security)
108.88 Total charge

STATEMENT

FROM Larry Robinson

FOR Use of D-4 tractor dozing drill site and digging pond

DATE November 1972

TO Hicks Dome Account c/o Joseph A. Porter

STREET Box 447

CITY Rosiclare, Illinois

8 hrs. @12.50/hr. $ 100.00

TOTAL DUE $100.00

Larry Robinson

Larry Robinson

Ck # 835 - $100.00
12/4/72

Certified True Copy

TRAIN CABOT INC 003747485

EARNINGS	HOURS	AMOUNT	DEDUCTIONS			
REGULAR		70000	FED.TAX	10067	STATE TX	1333
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			11400

YEAR TO DATE	
GROSS PAY	1395000
F.I.C.A.	46800
FED. TAX	193407
STATE TAX	26123
FOR PERIOD ENDING	11-15-72
NET PAY	586.00

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

TRAIN CABOT INC 003796319

EARNINGS	HOURS	AMOUNT	DEDUCTIONS			
REGULAR		70000	FED.TAX	10067	STATE TX	1333
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			11400

YEAR TO DATE	
GROSS PAY	1465000
F.I.C.A.	46800
FED. TAX	203474
STATE TAX	27456
FOR PERIOD ENDING	11-30-72
NET PAY	586.00

Certified True Copy

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

December 4, 1972

Mrs. Vera Bishop
Elizabethtown
Illinois

Dear Vera:

Enclosed find a check in the amount of $58.10 representing wages earned during the month of November.

35 hrs.	x	$1.80	=	$63.00
S. T.	$1.62			
S. S.	3.28			
I. T.	0.00			- 4.90
				$58.10

Sincerely,

Joseph A. Porter

Certified True Copy

JAP:vb
Encl.

James A. Porter

~~$60.70~~

+ ~~3.28~~ (Social Security)

.28

63.00
3.28 (Social Security)
$66.28 Total Charge

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537, 0
Name, S.S. No., Dependents

November, 1972
Month

Day - Date	Start Work	Stop Work	Hrs. Worked	Overtime	Remarks
Fri. 3	11:30	3:30	4		
Mon. 6	12:30	3:30	3		
Mon 13	2:00	4:00	2		
Thurs. 16	12:30	3:30	3		
Fri. 17	11:30	3:30	4		
Tues. 21	12:30	3:30	3		
Wed. 22	1:30	3:30	2		
Mon. 27	3:00	5:00	2		
Tues. 28	11:30	3:30	4		
Wed. 29	12:00	4:00	4		
Thurs. 30	11:30	3:30	4		
			35		All OME-HDA.

Certified True Copy

[signature]

Telephone Expenses
OME Project
November, 1972

Date	Place	Person		Amount
10/24	Boss, Mo.	Donithan		$ .75
"	Washington	Kirkemo		1.00
10/25	"	"		6.10
11/2	"	"		4.00
11/3	Princeton, Ky.	Trace		.40
"	"	"		2.03
"	Washington	Kirkemo		4.90
"	Carmi	DiKor		1.30
			Total	$20.48
			Tax	2.05
				$22.53

October, 1972

Date	Place	Person		Amount
10/4	Washington	Kirkemo		$2.20
10/6	"	"		4.00
			Total	$6.20

CERTIFIED TRUE COPY

Joseph A. Porter

OPERATOR'S NARRATIVE REPORT
November, 1972

During November Hole OME-1 was drilled 1,054 feet and was within 62 feet of its total depth at the end of the month. In order to speed up progress a second machine was brought in and used to start Hole OME-2. This hole was started on November 16 and was drilled to a depth of 215 feet by the end of the month.

Submitted with this report is a map on the scale of 1" = 400', showing the locations of the subject holes. Also submitted is a section of Hole OME-1, showing the relationship of the geology to that of the previous Hamp holes, a summary log for Hole OME-1, and copies of the detailed Geologist's log for the breccia zone. Inasmuch as Hole F-1 is just being started, no log is submitted. Pgs. 19-26

Hole OME-1 is considered to have been moderately successful from a geologic point of view. It apparently has confirmed a favorable horizon for fluorite mineralization between 600' and 700', stratigraphically beneath the base of the Maquoketa shale. This coincides with the bottom part of the Plattin limestone. The bottom of the favorable zone coincides approximately with the contact between the Plattin limestone and Joachim dolomite. The favorable zone contained significant mineralization but was estimated to be lower in grade than where previously intersected.

Breccia was encountered at a depth of 1792', and the hole was still in breccia at 2,326'. Four distinct types of breccia were recognized during the initial core study. These are generally described in the summary log and closely described in the detailed log.

Breccias of most interest were the gray, rock flour breccia from 2,000' to 2,136' and the purple breccia from 2,136' to 2,224'. Pertinent assays of both zones are pending.

The upper contact of the gray rock flour breccia was transitional. The lower contact was quite sharp. With depth the breccia appeared to become gradually finer with more matrix material. There appeared to have been a correspondingly gradual increase in amount of fluorite mineralization.

It is possible that this zone represents a "purple breccia" zone that is comparatively weakly mineralized. Pointing to this is the fact that the zone contains fairly rich patches of fluoritic, baritic matrix; pyrite and lightly disseminated galena and sphalerite. It also contains the distinct scattered, coarse, pale yellowish green barite phenocrysts which are common in the "purple breccias".

Distinct, fluoritic "purple breccia" was encountered from 2,136.5 to 2,224, a total of 87.5'. Top and bottom contacts were very distinct. The zone is easily recognizable as the same zone encountered in H-3 and H-4, because of its similar mineralogical and physical character. It correlates well both in elevation and in stratigraphic position. It differs only in that it is thinner and appears to contain more low grade zones with less matrix and more coarse fragments (+$\frac{1}{4}$").

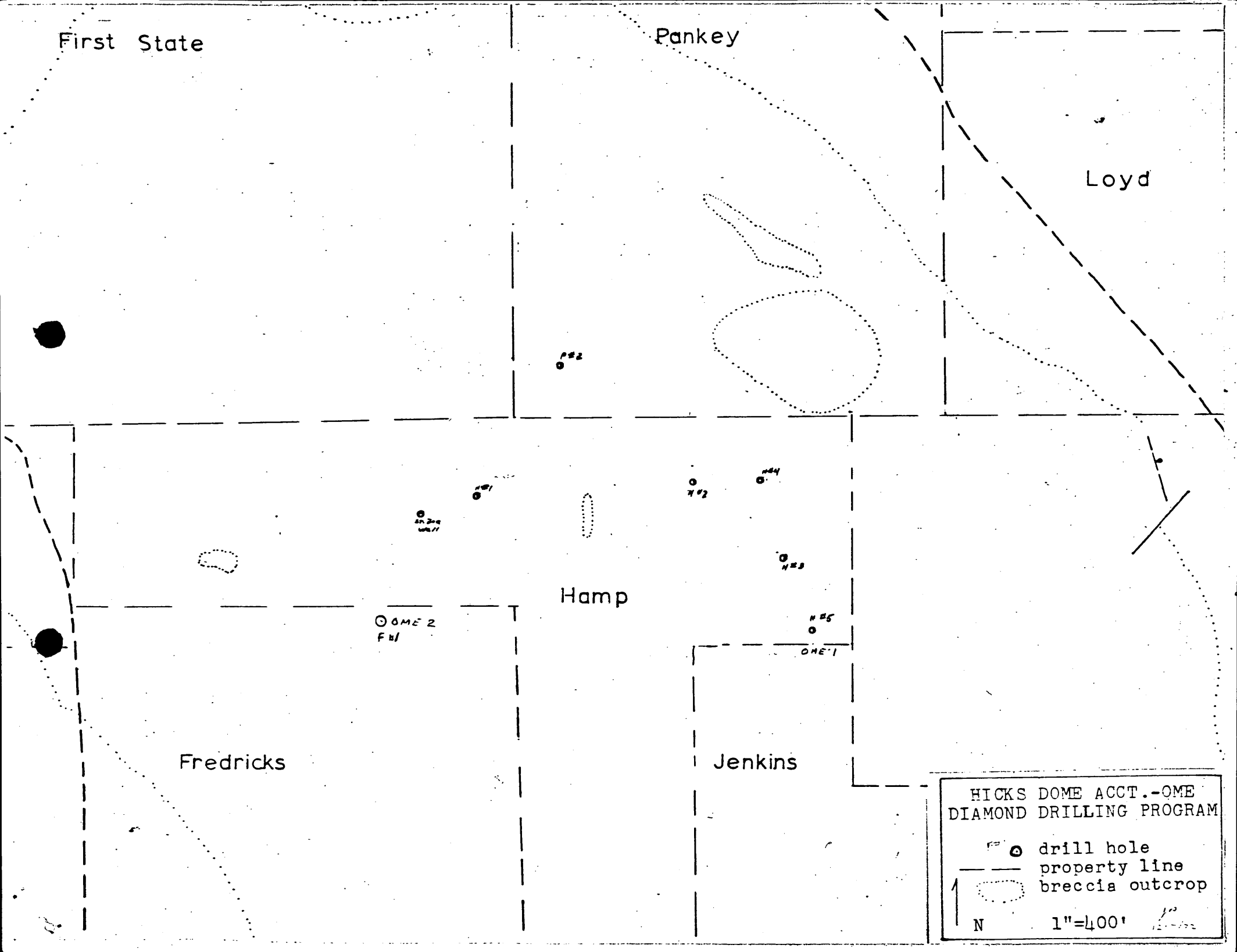
Relevant zones have been split, crushed and split again and sent off for various assays, including some spectrographic work.

An interesting zone of mineralization was intersected from 1730.0 to 1732.0 in unbrecciated Plattin limestone. It consisted of crudely banded, well replaced limestone with appreciable galena. It also contained fluorite, barite, sphalerite with some chalcopyrite. This mineralization resembles bedding replacement seen in the Cave-in-Rock district. It roughly corresponds with a similar zone in Hole H-5. Assays are pending.

No conclusions can be made at this time about Hole OME-2. At 215' it is in Clear Creek limestone, but nothing has been distinct enough to give a good stratigraphic marker.

Respectfully submitted,

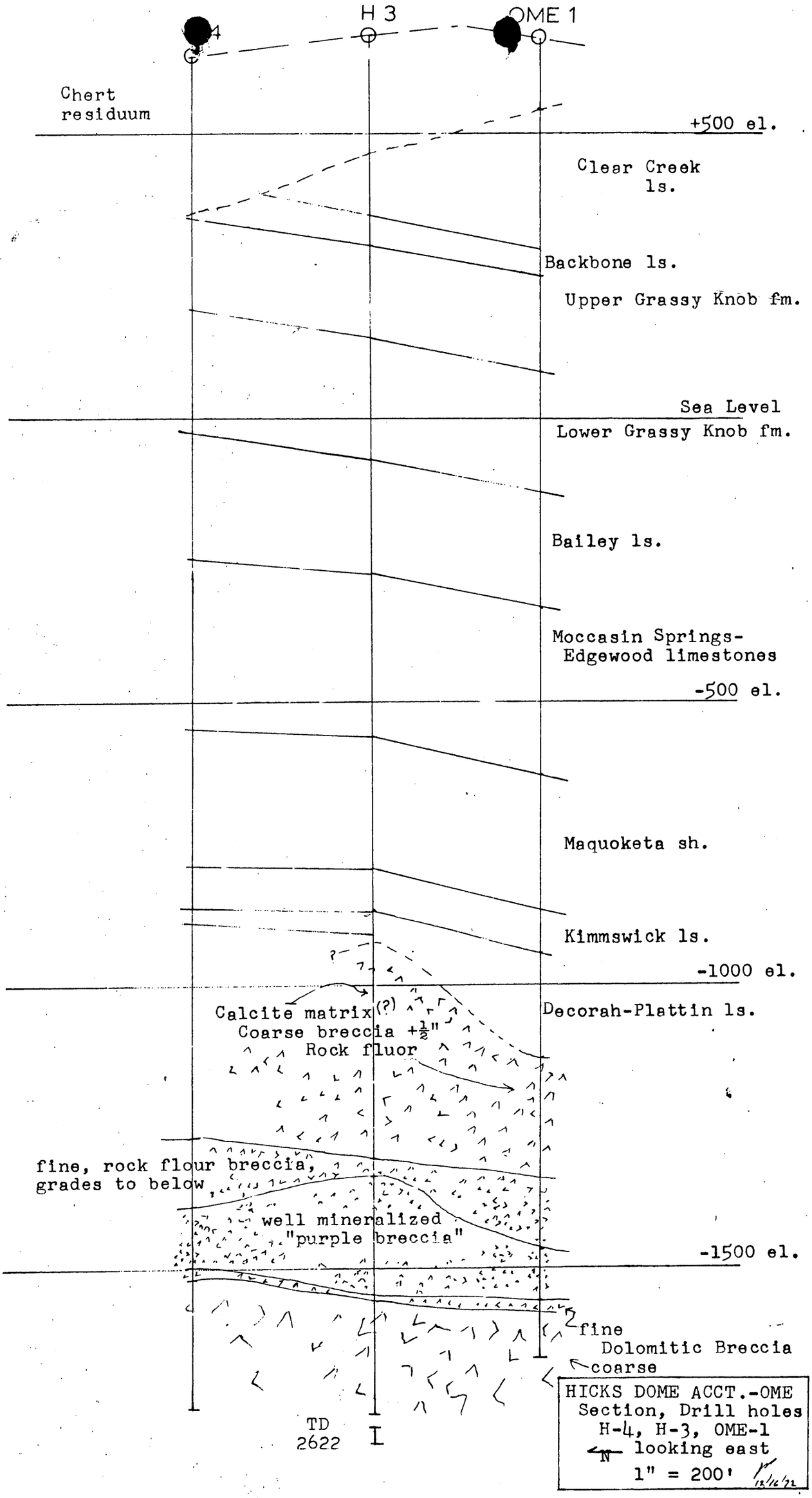
Joseph A. Porter


First State
Pankey
Loyd
Hamp
Fredricks
Jenkins
OME 2
OME 1
HICKS DOME ACCT.-OME
DIAMOND DRILLING PROGRAM
drill hole
property line
breccia outcrop
N
1"=400'

SUMMARY LOG
OME-1 (Hamp Property)

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Cherty residuum	119	119
Clear Creek ls.	Crystalline, light tan, light gray, cherty & very cherty, slightly dolomitic	253	372
Backbone ls.	Finely crystalline, pure, light gray, stylolitic	42	414
Upper Grassy Knob	Upper part dark gray, siliceous & argillaceous, all cherty, middle part resembles Clear Creek	167	581
Grassy Knob chert	30% to 70% chert in dark gray argillaceous limestone	215	796
Bailey ls.	Very fine, very silty, gray, speckled limestone	202	998
SILURIAN			
Moccasin Springs ls.	Very fine, dense, silty & dolomitic, light gray with streaks & patches of pink, wavy argillaceous streaks, pyrite crystals throughout	115	1113
St. Clair ls.	Very dense, light, gray, scattered pink rhombs, partly nodular	57	1171
Sexton Creek ls.	Dense, light gray, pure	21	1192
Edgewood ls.	Gray, fine grained, abundant argillaceous streaks, abundant dark gray chert	100	1292
ORDOVICIAN			
Maquoketa shale	Dark gray, well laminated, silty, sandy in part, fairly hard, pyritic, fractured	240	1532
Kimmswick ls.	Crystalline, medium & coarse, light gray, very pure, stylolitic	72	1604

FORMATION	DESCRIPTION	THICK.	DEPTH
Decorah-Plattin ls.	Very fine grained, dark brownish gray with wavy argillaceous streaks, all rather pure	188	1792
Breccia	Fine medium and coarse angular fragments of Plattin limestone, all tightly interlocked, very little matrix material, principally rock flour, some calcite, traces fluorite, barite, galena and sphalerite throughout	208	2000
Gray rock flour breccia	All fine, with gradually increasing amount of rock flour matrix, gradually becoming more fluoritic toward bottom, range from 1% to 6% CaF_2, some barite as coarse pale yellowish green crystals, traces Zn & Pb	136.5	2136.5
Purple breccia	Fine, well flouritized, with barite & traces Pb & Zn, spar 5% to 16% distinctly purple or dark blue due to matrix having been replaced by fluorite, fairly abundant +$\frac{1}{4}$" fragments unreplaced	87.5	2224
Dolomitic breccia	Mostly small angular fragments of dolomite & quartzitic sandstone in sandy, dolomitic matrix, traces fluorite, top contact very sharp	46	2270
Coarse dolomitic breccia	Mostly large fragments of dolomite & quartzite with patches of finer breccia	56	2326
TOTAL DEPTH			


H 3
OME 1
Chert residuum
+500 el.
Clear Creek ls.
Backbone ls.
Upper Grassy Knob fm.
Sea Level
Lower Grassy Knob fm.
Bailey ls.
Moccasin Springs-Edgewood limestones
-500 el.
Maquoketa sh.
Kimmswick ls.
-1000 el.
Calcite matrix (?)
Coarse breccia +½"
Rock fluor
Decorah-Plattin ls.
fine, rock flour breccia, grades to below
well mineralized "purple breccia"
-1500 el.
fine
Dolomitic Breccia
coarse
TD 2622
HICKS DOME ACCT.-OME Section, Drill holes H-4, H-3, OME-1
N looking east
1" = 200'
12/16/72

Log for breccia zone only

OME 1

Sheet No. 19

Depth Feet	Formation	No.	Width
	medium, fairly abundant dark gray interlaminated streaks and patches that are commonly more dolomitic, little interbedded stylolitic, some dark gray to black chert.		
1759.0-1768.0	Limestone as before, with portions as calc breccia in a veinlet nearly parallel to core.		
1768.0-1787.0	Limestone, as before, with interbedded light gray to white limestone, interlaminated argillaceous streaks throughout, stylolitic throughout, with fairly abundant irregular dark gray streaks, slightly dolomitic, bottom portion tending to become somewhat brecciated.		
1787.0-1793.0	Limestone as above, tend to become increasingly brecciated and grades into below, moderately brecciated upper portion with traces of purple and clear fluorite in breccia matrix, good traces of lead along stylolites at 1780 to 1790, top of breccia zone would be between 1790 and 1795.		
1793.0-1803.0	Breccia consists principally of fine angular fragments of various limestones and dolomites in a light gray rock flour matrix, all slightly dolomitic and silty, odd speck of galena throughout with patches and blebs of purple and clear fluorite, less than 1%, scattered stylolites, moderately pyritic throughout, very few fragments plus one-half inch.		
1803.0-1825.0	Breccia, mixed large fragments of limestone as before, in fine angular breccia as before, breccia matrix consists principally of fine calcareous rock flour and some calcite, few scattered blebs of purple fluorite throughout in matrix and along fractures, odd speck of galena, finer breccia portions are generally finely pyritic, clusters of bladed barite crystals in finer matrix, visible only after etching.		

OME-7

Sheet No. 20

Depth Feet	Formation	No.	Width
1825.0-1841.0	Breccia, mostly fine, little medium, consists principally of small angular fragments, all very tightly interlocked in a gray rock flour matrix, very little matrix material, fragments mostly minus one-half inch, few fragments plus one-half inch, fragments principally those of Plattin limestone.		
1841.0-1846.0	Limestone, gray to dark gray, very dense, very fine grained, slightly fractured throughout.		
1846.0-1855.0	Breccia, principally as before, core badly broken throughout, slightly vuggy, little calcite matrix, partly oxidized, entire core badly broken.		
1855.0-1882.0	Breccia, entire unit very uniform and massive, consists mostly of minus half inch angular fragments, all of which are very tightly interlocked, few large fragments, some plus two inches, mixed light and dark gray limestone and dolomitic limestone fragments, matrix principally dolomitic and calcareous, slightly silty rock flour, some calcite, slightly pyritic throughout, bits of fluorite occasionally in blebs in matrix material, odd speck of galena throughout.	935	1873-1882
1882.0-1920.0	Breccia, mostly fine, some medium and coarse, essentially as before, fragments generally angular, tightly interlocked, very little matrix material throughout, upper portions contain some calcite, and fair traces of bladed white barite crystals in matrix and vugs, entire unit is somewhat pyritic, matrix commonly somewhat fluoritic with purple and clear fluorite commonly associated with pyrite crystals.		
1920.0-1960.0	Breccia, as before, generally fine, some larger plus two-inch fragments scattered, all tightly interlocked, very little matrix material, occasional stylolite parallel to		

ONE 1

Sheet No. 21

Depth Feet	Formation	No.	Width
	core, breccia unit so far is remarkably uniform, barite and fluorite in matrix as before, both less than 1%, traces of zinc and lead.		
1960.0-2000.0	Breccia as before, slightly more matrix material, and few places where breccia is very fine, mineralization is as before, bottom portions possibly somewhat darker in color.		
2000.0-2030.0	Breccia, as before, fragments tend to be becoming smaller and finer, slightly more matrix material toward bottom, entire unit is all rather uniform and massive, fragments possibly are slightly less angular, few stylolites throughout, grades into unit below, mineralization as before, little pale purple fluorite in fractures.		
2030.0-2039.0	Breccia, mostly fine with some very fine, somewhat darker and more fluoritic than before, estimate fluorite at 2%, increased amount of crystalline pyrite, part of unit consists of very fine angular fragments, definite increase in amount of fine and small angular fragments (minus eighth of an inch), and increase in amount of matrix material.	936	9'
2039.0-2049.0	Breccia, gray, becoming increasingly fine, with purple fluorite in matrix, few patches fairly rich, possibly 10%, unit overall approximately 2%, with purple fluorite in fractures and occasional fine bleb of crystalline purple fluorite.	937	10'
2049.0-2059.0	Breccia, mostly very fine, little medium, fragments mostly minus one-eighth inch in gray rock flour matrix, in places the matrix is purple and fairly well replaced with fluorite, estimate fluorite at 2%, fairly abundant crystalline pyrite, traces of sphalerite.	938	10'

OME 1

Sheet No. 22

Depth Feet	Formation	No.	Width
2059.0-2071.5	Gray breccia, all very fine, matrix principally gray rock flour, moderately well replaced with purple fluorite, and traces of sphalerite, few rich patches purple fluorite, estimate fluorite 2%.	939	12.5'
2071.5-2081.0	Gray breccia, all very fine, in gray fluoritic rock flour matrix, tending to be darker than before, purple fluorite disseminated in matrix and as odd purple patch or streak, estimate fluorite at 2½%, fair traces of sphalerite throughout, odd speck of galena, fairly abundant pyrite.	940	9.5'
2081.0-2089.0	Breccia, all very fine, gray, slightly purple, fairly abundant disseminated yellow sphalerite and purple and clear fluorite, estimate spar at 2½%, purple spar in small fractures.	941	8'
2089.0-2099.0	Breccia, all very fine, angular to subrounded fragments in mixed purple fluoritic and rock flour matrix, matrix somewhat dolomitic and partly sandy, matrix makes up less than 20% of total rock, would consider this low grade purple breccia, disseminated yellow zinc throughout, estimate 0.3% Zn, spar 4.5%, fluorite occurs as small purple and clear dissemination, some fairly coarse, pyritic throughout.	942	10'
2099.0-2109.0	Breccia, as before, small angular fragments in a more purple matrix, considered as low grade purple breccia, somewhat better replacement in matrix by fluorspar, few patches of fairly rich looking material, there are occasional patches of deep purple breccia material that looks like original purple breccia which has been rebrecciated, few odd small fragments of pink, pyritic Silurian limestone can be seen (?), estimate fluorspar at 5%.	943	10'

OME 1

Sheet No. 23

Depth Feet	Formation	No.	Width
2109.0-2119.0	Breccia, very fine subangular to subrounded fragments in gray, somewhat fluoritic, purple, rock flour matrix, fairly well mineralized throughout, with purple fluorite as replacements in the matrix, fissure filling and crystalline blebs, few zones possibly as much as 10%, overall estimated at 4%, the fluorite generally associated with flecks of yellow sphalerite, few traces of lead, matrix somewhat dolomitic, few odd crystals of yellowish green clear barite, which are typical of purple breccia zone.	944	10'
2119.0-2129.0	Breccia, gray and purple as above, slightly more fluorite, estimated 5% to 6%, few patches possible 10%, somewhat more abundant barite as above.	945	10'
2129.0-2136.5	Breccia, gray-purple, fluoritic as before, few more rich patches and blebs of dark purple to black fluorite, estimate spar at 4%, grades rather quickly into below, few odd fragments of sandstone or quartzite.	946	7.5'
2136.5-2145.5	Purple breccia, fine angular fragments of limestone, some dolomite in a distinctly purple, fluoritic matrix, typical of other purple breccias, except contains somewhat more of plus one-half inch fragments, fairly abundant crystalline barite, fair traces of sphalerite throughout, matrix generally insoluble, upper parts appear to be approximately 20%, estimate average at 12%.	947	8.5'
2145.5-2154.0	Breccia, mostly very fine, mixed purple fluoritic and gray rock flour breccia, grading into each other, few coarse fragments throughout, fluoritic portions look quite rich and are mineralized as above, estimate entire unit at 6%.	948	8.5'

ONE 1

Sheet No. 24

Depth Feet	Formation	No.	Width
2154.0-2160.5	Purple breccia, mostly fine angular fragments in a purple fluoritic matrix, similar to as above, possibly more abundant breccia fragments, matrix mineralized as before, possibly somewhat less matrix material, though breccia so far may be somewhat more baritic, estimate fluorite at 10%.	949	6.5'
2160.5-2169.0	Purple breccia, as above, with more abundant mixed rock flour breccia, all fluoritic, locally as much as 20%, mineralized and similar to as before, fluorite estimated at 7%.	950	8.5'
2169.0-2179.0	Purple breccia, as before, few richer patches, generally lower grade throughout, contains fluorite, barite, lead, and zinc as before, estimate fluorite at 5 %.	951	10'
2179.0-2190.0	Purple breccia, as above, few patches of very rich resembling rebrecciated breccia, matrix mineralized as before, fairly abundant fragments, some of which are plus one-half inch, minor zones appear to be better mineralized, estimate fluorspar at 8%.	952	11'
2190.0-2197.0	Purple breccia, mostly fine angular fragments, few coarser fragments, matrix fairly well replaced, occasional large (plus ¼ inch) crystal of pale yellow-green barite, few large fragments scattered, matrix mineralized as above, fluorspar estimated at 10%.	953	7'
2197.0-2208.0	Mixed purple and gray rock flour breccia, all fluoritic throughout, few zones fairly rich, purple fluorite as before, fairly abundant rather coarse fragments, fairly abundant barite, rich patches of fluorite, 15% to 20%, entire unit estimated at 7%, few fairly sandy zones, bottom contact rather sharp, appears to be dipping at a 30° angle.	954	11'

DME-1

Sheet No. 25

Depth Feet	Formation	No.	Width
2208.0-2216.0	Purple breccia, only somewhat finer than before, better replacement of matrix by purple fluorite, crystalline barite and traces of lead and zinc as before, fragments are mostly fine, contains fairly abundant plus ½ inch, bottom 1' all very fine blue material that has been replaced by fluorite with only an occasional light colored subangular fragment, estimate spar at 12%.	955	8'
2216.0-2224.0	Purple breccia, fine and medium angular fragments of limestone, dolomite, and more abundant sandstone in a purple fluoritic matrix, parts appear to be rather rich, fairly abundant large fragments throughout, sand fragments somewhat more abundant, estimate spar at 10%.	956	8'
	NOTE: This purple breccia zone is very similar to that in Hamp 3 and 4, except that it is lower grade, apparently due to the increased number of larger fragments in the breccia. Zone may be somewhat richer in barite than has been previously seen, assuming that the coarse, pale green and clear fragments are barite. Bottom contact is very sharp. One and one-half feet of core was lost in the vicinity of the bottom contact, so actual contact can't be seen.		
2224.0-2237.0	Breccia, gray to light gray, very dolomitic, consists of coarse and fine angular fragments of light gray dolomite in a dolomitic matrix, fairly abundant scattered fragments of quartzitic sandstone, few very large pieces (plus 6 inches) but mostly fairly fine, little scattered clear and purple fluorite in matrix material.		

ONE 1

Sheet No. 26

Depth Feet	Formation	No.	Width
2237.0-2257.0	Breccia, mostly as above, mixed very fine and very coarse, all very dolomitic, few patches of fine breccia with faint purple trace, finer portions better replaced by fluorite, upper portions somewhat darker gray.		
2257.0-2270.0	Breccia, mostly fine, few plus one-half inch fragments, consists of fine angular fragments of dolomite and quartzitic sandstone in a dolomitic matrix, traces of purple spar and clear spar in matrix material.	957	13'
2270.0-2296.0	Coarse breccia, principally coarse, angular fragments of light gray granular, sandy appearing dolomite, with scattered odd patch of fine breccia, finer portions with rock flour matrix, traces of purple and clear fluorspar throughout in matrix material, little scattered sandstone fragments, would consider typical of coarse dolomite breccias seen in other holes.		
2296.0-2312.0	Coarse dolomitic breccia, as before, few patches of fine with purple fluorite in matrix, few blebs of coarse crystalline fluorite in fractures toward bottom.		
2312.0-2326.0	Breccia, mostly fine, anguler fragments, few fairly coarse and very fine, all angular to subangular dolomite, all tightly interlocked with little matrix material, quartzite throughout, fractures commonly filled with purple to clear spar, small patch of green spar at 2325, estimate spar throughout at 1%.		

TOTAL DEPTH

Tropari survey

Depth	Dip	Direction
1260'	-85°	552° W
1800'	-87°30'	580° W
2316'	-89°30'	---

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code

December 4, 1972

Mr. Joseph A. Porter
Geologist
Rosiclare, Illinois 62982

Re: OME-6873 (Fluorspar, et al)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois
Contract 2306

Dear Mr. Porter:

This is to confirm approval for the location of proposed drill hole OME-3 agreed to in discussion on December 1, 1972 between you and Mr. R. D. Trace, U. S. Geological Survey. This hole will be located on the Antaeus - Pankey property at a point about 600 feet north and 30 feet east of the southwest corner of that property. Estimated total depth may be approximately 2,300 feet.

Sincerely yours,

Harold Kirkemo
Chief, Office of
Minerals Exploration

cc: OME files
Mr. Laurence

HKirkemo/cac 4/16/73

OME 6873

MEMORANDUM-INTERIM REPORT December 3, 1972

DEC 8 1972

TO: Harold Kirkemo, OME, Washington
FROM: Robert D. Trace, Princeton, Ky.
SUBJECT: Hicks Dome, Illinois project; OME ?

Cal 120 ~~130~~ 120 Rec ~~130~~

At Joe Porter's request, I visited the subject project on December 1, 1972, and briefly examined the available core. Also, we discussed the location of No. 3 drill hole.

OME D.D.H. No. 1 (Proposed hole A and Porter's No. 5) had reached a depth of 2,244 feet(Noon, 12-1-72). The stratigraphy in No. 1 shows it to be approximately 50 feet downdip, or lower, than Porter holes 3 and 4 to the north.

Briefly:

0-1792 Unbrecciated carbonate rocks(normal section)

1792-2,000 Breccia, essentially unmineralized

2,000-2,137 Breccia, slightly mineralized(about 5% or less)

2,137-2,224 "Ore zone" See discussion below.

2,224-2,244 Breccia, essentially unmineralized

Porter plans to bottom at about 2,300--a reasonably safe distance below the "ore zone".

Pertinent facts regarding the "Ore zone" are:

1. 87 feet thick. Somewhat thinner than 3 and 4(Porter) but still substantial.

2. Eyeball grade 10-12% CaF_2. Also a little lower than numbers 3 and 4.

3. Breccia fragments somewhat larger, i.e. 1/8 to 1 inch in diameter, than in numbers 3 and 4 "ore zone".

4. "Ore zone" in OME 1 is at "proper" or predicted depth, based on Porter holes 3 and 4, thus suggesting continuity with 3 and 4.

5. The mineralization at the base of the"ore zone" cut off rather sharply(within 1 foot), much sharper than in holes 3 and 4 of Porter.

OME D.D.H. No. 2 (proposed hole C, I think, and Porter No. 6) was at 214 feet and in trouble. Driller had twisted drill rod off and was busily engaged in "fishing". Frustrated Joy drill boss wished he was back in Indiana(i.e. home).

Porter and I discussed location of OME No. 3. He wants to put it about 500 feet north of Panky No. 2, approximately the proposed hole D in application. (Incidentally, all my OME file is at Madisonville so I'm using my memory on the proposed hole designations.) There are factors pro and con regarding the location of hole 3 (i.e. D or B), but after considerable discussion, I agreed to his location.

Robert D Trace 12/4/72

Box 447

Phone (618) 285-6685

Joseph A. Porter
Geologist
Rosiclare, Illinois
62982

November 29, 1972

1972
CODE
cae 130
HR 120

Mr. Harold Kirkemo
Chief, Office of Minerals Exploration
U. S. Geological Survey
Matomic Building
Room 865
1717 H Street NW
Washington, D. C. 20006

Re: OME-6873 (Fluorspar, et al.)
Hicks Dome Account
Hicks Dome Property
Hardin County, Illinois

Dear Mr. Kirkemo:

Enclosed are four copies of the Operator's monthly voucher for the month of October, 1972. I trust the attached documentation of cost cited is adequate. Please advise if this is not the case or if any additional information is required.

Very sincerely yours,

Joseph A. Porter

JAP:vb
Enc.

Operator's Narrative Report
October, 1972

Work done during October consisted of preparations for and drilling of Hole OME-1. The hole was collared on October 5 and was drilled to a total depth of 1,230 feet during the month. Progress has not been sufficient to evaluate the hole from a geologic point of view. A summary log is attached.

Good progress was made until numerous cavities were encountered from 998 feet to 1,185 feet. The start of the cavities coincided with the top of the Silurian limestones.

These cavities created considerable problems and ultimately caused loss of the hole from 1000 feet to 1,230 feet. After penetrating the cavities with NX rods, the rods were accidentally dropped in the hole. They were broken off in the cavities and were impossible to fish out. An attempt was then made to take advantage of the natural deflection in the cavities and to drill past the lost tools. This attempt failed when the rods twisted off again in the cavities, resulting in tools which were impossible to retrieve.

As of the end of the month an attempt was being made to set a wedge at 989 feet and drill past the cavities and the lost tools. This was successful.

Stratigraphy penetrated to date has been a normal sequence of Devonian and Silurian rocks. Recognizable stratigraphic markers indicate that the contacts are approximately sixty to sixty-five feet below those in Hamp No. 3.

Mineralization encountered to date has been negligible. It consists of odd traces of fluorite, generally associated with calcite in vugs or fractures. Odd specks of sphalerite and galena have been seen.

The core is fairly well fractured throughout. Small minus one-half inch offsets along vertical fractures are very common. These are generally filled with calcite.

There are scattered patches and veins of brecciated limestone in a calcite matrix. The fragments generally consist of limestone, resembling those of nearby wallrock. Several small igneous dikes have been seen. These consist of very fine grained gray material with coarse angular fragments of lighter colored material, which is thought to be granite. These were fairly common in Hamp No. 3 and Hamp No. 4.

A very detailed geologist's log is available if required. Sections will be submitted when the hole is completed.

Respectfully submitted,

Joseph A. Porter

Joseph A. Porter

SUMMARY LOG
OME-1 (Hamp Property)
October, 1972

FORMATION	DESCRIPTION	THICK.	DEPTH
Overburden	Cherty residuum	119	119
Clear Creek ls.	Crystalline, light tan, light gray, cherty & very cherty, slightly dolomitic	372	253
Backbone ls.	Finely crystalline, pure, light gray, stylolitic	414	42
Upper Grassy Knob	Upper part dark gray, siliceous & argillaceous, all cherty, middle part resembles Clear Creek	581	167
Grassy Knob chert	30% to 70% chert in dark gray argillaceous limestone	796	215
Bailey ls.	Very fine, very silty, gray, speckled limestone	998	202
SILURIAN			
Moccasin Springs ls.	Very fine, dense, silty & dolomitic, light gray with streaks & patches of pink, wavy argillaceous streaks, pyrite crystals throughout	1113	115
St. Clair ls.	Very dense, light, gray, scattered pink rhombs, partly nodular	1171	57
Sexton Creek ls	Dense, light gray, pure	1192	21
Edgewood ls	Gray, fine grained, abundant argillaceous streaks, abundant dark gray chert	1230	

FORM 9-1648
MARCH 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
OFFICE OF MINERALS EXPLORATION

OK Rec'd 12-13-72

RECEIVED DEC 21 1972

OPERATOR'S MONTHLY VOUCHER

For Month of October, 1972

Docket No. OME- OME-6873
Contract 14-08-0001 2306
Contract Amount $ 95,450
Gov't. Participation % 50 $ 47,725

Operator's Name Hicks Dome Account c/o Gilbert Kerlin, Esq.
Address Shearman & Sterling, 53 Wall Street New York, New York 10005

COST ITEMS (FROM EXHIBIT A)	FOR OPERATOR'S USE: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS	FOR GOVERNMENT USE ONLY: THIS MONTH UNITS	THIS MONTH COSTS	TO DATE UNITS	TO DATE COSTS
		$		$		$		$
Category (1)								
T., Crse Rock (Road metal)	30.9	54.08	30.9	54.08	30.9 tons	54.08	30.9 tons	54.08
Hrs. Dozing	11	137.50	11	137.50	11 hrs	137.50	11 hrs	137.50
Feet, Rotary drilled	141	549.90	141	549.90	141 ft.	549.90	141 ft.	549.90
Feet Cored, NX	1089	5,221.60	1089	5,221.60	1089 ft.	5,221.60	1089 ft	5,221.60
Bags, Mud & Additi.	21	112.93	21	112.93	21 bags	112.93	21 bags	112.93
Water supply, Mon.	.7	210.00	.7	210.00	0.7 mo	210.00	0.7 mo	210.00
Category (2)								
Geol-Supervisor	1	1,250.00	1	1,250.00	1 mo.	1,250.00	1 mo.	1,250.00
Category (3)								
Core Boxes	110	137.50	110	137.50	110 bx.	137.50	110 bx.	137.50
Category (7)								
Office Expenses, Mon.	1	94.23	1	94.23	1 mo.	94.23	1 mo	94.23
TOTALS		$ 7,767.74		$ 7,767.74		$ 7,767.74		$ 7,767.74

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Nov. 20, 1972 *Payee Hicks Dome Account

Per Joseph C. Porter Title Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

A willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction is a criminal offense. (U. S. Code, Title 18, Sec. 1001.)

(INSTRUCTIONS ON REVERSE)

Approved as noted, subject to field examination and audit.

Signature Harold Hirkomo Chief, OME ~~Field Officer~~ Date 12/13/72

(63) 14X0804

Approved for: $ 3,883.87 (SUBJECT TO AUDIT)

Signature BM7

Date 20 DEC 1972 Vou. No. 03712 A

(SEE OTHER SIDE)

FOR OPERATOR'S USE

REMARKS

Category (1)

We have only been billed for the coarse rock used. Other billing will follow. Due to very wet weather, additional rock, doxing and tractor use will be required for access. Pertinent invoices are attached.

Category (2)

No sampler has been used as yet. Casual labor and help handling the core will be required in November. Geologist-Supervisor is employed at $1400 per month. 100% is charged to the project. Copies of paycheck stubs are attached. Please advise if this is not sufficient.

Category (7)

Secretarial services, typing logs, bit records, daily notes, etc., amounted to 46½ hours totalling $88.03. Telephone billied up to Oct. 15, 1972 amounts to $6.20. Records are attached.

FOR GOVERNMENT USE

REMARKS 079870

RECEIVED
U.S. GEOLOGICAL SURVEY

DEC 14 7 50 AM '72

BUDGET & FINANCE

OPERATOR'S MONTHLY REPORT

The Operator, under an Office of Minerals Exploration contract, is required to report monthly to the Government. The report consists of two parts.

FIRST, the Operator's Monthly Voucher on Form 9-1648 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Narrative Report is a concise description of the work performed, results accomplished, and any unusual situations encountered, illustrated and supported by engineering-geological maps or sketches, drill hole logs, assay reports, etc., as pertinent.

The Operator submits the original and three copies of each of the two sections of this report to the OME regional Field Officer at the end of each month during the life of the contract.

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, FORM 9-1648

In the left hand column list the items for which costs were incurred during the month, and also the items for which costs were previously reported. For items previously reported, show only UNITS TO DATE and COSTS TO DATE. Items listed should conform to Exhibit A of the contract (Estimated Costs of the Work). The total of COSTS THIS MONTH followed by the Operator's signature constitutes a claim for payment of the Government's share of the costs. The Operator or his agent must sign the certification in the lower left corner.

Except for amounts claimed under "fixed unit costs" provisions of the contract, all costs claimed in this voucher must be supported by documentary evidence consisting of: (a) certified copies or transcripts of payrolls which list each employee, wage rate, period of employment, gross earnings, and net earnings; (b) original or certified copies of invoices, statements of accounts, or purchase orders which indicate items of materials or services, quantities, unit prices, total charges, and payment terms; and (c) certified memoranda of the Operator for such items as unemployment taxes, employee's liability insurance, and depreciation of Operator-owned equipment. The certification may be stated thus, "Certified True Copy", followed by the signature of the Operator or his agent. One copy of each document should accompany the original of this voucher.

The requirement for submitting documentary evidence of claimed costs may be waived by the OME regional Field Officer if he determines that it is impracticable for an Operator to submit this material. In any case of waiver of this requirement an "on-site" audit by an OME auditor is mandatory prior to payment of the final Operator's Monthly Voucher.

O. R. AUSTIN & SONS
Contractors
ROSICLARE, ILLINOIS 62982

INVOICE

No 1657

TO
Mr Joseph Porter
Rosiclare, Illinois

TERMS: Net

DATE: 10/24/72
CUSTOMER ORDER NO.
SALESMAN
VIA

QUANTITY	DESCRIPTION	PRICE	AMOUNT
10/2/72	30.90 tons rock delivered to Hicks Dome @	$1.75/ton	$54 08
	Paid #827 $54.08 10/26/72		
	THANKS		

ORIGINAL

Thank You!

CERTIFIED TRUE COPY

STATEMENT

FROM Larry Robinson

For: Use of D-4 Tractor dozing access road and drill site

~~Date Sept.~~ October 19 1972

TO Hicks Dome Account c/o Joseph A. Porter

STREET Box 447

CITY Rosiclare, Illinois TERMS

11 hrs. @ $12.50/hr.	$137.50
Total Due	$137.50
Ck # 833 10/21/72	$137.50

Larry Robinson
Larry Robinson

JOY MANUFACTURING COMPANY

OLIVER BUILDING
PITTSBURGH, PENNSYLVANIA 15222

PLEASE REMIT TO
P. O. BOX 360135M
PITTSBURGH, PA. 15230

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORD'R NO.	DATE	AT REC. POINT	B.O.NO.
CONTRACT	CODE 99 69 05 14 03 209			DATE	AT SHIP POINT	

31180

SOLD TO
Mr. Gilbert Kerlin
53 Wall Street
New York, New York 10005

TERMS NET 30 DAYS
NO CASH DISCOUNT

INVOICE NO. 05116359

INVOICE DATE 11-8-72

PLEASE REMIT TO
P.O. BOX 360135M
PITTSBURGH, PA. 15230

DATE SHIPPED

SHIPPED TO
Hicks Dome, Illinois

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM Michigan City, Indiana

ORIGINAL QUANTITY ORDERED	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		To 1,230' core drilling at Hicks Dome, Illinois for period ending October 25, 1972 as per agreement.					
		PROSPECT NO.					
		H-5					
		6¼" R.B. 0. 134.		134.	3.90		$ 522.60
		3-7/8" R.B. 134. 141.		7.	3.90		27.30
		NX 141. 500.		359.	4.40		1,579.60
		NX 500. 1000.		500.	4.80		2,400.00
		NX 1000. 1230.		230.	5.40		1,242.00
							$5,771.50
		CORE BOXES USED					
		110 Cardboard Core Boxes @ $1.25/ea.					137.50
		MUD USED UP					
		19 100-lb. bags drilling mud @ $3.09/bag				58.71	
		1 50-lb. bag Caustic Soda				10.85	
		1 50-lb. bag Quebracho				20.78	
						90.34	
		Transportation & Handling @ 25%				22.59	112.93
		FURNISHING WATER (PUMPING)					
		Oct. 5 through Oct. 25 @ $300.00/mo.					210.00

CERTIFIED TRUE COPY

Joseph A. Porter

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED
NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE
GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

4134 4/67

09008

JOY MANUFACTURING COMPANY

PAGE NO. 2

SOLD TO Mr. Gilbert Kerlin

OUR ORDER NO.	AT REC. POINT	AT SHIP POINT	B.O. NO.	INVOICE NO.
				05116359

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	SALES CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
	SURVEY TIME							
		H-3	Sept. 28 7 hours					
			Sept. 29 8 hours					
			15 hours @ $16.00/hr.					$ x 240.00
								$6,471.93

x not charged OME

INVOICE (CONTINUATION)

FORM P138A

TRAIN CABOT INC 003697879

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FED.TAX	10067	STATE TX	1333	GROSS PAY	1325000
							F.I.C.A	46800
							FED TAX	183340
							STATE TAX	24790
							FOR PERIOD ENDING	10-31-72
							NET PAY	586.00
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			11400		

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

TRAIN CABOT INC 000839417

EARNINGS	HOURS	AMOUNT	DEDUCTIONS				YEAR TO DATE	
REGULAR		70000	FED.TAX	10067	STATE TX	1333	GROSS PAY	1255000
							F.I.C.A	46800
							FED. TAX	173273
							STATE TAX	23457
							FOR PERIOD ENDING	10-15-72
							NET PAY	586.00
TOTAL EARNINGS		70000	TOTAL DEDUCTIONS			11400		

JOSEPH A PORTER 501 1 020 00044 NON-NEGOTIABLE

5755
1MM 12-71

STATEMENT OF EARNINGS AND DEDUCTIONS

CERTIFIED TRUE COPY

James G. Porter

November 6, 1972

Mrs. Vera Bishop
Elizabethtown
Illinois

Dear Vera:

Enclosed find a check in the amount of $86.32 representing wages earned during the month of October.

52½ hrs.	x	$1.80	=	$94.50
S. T.	$2.37			
S. S.	4.91			
I. T.	.90			- 8.18
				$86.32

Sincerely,

Joseph A. Porter

CERTIFIED TRUE COPY

Joseph A. Porter

JAP:vb
Encl.

Chase OME-HDA 46 1/2 hrs = 83.70
+ SS. 4.33
88.03
Total

RECORD OF TIME WORKED

Vera Bishop, 178-18-8537, 0
Name, S.S. No., Dependents

October, 1972
Month

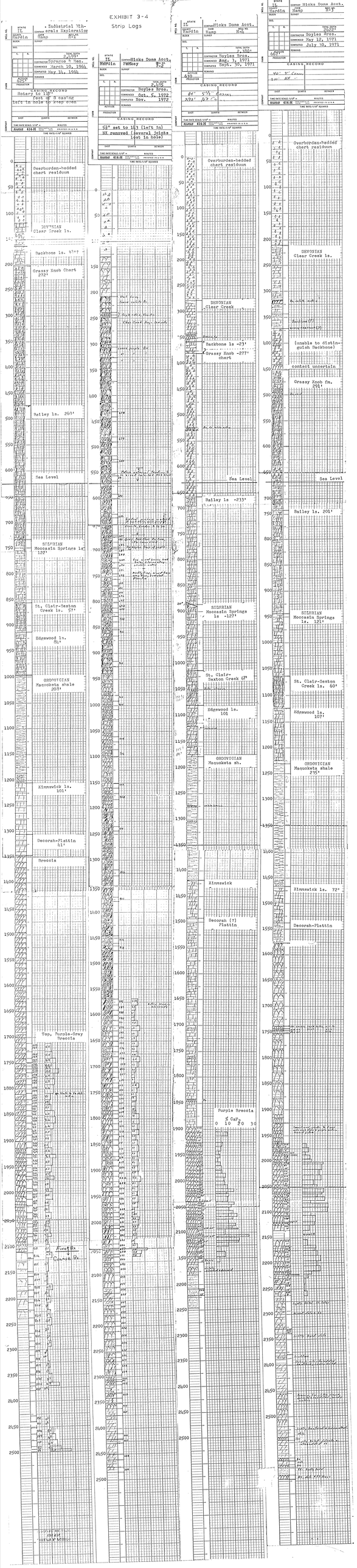
Day - Date	Start Work	Stop Work	Hrs.Worked	Overtime	Remarks
Wed. - 4	12:30	3:30	3		Col.
Thurs.-5	9:00	3:30	6		HDA
Tues.-10	12:00	3:30	3½		HDA
Thurs.-12	12:00	4:30	4½		HDA
Mon. - 16	9:00	4:30	7		HDA
Tues.- 17	9:00	4:30	7		HDA
Wed. - 18	9:30	4:30	6½		HDA-3½; 3 Misc.
Thurs.-19	12:30	4:30	4		HDA
Tues. -24	9:00	3:00	5½		HDA
Thurs.-26	9:00	3:30	5½		HDA

CERTIFIED TRUE COPY

Vera Bishop

EXHIBIT 3-4

Strip Logs



ASSAY GRAPH HAMP 8 (OME-9)

ASSAY GRAPH
OME 9 (Hamp 8)
McDonald Assays
% CaF_2 & $BaSO_4$
Vertical Scale 1" = 20'
Horizontal Scale 1" = 10%