DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Surcease Mining Company,
a corporation duly organized
and existing under and by
virtue of the laws of the
State of California,
814 - 30th Street
Sacramento, California,

pertaining to Exploration Project Contract No. Idm-5474, Docket No. DMEA-2809, including Amendment No. 1, for the period February 1, 1953 to April 18, 1953, covering a project of exploration for tungsten, located in San Bernardino County, California, commonly known as the Atolia Mines.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with Executive Officer in charge of the project, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reason:

The contract provides for payment
by the Government on the basis of
agreed costs of units of work
actually performed.

The review disclosed the following facts in regard to the amount paid or to be paid the contractor:

Total cost as billed by Contractor	$13,219.02
Exceptions	None
Total accepted cost	$13,219.02

The contract calls for a 75 per cent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Nine Thousand Nine Hundred Fourteen and 27/100 Dollars

$9,914.27

is considered valid and proper.

November 24, 1953

George Mavor
George Mavor
Auditor

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

800

NOV 16 1953

Mr. George Mavor
DMEA Auditor
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Idm-1474, DMEA-2809
Surcease Mining Company
San Bernardino County, Calif.

Dear Mr. Mavor:

By letter dated August 7, 1953 the Executive Officer, DMEA Field Team, Region III, forwarded both the Field Team's and the Operator's final reports on the referenced Exploration Project Contract.

These reports indicate that the exploratory work was discontinued on April 18, 1953 with the completion of 2220.7 feet of diamond drilling. Furthermore, a final MF-104, covering the month of April, 1953 was paid by Voucher No. SF-DMEA-43, dated June 1, 1953. However, your Monthly Work Reports have never listed this contract as being programmed for audit or review.

Since this project is covered by a Short Form Contract (agreed unit cost basis), a Report of Review will suffice. Therefore, it will be appreciated if you will take immediate steps to review the records and issue a Report of Review so that the project may be formally closed.

If this cannot be done, please advise the reasons.

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Chief
Contract Administration
and Audit Division

EDTalbert/wb
November 16, 1953

Copy to: Docket
Admr. Reading File
Mr. Martin
Mr. Chambers

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

ACCOUNTS MAY 14 1953

JUN 8 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April 195 3 Docket No. DMEA 2909 Contract No. Idm-7474
Operator's Name Sureesse Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California
Contract Amount, $ 33,400.00 Government Participation: 75 % Amount, $ 25,050.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contractor 625.7 at 6.75	3597.77	9171.25	12,769.02			
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Mobilization		250.00	250.00			
Demobilization	200.00		200.00			
TOTALS	3797.77	9421.25	13,219.02			

I certify that the above bill is correct and just and that payment therefor has not been received.
Date May 1, 1953 *Payee Sureesse Mining Company
Per K. Malone Title General Manager

*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.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$ 2848.33
Lloyd W. Sjolander
Signature Authorized Certifying Officer
(Authorized Certifying Officer)
Date JUN 1 1953 Vou. No. 5-9MCa-43
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date [illegible]

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Region III Date May 13, 1953

E. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

ACCOUNTS MAY 14 1953

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1953 Docket No. DMEA 2809 Contract No. Idm-5474
Operator's Name Pureease Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core per ft.	5.75	3597.77	625.7	12,769.02	2220.7	5.75	5000	5.75
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trans.								
Mobilization				250.00	1	250.00	1	250.00
Demobilization		200.00	1	200.00	1	200.00	1	200.00
TOTAL DISTRIBUTED COSTS		3797.77		13,219.02				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3797.77		13,219.02				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date May 1, 1953 Operator Pureease Mining Company

Per K. Malone Title General Manager

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

C. Narrative - Hole M-2

Hole was started April 3, 1953 and completed on April 18, 1953, for total depth of 625.7'. Acid tests were taken at 100, 200, 300 and 500, which indicated hole steepened at depth to 50°. This resulted in cutting the zone at 2750 rather than 2800. Due to nature of ground, which was blocky and broken, core recoveries were relatively poor in upper part of the hole with poor recoveries in the veins or faults. Recovery was good in lower 200 feet and in several instances strong gouge was cored successfully. NX was carried to 78', BX to 260' and hole was finished with AX. Water was lost temporarily at 366 but was recovered with bentonite and other material. No other difficulty was encountered.

Results:

Par zone was cut from 516 to 550 consisting of numerous quartz veins and veinlets, one of which showed a speck of tungsten. The zone apparently has a back dip and the section indicates a displacement of about 70' on the Par fault. If this is so, the old location would have missed as predicted.

A new blind vein was cut at 337.8 to 340 with good quartz but no tungsten. This vein does not outcrop. It may carry ore in a more favorable locality. It is a back or south dipping vein.

SURCEASE MINING COMPANY

DIAMOND DRILL HOLE LOG

Hole No.: M-2
Location: 1893 E - 165 S
Elevation of Collar: 3162.8
Depth: 625.7
Dip: -45 to 50 ≠ in bottom
Bearing: N 27° W
Date begun: April 3, 1953
Date finished: April 18, 1953

Project No. DMEA E474
Name Surcease Mining Company
Location Atolia

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
0	27	27	--						Overburden.
27.0	32.0	5.0	0.9	18					Weathered QM.
32.0	36.0	4.0	1.0	20					Weathered QM, coarse biotite.
36.0	41.0	5.0	0.8	16					Weathered QM, light color.
41.0	43.0	2.0	0.3	15					Do, intense alteration.
43.0	48.0	5.0	2.7	54					Coarse biotite QM, fract. and seams - Vein type alt. near 47.5 - Qtz frags, no WO_3
48.0	50.0	2.0	0.3	15					Alt. QM, no qtz, Fe stain.
50.0	55.0	5.0	0.7	14					Coarse QM, no qtz, iron stain on joints. Silica near 55, no vein.
55.0	59.0	4.0	0.6	15					Coarse QM, altered zone.
59.0	64.0	5.0	3.8	76					Sl. harder QM, ½" qtz seam near 61.5, also joints.
64.0	70.0	6.0	3.5	58					Sl. harder QM, iron stain on fractures.
70.0	73.0	3.0	2.6	87					Sl. alt. QM, iron stain.
73.0	78.0	5.0	2.3	46					Alt. QM, occ. calcite seams.
78.0	86.5	8.5	3.0	35	none				Mod. to intensely alt. QM, vein type alteration - broken and fractured with calcite and iron stain near 86.0 Vein zone or fault, no WO_3.
86.5	91.0	4.5	1.9	42					Mod. to intensely alt. QM, core broken and albitized near 90'.
91.0	96.0	5.0	3.3	68					Mod. to intensely alt. QM, calcite seam near 92.
96.0	99.0	3.0	1.2	70				95-100 0.07	Mod. to intensely alt. QM, iron stain.
99.0	103.0	4.0	0.2	5			100-105 0.04		Vein zone or fault. Int. alt QM plus calcite and siderite, no qtz, no WO_3.
103.0	105.0	2.0	1.7	85					Mod. to intensely alt. QM.
105.0	110.0	5.0	2.1	42					Alt QM, broken near 106, also 110, calcite seam, no WO_3.
110.0	119.0	9.0	4.8	53					Mod. to intensely alt. QM, bleached near 119.
119.0	125.0	5.0	2.6	52					Alt. QM, bleached, calcite seam near 123.
125.0	129.7	4.7	2.2	47					Broken and alt. QM, siderite seams.
129.7	136.75	7.05	3.8	54					Broken and alt. QM, fresher near 136. Prom. & strong siderite - calcite & strong alt. near 134. CV - 25°

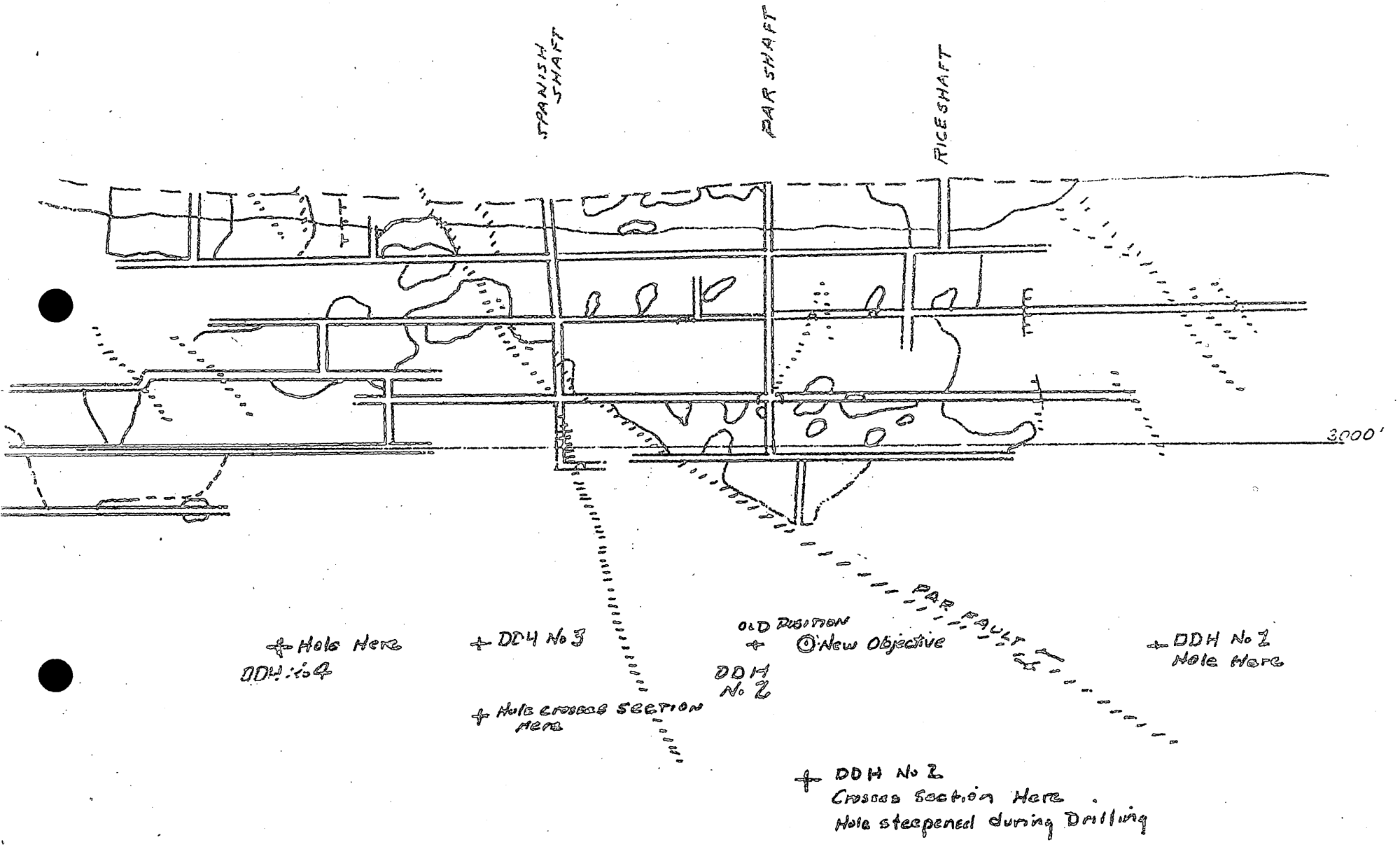
Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples $\%WO_3$	Samples Sldg	Samples $\%WO_3$	Description and Remarks
136.75	141.75	5.0	2.2	44					Mod. to intensely alt. QM, strongly bleached siderite seams - no qtz.
141.75	143.0	1.25	1.0	80					Mod. to sl. alt. QM.
143.0	143.05	0.05	0.05	100					Calcite vein.
143.05	143.3	0.25	0.25	100					QM - inclusion.
143.3	143.4	0.1	0.1	100					Broken zone with calcite.
143.4	150.0	6.6	6.4	97					Mod. alt. QM. Calcite and siderite seams.
150.0	156.7	6.7	4.0	60					Sl. alt. QM, calcite and siderite seams, iron stain.
156.7	167.0	10.3	10.2	99					Mod. alt. QM, slightly alt., harder and fresher, calcite seams. Increasing alt. near 167.
167.0	167.1	0.1	0.1	100					Intensely alt. QM with cal.
167.1	169.0	1.9	1.4	74					Mod. alt. QM with abd cal..
169.0	173.0	4.0	3.2	80					Sl. alt. QM, occ. calcite.
173.0	183.0	10.0	9.6	96					Sl. alt. QM, numerous calcite seams.
183.0	183.5	0.5	0.5	100					Normal QM, very sl. alt.
183.5	186.0	2.5	1.4	56					Intensely alt. QM with abdn calcite, slip surfaces and broken QM.
186.0	187.0	1.0	0.5	50					Harder QM, with cal. seams.
187.0	193.4	6.4	3.4	53					Int. alt. QM, broken with calcite. No qtz, no vein.
193.4	203.0	9.6	9.4	98					Sl. harder QM, with calcite seams up to ½".
203.0	213.4	10.4	10.4	100					Sl. alt. QM with prom cal. slips, bleached and altered near 212.
213.4	221.5	8.1	7.7	95					Sl. alt. QM, broken with calcite near 221 over 1 foot zone.
221.5	227.0	5.5	4.7	86					Sl. alt. to Mod. alt. QM, altered with calcite 223.5 - 224.0
227.0	229.5	2.5	1.0	40			225-230	0.03	Int. to mod. alt. QM with abdn calcite seams.
229.5	231.0	1.5	0.6	40			230-235	0.03	Calcite and strongly alt. QM fault or vein zone.
231.0	238.0	7.0	4.7	67					Int. to mod. alt. QM.
238.0	244.6	6.6	5.4	82					Alt. QM with calcite seams.
244.6	246.2	1.6	1.4	88					Albitized QM, vein type, no qtz.
246.2	249.0	2.8	2.8	100					Alt. QM - sl. iron stain.
249.0	256.8	7.8	4.5	58					Sl. alt. QM with calcite seam - harder.
256.0	260.0	3.2	1.5	47					Broken QM, altered.
260.0	269.8	9.8	5.3	54					Sl. harder QM, fere fract. and broken near 269. Alt.
269.8	275.0	4.2	3.7	88					Fresher QM, broken with ss.
275.0	280.0	5.0	1.5	30					Sl. alt. QM, locally sheared.
280.0	282.0	2.0	1.0	50	none		280-285	0.03	Vein zone with abdn calcite and pyrite - no qtz, alt. QM, no WO

Footage From	Footage To	Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples $\%WO_3$	Samples Sldg	Samples $\%WO_3$	Description and Remarks
282.0	285.75	3.75	2.5	68					Sl. alt. QM, nearly normal.
285.75	290.0	4.25	2.1	49					Sl. alt. QM, core ground and broken.
290.0	300.0	10.0	7.0	70					Sl. alt. QM, broken with pyrite 296-297. No qtz.
300.0	307.8	7.8	5.5	70					Harder, very sl. alt. QM. Calcite near 306.
307.8	311.0	3.2	1.2	38					Very sl. alt. QM - no vein.
311.0	315.0	4.0	3.2	80					Sl. alt. QM, pink stain on joint near 311.
315.0	320.0	5.0	1.5	30					Very sl. alt. QM, core ground not broken - no vein.
320.0	322.9	2.9	2.9	100					Harder very sl. alt. QM.
322.9	322.95	0.05	0.05	100	none		320-325	0.03	Qtz veinlet angle - 25°. No WO_3.
322.95	325.0	2.05	2.05	100					Harder sl. alt. QM
325.0	326.9	1.9	1.9	100					Do.
326.9	326.95	0.05	0.05	100	none		325-330	0.04	Qtz veinlet CV - 25°. Sl. albitized HW and FW. No WO_3
326.95	330.0	3.05	3.05	100					Very sl. alt. QM.
330.0	335.0	5.0	3.8	76					Do, mod. to intensely alt. 331 and 333. No qtz.
335.0	337.8	2.8	2.8	100					Very sl. alt. QM
337.8	340.0	2.2	0.4	18	337.340	0.19	335-340	0.08	Vein zone - new vein. 0.15 qtz with calcite seams with pyrite and alt. QM. Angle 60° - no WO_3.
340.0	345.0	5.0	2.0	40					Very sl. alt. QM.
345.0	349.0	4.0	2.6	65					Sl. alt QM, qtz frag. near 349. Core broken - no WO_3.
349.0	356.0	7.0	5.1	73					Very sl. alt. QM.
356.0	361.0	5.0	5.0	100					Fairly fresh hard QM.
361.0	363.4	2.4	2.4	100					Do.
363.4	364.0	0.6	0.6	100					Sheared and alt. QM with abdm pyrite.
364.0	366.4	2.4	2.4	100					Sl. alt. QM.
366.4	366.6	0.2	0.2	100					Calcite vein zone with alt. QM. No WO_3, no qtz.
366.6	371.1	4.5	4.5	100					Sl. alt. QM with calcite seams and alteration near 370.5
371.1	375.0	4.9	3.4	69					Mod. to alt. QM, fract. and altered near 374.5 with cal.
375.0	378.1	3.1	1.2	39					Mod. to intensely alt. QM. Sheared and broken near 375 with calcite and pyrite - angle 30°.
378.1	381.5	3.4	3.4	100					Mod. to sl. alt. QM, fract. with calcite near 380.
381.5	386.0	4.5	4.3	96					Sl. alt. QM with silicified QM near 383.5 with calcite, strong slip with sl. alb. near 384.
386.0	391.5	5.5	4.7	86					Sl. alt. QM with calcite and pink stain near 391.
391.5	397.8	6.3	6.0	79					Sl. alt. QM, calcite seams and broken zones.

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
397.8	406.3	8.5	6.6	78					Hard very sl. alt. QM, albitized with calcite seams. Red stained fract. CV - 55° near 404.
406.3	413.3	7.0	2.0	29					Alt. QM, core broken and dropped - overdrilled - no vein.
413.3	420.0	6.7	6.7	100					Hard sl. alt. QM, ½" calcite at 414.5. Angle 40°.
420.0	422.75	2.75	1.2	44			420-425	0.18	Strongly alt. QM. Bleached sl. albitized calcite seam.
422.75	428.75	6.0	4.4	73					Sl. to mod. alt. QM - bleached albitized with Kaolinized feldspar.
428.75	438.0	9.25	9.0	97					Sl. fresher harder QM
438.0	438.2	0.2	0.1	50	none		435-440	0.04	Dark hard gouge, fair angle - 80° - no qtz
438.2	445.5	7.3	3.6	49			440-445	0.06	Sl. alt. QM, broken and bleached 440-445.
445.5	450.0	4.5	1.8	40			445-450	0.03	Intensely alt. and bleached QM, broken - no vein.
450.0	454.5	4.5	3.7	82					Alt. and bleached QM, intensely alt. near 454.
454.5	460.0	5.5	5.1	93					Intensely alt. QM, bleached and fractured 454.7 - harder and nearly normal to 460.
460.0	468.0	8.0	7.5	94					Intensely alt. QM. Abdn calcite seams, intense alt. and bleached at 467.5.
468.0	475.3	7.3	6.6	91					Intensely alt. QM, some silicified QM, with abdn later calcite seams, angles 10 to 45° with pyrite.
475.3	478.5	3.2	2.6	81					Intensely alt. QM, silicified QM with calcite and broken zone near 476.
478.5	480.8	2.3	2.3	100					Intensely alt. QM with cal.
480.8	480.9	0.1	0.1	100					Broken zone with calcite and iron stain angle - 40°.
480.9	481.1	0.2	0.2	100					Intensely alt. QM, silicified with calcite.
481.1	481.15	0.05	0.05	100					Fractured zone with calcite.
481.15	484.4	3.25	3.25	100					Intensely alt. and silicified QM with calcite seams.
484.4	484.6	0.2	0.2	100					Broken zone with dark stain plus calcite and pink band. Angle - 40°.
484.6	484.9	0.3	0.3	100					Calcite vein (0.25') with broken inclusions. Angle 40° - no WO_3.
484.9	485.1	0.2	0.2	100					Calcite and iron stained gouge and seams alt. QM.
485.1	488.5	3.4	3.4	100					Sl. alt. QM, becoming fresh, hard and sl. albitized.
488.5	492.8	4.8	4.8	100					Hard very sl. alt. QM, darker with calcite seams.

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
492.8	493.0	0.2	0.2	100					Light grey gouge with inclusions of alt. QM & fault.
493.0	496.7	3.7	2.5						Alt. QM with calcite seams.
496.7	497.0	0.3	0.3	100					Calcite vein with alt. QM, red stain, angle - 40°.
497.0	497.7	0.7	0.7	100					Alt. QM with calcite, qtz veinlet at 20° to core, no WO_3.
497.7	502.6	4.7	3.6	77					Alt. silicified QM with talc on slips with calcite seams.
502.6	504.2	2.6	2.6	100					Silicified QM with talcose seams.
504.2	504.5	0.3	0.3	100					Silicified QM with calcite on HW and FW, trace epidote, angle - 60°.
504.5	507.4	2.9	2.9	100					Silicified QM - very sl. talcose with calcite seams.
507.4	507.5	0.1	0.1	100					White calcite vein with inclusion of QM - angle 40°.
507.5	516.4	8.9	8.0	90					Silicified and alt. QM with occ. calcite seam.
516.4	516.65	0.25	0.25	100	none		515-520	0.04	Qtz vein with calcite and abdn pyrite, angle 60°, no WO_3.
516.65	518.4	1.85	1.85	100					Altered and silicified QM with calcite seam near 518.
518.4	526.3	7.7	7.0	91					Alt. QM with stringers and seams of calcite - albitized near 526, broken with pyrite
526.3	532.9	6.6	6.5	99					Albitized QM with calcite seams near 529.2, 530.
532.9	534.5	1.6	1.6	100					Albitized QM with calcite seam.
534.5	535.6	1.1	1.1	100			535-540	0.03	Silicified QM.
535.6	535.8	0.2	0.2	100					Silicified QM with later qtz and calcite - start of vein.
535.8	536.2	0.4	0.4	100					Silicified and broken QM with bands of qtz, angle 50°.
536.2	536.4	0.2	0.2	100					Silicified QM with qtz bands and seams - no WO_3.
536.4	537.7	1.3	1.3	100					Albitized QM.
537.7	537.9	0.2	0.2	100					Qtz veinlet, no WO_3.
537.9	542.9	5.0	5.0	100			540-545	0.03	Albitized QM with qtz veinlet at 538. No WO_3.
542.9	544.7	1.8	1.8	100					Albitized QM, qtz veinlet at 543.7.
544.7	544.8	0.1	0.1	100					Qtz veinlet with pyrite. No WO_3 - angle 60°.
544.8	546.1	1.3	1.3	100					Albitized QM becoming broken with qtz veinlets & pyrite - no WO_3.
546.1	546.7	0.6	0.5	84					Silicified QM, broken with qtz seams and pyrite.
546.7	546.8	0.1	0.1	100	546.7-546.8	0.12	545-550	0.02	Good qtz vein with calcite fractured and broken with speck of WO_3

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
546.8	550.0	3.2	2.9	90					Albitized QM, broken and blocky, fractured.
550.0	552.0	2.0	0.8	15			550-555	0.09	Pyrite near 550 - vein zone? No WO_3, dark alt. No qtz.
552.0	552.6	0.6	0.8	50					Altered QM.
552.6	553.8	1.2	1.2	100					Sl. alt. albitized QM.
553.8	554.2	0.4	0.4	100					Intensely alt. bleached and broken QM with cal. seams.
554.2	554.9	0.7	0.7	100					Moderately altered QM.
554.9	555.6	0.7	0.7	100					Intensely alt. broken and sil. QM. Angle 50°.
555.6	562.1	6.5	6.5	100					Intensely to mod. alt. QM with broken zones and cal. albitized.
562.1	563.6	1.5	0.7	51					Intensely alt. QM, broken with fract. zones and cal.
563.6	565.1	1.4	1.4	100					Altered albitized QM.
565.1	570.3	5.2	4.3	83			565-570	0.18	Fault zone, sheared broken, kaolinized and albitized QM with dull grey gouge up to 0.2' - angle 25°, bleached with calcite near 570.
570.3	577.3	7.0	6.5	93					Intensely alt. for 0.4', strongly alt. to 474 becoming fresh and sl. alb. near 577.
577.3	577.9	0.6	0.6	100					Strongly altered dark pyritized QM with slip surfaces at 30°.
577.9	586.2	8.3	8.0	96					Harder nearly normal QM, prom joint slips near 582.2-585.5 with pink stain.
586.2	587.0	0.8	0.3	37					Intensely alt. QM with pyrite, dark broken with gouge.
587.0	587.6	0.6	0.5	67			585-590	0.26	Qtz vein with alt. QM. (about 0.2' qtz), angle 40° no visible WO_3.
587.6	590.6	3.0	3.0	100					Hard very sl. alt. QM.
590.6	591.5	0.9	0.4	45					Strongly alt. QM with gouge and pink stain, angle 25°, dark broken.
591.5	593.5	2.0	1.2	60					Alt. QM, becoming fresher.
593.5	603.5	10.0	10.0	100					Hard very sl. alt. QM.
603.5	604.1	0.6	0.5	67					Hard very sl. alt. QM.
604.1	606.0	1.9	1.0	53					Broken and alt. QM, sl. silicified and gouge, no vein, strongly altered in part.
606.0	609.5	3.5	3/1	89					Hard very sl. alt. QM.
609.5	618.5	9.0	7.3	81					Hard very sl. alt. QM with pink stained slip near 610.
618.5	625.7	6.5	6.5	90					Hard very sl. alt. QM, joint seam with red stain near 620

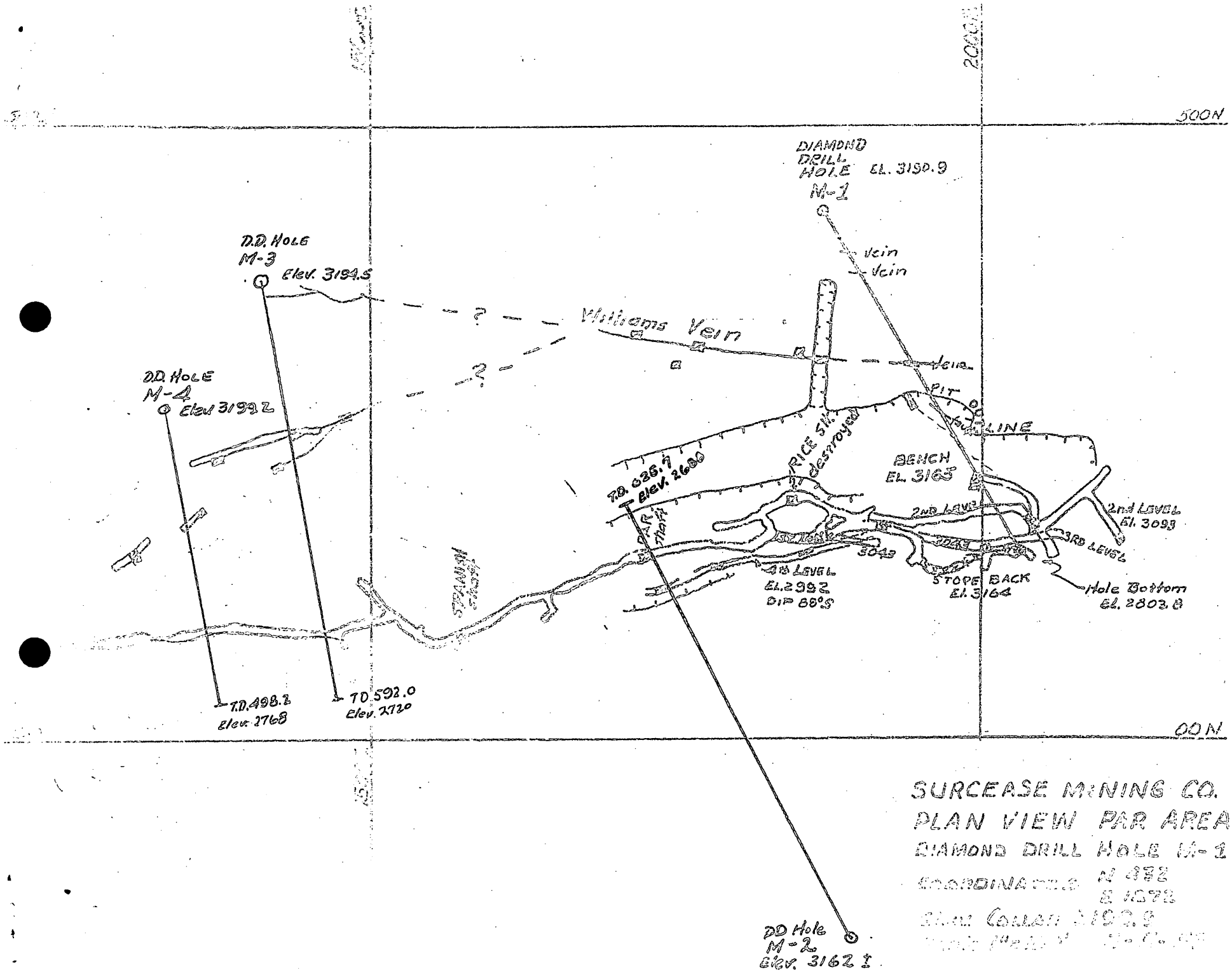


SURCEASE MINING CO.

LONGITUDINAL SECTION

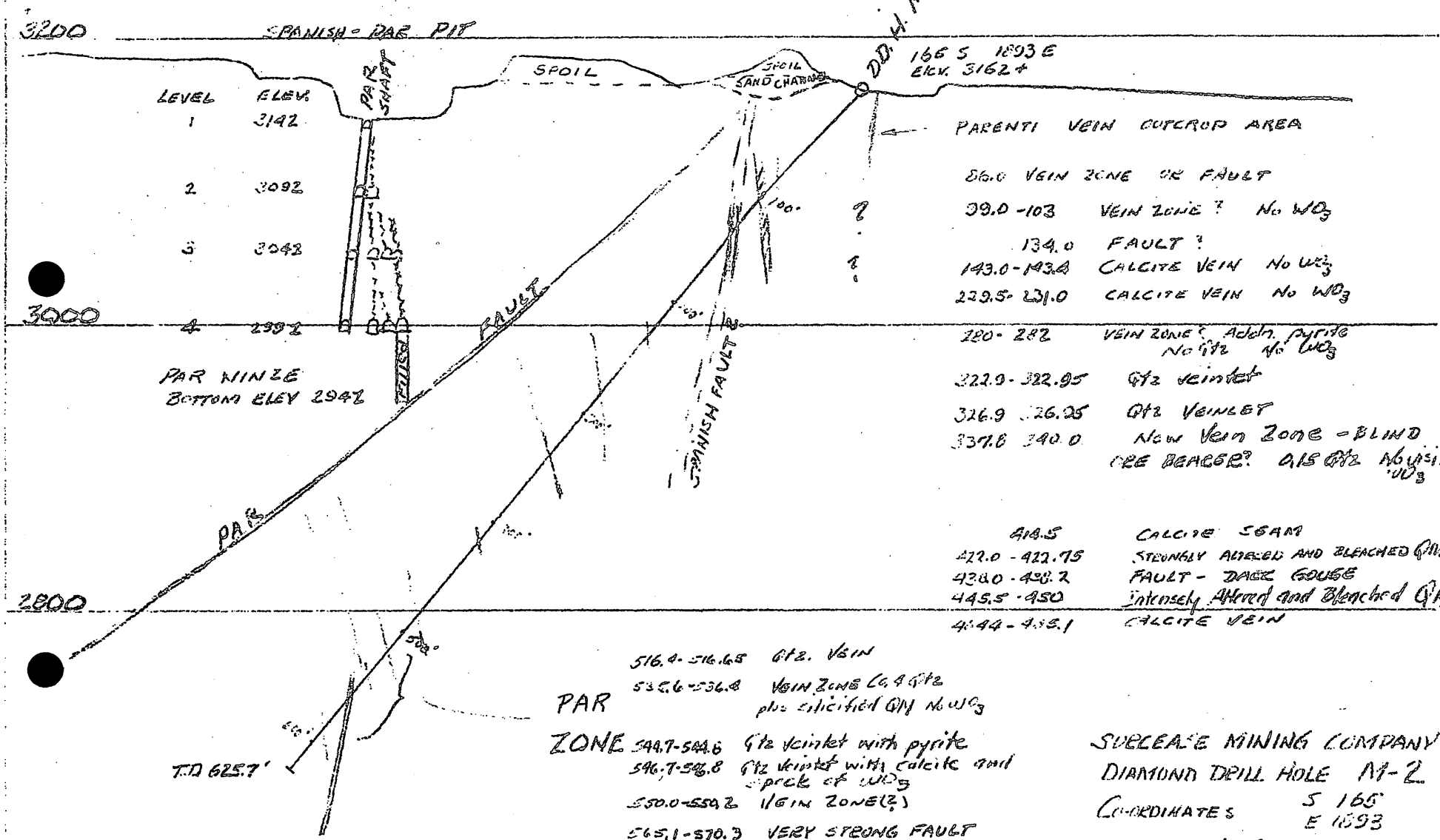
ALONG PAR - SPANISH VEIN

Scale 1" = 100' DLG 3-13-53


500N
00N
DIAMOND DRILL HOLE M-1 EL. 3150.9
vein
vein
D.D. HOLE M-3 Elev. 3184.5
Williams Vein
vein
D.D. HOLE M-4 Elev 3199.2
PIT
BENCH EL. 3165
RICE SH. destroyed
T.D. 636.7 Elev. 2680
2ND LEVEL
2nd LEVEL El. 3093
3RD LEVEL
4th LEVEL EL. 2992 DIP 88°S
STOPE BACK El. 3164
Hole Bottom El. 2803.8
T.D. 498.2 Elev. 2768
T.D. 592.0 Elev. 2720
DD Hole M-2 Elev. 3162.1
SURCEASE MINING CO.
PLAN VIEW PAR AREA
DIAMOND DRILL HOLE M-1
COORDINATES N 832
E 1078
Elev. Collar 3150.9

SECTION ALONG N27° W - LOOKING N.E.

HOLE M-2



HOLE BOTTOMED IN FRESH QM, little to no alteration

SUCCESS MINING COMPANY
DIAMOND DRILL HOLE M-2
COORDINATES S 165
E 1893
STRIKE N27°W DIP -45°
Elevation 3162±
4-30-53 Scale 1"=100' BY F.L.B.

Note: Hole steepens to -50° after first 100'.

Form MF 104 (Rev.)
(April 1952)

Budget Bureau No. 50-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
ACCOUNTS RECEIVED APR 23 1953
MAY 4 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March, 1953 Docket No. DMEA 2809 Contract No. 16m-5474
Operator's Name Pureesse Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California
Contract Amount, $ 33,400.00 Government Participation: 75 % Amount, $ 25,050.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling 1090' at 5.75	6267.50	2903.75	9171.25			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Mobilization	--	250.00	250.00			
TOTALS	6267.50	3153.75	9421.25			

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

Date Apr. 7, 1953 *Payee Pureesse Mining Company

Per K. Malone Title Manager

*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.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 4700 63

Lloyd H. Sjolander
Authorized Certifying Officer

Signature
(Authorized Certifying Officer)

Date APR 27 1953 Vou. No. SF-DMEA-41

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature [illegible] Title [illegible] Date April 22, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title Executive Officer DMEA Field Team Region III Date April 22, 1953

H. C. Miller

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
ACCOUNTS RECEIVED APR 23 1953

MAY 4 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1953 Docket No. DMEA 2809 Contract No. Idm-5474
Operator's Name Purcease Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	per ft.	5.75	6267.50	1090	9171.25	1595	5.75	5000	5.75
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Mobilization		--	--	250.00	1	250.00	1	250.00
TOTAL DISTRIBUTED COSTS		6267.50		9421.25				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6267.50		9421.25				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Apr. 7, 1953 Operator Purcease Mining Co.

Per K. Malone Title Manager

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

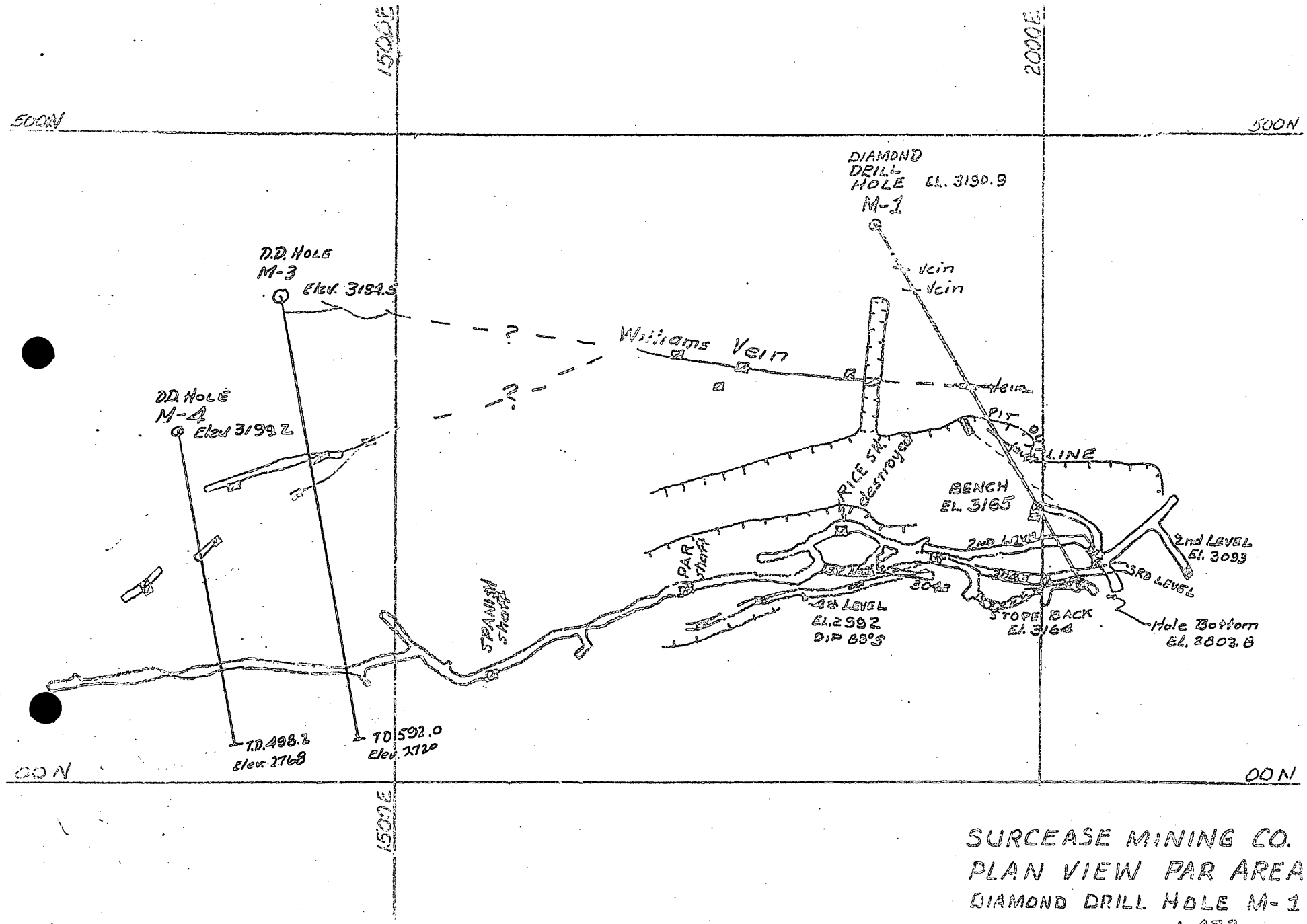
INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475



SURCEASE MINING CO.
PLAN VIEW PAR AREA
DIAMOND DRILL HOLE M-1
COORDINATES N 432
E 1872
ELEV. COLLAR 3190.9
Made 1"=100' 3-5-93

C. **Narrative** - Hole M-3

Hole was started on March 5, 1953 and 70' of NX casing set before changing to BX on March 6, 1953. Drilling proceeded to 312 ' with BX, where changed to AX. Drilling progressed to 372 where water was lost and hole cemented. In attempt to save one trip in and out, driller Odgers ordered core barrel to be placed in hole and lowered while pumping out the cement. He pumped until clear and pulled 20' above bottom. In morning core barrel and rods were cemented tight. Seven shifts were lost trying to loosen and finally barrel was overreamed and casing set to 372 under supervision of Mike Weaver. Odgers requested to quit, which he did. Work proceeded without trouble to total depth of 592 on a two shift basis under drillers Calvert and Allred. Hole was stopped at 592. Hole surveyed at 300 and 500 and appears to have steepened three to five degrees.

Results:

Hole was a blank with no tungsten in the core. Sludge assays not yet available but probably no good. A strong vein zone was cut at 2800 ℄ rather than 2850 as planned with quartz, calcite and pyrite but no tungsten. The core vein angles do not check with the theoretical ones, assuming a 90° dip. It is possible but not proven that an unknown fault and vein may have been encountered instead of the Spanish vein. This would still leave an upper segment unexplored, due to the unexpected steepening of the hole.

SURGEASE MINING COMPANY

DIAMOND DRILL HOLE LOG

Hole No: M-3
Location: 1421.3 E - 378.7 N
Elevation of collar: 3194.5
Depth: 892
Dip: -50° - Surv. 300' -57° - 400' -53°
Bearing: S 10° East
Date begun: March 5, 1953
Date finished: March 19, 1953

Project No. DMEA E474
Name Surgease Mining Co.
Location Atolia, N.W. of Spanish

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
0	10	10	--	--					Overburden.
10	32	22	--	--					QM - no core.
32.0	32.7	0.7	0.7	100	none		30-35		Vein zone - qtz plus calcite no WO_3. CV angle 58°.
32.7	39.0	6.3	0.8	7.8					Altered QM - brecciated.
39.0	40.0	1.0	0.5	50					Altered QM, 1/4" qtz plus cal. No WO_3 at 39.9. CV - 60°.
40.0	45.0	5.0	1.0	20					Altered QM - weathered.
45.0	45.3	0.3	0.3	100					ditto
45.3	45.5	0.2	0.2	100					Altered QM - 1/16" yellow limonite.
45.5	50.0	4.5	3.7	82					Sl. weathered QM, mottled with dark biotite.
50.0	55.0	5.0	4.5	90					ditto - calcite on seams.
55.0	60.0	5.0	4.7	94					ditto - calcite seams.
60.0	65.0	5.0	4.6	92					ditto
65.0	66.2	1.2	1.1	92					ditto - limonite on seams plus calcite.
66.2	66.5	0.3	0.3	100	none		65-70		Alt. QM plus calcite and qtz limonite stain plus slicks. No W.
66.5	70.0	3.5	3.0	86					Fresh QM - calcite on frac.
70.0	71.5	1.5	1.5	100					Sl. alt. QM, silicified.
71.5	79.0	7.5	5.0	67	none				Alt. QM with calcite plus qtz at 78.0. No WO_3. Normal QM at 78.0 to 79.
79.0	82.3	3.3	0.6	100					Fresh QM, limonite stain on joint.
82.3	82.9	0.6	0.6	100					Biotite & hdb near stringer of qtz, calcite (1/8") balance QM.
82.9	90.0	6.1	6.1	100					Albitized QM with blotchy bands of biotite and hdb.
90.0	90.9	0.9	0.9	100					Albitized QM.
90.9	94.0	3.1	3.1	100					Fresh QM.
94.0	100.0	6.0	5.6	94					QM, ¼" calcite plus limonite veinlet at 94.0.
100.0	104.0	4.0	3.0	75					Normal QM, jointed.
104.0	124.0	20.0	19.0	95					Fresh normal QM. No alt. bands or veins.
124.0	127.2	7.2	7.0	97					Fresh QM.
127.2	127.5	0.3	0.3	100	none				Vein wall type alteration. Albitized QM - limonite stains. Qtz grains in QM. No WO_3.

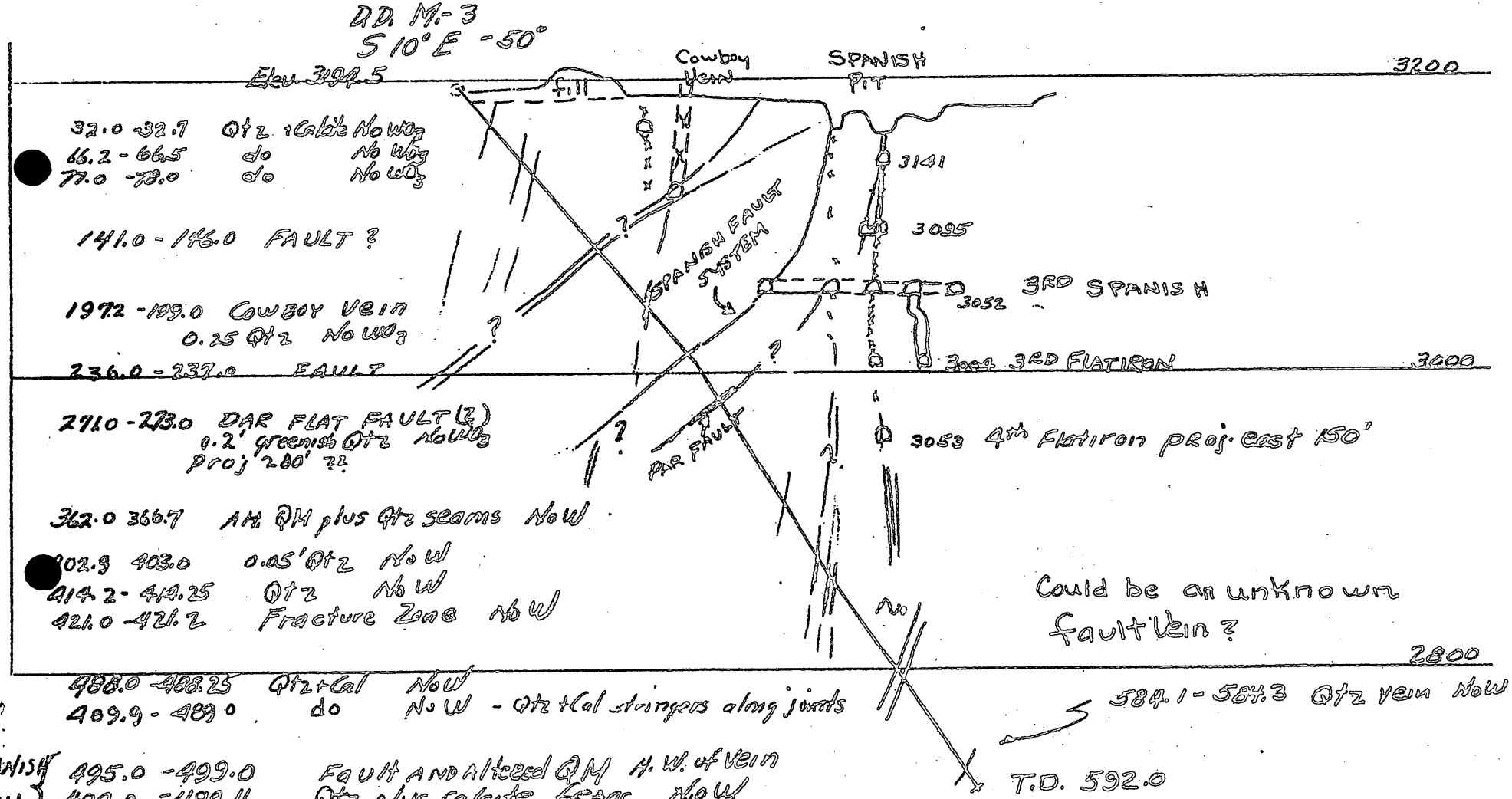
Footage			Core Recoveries		Samples				
From	To	Feet	Feet	%	Core	%WO_3	Sldg	%WO_3	Description and Remarks
127.5	128.5	1.0	1.0	100					Normal QM. limonite stained.
128.5	128.8	0.3	0.3	100	none				Albitized QM, vein wall alt. with qtz grains. No WO_3.
128.8	131.0	2.2	1.5	68					Sl. alt. QM.
131.0	141.0	10.0	8.8	88					Fresh med. grained QM.
141.0	146.0	5.0	0.8	16	none				0.6' fresh QM, then crushed and broken with clayey gouge, probable fault. No angle.
146.0	156.0	10.0	10.0	100					Hard QM, calcite seams.
156.0	166.0	10.0	10.0	100					ditto, qtz calcite veinlet 1/8" at 165.
166.0	176.0	10.0	10.0	100					Hard QM, calcite seam at 170.3, broken at 176.0.
176.0	186.0	10.0	10.0	100	none				QM, albitized 177-178. ½" chalcedonic qtz with red hemaitie stain near 177.6. No WO_3.
186.0	196.0	10.0	10.0	100	none				Normal QM, chalcedonic qtz seam 191.2-191.6. No WO_3.
196.0	197.2	1.2	1.2	100					Normal QM, becoming alb.
197.2	199.0	1.8	0.9	50	none		195-200		Cowboy's Vein - 0.25' qtz. No WO_3. Vein 0.2' thick, angle 50°. Shows pyrite F.W. QM broken and dark (0.6')
199.0	209.0	10.0	10.0	100					Hard normal QM.
209.0	219.0	10.0	10.0	100	none				Hard normal QM, ½" qtz seam near 211. No WO_3
219.0	229.0	10.0	10.0	100					Normal QM, occ. joints.
229.0	233.7	4.7	4.7	100					Normal QM, strongly bleached plus epidote along joints.
233.7	234.5	0.8	0.8	100					Altered QM, mod. to intense alteration.
234.5	234.7	0.2	0.2	100	none				Calcite vein zone, sl. iron stain. Angle 35°. No WO_3.
234.7	236.8	2.1	1.8	86					Sl. alt. QM.
236.8	237.1	0.3	--?	?					Some core lost - gouge, sl. alt. QM.
337.1	239.0	1.9	0.5	26					Hard fresh broken QM. Hard fresh QM, calcite and qtz seams near 243.5. No WO_3.
239.0	249.0	10.0	10.0	100					
249.0	260.0	11.0	10.5	96					Normal QM, sl. bleaching.
260.0	266.0	6.0	5.5	92					Normal QM, broken and oxidized joints
266.0	271.0	5.0	5.0	100					Fresh hard QM, becoming albitized.
271.0	273.0	2.0	0.7	35	none				Vein zone, 0.2' gouge. 0.2' greenish qtz, 0.2' alt. and broken QM, angle 70°. No WO_3
273.0	283.0	10.0	9.6	96					QM, strong joints at 280 with calcite. No WO_3.
283.0	293.0	10.0	10.0	100					Sl. albitized QM.
293.0	303.0	10.0	10.0	100					ditto, strong joints with s.s. at 294.
303.0	312.0	9.0	9.0	100					Normal QM, vein type alt. near 312/ No qtz or WO_3.
312.0	317.0	5.0	4.1	82					Albitized QM, occ. calcite seam, strong joints.
317.0	322.0	5.0	3.0	60					Albitized QM, do, sl. fresher
322.0	332.0	10.0	10.0	100					Do, strong alt. on joints, calcite & hematite on joint near 324. No WO_3

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO3	Samples Sldg	Samples %WO3	Description and Remarks
332.0	342.0	10.0	10/	100					QM, increasing albitization and broken QM.
342.0	352.0	10.0	10/	100					QM, considerable alb. and calcite seams.
352.0	362.0	10.0	10.0	100					ditto
362.0	366.7	4.7	4.7	100					QM, increasing alt. Qtz seams with vugs, bleaching near 366.7.
366.7	372.0	5.3	1.0	19	none		365-370		Veinlet at 366.7, angle 45° open fracture coated with qtz and pyrite. Lost water.
372.0	374.0	2.0	1.2	60					Sl. harder QM. Core broken near 373.
374.0	381.3	7.3	6.7	92					Sl. harder QM, darker, harder. ¼" calcite -pink stain on joint near 377.7
381.3	391.5	10.2	10.0	99					Dk QM, broken near 382.3, broken with minor qtz at 388.0. Angle 40°. No WO_3.
391.5	399.0	7.5	7.2	96					Harder QM. Blocky, fract. zone 388.5, red stain joint with cinnabar at 396. No W.
399.0	402.9	3.9	3.9	100					Dark sl. alt. QM.
402.9	403.0	0.1	0.1	100	none				Qtz veinlet (0.05') white vitreous - dark biotite. No WO_3.
403.0	405.4	2.4	2.4	100					Hard sl. alt. QM.
405.4	406.8	1.4	1.4	100					ditto
406.8	407.0	0.2	0.2	100	none				Fracture zone - minor calcite plus pyrite. Angle 55°. No WO_3.
407.0	414.2	7.2	7.2	100					Hard, very sl. alt. QM, occ. joints
414.2	414.25	0.05	0.05	100	none		410-415		Qtz veinlet (0.05') Angle 40°. No WO_3. Replacement qts along core with pyrite.
414.25	415.0	0.75	0.75	100					Hard sl. alt. QM.
415.0	421.0	6.0	5.4						Sl. alt. QM. Broken and fracture zone. Prom. fract near 420.5.
421.0	421.2	0.2	0.2	100					Prom. fract.- 0.2 intro. calcite. QM intensely altered. No WO_3.
421.2	422.6	1.4	1.4	100					Altered QM.
422.6	422.61	0.01	0.01	100					Fracture zone coated with iron and calcite. Angle 55°, no WO_3.
422.61	425.1	2.39	2.39	100					Altered QM.
425.1	425.2	0.1	0.1	100					Fracture zone plus calcite Angel 45°, No WO_3.
425.2	428.5	3.3	3.3	100					Altered QM.
428.5	428.6	0.1	0.1	100					Do, plus calcite seams.
428.6	431.0	3.4	3.4	100					Altered QM.
431.0	441.0	10.0	10/	100					Altered QM, prom. calcite seams with pyrite near 440.
441.0	451.5	10.5	10.5	100					Alt. QM, abd calcite seams near 442, 443.2, 447, 449.7 with pyrite. Increasing bleaching of QM.

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
451.5	461.5	10.0	10.0	100					Altered QM, strong to mod. bleaching.
461.5	470.5	9.0	8.3	92					Altered QM, calcite and pyrite on joints, ½" qtz at 472.0.
479.6	488.0	8.5	8.5	100					Alt. QM, slightly bleached Fe_2O_3 near 482, color change.
488.0	488.25	.25	0.25	100	none		485-490		Broken QM, dark graphitic film plus pyrite over 0.1' 0.05 qtz plus calcite vein, angle 60°. No WO_3.
488.25	488.9	0.65	0.65	100					Alt. QM plus calcite 0.05 qtz. plus calcite seam. Angle 60°. No WO_3.
488.9	489.0	0.1	0.1	100					
489.0	489.5	0.6	0.6	100					Altered QM, seams plus pyrite in open joint fract. No WO_3.
489.5	492.2	2.7	2.7	100	none		490-495		Altered QM plus calcite, Qtz plus calcite. Angle 50. No WO_3
492.2	492.5	0.3	0.3	100					
492.5	495.0	2.5	2.5	100					
495.0	498.6	3.6	0.25	7	none		495-500		Soft alt. QM sericite frags and broken frags. H.W. of vein zone.
498.6	499.0	0.3	0.3	100					Broken frags, alt. QM.
499.0	499.4	0.4	0.3						Qtz vein frags and alt. QM with pyrite, angle 50°. No WO_3. Spanish Vein?
499.4	503.3	3.9	3.9	100					Alt. QM, calcite seams strong seam with gray gouge 502, with pyrite.
503.3	503.5	0.2	0.2	100	none				Pink qtz vein with pryite 0.1' qtz angle -55°. No W.
503.5	510.8	6.3	6.0	100					Alt. QM, calcite seams plus pyrite and qtz veinlet. No def. vein. No WO_3.
509.7	519.7	10.0	8.7						Sl. to mod. alt. QM. Alt. and core lost near 519.
519.7	519.75	0.05	0.05	100	none				Qtz - calcite veinlet, CV - 80°, strong joint abdn pyrite. No W.
519.75	530.0	10.25	10.0	98					Alt. QM, becoming harder. Occ. strong joints with calcite.
530.0	534.5	4.5	2.9	65					Mod. to sl. alt. QM, occ. calcite seams.
534.5	544.5	10.0	10.0	100					Alt. sl. darker QM, fract. show movement in several directions. Introduced calcite.
544.5	547.0	3.5	3.0	86					Alt. QM, sl. bleached with calcite seams.
547.0	547.1	0.1	0.1	100					Broken QM plus albite (?) angle 50°, no WO_3.
547.1	549.5	2.4	1.9	79					Alt. QM
549.5	554.0	4.5	1.3	29			550-555		Intensely alt. QM, broken, crushed, bleached. No qtz, no WO_3.

Footage			Core Recoveries		Samples				Description and Remarks
From	To	Feet	Feet	%	Core	%WO3	Sldg	%WO3	
554.0	554.6	0.5	0.4	80					Sl. alt. QM becoming harder
554.6	557.8	3.2	1.9						Sl. harder QM, broken with calcite angl gouge (?) fault? Bit plugged.
557.8	563.15	5.25	5.1	97					Alt. QM, occ. cal. seams.
563.15	563.2	0.05	0.05	100					Dark redish hematite on fracture, med. hard alt.
563.2	566.65	3.45	3.40	99					QM, occ. cal. seams
566.65	567.0	0.55	0.55	100	none				Fracture QM with abdn hematite and calcite seams CV - 80°. No WO_3.
567.0	568.0	1.0	1.0	100					Alt. QM.
568.0	574.0	6.0	4.8						Sl. harder alt. QM, fract. and broken on joints
574.0	582.0	10.0	8.3						Do, med. to intense alt. near 575, 576. Occ. cal. coated fractures sil. QM near 582 with gouge and broken core.
582.0	584.1	2.1	2.1	100					Altered QM.
584.1	584.3	0.2	0.2	100					Early qtz. No WO_3. Angle 55°, nearly a silicified monz. Alt. QM fract. near 585.8.
586.6	587.8	0.2	0.1	50					Alt. QM introduced cal. No WO_3.
587.8	592.0	4.2	4.2	100					Alt. QM, prom. broken zone with strong alteration 488.6-488.8. Occ. calcite seams. No WO_3.

SECTION ALONG S 10°E, LOOKING EAST



32.0 - 32.7 Qtz + Calcite No WO_3
66.2 - 66.5 do No WO_3
77.0 - 78.0 do No WO_3

141.0 - 146.0 FAULT ?

197.2 - 199.0 Cowboy Vein
0.25 Qtz No WO_3

236.0 - 237.0 FAULT

271.0 - 273.0 DAR FLAT FAULT (?)
0.2' greenish Qtz No WO_3
proj 280' ??

362.0 366.7 Alt. QM plus Qtz seams No W

402.9 403.0 0.05' Qtz No W
414.2 - 414.25 Qtz No W
421.0 - 421.2 Fracture Zone No W

Could be an unknown fault vein ?

486.0 - 488.25 Qtz + Cal No W
489.9 - 489.0 do No W - Qtz + Cal stringers along joints

584.1 - 584.3 Qtz vein No W

SPANISH VEIN
495.0 - 499.0 Fault and altered QM H.W. of vein
499.0 - 499.4 Qtz plus calcite frags No W
503.3 - 505.5 Pink Qtz (0.1') No W

Hole Surveyed 300' AND 400'

SURCEASE MINING CO.
DIAMOND DRILL HOLE M-3
COORDINATES N 378 1 E 1421 3
ELEV. 3194 5 STRIKE S 10°E DIP -50°
Scale 1" = 100' R.B. 4-6-53

C. Narrative - Hole M-4

Hole started on March 22, 1953 and 29 feet of overburden penetrated. Reamed to 35 feet. Coring started at 35 feet. Hole continued to 60 feet as NX and BX casing set. Drilling continued to 137 feet with BX and 137 feet of AX casing set. Drilling continued with AX core to 498.2 (total depth). Tests were taken at 300 and 400 feet and readings indicated a very slight change from the initial dip of 60° to 61°. No trouble was encountered and hole was finished on afternoon shift on March 31, 1953.

Results:

Several scheelite and quartz veins were encountered in the upper part of the hole. The showings at 46 and 95 feet were narrow but good. The bottom of the hole carried Quartz and Calcite veins but no tungsten except for a speck in the vein at 443. The objective was cut at 477 and indicated a moderate to strong vein with gouge and altered quartz monzonite but no tungsten. The vein appears to take southerly dip of 80°, below the known stopes. Wall rock alteration with introduced calcite and pyrite were prominent in lower part of the hole.

SURGEASE MINING COMPANY

DIAMOND DRILL HOLE LOG

Hole No.: M-4
Location: 1332 E - 273 N
Elevation of collar: 5199.2
Depth: 498.2
Dip: -60°
Bearing: S 10° E
Date begun: March 22, 1953
Date finished: March 31, 1953

Project No. DMEA E474
Name Surgease Mining Co.
Location Atolia, N.W. Spanish Vein

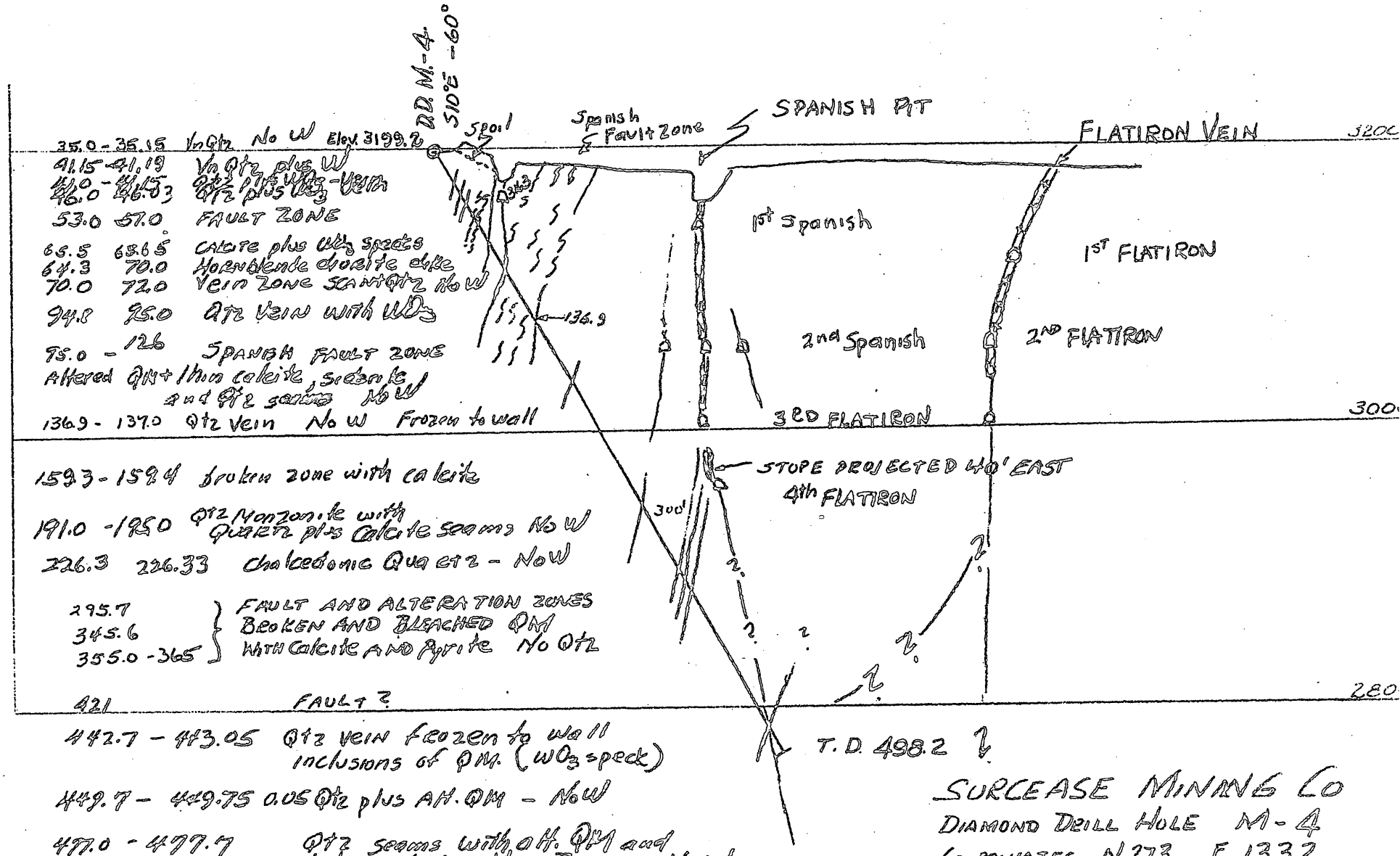
Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples $\%WO_3$	Samples Sldg	Samples $\%WO_3$	Description and Remarks
0	29.0	--	--						Overburden
29	35.0	6.0	--	0					QM not cored
35.0	39.0	4.0	1.0	25					Weathered and broken QM, 1 pc. of vein qtz. No WO_3.
39.0	41.0	2.0	0.4	20					Altered QM.
41.0	41.15	0.15	0.15	100	yes		40-45		Qtz vein, minor calcite, speck of WO_3. CV - 40°.
41.15	41.19	0.04	0.04	100	yes				Qtz plus scheelite - ¼"
41.19	44.0	1.8	0.3	17					Altered QM
44.0	46.0	2.0	0.4	20					Altered QM
46.0	46.03	0.03	0.03	100	none				Qtz veinlet on strong joint.
46.03	48.0	1.97	0.6	30					Altered QM
48.0	53.0	5.0	4.0	80					Altered QM plus calcite on joint surfaces.
53.0	57.0	4.0	1.8	45					Fault zone, soft altered QM with calcite seams.
57.0	60.0	3.0	3.0	100					Sl. alt. QM with cal. seams.
60.0	65.3	5.3	5.3	100					Alt. QM, carbonate and siderite on joints. At 65° hdb diorite bleb with chill border.
65.3	65.5	0.2	0.2	100					Dark fine grained diorite.
65.5	65.65	0.15	0.10	66.6	yes		65-70		Calcite plus specks of WO_3, on joints. CV - 50° at rt. angles to dike contact.
65.65	67.20	1.55	1.55	100					Dark diorite cut by calcite seam.
67.20	70.0	2.8	2.7	96					Dark mottled hdb diorite splotches of coarse biotite. Probable core of dike.
70.0	72.6	2.6	0.4	15	none				Intensely alt. QM - Gouge with ¼" qtz veinlet. CV - 50° - No WO_3.
72.6	73.4	0.8	0.6	75					Mod. to intensely alt. QM.
73.4	78.0	4.6	4.6	100					Fresher QM. Sl. alt. near 75.0. Balance hard.
78.0	83.0	5.0	4.8	96					Broken QM, altered with calcite and pyrite on joints
83.0	90.0	7.0	6.9	99					Do. Some limonite and intro. qtz grains on joints.
90.0	94.8	4.8	4.7	98					QM, increasing alteration.
94.8	95.0	0.2	0.2	100	yes		90-95		Qtz vein with calcite and scheelite - Angle 40°

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
95.0	96.6	1.6	1.6	100					Broken QM, limonite and calcite on joint surfaces.
96.6	96.8	0.2	0.2	100					Calcite and qtz seam in alt. QM. No WO_3.
96.8	98.2	1.4	1.4	100					Fresher QM, ½" qtz at 98.2
98.2	99.7	1.5	1.5	100					Dark hbd biotite diorite.
99.7	100.0	0.3	0.3	100					Intensely alt. QM, limonite calcite kaolinized feldspars
100.0	103.0	3.0	3.0	100					Broken QM, fresher at 103 prom. siderite vein at 102.6
103.0	110.0	7.0	3.5	50					Broken and altered QM. Calcite and limonite seams fresher at 108.
110.0	114.3	4.3	4.3	100					Darker hdb monzonite sl. bleached.
114.3	114.8	0.5	0.5	100					Highly altered QM.
114.8	117.0	2.2	2.2	100					Broken highly altered QM sheared with introduced pyrite and seritized.
117.0	120.0	3.0	1.8	60					Light colored bleached QM limonite stain, some gouge.
120.0	127.0	7.0	5.5	79					Do, sl. fresher at 126.
127.0	132.9	5.9	5.9	100					Fresh QM, limonite and calcite on joint.
132.9	136.9	4.0	4.0	100					Fresh QM, becoming altered with pyrite and minor qtz at 136.5. No WO_3.
136.9	137.0	0.1	0.1	100	none				Qtz vein frozen to wall with pyrite. Angle 35°.
137.0	147.1	10.0	10.0	100					Hard fresh QM.
147.1	156.9	9.8	9.8	100					Hard QM, silicified near 150, darker near 153, then normal - biotite seam.
156.9	167.0	10.1	10.0	100					Normal QM, broken zone with calcite near 159.3
167.0	177.0	10.0	10.0	100					Normal QM
177.0	187.5	10.5	10.0	95					Normal QM, sl. altered near 187.5.
187.5	195.8	8.3	6.1	74					QMp sl. alt. and bleached with qtz, calcite and pyrite seams. No WO_3. Normal near 195.
195.8	205.8	10.0	10.0	100					Alt. near 195.8, balance normal QM.
205.8	215.95	10.15	10.1	99+					Hard QM
215.95	225.9	8.9	8.9	89					Hard QM, broken near 225. No vein, ½" chalcedonic qtz near 226.3. No WO_3.
225.95	235.95	10.0	10.0	100					Hard QM
235.95	245.9	9.95	9.95	100					Hard QM
245.9	255.9	10.0	10.0	100					Hard QM
255.9	266.0	10.1	10.1	100					Hard QM
266.0	276.0	10.0	8.6	81					Hard QM, fract. and broken core near 276. No vein.
276.0	284.5	8.0	8.0	100					Hard QM, occ. joints coated with chlorite and pyrite with calcite. No W.
284.5	294.5	10.0	9.3	93					Sl. alt. QM broken and bleached with intro. cal. near 292 and 294.

Footage			Core Recoveries		Samples				Description and Remarks
From	To	Feet	Feet	%	Core	%WO_3	Sldg	%WO_3	
294.5	300.0	5.5	5.2	95					Sl. alt. QM, ditto.
300.0	308.0	8.0	4.8	60					Mod. to intensely alt. QM, fresher near 308. No vein, no WO_3.
308.0	318.0	10.0	6.7	67					Sl. alt. QM with short intensely alt. zones with calcite, pyrite and sericite. No qtz, no WO_3.
318.0	328.0	10.0	10.0	100					Hard nearly normal QM, cal. seam near 324.
328.0	339.0	11.0	10.4	95					Hard nearly normal QM.
339.0	349.0	10.0	10.0	100					Do, broken near 345.6 and 349.0.
349.0	355.0	6.0	5.2	87					Hard nearly normal QM.
355.0	365.0	10.0	7.1	71					Altered, broken and albitized QM. Prom. fract. and calcite seams occ. to abdn pyrite fresher 364.5.
365.0	375.0	10.0	10.0	100					Sl. harder nearly normal QM.
375.0	385.0	10.0	10.0	100					Decreasing alteration - fault at 384 - fresh at 383.
385.0	395.0	10.0	7.7	77					Increasing alt., bleached plus albite, calcite with sericite.
395.0	405.0	10.0	9.6	96					Sl. to mod. altered QM fault at 404.
405.0	410.0	5.0	1.6	32					Mod. fresh QM - Hole blocked by fracture at 406.5 parallel to core.
410.0	421.0	11.0	4.7	43					Faulty Sl. to mod. alt. to 414.
421.0	431.0	10.0	7.8	78					Broken QM, mod. to intensely altered 426-431.
431.0	441.7	10.7	5.8	54					Mod. alt. QM, sl. harder.
441.7	442.7	1.0	1.0	100					Do.
442.7	443.05	0.35	0.35	100	yes		440.445		Qtz vein - frozen to walls with inclusions of QM. Minute specks of WO_3, no value.
443.05	449.7	6.65	5.95	89					Mod. alt. QM, albitized with calcite. ¼" qtz seam at 449.7. No WO_3.
449.7	460.25	10.6	10.6	100					Alt. QM, with calcite seam, broken with chlorite along joints.
460.25	470.25	9.7	9.7	97					Do - increasing alt. near 470.
470.25	474.2	3.95	3.4	86					Do. Intensely altered open vugs with minute qtz crystals. Considerable pyrite on joints. No WO_3
474.2	477.0	2.8	2.8	93					Alt. QM, prom. pink stained joint slip at 476.9. Angle 20° - fault (?)
477.0	477.7	0.7	0.7	100	none		475-480		Vein zone, qtz seams with alt. QM and calcite veinlets No WO_3 - about 0.25' qtz.

Footage			Recoveries		Samples				Description and Remarks
From	To	Feet	Feet	%	Core	%WO_3	Sldg	%WO_3	
477.7	483.0	5.3	3.4	64					Mod. to intensely alt. QM with calcite seams and pyrite and qtz veinlets. No WO_3.
483.0	492.0	9.0	6.0	67					Mod. to intensely alt. QM, intensely bleached near 486-488. Cal. seams.
492.0	495.0	3.0	0.6	20					Intensely altered QM, soft, strong bleach to 495.0.
495.0	495.1	0.1	0.1	100	none				Calcite vein. No WO_3.
495.1	398.2	3.1	1.1	35					Mod. to intensely alt. QM with calcite - broken soft, altered with chlorite fresher near 498.2. Hole stopped.

SECTION ALONG S10°E, LOOKING EAST



35.0 - 35.15 Vn Qtz No W Elev. 3199.2

41.15 41.19 Vn Qtz plus W

46.0 - 46.3 Qtz plus WO_3 - Vein

53.0 57.0 FAULT ZONE

65.5 65.65 Calcite plus WO_3 specks

64.3 70.0 Hornblende diorite dike

70.0 72.0 Vein Zone Scant Qtz No W

94.8 95.0 Qtz Vein with WO_3

95.0 - 126 SPANISH FAULT ZONE
Altered QM + thin calcite, siderite and Qtz seams No W

136.9 - 137.0 Qtz Vein No W Frozen to wall

1593 - 1594 Broken zone with calcite

191.0 - 195.0 Qtz Monzonite with Quartz plus Calcite seams No W

226.3 226.33 Chalcedonic Qua Qtz - No W

295.7
345.6
355.0 - 365
} FAULT AND ALTERATION ZONES Broken and Bleached QM with Calcite and Pyrite No Qtz

421 FAULT ?

442.7 - 443.05 Qtz vein frozen to wall inclusions of QM. (WO_3 = peck)

449.7 - 449.75 0.05 Qtz plus AH. QM - No W

477.0 - 477.7 Qtz seams with AH. QM and later calcite - Vein Zone - No W

SURCEASE MINING CO
DIAMOND DRILL HOLE M-4
COORDINATES N 273 E 1332
BEARING S10°E DIP -60° ELEV. 3199.2
Scale 1" = 100' F.L.B. 4-6-53

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Mineral Administration
RECEIVED
ACCOUNTS MAR 12 1953

OPERATOR'S MONTHLY REPORT AND VOUCHER

MAR 23 1953

Month of February, 1953 Docket No. DMEA 2809 Contract No. Idm-E474
Operator's Name Surcease Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California
Contract Amount, $33,400.00 Government Participation: 75 % Amount, $25,050.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) ~~Independent~~ Short Form Contracts:						
Drilling 505' at 5.75	2903.75	none	2903.75			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Mobilization	250.00	none	250.00			
TOTALS	3153.75	none	3153.75			

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

Date March 6, 1953 Payee Surcease Mining Company

Per D. A. Moyer Title Asst. Mgr.

*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.

→ NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$2365.31

Lloyd H. Sjolander
Authorized Certifying Officer

Signature (Authorized Certifying Officer)

Date MAR 16 1953 Vou. No. SF-DMEA-37

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. [illegible] in accordance with the terms of the contract.

Signature A. C. Johnson Title [illegible] Date March 9, 1953.
A. C. Johnson Region III

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature H. C. Miller Title Executive Officer DMEA Field Team Date 3/12/53
H. C. Miller Region III

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

ACCOUNTS MAR 12 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1953 Docket No. DMEA 2809 Contract No. Idm-E474
Operator's Name Surcease Mining Company Minerals Tungsten
Address Box 27, Red Mountain, California

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core per ft.	5.75	2903.75	505	2903.75	505	5.75	5000	5.75
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Mobilization	unit	250.00	1 unit	250.00	1	250.00	1	250.00
TOTAL DISTRIBUTED COSTS		3153.75		3153.75				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3153.75		3153.75				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Mar. 6, 1953 Operator Surcease Mining Co.

Per L. A. Moyer Title Asst. Mgr.

NOTE.—Title 18, U. S. Code (Crimes), section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

REMARKS:

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

U. S. GOVERNMENT PRINTING OFFICE 205676

C. Narrative

Drilling equipment (minus swivel head) and men from McClintock Drilling Contractors arrived at Atolia on January 30, 1953. Rig was unloaded and set up by February 3, 1953. From February 4 to 6 a three day delay ensued due to a mix up in air freight schedules and no swivel head was available for drilling. Swivel head arrived and 41 feet of NX casing was set on February 7, 1953. On February 9th the hole was drilled to 66 feet and 25 feet of BX casing was set. It was then discovered that the bit for EX would not fit the available core barrel and two days were lost waiting for a new core barrel, which arrived with Mr. Greenwood on February 12th. Drilling proceeded with 60 feet of hole on this date. BX core was continued to 207 when trouble was experienced getting in and out of the hole, and after a near loss, 214 feet of AX casing was set. Drilling continued with AX and no further difficulty was encountered to the total depth of 505.3 feet below the collar (504+) below ground surface. An acid test was taken on February 28th at 400 feet. The first trial was unsuccessful due to improvised equipment but a fair test showed a probable inclination of 55°; the hole apparently steepened. In as much as known footwall fractures above were dipping away from the hole, the hole was stopped at 505.3.

Results:

Two strong quartz veins were cut; the Williams and the Rice (?). The Rice was blank but the Williams showed two specks of WO_3 (S-5). Several blind or unknown veins were cut in the surface portion of the hole and showed specks of WO_3. No ore was encountered although strong quartz and calcite, wall rock alteration, and pyritization appear favorable. There is a possibility that the ore bearing Par system dips south and was not cut by this hole. In this event a hole must be drilled from south side of the outcrop area. Casing was pulled on March 2nd for move to M-3. M-2 has not been drilled. It is planned to drill M-3 next. It may be necessary to shift the location of M-2 from its planned position. Since the hole was spotted a lower level has been reopened and mapped. The indication is that a shift to the east will be advantageous.

SURCEASE MINING COMPANY

DIAMOND DRILL HOLE LOG

Hole No.: M-1
Location: N. 432 E. 1872 - H.W. Par
Elevation of collar: 3190.9
Depth: 505.3'
Dip: -47° -steepens to 55° ?
Bearing: S 30° W
Date Begun: Feb. 1, 1953
Date Finished: Feb. 28, 1953

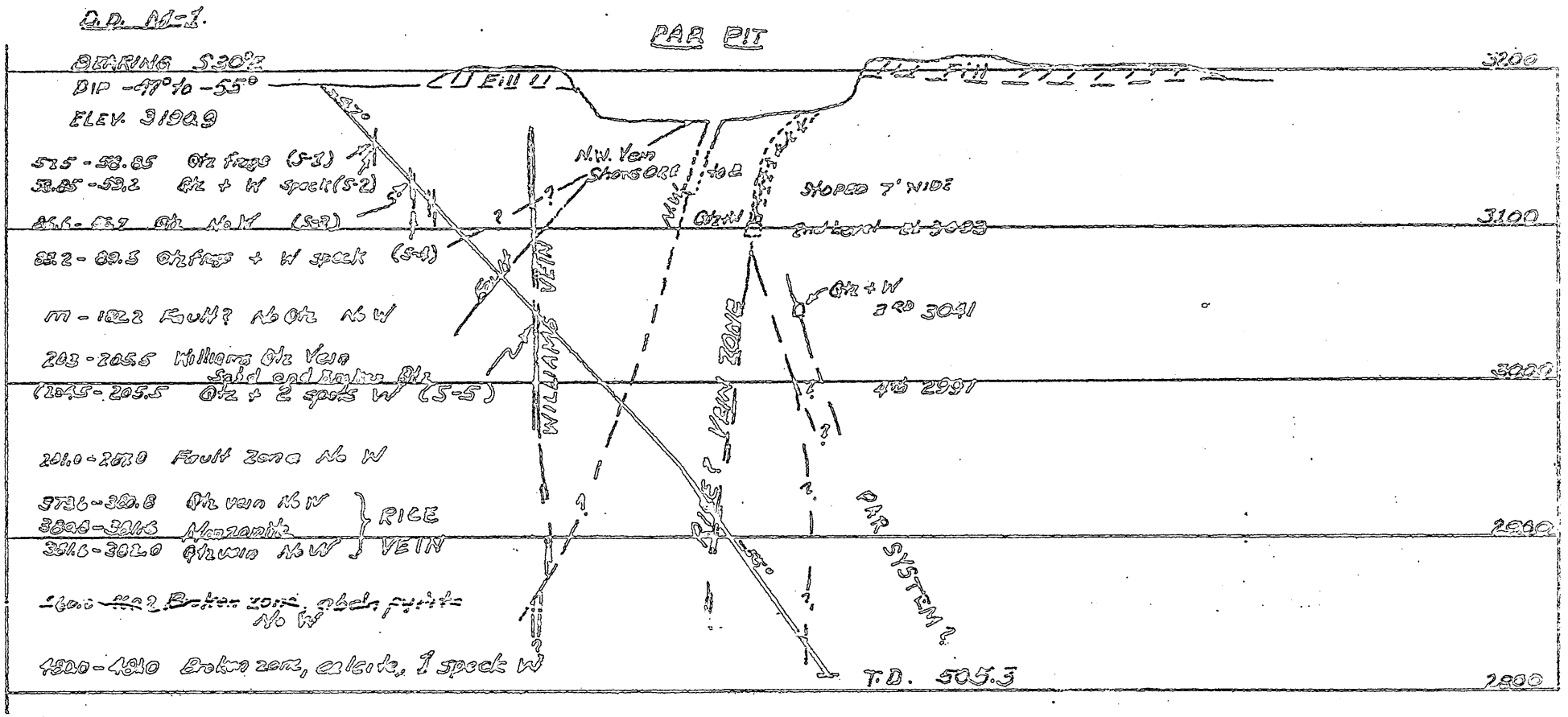
Project No.
Name Surcease Mining Co.
Location Atolia

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples Core $\%WO_3$	Samples Sldg	Samples Sldg $\%WO_3$	Description and Remarks
0	40	40	--	--					Overburden
40	57.5	17.5	0.35	2			46-56	0.04	Soft altered Qtz Monzonite (QM) 57.5' mark estimated
57.5	58.85	1.35	.35	22	S-1	0.07			Qtz frags. plus alt. QM No WO_3
58.85	59.2	0.35	.35	100	S-2	0.06	56-61	0.03	Qtz vein with specks of WO_3 1.7' (?) vein zone.
59.2	61.0	1.8	1.8	100					Altered Qtz Monzonite
61.0	66	5.0	1.7	34					do
66	76	10.0	2.0	20			76-81	0.03	do
76	86	10.0	5.5	55			81-86	0.04	QM, slightly harder, blocky and fractured.
86.0	86.6	0.6	0.6	100					QM, poss. horse.
86.6	86.7	0.1	0.1	100	S-3	0.07			Vein Qtz CV - 50°. Broken yellow limonite. No visible WO_3.
86.7	88.0	1.3	1.2	92			86-91	0.04	QM sl. alt., jointed.
88	89	1.0	1.0	100			91-96	0.04	QM.
89.0	95	6.0	1.2	20	S-4	0.14			Badly broken QM, strong alteration. 3 frags. Qtz (0.1) plus WO_3 specks plus spot at or near 89.2.
95	96.0	1.0	1.0	100			96-101	.04	Sl. alt. QM.
96	104.8	8.8	5.4	61			101-106	.03	Alt. and sl. harder QM.
104.8	104.9	0.1	0.1	100	None				Qtz vein CV - 40°. No visible WO_3. Dark alt. on walls, altered QM
104.9	106	1.1	0.9	82					
106.0	106.5	0.5	0.5	100					do
106.5	106.7	0.2	0.2	100					Altered QM, dk broken 0.06 calcite vein. No WO_3.
106.7	108.5	1.8	1.4	78					Altered QM
108.5	117.0	8.5	8.65	100+			116-126	.02	Harder QM, joints, calcite seams. Prom. joint near 117
117.0	126.2	9.2	8.45	92					Harder QM
126.2	126.6	0.4	0.4	100+	None				Vein alteration plus Qtz (0.1'). No WO_3.
126.6	127.0	0.4	0.4	100					Altered QM, FW of vein harder
127.0	127.6	0.6	0.6	100					Normal QM.
127.6	131.0	3.4	3.4	100					Albitized QM with stringers of calcite, nearly parallel to core.
131.0	132.2	1.2	1.2	100			131-141	.03	Run parallel to calcite vein, ca 0.15' thick at 131.5. Redish Hematite plus pyrite. No visible WO_3

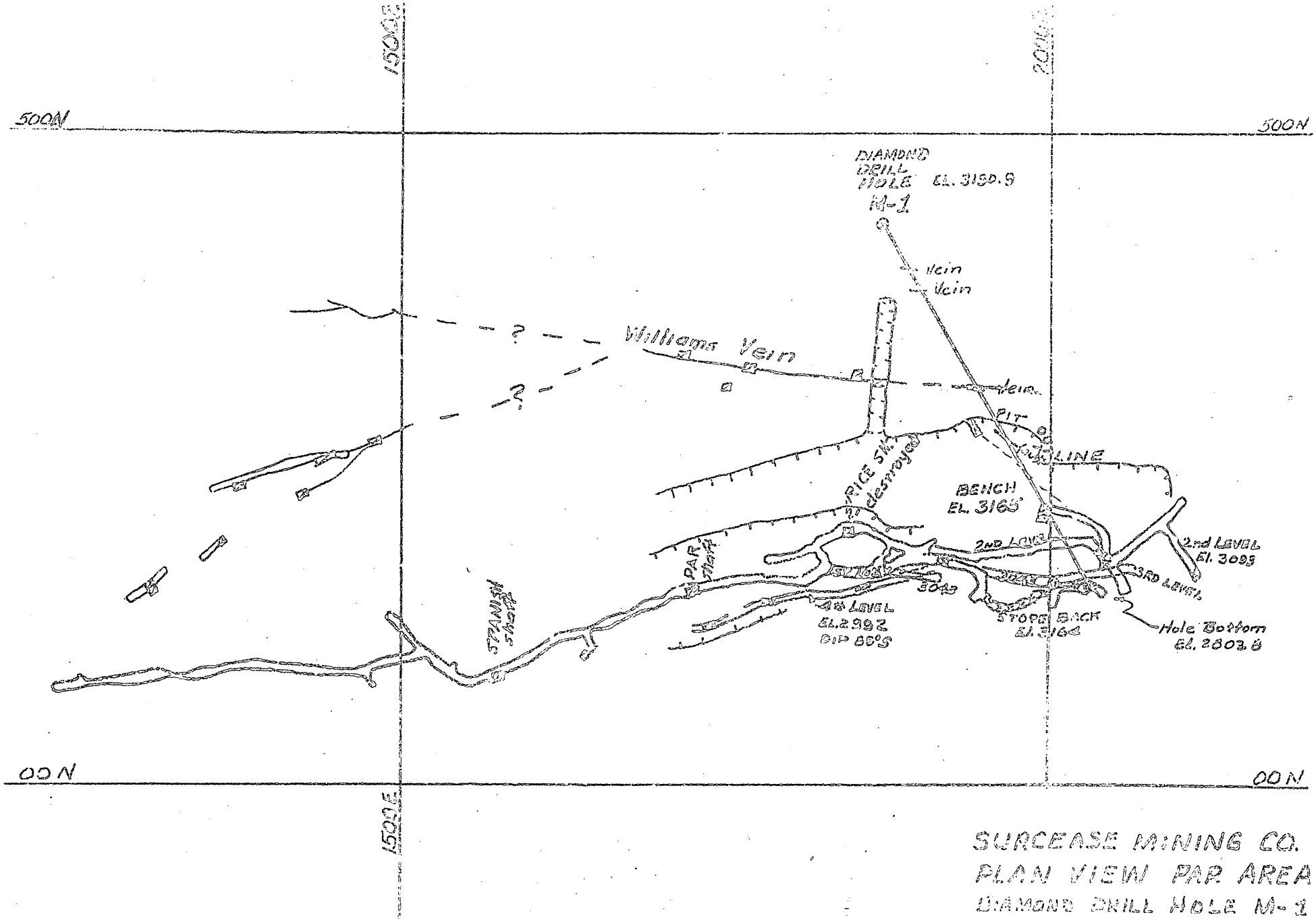
Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
132.2	134.8	2.6	1.6	61.5					Albitized QM and calcite seams.
134.8	137.0	2.2	2.9	100+					Normal QM, slightly harder soft and broken near 137.9
137.0	138.0	1.0	1.0	100					Alb. QM.
138.0	138.8	0.8	?	?					Prob. loss of 1' of core - alt. QM, no WO_3.
138.8	142.0	3.2	2.1	66					Albitized QM, becoming fresh and hard near 142.
142.0	147.2	5.2	5.2	100					QM - moderately hard biotite band (0.1') near 143 calcite seams near 145
147.2	152.3	5.1	5.3	100+					Hard QM, calcite seams
152.3	162.2	9.9	9.9	100					do, calcite seam near 153.5.
162.2	167.0	4.8	4.2	87					Sl. harder QM, fractured with dark H.W. alteration near 163 No Qtz - no WO_3.
167.0	177.0	10.0	9.7	97					Hard QM, fract. zone with pink stain near 166.5
177.0	182.2	5.2	0.8	15	None				Very poor core, broken QM - Vein alteration plus red and pink hematite plus calcite - weak albitization.
182.2	187.0	4.8	4.5	94					Normal QM, sl. broken, aplitic near 183. Alt. along joints near 185 - No Qtz.
187.0	197.0	10.0	9.6	96					Hard QM with calcite on joint seams - 189, 190, 191 dark with Fe stain near 191 plus Qtz films - No WO_3.
197.0	203.0	6.0	6.0	100					Hard QM, darker and alb. with calcite seams near 202.5. Abd. fine pyrite.
203.0	205.5	2.5	2.5	100	S-5	0.09	200-205	0.03	2.0' Qtz vein - strong white broken Qtz with calcite. Two (2) spots WO_3 near 205. CV angle - 50° on HW S-5 - 204.5 - 205.0 - Williams Vein zone.
205.5	207.0	1.5	1.5	100					Alt. and albitized QM. Calcite seams and pyrite on joint surfaces.
207.0	211.6	0.6	0.6	100					Fault Zone (?) plus gouge?
211.6	214.0	2.4	2.7	100+					QM, dark and albitized to 213.6 - change to normal QM on CV - 35°.
214.0	223.0	9.0	4.6	51					Monz. hard sl. altered hdb. Monz plus minor silica near 220. Fract. zone with gouge near 222.
223.0	233.0	10.0	8.6	86					Hard QM, minor fract. with calcite seams.
233.0	243.0	10.0	9.6	96					Hard sl. alt. QM.
243.0	252.0	10.0	10.3	100+					Hard sl. alt. QM, 1/4" cal. seam with pink stain near 252
253.0	263.0	10.0	6.8	68					Hard QM with hornblende fine grained, occ. calcite seams silicified with epidot near 260.5, no WO_3.

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
263.0	273.0	10.0	10.5	100+					Hard Hdb Wons., fine grained occ. calcite seams.
273.0	279.0	6.0	2.6	43					Alt. QM with frac. and s.s. on joint seams. CV - 55°, Broken frags near 279.
279.0	281.0	2.0	2.0	100					Hard QM
281.0	287.0	6.0	1.9	32			280-285 285-290	.04 .04	Broken dark altered QM with pyrite - no WO_3 gouge & fault zone (?)
287.0	296.0	9.0	5.5	61					Normal QM, contact gradational to above 287.
296.0	306.0	10.0	5.6	56					QM broken near 306.
306.0	316.0	10.0	10.6	100+					QM broken, sl. alteration.
316.0	322.0	6.0	4.9	82					QM, prom. calcite and pink stain near 318.
322.0	332.0	10.0	6.5	65					QM
332.0	342.0	10.0	4.0	40					QM, very sl. alteration & cal
342.0	352.0	10.0	10.0	100					do.
352.0	362.0	10.0	10.0	100					Hard QM jointed - cal. seams.
362.0	372.0	10.0	10.0	100					do.
372.0	379.5	7.5	7.5	100					QM, increasing in silica near 379.5, frac. & broken.
379.5	380.0	0.5	0.5	100	None				Qtz with very fine pyrite plus calcite on joints. Increasing silica CV angle - 40°. No WO_3.
380.0	380.5	0.5	0.5	100	None				Greenish Qtz plus very fine pyrite and minor calcite fract. parallel to core. No WO_3.
380.5	380.9	0.4	0.4	100	None				do. CV angle - 40°. No WO_3.
380.9	381.5	0.6	0.2	33					QM (horse with prob. gouge fractures & soft QM).
381.5	381.7	0.2	0.2	100	None				Qtz plus pyrite, sl. iron stain. F.W. of zone. No WO_3. The above is probable Rice vein. No WO_3 in core. Core split but not assayed.
381.7	382.0	0.3	0.2	66					QM, probable lost gouge. No visible WO_3.
382.0	393.0	11.0	11.0	100					Hard QM jointed & fract. in two directions near 383.5 with very fine pyrite. Dark zones of alteration near 390.5, 391.5. CV angle parallel to core. Fe stain.
393.0	404.0	11.0	8.0	73					Hard QM, pyrite plus cal. seams. Pyrite seam near 394 parallel to core, strong joints plus alteration near 395-401.
404.0	405.0	1.2	1.2	100					Albitized QM
405.0	415.0	10.0	1.9	100					Bleached and altered QM white to talcose plus SiO_2 No WO_3. In part "aplitic" - broken to 414.
414.0	424.0	10.0	10+	100+					Bleached and altered QM in part talcose.

Footage From	Footage To	Footage Feet	Core Recoveries Feet	Core Recoveries %	Samples Core	Samples %WO_3	Samples Sldg	Samples %WO_3	Description and Remarks
424.0	427.05	3.0	3.0	100					Do. Broken sl. Fe stain, abrupt change on fract. zone with introduced cal. and biotite. Sl. iron stain.
427.05	435.0	8.2	8.2	100					Dark albitized QM fract. zone with abd. pyrite broken 1/16" limonite ocher on joint parallel to core near 434.5
435.0	445.0	10.0	10.0	100					Do. numerous strong joint breaks with biotite and pyrite.
445.0	455.0	10.0	10.0	100					Do. Normal QM near 448 then increasing albitization and calcite seams near 455.
455.0	465.0	10.0	9.2	92					Dark albitized QM fractured with calcite near 456, 1/2" calcite and abd. pyrite near 460. Some core lost. CV angle - 30° - broken dark, altered to 465 fract. greenish slightly talcose.
465.0	474.75	10.0	10.0	100					QM fractured 465.2 CV angle 30° with pyrite and broken zone yellow Fe stain 471-471.8 Cal. seam plus Qtz film near 472.7. No WO_3.
474.75	480.0	5.25	5.0	95					Hard sl. alt. QM calcite seams.
480.0	481.0	1.0	1.0	100	None				Broken dark QM with calcite seam and calcite replacement-speck of WO_3 in calcite.
481.0	485.0	4.0	4.6	100+					Dark very sl. alt. QM with abd. pyrite.
485.0	488.2	3.2	3.2	100					Do.
488.2	492.3	4.1	0.9	22					Broken and albitized QM. Dark iron stained fractures.
492.3	495.0	2.7	2.6	96					Broken QM albitized and fractured.
495.0	505.3	10.0	10.0	100					Hard QM. Very sl. alt. calcite seam at 500 with pyrite sl. alteration near 505.



SURCEASE MINING COMPANY
DIAMOND DRILL HOLE M - 1
COORDINATES N 432. STRIKE S.30°E.
E 1872 DIP -47° to -55°
scale 1" = 100' Date 3-5-53
Drawn By F.L.B.
Note: Abridged from 40 scale Mine Section



SURCEASE MINING CO.
PLAN VIEW PAR AREA
DIAMOND DRILL HOLE M-1
COORDINATES N 1132
E 1672
SURV. COLLAR 3150.9
DATE FINISHED 3-5-53

DEC 1 5 1953

Mr. J. W. Hoefling, President
Surcease Mining Company
214 - 30th Street
Sacramento, California

Re: Docket No. DMEA 2809, Tungsten
Atolia Mines
San Bernardino County, Calif.
Contract No. IdM-2424

Dear Mr. Hoefling:

This is with reference to the subject exploration contract between Surcease Mining Company and the Government.

The final audit of the contract expenditures and the final reports of the Operator and of the Field Team have been received and accepted by this Administration. Of the total amount of $33,400.00 approved under the contract, the sum of $13,219.02 was expended, 75 percent of which, or $9,914.27, represented the Government's share. There were no unused materials, supplies or equipment to be disposed of for the joint account of the Operator and the Government. The exploration work was completed in a satisfactory manner.

Because the results of the exploration were unfavorable, it is not our intention to make a Certification of Discovery or Development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to Article 5 (d) of the contract which requires the Operator to keep and preserve said records and accounts for at least three years after the completion of the project or the termination of this contract.

Your interest in the Exploration Program of the Defense Minerals Exploration Administration and your willingness to participate therein are appreciated.

Sincerely yours,

C. O. Mittenderf

Administrator

cc: Docket
FT, Reg. 3
Code 400
Code 800
Adm. Read. File
Gilbert DeHuff, USBM
Louis Pavilides, USGS

JHopkins/la
12/11/53

Government's Copy

SURCEASE MINING COMPANY
DOCKET NO. DMEA-2809
CONTRACT NO. Idm-E474

AMENDMENT NO. 1

Contract Idm-E474 (Docket No. DMEA-2809), dated January 8, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Surcease Mining Company, is amended as follows:

The location of diamond drill hole No. 2 is changed from that shown on Map No. 1 of Exhibit "A" of the contract to approximately the intersection of the 165 South and 1893 East coordinates at a collar elevation of approximately 3163 feet. The hole is to bear North 27 deg. West at an inclination of minus 45 deg. and is to be drilled to an estimated depth of 550 feet.

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum."

Dated March 18, 1953.

UNITED STATES OF AMERICA

By H C Miller
H. C. Miller, Executive Officer
DMEA Field Team, Region III

SURCEASE MINING COMPANY

By J W Hoefling
J. W. Hoefling, President

DEPARTMENT OF STATE
Bureau of Intelligence and Research
Document Control Unit
Received
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AMENDMENT NO. 1

Docket No. 2809 Mineral Tungsten

Exploration Project Contract Idm-E474

Date of Contract January 8, 1953

Date of Amendment March 18, 1953

Operator Surcease Mining Company

JUSTIFICATION

Since submitting its request for exploration assistance, the company has reopened the lower level of the Par workings and a geologic study reveals that a flat intermineral (Par fault) displaces the vein system and would possibly blank DDH No. 2 if drilled as originally intended and shown on Map No. 1, of Exhibit "A." If the location, direction, inclination and depth of the hole is changed as provided for in the amendment the objective is virtually the same and the same system will be cut at the same horizon. The new hole also will explore a completely unknown southerly area between the Spanish-Par-Flatiron and Parenti veins - in which blind mineralized veins might be found.

Mr. Benjamin Sheahan, Bureau of Mines, engineer on the project, has recently mapped the lower level of the Par workings and reports that the vein has reversed its dip slightly, and that faulting leaves an unexplored section of the vein which would be very difficult to encounter by a diamond drill hole from the original location of DDH No. 2. Mr. Sheahan recommends changing the location of DDH No. 2 as proposed by the Operator and provided by Amendment No. 1.

H. C. Miller, Executive Officer
DMEA Field Team, Region III

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Commodity [redacted]

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

[redacted]

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Contract No. Idm-E [redacted]

Date of Contract or Amendment: [redacted]

Name and Address of Operator:

[redacted]

Amount of Government participation ____ $ [redacted]

Percent of Government participation [redacted] %

Region: [redacted] State: [redacted]

[redacted]

(Name)

[redacted]

(Title)

Date Delivered to Bureau of Mines, Washington. [redacted]

13908

Docket No. DMEA 2209

Commodity Tungsten

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

STRATEGIC AND CRITICAL MINERALS EXPLORATION PROGRAM

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please enter on the records of the Defense Minerals Exploration Administration, under the Strategic and Critical Minerals Exploration Program, the following contract, or amendment to contract.

Contract No. Idm-E 474

Date of Contract or Amendment: January 6, 1953

Name and Address of Operator:

Surcease Mining Company
214 30th Street,
Sacramento, Calif.

Amount of Government participation $ 25,050.00

Percent of Government participation 75 %

Region: III State: California

(Name)

J. L. Chambers,
Chief, Contract Administration and Audit Division

(Title)

Date Delivered to Bureau of Mines, Washington. Jan. 8, 1953

13908

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 2809

COMMODITY Tungsten

Government's Copy

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

IDM-E 474

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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FEB 2 1953

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 8th day of January, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Surcease Mining Company, a corporation duly organized and existing under and by virtue of the laws of the State of California, 214 30th Street, Sacramento, California

hereinafter called the "Operator," as follows:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of California, County of San Bernardino, described as ~~follows:~~ Three patented mining claims known as Waverly, Par, and Flatiron, more particularly identified in Annex I attached hereto and made a part hereof.

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

(*b*) ~~That the Operator is a lessee in possession and entitled to possession, and the Owner's Consent to Lien is attached.~~
The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within thirty (30) days from the date of this contract shall commence work on a project of exploration for[5] tungsten

in or upon the described land; and shall bring the project to completion within a period of five (5) months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 75 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $25,050.00, which is 75 percent of $33,400.00 the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of units of work performed on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) *Compliance with requirements.*—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account and statement of work performed to accompany his final report.

ARTICLE 6. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) percent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) percent of any such net amounts, plus one-half (½) percent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such net amounts.

(For instance: The percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) percent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(*b*) As here used, "net smelter returns," "net concentrator returns," and "other net amounts realized from the sale or other disposition," mean gross revenue from sales, or if not sold, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be the gross income from mining operations for percentage depletion purposes in income-tax determination.

(*c*) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

ARTICLE 7. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided,* that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 8. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if, in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified.

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Surcease Mining Company
(Operator)

By J W Hoefling, Pres.

By C Mitchell
Administrator, Defense Minerals Exploration Administration

I, J. B. Gee, certify that I am the secretary of the corporation named as Operator herein; that J. W. Hoefling, who signed this contract on behalf of the Operator, was then President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

J B Gee [CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

EXPLORATION PROJECT CONTRACT
SURCEASE MINING COMPANY
DOCKET NO. DMEA-2809

EXHIBIT "A"

Description of the Work

The project consists of drilling a maximum of 5,000 feet of diamond drill holes to explore for tungsten ore on the lands identified in Annex I of this contract. It is estimated that approximately eight (8) holes will be drilled, four (4) being each about 450 feet in depth, and four (4) being each about 800 feet in depth. Reaming and casing or cementing may be done where necessary.

The project shall be started by drilling one or more of the four shorter holes at approximately the locations with the approximate directions and inclinations indicated on Map No. 1 attached hereto and made a part hereof. No project holes shall be drilled to intersect the "Spanish" vein structure within approximately 100 feet of each other, or within approximately 50 feet of any boundary of lands not included in the project.

The Operator shall obtain written approval from the DMEA Field Team prior to drilling each of the four longer holes for the approximate coordinates, elevation, direction and inclination at collar and estimated depth of that hole. The DMEA Field Team will approve such longer holes only if one or more of the shorter holes shall reveal significant mineralization, and attach each such approval to this contract.

Estimated Costs of the Project

5,000 feet of diamond drilling @ $5.75 per foot 1/	$28,750.00

1/ This covers all costs whatsoever including the cost of diamond drill hole site preparation, hauling water, providing core boxes, geological logging of holes, assaying of cores, and general supervision.

Mobilization @ $250.00 2/	$ 250.00	
Demobilization @ $200.00 2/	200.00	
600 ft. of reaming and casing or cementing at depths between 400 and 800 ft. @ $3.75/ft.	2,250.00	
600 ft. of reaming and casing or cementing at depths between 0 and 400 ft. @ $3.25/ft.	1,950.00	
Estimated Total Cost of Project		$33,400.00
Government Participation @ 75%		$25,050.00

2/ Mobilization and demobilization shall each be considered one unit of work.

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EXPLORATION PROJECT CONTRACT
SURCEASE MINING COMPANY
DOCKET NO. DMEA-2809

ANNEX I

WAVERLY, PAR, and FLATIRON patented mining claims are with other claims unnamed herein, covered by Mineral Survey 4708, (Independence Serial 0273). The patent was issued by the United States of America on January 18, 1916, to Atolia Mining Co., Patent No. 508238, recorded February 11, 1916, in Book "K" Patents, Page 34, Records of San Bernardino County, California. (also recorded February 25, 1916, in Book 18, Patents, Page 293, Records of Kern County, California)

These claims were purchased from the Atolia Mining Co. by J. W. Hoefling, A. M. Hoefling, and P. M. Hoefling (doing business as Hoefling Brothers) who duly transferred all their right, title and interest therein to the Operator.

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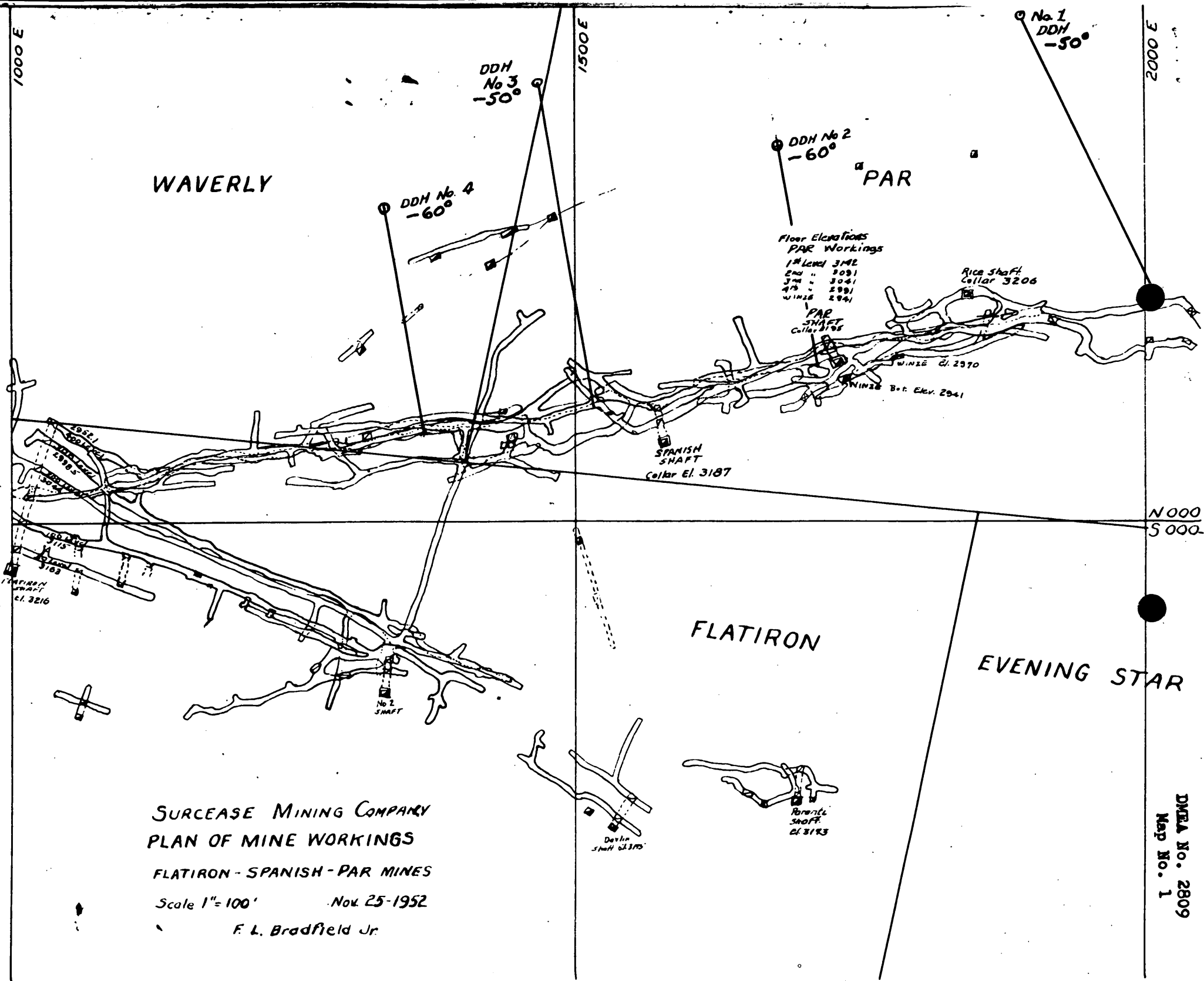

DMEA No. 2809
Map No. 1