OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Bonanza Gold, Inc.
Lobby, Paulsen Building, P. O. Box 1444
Spokane, Washington 99210

pertaining to Exploration Contract 14-23-090-2185, OME-6338, including Amendment No. 1, for June 1, 1964, to August 16, 1964, inclusive, covering an iron ore project at the Jumbo Mine, Ketchikan Recording Precinct, First Division, Alaska.

My review included an examination of the Monthly Vouchers (MME Forms 60) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, confirmation of work performed by reference to reports and correspondence, 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 reason that:

> All of the acceptable costs were under a contract provision for contribution by the Government on the basis of fixed unit costs of work performed.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$18,003.00
Exceptions:		
Prior to this review	$ -0-	
Herewith	-0-	-0-
Total acceptable cost		$18,003.00

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

Payable on audited claim	$ 9,001.50
Paid to date	-0-
Balance due	$ 9,001.50

C. E. Fisher

C. E. Fisher, OME Auditor

February 9, 1965

Acceptable costs:

Diamond core drilling, 1,613 ft. @ $11.00	$17,743.00
Core boxes, 59 @ $1.00	59.00
Sample assays for iron and copper, 27 @ $3.00	81.00
Composite samples assayed for molybdenum, titanium oxide, lime, sulphur, phosphorus, insoluble, gold, and silver, 4 @ $30.00	120.00
Total	$18,003.00

So. 157 Howard Street
Spokane, Washington 99204
February 15, 1965

Mr. Frank E. Duval
President
Bonanza Gold, Inc.
Lobby, Paulsen Building
Spokane, Washington 99210

Re: OME-6358 (Iron Ore)
Jumbo Basin, Prince of Wales Island
Ketchikan Precinct, Alaska
Contract 2185

Dear Mr. Duval:

There is enclosed one copy of a Report of Review, in lieu of a final audit, dated February 9, 1965, covering the subject contract, for the period June 1, 1964, to August 16, 1964, inclusive.

Payment of the "Balance due" in the amount of $9,001.50 will be made by our Washington office and should be received shortly.

Sincerely yours,

D. R. Maclaren
Acting Field Officer, OME
Region I

Enclosure

cc: OME(2)
Voucher File

Director's Reading File
Resources Research Branch Chief

MLSmelser:mls

No. 137 Howard Street
Spokane, Washington 99204
February 15, 1965

Memorandum

To: Fiscal Section, Office of Management Operations
Office of the Secretary, Washington, D. C.

From: Acting Field Officer, Region I

Subject: OMR-6338 (Iron Ore)
Bonanza Gold, Inc.
Jumbo Basin, Prince of Wales Island
Ketchikan Precinct, Alaska
Contract 2185

There is enclosed the original of a Report of Review, in lieu of a final audit, dated February 9, 1965, covering the subject contract, for the period June 1, 1964, to August 16, 1964, inclusive.

One copy of the report has been sent to the Operator and one copy retained in the Spokane office files.

Also enclosed are the original and two copies of the Operator's monthly voucher, progress report, and supporting documents for the months of June, July, and August 1964 for processing.

D. R. MacLaren

Enclosures

cc: OMR(2)
Voucher File

Director's Reading File
Resources Research Branch Chief

MLMacLaren:mls

FEB 1 0 1965

Memorandum

To: Acting Field Officer, Region I

/s/ C. E. Fisher

From: Contract Administration and Audit Division

Subject: OME-6338 (Iron Ore)
Bonanza Gold, Inc.
Jumbo Mine
Ketchikan Recording Precinct
First Division, Alaska
Contract 2185

As requested in your memorandum of January 29, 1965, a Report of Review covering the subject contract has been prepared. The original and two copies are enclosed, together with the original of the final (June-July-August 1964) voucher and attachments. The Operator's claim for 59 core boxes appeared to be reasonable and, therefore, was allowed rather than the 53 core boxes indicated in your memorandum.

If you concur in the facts as stated therein, distribution should be made in accordance with section 4 of OME Circular 2 dated February 17, 1960. As evidence of your concurrence, a copy of your letter transmitting the Operator's copy of the Report of Review should be furnished to this Division. If for any reason you do not concur, the original and both copies should be returned to this Division with your comments.

Enclosures

AMAlley/ama 2-9-65

cc:
Docket
Director's Reading File
CA & A Division
Fiscal Section

So. 157 Howard Street
Spokane, Washington 99204

~~ORIGINAL~~
COPY
O. M. E.
RECEIVED
FEB 8 1965
INITIALS | CODE

January 29, 1965

Memorandum

To: Contract Administration and Audit Division, OME

From: Acting Field Officer, OME, Region I

Subject: OME-6336 (Iron Ore)
Bonanza Gold, Inc.
Jumbo Basin, Prince of Wales Island
Ketchikan Precinct, Alaska
Contract 2185

Work under the subject contract was terminated, effective August 16, 1964, by an agreement dated January 21, 1965.

The number of units of work completed by the Operator and accepted by the Acting Field Officer as conforming to contract specifications were:

Diamond drilling	1,613 feet
Core boxes	53 each
Assays for iron and copper	27 each
Assays, composite	4 each

An acceptable final report was received from the Operator on December 30, 1964.

A Report of Review in lieu of a final audit is in order and requested. For this purpose, the original copies of the final (June-July-August 1964) MME-60 and MME-61, together with supporting documentation, are attached.

D. R. MacLaren

Attachments

DRMacLaren:my

cc: OME
Herdlick
Director's reading file
Resources Research Branch Chief

MME FORM 60
SEPT. 1959

RECEIVED
JAN 11 1965
OKE

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Docket No.
Contract No. # 6338
14-23-090- 2185
Contract Amount $ 60,150.00
Gov't. Participation % 50 $ 30,075.00
Mineral(s) Iron ore

OPERATOR'S MONTHLY VOUCHER

For Month of ~~July-August~~ June

Operator's Name
Address Bonanza Gold, Inc.
East 15 Walton Ave. Spokane, Washington 99207

COST CATEGORIES	FOR OPERATOR'S USE: MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE	FOR GOVERNMENT APPROVAL ONLY: MONTHLY TOTAL	PREVIOUSLY REPORTED	TOTALS TO DATE
Fixed Unit Costs and						
(1) Independent Contracts:						
Bulldozing						
Drifting						
Crosscutting						
Drilling						
core	$ 17,743.00	none	$ 17,743.00			
59 core boxes			59.00			
(2) Personal Services:						
Supervision & Technical						
Outside Consultants						
Labor						
(3) Operating Mat'l. & Supplies:						
Timber						
Explosives						
Pipe						
Rail						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehab. & Repairs:						
Buildings, Fixtures, etc.						
Operating Equipment						
(6) New Buildings, Fixtures, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Analytical Work						
Payroll Taxes	$ 201.00	none	$ 201.00			
Employee's Liability Ins.						
TOTALS			$ 18003.00	18,003.00	—	18,003.00

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

Date Dec. 15th, 1964 *Payee Bonanza Gold, Inc.

Per Frank H. Duval Title President

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

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

(INSTRUCTIONS ON REVERSE)

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

$ 9,001.50

Signature BHB
(Authorized Certifying Officer)

Date 12/24/65 Vou. No. 12087

(SEE OTHER SIDE)

Certification by Government Representative:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating an exploration project in accordance with the terms of Contract No. 2165

Signature [illegible] Title Acting Field Officer, Reg. I Date FEB 1 1965

Approved by OME Executive Officer or Alternate:

Signature [illegible] Title Acting Field Officer, Reg. I Date FEB 1 1965

OPERATOR'S MONTHLY REPORT

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

FIRST, the Operator's Monthly Voucher on MME Form 60 listing the project costs incurred and claimed by the Operator is the voucher basis for payment of the Government's share of the cost.

SECOND, the Operator's Progress Report on MME Form 61 is a statistical report of the units and cost of of work performed under the contract.

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

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

PREPARATION OF OPERATOR'S MONTHLY VOUCHER, MME FORM 60

After all applicable spaces are filled in, the Operator or his agent must sign the certification in the lower left corner. Categories (2) through (7) apply to "Actual Cost" contracts only.

Under "Fixed Unit Costs" and Category (1) report, (a) the total fixed unit costs of work performed under contract provisions for contribution by the Government on a basis of "fixed unit costs"; and (b) the claimed costs of work performed on a unit-price basis by independent contractors.

Under Category (2) include the claimed costs of all payrolled and invoiced supervisory, technical, and labor personnel, except the costs for services applicable to Categories (5) and (6).

Under Category (3) include the claimed costs of all project materials and supplies other than those used for work under Categories (5) and (6).

Under Category (4) report claimed rentals on equipment belonging to a third party, claimed payments or obligations for payments on the Operator's purchase of equipment, and claimed depreciation for the use of Operator-owned equipment.

Under Categories (5) and (6) include all claimed costs of labor, supervision, technical services, operating materials and supplies, and all other items used in (5) the initial rehabilitation and repairs of existing buildings, fixtures, installations (exclusive of mine workings), and operating equipment; and (6) the installation or construction of new buildings, fixtures, and fixed improvements (exclusive of mine workings). Do not report these costs under Categories (2), (3), (4), and (7).

Under Category (7) include all miscellaneous claimed costs such as repairs (other than initial) and maintenance of equipment, sampling and analysis, travel, communication, accounting, office expenses, and the Operator's share of payroll taxes and insurance.

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

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

MME FORM 61
SEPT. 1959

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

RECEIVED
JAN 11 1969
O.M.E.

OPERATOR'S PROGRESS REPORT For Month of ~~June, July, August~~ Docket No. ~~# 6338~~

Operator's Name ~~Bonanza Gold, Inc.~~ Contract No. 14-23-090- ~~2185~~

OPERATION	UNITS	FOR OPERATOR'S USE: UNITS THIS MONTH	UNITS TO DATE	COSTS TO DATE	FOR GOVERNMENT USE: APPROVED UNITS THIS MONTH	APPROVED UNITS TO DATE	APPROVED COSTS TO DATE
Drifting							
Crosscutting							
Raising							
Shafts							
Winzes							
Other Underground							
Drilling, Core-Diamond		1613	1613	$ 17,743.00	1613	1613	$ 17,743.00
Rotary							
Drilling, Non-core-Diamond							
Rotary							
Churn							
Percussion							
Miscellaneous							
Core Boxes				59.00	53 [1]	53	53.00 [1]
Roads and Trails							
Stripping							
Trenching							
Test Pitting							
Other Surface Work							
Initial Rehabilitation and Repairs							
Rehabilitation of Mine Workings							
New Buildings, Fixtures, etc.							
Operating Equipment Purchases							
Analytical Work				201.00			201.00
TOTAL TO DATE (per MME Form 60)				$ 18,003.00			17,997.00

REMARKS

We have substituted wooden core boxes in place of cardboard owing to the heavy rainfall. We have submitted a cost of $ 1.00 each for core boxes -no invoice- we actually paid $ 10.90 each including freight.
Owing to nature of terrain and the fact that we used a helicopter and an airdrop spot that we had to clear, we flew in two drills and started one on Hole # 30 on June 8th and moving this drill to # 29-28-27-26- to # 25, the other drill we started on Hole # 17 on

(Continue on back)

REMARKS

[1] Driller's log sheets for hole #30 show no itemized core recovery but indicate a recovery of 99%. Excluding overburden, the average itemized recovery from holes #17, #19 & #24 is 96.7%. Applying this lower figure to hole #30 less overburden, probable core recovery is:

(Continue on back) (over)

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 October 6th, 1964 Operator ~~Bonanza Gold, Inc.~~

Per Frank H. Duval Title ~~President~~

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

I certify that the information above is complete and accurate to the best of my knowledge and belief.

Signature [illegible]

Title Acting Field Officer, Reg. I
Government Representative

Date FEB 1 1965

(INSTRUCTIONS ON REVERSE)

REMARKS *(Cont.)*

June 19th , then # 18 then progressively down to 16-15-14-13.
We then plan to drill # 5-6-7-8 and lastly # 31 and 32.
The airdrop was located at # 17 as being the best location as to terrain.
Hole # 17 was finished on July 7th,1964 to a depth of 274'
Hole # 30 was finished on July 19th,1964 to a depth of 572'
Hole # 18 was started on July 11th,1964 and by July 31st was down to 275'
Hole # 29 was started on July 23,1964 and by July 31st was at a depth of 324'
Hole # 18 was finished on August 7th,1964 at 382'
Hole # 29 was finished on August 12th,1964 at 385'

REMARKS *(Cont.)*

Hole	Core
17	196 ft
18	316 "
29	319 "
30	491 "
	1322 ft.

@ 25 ft of core per box, 52.88 - say 53 boxes reasonably acceptable

INSTRUCTIONS FOR PREPARING OPERATOR'S PROGRESS REPORT, MME FORM 61

This report is the second of the three parts of the Operator's Monthly Report. Submit the original and ~~four~~ three copies.

The cost for each operation should be the total of all claimed costs attributable to that type of work with two exceptions, namely—operating equipment purchased and analytical work which are stated separately. For example, drifting costs should be the total of all costs chargeable to drifting including supervision, technical services, timbering (if any), etc. Similarly, drilling costs should include the cost of cementing, reaming, core boxes, etc. This procedure of distribution holds whether the contract was written on an actual cost or a unit cost basis, or some combination of the two. Distribute the cost of such general items as supervision, equipment rented, etc. according to relative footages or on some other conventional basis. The item "Initial Rehabilitation and Repairs" covers all rehabilitation and/or repairs other than the rehabilitation of mine workings.

The item titled "Drilling, Non-core Percussion" includes all drilling performed with wagon, jack-hammer, stoper and mounted drills. The several items labelled "Other" are provided to take care of particular exploration operations not specified on this form.

Boyles Bros. DRILLING COMPANY

CONTRACTORS · ENGINEERS · GEOLOGISTS

General Offices and Plant

1624 Pioneer Road P. O. Box 58 HU 7-7595

SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

INVOICE DATE: Sept. 15th, 1964
ORDER NUMBER: 26-29
INVOICE NUMBER: 5
CONTRACT: Ranson Gold-Alaska
TERMS: Net
SHIPPED TO: Hetta Inlet, Prince of Wales Island, Alaska.

Ranson Gold Inc.
c/o Mr. Robert Anderson
Radio Central Building
Spokane, Washington.

Hole # 12 279 ft. to 282 ft. - 107 ft. at $ 6.20 per ft.		$ 677.40
Setting time - 5 min - 6 hrs. 18.00 per hr.		113.40
	total	$ 790.80
Hole # 29 2444 ft. to 305 ft. - 61 ft. at $ 6.20 per ft.		$ 378.20
Setting time - 5 min - 6 hrs. 18.00 per hr.		108.00
	total	$ 486.20
Moving from Hole #12 to Hole #29 2 man-3½ hrs. at $18.00 per hr.		$ 202.50
6 man-16 hrs. at 23.20 per hr.		445.20
	total	$ 647.70
Moving from Hole # 29 to Heliport-3 man-24 hrs. at $18.00 per hr.		$ 432.00
Moving " " 29 to " 3 man-20 hrs. " " " "		360.00
Moving small, Heliport & return- 1 man-43 hrs. at 6.50 " "		279.50
Moving Hole #29, to Heliport - 2 man-28 hrs. at 18.00 " "		504.00
Moving Hole Helicopter 4 man-10 hrs. at 23.20 " "		232.00
Helicopter time 10.5 hrs. at 125.00 " "		1,312.50
Supplies sold to Ranson		682.40
29 days board at 5.00 a day		145.00
Approval By..... Grand	total	$ 6,552.40

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

General Offices and Plant

1624 Pioneer Road P. O. Box 58 HU 7-7595

SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

INVOICE DATE. Aug. I, 1964
ORDER NUMBER. 50-23
INVOICE NUMBER: 2
CONTRACT. Bonanza Gold, Alaska
TERMS. Net
SHIPPED TO. Hotta Inlet, Prince of Wales Island, Alaska

BONANZA GOLD INC.
c/o Mr. Eskil Anderson
Radio Central Building
Spokane, Washington.

Hole # 29 0 to 64 ft. - 64 ft. at $10.00 per ft.			$ 640.00
64 ft. 250 - I86 7.90			I,469.40
250 324 - 74 8.20			606.80
Reaming 0 64 - 64 3.60			230.40
Casing time 8 hrs. at I2.60			I00.80
Moving & Setting Up 46 I2.60			579.60
Portland Cement I sack at 6.00			6.00
		Total	$ 3,633.00
Hole # 30 287 ft. to 572 ft.- 285ft. at 8.20 per ft.			$ 2,337.00
Casing time 8hrs. at I2.60 per hr.			I00.80
		Total	$ 2,437.80
Meals			
Douval I2 days at 5.00 per day			$ 60.00
Connason 6 5.00			30.00
Plummer 3I 5.00			I55.00
		Total	$ 245.00
I man -24 hrs. Working on trails, setups & Heliports. at $ 6.30 per hr.			$ I5I.20
Approved By.....		Grand Total	$I2,555.30

110

~~Original in Bonanza file for bookkeeping~~

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

General Offices and Plant

1624 Pioneer Road P. O. Box 58 HU 7-7595

SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

INVOICE DATE Aug. I, 1964
ORDER NUMBER: 50 28
INVOICE NUMBER: 2
CONTRACT Bonanza Gold-Alaska.
TERMS Net
SHIPPED TO Hetta Inlet, Prince of Wales Island, Alaska.

BONANZA GOLD INC.
c/o Mr. Eskil Anderson
Radio Central Building
Spokane, Washington.

Hole # I7	29 ft. to 50 ft. - 2I ft. at $I0.00 per ft			$ 2I0.00
	50 250 -200 7.90			I,580.00
	250 274 - 24 8.20			I96.80
Reaming	2I 50 - 29 3.60			I04.40
Casing	8 hrs. at I2.60 per hr		Total	I00.80
				$ 2,192.00
Hole # I8	0 to 75 ft. - 75 ft. at I0.00 per ft.			$ 750.00
	75 250 -I75 7.90			I,382.50
	250 275 - 25 8.20			205.00
Reaming	6 55 - 55 3.60			I98.00
Cement time	39 hrs. at I2.60			49I.40
Drilling time	I4 hrs. at I2.60			I76.40
Portland Cement	8 sacks at 6.00			48.00
Bentonite	I sack at I5.00			I5.00
			Total	$ 3,266.30
Moving and Setting Up	50 hrs. at I2.60			630.00
				$ 3,896.30

~~Original in Bmanager file for bookkeeping~~

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

General Offices and Plant

1624 Pioneer Road P. O. Box 58 HU 7-7595

SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

INVOICE DATE: July 1, 1964
ORDER NUMBER: 50-28
INVOICE NUMBER: 1
CONTRACT: Bonanza Gold-Alaska
TERMS: Net
SHIPPED TO: Hetta Inlet, Prince of Wales Island, Alaska

BONANZA GOLD, INC.
c/o Mr. Eskil Anderson
Radio Central Building
Spokane, Washington

Mobilization Fee		$6,000.00
½ Boat Charter, Ketchikan to Jumbo Basin	600.00	300.00
16 Hours Moving In, Camp & Drill Equipment with 3-2 man crews	12.60	604.80
16 Hours Temsco Flying Service Helicopter	135.00	2160.00
Temsco Flying Service Plane Charter 6-5-64	30.00	30.00
Materials for 2 Tents		255.04
250 Core Boxes, FOB Salt Lake City	4.00	1,000.00
Freight, Core Boxes, Salt Lake City to Seattle		596.88
Freight, Core Boxes, Seattle to Ketchikan		272.66
M. C. Peckham, 8 hours handling core boxes in Ketchikan	4.37½	35.00
Coastal Ellis, Air Fare for Peckham to Ketchikan & Return for Boxes		30.00
Ireland Transfer - Fork Lift for Core Boxes		34.38
5.2 Hours Temsco Flying Service, Helicopter for Core Boxes	135.00	702.00
4 Hours Flying Core Boxes 2-2 man crews	12.60	100.80
MEALS		
Frank Duval 13 Days		
Ed Weber 10 Days		
Walt Gonnison 17 Days		
Carl Plummer 13 Days		
Total 53 Days	5.00	265.00
	Sub Total	$12,346.56

~~Original in Bonanza file~~
~~for Book keeping~~

10

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
SHOOTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

General Offices and Plant

1624 Pioneer Road P. O. Box 58 MUntor 7-7595

SALT LAKE CITY 10, UTAH

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
ST. LOUIS

INVOICE DATE: July 1, 1964
ORDER NUMBER: 50-28
INVOICE NUMBER: 1
CONTRACT: Bonanza Gold-Alaska
TERMS: Net
LOCATION: Hatta Inlet, Prince of Wales Island, Alaska

BONANZA GOLD, INC.
c/o Mr. Eskil Anderson
Radio Central Building
Spokane, Washington

HOLE NO.		FROM	TO	FOOTAGE	RATE	TOTAL
[illegible]0'	Overburden	0.0	64'	64'	10.00	640.00
[illegible]0	BX/L	64'	250'	186'	7.90	1,469.40
[illegible]0	BX/L	250'	287'	37'	8.20	303.40
[illegible]	Reaming	0.0	26'	26'	3.60	93.60
[illegible]0	Casing			4 Hours	12.60	60.40
[illegible]0	Cementing			68 Hours	12.60	856.80
[illegible]0	Cement			14 Bags	6.00	84.00
[illegible]0	Moving & Set Up	2 man crew		37 Hours	12.60	466.20
[illegible]	Overburden	0.0	29'	29'	10.00	290.00
[illegible]7	Reaming	0.0	21'	21'	3.60	75.60
[illegible]7	Casing			½ Hour	12.60	12.60
[illegible]7	Cementing			4 Hours	12.60	50.40
[illegible]7	Cement			4 Bags	6.00	24.00
[illegible]7	Moving & Set Up	2 Manx Crew		45 Hours	12.60	567.00
					Sub Total	4,993.40
					Sub Total	12,346.56
					TOTAL	$17,339.96

~~Original in Bonanza file for Bookkeeping.~~

Phone [illegible] 2-5612

CERTIFICATE OF ASSAY

FROM

PETER MACK

ASSAYER AND CHEMIST

Bonanza Gold, Inc. Wallace, Idaho, [illegible]

MARKED	Gold ozs per ton	Silver ozs per ton	[illegible] %	[illegible] %	Copper %	[illegible] %	[illegible] %	[illegible] %	[illegible] %
Sample & Assay #			Lime	F		[illegible]			
# 12/17444	Tr	Tr	0.05	0.070		0.7	21.2	[illegible]	0.05
16/17446 #6	Tr	Tr	2.80	0.060		0.6	[illegible]	[illegible]	0.14
21/17453	Tr	Tr	2.40	0.045		0.1	[illegible]	[illegible]	[illegible]
27/17460	Tr	0.3	4.85	0.[illegible]		0.[illegible]	[illegible]	[illegible]	[illegible]

BONANZA GOLD, INC.
LOBBY, PAULSEN BLDG.
P. O. BOX 1444 — PH 7-2124
SPOKANE, WASHINGTON

Alaska
Department of Natural Resources
Division of Mines
and Minerals

Form M-1-0-62-3M

Assay Office Anchorage, Alaska

Date September 17, 1964

REPORT OF ASSAY

On samples received from Al Gooch - Div. of Mines & Minerals

Address Box 1408 - Ketchikan, Alaska

Assay No.	Sample Marked	OUNCES PER TON		Value per Ton	Percentage of
		GOLD	SILVER	IRON	
16734-A	17313 - Connason #2			6.3%	
16731-A	Connason #1			9.2%	
16730-A	Connason #3			8.9%	
16729-A	Connason #11			8.3%	
16728-A	Connason #10			8.5%	
16727-A	Connason #9			9.6%	
16726-A	Connason #8			8.1%	
16725-A	Connason #7			8.5%	
16724-A	Connason #6			8.4%	
[illegible]	Connason #5			8.4%	
[illegible]	Connason #4			10.2%	

[illegible]
[illegible]
[illegible]
SPOKANE, WASHINGTON [illegible]

Jumbo Basin
F. Gurel

I.W. Mitchell Assayer.

State of Alaska
Department of Natural Resources
Division of Mines
and Minerals

Form M-1-8-62-3M

Assay Office Anchorage, Alaska

Date September 10, 1964

REPORT OF ASSAY

On samples received from Al Gooch - Div. of Mines & Minerals

Address Box 1408 - Ketchikan, Alaska

Assay No.	Sample Marked	OUNCES PER TON		Value per Ton	Percentage of
		GOLD	SILVER	COPPER	
16722	#4 Gonnason			Less than 0.1%	
16723	#5			Less than 0.1%	
16724	#6			Less than 0.1%	
16725	#7			Less than 0.1%	
16726	#8			Less than 0.1%	
16727	#9			Less than 0.1%	
16728	#10			Less than 0.1%	
16729	#11			Less than 0.1%	
16730	#3			Less than 0.1%	
16731	#1			Less than 0.1%	
16732	#2			Less than 0.1%	

BONANZA GOLD, INC.
P. O. Box
SPOKANE, WASHINGTON

Jumbo Basin
F. Duval

I.W. Mitchell Assayer.

of Alaska
Department of Natural Resources
Division of Mines
and Minerals

Form M-1-8-62-3M

Assay Office Anchorage, Alaska

Date December 8, 1964

REPORT OF ASSAY

On samples received from Al Gooch - Div of Mines & Minerals

Address Box 1408 - Ketchikan, Alaska

Assay No.	Sample Marked	OUNCES PER TON		Value per Ton	Percentage of
		COPPER		IRON	MOLY
17196	Duval #12	Nil		3.9%	Nil
17197	Duval #13	Nil		3.6%	
17198	Duval #14	Trace		6.6%	
17199	Duval #15	Less than 0.1%		8.7%	
17200	Duval #16	Trace		4.4%	Nil
[illegible]	Duval #17	Trace		6.1%	
17202	Duval #18	Less than 0.1%		4.2%	
17203	Duval #19	Nil		11.2%	
17204	Duval #20	Nil		7.3%	
17205	Duval #21	Nil		9.5%	Nil
17206	Duval #22	4.1%		9.4%	
17207	Duval #23	Nil		6.5%	
17208	Duval #24	Nil		6.3%	
17209	Duval #25	Trace		5.6%	
17210	Duval #26	Trace		6.2%	
17211	Duval #27	Trace		6.4%	Nil

BONANZA GOLD, INC.
LOBBY, PAULSEN BLDG.
P. O. BOX 1444 — RI 7-2124
SPOKANE, WASHINGTON 99210

I.W. Mitchell Assayer.

FRANK H. DUVAL
PRESIDENT
~~ESKIL ANDERSON~~
~~1ST VICE-PRESIDENT~~
TERRY GILL
2ND VICE-PRESIDENT
E. H. DUVAL
SEC'Y-TREAS.
HARRY F. MAGNUSON
DIRECTOR
STEVE TENEFF
DIRECTOR

RECEIVED
DEC 30 1964
O M E
SPOKANE, WASHINGTON

BONANZA GOLD, INC.
LOBBY PAULSEN BLDG. • P. O. BOX 1444
SPOKANE, WASHINGTON 99210

TELEPHONE
RI 7-2125
TELETYPE
509-328-6656

Department of the Interior
Office of Minerals Exploration
Spokane, Washington

O.M.E. Docket # 6338

Drilling record for month of July 1964 on Jumbo claims, Prince of Wales Island, Alaska.

The location, directions, and lengths of diamond drill holes drilled in July, 1964 follow:

DDh # 30 300' N 51° E from S.E. cor. Jumbo IC claim
Direction N 50° E-47° from 287' to 572'
All drill holes collared in overburden, hole # 30 drilled through Diorite, containing finely deceminated sulphides and bottomed in nearly barren Diorite. DDh # 30 was finished and bottomed at 572' on July 19th, 1964 the rock is slightly magnetic but not with visible magnetite.

DDh # 17 300' N 51° E, 200' N 39° W from S.E.Cor. Jumbo IB claim.
Direction N 50° E-47°
DDh # 17 through Skarn and Skarned Schists bottoming in Granodiorite. Depth from 52' to 274' -finished and bottomed at 274' on July 7th, 1964.

DDH # 18 377' N 51° E from DDH # 30 @-45° to 275' drilling continuing.
DDh # 29 256' N 39° W from DDH # 30 @ -45° to 324' drilling through Skarn. Skarned Andesites and Diorties both not completed. Most core slightly Magnetic. Samples have been taken but no assay results to date, drilling continuing.

Core recovery excellent. No sludge return.
All core drilling A.X. Standard.

Very truly yours,
BONANZA GOLD, INC.
Frank H. Duval
BY
FRANK H. DUVAL

FHD/em.

FRANK H. DUVAL
PRESIDENT
~~EGIL ANDERSON~~
~~1ST VICE-PRESIDENT~~
TERRY GILL
2ND VICE-PRESIDENT
E. H. DUVAL
SEC'Y-TREAS.
HARRY F. MAGNUSON
DIRECTOR
STEVE TENEFF
DIRECTOR

RECEIVED
DEC 30 1964
O M E
SPOKANE, WASHINGTON

BONANZA GOLD, INC.
LOBBY PAULSEN BLDG. • P. O. BOX 1444
SPOKANE, WASHINGTON 99210

TELEPHONE
RI 7-2125
TELETYPE
509-328-6656

Department of the Interior
Office of Minerals Exploration
Spokane, Washington

O.M.E.Docket # 6338

Drilling record for the month of August 1964 on Jumbo claims on Prince of Wales Island, Alaska.

The location, directions, and lengths of diamond drill holes drilled and finihhed in August 1964 follows:

DDH # 18 continues through Skarn and bottoms in Granodiorite, location reported in July report. Continued from 275' to 382', it was finished and bottomed at 382' on August 7th, 1964.

DDH # 29 location reported in July report. Continued from 324' to 385' continued through Skarned Diorite and bottoms in Diorite. It was finished and bottomed at 385' on August 12th,1964.

The Skarns and Diorites are weakly magnetic and carry sparse deciminated sulphides but no appreciable magnetite was observed. All four holes show mineralization of iron and copper.

All core drilling A.X.Standard.
All core recovery excellent. No sludge returns.

All drilling under direct supervision of two Geologists working on the project, namely Mr. Carlos Plummer, of the University of Washington, Dept. of Geology and Mr. Walter Gonnason of Everett, Washington.

All drilling was stopped on August 12th,1964 as at that time it was determined by Geologists and Bonanza Gold, Inc. that any further drilling for iron should be carried out in the vicinity of Holes # 1 to # 4 and then above magnetite cliff as shown on Jumbo map.

Qwing to steepness of grade and rough terrain it was necessary to use a helicopter for the moves and the drilling of holes # 17-18-29 and 30, at a cost in excess of $50,000. of which it was determined that as to actual footage drilled at an O.M.E. $11.00 per foot basis, the cost to Bonanza Gold, Inc. would be approximately $40,000. being prohibitive as no iron of ore grade was found in drilling.

Very truly yours,
BONANZA GOLD, INC.

Frank H. Duval

BY
FRANK H. DUVAL

FHD/em.

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7th, 1964
Hole Size AAA
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date June
Drilled by Boylan Brothers

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Depth Feet	Foot Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
0-52	-	Overburden. Bottom of overburden arbitrarily set at depth where relatively unweathered fragments of skarn predominate over weathered skarn fragments.							
52-59	7	Dark reddish-brown and dark green to black very fine-grained skarn fragments within a medium-green matrix which flowed plastically during metamorphism between the fractured darker components. Patterns are very irregular. Many fractures and small solution cavities in rock. At about 55 ft. is a 6in. section dominantly brown, coarse anhedral garnet. Some light green copper stains among garnet. Locally, light green and reddish-brown components are in a homogenous fine-grained mixture. In places, white, fine-grained mineral, probably plagioclase is in the matrix between fragments Trace Cu & Fe sulfides throughout.							
60	-	Fragments of weathered skarn Apparently no core missing, so must be hole collapse.							
60-62	2	Skarn, mainly black and red-brown fragments in light matrix.							
62-63	1	Skarn merges into medium green andesite with small white phenocrysts.							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Started June 23, 1964
Finished July 7, 1964
Hole Size A.X.
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plumser Date July
Drilled by Boyles Brothers

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
63-64	1	Schist below sharp contact. Dark grey, very fine grained with pronounced foliation expressed by very thin elongate light grey lenses giving a laminated appearance to rock Foliation is folded in small open folds, with average trend of afoliation about 90° to hole.							
64-66	1	Skarn and schist rock fragments.							
66-81	5	Schist continues. Foliation direction variable, but at high angle to hole. At about 66ft. the schist has been fractured and intermixed with aphanitic qtz for about a foot.							
81-85	4	Skarn. Light reddish-brown & various shades of green. Fine banding at 82' appears to be same pattern and texture as schist, therefore, skarn must have replaced sch. during metamorphism here.							
85-86	1	Schist resumes. Contacts are fragments of sch. in skarn matrix.							
86-91 104	8	Skarn resumes. Irregular pattern to 88ft. where fine banding begins. Within banded section is about 2ft. of black, fine-grained rock which is slightly magnetic. At 91' irregular, dominantly green skarn resumes, includes some fragments of reddish-brown and white banded schist. Schist becomes dominant below 93ft. with occassional							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7, 1964
Hole Size A.X.
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plumer Date June
Drilled by Boyles Brothers

Hole No.
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		"intrusions" by the light green calc-silicate rock. At 102ft, the light colored skarn minerals dominate the schist which then merges into light colored irregular patterned skarn.							
104-107	3	An inclusion of dark grey sch. with a very thin sulfide layer along contact. Below is fine grained light green and white skarn.							
107-115	8	Numerous dark grey sch. inclusions in light skarn matrix. Skarn preferentially invaded plane of schistosity of some sch. fragments. At 114ft. skarn is in irregular bands of white, green and light brown which have been folded.							
115-118	3	Very fine-grained greenish black rock.							
118-137	19	Slight skarn effect on dark rock, then sharp contact, below is skarn, light green, white, & brown. At about 119ft. these merge into a zone of sharply banded, tightly folded light green skarn and dark schist. Skarn has penetrated foliation of sch. and then both were folded. Various degrees of replacement of sch. by skarn. Locally, core is slightly magnetic. At about 130 schist merges into lighter colored fine-grained, homogenous skarn.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7th, 1964
Hole Size A.X.
Depth 274 feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyles Brothers

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Depth Foot	Foot Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
137-151	14	Disseminated small blebs of Cu/Fe sulfides within dark grey rock, for 6". Below is thin-banded light green and brown skarn. At about 136ft, get inclusions of dark grey sch. then get dominantly sch. with several irregular zones of material appearing to be quartzite, which is white, but apparently is aplitic intrusive rock. First appears as 2" or less zones. From 141-142 aplite is in veins cutting sch. parallel to hole. Aplite contains about 3% med. grained amphibole needles. Various thin, light colored veins cut dark sch. below 142ft. A minor jumbled section of skarn and schist at 147ft. Schistosity is vague in rock below 143ft.							
151-159	8	A 6" dike of medium grained granodiorite. Below is dark grey hornfels which seems to be same composition as sch. Another 4" granodiorite dike at 155ft. Irregular white veinlets cut both rock types.							
159-160	1	Same dark hornfels, but fractured and reconsolidated by thin white and light green veinlets with a fair amount of fine-grained Cu/Fe sulfide.							
160-168	8	Dark hornfels continues with aplite intrusion into cracks along length of hole. Long slivers of hornfels are included w/in wide aplite veins. Minor Cu/Fe sulfides w/in both rock types.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7th, 1964
Hole Size A.X.
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data						
			No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
168-171	3	Hornfelsed dark grey rock w/o any aplite. At 170ft. is a 6"zone of hydrothermally altered rock, containing chlorite, etc.							
171-181	6	Skarn intermixed with dark grey hornfels. Skarn is fine grained in all the usual coloring. Hazy schistosity appears in hornfels at about 173ft. and rock is slightly lighter colored.							
181-193	12	Finely-banded dark grey sch. At 183ft. is a 1ft. zone of fine-grained light green rock interupts sch. Occassional veinlike intrusions of aplite w/in sch. Foliation about 90° to hole. At 92ft. sch. becomes coarser grained with brownish streaks.							
193-195	2	Skarn for 6", dominantly reddish-brown, no pattern. Then sch. to 195ft.							
195-211	16	1/8" Cu/Fe sulfide vein, then skarn with much dark hornfels included to 203ft. At 203 ft. sch. resumes w/ occassional layers of light green w/in foliation plane. At 205ft. skarn resumes. At 206ft. a 1ft long dark hornfels begins, below is skarn.							
211-214	3	Dense, dark green skarn w/ paper thin Cu/Fe Sulfide veins Where veins intersect, sulfide becomes as thick as 1/4".							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7, 1964
Hole Size A.X.
Depth 274 foot
% Core Rec. about 98

Mine Juneau Basin
Location Prince of Wales Is. Alaska

Logged by G. Plummer Date July
Drilled by

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 foot
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Opts. Feet	Oz. Ag	% Pb	% Zn
214-216	2	Skarn, dark and light green intermixed. Occassional Cu/Fe sulfide spots. At 214.5ft is a 1" calcite vein & weathered rock marginal to it.							
216-219	3	A 6" long irregular lens of aplite then banded multicolored skarn. At 217ft. surfaces of rock that have been subject to dissolving by solutions. Skarn becomes irregular about 219ft. and merges into medium green aphanitic rock. which							
219-222	3	Various dikes: A 6" wide, medium grained mottled dioritic dike cuts through andesite at about 70° to hole. Andesite is porphyritic, about 4" wide and cuts skarn below at about 70° to hole. Skarn, diorite, and andesite are intruded at about 30° from hole by a narrow aplite dike (or vein). Below, get mixed colored skarn. At 221-222ft, core is fractured, and surfaces have rust-colored weathered appearance. Water started gushing out of hole about here							
222-225	3	Looks like skarn replacing andesite. Medium-grained light green spots w/in a matrix of mixed reddish-brown and dark green. At 224ft. is 8" of irregular, medium and light green rock.							
225-226	1	Multi-shaded green rock, probably altered andesite. Abundant Fe/Cu sulfides. Fine aplite veinlets throughout.							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47D

Started June 23,1964
Finished July 7D,1964
Hole Size A.X.
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plumner Date July
Drilled by

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
226-236	10	Various green rocks above merge into various skarn types in irregular pattern. occassional fragments of "skarnized sch. Some black sch. at 231ft. which is magnetic. Rest of sch. is dark reddish-brown to black. Rock is fractured and weathered to black at about 232 ft. for about 6".							
236-237	1	An aphanitic, glassy, medium green rock in gradational contact w/ sch. Has streak like inclusions of black, dense rock w/ some minor sulfides disseminated.							
237-240	3	"Skarnized" sch. Occassional thin granodioritic injections into plane of schistosity.							
240-244	4	Granodiorite below irregular contact. 6" of GrD. then an irregular mixture of GnD. and sch. w/ much of sch. partially resorbed. At 243ft. reddish brown skarn enters the mixture and prevails for 1ft.							
244-253	9	Fine-grained medium green rock grades into GnD. At 245ft. is a 6" inclusion of dense black rock. Below is GrD. GrD. is granitic textured, medium(+) or coarse(-) grained. Color index about 20 or 30, plagioclase the dominant feldspar, though slightly pinkish hue may indicate fair amount of K-spar, Medium grained amphibole or pyroxene the dominant mafic. Disseminated accessory pyrite.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 23, 1964
Finished July 7, 1964
Hole Size A.X.
Depth 274 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by

Hole No. 17
Level
Grid
Latitude
Departure
Elevation 850 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
253-254	1	Aphanitic dark green rock, probably an inclusion of hornfelsed rock in sharp contact w/ GnD. Both contacts about 50° to hole.							
254-274	20	Granodiorite as before. Seems to become slightly coarser grained with depth. a weathered zone of 3" at 257ft.							

---0---

July 1964

elev DDH # 17

scale 1" = 50'

850

800

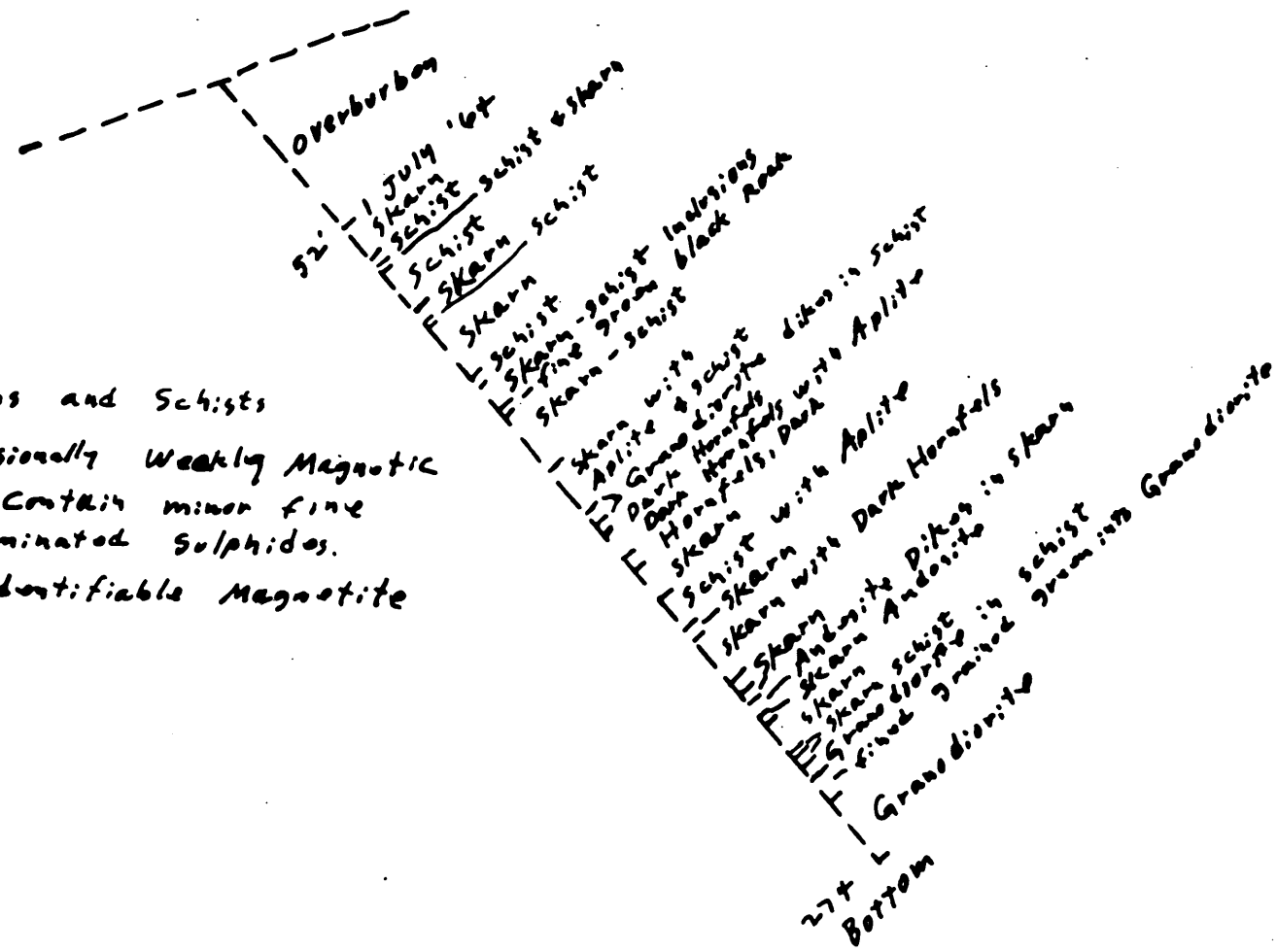
750

700

650

600

Skarns and Schists occasionally weakly Magnetic and contain minor fine decominated Sulphides. No identifiable Magnetite



overburden
52'
July '64
Skarn
Schist
Schist
Schist
Skarn
Skarn
Schist
Skarn - Schist
Skarn - Schist
Fine grain black Rock
Skarn with Aplite & Schist dikes in Schist
Aplite
Granodiorite
Dark Hornfels
Dark Hornfels with Aplite
Dark Hornfels, Dark
Skarn with Aplite
Schist
Skarn
Skarn with Dark Hornfels
Andesite dikes in Skarn
Skarn
Andesite
Skarn
Skarn schist in schist
Granodiorite
fined grained grain into Granodiorite
Granodiorite
27+
Bottom

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 11th, 1964
Finished Aug. 2nd, 1964
Hole Size AX
Depth 382'
% Core Rec. 98

Mine Jumbo Basin
Location
Logged by Plummer Date July
Drilled by Boyles Bros.

Hole No. 18
Level
Grid
Latitude
Departure
Elevation 775 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample No.	Sample Interval	Sample Core Feet	Sample Sple. Feet	Data Oz. Ag	Data % Pb	Data % Zn
0-66	-	Overburden							
66-67	BX core 1ft	Medium grained granodiorite w/ Color Index about 20. Sharply cut at 45° to core by a pinkish aplite vein.							
67-70	3	Get much darker rock of about the same texture as the above granodiorite. Seems to be somewhat "skarnized" granodiorite.							
70-71	1	White aphanitic rock, probably feldspar rich aplite.							
71-80	9	Skarn, which is medium grey to 75 ft where becomes dark grey & has texture of granodiorite. At 79 ft is highly bleached zone of same rock. Rock is fractured & weathered along fracture surfaces.							
80-82	2	Grey, fine grained rock, soft, probably limestone, but may be clay rich altered rock. Evidence of extensive shearing.							
82-85	3	Light grey bleached hard rock grades into diorite(lamprophyric). At 83 ft, rock is bleached, sheared & cut by calcite veins about 50° to hole. At 85 ft unbleached diorite resumes.							
85-98	AX core 13ft	Diorite. Dark, coarse grained becomes dar fine grained. At 90 ft is cut by a 2" section of lighter coarse grained diorite of color index about 50. Below is mixture of various grained size dark diorites. Traces of sulfides							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. 18
Level
Grid
Latitude
Departure
Elevation 775 feet
Bearing
Inclination 47°

Started July 11th, 1964
Finished Aug. 7th, 1964
Hole Size A.X.
Depth 382 feet
% Core Rec. about 98

Mine Jumbo Basin
Location Prince of Wales, Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling Co.

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Spla. Feet	Oz. Ag	% Pb	% Zn
		except ~~for~~ at about 97 ft where a fair concentration of Cu/Fe sulfides exist for about 1".							
98-104	6	Below a narrow shear zone is multi-colored skarn w/ much pinkish-brown rock. Disseminate Cu/Fe sulfides. At 104 ft, skarn grades into diorite.							
104-124	20	Diorite. A 4" bleached section at 111 ft. A 3" garnet bearing skarn zone at 114 ft. Most of diorite has more plagioclase than usual(estimate 15%). Trace of Cu/Fe sulfide.							
124-126	2	Bleached diorite for 1 ft, then core is mud like for about 6", below is white bleached diroite. A shear zone.							
126-145	19	Diorite resumes. Occassional calcite veinlets. At about 138 ft get andesite mixed in. Fair concentration of Cu/Fe sulfides 139-145 ft.							
145-154	9	Aphanitic medium green rock w/ occassional reddish skarn type rocks. Fair concentration of disseminated Cu/Fe sulfides from 146-148 ft.							
154-155	1	Med. grained diorite, considerably more leucocratic than usual, but not like the late phase granodiorite. Disseminated sulfides.							
155-167	12	Above rock grades into dense dark aphanitic rock w/ dis-							

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 11th, 1964
Finished Aug. 7th, 1964
Hole Size A.X.
Depth 382 feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyles Brothers Drilling

Hole No. 18
Level
Grid
Latitude
Departure
Elevation 775 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Spic. Feet	Oz. Ag	% Pb	% Zn
		seminated Cu/Fe sulfides. At 157 ft, grades into fine-grained diorite w/ good concentration of Cu/Fe sulfides. A poorly consolidated sheared & skarnized zone offrom 159-161 ft. (mixed skarn & diorite). Fair showing of Cu/Fe sulfides 160-161 ft. Diorite below. At 163 ft is a consolidated shear zone w/ calcite lined vug. Much epidote & numerous sulfide veinlets as well as disseminated sulfides. Less altered diorite below 165 ft.							
167-178	11	Dense dark skarn, probably altered andesite. Minor Cu/Fe sulfides. Grades into diorite at 169 ft. then grades back into skarn which is multicolored, with salmon pink predominating. Below 171 ft is mixed skarn & diorite w/ numerous 1/8" veins of sulfide. At 175 ft is a 6" gouge zone. At 176 ft is a 6" bleached diorite zone. Below is diorite which appears slightly "skarnized".							
178-203	25	Above rock grades into unaltered diorite which persists until 179 ft where there is a 6" slightly skarnized diorite section(lighter color w/ much pink mixed in). Below is diorite. Small epidote vein at 181 ft. A 1/4" vein of granitic rock at 184 ft about 70° to hole. At 185 ft. is a 3" zone of diorite partially altered to epidote. Minor disseminated sulfides 189-190 ft. At 196 ft, color gets							

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 11th, 1964
Finished Aug. 7th, 1964
Hole Size A.X.
Depth 382 feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date August
Drilled by Boyles Brothers Drilling

Hole No. 18
Level
Grid
Latitude
Departure
Elevation 775 feet
Bearing
Inclination 47°

Depth Feet	Foot Core	Lithologic Description	Sample No.	Sample Interval	Sample Core Feet	Sample Spls. Feet	Data Oz. Ag	Data % Pb	Data % Zn
		lighter & then get white & grey shear banding about 50° to hole. Below, rock grades into grey-green fine-grained andesite, at about 197 ft & into diorite at 199 ft. A 1/2" calcite vein at 201 ft.							
203-274	71	Andesite porphyry quickly becomes irregular patterned brownish dark-gry & dark green skarn. Grades back to Andesite porphyry at 205ft then to diorite about 206 ft. Below is diorite in various gr. sizes & various degrees of darkness. An unconsolidated shear zone 231-232 ft. At 272-274 ft are various zones of more leucocratic diorite grading into diorite.							
274-362.5	88.5	Dense dark grey rock w/ a reddish cast. Many small veins of light grey. Seems to be "skarnized" diorites & andesite. At 283 ft is lighter colored typical skarn, mainly brownish red. Many veinlets some microfaulted & other veinlets cutting through micro faulting. Red & white skarn predominates below 285 ft. At 299 ft, get some light green streaks like malachite. Below 300 ft are large irregular patches of aphanitic white quartz & some medium grained garnet crystals in the pink patches. Garnet, much coarser grained becomes dominant. Some blebs of sulfide at 308 & 313 ft. Occassional showing of epidote. At 323 ft is a foot of poorly consolidated garnet w/in which is							

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 11th, 1964
Finished August 7th, 1964
Hole Size A.X.
Depth 382 feet
% Core Rec. 98

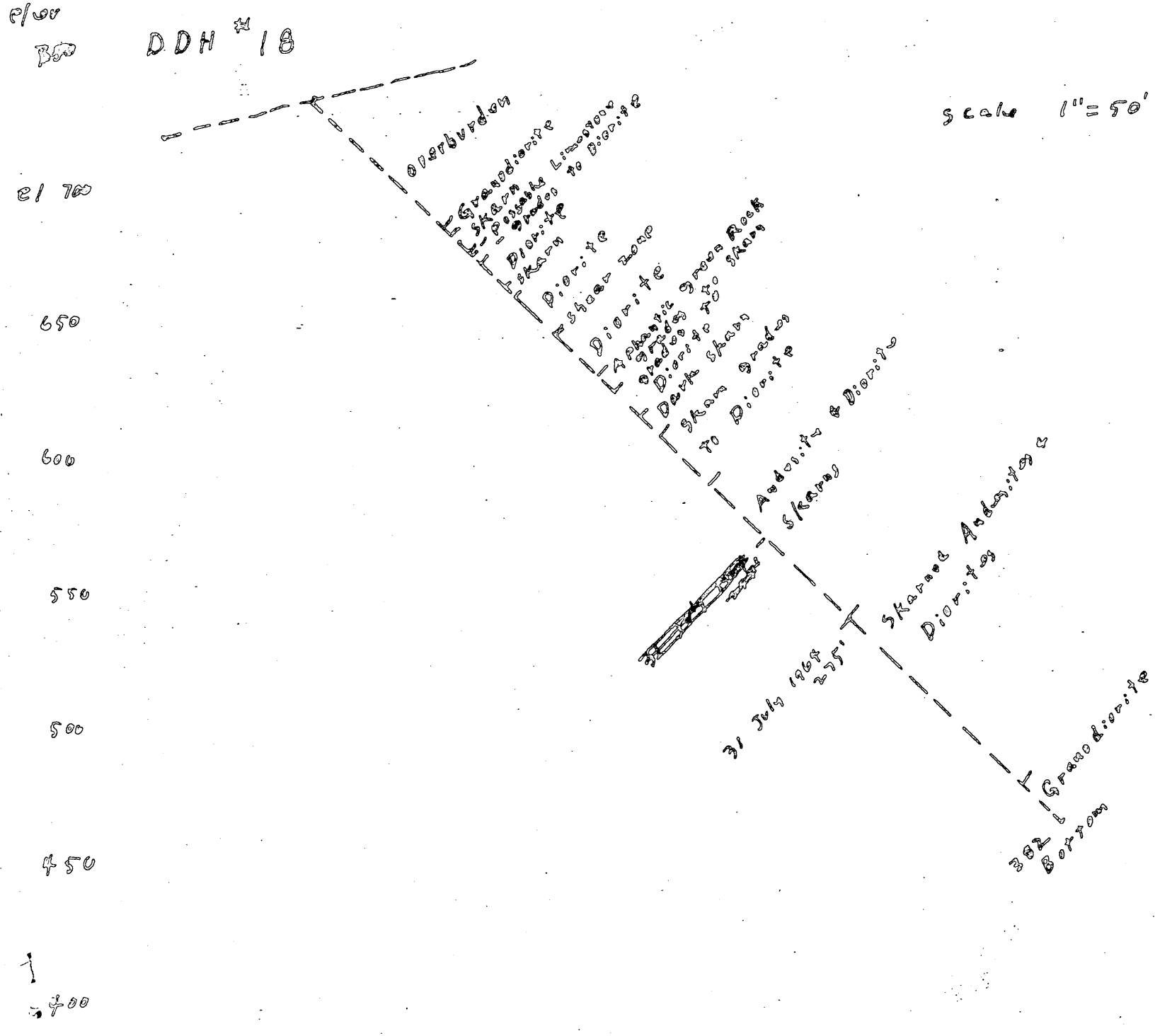
Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date August
Drilled by Boyle Brothers Drilling

Hole No. 18
Level
Grid
Latitude
Departure
Elevation 775 feet
Bearing
Inclination 47°

Depth Feet	Foot Core	Lithologic Description	Sample No.	Sample Interval	Sample Core Feet	Date Sple. Feet	Date Oz. Ag	Date % Pb	Date % Zn
		some green rock about 4" long w/ a very high percentage of chalcopyrite. Below, rock is predominantly garnet & quartz. At 356 ft is a 1/4" patch of sulfides. Occassional smaller blebs elsewhere of sulfides. At 353 ft, start getting some dense medium green rock mixed w/ garnet. At 356-357.5 is a large white qtz section w/ some garnet. White merges into medium & dark rock which has very fine disseminated sulfides. Another white quartz section from 361-362.5 ft.							
362.5 -382	19.5	Quartz grades into granodiorite which for first 4" seems to include garnet as it is reddish brown w/ amphibole, but texture of granodiorite. A 1" patch of reddish brown at 364 ft. Rest is medium grained granodiorite, color index about 40 & uniform texture. Mafic is amphibole in sub-aggregates of euhedral and subhedral laths. Plagioclase is dominant mineral though local purple hued feldspar is probably K-spar.							
382		*** END OF HOLE***							

July - August 1964



DIAMOND DRILL RECORD

Standpipe
Casing

Started July 23, 1964
Finished Aug. 12, 1964
Hole Size 3.5x3 feet
Depth 385 feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by Plummer Date July
Drilled by Boyles Bros. Drilling Co.

Hole No. 29
Level
Grid
Latitude
Departure
Elevation 650 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample No.	Sample Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
0-64	--	Overburden							
64-69	5	Skarn. Irregular patterns of aphanitic dark green, dark reddish brown, black, medium green. Minor Cu/Fe sulfides.							
69-70	1	Shear zone. Light green & grey altered skarn, some unconsolidated, most consolidated. 1" coarse-crystalled calcite vein in center. Lower contact is a series of dark & light shear bands about 30° to hole.							
70-78	8	Skarn continues. Higher Fe/Cu sulfide concentration near shear zone & occassional minor concentration below. From 75-77 ft core contains high concentration of dull-dark, silver colored powdery material which is slightly magnetic; also, chalcopyrite here.							
78-79	1	About 1 ft of medium grained leucocratic Granodiorite. Amphibole laths about 5% of rock. Contacts sharp but irregular.							
79-95	16	Skarn continues. Small calcite vein at 88 ft. Fairly high number of Cu/Fe sulfide bearing veinlets 88-89 ft. & 95-96-88.							
95-96	1	About 8" section of medium grey aplitic rock.							
96-103	7	Skarn as before. Locally, a fair amount of sulfide veinlets.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 23, 1964
Finished Aug. 12th, 1964
Hole Size A.X.
Depth 385 Feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling Co.

Hole No. 29
Level
Grid
Latitude
Departure
Elevation 650 foot
Bearing
Inclination 47°.

Depth Feet	Foot Core	Lithologic Description	Sample Data						
			No.	Interval	Core Foot	Spls. Foot	Oz. Ag	% Pb	% Zn
103-105	2	Hydrothermally altered skarn, medium & light green & white rock. Narrow calcite veins & some shear surfaces w/ rust colored material.							
105-108	3	Light altered skarn grades quickly to dark skarn.							
108-111	3	Hydrothermally altered skarn mostly light to medium-grey. Some is porphyritic, seemingly metasomatically altered andesite.							
111-129	18	Dark unaltered skarn resumes w/ localized light grey areas of skarn. Local concentrations of sulfides in irregular veins. One foot of hydrothermally altered light skarn at 126-127 ft.							
129-130	1	Medium grained leucocratic granodiorite. Lower contact about 30° to hole.							
130-133	1	Skarn, as above.							
133-139	6	Very dark green, fine-grained basaltic or andesitic looking rock which is featureless until 135 ft where a 1 ft section of light skarn includes a shear plane at 45° to hole w/ sulfide veinlets. Skarn seems a result of alteration of dike. Dike rock continues below w/ disseminated sulfides.							
139-142	3	Above rock grades into light hydrothermally altered skarn w/ numerous consolidated shear planes about 30° to hole.							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. 29
Level
Grid
Latitude
Departure
Elevation 650 feet
Bearing
Inclination 47°

Started July 23, 1964
Finished Aug. 12th, 1964
Hole Size A.X.
Depth 385 feet
% Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyles Brothers Drilling

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spic. Feet	Oz. Ag	% Pb	% Zn
[illegible]-146	4	Altered rock grades into dark skarn.							
146-148	2	Skarn grades back into hydrothermally altered light rock sheared about 30° to hole; well consolidated to 147 ft where poorly consolidated for about a foot.							
[illegible]-157	9	Dark & medium colored skarn resumes. Minor sulfides. Aphanitic medium green rock is dominant, probably andesite w/in skarn.							
[illegible]-159	1	Small rock fragments, probably local shearing; below is very amphibolitic diorite. Disseminated sulfides.							
[illegible]-160	2	Indefinite contact below is granodiorite(leucocratic).							
[illegible]-161	1	Mafic diorite, slightly magnetic.							
161-215	54	Above rock becomes aphanitic black & medium green "skarnized" dike; some mottled dark purplish skarn. Many fine light green veinlets. Much of core is slightly magnetic & has localized sulfide concentrations. Can recognize phenocrysts in some of rock. At about 196 ft. the skarnized rock seems to be "schist", but no platy minerals visible, but small light lenses give rock a banded appearance; has a reddish dark grey color. At 205 ft, rock becomes med. grey-green skarn. At 206 ft, is very dark grey. Occassional sulfide veinlets throughout.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started July 23, 1964
Finished Aug. 12th, 1964
Hole Size A.X.
Depth 385 feet
% Core Rec.

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling

Hole No. 29
Level
Grid
Latitude
Departure
Elevation 650 feet
Bearing
Inclination 47°

Depth Feet	Foot Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spic. Feet	Oz. Ag	% Pb	% Zn
		At 209 ft rock is fine-grained, rather than aphanitic.							
215- [illegible]	3	Above rock bleached to medium grey-tan & this is cut sharply at 215 ft by a 1" banded qtz rich vein 30° to hole. Two moresuch veins several inches lower. Rock becomes pinkish grey & finally medium green. Minor sulfides.							
[illegible]- 2[illegible]	5	Dark gre[illegible] continuous interlaced by [illegible]t green veinlets.							
[illegible] 241	38	Skarn. [illegible]-brown, grey & green. Some has texture of diorite. From 229-231 is medium grey-green porphyritic rock, probably an andesite dike. Much skarn schist below. w/ good concentrations of Chalcopyrite.							
[illegible] [illegible]	18	Medium green andesite porphyry w/ small phenocrysts of plagioclase. Some larger phenocrysts of amphibole & numerous black aphanitic inclusions. Several thin aplite veins. At 272 ft is a 3" section of skarn alteration of andesite. At 273 ft. grades into diorite & back to andesite porphyry at 275 ft. At 280 ft., rock is somewhat bleached & sheared, w/ a few minor irregular patches of brown skarn at 288 ft & minor Cu/Fe sulfides.							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. [illegible]
Level
Grid
Latitude
Departure
Elevation 650 feet
Bearing
Inclination [illegible]

Started July 23 1964
Finished August 1[illegible] 1964
Hole Size [illegible]
Depth 385 feet
Core Rec. 98

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

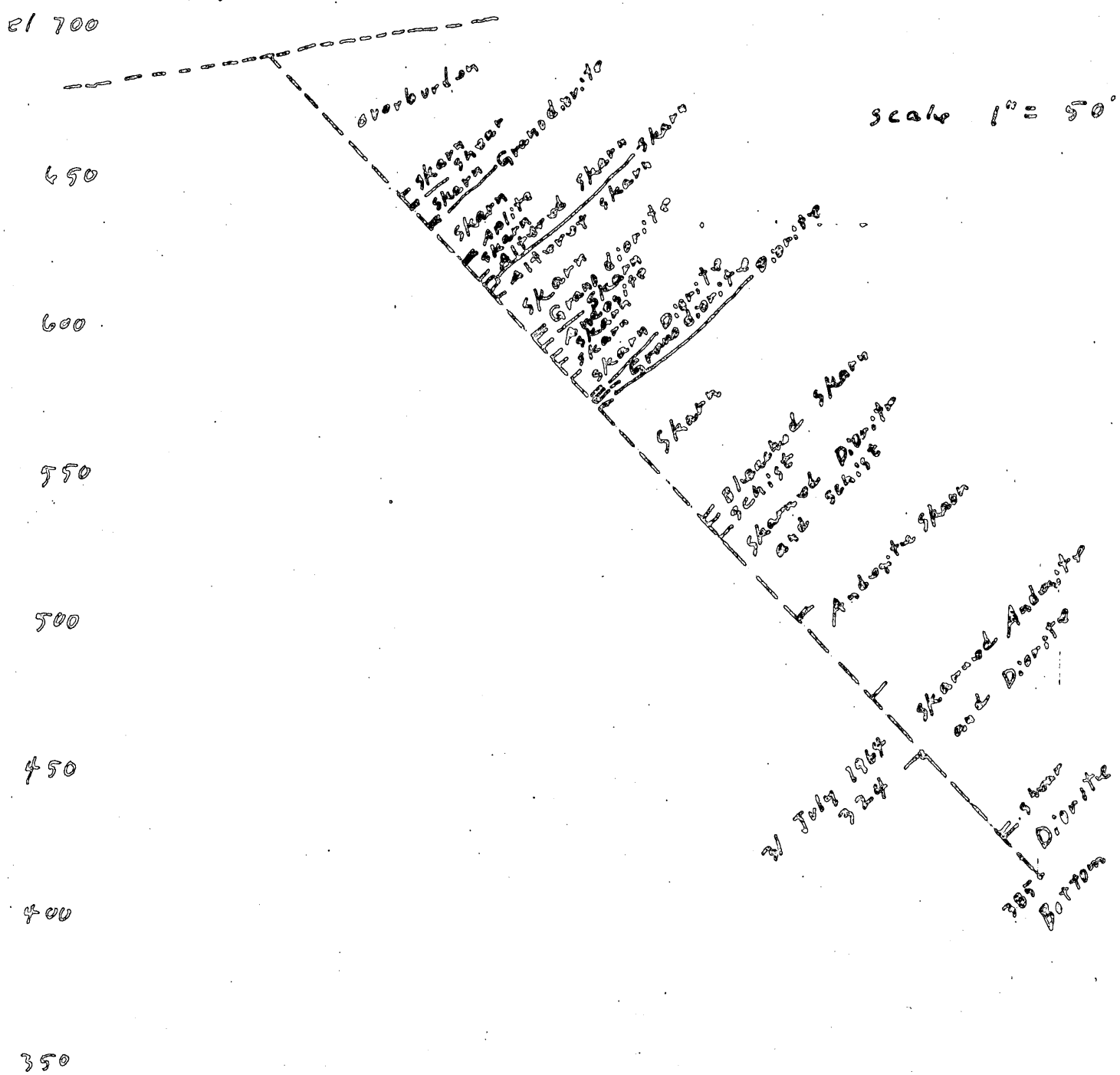
Logged by [illegible] Date August
Drilled by Boyle Brothers Drilling Co.

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
[illegible]	[illegible]	At 243 ft. [illegible] irregular [illegible] of [illegible] mixed w/ andesite [illegible] patches [illegible] concentration of [illegible] sulfide & some are slightly magnetic. [illegible] sections up to [illegible] ft long. Some fragments of schist at [illegible]-235 ft w/ the plane of foliation [illegible] 70° to core. Below 247 ft [illegible] rather than andesite prevails. [illegible] 255 ft is rusty [illegible] diorite w/ good sulfide concentration & some epidote. Below diorite prevails w/ occasional sulfide veinlets.							
[illegible]	[illegible]	At 283 ft is a consolidated shear zone w/ shear planes [illegible] about 35° to hole [illegible] from [illegible] of core.							
385	[illegible]	[illegible] of Hole							

Form 108 [illegible] 6-63 [illegible] 6-63-1 EN CO 990107

July - August 1964

DDH #29



DIAMOND DRILL RECORD

Sandstone
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size AQ
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date June
Drilled by Boyle's Bros.

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
0-64		Overburden							
64-84		Medium to coarse grained gabbro or diorite: granitic textured, plagioclase and amphibole; amphibole is in large laths which are dark green; plagioclase is medium grey. Traces of Fe/Cu sulfides in very fine veinlets.							
84-93.5		Skarn: Intermixed aphanitic green and red rock with no regular pattern between the two. Occassional fracture fillings of diorite. Some thin concentrations of magnetite which is fine-grained and porous with occassional small cavities dissolved out. Disseminated Fe/Cu sulfides; also in fine veinlets.							
93.5-94		Medium-grained diorite or gabbro, similar to above rock but finer-grained. Small calcite vein at about 97ft.							
94-101		Coarse amphibole crystals mark beginning of skarn zone. Much diorite intruded into skarn. Veinlets of Cu/Fe sulfides and epidote. More sulfides than in above skarn zone.							
101-104		Medium and coarse grained diorite. Locally, rock is nearly pure amphibole.							
104-114		Intermixed diorite(amphibole rich) and skarn. No regular pattern. Probably, fragments of Ls. were metamorphosed and partially absorbed by magma.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plumner Date June
Drilled by

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing 47°
Inclination

Depth Foot	Foot Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Spic. Feet	Oz. Ag	% Pb	% Zn
		Amphibolitic diorite predominates. Occassional minor concentrations of Fe/Cu Sulfides. Very minor traces of magnetite.							
114-115		Fine-grained dark green rock, probably andesite. Many thin veinlets of Cu/Fe Sulf.							
115-118		Amphibolitic diorite resumes below irregular contact. Occassional inclusions of fine-grained, light grey rock which may be a calc-silicate							
118-120		Medium-grained diorite with a more even texture in irregular contact with above amphibolitic diorite. Inclusions of amph. diorite as well as a fine-grained grey rock.							
120-121		Fine-grained dark green andesite w/ occassional thin veinlets of chalcopyrite.							
121-124.5		Coarse-grained amphibolitic rock in irregular contact grades downward into medium grained diorite which has occassional large amphibole crystals. Traces of Fe/Cu sulfides.							
124.5-126		Fine-grained very light grey aplite in sharp contact with diorite, above and below.							
126-141		Med. and coarse grained diorite resumes. At 130ft an irregular Fe/Cu sulf. vein about 1/4" thick at about 30° to hole.							

Size of Core: _____
Casing: _____

DIAMOND DRILL RECORD

Hole No. 30
Level: _____
Grid: _____
Latitude: _____
Departure: _____
Elevation: 625 feet
Bearing: _____
Inclination: 47°

Started: June 22, 1964
Finished: July 12, 1964
Hole Size: _____
Depth: 372 feet
% Core Rec. 99

Mine: Duke Island
Location: Prince of Wales Is., Alaska

Logged by: C. Plummer Date: June
Drilled by: Boyles Brothers Drilling

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
141-143		1/2" calcite vein, followed by mixed diorite & skarn w/ some Fe/Cu sulfides.							
143-162		Medium grained diorite becomes dominant. At 143.5 ft. is a 6" section of nearlly pure amphibole.							
162-164		A few very narrow red & green skarn bands, then a very fine-grained dark green rock, apparently andesite dike. Some fine reddish spots, possibly dispersed agarnet. Minor Fe/Cu Sulfides. Contact at both ends is about 45° to hole.							
164-179		Below contact is med. grained skarn w/ chalcopyrite. This merges into diorite. Some of the skarn has a fragmental appearance within the diorite. Considerable Fe/Cu Sulfides throughout, though amount decreases as diorite becomes homogenous. Skarn ends at about 169 ft. At 171 ft. is a narrow qtz vein.							
179-180		Finer-grained diorite w/ plagioclase phenocrysts. Merges back into "normal" diorite, at 180 ft.							
180-192.5		Diorite. At about 182 ft is a more leucocratic rock mixed in for several inches, possibly granodiorite, injected into diorite.							
192.5-193		3" coarse-crystaled calcite vein, 30° to hole. Dark dense rock for several inches either side w/ Fe/Cu sulfides.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date June
Drilled by Boyles Brothers Drilling

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data: No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
193-196		Diorite, as above.							
196-198		Sharp contact 45° to hole, below is andesite; dark dense above grades down to porphyritic w/ amphibole & plagioclase phenocrysts. After a foot, get diorite intermixed w/ andesite.							
198-201		Diorite. At 201 ft is a 1/8" Fe/Cu sulfide vein.							
202-206		Light green rock, apparently sheared & hydrothermally altered. In center, rock is poorly consolidated & porous evidently a recent shear zone. Some calcite breccia fragments in sheared rock. At 204 ft is a minor calcite vein & below is reddish spots which may indicate garnet. Skarn banding appears for several inches before merging into diorite.							
206-208		Diorite.							
208		Calcite vein 20° to hole w/ skarn bordering it 1/2" either sede. Small veinlets of Cu/Fe sulfide parallel to skarn.							
208-209.5		Diorite.							
209.5-210		2" skarn zone grading into diorite on either side. 2" below skarn, diorite is in contact w/ andesite. Andesite has plagioclase phenocrysts & minor Fe/Cu sulfides.							
210-221		Diorite w/ occassional inclusions of andesite. At 212 ft							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plumner Date June
Drilled by Boyle Brothers Drilling

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Foot	Foot Core	Lithologic Description	Sample No.	Interval	Core Feet	Spic. Feet	Oz. Ag	% Pb	% Zn
		is a 1" aplite vein. Traces of Fe/Cu sulfide. At 219 ft is a 1" vein of light grey appearing rock, possibly hydrothermally altered andesite, along edge, skarn-like rock grades into diorite.							
221-222		A 1" vein of Cu/Fe sulfided w/in a fractured zone. Below is more diorite & at 222 ft is a 6" zone of alteration & bleaching, w/ minor sulfides							
222-227		Diorite continues, becoming finer-grained & containing occassional fractures which exhibit hydrothermally altered diorite(ligt green). At 226 ft is a 1/4" chalcopyrite vein at 20° to hole; vein cuts diorite as well as a 1/2 inch andesite dikelet, at 30° to chalcopyrite. Also, chalcopyrite vein cuts through a thin qtz vein about 10° between veins. A skarn colored zone borders qtz vein. Diorite below w/ breccia fragments of dark aphanitic rock included & associated minor chalcopyrite.							
227-232		Another thin chalcopyrite vein w/ marginal alteration of diorite. Diorite includes several fragments of andesite							
232-233		A sheared and altered zone 2" wide, below is 1 ft diorite which is sheared & cut by a Fe/Cu sulfide vein.							
233-235		Fragments of dioritete w/in aplitic matrix. Minor Cu/Fe sulfides.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date June
Drilled by Boyle Brothers Drilling

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data						
			No.	Interval	Core Feet	Spls. Feet	Cu. Ag	% Pb	% Zn
235-243		Relatively homogenous diorite							
243		A white vein 40° to hole. Above it is 1/8" Cu/Fe Sulf. vein. Below is 2" altered rock some of which has a pinkish hue as in skarn.							
243-250		Brecciaed dior. w/in aplite for several inches, then homogenous dior. resumes to 245 ft where a narrow aplite zone has slightly altered diorite w/ minor Fe/Cu sulf. A similar aplite zone occurs at 247 ft. Occassional brecciaed diorite w/ aplite to 250 ft.							
250-253		Sharp contact, then very light grey aplite dotted w/ fine-grained amphibole. Light pinkish hue may indicate K-spar. (potash feldspar)							
253-264		Sharp contact, diorite continues. Occassional aplite veinlets. Locally, diorite is very high in amphibole content. Some amphibole rich zones grade into andesite porphyry, which has minor Fe/Cu sulfides.							
264-267		Another zone of fractured diorite cemented by aplite. Some smaller fragments have slightly reddish-brown skarn-like appearance. Minor chal-Cu/Fe sulfides.							
267-272		Sharp contact w/ aplite above & amphibole rich diorite below. At 269 ft is another fracture-aplite zone of 6";							

Standpipe
Casing

DIAMOND DRILL RECORD

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling Co.

Depth Feet	Feet Core	Lithologic Description	Sample Data						
			No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
		Another 3" zone at 270 ft.							
272		1/2" coarsely crystalline calcite vein, 90° to hole. Several fine Fe/Cu veinlets below.							
272-274		Diorite continues. Amphibolitic diorite predominating. Occassional light grey veinlets. Traces of cu/Fe sulf.							
274-281		"Normal" or less amphibolitic diorite resumes. Occassional 1 light grey veinlets. Fracture & aplite zone at 280 ft.							
281		Blocks of amphibolitic diorite mixed w/ lighter diorite for about 1 foot.							
281-288.5		Sharp contact about 40° to hole. Aplite for about 2" grades into granodiorite or granite, such as prevails in the main stock of the region. Granodiorite is medium grained w/ a color index of 15 or 20. Amphibole is dominant mafic mineral. Some of feldspar may be potash, as feldapar on fracture surfaces is light flesh colored. Most felspar is medium grey. Qtz seems to be fine-grained & subordinate.							
288.5-297		Sharp contact about 40° to hole. Diorite below, which occassionally merges into andesite porphyry. Fragmented diorite w/ aplite filling begins at about 290 ft. Minor sha Cu/Fe sulfides in fracture zone. Non-fractured diorite resumes at 292 ft. 2 granitic intrusions of 1" at 294 ft							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling Co.

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
297-298		Shear zone: poorly consolidated gouge w/ fairly abundant Cu/Fe sulfide; shear zone about 3". Sulfides persist into consolidated rock. For 1 ft below is dense dark & medium green hornfelsic rock. Some has a slightly purplish hue. Locally, vaguelly banded. Narrow qtz vein near 2[illegible] ft. Disseminated Cu/Fe sulfides throughout hornfels.							
298-386		Irregular contact, diorite below w/ occassional fragments of dense green rock. Thin Cu/Fe Sulf. veinlets near contact. Diorite has large variation in grain size of minerals. Core slightly magnetic. Occassional Cu/Fe sulf. veinlets throughout. Below 356 ft, finer grained rock w/ coarse amphibole phenocrysts predominate. at 364 ft are several fine fissures at 45° to hole w/ Cu/Fe sulfides. At 268 ft is a 1/8" thick Cu/Fe sulfide vein. At 269 ft. is a slightly bleached zone about 6"long, 45° to hole w/ trace of chalcopyrite. At 380 ft is a 1" darker section which is longmagnetic. At 384 ft is a 1/2" white aplite dike in sharp contact at 45° to hole.							
386		1" medium grained leuco-granodiorite(very little amphibole) at about 90° to hole.							
386-406		Diorite continues. A 1/4" Cu/Fe sulf. vein at 45° to hole at 393 ft., another at 392. Disseminated sulfides through.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyles Brothers Drilling Co.

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data						
			No.	Interval	Core Feet	Spls. Feet	Oz. Ag	% Pb	% Zn
406		6" Med. grained Granodiorite in sharp contact w/ dense dark green rock w/ dark brown, irregular patches. Hornfelsed possibly "skarnized".							
406-434		Diorite continues.							
434		3" intrusion of granodiorite in contact about 50° to hole							
434-441		Diorite continues to 437 where it appears to have been extensively fractured into fragments less than 1" which have reconsolidated with appreciable Fe/Cu sulfides between fragments.							
441-443		Med. grained granodiorite in sharp contact 60° to hole. Numerous irregular inclusions of diorite above lower irregular contact.							
443-444		Fine grained diorite or andesite.							
444-447		1" fracture filling of aplite (probably related to granodiorite) below is abundant disseminate Cu/Fe sulfides, in dark andesitic rock. At 445 ft a 1/2" fine grained granodiorite vein sharply cuts rock. Just above, andesite grades into coarser grained diorite which persists downward. Diorite also contains abundant disseminated sulfides							
447-448		Sharp contact 45° to hole. then fine-grained dense dark green andesite w/ a few plag. phenocrysts.							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
448-455		1 ft of sheared & gouge rock, then diorite occurs w/ few sulfide veinlets.							
455-486		Fragmented diorite w/in a matrix of med. grey, fine grained intrusive rock. Breccia persist to 256 ft where get grey rock alone, then get diorite fragments w/in grey rock for several ft before get diorite alone below 462 ft. Diorite becomes finer grained and darker w/ a fair amount of Cu/Fe sulfides at 462.5 ft & minor veins below. A 1 ft section of dense andesite at 466 ft-contacts at 45° to hole. At 474 ft. fractured diorite, consolidated by lighter grey intrusive material resumes. At 476 slightly porphyritic andesite truncates diorite at 45° to hole. Dior. resumes at 476 ft contact which is 45° to hole is cut at right angle (also 45° to hole) by a vein of white aplitic material. Magnetite & sulfide v veinlets below this vein. A small calcite vein at 483 ft. Disseminate Fe/Cu sulfides.							
486-488		Contact at 45° to hole. Below is fine-grained light grey intrusive material, slightly darker than above aplite. A few small amphibole phenocrysts							
488-492		45° contact. Coarse grained diorite w/ some sulfides at contact. 1/2" calcite vein at 499 ft.							
492-495		Sharp contact. White aplite. At 494 ft get long slivers of							

DIAMOND DRILL RECORD

Standpipe
Casing

Started June 11th, 1964
Finished July 19th, 1964
Hole Size A.X.
Depth 572 feet
% Core Rec. 99

Mine Jumbo Basin
Location Prince of Wales Is. Alaska

Logged by C. Plummer Date July
Drilled by Boyle Brothers Drilling

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 47°

Depth Feet	Feet Core	Lithologic Description	Sample Data						
			No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
		diorite which means aplite is following a system of fractures sub-parallel to core.							
495-504		Amphibolitic diorite resumes below contact 70° to hole. At 499 ft is a fair concentration of disseminated Cu/Fe sulfides. Occassional consentrations of sulfides below, mainly in veinlets.							
504-505		White aplite, sharp contacts at 45° to hole. Fe/Cu sulfides in diorite along contacts.							
505-517		Diorite w/ occassional small concentrations of sulfides and some minor veinlets of aplite. At 512 ft is a 2" intrusive of granitic rock. 2" below this is a 1/2" aplite vein. At 4513 ft is a 3" aplite dike & several thinner aplite veins below this.							
517-519		Several narrow aplite veins then a 2 ft long aplite dike. All contacts sharp.							
519-522		Diorite resumes as before w/ some sulfides.							
522-529		Sharp contact at about 45° to hole, then light grey andesite porphyry w/ numerous phenocrysts of amphibole, some quite large. An inclusion of diorite at 527 ft w/ increasing amphibole phenocrysts near it.							
529-539		Diorite resumes after gradient contact featuring increasing amphibole. Minor Cu/Fe sulfides.							

Fig. 12

Standpipe
Casing

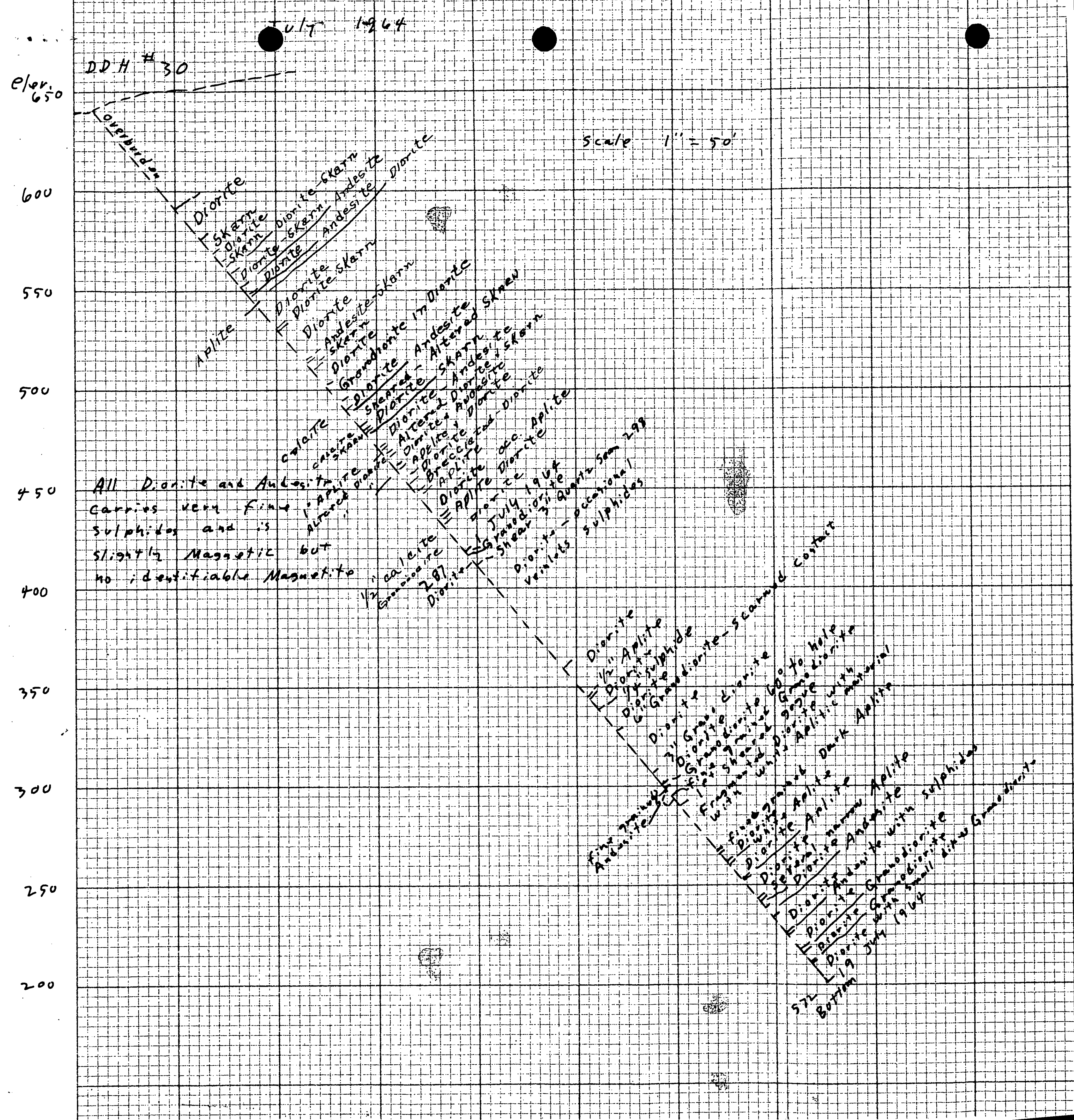
DIAMOND DRILL RECORD

Hole No. 30
Level
Grid
Latitude
Departure
Elevation 625 feet
Bearing
Inclination 42°

Started June [illegible]
Finished July [illegible]
Hole Size [illegible]
Depth [illegible] feet
% Core Rec [illegible]

Mine [illegible]
Location [illegible] of Yakobi Is., Alaska
Logged by [illegible] Date July
Drilled by [illegible] Drilling Co.

Depth Feet	Feet Core	Lithologic Description	Sample No.	Interval	Core Feet	Sple. Feet	Oz. Ag	% Pb	% Zn
[illegible]		[illegible] rock w/ abundant [illegible] [illegible] [illegible] rock [illegible] [illegible] [illegible]							
[illegible]		[illegible] rite as described [illegible] [illegible] medium-grained leucocratic granodiorite [illegible] w/ sharp contact [illegible] aplite vein [illegible] Cu/Fe [illegible] [illegible] at [illegible]							
[illegible]		sharp contact [illegible] hole, [illegible] leuco-granodiorite [illegible] coarse grained [illegible] [illegible] white color w/ [illegible] hole. Lower [illegible]							
[illegible]		[illegible] rite [illegible] vein [illegible] yet the [illegible] diorite. [illegible] fines.							
[illegible]		[illegible] contact [illegible] then red-[illegible] [illegible] diorite.							
[illegible]		sharp contact [illegible] w/ large [illegible] increasing [illegible] upward until becomes [illegible] diorite after [illegible] amphibolitic diorite [illegible] where "normal" [illegible] containing diorite resumes at [illegible] 60 ft is a 6" [illegible] leuco-granodiorite like [illegible] to hole [illegible] w/ only trace [illegible]							


July 1964
DDH #30
elev. 650
Scale 1" = 50'
600
550
500
450
400
350
300
250
200
Overburden
Diorite
Skarn
Diorite
Skarn
Diorite-Skarn
Diorite-Skarn Andesite
Diorite Andesite
Diorite
Diorite
Diorite Skarn
Aplite
Diorite
Diorite-Skarn
Diorite
Andesite-Skarn
Diorite
Granodiorite in Diorite
Diorite Andesite
Sheared Altered Skarn
Diorite Skarn
Diorite Andesite
Altered Diorite & Skarn
Diorite & Andesite
Aplite & Diorite
Diorite
Brecciated Diorite
Aplite occ. Aplite
Diorite Diorite
Aplite
calcite
calcite skarn
1" Aplite
Altered Diorite
All Diorite and Andesite carries very fine sulphides and is slightly Magnetic but no identifiable Magnetite
Diorite
July 1964
Granodiorite
Shear 3" Quartz Seam 298
Diorite — occasional veinlets sulphides
1/2" calcite
Granodiorite
287
Diorite
Diorite-Scarned contact
Diorite
1/2" Aplite
Diorite sulphide
1/4" Diorite
Diorite
Granodiorite
Diorite
Granodiorite 60° to hole
3" Granodiorite
Diorite
Granodiorite
fine grained gouge
Diorite with sheared Diorite with Aplitic material
Fragmented white Aplite
Dark Aplite
fine grained Andesite
fine grained Diorite
white Aplite
Diorite Aplite
Diorite narrow Aplite
several Diorite Andesite
Diorite Andesite with sulphides
Diorite Granodiorite
Diorite Granodiorite
Diorite with small dikes Granodiorite
Diorite
19 July 1964
572 Bottom

CA&A Div.

MAR 9 1965

Bonanza Gold, Inc.
Lobby, Paulsen Building
Spokane 1, Washington

Re: OMX-6338 (Iron Ore)
Bonanza Gold, Inc.
Jumbo Basin, Prince of Wales Island
Ketchikan Precinct, Alaska
Contract 2185

Gentlemen:

Pursuant to Article 6 of the subject contract, as amended, and Item 4 of the Termination Agreement, royalties shall be paid to the Government as provided in the contract on all production from the land described in the contract from April 7, 1964, to April 7, 1974, or until the sum of $9,001.50 is fully repaid with interest at the rate of 6½ percent per annum.

Royalty payments should be made in favor of the Office of Minerals Exploration, and should be mailed or delivered to the Field Officer, Office of Minerals Exploration, Region I, South 157 Howard Street, Spokane, Washington, 99204. Each payment should be accompanied by two copies of settlement sheets or other suitable sales evidence showing the name of the purchaser, the quantity and grade of the production sold, the price per unit, and the gross proceeds and allowable deductions therefrom. The purchaser should be notified of the Government's royalty on production and directed to pay the royalty, computed as provided in the contract, directly to the Government.

The Field Officer should be promptly notified upon the commencement of any production, and upon any extended cessation thereof.

Production unsold or unused six months after extraction from the ground should be reported promptly to the Field Officer.

Attention is specifically invited to the provisions of Article 2(a) of the contract referring to the preservation of the Government's royalty rights. Two true copies of any instrument transferring, surrendering, or encumbering any of said rights shall be furnished to the Field Officer.

Sincerely yours,

George Fumich, Jr.

Acting Director

FMMurphy/mm (3/8/65)
cc: Director's Reading File
Review Committee
CAAA Division
Region I (2)
Docket
Mr. Johnson
Mr. Eskil Anderson, 924 W. 22nd Ave., Spokane, Wash. 99203

MME Form 14
March 1961

Contract No. Idm-E) 14-23) 2185

No. 319

Docket No. DMEA) MME) 6338

Date of Action ~~February 11, 1969~~
Terminated contract

DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OBLIGATION DOCUMENT

To: Chief, Fiscal Section, Office of the Secretary

From: Chief, Division of Administrative Management

Please enter the amounts shown below on the accounts of the Office of Minerals Exploration.

Name and Address of Contractor:

Bonanza Gold, Inc.
Paulsen, Bldg.
Spokane 1, Washington

Date of Contract	Region	State	Commodity
April 7, 1964	I	Alaska	Iron
	Reserve		Obligation
Prior Amount	0		30,075.00
Increase	0		0
Decrease	~~0~~		~~$21,073.50~~
Revised Amount	0		9,001.50

Remarks:

cc: 110
800
210

88995-61

Audit's Copy

EXPLORATION CONTRACT
BONANZA GOLD, INC.
OME-6338

TERMINATION AGREEMENT

It is agreed this 21st day of January, 1965, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter referred to as the "Government," and Bonanza Gold, Inc., hereinafter referred to as the "Operator," parties to that certain Exploration Contract No. 2185 (OME-6338), dated April 7, 1964, as amended, hereinafter called the "Contract," that:

1. Effective August 16, 1964, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government will contribute only to the allowable costs of work performed prior to said effective date, except for the costs of assaying samples sent out to be assayed prior to September 15, 1964.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and the final account.

4. The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer (for example, if the Operator either transfers or fails to retain its interest in the land), shall pay to the Government the royalty on production provided for in the Contract in the same manner and amount, for the same period, and subject to the same conditions provided for in the contract, as amended, as if a certification of possible production had been made, such certification being hereby waived by the Operator. In addition, all rights of the Government provided for in the Contract with respect to percentage royalty and liens to secure payment thereof, reports (including preservation of Operator's records), accounts, audits, and the right to recover any overpayments are hereby preserved.

5. The Operator hereby releases and agrees to save the Government harmless from all claims and demands under or arising out of the Contract, except as otherwise provided in this Termination Agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of
Minerals Exploration

BONANZA GOLD, INC.

By Frank H. Dwyer

Title President

Audit's Copy

EXPLORATION CONTRACT
BONANZA GOLD, INC.
OME-6338

AMENDMENT NO. 1

It is agreed this 24th day of August, 1964, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter referred to as the "Government," and Bonanza Gold, Inc., hereinafter referred to as the "Operator," that Exploration Contract 2185 (OME-6338), dated April 7, 1964, is amended effective the date of the contract as follows:

1. In Exhibit A of the contract:

(a) Under the heading General Provisions the last paragraph is deleted and replaced as follows:

The location, attitude, and the sequence of drilling of each diamond drill hole shall be subject to Government approval.

(b) Under the heading Description of the Work the second paragraph is deleted and replaced as follows:

The holes shall be drilled not less than BX wireline or AX standard core size (1-1/8" core diameter); and after traversing the limestone, skarn, and magnetite are expected to bottom in the granitic intrusive. The 18 holes shown on Fig. 1 shall be drilled at approximately a minus 45 degree angle on a bearing of approximately N. 50° E., to an estimated average depth of about 250 feet. The line of Holes Nos. 25 through 30 shall be started prior to the indicated holes at higher elevations. If necessary, holes up to 500 feet in depth may be drilled to completely traverse the magnetite and underlying skarn formations. However, the aggregate footage of all holes drilled under this contract shall not exceed 5300 feet.

(c) Under the heading Estimated Cost of the Project, Fixed Unit Costs, the word "cardboard" in the second specification is deleted.

This amendment shall not be construed to increase the fixed unit cost of any item of work, the estimated total cost of the project, or any aggregate total amount which the Government may be required to contribute.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of
Minerals Exploration

BONANZA GOLD, INC.

By _____

Title President

MME Form 14
March 1961

No 278

Contract No. Idm-E) 14-23) 2185

Docket No. DMEA) MME) 6338

Date of Action April 7, 1964
Executed Contract

DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OBLIGATION DOCUMENT

To: Chief, Fiscal Section, Office of the Secretary

From: Chief, Division of Administrative Management

Please enter the amounts shown below on the accounts of the Office of Minerals Exploration.

Name and Address of Contractor:

Bonanza Gold, Inc.
Lobby, Paulsen Bldg.,
Spokane 1, Washington

Date of Contract	Region	State	Commodity
April 7, 1964	I	Alaska	Iron

	Reserve	Obligation
Prior Amount	$30,075.00	0
Increase	0	$30,075.00
Decrease	30,075.00	-0
Revised Amount	0	$30,075.00

Remarks:

6½% interest

cc: 110
800
210

88995-61

MME Form 51
June 1963

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Audit's Copy

EXPLORATION CONTRACT
(Short Form)

Docket No.	Commodity	Contract No.	County	State
OME 6398	Iron Ore	14-83-080-2185	Ketchikan Recording Precinct	Alaska

It is agreed APR 7 1964 (Date), between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and

Bonanza Gold, Inc., a Washington corporation,

whose mailing address is Lobby, Paulsen Bldg., Spokane 1, Washington, hereinafter called the "Operator," as follows:

ARTICLE 1. Authority and scope.--(a) This contract, entered into under the authority of Public Law 701, 85th Cong., 2d sess. (72 Stat. 700; 30 U.S.C. § 641 - 646), consists of this form, the attached Annex I (land description), Exhibit A (work and costs), and the maps and documents listed. The work is a search for new or unexplored deposits of the commodity designated above. The Operator shall begin the work on or before June 1, 1964 (Date), and, subject to the provisions of Article 7 and Exhibit A, shall complete the work within 12 months from the date of the contract.

(b) The description of the work and the fixed cost for each unit of work to be performed (per foot of drilling, per foot of drifting, per hour of operations, etc.) are hereby agreed upon as specified in Exhibit A. The estimated total cost of the work is $60,150. The Government will contribute 50 percent of the total fixed unit costs of the work performed, not in excess of $30,075 in accordance with the provisions of Articles 4 and 5.

(c) Interest computation.-- Simple interest at the rate of 6 1/8 percent shall accrue from the dates Federal funds are made available until the period specified for payment of royalty expires, or until the amount of Federal funds contributed is fully repaid with interest.

(d) The Operator shall not transfer or assign this contract or any right or obligation thereunder without the written consent of the Government.

ARTICLE 2. Operator's rights in land.--(a) The Operator represents and undertakes that Annex I correctly describes the land which is the subject of this contract and the nature of the Operator's right of property and possession therein (whether as owner, lessee, or otherwise), and that such right, title, or interest is subject only to the following claims, liens, or encumbrances:

See Annex I

(b) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above and (if the Operator does not hold the legal title) the Lien Agreement of any holder of the legal title of the land (lessor, seller, optionor, etc.) are attached as follows:

See Annex I

(c) The Operator shall preserve and maintain his right, title, or interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. The Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a royalty on production and liens for the payment thereof. Two true copies of such instrument shall be furnished to the Government. If the Government's rights to royalty as provided in Article 6 have been terminated, the provisions of this paragraph (c) shall become inapplicable.

ARTICLE 3. Performance of the work.--(a) Operator's responsibility.--The work shall be performed diligently, efficiently, in a workmanlike manner in accordance with good mining standards, and in compliance with State laws governing health, safety, and liability insurance covering employment. The Operator shall provide suitable and adequate equipment, facilities, materials, supplies, and labor to complete the work as specified in Article 1(a).

(b) Government may inspect.--The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract and production operations during the period that royalty is payable to the Government. The Operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 4. Contribution by the Government.--The Government will make its contribution on the basis of the monthly vouchers referred to in Article 5(b), but all payments by the Government are provisional only, subject to audit. Until the account between the Operator and the Government is finally audited and settled and the Operator's final report has been received, the Government may withhold such sums as are necessary to protect its interests. To the extent that amounts in excess of fixed unit costs or in excess of the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such amounts for his own account without contribution by the Government. The Government will not contribute to the cost of any work performed prior to the date of this contract. The Government may make payments for the account of the Operator directly to independent contractors and suppliers rather than to the Operator.

ARTICLE 5. Reports, accounts, audits.--(a) Operator's records.--The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine all pertinent books, documents, papers, and records of the Operator.

(b) Monthly reports.--The Operator shall provide the Government with four copies of monthly reports in three sections as follows:

(1) Operator's Monthly Voucher claiming costs for work performed;

(2) Operator's Progress Report showing the number of units of the various types of work performed; and

(3) a narrative report of the work performed during the reporting period, including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground.

(Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) Final report.--Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with three copies of a final report (in addition to the final monthly report). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) Report of sales.--The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's royalty relates, such as two copies of smelter or concentrator settlement sheets and certified accounts of production and sale or other disposition of production.

(e) Compliance with requirements.--If the Government determines that any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the preparation or completion of same with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 6. Repayment by Operator.--(a) Certification.--If the Government considers that mineral or metal production from the land covered by the contract may be possible as a result of the exploration work, it shall so certify in writing to the Operator at any time not later than six months after a sufficient final report and final accounting (see Article 5) have been furnished.

(b) Royalty on production.--The Operator, whether or not the producer (for example, if the Operator either transfers or does not retain his interest in the land), shall pay to the Government a royalty on all minerals and metals mined or produced from the land as follows:

(1) irrespective of any certification of possible production--from the date of the contract until the lapse of the time within which the Government may issue such certification or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first; or

(2) if the Government issues a certification of possible production--for a period of ten years from the date of the contract or until the total net amount contributed by the Government is fully repaid with interest, whichever occurs first.

(c) Payment of royalty.--(1) The Government's royalty shall be five percent of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrate, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business and shown as deductions on the buyer's settlement sheets (such as treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight payable by the buyer to a carrier (not the Operator or producer)), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. No costs of the Operator or producer are deductible in arriving at the "gross proceeds" as that term is here used.

The term "treatment processes" means those processes (such as milling, concentrating, smelting, refining, or equivalent, but excluding fabricating or manufacturing) applied to the crude ore or other production after it is extracted from the ground to put it into a commercially marketable form.

(2) The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be.

(d) Unsold production.--If any production (ore, concentrate, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used in integrated manufacturing or fabricating operations (for instance if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrate, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) Lien for payment.--To secure the payment of royalty (see Article 6(b)), the Operator hereby grants to the Government a lien upon his interest in the land and upon any production of minerals and metals therefrom until the royalty claim is extinguished by lapse of time or is fully paid.

(f) Notice to purchasers.--The Operator or producer shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such pruchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Government, and this estimate shall be final and binding upon the Operator or producer.

(g) No obligation to produce.--Nothing in this contract shall be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(h) Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals and metals mined or produced from the land.

ARTICLE 7. Termination of the Government's Obligations.--(a) If the Government determines that operations at any time have failed to achieve anticipated results and further work is not justified, the Government may give the Operator written notice thereof, and thereupon:

(1) the Government shall be free of all obligation to pay on account of units of work not then performed; and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

(b) If the Government determines that the Operator is in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon:

(1) the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and

(2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to final accounting and reporting.

The Government may also avail itself of any other remedy the law may provide for breach of contract, including the right to rescind the contract and to demand repayment of all moneys contributed by the Government under the contract.

(c) The giving of any notice by the Government under the provisions of this Article 7 shall not affect the Government's rights as provided for in the contract with respect to royalty and liens to secure the payment thereof, and such rights shall be fully preserved.

(d) The determinations of the Government are subject to appeal under Article 11.

ARTICLE 8. Notices to be given by the Government may be delivered to the Operator or may be sent by certified mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 9. Officials not to benefit.--No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 10. Nondiscrimination in Employment.--The provisions respecting nondiscrimination in employment which are required by section 301 of Executive Order 10925, dated March 6, 1961, as amended and supplemented, are attached hereto as Exhibit B and are hereby incorporated in and made a part of this contract.

ARTICLE 11. Disputes.--Any dispute arising under this contract which is not disposed of by agreement shall be decided by the Director, Office of Minerals Exploration, who shall reduce his decision to writing and mail or otherwise furnish a copy thereof to the Operator. The decision of the Director, Office of Minerals Exploration, shall be final and conclusive unless, within 30 days from the date of receipt of such copy, the Operator mails or otherwise furnishes to the Director, Office of Minerals Exploration, a written appeal addressed to the Secretary of the Interior. The decision of the Secretary or his duly authorized representative for the determination of such appeals shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, or capricious, or arbitrary, or so grossly erroneous as necessarily to imply bad faith, or not supported by substantial evidence.

The term "Director, Office of Minerals Exploration," as used herein includes his duly authorized representative.

ARTICLE 12. Work Hours Act of 1962 - Overtime Compensation.--This contract, to the extent that it is of a character specified in the Work Hours Act of 1962 (Public Law 87-581, 76 Stat. 357-360) and is not covered by the Walsh-Healey Public Contracts Act (41 U.S.C. 35-45), is subject to the following provisions and to all other provisions and exceptions of said Work Hours Act of 1962.

(a) Overtime requirements.--No Operator or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic to be employed on such work in excess of eight hours in any calendar day or in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate of not less than one and one-half times his basic rate of pay for all hours worked in excess of eight hours in any such calendar day or in excess of forty hours in any such workweek, as the case may be.

(b) Violations; liability for unpaid wages; liquidated damages.--In the event of any violation of the clause set forth in subparagraph (a) of this paragraph, the Operator and any subcontractor responsible therefor shall be liable to any affected employee for his unpaid wages. In addition, such Operator and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed, with respect to each individual laborer or mechanic employed in violation of the clause set forth in subparagraph (a) of this paragraph, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in subparagraph (a) of this paragraph.

(c) Withholding for unpaid wages and liquidated damages.--The Office of Minerals Exploration may withhold or cause to be withheld, from any moneys payable on account of work performed by the Operator or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Operator or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in subparagraph (b) of this paragraph.

ARTICLE 13. Copeland (Anti-Kickback) Act--Nonrebate of wages.--The regulations of the Secretary of Labor applicable to contractors and subcontractors (29 CFR, Part 3), made pursuant to the Copeland Act, as amended (40 U. S. C. 276c) and to aid in the enforcement of the Anti-Kickback Act (18 U. S. C. 874) are made a part of this contract by reference. The Operator will comply with these regulations and any amendments or modifications thereof and will be responsible for the submission of affidavits required of independent contractors thereunder. The foregoing shall apply except as the Secretary of Labor may specifically provide for reasonable limitations, variations, tolerances, and exemptions.

ARTICLE 14. Changes and added provisions.--

Executed in quintuplicate the day and year first above written.

Bonanza Gold inc
(Operator)

By Frank H. Duval

Title President

THE UNITED STATES OF AMERICA

By [illegible]

I, Estelle H Duval (Name), certify that I am the _____ secretary of the corporation named as Operator herein; that Frank H Duval (Name), who signed this contract on behalf of the Operator, was then President (Title) 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.

[CORPORATE SEAL]

INT.-DUP. SEC., WASH., D.C. 31011

EXPLORATION CONTRACT
BONANZA GOLD, INC.
OME-6330

ANNEX I

The land referred to in Article 2 of the contract consists of forty-six (46) patented lode mining claims and fractions and ten (10) unpatented lode mining claims, including all rights pertaining thereto, in the Copper Mountain mining district, Prince of Wales Island, Ketchikan Recording Precinct, First Division, State of Alaska, as follows:

Patented Claims and Fractions

Patent No. 42005, Mineral Survey Number 562A, issued 10-18-05, recorded at Ketchikan, Alaska, in Volume 482, pp. 127 to 157. This patent comprises 29 claims as follows:

Jumbo No. 1	Jumbo No. 1A
Jumbo No. 1C	Jumbo No. 1B
Jumbo No. 2	Jumbo No. 2A
Jumbo No. 2B	Jumbo No. 1D
Jumbo No. 3	Jumbo No. 1E
Jumbo No. 3B	Jumbo No. 3A
Jumbo No. 4	Jumbo No. 5
Jumbo No. 6	Jumbo No. 7
Jumbo No. 8 Bryan & Petty	Jumbo No. 8 Scott
Jumbo No. 9 Scott	Jumbo No. 9 Bryan & Petty
Jumbo No. 10	Jumbo No. 11
Jumbo No. 12	Jumbo No. 13
Jumbo No. 14	Jumbo No. 15
Jumbo No. 16	Jumbo No. 17
Jumbo No. 18	

Supplementary data show a notation of record 9-21-14 at Ketchikan in F 73 and 76.

Patent No. 1203824, Mineral Survey Number 1542, recorded at Ketchikan 2-4-60, Vol. 9, Deeds, pp. 29-34. This patent was issued in lieu of Patent No. 1064828, dated March 30, 1933, which is cancelled because it bore an erroneous Mineral Survey Number. This patent comprises 5 claims as follows:

Jumbo No. 46	Jumbo No. 47
Jumbo No. 48	Jumbo No. 49
Jumbo No. 50	

Patent No. 385872, issued 2-18-14, Mineral Survey Number 886, recorded at Ketchikan 9-21-14, in F 71 and 74. The claims and fractions in this patent are as follows:

El Mora	Justina
Fraction No. 1	Fraction No. 3
Fraction No. 2	Fraction No. 4

Patent No. 1062853, issued 4-14-33, Mineral Survey Number 1545, recorded at Ketchikan 5-5-33, p. 97. The claims in this patent are as follows:

Jumbo No. 51	Jumbo No. 52
Jumbo No. 53	Jumbo No. 54
Jumbo No. 55	Jumbo No. 56

Unpatented Lode Mining Claims

The following 10 unpatented claims are recorded in the Recording Office, Ketchikan, Alaska, as follows:

Name of Claim	Book No.	Page No.
Gresham No. 1	19	171
Gresham No. 2	19	172

Groshen No. 3	19	173
Groshen No. 4	19	174
Groshen No. 5	19	175
Groshen No. 6	19	176
Groshen No. 7	19	177
Groshen No. 8	19	178
Groshen No. 9	19	179
Groshen No. 10	19	180

The Operator has rights to the claims listed in this Annex I under the terms of a Sale Agreement, dated November 1, 1963, between Eskil Anderson as the Owner and Bonanza Gold, Inc., a Washington corporation, as the Purchaser.

A Lien or Subordination Agreement executed by Eskil Anderson, covering the claims listed in this Annex I is attached hereto and made part hereof.

The outer boundaries of the claims are shown in green on the map entitled "Fig. 3, Claim Map - Jumbo Basin," attached hereto and made part hereof.

Item 2 (c) - 1

MME Form 52
June, 1961

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

FOR GOVERNMENT USE ONLY
Operator
Docket No. OME –
Contract No. 14-23-090 – 2185
Contract Date APR 7 1964

LIEN OR SUBORDINATION AGREEMENT 1/

To the United States of America:

That certain land in the ~~county of~~ Ketchikan Mining and Recording Precinct, State of Alaska, described ~~as follows~~ 2/ in a "Sale Agreement" dated November 21, 1963 and recorded at Ketchikan in Volume 19, Mining, Pages 191-199 and including 46 Patented mining claims known as the Jumbo Group and Ten unpatented mining claims known as the Goshen Group, Goshen No. 1 to Goshen No. 10. Goshen Claims were staked under authority of Paragraph 14 of above "Sale Agreement".

hereinafter called the "land", is the subject of a proposed exploration contract, hereinafter called the "Contract", between the United States of America, hereinafter called the "Government" and

Bonanza Gold, Inc. 3/

hereinafter called the "Operator". In consideration for and as an inducement to the Government executing the Contract, the undersigned:

1. (a) Being the owner of an interest in the land, hereby grants to the Government a lien upon all of his right, title, and interest in the land and upon any production of minerals therefrom to secure the payment to the Government of the royalty on production provided for by the Contract, and agrees if the Operator's interest should be surrendered or terminated at any time prior to the expiration of the rights of the United States under said Contract to pay royalty to the Government according to the terms of said Contract; or

(b) ~~Being the holder of a claim, lien, or encumbrance against the land, hereby subordinates his claim, lien, or encumbrance in or against the land and in any production therefrom to the rights of the Government under the Contract with respect to royalty on production and liens to secure same.~~ 4/

2. Undertakes and agrees that property in which the Government may acquire an interest or equity under the Contract may be dismantled, severed from the land, and removed as may be provided in the Contract; and the Government's interest and equity in such property shall be prior and superior to any adverse right or claim of the undersigned.

3. Represents and undertakes that there is no claim, lien, or encumbrance upon the undersigned's right, title, claim, or interest in or against the land other than the following: (If "none" insert the word "none". Do not leave blank.)

1/ Production from the land is not required, and in the absence of production there is no obligation to pay royalty to the Government.

2/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease /or contract, deed, or other document/ dated _____, and recorded in Book_____, Page____, official records of said county". If (b) is used, the book and page of recordation must be inserted above. If the space provided is insufficient, use an Annex and refer to the Annex in the space.

3/ Insert name exactly as it appears in the Application MME Form 40.

4/ Subparagraph 1(a) does not apply to the holder of a claim, lien, or encumbrance.

4. Undertakes and agrees (a) neither to commit any act nor assert any claim in conflict with the provisions of this Agreement; and (b) to give advance notice of the Government's rights under this agreement to any subsequent transferee, mortgagee, encumbrancer, or lessee of any of the undersigned's right, title, claim, or interest in or against the land or any production therefrom, furnishing the Government with two true copies of such notice; and

5. Consents to all amendments (including an agreement of termination) and assignments of the Contract without notice thereof, and undertakes and agrees that this agreement shall extend and apply thereto.

6. Added provisions None (State "None" or "See Annex No._____".)

Dated this 9th day of January, 19 64.

APPLICANT SHOULD NOT SIGN

Eskil Andersson (Seal)	924 E. 22nd Ave. (Street)	
	Spokane, Washington 99203 (City & State)	
ESKIL ANDERSON		
(Seal)	(Street)	
	(City & State)	
(Seal)	(Street)	
	(City & State)	
(Seal)	(Street)	
	(City & State)	
(Seal)	(Street)	
	(City & State)	
(Seal)	(Street)	
	(City & State)	

I, _____ (Name), certify that I am the _____ (Title—Secretary, etc.) of the corporation named herein; that _____ (Name), who signed this agreement was then _____ (Title—Pres., Vice-Pres., etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

_____
(Corporate Seal)

INT.-DUP. SEC., WASH., D.C.
95181

EXPLORATION CONTRACT
BONANZA GOLD, INC.
OME-6338

EXHIBIT A

The purpose of this project is to explore by surface diamond drilling for contact metamorphic deposits of iron, occurring in the form of magnetite, along the contacts of Paleozoic sediments and predominantly intrusive granodiorite.

General Provisions

The core from diamond drilling shall be stored in boxes identified as to hole number with markers in the core sections to indicate the depth represented. Samples of the sludge and core segments shall be stored in suitable containers properly identified as to source and location. The stored core and sludge samples shall be made available for Government inspection and possible use. With prior Government approval, the Operator may dispose of the stored core and samples.

Core showing significant magnetite shall be split and one split assayed for iron and copper. The other split shall be stored in proper sequence with the unmineralized core. No sample shall represent a hole length of greater than ten feet.

Facilities shall be provided for recovering diamond drill sludges and such sludges shall be retained when drilling in magnetite-bearing formations. Whenever individual core recovery is found to be less than 60 percent, the corresponding retained sludge and such core segments as may have been recovered shall be assayed separately and the results combined according to standard practice to represent a single sample.

In addition to the assays for iron and copper, not more than fifteen selected, representative composite samples of magnetite-bearing drill core shall be assayed for molybdenum, titanium oxide, lime, sulfur, phosphorus, insoluble, gold, and silver.

True copies of all sample assay certificates shall be submitted with the Operator's monthly report, which shall also include maps or sketches showing the work completed during the reporting period. The maps shall indicate the general rock formations and structures traversed by the drill holes; also, the location and values of the samples.

The Government will not contribute to the cost of any incomplete hole, to a hole drilled closer than 200 feet to another hole, nor to a hole within 200 feet of the exterior boundaries of the claim groups described in Annex I of this contract.

The Operator shall provide such supervisory, labor, and technical services as may be required to complete the work in a satisfactory manner.

The location and attitude of each diamond drill hole shall be subject to Government approval.

Description of the Work

The work will consist of drilling an estimated 30 holes aggregating a maximum of 5300 feet comprised of plug drilling through overburden and diamond core drilling through consolidated formations. The approximate locations and directions of 18 of the holes are shown in red on the map entitled "Fig. 1, Jumbo Mine, Prince of Wales Island, Jumbo Mountain, Alaska," attached hereto and made part hereof. In addition to the 18 holes indicated in red on Fig. 1, two additional holes may be drilled to explore favorable areas indicated by the project work.

The holes shall be drilled not less than BX wireline or AX standard core size (1-1/8" core diameter); and after traversing the limestone, skarn, and magnetite ore expected to bottom in the granitic intrusive. The 18 holes shown on Fig. 1 shall be drilled at approximately a minus 45 degree angle on a bearing of approximately N. 30° E., to an estimated average depth of about 250 feet. Holes Nos. 25 through 30 shall be completed prior to the indicated holes at higher elevations. If necessary, holes up to 300 feet in depth may be drilled to completely traverse the magnetite and underlying skarn formations. However, the aggregate footage of all holes drilled under this contract shall not exceed 5300 feet.

Estimated Cost of the Project

Fixed Unit Costs

5300 feet drilling, overburden and AX standard or BXWL core size or larger @ $11.00/ft.	$58,300.00
500 cardboard core boxes @ $1.00/box	500.00
300 samples assayed for iron and copper @ $3.00/sample	900.00
15 composite samples assayed for molybdenum, titanium oxide, lime, sulfur, phosphorus, insoluble , gold, and silver @ $30.00/sample	450.00
Total Estimated Cost	$60,150.00
Government Participation @ 50%	$30,075.00

EXHIBIT B

NONDISCRIMINATION IN EMPLOYMENT

(Section 301, Executive Order 10925, March 6, 1961, as amended)

'During the performance of this contract, the contractor agrees as follows:

'(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited, to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this non-discrimination clause.

'(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

'(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the said labor union or workers' representative of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

'(4) The contractor will comply with all provisions of Executive Order No. 10925 of March 6, 1961, as amended, and of the rules, regulations, and relevant orders of the President's Committee on Equal Employment Opportunity created thereby.

'(5) The contractor will furnish all information and reports required by Executive Order No. 10925 of March 6, 1961, as amended, and by the rules, regulations, and orders of the said Committee, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Committee for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

'(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 10925 of March 6, 1961, as amended, and such other sanctions may be imposed and remedies invoked as provided in the said Executive Order or by rule, regulation, or order of the President's Committee on Equal Employment Opportunity, or as otherwise provided by law.

'(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the President's Committee on Equal Employment Opportunity issued pursuant to section 303 of Executive Order No. 10925 of March 6, 1961, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.'"

MME Form 14
March 1961

No. 274

Contract No. Idm-E) 14-23) **2185**

Docket No. DMEA) MME) **6338**

Date of Action **April 7, 1964**
Approved Contract

DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OBLIGATION DOCUMENT

To: Chief, Fiscal Section, Office of the Secretary

From: Chief, Division of Administrative Management

Please enter the amounts shown below on the accounts of the Office of Minerals Exploration.

Name and Address of Contractor:

Bonanza Gold, Inc.
Lobby, Paulsen Bldg.,
Spokane 1, Washington

Date of Contract	Region	State	Commodity
April 7, 1964	**I**	**Alaska**	**Iron**
	Reserve		Obligation
Prior Amount	0		0
Increase	$30,075.00		0
Decrease	0		0
Revised Amount	$30,075.00		0

Remarks:

6½% interest

cc: 110
800
210

88995-61

JUMBO PROPERTY
PRINCE OF WALES ISLAND

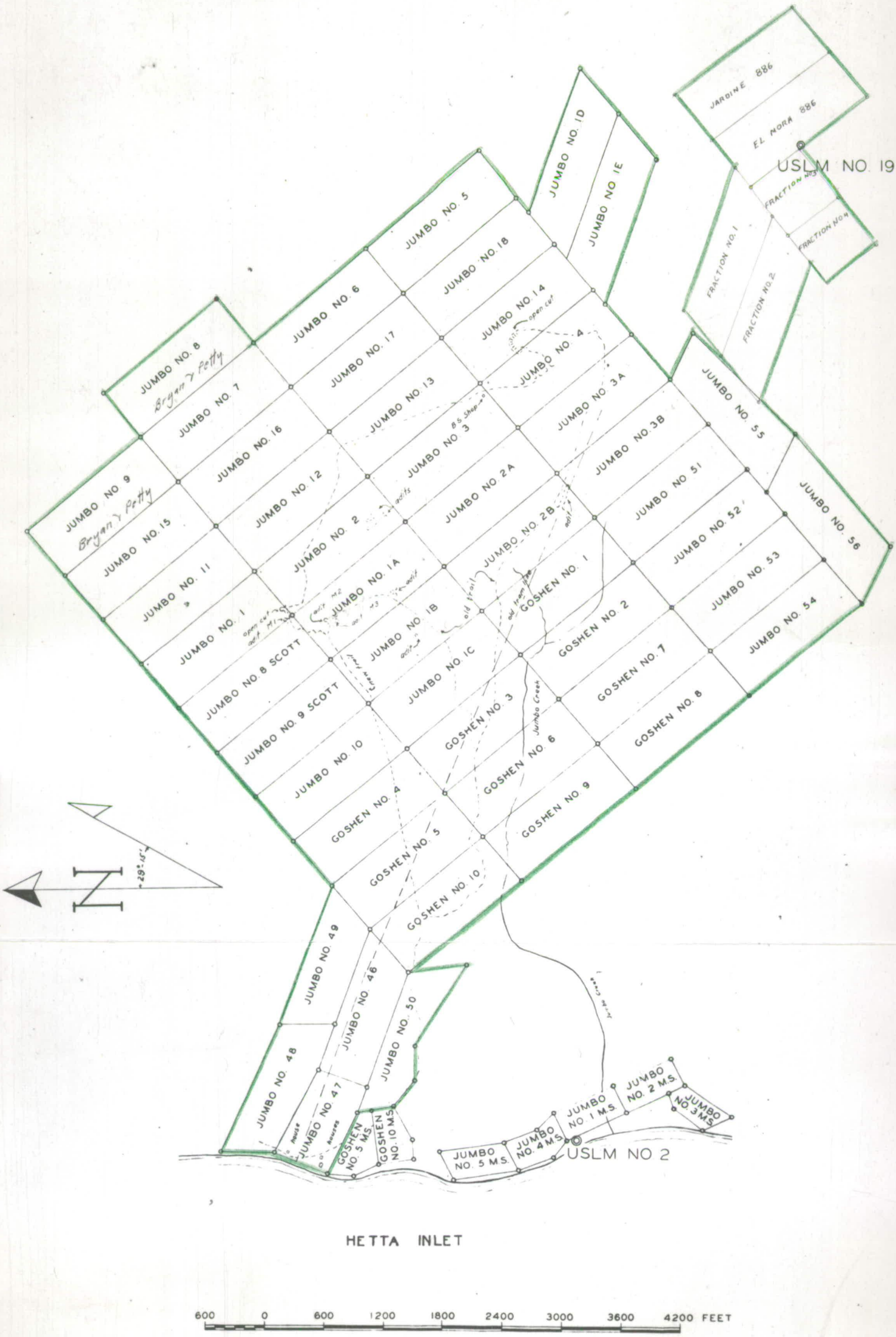
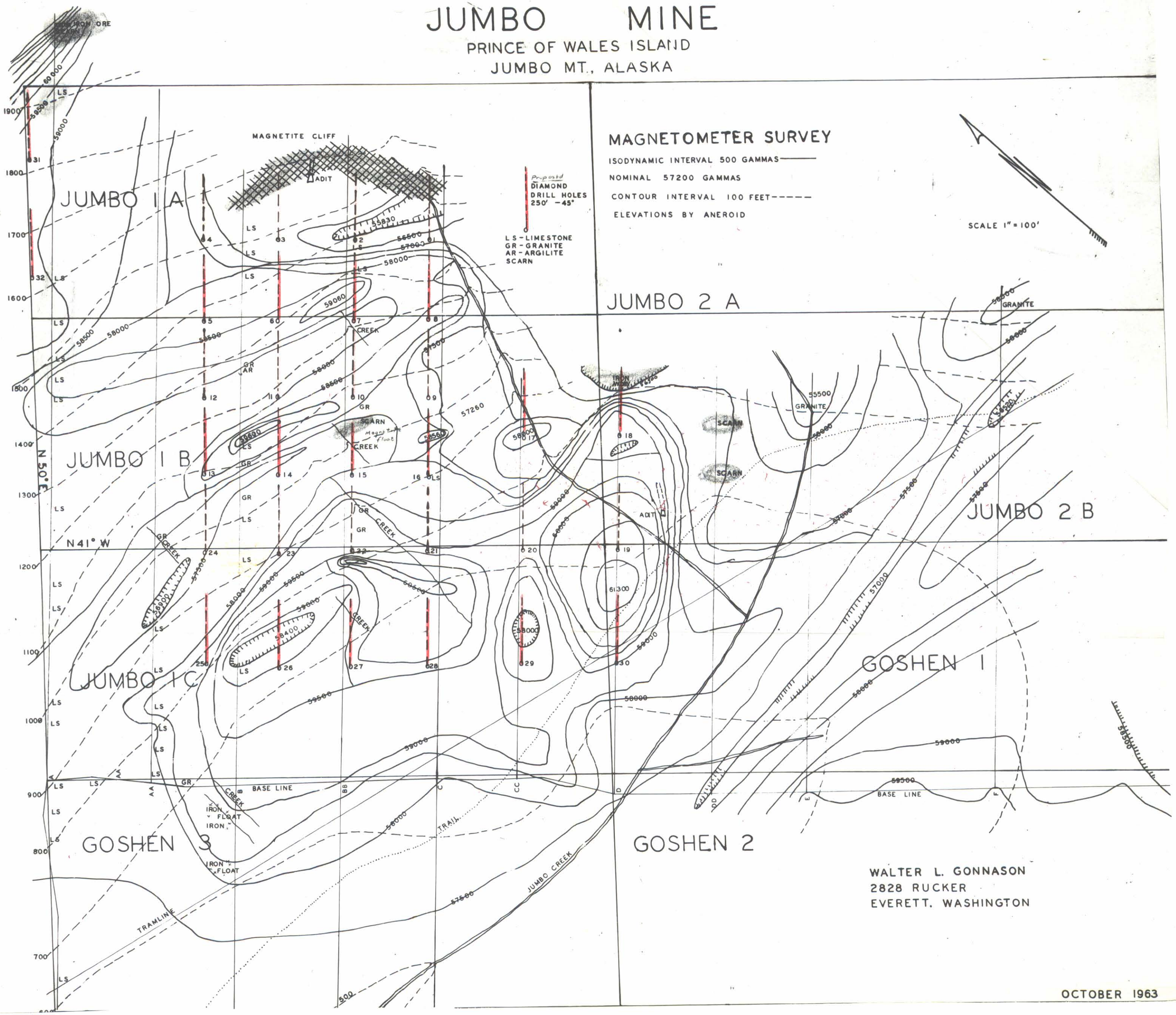


FIG. 3 CLAIM MAP - JUMBO BASIN

FIG-1

JUMBO MINE

PRINCE OF WALES ISLAND

JUMBO MT., ALASKA