MF-205
(Combines and supercedes MF-[illegible] and MF-203)
June 1956

For Government's Use Only
EXPL[illegible]TION PROJECT CONTRACT
Operator_____
Docket No. DMEA-_____
Contract No. Idm-E_____
Contract Date_____

RECEIVED
JUL 3 1957
D.M.E.A.

CONSENT TO LIEN and SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of _____, State of _____, described as follows: 2/

_____

_____

_____

_____,

which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. 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;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom, to secure the payment to the Government of a percentage royalty on production as may be provided for by the Contract;

3. Subordinates the undersigned's right, title, claim, or interest 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. 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 lines blank.)

_____

_____

_____

1/ Mining or 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 cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

5. 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 copies of such notice; and

6. 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.

7. Added provision: _____ (State "None" or "See Annex No.____")

Dated this _____ day of _____, 195__.

Phil R Adams	[Seal]	Box 507 Gold Beach Ore	[Address]
Polly Adams.	[Seal]	Gold Beach Oreg.	[Address]
Howard Jesse Coldiron	[Seal]	Box 24 Gold Beach Ore	[Address]
Florence L Coldiron	[Seal]	Box 24 Gold Beach, Ore.	[Address]
	[Seal]		[Address]
	[Seal]		[Address]

I, _____ certify that I am the _____ _____ (Secretary, etc.) of the corporation named herein; that _____ _____ who signed this agreement was then _____ (President or Vice-President, 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]

Mr. Lyon:

You need these as well - sorry I overlooked and hope that I didn't cause any inconvenience.

Peggy

MF-205
(Combines and supercedes MF-[illegible] and MF-203)
June 1956

For Government's Use Only
EXPL[illegible]TION PROJECT CONTRACT
Operator_____
Docket No. DMEA-_____
Contract No. Idm-E_____
Contract Date_____

RECEIVED JUL 3 1957 D.M.E.A.

CONSENT TO LIEN
and
SUBORDINATION AGREEMENT 1/

To the United States of America:

Referring to that certain land in the County of Curry, State of Oregon, described ~~xxxxxxxx~~ 2/ In a Contract Recorded in Volume 16 Pages 662-7 and Volume 16 Pages 668-73 Book of Mines Curry County, Oregon. Dated April 3, 1957 and Recorded May 24, 1957.

_____,
which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. 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;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom, to secure the payment to the Government of a percentage royalty on production as may be provided for by the Contract;

3. Subordinates the undersigned's right, title, claim, or interest 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. 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 lines blank.)

None

1/ Mining or 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 cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

5. 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 copies of such notice; and

6. 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.

7. Added provision: None (State "None" or "See Annex No.____")

Dated this 28 day of May, 1957.

J. R. Edwards By W. F. Hedderly Att. in fact.	[Seal]	Portland, Oregon	[Address]
Phyllis J. Edwards By W. F. Hedderly Att. in fact.	[Seal]	Portland, Oregon	[Address]
	[Seal]		[Address]
W. F. Hedderly	[Seal]	Gold Beach, Ore.	[Address]
Mary Elizabeth Hedderly	[Seal]	Gold Beach, Ore.	[Address]
	[Seal]		[Address]

I, _____ certify that I am the _____ _____ (Secretary, etc.) of the corporation named herein; that _____ _____ who signed this agreement was then _____ (President or Vice-President, 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]

MF-205
(Combines and supercedes MF-201 a[illegible]MF-203)
June 1956

For Government's Use Only
EXPLORATI[illegible]PROJECT CONTRACT
Operator_____
Docket No. DMEA-_____
Contract No. Idm-E_____
Contract Date_____

CONSENT TO LIEN
and
SUBORDINATION AGREEMENT 1/

RECEIVED JUL 1 1957 D.M.E.A.

To the United States of America:

Referring to that certain land in the County of Curry State of Oregon, described as follows: 2/

See 1 (a)

_____,
which is the subject of a proposed exploration project contract, hereinafter called the "contract," with the United States of America, hereinafter called the "Government;" in consideration of the contract and as an inducement to the Government to enter into it, the undersigned hereby--

1. 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;

2. Grants to the Government a lien upon all of the undersigned's right, title, and interest in the land and upon any production of minerals therefrom, to secure the payment to the Government of a percentage royalty on production as may be provided for by the Contract;

3. Subordinates the undersigned's right, title, claim, or interest 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. 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 lines blank.)

See Schedule "A" attached hereto, showing liens of record, but validity not admitted.

1/ Mining or 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 cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

5. 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 copies of such notice; and

6. 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.

7. Added provision: _____ (State "None" or "See Annex No.____")

Dated this _____ day of _____, 195__.

Mary Gmedberg	[Seal]	Bend Oregon	[Address]
Al Lachance By Mary Gmedberg, Atty-in-fact	[Seal]	Agness - Ore	[Address]
_____	[Seal]	_____	[Address]
_____	[Seal]	Coos Bay, Oregon	[Address]
John A. Walsh	[Seal]	1090 Ingersoll Coos Bay Oregon	[Address]
Bayard Amey Walsh	[Seal]	1090 Ingersoll Coos Bay Ore	[Address]
Geo. H. Skinner		6100 NE Killingsworth Portland 12 Ore	

I, Esther W. Skinner, certify that I am the _____ _____ (Secretary, etc.) of the corporation named herein; that _____ _____ who signed this agreement was then _____ (President or Vice-President, 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]

#16402 - Volume 1/126
U.S. Internal Revenue
vs.
John A. Shoff dba
Pistol River Sawmill

Filed: 2/13/47
Face: $779.17, plus interest
Partial Satisfaction filed
7/3/50

#17158 - Volume 1/127
U.S. Internal Revenue
vs.
John A. Shoff and Frank G. O'Neill
dba Pistol River Lbr. Co.

Filed: 7/18/47
Face: $1131.02 plus interest
Partial Satisfaction filed
7/30/50

#17159 - Volume 1/127
U.S. Internal Revenue
vs.
John A. Schoff & Frank G. O'Neill
dba Pistol River Lbr. Co.

Filed: 7/18/47
Face: $1708.33 plus interest
Partial Satisfaction filed
7/3/50

#17226 - Volume 1/127
U.S. Internal Revenue
vs.
John A. Shoff & Frank G. O'Neill
dba Pistol River Lbr. Co.

Filed: 7/31/47
Face: $817.17 plus interest
Partial Satisfaction:
7/3/50

Allen, Edith E.
vs.
J. A. Walsh

Filed: (Blank) (3/1/54
Face: $350.00
Costs: 28.35
Atty.: 150.00
Partial Satisfaction on
execution sale of #342.25
6/10/55

OFFICIAL FILE COPY
O M E A
RECEIVED JUL 1 1957
DATE | INITIALS | CODE

DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4774

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [ ] Project summary (final)
- [ ] Work Comoleted analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

17963

Form MF–103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR

Budget Bureau No. 42–R1035.3
Approval expires June 30, 1958

DEFENSE MINERALS EXPLORATION ADMINISTRATION

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

PACIFIC NICKEL CORPORATION
C/O Gibson, Dunn & Crutcher
634 South Spring Street
Los Angeles, California

Attention: Mr. John Sage

RECEIVED JUL 1 1957 DMEA

APPLICANT NOT TO USE THIS BLOCK

Docket Number: 4774
Date Received: 7-1-57
Government Participation %:
Region: Region I NW
Division Code: 400

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [X]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized: California

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
Tom Lyon		President & Director
Richard C. Miller		Vice Pres. & Director
Rose Nunenmacher		Assistant Secretary & Dir.
Martyn H. Yardley		Secretary & Treasurer
Robert P. Miller		Assistant Secretary
Joseph F. Nunenmacher		Vice President

Mineral(s) for which you wish to explore: Nickel

Estimated Cost of Project: $ $83,233

LOCATION OF PROPERTY

Name	County	State
Red Flats	Curry	Oregon

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order–I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

June 28-57
Dated

Tom Lyon
Tom Lyon
BY *(Signature)*

President
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

Note – No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. *(a)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 15539

APPLICATION FOR AID IN AN EXPLORATION PROJECT

EXTRA COPY
DMEA
RECEIVED 1 1957
DATE | INITIALS | CODE

1. Applicant's Property Rights:

Attached are four (4) copies of the Applicant's Property Rights.

2. Physical Description:

(a) The large 800 scale map shows the area on which the laterite is exposed on the surface. The ownership map in the Metallurgical Report shows the claims on which exploration is to be done.

(b) Ownership is described in the statement #1.

(c) There has been no production from this property as far as can be ascertained. Attached are four (4) copies of the lease and option agreements on the property. Lease contracts are in the name of Rose Nunenmacher and have been assigned to the Pacific Nickel Corporation.

(d) No known ore reserves have been calculated. There are copies of all assay certificates enclosed, since we have started trenching the property.

(e) The surface of the nickeliferous area is covered with a thin veneer of laterite varying from two (2) to five (5) feet in thickness. Below this is an area of oxidized serpentine containing nickel values. This is neither a vein nor a bedded deposit, and has been formed by the oxidization of nickeliferous serpentine. We expect to find ourselves in the area in which the Bureau of Mines drilled some twenty-three (23) holes as described in Circular #5072. There are four (4) copies of 800 scale maps showing the laterite areas which we propose to prospect.

(f) Approximately 12,000' of bull-dozer trenches were dug and sampled last year, the maximum depth being 10' and the average depth between 8' and 8.5'. We believe that the ground beneath these trenches will be ore, possibly as deep as 30'. The samples were taken in vertical cuts in the bull-dozer trenches. Copies of all assay certificates are herewith enclosed. A tabulation of these assays is also contained in the Metallurgical Report.

(g) Attached to this application are four (4) complete copies of all data submitted. It is not necessary to return this to the Pacific Nickel Corporation.

3. Accessibility of Project:

(a) The property lies approximately eight (8) miles in a straight line East of Gold Geach, Oregon. The road is approximately seventeen (17) miles long. In

3. (a) Continued

case the examining engineers are unable to locate the property, if they contact Mr. Brownie Coldiron, a well-known man in Gold Beach, he will either take them to the property or direct them.

(b) Gold Beach is the closest shipping point and supply center, and place of residence for temporary employees.

4. The Exploration Project:

(a) The accompanying 800 scale map will show the laterite areas proposed to explore. The grid on these maps show 300' intersections. The area outlined in red is the first portion of the project. However, the area shown to the East, known as a snow-camp area, will receive some drilling. The area is unsurveyed and the claims have not been tied into any identifiable landmarks. However, they cover the laterite areas as shown on the map.

(b) There is no access road required to the project. However, the roads to the drill holes will have to be brushed out and locations made for the drill. This is all included in the price per foot submitted by the contractor.

(c) In the event that the exploration contract with the DMEA is executed, the work will start as soon as possible, which will be in a matter of days. We expect to finish this preliminary work by the first of November, 1957.

5. Experience:

The work will be under the direction of Mr. Tom Lyon, a well-known engineer, and an engineer from the Southwestern Engineering Company, Los Angeles, will be on the ground to collect and prepare the samples for shipment to Los Angeles.

6. Estimate of Costs:

(a) We have bona fide bids from several drilling companies for the drilling and obtaining of accurate samples of the work. The lowest bid is $5.25 per foot of hole. This price includes brushing out roads and levelling off a set-up for the drilling. The assaying will be contracted for at $6.75 per sample. There will be six (6) samples per hole, which is to be 30' in depth unless drilling discloses that shallower depths should be used. Attached are assay estimates showing the results of samples taken at the bull-dozer cuts shown on the map contained in the

6. (a) Continued

Metallurgical Report. Also you will find three bids for drilling; the lowest and most satisfactory bid we believe is $5.75 per foot, which includes brushing out roads, etcetera necessary to make the set up.

(b) The Southwestern Engineering Company will provide for a suitable engineer to supervise the collection and preparing of the samples. He may need two (2) helpers. His salary will be $900 a month, plus expenses. The helpers will be employed at the rate of $2.00 per hour. The above men are available.

(c) Two hundred (200) gallons of gasoline @ 35¢ per gallon will be required. For other operating materials and supplies, see list of equipment attached.

(d) Attached you will find a list of equipment necessary to prepare the samples. The cost of this equipment is estimated to be $3,081. It will be necessary to rent a jeep for the collection of the samples which will be $800. A generator for lighting and drying purposes will be rented for $600.

(e) It is estimated that it will cost $1,000 to put the buildings on the property in shape for habitation.

(f) There will be no new buildings erected.

(g) Operating equipment will be new and it is very doubtful that there will be much, if any, repair costs. However, it would be well to include an item of $100 to take care of this.

There will be no salary for anyone not on the job. However, some expenses will have to be allowed for for the directing engineer from San Diego to the property.

The maps shown show slightly more than 1500 drill holes. We are making application, however, at the present time for 10,000' of holes, average depth per hole of 30' which will approximate 333 holes. If this is successful, we will ask for another increment of 10,000'. The cost of the first 10' is estimated as follows:

Drilling	$ 52,500
Assaying	11,245
Equipment and Machinery rental	4,481
Supervision and Preparation of Samples	7,440
(This includes the salary of the supervising engineer)	
10% Contingency to cover payroll and such costs as compensation insurance, FOAB, UI, and whatever the State requires)	7,567
TOTAL	$ 83,233

7. (a) We have cash in the bank necessary to furnish our share of this cost.

(b) All of our share of the cost will be furnished by money. No equipment is owned by this company.

APPLICANT'S PROPERTY RIGHTS

EXHIBIT 1 TO APPLICATION FOR AID IN AN EXPLORATION PROJECT

Applicant, Pacific Nickel Corporation, a California corporation, does hereby set forth as Exhibit 1 the following information as a part of this Application:

(a) The land upon which Applicant proposes to explore has not been surveyed by the Government so as to have available a description by section, township and range, nor is there a metes and bounds survey available at this time. Applicant proposes to explore the following unpatented mining claims located in Curry County, Oregon. The recording data hereinafter set forth is located in the official Mining Records of said county and state:

Claim No.	Date of Filing	Volume and Page No.	
1	July 1, 1936	10	510
2	July 1, 1936	10	511
3	July 1, 1936	10	512
4	July 1, 1936	10	512
5	July 1, 1936	10	513
6	July 1, 1936	10	514
7	July 1, 1936	10	514
8	July 1, 1936	10	516
9	July 1, 1936	10	526
Relocation Notice	July 13, 1945	12	321-322
10	April 14, 1941	11	356

Applicant controls the following described tunnel site claims which are located in the immediate area of the foregoing:

Hematite Tunnel Site Location No. 1, recorded in Volume 16 at page 300 of the Official Mining Records of Curry County, Oregon, and re-recorded in Volume 16 at page 314 of the official Mining Records of Curry County, Oregon.

Hematite Tunnel Site, Location No. 2, recorded in Volume 16 at page 299 of the official Mining Records of Curry County, Oregon, and re-recorded in Volume 16 at page 313 of the official Mining Records of Curry County, Oregon.

Hematite Tunnel Site Location No. 3, recorded in Volume 16 at page 304 of the official Mining Records of Curry County, Oregon.

Fritzie Cabin Tunnel Site, Location No. 1, recorded in Volume 16 at page 315 of the official Mining Records of Curry County, Oregon.

Fritzie Cabin Tunnel Site, Location No. 2, recorded in Volume 16 at page 318 of the official Mining Records of Curry County, Oregon.

Snow Camp Tunnel Site, Location No. 1, recorded in Volume 16 at page 317 of the official Mining Records of Curry County, Oregon.

Snow Camp Tunnel Site, Location No. 2, recorded in Volume 16 at page 316 of the official Mining Records of Curry County, Oregon.

Snow Camp Ridge Tunnel Site Location, recorded in Volume 16 at page 494 of the official Mining Records of Curry County, Oregon.

Knobkone Tunnel Site, Location No. recorded in Volume 16 at page 320 of the official Mining Records of Curry County, Oregon.

Knobkone Tunnel Site, Location No. 2, recorded in Volume 16 at page 321 of the official Mining Records of Curry County, Oregon.

In addition, Applicant controls the following described mining claim:

Sunset Mining Claim, in the Hunter Creek Mining District, location notice of which was duly recorded in Volume 13 at Page 124 of the Official Mining Records of Curry County, Oregon, said claim consisting of the West half (W-1/2) of the Southwest Quarter (SW-1/4) of Section 30, Township 37 South, Range 13 West of the Willamette Meridian in Curry County, Oregon, and containing 80 acres more or less.

Any portion of the above described land may be made subject to Government lien for royalty payments.

(b) Applicant knows the claims that it proposes to explore under the general name of the "Red Flats claims" and the individual claims in the order as hereinabove set forth as follows: Red Gold Association No. 1 to No. 9 (relocated as Live Oak Association Placer Mining Claim), Red Gold Association No. 10.

(c) Applicant's interest in the land is by virtue of an assignment of contracts with the locators or the successors to the locators of the claims which Applicant proposes to explore. Exhibit A annexed hereto and made a part hereof is a copy of the assignment of the contract, which has as an exhibit thereto the contract with the owners of the claims that Applicant proposes to explore. In addition there is annexed hereto a copy of the assignments and contracts with the owners of the claims as hereinabove set forth which Applicant controls in the immediate area, Exhibits B and C.

(d) Applicant has annexed hereto as Exhibit D a statement setting forth all liens, mortgages or other encumbrances on the property which Applicant proposes to explore.

FORM 3 1-56 60M F. & K. INC.

LEDOUX & COMPANY, (Inc.)

ENGINEERS, CHEMISTS AND ASSAYERS

359 ALFRED AVENUE TEANECK, NEW JERSEY

RP **REPORT OF ANALYSIS**

No. 746580 Teaneck, N. J. Jan. 3, 1956

Our analysis of the sample of NICKEL ORE

From Southwestern Engineering Company

Marked: Composite Nos: 1,4,5 and 6

and submitted to us, shows:

After drying:

	Nickel
#1	0.80%
4	0.81%
5	0.87%
6	1.05%

* * *

To Southwestern Engineering Co.

LEDOUX & COMPANY, Inc.

U C Powden

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 12/14/56

SAMPLE RECEIVED 12/11/56

REPORT PHONED 12/13/56

LAB. #	SAMPLE			Ni
50892	W-9	Composite	A	.47
93	"	"	B	.37
94	E-16	"	A	.42
95	E-23	"	A	.65
96	E-24	"	A	.95
97	"	"	B	.88
98	"	"	C	.78
99	E-26	"	A	1.24
50900	E-26	"	B	1.33
01	E-28	"	A	1.28
02	E-28	"	B	.88
03	E-29	"	A	.83
04	"	"	B	.94
05	"	"	C	1.09

COPY
NEA
JUL 1 1957
CODE

KENNARD AND DRAKE

The EISENHAUER LABORATORIES
3116 - 3122 South Santa Fe Ave.
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

The EISENHAUER LABORATORIES
113 Trust 1342 2 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Nov. 12/56

Southwestern Engineering Co.
Denver
Colorado

Subject: Assay of Ore.

Marked: Sample (11)

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Respectfully submitted,

[illegible]

[illegible], Jr.

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 11/9/56

SAMPLE RECEIVED 11/6

REPORT PHONED 11/9

LAB. #	SAMPLE	Ni
50329	E-24-213	1.20
30	E-24-243	1.47
31	E-24-373	1.28
32	E-24-403	.46
33	E-24-433	1.22
34	E-24-503	.64
35	E-24-593	1.24
36	E-24-943	.61
37	E-24-1933	.58
38	E-24-2053	1.01
39	E-27-82	1.10
40	E-27-152	1.12
41	E-27-242	.75
42	E-27-332	.73
43	E-27-382	.91
44	E-27-412	.87
45	E-27-552	.65
46	E-27-612	.77
47	E-27-642	.97
48	E-28-961	.91

KENNARD AND DRAKE

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 10/31/56

SAMPLE RECEIVED 10/29

REPORT PHONED 10/30

LAB. #	SAMPLE	Ni
50194	Hunter Creek #1	.30
50195	" " #2	.35
50196	" " #3	.31
50197	" " #4	.12

KENNARD AND DRAKE

John F. Drake

MINING
METALLURGY
CHEMISTRY

ORE TESTING
PLANT DESIGN
METALLURGICAL RESEARCH
ASSAYS & ANALYSES

HARLEY A. SILL
CONSULTING ENGINEER
1011 SOUTH FIGUEROA STREET
LOS ANGELES 15

October 31, 1956

Southwestern Engineering
4800 Santa Fe Ave.
Los Angeles, California

Nickel Analysis

Description	% Ni
Composite # 3801	0.73%

Harley A. Sill
Consulting Engineer

The EISENHAUER LABORATORIES
3162-3227 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 18, CALIF.

ED. EISENHAUER, JR.
C. EISENHAUER RAYMOND

Established 1918
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Oct. 30/56

Southwestern Engineering Co.
Los Angeles 14
California

Subject: Assays of Ore.

Marked.	Gold (Au)
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

Respectfully submitted,

Ed. Eisenhauer, Jr.

The EISENHAUER LABORATORIES
3-1-6-3-2-2 South San Pedro Street
Phone VAndike 9-3-2-8 LOS ANGELES 13, CALIF.

J. P. EISENHAUER, JR.
J. P. EISENHAUER, RAYMOND

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Dec. 28, 1955

[illegible]

[illegible]

[illegible]

The EISENHAUER LABORATORIES
6103-13 225 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
CORE TESTING

Oct. 16/66

[redacted]

[redacted]

Respectfully submitted,

[redacted]

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 10/17/56

SAMPLE RECEIVED 10/10/56

REPORT PHONED 10/15

LAB. #	SAMPLE	Ni
49858	W-25-81	.91
59	W-25-111	.83
60	W-25-141	.81
61	W-25-171	.79
62	E-25-97	.93
63	E-25-127	.99
64	E-25-157	.83
65	E-25-177	.77
66	E-25-287	.84
67	E-25-317	.98

KENNARD AND DRAKE

John Drake

The EISENHAUER LABORATORIES

3 1 6 3 2 2 S o u t h S a n P e d r o S t r e e t
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Our File 46436

Your Ref. 46436 Date August 1, 1946

Mr. [illegible]
[illegible]
California

Dear Sir:

We have received your samples of ore

Assay (Au)

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

The EISENHAUER LABORATORIES
3 1 6 - 3 2 2 2 S o u t h S a n P e d r o S t r e e t
Phone: VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Oct. 27/56

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 10/10/56

SAMPLE RECEIVED 10/5/56

REPORT PHONED 10/10

LAB. #	SAMPLE	Ni
49799	W-21-83	1.14
49800	W-21-113	1.21
1	W-21-143	1.01
2	W-21-173	1.04
3	W-21-203	1.12
4	W-21-233	1.23
5	W-21-263A	1.00
6	W-21-293	1.05
7	W-21-313	1.50
8	W-21-393	1.53

KENNARD AND DRAKE

John B. Drake

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co

Los Angeles Cal

Attn: Mr. Lord

DATE 10/12/56

SAMPLE RECEIVED 10/9/56

REPORT PHONED 10/12/56

LAB. #	SAMPLE	Ni
49831	E-21-525	1.04
32	E-21-555	.87
33	E-22-52	1.01
34	E-22-82	.84
35	E-23-357	.82
36	E-23-387	.84
37	E-23-447	1.12
38	E-23-477	1.06
39	W-21-513	1.23
40	W-25-51	1.38

KENNARD AND DRAKE

John Drake

The EISENHAUER LABORATORIES
3216-3222 South San Pedro Street
Phone VAndike 93128 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Sept. 27/29

Sonora Mexican Mining Co.
Mexico
Co. Imperial S.

Subject: Assays of Ore.

Marked	Nickel (Ni)
490-500	.56%
501-520	.70%
[illegible]	.20%
[illegible]	[illegible]
[illegible]	.66%
[illegible]	.85%
[illegible]	.49%

Respectfully submitted,

[signature]

M. Eisenhauer, Jr.

ED. EISENHAUER, JR.
G. EISENHAUER, RAYMOND

The EISENHAUER LABORATORIES

3126-43 212 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Sept 29/56

Southwestern Engineering Co
Los Angeles
Calif.

Subject: Assays of Ore.

Marked	Nickel (Ni)
E-21-65	.79 %
E-21-125	.94 %
E-21-95	.93 %
E-21-155	1.17 %
E-21-175	.95 %
E-21-185	.62 %

Respectfully submitted,

Ed. Eisenhauer, Jr

ED. EISENHAUER, JR.
C. EISENHAUER RAYMOND

The EISENHAUER LABORATORIES
3162 3222 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Oct. 12/56

Southwestern Engineering Co.
Vernon,
California

Subject: Assay of Ore.

Marked: D 21-405

Nickel (Ni) 0.90%

Respectfully submitted,

Ed. Eisenhauer, Jr.

The EISENHAUER LABORATORIES
3162-3224 South San Pedro Street
Phone VAndike 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Sept. 21/56

Southwestern Engineering Co
Los Angeles
Calif

Subject: Analyses of Ore.

Marked	Nickel (Ni)
W-20-315	.94 %
E-20-56	.86 %
E-20-260	.78 %
E-20-290	.70 %
E-20-320	.99 %
E-20-350	.73 %
E-20-380	.80 %
E-20-410	.73 %
E-20-440	.88 %
E-20-470	.75 %

Respectfully submitted

Ed. Eisenhauer, Jr

COPY
MEA
JUL 1 '57
INITIALS CODE

MINING
METALLURGY
CHEMISTRY

ORE TESTING
PLANT DESIGN
METALLURGICAL RESEARCH
ASSAYS & ANALYSES

HARLEY A. SILL
CONSULTING ENGINEER
1011 SOUTH FIGUEROA STREET
LOS ANGELES 15

September 18, 1956

Southwestern Engineering Co.
4800 Santa Fe Ave.
Vernon, California

NICKEL ANALYSES

Composite # 1 ..... 0.65% Ni

Composite # 2 ..... 1.05%

Harley A. Sill
Consulting Engineer

CERTIFICATE OF ANALYSIS

KENNARD and DRAKE

3364 EAST 14TH STREET . . LOS ANGELES 23, CALIFORNIA
ANGELUS 1-1156

CHEMICAL & SPECTROGRAPHIC LABORATORIES

CONSULTING ENGINEERS - CHEMISTS
METALLURGISTS

TO Southwestern Engineering Co
Los Angeles Cal

Attn: Mr. Lord

DATE 9/14/56

SAMPLE RECEIVED 9/12

REPORT PHONED 9/14

LAB. #	SAMPLE	Ni
49400	E-18-317	.97
01	E-18-347	.88
02	W-20-105	.89
03	W-20-85	1.22
04	W-20-135	1.02
05	W-20-165	1.07
06	W-20-195	1.38
07	W-20-225	1.25
08	W-20-255	1.39
09	W-20-285	1.55

KENNARD AND DRAKE

John Forsake

The EISENHAUER LABORATORIES
3162 South San Pedro Street
Phone VAnderbe 9328 LOS ANGELES 13, CALIF.

Established 1916
ASSAYERS
METALLURGISTS
CHEMISTS
ORE TESTING

Sept. 14/56

Southwestern Engineering Co.
Yerba
California

Subject: Analyses of Ore.

Marked	Nickel (Ni)
[illegible]	1.11%
[illegible]	.74%
[illegible]	.76%
[illegible]	1.01%
[illegible]	.22%
[illegible]	.70%
[illegible]	.35%
[illegible]	.44%
[illegible]	.42%
[illegible]	.32%

Respectfully submitted,

E. Eisenhauer, Jr.

MINING
METALLURGY
CHEMISTRY

ORE TESTING
PLANT DESIGN
METALLURGICAL RESEARCH
ASSAYS & ANALYSES

HARLEY A. SILL
CONSULTING ENGINEER
1011 SOUTH FIGUEROA STREET
LOS ANGELES 15

October 17, 1956

Southwestern Engineering
4800 Santa Fe Ave.
Los Angeles, California

NICKEL ANALYSIS

Description	% Ni
Check sample Red Flats Composite # 3	0.94

Harley A. Sill
Consulting Engineer

SYCAMORE 3-1156 RYAN 1-8141

BAILLY ENGINEERING ENTERPRISES
709-711 South Fair Oaks Avenue
PASADENA, CALIFORNIA

EXTRA COPY
D M E A
RECEIVED JUL 1 1957
DATE | INITIALS | CODE

May 15, 1957

Pacific Nickel Company
Mayfair Hotel
1256 West 7th Street
Los Angeles, California.

Attention: Mrs. Rose Nunnenmacher

Exploration Drilling and
Geological Evaluation Sampling
Snow Camp, Red Flats,
Curry County, Oregon

Dear Sir:

At your request and based upon information furnished by Mr. Lyons, we are submitting our offer to drill exploration holes and furnish fully representative samples at the above location. It is our understanding that you will stake out the locations and that they will be reasonably accessible to our mobile equipment. We will, under ordinary circumstances, provide such access roads as are required, in our opinion, to spot our equipment at the drilling locations. Our unit prices per foot are based on your premise that the average depth per hole will be in the immediate neighborhood of 30', spaced approximately 300 feet apart. We will furnish representative samples from a minimum 90% recovery. These samples taken at representative intervals specified by you, will be furnished to you in adequate containers supplied by us, covering interval increments and then picked up by your authorized representative.

It is understood that our work is on a professional basis and that our operation will at all times be supervised by a competant engineer and/or geologist. We were advised by you that approximately 1,000 holes with an average depth of 30' would be required and the bulk of the work must be completed on or about November 1, 1957. Barring circumstances described as "force majeure", we submit the following firm bid on a footage basis:

(1)	First 1,000'	at $8.00 per foot	$8,000.00
(2)	Next 9,000'	at 7.50 per foot	67,500.00
(3)	Next 10,000'	at 7.00 per foot	70,000.00
(4)	All over 20,000'	at 6.00 per foot	

Payments to be made every 15 days for all work covered by samples turned over to your representative for the preceding 15 day period.

In the event that work is cancelled before the first 1,000 feet are drilled and sampled, we are to receive the unit price shown above plus $15,000, as liquidating damages to partly cover the costs of moving in and out of the location, both our units and personnel.

We wish to reiterate that our drilling and sampling is professional in scope with the specialized equipment and personnel required to give you a sample coverage that will allow you to accurately evaluate the ore deposit. Kindly notice that we are not merely interested in "making hole" but place emphasis in providing the client with the kind of geological sampling required to satisfy his needs.

Either the writer or Mr. C. W. O'Connell, engineering manager of our fully integrated organization is available for consultation if you so desire.

The above offer is for acceptance on or before June 15, 1957 unless otherwise agreed upon.

Anticipating your further communications, we are,

Yours very truly,

BAILLY ENGINEERING ENTERPRISES,

Floren H. Bailly

F. H. Bailly, President.

FHB:McE

Cc: Mr. Thomas Lyons

LANDSCAPE 6-8622
LANDSCAPE 6-7061

GEORGE F. CASEY CO.

FOUNDATION DRILLING CONTRACTORS
FOUNDED IN 1920
1337 SECOND STREET
BERKELEY 10, CALIFORNIA

May 29, 1957

JUN 1 1957
CODE

Mr. Tom Lyon
4990 Westminster Terrace
San Diego, California

Dear Sir:

As promised, our Mr. White spent a day with Brownie Coldiron on your property in Oregon.

To get the kind of samples you would like, it looks rather costly. To make necessary access and drill the holes, we estimate it would cost between $20 and $25 per lineal foot of hole.

There are other types of rigs that would drill this material faster and, therefore, less expensively, but they use water or rotary mud to remove the material from the hole and consequently, it is not possible to tell where the various strata are located.

We do not believe any other method of dry drilling would be any cheaper than the above.

Yours very truly,

GEORGE F. CASEY COMPANY

G. F. Hyatt

GFH:jm

by G. F. Hyatt

Dan Kunk
4-4161

COPY

June 26, 1957

EXTRA COPY
DMEA
RECEIVED JUL 1 1957

DATE	INITIALS	CODE

Pacific Nickel Company
634 South Spring Street
Los Angeles, California

Att: Mr. John Senge

This letter is an offer by the undersigned to perform certain drilling and sampling operations on your property known as Red Flats in Gold Beach, Oregon, upon the terms and conditions set forth below.

We are to undertake the drilling of holes on said property to an average depth of 30 feet and a 2 foot diameter or more, if deemed necessary by us. In addition, we are to provide you at the job site with adequate samples of side-wall material for each 5 feet of depth. You are to furnish the bags.

The drilling is to proceed in three successive phases of approximately 10,000 lin/ft. each.

Phase I: You shall pay us $5.75 per lin/ft. up to 10,000 lin/ft. If contract is terminated by you during the first Phase, you will be obligated to pay us $10,000 to compensate cost of equipment and mob and demob, also footage price on all shafts that have been drilled.

Phase II: You shall pay us $5.50 per lin/ft. up to 10,000 lin/ft. after the first Phase has been completed.

Phase III: You shall pay us $5.35 per lin/ft. up to 10,000 lin/ft. after the first Two Phases have been completed.

During the course of operations, we will submit semi-monthly progress billings to be payable on or before the 5th and 20th of each month.

Upon completion of Phase I, we will notify you in writing of its completion through your representative on the job, if any, or otherwise at the above address. You will have 5 days thereafter to elect whether to proceed with Phase II. The same procedure will apply to Phase III at the completion of Phase II.

The general location of the holes and the taking of samples shall be under the direction and supervision of your personnel. After the samples have been taken we will cover the holes with temporary plywood covers. As each hole is covered, you shall assume all responsibility therefor including the placing of permanent covers or the filling of the holes.

We will furnish roads for our drilling equipment to areas designated by your representative.

We will commence drilling operations upon receipt at our office of five days' written notice from you. We will commence drilling operations on Phases II and III within 5 days following receipt at our office of written notification of your election to proceed.

You are to furnish a payment bond at our expense which will guarantee payment to us for all Phases pursuant to the terms of this agreement. Upon request we will furnish a performance bond at your expense. We will provide Workmen's Compensation and Public Liability and Property Damage insurance.

Depth of holes shall be computed from the top surface of the ground to the bottom of completed holes. We are to have no obligation to remove dirt and are not responsible for delays caused by acts of God, strikes, weather conditions, or other causes beyond our control.

Should it be necessary for us to institute suit to collect any sums due hereunder we shall receive such attorney's fees as a Court may judge reasonable.

BERTRAM DRILLING CO.

Victor G. Zonver

Victor G. Zonver, Pres.

COPY

THIS AGREEMENT APPROVED AND ACCEPTED:

_____

_____

_____

cc: Tom Lyons
Rose Nunnemacker

June 26, 1957

INFORMATION FOR MR. TOM LYON - PACIFIC NICKEL CORPORATION

Equipment for Sample Preparation	Weight Lbs.	Delivery date	FOB	Price as of June 21, 1957
1 - Braun Chipmunk crusher, jaw size 9" x 4", complete with tight and loose pulleys for drive from a gasoline motor		1-3 days	Los Angeles	$ 595.00
1 - Denver roll crusher, size 10" x 6", complete with tight and loose pulleys for drive from a gasoline motor	1200	6 weeks	Denver	715.00
# 1 - Denver Laboratory crusher, cone and ring type. (Coffee Mill) Size No. 1, complete with tight and loose pulleys for drive from a gasoline motor	550	6 weeks	Denver	292.00
* 1 - Mine & Smelter Co. Gyrol Reduction Laboratory crusher complete # with V belt drive but without motor	200	6 weeks	Denver	612.00
# 1 - Ditto but 10"	550	6 weeks	Denver	1160.00
2 - Denver Laboratory drying ovens complete for 1-phase, 110 volts. Strip type heating elements preferred. $148.00 each plus $50.00 to change to strip type heating elements		1-3 days	Los Angeles	396.00
2 - Wisconsin BKN 5 HP Air cooled gasoline motors for operating crushers. $150.00 each		1-3 days	Los Angeles	300.00
2 - Jones Sample Splitter 8" x 14". $ 57.50 each		1-3 days	Los Angeles	115.00
4 - Steel plates for hotplates, each 3' x 3' x 3/8"				100.00
Miscellaneous equipment, sample and drying pans, brushes, sample bags, sample mailing envelopes, sample tags, etc.				300.00
** Freight, state sales tax, etc. 10% of FOB prices				250.00
Postage on samples				160.00
Tools required by Forest Service				150.00
Jeep Rental - $800; Generator Rental - $600 - Total				1400.00
		TOTAL		$4481.00

* 6" size NOT available with tight and loose pulley.

** Based on selection of rolls instead of Coffee Mill or Massco Gy-Roll crushers

\# Items marked thus eliminated

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CERTIFICATE OF ASSISTANT SECRETARY
OF PACIFIC NICKEL CORPORATION

The undersigned does hereby certify that she now is and at all times mentioned herein has been the duly elected and acting Secretary of Pacific Nickel Corporation, a California corporation and does further certify that at a duly and validly held meeting of the Board of Directors of said corporation that the following resolutions were adopted and that said resolutions have not been altered, modified or rescinded to the date of this Certificate:

RESOLVED, that the following are elected as officers of this corporation to serve until their death, resignation or election and qualification of their successors:

Tom Lyon	President
Joseph Nunenmacher	Vice President
Richard C. Miller	Vice President
Martyn Yardley	Secretary-Treasurer
Robert P. Miller	Assistant Secretary
Rose Nunenmacher	Assistant Secretary

RESOLVED FURTHER, that the President of this corporation be and he hereby is authorized, directed and empowered in the name and on behalf of this corporation to do and perform any and all things which he, acting in his sole discretion, deems necessary or expedient to make application in the name and on behalf of this corporation to the Defense Minerals Exploration Administration to obtain from said Administration a loan for the purpose of exploring those certain mining claims, assigned or to be assigned to the corporation generally known as the Red Flats, Snow Camp and Badlands claims located in Curry County, Oregon including but not limited to, preparing, executing, verifying, delivering, filing and/or recording

such document or documents as may be required in the name and on behalf of this corporation.

IN WITNESS WHEREOF the undersigned has executed this Certificate this 30th day of June, 1957 at Los Angeles, California.

Rose Nunenmacher
Rose Nunenmacher, Assistant Secretary
PACIFIC NICKEL CORPORATION

(SEAL)

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RECEIVED JUL 1 1957

DATE	INITIALS	CODE

ASSIGNMENT OF CONTRACT

For good and valuable consideration, receipt of which is hereby acknowledged, ROSE NUNENMACHER ("Assignor" herein) does hereby assign all of her right, title and interest in and under that certain Agreement made and entered into by and between Assignor and PHIL R. ADAMS and POLLY ADAMS, husband and wife, and HOWARD JESSE COLDIRON and FLORENCE L. COLDIRON, husband and wife, and R. T. MERSERVEY, as owner of an undivided one-third interest in Fritzie Cabin No. 1, dated April 3, 1957, to PACIFIC NICKEL CORPORATION, a California corporation ("Assignee" herein) subject to all liabilities incurred by Assignor in connection with said contract on the property covered thereby.

Assignee, in addition to the consideration given for the assignment of said contract pursuant to this Assignment does hereby agree to save and hold Assignor harmless from any and all claims, liens, demands, encumbrances or charges of any nature whatsoever relating or incurred in connection with said contract or the property described therein and further agrees to do and perform any and all things required to be done and performed by Assignor under said contract.

Assignee further agrees that in connection therewith and as a part of said Assignment that in the event that Assignee receives a notice of default under the terms of said contract from the Sellers, as described therein, that such notice shall be deemed to be notice from Assignor and the period of time in which Assignee shall have to cure such default as to Assignor shall be one half of the period of time designated in such notice by Sellers. In the event that Assignee fails to cure within said period of time as set forth herein as to the notice deemed to have been given by Assignor, Assignor shall have the

immediate right, without further notice, to take possession of the property described in said contract and reassume all rights granted by Sellers and Assignee agrees to do and perform all acts and things necessary to re-establish Assignor in full and complete control of said claims subject to the terms and provisions of said contract.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Assignment this 30th day of June, 1957.

Rose Nunenmacher
Rose Nunenmacher

Assignor

PACIFIC NICKEL CORPORATION

By Tom Lyon
Tom Lyon, President

Assignee

STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

On this 30 day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared ROSE NUNENMACHER, known to me to be the person whose name is subscribed to the within Instrument, and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Ann Raetz
Notary Public in and for said County and State

[NOTARIAL SEAL]

My Commission Expires: Sept 1, 1960

State of California
County of Los Angeles

On this 30 day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared TOM LYON, known to me to be the President of PACIFIC NICKEL CORPORATION, the corporation that executed the within Instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation herein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Ann Raetz
Notary Public

[NOTARIAL SEAL]

My Commission Expires September 1, 1960

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 1 1957

DATE	INITIALS	CODE

ASSIGNMENT OF CONTRACT

For good and valuable consideration, receipt of which is hereby acknowledged, ROSE NUNENMACHER ("Assignor" herein) does hereby assign all of her right, title and interest in and under that certain Agreement made and entered into by and between Assignor and MARY SMEDBERG, JOHN A. WALSH, AL LaCHANCE, CHARLES H. SKINNER and BENNETT INVESTMENT COMPANY, a corporation, dated July 20, 1956 as modified April 3, 1957 to PACIFIC NICKEL CORPORATION, a California corporation ("Assignee" herein) subject to all liabilities incurred by Assignor in connection with said contract on the property covered thereby.

Assignee, in addition to the consideration given for the assignment of said contract pursuant to this Assignment does hereby agree to save and hold Assignor harmless from any and all claims, liens, demands, encumbrances or charges of any nature whatsoever relating or incurred in connection with said contract or the property described therein and further agrees to do and perform any and all things required to be done and performed by Assignor under said contract.

Assignee further agrees that in connection therewith and as a part of said Assignment that in the event that Assignee receives a notice of default under the terms of said contract from the Sellers, as described therein, that such notice shall be deemed to be notice from Assignor and the period of time in which Assignee shall have to cure such default as to Assignor shall be one half of the period of time designated in such notice by Sellers. In the event that Assignee fails to cure within said period of time as set forth herein as to the notice deemed to have been given by Assignor, Assignor shall have the

immediate right, without further notice, to take possession of the property described in said contract and reassume all rights granted by Sellers and Assignee agrees to do and perform all acts and things necessary to re-establish Assignor in full and complete control of said claims subject to the terms and provisions of said contract.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Assignment this 30th day of June, 1957.

Rose Nunenmacher
Rose Nunenmacher
Assignor

PACIFIC NICKEL CORPORATION

By Tom Lyon
Tom Lyon, President
Assignee

STATE OF CALIFORNIA)
(ss
COUNTY OF LOS ANGELES)

On this 30 day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared ROSE NUNENMACHER, known to me to be the person whose name is subscribed to the within Instrument, and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Ann Raetz
Notary Public in and for said County and State

[NOTARIAL SEAL]

My Commission Expires: Sept 1, 1960

State of California
County of Los Angeles

On this 30 day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared TOM LYON, known to me to be the President of PACIFIC NICKEL CORPORATION, the corporation that executed the within Instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation herein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Ann Raetz
Notary Public

[NOTARIAL SEAL]

My Commission Expires September 1, 1960

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RECEIVED JUL 1 1957

DATE	INITIALS	CODE

ASSIGNMENT OF CONTRACT

For good and valuable consideration, receipt of which is hereby acknowledged, ROSE NUNENMACHER ("Assignor" herein) does hereby assign all of her right, title and interest in and under that certain Agreement made and entered into by and between Assignor and H. F. HEDDERLY and MARY ELIZABETH HEDDERLY, husband and wife, dated April 3, 1957, to PACIFIC NICKEL CORPORATION, a California corporation ("Assignee" herein) subject to all liabilities incurred by Assignor in connection with said contract on the property covered thereby.

Assignee, in addition to the consideration given for the assignment of said contract pursuant to this Assignment does hereby agree to save and hold Assignor harmless from any and all claims, liens, demands, encumbrances or charges of any nature whatsoever relating or incurred in connection with said contract or the property described therein and further agrees to do and perform any and all things required to be done and performed by Assignor under said contract.

Assignee further agrees that in connection therewith and as a part of said Assignment that in the event that Assignee receives a notice of default under the terms of said contract from the Sellers, as described therein, that such notice shall be deemed to be notice from Assignor and the period of time in which Assignee shall have to cure such default as to Assignor shall be one half of the period of time designated in such notice by Sellers. In the event that Assignee fails to cure within said period of time as set forth herein as to the notice deemed to have been given by Assignor, Assignor shall have the

immediate right, without further notice, to take possession of the property described in said contract and reassume all rights granted by Sellers and Assignee agrees to do and perform all acts and things necessary to re-establish Assignor in full and complete control of said claims subject to the terms and provisions of said contract.

IN WITNESS WHEREOF, Assignor and Assignee have executed this Assignment this 30th day of June, 1957.

Rose Nunenmacher
Rose Nunenmacher

Assignor

PACIFIC NICKEL CORPORATION

By Tom Lyon
Tom Lyon, President

Assignee

STATE OF CALIFORNIA)
) ss
COUNTY OF LOS ANGELES)

On this 30th day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared ROSE NUNENMACHER, known to me to be the person whose name is subscribed to the within Instrument, and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal.

Ann Raetz
Notary Public in and for said County and State

[NOTARIAL SEAL] My Commission Expires: Sept 1, 1960

State of California
County of Los Angeles

On this 30th day of June, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared TOM LYON, known to me to be the President of PACIFIC NICKEL CORPORATION, the corporation that executed the within Instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation herein named, and acknowledged to me that such Corporation executed the within Instrument pursuant to its by-laws or a resolution of its board of directors.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

Ann Raetz
Notary Public

[NOTARIAL SEAL] My Commission Expires September 1, 1960

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MODIFICATION OF AGREEMENT

THIS MODIFICATION OF AGREEMENT, Made this 3rd day of April, 1957, by and between MARY SMEDBERG, JOHN A. WALSH, AL LACHANCE, CHARLES H. SKINNER and BENNETT INVESTMENT COMPANY, a Corporation, herein called the Sellers, and ROSE NUNENMACHER, herein called the Buyer;

WITNESSETH:

WHEREAS, the parties hereto heretofore entered into a certain contract dated July 20, 1956, wherein Sellers were selling to Buyer certain mining claims known and described as RED GOLD ASSOCIATION CLAIMS 1 to 8 inclusive, and 10, and LIVE OAK ASSOCIATION CLAIM, also known as Red Gold Association Claim 9, as in said agreement more particularly described; and

WHEREAS, it is known to the parties that sellers do not own the West one-half of Red Gold Association Claim No. 1, and it is the desire of the parties to drop said West one-half of Red Gold 1 from said contract of July 20, 1956, and adjust the purchase price proportionally; and

WHEREAS, it is the desire of the parties hereto to modify such agreement in certain other respects, the balance of such agreement to remain as heretofore;

NOW, THEREFORE, In consideration of the covenants and conditions herein contained and the money herein agreed to be paid, it is covenanted and agreed by and between the parties hereto as follows:

1. That said agreement of July 20, 1956 by and between the parties hereto be modified to exclude the West One-half of Red Gold Association Claim No.1, therefrom, and to reduce the purchase price in said agreement contained to $950,000 because of such exclusion.

2. The Buyer is paying herewith the sum of $2000.00, receipt of which by the Sellers is hereby acknowledged, the payment provisions in said contract to be hereafter as follows:

③

(a) Buyer shall hereafter pay unto Sellers the sum of $1000.00 per month until the 1st day of November, 1957, the first such payment of $1000.00 to be made on or before the 1st day of May, 1957.

(b) Commencing on November 1, 1957, and until November 1, 1961, Buyer shall payunto the Sellers the sum of $20,000.00 per year during such period, payable quarterly on the 1st days of November, February, May and August of each year, the first such quarterly payment to be due and payable on November 1, 1957.

(c) Commencing with November 1, 1961, the balance of the purchase price as in said contract of July 20, 1956, being the balance then remaining unpaid on the original purchase price of$950,000 as amended hereby shall be prorated on a quarterly basis over the succeeding sixteen (16) years.

(d) It is understood and agreed that all sums (to-wit: $9,000.00) paid heretofore on said total purchase price of $950,000 as amended hereby shall be credited to the Sellers, and that all sums hereafter paid hereunder shall likewise be so credited in calculating the total balance due hereon as of November 1, 1961.

(e) It is further understood and agreed that the Royalty payments provided in said contract of July 20, 1956 in Paragraph (4) (d) shall remain unchanged and shall be made as therein provided in the event ore be removed from said premises of a value at said rate which shall be greater than the payments herein set forth.

3. That said agreement of July 20, 1956, shall be further modified to provide that in the event the Buyer shall obtain a loan from D.M.E.A. for the purpose of exploring and developing said premises, that the interest of sellers in and to said mining claims shall be subordinated to repay such loan for a period of ten (10) years, as presently provided by law.

4. In all other respects, except as herein specifically provided, said agreement of July 20, 1956, shall remain unchanged, and shall be in full force and effect, as though this modification of agreement had not been made.

(3)

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IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

Mary Smedberg (Seal)

Joel Charles H. Skinner (Seal)

Al LaChance (Seal)
by Mary Smedberg attorney in fact

John C. Walsh (Seal)

Grace Anne Walsh (Seal)

Esther R. Skinner (Seal)

BENNETT INVESTMENT COMPANY
By Joseph M. Fleming (Seal)
Sellers Pres.

Rose Nuremmacher (Seal)
Buyer

STATE OF OREGON)
: SS.
COUNTY OF Coos)

BE IT REMEMBERED, That on this 26th day of March, 1957 before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Mary Smedberg, individually and as attorney in fact for Al LaChance, to me personally known, and known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that she executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Irene Gerrish
Notary Public for Oregon
My Commission Expires: October 18, 1959

(3)

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STATE OF OREGON)
COUNTY OF Coos) SS.

BE IT REMEMBERED, That on this 29th day of March, 1957 before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named JOHN A. WALSH and GRAYCE ANNE WALSH, husband and wife, to me personally known, and known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Notary Public for Oregon
My Commission Expires: May 13, 1960

STATE OF OREGON)
: SS
County of)

BE IT REMEMBERED , That on this _____ day of March, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named AL LACHANCE to me personally known, and known to be to be the identical individual described in and who executed the within instrument and acknowledged to me that he executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Notary Public for Oregon
My Commission Expires: _____

STATE OF OREGON)
) SS.
County of Multnomah

BE IT REMEMBERED, That on this 1st day of ~~March~~ april, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named CHARLES H. SKINNER and Esther W SKINNER, husband and wife, to me personally known, and known to be to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Notary Public for Oregon
My Commission Expires: 11/17/60

(3)

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STATE OF OREGON)
: SS.
County of Coos)

BE IT REMEMBERED, That on this 3rd day of April, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named

JOSEPH McKEOWN who is President of the BENNETT INVESTMENT COMPANY, to me personally known, and known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that he executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Notary Public for Oregon
My Commission Expires: October 18, 1959

STATE OF OREGON)
: SS
County of)

BE IT REMEMBERED, That on this 3rd day of April, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named ROSE NUNENMACHER, to me personally known, and known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year first above in this, my certificate, written.

Notary Public for Oregon
My Commission Expires: October18, 1959

RECORDED: May 27, 1957
Oleta A. Walker, County Clerk,
CURRY COUNTY, ORE., By P. Anderson Deputy

RECEIVED 1957
CODE

A G R E E M E N T

THIS AGREEMENT, Made this 3rd day of April, 1957, by and between PHIL R. ADAMS and POLLY ADAMS, husband and wife, and HOWARD JESSE COLDIRON and FLORENCE L. COLDIRON, husband and wife, and R. T. MERSERVEY, as owner of an undivided one-third interest in Fritzie Cabin No. 1, hereinafter called Sellers, and ROSE NUNNEMACHER, hereinafter called Buyer;

WITNESSETH:

I. We, Phil R. Adams and Polly Adams, and Howard Jesse Coldiron and Florence L. Coldiron, and R. T. Meservey, the Sellers above named, do covenant to and with the above named Buyer that we are the sole owners of the following described mining locations.

Hematite Tunnel Site Location No. 1, recorded in Volume 16 at page 300 of the official Mining Records of Curry County, Oregon, and re-recorded in Volume 16 at page 314 of the official Mining Records of Curry County, Oregon.

Hematite Tunnel Site, Location No. 2, recorded in Volume 16 at page 299 of the official Mining Records of Curry County, Oregon, and re-recorded in Volume 16 at page 313 of the official Mining Records of Curry County Oregon.

Hematite Tunnel Site Location No. 3, recorded in Volume 16 at page 304 of the official Mining Records of Curry County, Oregon.

Fritzie Cabin Tunnel Site, Location No. 1, recorded in Volume 16 at page 315 of the official Mining Records of Curry County, Oregon.

Fritzie Cabin Tunnel Site, Location No. 2, recorded in Volume 16 at page 318 of the official Mining Records of Curry County, Oregon.

Snow Camp Tunnel Site, Location No. 1, recorded in Volume 16 at page 317 of the official Mining Records of Curry County, Oregon.

Snow Camp Tunnel Site, Location No. 2, recorded in Volume 16 at page 316 of the official Mining Records of Curry County, Oregon.

Snow Camp Ridge Tunnel Site Location, recorded in Volume 16 at page 494 of the official Mining Records of Curry County, Oregon.

Knobkone Tunnel Site, Location No. 1, recorded in Volume 16 at page 320 of the official Mining Records of Curry County, Oregon.

Knobkone Tunnel Site, Location No. 2, recorded in Volume 16 at page 321 of the official Mining Records of Curry County, Oregon.

II. The Sellers, in consideration of the money herein agreed to be paid, and the covenants and conditions herein set forth hereby give and grant unto the Buyer an irrevocable offer to sell said mining locations to the Buyer for the amount set forth hereinafter provided, the Buyer accepts said offer within the time set forth below.

The Buyer, in consideration of this agreement agrees to pay as follows:

1 The sum of $5000.00 on or before the 15th day of May 1957, and in the event said sum is not so paid this agreement shall be rendered ineffective.

2 The sum of $1000.00 per month commencing on the 20th day of May, 1957, until and including the 20th day of October 1957, or the sum of $6000.00 in all.

III. It is agreed that the Buyer shall have the right on or prior to November 1, 1957, to elect to purchase said mining locations from the Sellers at a rate of $350.00 per acre. In this regard, it is agreed that Buyer shall take only that portion or those portions of said premises as she shall desire to purchase, the portion or portions to be so purchased to be designated by Buyer on or before the 1st day of November 1961. The Buyer's election to purchase all or a portion of said premises may be exercised by the Buyer paying to the Sellers on or before November 1, 1957, the sum of $5000.00, with an additional sum of $5000.00 to be paid quarterly on the 1st days of February, May, August and November of each year thereafter until the said 1st day of November, 1961. All sums so paid shall be applied upon and be a part of the purchase price hereunder. On the 1st day of November, 1961 the balance of the purchase price, as calculated on or before such date at said rate of $350.00 per acre for the land taken, and taking into account all payments made theretofore, shall be prorated quarterly over the succeeding 16 years, the first such quarterly payment to be made on or before the 1st day of November, 1961,

with like payments on the 1st days of February, ~~May, August~~ and November of each year thereafter until the whole purchase price has been paid in full.

IV. It is agreed that in the event the Buyer elects to purchase said group of mining locations above specified, on the terms heretofore provided, the following conditions are agreed upon between the parties:

(a) The Buyer shall have the exclusive right to continue the possession of said premises and mine, ship and sell any and all ores found thereon.

(b) Buyer agrees to carry on and conduct the mining of said locations and the work in a good, workmanlike manner, fully complying with all laws and regulations, federal, state and other governmental authorities, and to fully perform and pay for all assessment work and other requirements in order to keep said mining locations in full force and effect under the mining laws and regulations of the state, federal and other governmental authorities.

(c) Buyer agrees to carry public liability insurance with $100,000.00 / $300,000.00 protecting Buyer's operations and the Sellers against third party claims in said amounts.

(d) In the event Buyer shall remove any ore prior to the time the purchase price is fully paid, the Buyer shall pay to the Sellers the sum of ten (10%) per cent of the gross proceeds from the sale of all ores, both metallic and nonmetallic, mined and shipped from said property, and as this royalty is paid, the same shall be applied upon the purchase price. It is agreed, however, that said royalty payments shall be made on or before the 20th day of the month after the proceeds of such sale have been received by Buyer and said royalty payments shall be applied upon the next payment due under this contract.

(e) It is further covenanted and agreed by the parties hereto that times of payment and the strict and literal performance of each of the covenants herein set forth, are of the essence of this

contract, and no waiver, if any, by the Sellers of a prior default shall be deemed to constitute a waiver of a subsequent default, and in case the Buyer shall fail to make the payments aforesaid punctually and upon the strict terms and times above limited, or shall fail to perform and keep all or any of the agreements and stipulations aforesaid, strictly and literally the Sellers may give the Buyer 90 days' written notice said default, and if the Buyer remains in default at the expiration of said 90-day period as specified in said notice then the Sellers shall have the right to declare this contract null and void insofar as the same may be binding upon the Sellers, and all rights and interests hereby created or then existing in favor of the Buyer, or derived from her, shall utterly cease and determine, and the right of possession and all legal and equitable interests in the premises hereby contracted, shall revert to and revest in said Sellers, without any declaration of forfeiture or act of re-entry, or any other act by said Sellers to be performed and without any right of the Buyer of reclamation or compensation for moneys paid or services performed or improvements made upon said lands, as absolutely, fully and perfectly as if this contract had never been made. After the above 90 days' notice has been given, and after the 90 days have elapsed, the Sellers shall have the right, or any one of them, to enter upon the lands aforesaid and take immediate possession thereof, together with the improvements and appurtenances without delay or hindrance.

(f) Buyer covenants and agrees to keep said premises free and clear of all liens and encumbrances, whether for labor, material or otherwise, and in the event any or all of said premises be returned to Sellers, and not be purchased, it shall be returned free and clear of all liens and encumbrances.

(g) Each of the respective Sellers shall warrant his or her respective fractional interest in said locations only against their own acts. Provided, however, the Sellers agree to furnish the Buyer

within thirty (30) days after the Buyer elects to purchase, as hereinabove provided, certified copies of the original location notices and all other instruments of record subsequent thereto affecting the title to said mining locations, and will likewise furnish a certificate of a reputable attorney practicing in either Coos County or Curry County, Oregon, that there are no liens or judgments of record against the Sellers, or any of them, but that in the event any such liens or judgments shall exist, if the respective Seller against whom the same exists does not cause the same to be removed within thirty (30) days from the date of notice by the Buyer, the Buyer shall have the right to pay said lien or judgment and deduct the same from the purchase price hereunder. The certificate of a reputable attorney should also state that he has examined the certified copies of the original location notices and all of the instruments of record subsequent thereto effecting said mining locations and finds that a good and marketable title as to all of the locations are vested in the Sellers, subject to any defects that may appear from their examination of the record.

(h) Upon ten (10) days' written notice the Buyer may terminate this agreement. Any moneys theretofore paid to the Sellers by the Buyer, will be considered as liquidated damages for the cancellation of this agreement.

(i) It is understood and agreed, that Buyer is purchasing said mining locations to acquire mineral rights to the property covered thereby, and that the Buyer will take only that part or those parts of such mining locations that she desires, and that all parts of such premises not desired will be returned to the Sellers without further obligation or payment on the part of the Buyer. As heretofore stated, the Buyer shall pay for each acre taken the sum of $350.00 upon the terms and at the times above specified. Buyer or her assigns may elect at any time prior to final payment hereunder to exclude certain of said lands for the reasons hereinabove stated. Sellers shall not be liable or responsible to return any overpayment made to them, in the event they shall have been overpaid on the basis of the

acres actually taken at the time of such election.

(j) In the event Buyer shall fail or refuse to exercise the options herein granted, or should terminate this agreement as permitted herein, and in the event the Buyer or her assigns have no further interest in the mining locations herein contained, or any interest in developing any other claims or locations in the Red Flats vicinity or area, then all of such assay reports, maps, aerial photographs and other documents and date shall be delivered to Sellers without cost or obligation.

(k) It is understood and agreed that most of the property here dealt with has been located by Sellers as tunnel site locations, It is understood and agreed that such a location is filed for discovery purposes and gives and grants unto the locators thereof the prior right to file mining claims on the premises covered for minerals discovered thereby. It is therefore agreed that Sellers must relocate said premises in placer and lode locations as may be required by the geology of the area at their own cost and expense, and in no case will Buyer be responsible to purchase any of said premises unless properly relocated, and unless Sellers can deliver good title thereto. Sellers agree that they will diligently proceed with such relocations to insure delivery hereunder. It is the intent of this provision that Buyer shall acquire all rights of S llers in and to the premises herein without being required to pay more than $350.00 per acre for any portion or part thereof.

(l) It is understood and agreed that the mining locations herein are on an unsurveyed portion of the public domain. The cost of surveying said premises and determining the number of acres therein shall be borne by the Buyer.

(m) It is understood and agreed that Sellers shall have the right, and shall be paid for any and all fractional claims which may lie between any of the existing locations above described.

(n) The Buyer shall file all affidavits for assessment work and other work required on such claims on behalf of Sellers, as their

agent until title for such premises shall be transferred to the Buyer or her assigns.

(o) It is agreed that in the event Buyer shall obtain a loan for the purpose of exploring and developing said premises, the interest of Sellers in and to said mining claims shall be subordinated to repay such loan for a period of ten (10) years; Provided however, repayment of such loan shall in no way effect the total price Sellers are receiving hereunder.

IN WITNESS WHEREOF, The parties hereto have hereunto set their hands and seals and executed the foregoing instrument the day and year first above written.

Phil R Adams (SEAL)

Polly Adams (SEAL)

Howard Jesse Coldiron (SEAL)

Vasma L. Coldiron (SEAL)

Phil R Adams (SEAL)
Attorney-in-Fact for R. T. Meservey
Sellers

Rose Nunenmacher (SEAL)
Buyer

(1)

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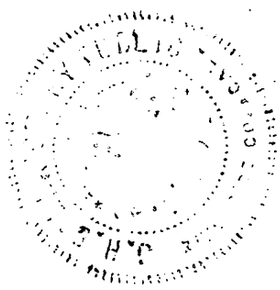
STATE OF CALIFORNIA

COUNTY OF RIVERSIDE

BE IT REMEMBERED, that on this 14th day of May 1957, before me, the undersigned, a Notary Public in and for said County and State, Personally appeared the within named Polly Adams, to me personally known and known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that she executed the same freely and vuluntarily, for uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year first above in this, my certificate, written.



R H Gall

Notary Public for California.

My Commission Expires September 24, 1960

8.

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STATE OF OREGON)
: SS.
COUNTY OF CURRY)

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BE IT REMEMBERED, That on this 8th day of May, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Phil R. Adams, Howard Jesse Coldiron and Florence L. Coldiron, husband and wife, and Phil R. Adams, Attorney-in-Fact for R. T. Meservey, to me personal known, and known to me to be the identical individuals described i and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my N tarial Seal the day and year first above in this, my certificate, written.

William E. Daly
Notary Public for Oregon
My Commission Expires: 1/9/60

STATE OF ~~CALIFORNIA~~ Oregon)
: SS
COUNTY OF Curry)

BE IT REMEMBERED, That on this 28 day of May, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Polly Adams and Rose Nunenmacher, to me personally known, and known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freel and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixe my Notarial Seal the day and year first above in this, my certificate, written.

Oleta A. Walker
~~Notary Public for California~~
My Commission Expires:
County Clerk Curry County, Ore.

9.

RECORDED: May 28, 1957
Oleta A. Walker, County Clerk,
CURRY COUNTY, ORE., By P. Anderson, Depu

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AGREEMENT OF SALE

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THIS AGREEMENT, Made this 3rd day of April, 1957, by and between H. F. HEDDERLY and MARY ELIZABETH HEDDERLY, husband and wife, hereinafter called Sellers, and ROSE NUNNEMACHER, hereinafter called Buyer;

WITNESSETH:

I. We, H. F. Hedderly and Mary Elizabeth Hedderly, represent that we are the owners of the following described mining claims in the County of Curry, State of Oregon, to-wit:

> Sunset Mining Claim, in the Hunter Creek Mining District, location notice of which was duly recorded in Volume 13 at Page 124 of the Official Mining Records of Curry County, Oregon, said claim consisting of the West half (W½) of the Southwest Quarter (SW¼) of Section 30, Township 37 South, Range 13 West of the Willamette Meridian in Curry County, Oregon, and containing 80 acres more or less.

II. The Sellers, in consideration of the money herein agreed to be paid and the covenants and conditions herein set forth, hereby give and grant unto the Buyer an irrevocable offer to sell said mining claim to the Buyer for the amount set forth hereinafter, provided the Buyer accepts said offer within the time set forth below.

The Buyer, in consideration of this agreement agrees to pay the sum of $350.00 on or before the 15th day of April, 1957, with a like sum to be due and payable on the same day of each month thereafter to and including the 15th day of October, 1957.

III. The Buyer shall have the right, at any time prior to the 1st day of November, 1957, to elect to purchase said premises for a total purchase price of $50,000.00, by payment to the Sellers of the sum of $5000.00, and in the event the Buyer so elects, the balance of the purchase price shall be payable as follows:

1. The sum of $5000.00 per year on the 1st day of November of each year until the 1st day of November, 1961.

2. On the 1st day of November, 1961, the balance of said purchase price shall be prorated over the succeeding seven (7) years, and shall be paid in annual installments commen-

cing on November 1, 1961, and continuing until the whole sum of said purchase price has been paid in full. The Royalty payments as hereinafter set forth, shall be applied on the installment payments then due, as hereinafter set forth.

IV. It is agreed that in the event the Buyer elects to purchase, the following conditions are agreed upon between the parties:

(a) The Buyer shall have the exclusive right to continue the possession of said premises and mine, ship and sell any and all ores found thereon.

(b) Buyer agrees to carry on and conduct the mining of said claims and the work in a good, workmanlike manner, fully comply with all laws and regulations, federal, state and other governmental authorities, and to fully perform and pay for all assessment work and other requirements in order to keep said mining claims in full force and effect under the mining laws and regulations of the state, federal and other governmental authorities.

(c) Buyer agrees to carry public liability insurance with $100,000.00 / $300,000.00 protecting Buyer's operations and the Sellers against third party claims in said amounts.

(d) In the event Buyer shall remove any ore prior to the time the purchase price is fully paid, the Buyer shall pay to the Sellers the sum of ten (10%) per cent of the gross proceeds from the sale of all ores, both metallic and nonmetallic, mined and shipped from said property, and as this royalty is paid, the same shall be applied upon the purchase price. It is agreed, however, that said royalty payments shall be made on or before the 20th day of the month after the proceeds of such slae have been received by the Buyer, said royalty payments shall be applied upon the next monthly payment due hereunder.

(e) It is agreed that the Buyer shall not have the right to pay any of said installments prior to the date hereinabove specified unless Sellers' written consent is first had and obtained.

(f) Buyer agrees to pay any and all taxes and assessments hereafter levied against said premises prior to the time the same

shall become delinquent, it being agreed, however, that the 1955-56 taxes have already been paid by the Sellers. Buyer further agrees to pay all severance taxes and any other taxes or assessments of any nature by reason of Buyer's operations on said premises, or in connection therewith, and to save the Sellers and said premises harmless from the payment thereof. In the event the Buyer fails to pay any taxes and assessments, or any other charges, when the same shall become due, the Sellers shall have the right to pay the same, and the amounts so paid by the Sellers shall be repayable by the Buyer to the Sellers on demand, together with interest thereon at the rate of eight (8%) per cent per annum from the date of payment until repaid.

(g) Sellers agree that in the event the Buyer shall fully comply with all of the terms, covenants and conditions of this Agreement and shall make prompt and punctual payment of all sums of money aforesaid, and shall strictly and literally perform all and singular the agreements and stipulations aforesaid, according to their true tenor and intent, then the Sellers will cause to be delivered to the Buyer, a good and sufficient deed conveying said premises to the Buyer. Pending the full payment of the purchase price the Sellers will deposit a good and sufficient deed in escrow in the First National Bank of Portland, Gold Beach Branch, with irrevocable instructions to deliver the deed to Buyer upon satisfactory proof of the full payment of the purchase price.

(h) It is further understood and agreed that in the event either of the parties hereto have been required to institute any suit or action for the possession of said premises, or any portion thereof, or to enforce any of the legal or equitable rights of any of the parties hereto, arising or growing out of this contract, or any matters herein contained, that the prevailing party in any such action, suit, or proceeding shall recover therein such reasonable attorney's fees as shall be incurred by the prevailing party, their heirs, legal representatives, successors or assigns, and to

be adjudged by the court or jury, in addition to the costs and disbursements.

(i) It is further covenanted and agreed by the parties hereto that times of payment and the strict and literal performance of each of the covenants herein set forth, are of the essence of this contract, and no waiver, if any, by the Sellers of a prior default shall be deemed to constitute a waiver of a subsequent default, and in case the Buyer shall fail to make the payments aforesaid punctually and upon the strict terms and times above limited, or shall fail to perform and keep all or any of the agreements and stipulations aforesaid, strictly and literally, the Sellers may give the Buyer 90 days' written notice of said default, and if the Buyer remains in default at the expiration of said 90-day period as specified in said notice, then the Sellers shall have the right to declare this contract null and void insofar as the same may be binding upon the Sellers, and all rights and interests hereby created or then existing in favor of the Buyer, or derived from her, shall utterly cease and determine, and the right of possession and all legal and equitable interests in the premises hereby contracted, shall revert to and revest in said Sellers, without any declaration of forfeiture or act of re-entry, or any other act by said Sellers to be performed, and without any right of the Buyer of reclamation or compensation for moneys paid or services performed or improvements made upon said lands, as absolutely, fully and perfectly as if this contract had never been made. After the above 90 days' notice has been given, and after the 90 days have elapsed, the Sellers shall have the right, or any one of them, to enter upon the lands aforesaid and take immediate possession thereof, together with the improvements and appurtenances without delay or hindrance.

(j) Buyer covenants and agrees to keep said premises free and clear of all liens and encumbrances, whether for labor, material or otherwise.

(k) Each of the respective Sellers shall warrant his or her

respective fractional interest in said claims only against their own acts. Provided, however, the Sellers agree to furnish the Buyer within thirty (30) days after the Buyer elects to purchase, as hereinabove provided, certified copies of the original location claims and all other instruments of record subsequent thereto affecting the title to said mining claims, and will likewise furnish a certificate of a reputable attorney practicing in either Coos County or Curry County, Oregon, that there are no liens or judgments of record against the Sellers, or any of them, but that in the event any such liens or judgments shall exist, if the respective Seller against whom the same exists does not cause the same to be removed within thirty (30) days from the date of notice by the Buyer, the Buyer shall have the right to pay said lien or judgment and deduct the same from the purchase price hereunder. The certificate of a reputable attorney should also state that he has examined the certified copies of the original location notices and all of the instruments of record subsequent thereto affecting said mining claims, and finds that a good and marketable title as to all of the claims as vested in the Sellers, subject to any defects that may appear from their examination of the record.

(l) Upon ten (10) days' written notice the Buyer may terminate this agreement. Any moneys theretofore paid to the Sellers by the Buyer shall be considered as liquidated damages for the cancellation of this agreement.

(m) It is agreed that in the event Buyer shall obtain a loan for the purpose of exploring and developing said premises, the interest of Sellers in and to said mining claims shall be subordinated to repay such loan for a period of ten (10) years; Provided, however, repayment of such loan shall in no way effect the total price Sellers are receiving hereunder.

IN WITNESS WHEREOF, The parties have hereunto set their hands and seals and executed the foregoing instrument the day and year

first above written.

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H. F. Hedderly (SEAL)

Mary Elizabeth Hedderly (SEAL)
Sellers

Rose Nunenmacher (SEAL)
Buyer

STATE OF OREGON)
: SS.
COUNTY OF CURRY)

BE IT REMEMBERED, That on this 3rd day of April, 1957, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named H. F. Hedderly and Mary Elizabeth Hedderly, and Rose Nunenmacher, to me personally known, and known to me to be the identical individuals described in and who executed the within instrument and acknowledged to me that they executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year first above in this, my certificate, written.

William E. Taylor
Notary Public for Oregon
My Commission Expires: 4/9/60

RECORDED: May 24, 1957
Oleta A. Walker, County Clerk,
CURRY COUNTY, ORE., By P. Anderson Deputy

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CONSENT TO ASSIGNMENT

We, MARY SMEDBERG and AL LaCHANCE, being the owners of a majority interest in Red Gold Association Mining Claims No. 1 to 8 inclusive, Red Gold Association Claim No. 9 also known as Live Oak Association Claim and Red Gold Association Claim No. 10 all located in Curry County, Oregon, and being more particularly described in Volume 10 at pages 510-15, Volume 12, pages 321-22 and Volume 11 at page 356 all of the Official Mining Records of Curry County on file in the office of the Clerk of Curry County in the Courthouse in Gold Beach, Oregon, and, we being the sellers of more than a majority interest in the above described mining claims in a certain contract entered into between Mary Smedberg, John A. Walsh, Al LaChance, Charles H. Skinner and Bennett Investment Company, a Corporation, as Sellers, and Rose Nunenmacher as Buyer, and pursuant to Paragraph 4L of said contract, and in consideration of the provisions of said contract, DO HEREBY CONSENT, and by these presents do hereby consent to the assignment of all rights and interest of the Buyer in said contract and arising out of said contract.

WITNESS our hands and seals this 31st day of July, 1956, at Gold Beach, Oregon.

Mary Smedberg (SEAL)

Al LaChance (SEAL)
Al LaChance
By: Mary Smedberg his attorney in fact.

STATE OF OREGON
COUNTY OF [illegible] } ss.

BE IT REMEMBERED, That on this ___ day of August, 1956, before me, the undersigned, a Notary Public in and for said County and State, personally appeared the within named Mary Smedberg, known to me to be the identical individual described in and who executed the within instrument and acknowledged to me that she executed the same freely and voluntarily, for the uses and purposes therein contained.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial Seal the day and year first above in this, my certificate, written.

(Notarial Seal)

Notary Public for Oregon
My Commission Expires: _____

STATE OF OREGON
COUNTY OF [illegible] } ss.
August [illegible], 1956.

Personally appeared Mary Smedberg who, being duly sworn, did say that she is the attorney in fact for Al LaChance and that she executed the foregoing instrument by authority of and in behalf of said principal; and she acknowledged said instrument to be the act and deed of said principal.

Before me:

Mary Smedberg
Mary Smedberg

Notary Public for Oregon

(Notarial Seal)

My Commission Expires: 12-21-58

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AGREEMENT

THIS AGREEMENT, Made and entered into this 20 day of July, 1956, by and between MARY SMEDBERG, JOHN A. WALSH, AL LaCHANCE, CHARLES H. SKINNER and BENNETT INVESTMENT COMPANY, a Corporation, herein called the "Sellers", and ROSE NUNENMACHER, herein called the "Buyer",

W I T N E S S E T H:

All prior agreements between the parties are hereby terminated, and:

(1) It is agreed that as to Red Gold Association Claims numbered One (1) to Eight (8), inclusive, Mary Smedberg, one of the Sellers, is the owner of a 7/16 interest therein; John A. Walsh, one of the Sellers, is the owner of a 2/16 interest therein; Al LaChance, one of the Sellers, is the owner of a 2/16 interest therein; Charles H. Skinner, one of the Sellers, is the owner of a 2/16 interest therein; Bennett Investment Company, one of the Sellers, is the owner of a 2/16 interest therein. As to Live Oak Association Claim, sometimes known as Red Gold Association Claim Number 9, and as to Red Gold Association Claim Number 10, Mary Smedberg and Al LaChance, two of the Sellers, are the owners thereof. All of said mining claims which are the subject of this agreement being more particularly described as follows:

Red Gold Association Claims numbered One (1) to Eight (8), inclusive, recorded in Volume 10, Pages 510 to 515, inclusive, of the Official Mining Records of Curry County, Oregon; and

Live Oak Association Claim recorded in Volume 12, Pages 321 and 322 of the Official Mining Records of Curry County, Oregon; and

Red Gold Association Claim No. 10 recorded in Volume 11, Page 356, of the Official Mining Records of Curry County, Oregon.

(2) Buyer, concurrently with the execution of this Agreement, has delivered to Sellers the sum of Five Thousand Dollars ($5,000.00), to be divided among Sellers as their interests appear, receipt of which Sellers jointly and severally acknowledge, for and in consideration of the option granted by Sellers to Buyer to acquire said mining claims as hereinafter in Paragraph (3) set forth. Sellers jointly and severally, concurrently with the execution of this agreement, deliver to Buyer possession of said mining claims for and in consideration of Buyer's promise to pay to Sellers the sum of Two Thousand Dollars ($2,000.00) per month on the 15th day of each and every month during the exploration period hereinafter provided for beginning with August 15, 1956; said possession to continue for exploration purposes to January 15, 1957. In the event that Buyer fails to pay any of said monthly installments when due, this Agreement shall be of no further force and effect, and any and all rights of Buyer in and to said mining claims or the possession thereof or the right to acquire said mining claims shall immediately cease and determine and any sums paid by Buyer to Sellers shall be the sole properties of Sellers.

(3) It is agreed that the Buyer shall have the rights on or prior to February 16, 1957, to elect to purchase said mining claims from the Sellers, and in which event the purchase price shall be in the total sum of

ONE MILLION DOLLARS ($1,000,000.00),

and the Buyer's election to purchase may only be exercised by the Buyer paying to the Sellers on or before February 16, 1957, the sum of Fifty Thousand Dollars ($50,000.00), which shall be

applied against said purchase price. The balance owing on said purchase price shall be payable as follows:

Fifty Thousand Dollars
($ 50,000.00) during the first year next following the election to purchase, said amount being payable in equal monthly installments, and the balance of said purchase price shall be payable over the next four year period in equal monthly installments.

(4) It is agreed that in the event the Buyer elects to purchase, the following conditions are agreed upon between the parties:

(a) Buyer shall have the exclusive right to continue the possession of said premises and mine, ship and sell any and all ores found thereon which the Sellers would have the right to remove by reason of their location and ownership of said mining claims.

(b) Buyer agrees to carry on and conduct the mining of said claims and the work in a good workmanlike manner, fully complying with all laws and regulations, federal, state and other governmental authorities, and to fully perform and pay for all assessment work and other requirements in order to keep said mining claims in full force and effect under the mining laws and regulations of the state, federal and other governmental authorities.

(c) Buyer agrees to carry public liability insurance in the amount of $100,000.00 for injury to any one person, and $300,000.00 for injuries in any one occurrence, and property damage in the amount of $100,000.00

naming the Sellers and the Buyer as insured as their interests may appear, insuring them, and each of them, against legal liability for loss or damage against the claims of third parties by reason of the operations by the Buyer thereon. Buyer further covenants and agrees with the Sellers that she will indemnify and save harmless the Sellers from and against any claim or loss of any kind or nature which may arise by reason of the Buyer's possession, occupancy and operations on said premises.

(d) In the event Buyer should remove any ore prior to the time the purchase price is fully paid, the Buyer shall pay to the Sellers on or before the 20th day of the month following receipt of moneys for ore produced and sold from said mining claims, the sum of 10% of the gross returns for said month or in the event that Buyer operates the smelter or mill, then such payment shall be made upon receipt by Buyer of the proceeds from the sale of the product to Buyer's customers, and as this royalty is paid the same shall be applied upon the payment of the purchase price then due. It is agreed that the term "ore" shall apply to both metallic and nonmetallic ores.

(e) It is agreed that the Buyer shall not have the right to pay any of said installments prior to the dates hereinabove specified, unless Sellers' written consent is first had and obtained.

(f) Buyer agrees to pay any and all taxes and assessments hereafter levied against said premises prior to the time the same shall become delinquent, it being agreed, however, that the 1955-1956 taxes have already been paid by the Sellers. Buyer further agrees to pay all severance taxes and any other taxes or assessments of any nature by reason of Buyer's operations on said premises, or in connection therewith, and to save

(2)

the Sellers and said premises harmless from the payment thereof. In the event the Buyer fails to pay any taxes and assessments, or any other charges when the same shall become due, the Sellers shall have the right to pay the same and the amounts so paid by the Sellers shall be repayable by the Buyer to the Sellers on demand, together with interest thereon at the rate of 8% per annum from date of payment until repaid. Buyer further agrees to perform the annual assessment work and all other work and acts which may be necessary to keep said mining claims in good force and effect, and in the event the Buyer, after receiving sixty (60) days' written notice from the Sellers, shall fail to perform and complete said assessment work or other acts required by law to be performed to keep said mining claims in good force and effect, the Sellers shall have the right to perform said work and to do said acts and the cost thereof shall be repayable by the Buyer to the Sellers on demand, together with interest thereon at the rate of 8% per annum from the date said costs are incurred until repaid.

(5) Sellers agree that in the event the Buyer shall fully comply with all of the terms, covenants and conditions of this agreement and shall make prompt and punctual payment of all sums of money aforesaid, and shall strictly and literally perform all and singular the agreements and stipulations aforesaid, according to their true tenor and intent, then the respective Sellers will cause to be delivered to the Buyer, upon request, a good and sufficient deed conveying said premises to the Buyer, and Sellers will warrant their respective interests against the lawful claims and demands of all persons claiming by, through or under the Sellers.

(2)

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(h) It is further understood and agreed that in the event either of the parties hereto have been required to institute any suit or action for the possession of said premises, or any portion thereof, or to enforce any of the legal or equitable rights of any of the parties hereto, arising or growing out of this contract, or any matters herein contained, that the prevailing party in any such action, suit or proceeding shall recover therein such reasonable attorney's fees as shall be incurred by the prevailing party, their heirs, legal representatives, successors or assigns, and to be adjudged by the court or jury, in addition to the costs and disbursements.

(i) It is further covenanted and agreed by the parties hereto that times of payment and the strict and literal performance of each of the covenants herein set forth, are of the essence of this contract, and no waiver, if any, by the Sellers of a prior default shall be deemed to constitute a waiver of a subsequent default, and in case the Buyer shall fail to make the payments aforesaid, both principal and interest, or any of them, punctually and upon the strict terms and times above limited, or shall fail to perform and keep all or any of the agreements and stipulations aforesaid, strictly and literally, the Sellers may give the Buyer ninety (90) days' written notice of said default, and if the Buyer remains in default at the expiration of said 90-day period as specified in said notice, then the Sellers shall have the right to ~~declare the full~~ and foreclose this contract with no right of deficiency, balance of purchase price immediately due and the right to declare this contract null and void insofar as the same may be binding upon the Sellers, and all rights and interests hereby created or then existing in favor of the Buyer, or derived from her, shall utterly cease and determine, and the right of possession

and all legal and equitable interests in the premises hereby contracted, shall revert to and revest in said Sellers, without any declaration of forfeiture or act of re-entry, or any other act by said Sellers to be performed, and without any right of the Buyer of reclamation or compensation for moneys paid or services performed or improvements made upon said lands, as absolutely, fully and perfectly as if this contract had never been made. If the Buyer remains in default at the expiration of said 90-day period, as specified in said notice, the Sellers shall have the right, immediately upon the failure of the Buyer to comply with the stipulation of this contract, or any one of them, to enter upon the lands aforesaid and take immediate possession thereof, together with the improvements and appurtenances, without delay or hindrance, and no court shall relieve the Buyer from the failure to comply strictly and literally with this contract.

(j) Buyer covenants and agrees to keep said premises free and clear of all liens and encumbrances, whether for labor, material or otherwise, if incurred by or at the request of Buyer.

(k) It is agreed that all payments to be made to the Sellers hereunder shall be paid to BENNETT INVESTMENT COMPANY, a corporation , and they are directed as said funds are received to pay 43.75% to Mary Smedberg, 12.50% to John A. Walsh, 18.75% to Al LaChance, 12.50% to Charles M. Skinner and 12.50% to Bennett Investment Company.

(l) This contract may not be assigned or transferred by the Buyer without the written consent of the sellers of at least a majority interest in said mining claims first had

and obtained, provided, however, that such sellers agree not to unreasonably withhold their consent. In the event of such an assignment, the term Buyer herein shall mean such assignee or successor assignee.

5. Sellers shall, concurrently with the execution of this Agreement and, if Buyer exercises the option to purchase said mining claims as granted herein, at the time of the exercise of said option, deliver to Buyer certified copies of the original locations of said mining claims and all other instruments of record filed subsequent thereto affecting or relating to said mining claims (Sellers need not, however, deliver certified copies of any such documents previously delivered to Buyer), and the opinion of an attorney, satisfactory to Buyer, that there are no liens, encumbrances, claims, demands or charges of any nature whatsoever affecting Sellers' title to said mining claims or limiting Sellers' ability to transfer to Buyer pursuant to this Agreement a good and marketable title to said mining claims or which would have the effect of interferring in any manner with any of the rights or privileges granted to Buyer pursuant to this Agreement.

Sellers jointly and severally warrant and represent to Buyer that at the date of the execution of this Agreement, and in the event that Buyer exercises the option to purchase said mining claims as granted herein, that on such date, that to the knowledge and belief of Sellers, there are no liens, encumbrances, claims, demands or charges of any nature whatsoever affecting Sellers' title to said mining claims or limiting Sellers' ability to transfer to Buyer pursuant to this Agreement a good and marketable title to said mining

(2)

claims or which would have the effect of interferring in any manner with any of the rights or privileges granted to Buyer pursuant to this Agreement.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals and executed the foregoing instrument the day and year first above written.

John A. Nash (SEAL)

Mary [illegible] (SEAL)

[illegible] (SEAL)

[illegible] (SEAL)

Charles W. Skinner (SEAL)

BENNETT INVESTMENT COMPANY, an Oregon Corporation

BY Joseph M. Klemm Pres.

Sellers

Rose Nunenmacher (SEAL)

Buyer

(2)

VOL. 16 Page 686

STATE OF OREGON }
COUNTY OF Coos } ss.

July 20 A. D. 19 56.

Personally appeared JOSEPH McKEOWN, who, being duly sworn, did say that he is the President of BENNETT INVESTMENT COMPANY, a Corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its board of directors; and he acknowledged said instrument to be its voluntary act and deed.

Before me:

Irene Quick

Irene Quick (Official Seal)
Notary Public for Oregon

(My Commission expires October 18, 1959)

10

(2)

VOL. 16 Page 687

STATE OF OREGON }
COUNTY OF Coos } ss.

July 20 A. D. 19 56.

Personally appeared the above-named MARY SNEDDERS, JOHN A. WALSH, AL LaCHANCE and CHARLES H. SKINNER and acknowledged the foregoing instrument to be their voluntary act and deed.

Before me:

(Official Seal)

Notary Public for Oregon

(My Commission Expires October 10, 1959)

(2)

VOL 16 PG 688

STATE OF OREGON
COUNTY OF Coos } ss.

July 30 A. D. 1956.

Personally appeared the above-named ROSE NUSSBAUMER and acknowledged the foregoing instrument to be her voluntary act and deed.

Before me:

Alice Pierce

(Official Seal)

Alice Pierce
Notary Public for Oregon

(My Commission Expires January 26, 1957 ~~October 18, 1959~~.)

RECORDED: May 27, 1957
Oleta A. Walker, County Clerk,
CURRY COUNTY, ORE., By T. Anderson Deputy

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one at a
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
Mr Hankerson Room 4458	RUN STOP		RUN STOP
	RUN STOP		RUN STOP
	RUN STOP		RUN STOP
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	RUN STOP		RUN STOP
	RUN STOP		RUN STOP
	RUN STOP		RUN STOP
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Send surplus envelopes to supply room for reissue.

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Use RUN and STOP only when messenger service between Government buildings in Washington is required.
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OFFICIAL FILE COPY
DMEA
RECEIVED SEP 26 1957

DATE	INITIALS	CODE
9/26	C	220
		225

1201 N. Division St.
Spokane 2, Washington

September 20, 1957

Mr. Tom Lyon, President
Pacific Nickel Corporation
% Gibson, Dunn & Crutcher
634 South Spring Street
Los Angeles, California

Re: Docket No. DMEA-4774 (nickel)
Red Flats Claims
Curry County, Oregon

Dear Mr. Lyon:

At the request of our Washington, D.C. office we are returning to you the copy of your application which was sent to us for review.

Sincerely yours,

S. W. Zoldok for
Wing G. Agnew, Member
DMEA Field Team, Region I

Enclosure

cc: DMEA (2)
USGS

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-11	Martin	400
9/13	[illegible]	130
"	Johnson	110
		220

SEP 13 1957

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4774 - Nickel
Pacific Nickel Corporation
Red Flats claims
Curry County, Oregon

Dear Mr. Weissenborn:

Enclosed are copies of letter to us of August 30, 1957, from the captioned operator, and our reply of today regarding the subject application.

It will be appreciated if you will review your same docket and return directly to the applicant, at the requested address, whatever copies of the data it submitted are extra after you have filed one complete set for the Field Team's possible use.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

Enclosure

WSMartin:foc 9-11-57
cc to: Docket
Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-11	Martin	400
9/13	Lebrudge	130
9/13	Lamb	130
9/13	Kilsgaard	130
		110
		220

SEP 13 1957

Mr. Tom Lyon, President
Pacific Nickel Corporation
% Gibson, Dunn & Crutcher
634 South Spring Street
Los Angeles, California

Re: Docket No. DMEA 4774 - Nickel
Red Flats claims
Curry County, Oregon

Dear Mr. Lyon:

As requested in your letter of August 30, 1957, the subject application for exploration aid has been withdrawn from our active files.

To return your entire application, as you also requested, would be contrary to our practice, except to the extent that our files contain duplicate material. We are, however, enclosing three copies each of three Form MF-205 submitted in connection with your same application, one report by Southwestern Engineering Company on "Red Flat Nickel Project", and one copy of Southwestern Engineering Company's letter of July 26, 1957, to Mr. Weissenborn, giving Mr. Robert Lord's additional comments on the same report.

At the same time we are determining whether any of the other copies which have been distributed for review by other Government offices could be spared.

Sincerely yours,

Frank E. Johnson
(By ...)
ACTING Administrator

WSMartin:foc
9-11-57
cc to: Docket
Code 400
Admr. R. File
Oper. Comm.

Enclosure
FT. REG. I
Messrs. H.W. Davis, USBM
T.H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-11	Martin	400
		200
		220

September 11, 1957

MEMORANDUM

To: Allen S. Dakan, Director
Div. Oper. Control and Statistics

From: W. S. Martin, Director
Division of Iron and Ferro-Alloys

Subject: Withdrawal of Application
Docket No. DMEA 4774 - Nickel
Pacific Nickel Corporation
Red Flats claims
Curry County, Oregon

The above application has been withdrawn as requested in applicant's letter of August 30, 1957. Copy attached.

WSMartin
W. S. Martin, Director
Div. Iron and Ferro-Alloys

Attachment

WSMartin/foc
cc to: Docket
Admr. R. File
Code 400

8623

PACIFIC NICKEL CORPORATION
634 South Spring Street
Los Angeles, California

August 30, 1957

Mr. Clarence O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Interior Building
Washington 25, D. C.

Dear Mr. Mittendorf:

We wish to thank you for your wire of August 29, 1957. This was reported to our Board of Directors, and our company has decided to withdraw our Application #4774 for Exploration Loan for the Red Flats Nickel Property.

We will appreciate the courtesy if your office will return all of the documents, plans, etcetera which we have submitted in connection with this case. Please send these to the undersigned in care of Gibson, Dunn & Crutcher, 634 South Spring Street, Los Angeles, California.

Very truly,

Pacific Nickel Corporation

Tom Lyon, President

TL:pf

cc: Mr. Clair Engle
Senator Warren G. Magnuson
Mr. Oliver C. Ralston

Excerpt from Mr. Mittendorf's diary, Friday, Aug. 30, 1957:

I answered the Morse-Neuberger letter today, but before doing so I checked with Fritz, of ODM, to get an indication of the nature of their reply to the letter they received from Morse and Neuberger. He said they had explained that there is no need to enter into additional commitments for nickel. He also told the Senators that DMEA will continue to explore for nickel, and he tried to explain how ODM's actions in the two instances are not in conflict.

Reg # 253143

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 3 1957

DATE	INITIALS	CODE
9/3	C	220
9/3	WSM	400

PACIFIC NICKEL CORPORATION
634 South Spring Street
Los Angeles, California

August 30, 1957

Mr. Clarence O. Mittendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Interior Building
Washington 25, D. C.

Dear Mr. Mittendorf:

We wish to thank you for your wire of August 29, 1957. This was reported to our Board of Directors, and our company has decided to withdraw our Application #4774 for Exploration Loan for the Red Flats Nickel Property.

We will appreciate the courtesy if your office will return all of the documents, plans, etcetera which we have submitted in connection with this case. Please send these to the undersigned in care of Gibson, Dunn & Crutcher, 634 South Spring Street, Los Angeles, California.

Very truly,

Pacific Nickel Corporation

Tom Lyon

Tom Lyon, President

TL:pf

cc: Mr. Clair Engle
Senator Warren G. Magnuson
Mr. Oliver C. Ralston

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8-29	Martin	400
8/29	Selfridge	120
"	Johnson	110
"	Mittendorf	100
8/30	P	220
		400

AUG 30 1957

INTERIOR

DMEA

COLLECT

MR. ROBERT C. MILLER, VICE-PRES. & DIRECTOR
PACIFIC NICKEL CORPORATION
% SOUTHWESTERN ENGINEERING CORPORATION
4800 SANTA FE AVENUE
LOS ANGELES 58, CALIFORNIA

AS REQUESTED IN YOUR TELEGRAM OF AUGUST 28 TO MR. W. S. MARTIN, we are POSTPONING TO SEPTEMBER 16, 1957, ACTION ON APPLICATION OF PACIFIC NICKEL CORPORATION, DOCKET DMEA 4774.

C. O. Mittendorf (fw)

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

WSMartin:foc
8-29-57
cc to: Docket
Code 400
Admr. R. File
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

8623

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

NUMBER 1264 — DL=Day Letter, NL=Night Letter, LT=International Letter Telegram

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DMEA
RECEIVED AUG 29 1957

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DA 351

O LSK202 PD AR=WUX LOS ANGELES CALIF 28 1246PMP=
=WILLIAM C MARTIN, CARE D M E A=
ROOM #3533 DEPT OF INTERIOR E ST WASHDC=

HAVING APPOINTMENT WITH RALSTON WEDNESDAY, SEPTEMBER 4TO SUBMIT NEW METALLURGICAL REPORT AND DATA. ASK THAT YOU POSTPONE ACTION FINAL DEAM APPROVAL OR REJECTION APPLICATION OF PACIFIC NICKEL #4774 UNTIL AT LEAST SEPTEMBER 16. PLEASE WIRE COLLECT CONFIRMATION REGARDING POSTPONEMENT=

SOUTHWESTERN ENGINEERING CO ROBERT P MILLER=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

19 AUG 28 PM 4 38

DLY

RECEIVED
AUG 29 1957
D.M.E.A.

Rose Nunemmacher 11:15 8-28-57

Mr. Martin:

Please call Mr. Robert Miller of Southwestern Engineering Company, Los Angeles, Operator 771, LU 8-0028.

foc

(Rose Nunenmacher)

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE .....

REFERRED TO:

1. .....
2. .....
3. .....
4. .....

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS: .....

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Check (X) before the items needing attention.

.....

Initials of sender.

GPO 16—63815-1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

August 26, 1957

Memorandum

Re: Docket No. 4774 - Nickel

To: W. S. Martin, Chief, Iron and Ferroalloys Division, Defense Minerals Exploration Administration

From: H. W. Davis, Branch of Ferrous Metals and Ferroalloys

Subject: Review of data from Field Team, DMEA 4774 (Nickel) Pacific Nickel Corp., Red Flats Mine, Curry County, Oregon

Inasmuch as the Field Team pointed out some of the metallurgical difficulties that are connected with the applicant's proposed project and Mr. Bardill has stated that the Krupp-Renn process would be economically infeasible for the nickeliferous material, I requested O. C. Ralston to furnish an opinion concerning the metallurgical aspects. A copy of Dr. Ralston's memorandum is attached.

Mr. Bardill states there is some question whether leuppen would have a domestic market. I am in agreement with Mr. Bardill. So far as I am aware, leuppen has never been used in the United States. As pointed out in my memorandum of July 3, in a few years free-world nickel production will be increased to at least 650 million pounds annually and by far the greater part of this output will be preferred commercially pure nickel and nickel oxide sinter, products far superior to the proposed product of Pacific Nickel Corp.

I concur with the opinion of W. P. Williams that DMEA participation in exploration should be delayed until applicant has done some metallurgical research to demonstrate that a saleable product can be produced. I also concur with the suggestion of the Field Team that if the final decision is to execute a contract, the work should be divided into two stages, with metallurgical testing following the first stage.

H. W. Davis
H. W. Davis

Attachment

OFFICIAL FILE COPY
DMEA
RECEIVED 1957
DATE | INIT. | NOTE
9-3 | C | 220
400

August 21, 1957

Memorandum

To: Hubert W. Davis, Commodity Industry Analyst, Room 3519

From: O. C. Ralston, Chief Metallurgist

Subject: Pacific Nickel Corporation, Krupp-Renn Kiln for Red Flats Nickel Ore. Docket No. DMEA-4774 (Nickel).

I have read the reports by A. E. Weissenborn and W. G. Agnew on the deposit and the report by J. Bardill on the metallurgy of a Krupp-Renn kiln. My estimate of the metallurgical discussion has been requested.

In addition to the nickeliferous ores tested by the Japanese it should be recorded that at the famous Hermann Goehring plant at Salzgitter, Austria, during World War I, one of the four rotary kilns intended for making sponge iron in rotary kilns (Krupp-Renn) was switched to nickeliferous laterite from Upper Silesia and from Greece with over 2 percent nickel, which produced a much higher grade of nickeliferous iron leuppen (German word for "lumps").

The characteristics of a Krupp-Renn kiln (the word "Renn" is from the German verb "rennen" meaning "to run-together" or "to roll") are that iron or nickel is reduced to spongy form in the rolling kiln, the temperature being such that the reduced particles of metal stick or weld together and roll into rough balls of various sizes. A protective slag of sticky consistence is required which will coat the leuppen to protect them from reoxidation when they get into the oxidizing heating gases and the little leuppen are pressed through the taffy like slag to contact the larger leuppen and stick to it, being flattened by the weight of charge so that the final lump is a series of onion-skin layers of metal. Temperature control to keep a taffy slag is important and such taffy is only produced from a high siliceous slag. This slag tends to attack the lining of the kiln and the best lining has been strong quartite blocks cut into shapes resembling large brick. The average K-R kiln formed rings on the brickwork, requiring the use of a water-cooled boring bar stuck up against the accretions or rings to machine them off. The brickwork in the hot end of the kiln

Krupp-Renn Process Kiln
Greece .65 Low capital cost
Germany Small power required

50T ore 25T coal x 1 flux
$10,000 for test run incl freight!

3500 acres .85

1000 30' holes
Ship 50 Tons to Europe
$1.15/lb contained nickel GSA is getting
for FeNi from Riddle

20 or 30 Trenches

Pacific Nickel Co., a California Corp
5' Samples 4000 T/acre foot
Rain & mud 43 acres to be had

May 1 exam

Tom Lyons was here Nov. 1, 1956 - Present
Reno - Kiilsgaard - Guild - TLC - SPH - ADMM

Miller & Hughes came in May 8, 1957
and took blanks away with them

Excerpt from Mr. Mittendorf's diary, 8/13/57:

Tom Lyon phoned from San Diego to ask if we had received the field team's recommendations on his nickel application. He had phoned Spokane and was told that their recommendations were mailed last Tuesday. (Pacific Nickel - Red Flats).

We made a quick check of M&F and found that the report had not been received.

He asked that I do all possible to expedite the case, and that I let him know, collect, what action had been taken.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
So. 157 Howard Street
Spokane 4, Washington

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 15 1957

DATE	INITIALS	CODE
8/15	G	220
		130
		220
		400

August 9, 1957

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. ~~DMEA 4774 (Nickel)~~
Pacific Nickel Corporation
Red Flats Mine
Curry County, Oregon

Dear Mr. Selfridge:

Attached is a very complete memorandum from J. D. Bardill, U. S. Bureau of Mines, commenting on the metallurgical aspects of the application presented by Pacific Nickel Corporation for the exploration of the Red Flats nickel deposit. The facts brought out by Bardill point out some real difficulties in applying the Krupp-Renn process to this type of nickeliferous rock. Also enclosed are the original and one carbon copy of a letter dated July 26, 1957 from Robert Lord of Southwestern Engineering Company giving some additional information on the Krupp-Renn process.

The application was discussed on July 22 at considerable length with Mr. Tom Lyon, president of the Pacific Nickel Corporation. Those present at the discussion representing the Field Team were J. D. Bardill, T. H. Howard, R. N. Appling, S. W. Zoldok, H. F. Albee, D. R. MacLaren, W. G. Agnew, and A. E. Weissenborn. During the discussion it was brought out that there are three main types of material present at the deposit; laterite containing about 0.9 percent nickel, weathered serpentine with almost the same nickel content but with a much higher MgO content, and unweathered serpentine running low in nickel. There was some discussion of how high the MgO content of the furnace feed could be without adversely affecting the process. Mr. Lyon made no clear answer, stating only that the slag could contain as much as 25 percent MgO. Mr. Lord's letter confirms this but also avoids stating specifically how high the feed can run in MgO.

It was pointed out to Mr. Lyon that although more nickeliferous serpentine might be found by the proposed exploration, the amount of laterite that could be reasonably expected to be added to

Reviewed by
DMEA OPERATING COMMITTEE
8-19-57
(date)

the present reserves by such exploration is not very great. The Bureau of Mines drilling indicated a ratio of 4.5 parts of nickeliferous serpentine to 1 part of laterite, with further exploration this ratio would be increased, yet the metallurgical tests were made on a feed consisting of 1 part serpentine to 1 part of laterite. Mr. Lyon stated that the addition of silica flux would make it possible to treat a higher MgO feed, although he admitted that this would decrease the capacity of the kiln. (In his letter of July 26, Robert Lord discusses this point and argues that the addition of a relatively small amount of silica or aluminum-bearing siliceous flux would have a marked effect on the silica content of the slag.)

Mr. Lyon argues further that the MgO content of the weathered serpentine is imperfectly known. He recognizes that there is a metallurgical problem to be solved but he believes that the Krupp-Renn process or some adaptation of it can be successfully applied to the treatment of the nickeliferous serpentine. He also states that the company is experimenting with a promising process for upgrading the nickel content of the serpentine, but he is not at liberty to discuss the details of this process as it is still unpatented. He contends strongly that before expensive metallurgical tests can be justified, it is essential to know with considerable accuracy the composition of the material it is proposed to treat -- particularly the nickel and the MgO content, the latter being as critical as the nickel. It is also essential to establish that there is sufficient tonnage of the material present to justify both the cost of metallurgical research and of the plant that it is hoped will be built. It is on this premise that he bases his argument for DMEA support of his proposed drilling program.

There was some tentative discussion of the possibility of breaking the project into two stages, the first stage involving perhaps 4,000 feet of drilling with the thought that this might give enough information and justification for preliminary metallurgical tests, to be followed by the remainder of the proposed drilling program if these tests were encouraging. Mr. Lyon was reluctant to accede to this as he stated the drilling costs are based on drilling the entire footage requested. However, Lord in his letter of July 26, states that the drilling company would contract for the lesser amount of drilling at the same price.

The Field Team recognizes that if the nickeliferous serpentine can be successfully treated, an important resource will be opened up. It recognizes further that the opinion of a man of the reputation in the industry of Mr. Lyon is entitled to

respect. It also believes that although the proposed drilling is not likely to increase the reserves of laterite at Red Flats very much over that already demonstrated by the Bureau of Mines drilling, there is a good possibility that the reserves of nickeliferous serpentine could be substantially increased.

The problem, therefore, is to decide whether a project that has for its objective the encouragment of metallurgical research falls within the scope of the DMEA program, and we feel that this is a top level policy decision that must be made by DMEA itself. We can only say that the Pacific Nickel Company is aware of the difficulties and apparently is willing to finance the metallurgical research if sufficient nickeliferous material can be found.

As requested, we are returning herewith the Southwestern Engineering Company report.

By Field Team, Region I

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Wing G. Agnew

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
Albee

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

1201 N. Division St.
Spokane 2, Washington

OFFICIAL FILE COPY DMEA RECEIVED AUG 15 1957		
DATE	INITIALS	CODE
		130
		220

July 30, 1957

MEMORANDUM

To: DMEA Field Team, Region I

From: John D. Bardill, Bureau of Mines

Subject: Comments on metallurgical aspects of DMEA application, Docket No. DMEA-4774 (nickel), Pacific Nickel Corporation, Curry County, Oregon

Mr. George C. Selfridge, chairman, DMEA Operating Committee, Washington, D.C., in a letter to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, dated July 12, 1957, requested, in part, comments on the metallurgical aspects of the subject application.

A sketchy, undated and unsigned report, entitled "Red Flat Nickel Project - Krupp-Renn Processing of Nickeliferous Ore," prepared by Southwestern Engineering Company, Los Angeles, Calif., was included with the application. The report very briefly and inadequately outlines the Krupp-Renn process for smelting Red Flat nickeliferous ores with an estimate of $15,000,000 for a plant and cost estimates for raw materials, operations, capital investments and expected profits. The plant will include a low temperature carbonization facility to carbonize Oregon coal to produce a char usable as an ore reductant in the process. Presumably, the raw coal will be burned for heating needs.

Eight plants containing 19 rotary kilns in Japan, one containing 6 rotary kilns in northern Korea, and two in Manchuria used the Krupp-Renn process to make sponge iron, low-grade nickel ferroalloys, and nickel-chromium ferroalloys. Raw ore materials were leached iron sands, sandy limonite, hematite, magnetite, and serpentine. The nickel and chromium minerals usually occurred in the limonite and serpentine. A brief description of the Iwaki Cement Co., Ltd. plant operations at Nanao City states the temperature of the hot zone was 1300° C. See Bureau of Mines Information Circular 7440, "Sponge Iron in Japan." One paragraph about the operations is worthy of note:

> "This plant had four rotary kilns but never operated more than two at one time. Many difficulties were experienced in kiln operation, which caused numerous shutdowns. Corrosion of the brick lining often warped the kiln shell. The growth of accretions or rings within the kiln was a constant hindrance to

Reviewed by
DMEA OPERATING COMMITTEE
8-19-57
(date)

operations but was reportedly partly overcome during the last year of operation. Excessive flue dust also was a problem. As a whole, kiln operations were not too satisfactory; continuous operation seldom exceeded 60 days without repairs or clean-out, so the rated capacity was never approached."

A comparison of Krupp-Renn process sponge-iron and granular sponge iron is given in Bureau of Mines Report of Investigations 4376, "Laramie Sponge-Iron Pilot Plant," pages 42 and 43, which states in part that high temperatures are used in the kiln, and corrosion of the brick lining is excessive. Elsewhere in the report of the Laramie pilot-plant operations, mention is made of the difficulties experienced because of rings of accretions even when operating in the 900° to 1000° C. temperature range.

Nowhere in the Southwestern Engineering Co. report is any mention made of the reason for selecting the Krupp-Renn process for treating Red Flats nickeliferous laterites and serpentines. My frank guess is that since Sweco is reported to be licensed by the Germans to use the process, it will participate in any royalties that may be levied should Pacific Nickel Corporation employ the process.

The report simply states that the plant will consist of three kilns 15 by 360 feet with a low-temperature carbonization plant to process low-grade coal or lignite, costing $15,000,000. Capacity of the plant is given at 108,000 tons of luppen per year. Nothing was submitted to substantiate the cost or capacity of the plant.

Ten trenches were cut by Sweco, having an average depth of about 8.75 feet and averaging about 0.91 percent nickel. The ratio of laterite to serpentine in the trenches was approximately one to one; however, the bottoms of the trenches were still in nickeliferous serpentine. Bureau of Mines drill holes indicated the ratio is approximately one part laterite to 4.5 parts of serpentine. Sweco did not submit ore reserve estimates. Based on the length and depth of the trenches it appears as though the trenches roughly delineated 1,350,000 tons each of laterite and serpentine, or a total of about 2,700,000 tons. At the estimated mining rate of 550,000 tons per year, the operation would have a life of about 4.9 years, yet the plant is being amortized over a period of 20 years, according to the Sweco report.

The report shows the laterite and serpentine to have the following partial analysis:

	Laterite	Serpentine
Fe	29.0%	10.0%
Ni	0.91%	0.91%
Co	0.10%	0.10%
Al_2O_3	6.0%	2.0%
Cr_2O_3	2.5%	1.0%
CaO	1.1%	1.2%
MgO	5.5%	25.0%
SiO_2	26.0%	40.0%

The report states that due to high magnesia content of serpentine it is necessary to blend laterite with serpentine to produce an acceptable feed and a ratio of one to one was used for the study. No substantiating test data was submitted in the report to indicate such an assumption to be true nor any evidence to support the assumptions of nickel and iron recoveries in the luppen. No mention was made of the temperature at which the charge will be reduced in the kiln.

Reference to liquidus diagrams shows that the melting point of Red Flat laterite will be about 1400° C. and for Red Flat serpentine about 1550° C. The mixture of 1 part each of laterite and serpentine with 5 percent alumina given in the Sweco report would have a melting point of approximately 1400° C.

The matter of smelting Red Flat nickeliferous material was discussed with Mr. Lloyd Banning, Supervising Extractive Metallurgist, Bureau of Mines, Albany, Oregon, on July 24, 1957, at Albany. We were both of the opinion that the smelting temperature should not be in excess of 1300° C. to operate and to prevent excessive wear on kiln lining.

Since Bureau of Mines drilling had indicated the ratio of 1 laterite to 4.5 serpentine, we used this ratio to compute a kiln charge with a slag melting point in the 1300° C. with a 10% Al_2O_3 plane.

A clay having a composition of about 81.3% SiO_2 and 18.7% Al_2O_3 and lime were calculated to be used as fluxes. Any number of substitutes composed of silica and alumina might be used. For each 100 lbs. of mixed laterite and serpentine, 53 lbs. of clay and 10 lbs. of lime are calculated to be required to produce a satisfactory slag having a composition of 10% Al_2O_3, 64% SiO_2, 17% MgO and 9% CaO. The ore mix would contain about 0.91% Ni and 13.45% Fe. The content of the ore charge and fluxes would contain about 0.56% Ni and 8.25% Fe.

Because the nickel and iron contents of the charge are considerably lower than the estimate of Sweco, due to the addition of a considerable amount of fluxes, we estimate recoveries of about 85 percent of the nickel and 90 percent of the iron in the final product.

Assume ore contains 13.45 percent iron, recovery of 90 percent, and product containing 91 percent iron. Then each ton of luppen will contain 1820 lbs. iron. Each ton of mixed ore contains 269 lbs. iron at 90 percent recovery is 242.1 lbs. Then

$$\frac{1820}{242.1} = 7.52 \text{ tons ore/ton luppen}$$

also 0.91% Ni x 2000 x 85% = 15.47 lbs. Ni in each ton of ore

or 15.47 x 7.52 = 116.3 lbs. Ni in each ton of luppen

or 5.81% Ni contained in luppen

Assume iron in luppen to have market value of No. 1 heavy melting scrap at Seattle at $46.00 per ton or 2.3¢/lb. and nickel at $0.74/lb., then

(116.3 lbs. x 74¢) + (2.3¢ x 1820) = $127.92 estimated gross value of luppen

Estimated value of recoverable iron and nickel per ton of ore = $17.01

Unpublished confidential reserves indicated by Bureau of Mines drilling Red Flats in 1952 were about 600,000 tons of laterite and 2,700,000 tons of serpentine. Details of the project, excepting reserves, are reported in Report of Investigations 5072. It is the belief that the most favorable portion of the deposit was examined and drilled at the time.

Assuming the Sweco report estimate of plant capacity is correct of 108,000 tons of luppen per year, or 547,560 tons ore per year, the output of luppen per year will be materially reduced when the ore is mixed in the ratio of 1 part laterite to 4.5 parts serpentine, and further diluted by adding the necessary fluxes; i.e.

$$\frac{547{,}760 \text{ tons capacity of charge}}{1 \text{ part ore} + 0.63 \text{ parts fluxes}} = 336{,}050 \text{ tons ore per year}$$

$$\frac{336{,}050 \text{ tons/year}}{7.52 \text{ tons ore/ton luppen}} = 44{,}690 \text{ tons luppen per year}$$

$$\frac{3{,}300{,}000 \text{ tons ore in deposit}}{7.52 \text{ tons ore/ton luppen}} = 438{,}830 \text{ tons luppen}$$

$$\frac{438{,}830 \text{ tons}}{44{,}690 \text{ tons produced/yr}} = 9.82 \text{ yrs. life of deposit}$$

$$\frac{\$15{,}000{,}000 \text{ cost of plant}}{9.82 \text{ yrs. life of deposit}} = \$1{,}527{,}500 \text{ amortization/yr.}$$

$$\frac{\$15{,}000{,}000 \times 6\% \text{ interest}}{2} = 450{,}000 \text{ interest/yr.}$$

$\$1{,}977{,}500$ amortization and interest/yr.

$$\frac{\$1{,}977{,}500}{44{,}690 \text{ tons luppen}} = \$44.25\text{/ton of luppen (capital costs)}$$

Assume Sweco's estimate of operating cost of $28.32 per ton of luppen is correct, this amount will be increased for the above mentioned reasons roughly as follows:

$$\frac{\$28.32 \times 7.52}{5.07} = \$42.00\text{/ton of luppen (operating costs)}$$

Cost of coke reductant and heating coal at $20.17/ton luppen according to Sweco report.

$$\frac{\$20.17 \times 1.63 \times 7.52}{5.07} = \$48.75\text{/ton of luppen}$$

Also, cost of ore/ton of luppen @ $7.60

$$\frac{\$7.60 \times 7.52}{5.07} = \$11.27$$

Cost of raw materials per ton of luppen:

Ore	$11.27
Fluxes	50.75
Fuel	48.75
	~~$100.77~~
	$110.77

Assume Sweco's report estimate of raw materials of $29.04 is correct, then this amount must be increased by the cost of additional fluxes as well as adjusted for increased fuel requirements. Assume lime at $39.00 delivered to the mine and clay at $5.40 (same as cost of coal delivered) per ton.

Fluxes required/ton of ore:

200 lbs. lime	@	$39.00/ton	$3.90
1060 lbs. clay	@	5.40/ton	2.85
			$6.75

$6.75 x 7.52 = $50.75/ton luppen

Ash content of char estimated at about 5 percent of clay requirements for flux and was not considered in calculations.

Estimated total cost per ton of luppen:

Raw materials	$100.77
Operating costs	42.00
Capital costs	44.25
	$187.02

It must be borne in mind that these estimates are full of assumptions. However, I believe that the estimates are sufficiently adequate to show that the estimated total cost to produce a ton of luppen is considerably in excess of the estimated gross value of $127.92 of the product.

There is some question whether the luppen would have a domestic market. It would be difficult to estimate the price it would bring on a foreign market. The Japanese would probably be the most likely purchaser for such a product.

A preliminary examination of the Snow Camp Meadow deposit and 9 auger samples indicates it is a low-grade serpentine deposit and probably not economically amenable to the Krupp-Renn process.

Members of the Field Team discussed the application with Mr. Tom Lyon, company president, at Spokane, July 22, 1957.

John D. Bardill

John D. Bardill

Distribution:
DMEA (4)
USGS (2)
Docket
Engineer

SWECO

SOUTHWESTERN ENGINEERING COMPANY

Engineers and Constructors ... Manufacturers

MAIN OFFICE AND PLANT

4800 SANTA FE AVENUE

POST OFFICE BOX 58264, VERNON STATION

LOS ANGELES 58, CALIFORNIA

ROBERT P. MILLER
PRESIDENT-GENERAL MANAGER
C. D. COULTER
EXECUTIVE VICE PRESIDENT
ASSISTANT GENERAL MANAGER
R. J. KINCAID
SECRETARY-TREASURER

TELEPHONE
LUDLOW 3-6262
CABLE ADDRESS
"SWECOLA"

RECEIVED
Special Del. Air Mail
JUL 29 1957
U. S. G. S.
SPOKANE, WASH.

July 26, 1957 *In reply refer to:*

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 15 1957

DATE	INITIALS	CODE

DMEA (2)

Mr. Albert E. Weissenborn
U. S. Geological Survey
157 Howard Street
Spokane 8, Washington

Dear Mr. Weissenborn:

I have been asked to comment on a ~~statement by~~ Mr. Tom Lyon of Pacific Nickel Corporation that silica sand could be added to Red Flats nickeliferous ores as a flux component for the Krupp-Renn process, and that it would permit increase of the proportion of the so-called serpentine in the feed mixture.

I feel that it would be feasible to add silica as a diluent and flux for the higher MgO content of the serpentine fraction. I believe that such addition would allow increase of the serpentine fraction of the feed mixture.

The extent to which silica might be added would be governed by economic and other considerations. The influence of these factors will require careful study and confirmation on a pilot plant scale after more information on the deposits becomes available.

The Krupp-Renn process requires slag having certain physical characteristics and chemical composition. In respect to the latter, a content of 28% MgO is regarded as nearly maximum, while AL_2O_3, SiO_2 and CaO should be within a desired range. The purpose of silic addition would be to control the slag composition, particularly in respect to MgO content. In some cases the addition of alumina bearing siliceous material might be preferable to straight silica.

Since the slag would represent considerably less by weight than the original ore, it would be affected to greater extent by additions. Introduction of 5-15% of silica would have a marked bearing on slag composition.

SOUTHWESTERN ENGINEERING COMPANY

Mr. Albert E. Weissenborn
U. S. Geological Survey

July 26, 1957

In regard to the proposed drilling program, I have heard from the Pacific Nickel Corporation that costs for drilling and assaying will be the same on a reduced basis.

Very truly yours,

SOUTHWESTERN ENGINEERING COMPANY

Robert Lord

Robert Lord

RL:sa
Air Mail-Special Del.

4774

MINING WORLD - August 1957, Vol. 19 No. 9, page 77

Two nickeliferous laterite areas are being explored in southwestern Oregon. Nickel Corporation of America is drilling on Woodcock and Eight Dollar mountains near Kerby, Oregon in Josephine County; Pacific Nickel Corporation has leased 12,000 acres at Red Flat in Curry County and is drilling there. The Oregon Department of Geology and Mineral Industries has investigated both properties in the past.

Friends:

It doesn't appear that the prospects have changed since our previous decision. With all a great deal of the work that has been done, it would seem that proof of ownership in the usual classes mainly Mn, Kings Cobalt, etc., i.e. now dependent on a satisfactory metallurgical process. A large sample of ore and ~~the~~ Oregon roof should be sent to an existing Krupp-Renn plant for testing and obtaining first hand results. If the test is satisfactory, then additional exploration is warranted.

G.C.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7-11	Chapman	400
7-11	Martin	400
7/12	GCS	130
"	Jorma	110
"	Butterworth	100
		220
		400

JUL 12 1957

Mr. A. E. Weissenborn, Executive Officer
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA 4774 - Nickel
Pacific Nickel Corporation
Red Flats claims
Curry County, Oregon

Dear Mr. Weissenborn:

The above-docketed application for exploration assistance is being referred to your office for review and a field examination of the property if necessary.

Copies of memoranda dated July 3 and 5, 1957, by H. W. Davis, Bureau of Mines, and N. E. Nelson, Geological Survey, respectively, relating to the project, are enclosed. Also enclosed is an extra copy of the application for the use of the Field Team.

In this connection, please review the pertinent portions of "A RECONNAISSANCE OF NICKEL DEPOSITS OF SOUTHWEST OREGON AND NORTHWEST CALIFORNIA, INTERIM REPORT BY RICHARD N. APPLING, JR.". The copy of this report that is available to us has no date, presumably because the report is unpublished. It can be further identified, however, as the attachment discussed in Memorandum of September 25, 1956, from Mr. H. W. Davis to DMEA Operating Committee, copy of which was sent to Mr. Wing G. Agnew, Chief, Spokane Field Office, Region I, Spokane, Washington, in connection with Docket No. DMEA 4093, that had already been denied in July 1956.

It will also be appreciated if you will include comments on the metallurgical aspects of the application.

Sincerely yours,

APPROVED:

O. M. Bishop (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

George C. Selfridge
Chairman, Operating Committee (HB)

WSMartin/foc 7-11-57
cc to: Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

Enclosures

P.S. Also enclosed for use of the Field Team is a copy of Southwestern Engineering Company report on the "Red Flat Nickel Project - Krupp-Renn Processing of Nickeliferous Ore." Please return the report with the field report and recommendations.

8623

DMEA Form 7
(12-56)

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Date	Surname	Code
7-11	Chapman	400
7-11	Martin	400
7/12	Selfridge	130
7/12	Kilgoodell	130
7/12	Bishop	130
"	Jones	110
	Chutterdon	100
7/15	P.K.	220
		400

JUL 12 1957

Pacific Nickel Corporation
c/o Gibson, Dunn & Crutcher
634 South Spring Street
Los Angeles, California

Attention: Mr. John Sage

Re: Docket No. DMEA 4774 - Nickel
Red Flats claims
Curry County, Oregon

Gentlemen:

The above-docketed application for exploration assistance for nickel ores has been reviewed by the Division of Iron and Ferro-Alloys of the Defense Minerals Exploration Administration and is being referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region I, South 157 Howard Street, Spokane 4, Washington, for review and a possible field examination of the property.

Any assistance that you can give the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Miller (for)

Administrator

WSMartin:foc
7-11-57
cc to: Docket
Code 400
Admr. R. File
Oper. Comm.
FT. REG. I
Messrs. H. W. Davis, USBM
T. H. Kiilsgaard, USGS

8623

Red Flute

Nickel 4774

THE WALL STREET JOURNAL
Tuesday, July 9, 1957, Page

GSA Rejects Proposal By Inco to Stockpile Its Expanded Output

Federal Agency Believes Expansion Of Nickel Production Already Under Way Will Meet Needs

By a WALL STREET JOURNAL *Staff Reporter*

WASHINGTON—The Government has rejected International Nickel Co.'s proposal that Uncle Sam agree to buy part of its expanded nickel output for stockpiling.

General Services Administration Chief Franklin G. Floete, whose agency manages the nation's strategic stockpile, said, "We've advised them (Inco) that the Government is not interested." The decision, he said, was based on "half a dozen factors," including the fact that nickel expansion already underway promises to make a total of 440 million pounds available to the U. S. by 1961, up from the current level of approximately 300 million pounds.

In June the big Canadian company—which supplies more than half of U. S. needs for the scarce metal—sent Mr. Floete and Defense Mobilizer Gordon Gray letters proposing that the Government stand ready to take part of the estimated 75 million pounds a year which Inco said it hopes to add to its output from new deposits in Manitoba, being developed at an estimated cost of $115 million.

Purpose of such a U. S. commitment would have been an added spur to the company to complete the expansion.

Expansion Already Underway

However, it was understood the officials of the G.S.A. and the Office of Defense Mobilization—which lay down over-all stockpiling policy—believed this added spur isn't necessary since Inco is already embarked on the expansion anyway.

In the first public disclosure of some of the details of the rejected Inco proposal, Mr. Floete said the Government was asked to agree to take up to 150 million pounds of nickel from the new deposits during a two-and-a-half-year period beginning July 1, 1960, if Inco couldn't sell this quantity privately. Under this backstopping arrangement, Uncle Sam would have paid Inco 74 cents a pound—

* * *

International Nickel's proposal that the U.S. Government agree to buy part of its expanded nickel output was rejected by the General Services Administration. In June, the big Canadian company — which supplies the U.S. with more than half its nickel requirements—urged the G.S.A. to stand ready to take a portion of the 75 million pounds which Inco expects to add to its output from new deposits in Manitoba. But this country's defense officials turned thumbs down on the offer. Nickel expansion now in progress, they said, promises to make 440 million pounds yearly available to the U.S. by 1961, compared with 300 million pounds now.

* * *

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

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DMEA
RECEIVED JUL 5 1957

DATE	INITIALS	CODE
1/5	C	220
7/5	DLC	4700

July 3, 1957

Re: Docket No. 4774
Pacific Nickel Corp.
634 South Spring Street
Los Angeles, Calif.
$83,233
Nickel

WSM

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division, Defense Minerals Exploration Administration

From: H. W. Davis, Branch of Ferrous Metals and Ferroalloys

Subject: Review of application

The applicant's proposal pertains to a loan of $83,233 for the proposed exploration of the Red Flats nickel deposit in Curry County, about 8 miles east of Gold Beach, Oregon.

The Red Flats nickel deposit was first examined by the Bureau of Mines in June 1945 but it was not until 1952 that the deposit was drilled and sampled. In 1953 a 15-ton sample was procured and subjected to continuous smelting tests at the Northwest Electrodevelopment Experiment Station, Albany, Oregon. The results of diamond drilling of the deposit and of smelting tests on the 15-ton sample are given in Report of Investigations 5072. The tests indicated that it is technically feasible to recover a low-carbon ferronickel product from the Red Flats nickel ore, but for a commercial operation a grade of ore considerably higher in nickel than the sample tested will be required. However, neither the field investigations nor the smelting tests were considered complete; nevertheless, a fairly large area of nickeliferous laterite and nickeliferous serpentine was indicated by the Bureau's drilling program. Consequently, it was concluded that further drilling and exploration should be planned to delimit areas of nickel-rich laterite and serpentine indicated by the investigations reported.

In 1946 the Oregon State Department of Geology and Mineral Industries initiated a project on the laterite soils of southwestern Oregon and began work at the Red Flats deposit (The Ore Bin, vol. 9, No. 3, March 1947, pp. 19-27), and in 1947 the department did some additional sampling (The Ore Bin, vol. 10, No. 5, May 1948, pp. 33-38).

Referring to the Metallurgical Report which accompanied the application, it is noted that applicant plans to produce about 108,000 tons of a product containing 91 percent iron, 4.15 percent nickel, 0.8 percent carbon, and 0.35 percent sulfur. In a few years, free-world production of nickel will, as a result of expansion and development programs now under way, be increased to at least 650 million pounds annually. By far the greater part of this output will be commercially pure nickel and nickel oxide sinter, products far superior to the product of Pacific Nickel Corp.

It is recommended that the application be referred to the Field Team for its review and recommendation.

H. W. Davis

H. W. Davis

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

July 2, 1957

Pacific Nickel Corporation
634 South Spring Street
Los Angeles, California

Attention Mr. John Sage:

Subject: DMEA-4774

Gentlemen:

Your application for exploration assistance, dated June 28, 1957 submitted to our office at Washington, D. C. has been assigned Docket Number DMEA-4774 and referred to the Iron and Ferro Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: Region I N.W.

Martyn H. Yardley
8628 South Gate Southgate Cal
Joseph F Nunenmacher
Rose "
Mayfair Hotel Los angeles
Richard Miller
Robt P "
4800 St Fe Ave Losangeles Cal
Tom Lyon
4990 Westminster Tr
San Diego Cal

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DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

File in Docket 4794-Ni.

September 25, 1956

Memorandum

To: DMEA Operating Committee

From: H. W. Davis, Branch of Ferrous Metals and Ferroalloys
Through: Charles W. Merrill, Chief, Division of Minerals

Subject: Suggested Resubmission and Reconsideration of Application of Rare Metals Corp. of America, Docket No. DMEA 4093

The subject application for DMEA exploration aid on the Pine Flat and Diamond Flat deposits was denied because, according to the field team examination, the inferred average thickness of the two deposits is about 15 feet; the total minable tonnage is about 2 million; the 8 samples taken from the discovery cuts showed nickel content ranging from 0.34 to 1.09 percent; the reserves are widely scattered; and the indicated reserves, both in quantity and grade, do not measure up to the requirements necessary to justify a reduction plant.

Subsequently, a report "A Reconnaissance of Nickel Deposits of Southwest Oregon and Northwest California", has been submitted. This report contains information on field work started in March 1954 and completed late in September 1955. According to the report it is reasonable to assume that the Pine Flat deposit contains 4 to 5 million tons of material, with a probable average assay of 0.75 to 1.0 percent nickel, and that assay of samples from 17 auger holes at the Diamond Flat deposit indicate an average value of about 0.8 to 0.9 percent nickel and assuming average depth of good laterite and 5 feet of rocky laterite, it is estimated that at least 2 million tons of material are available.

Accordingly, it is suggested that DMEA review the application of the Rare Metals Corp. in the light of the favorable report on the Southwest Oregon-Northwest California district.

RECEIVED
SEP 25 1956

A copy of the report, "A Reconnaissance of Nickel Deposits of Southwest Oregon and Northwest California," is attached for review. The report is for official use only. Please return it to the Branch of Ferrous Metals and Ferroalloys after it has served your purpose.

H. W. Davis

Attachment

Copy to: Ferrous Metals
H. W. Davis
Div. of Minerals (2)
Wing G. Agnew, Chief, Spokane
Field Office, Reg. I, Spokane, Wash.
Mark L. Wright, Acting Reg. Dir.,
Reg. I, Albany, Oregon
R. B. Maurer, Acting Reg. Dir.,
Reg. II, San Francisco, Calif.
T. H. Kiilsgaard, U.S.G.S.,
Room 5222 Interior Bldg.
Files

10% Al_2O_3

17% MgO

64% SiO_2

9% CaO

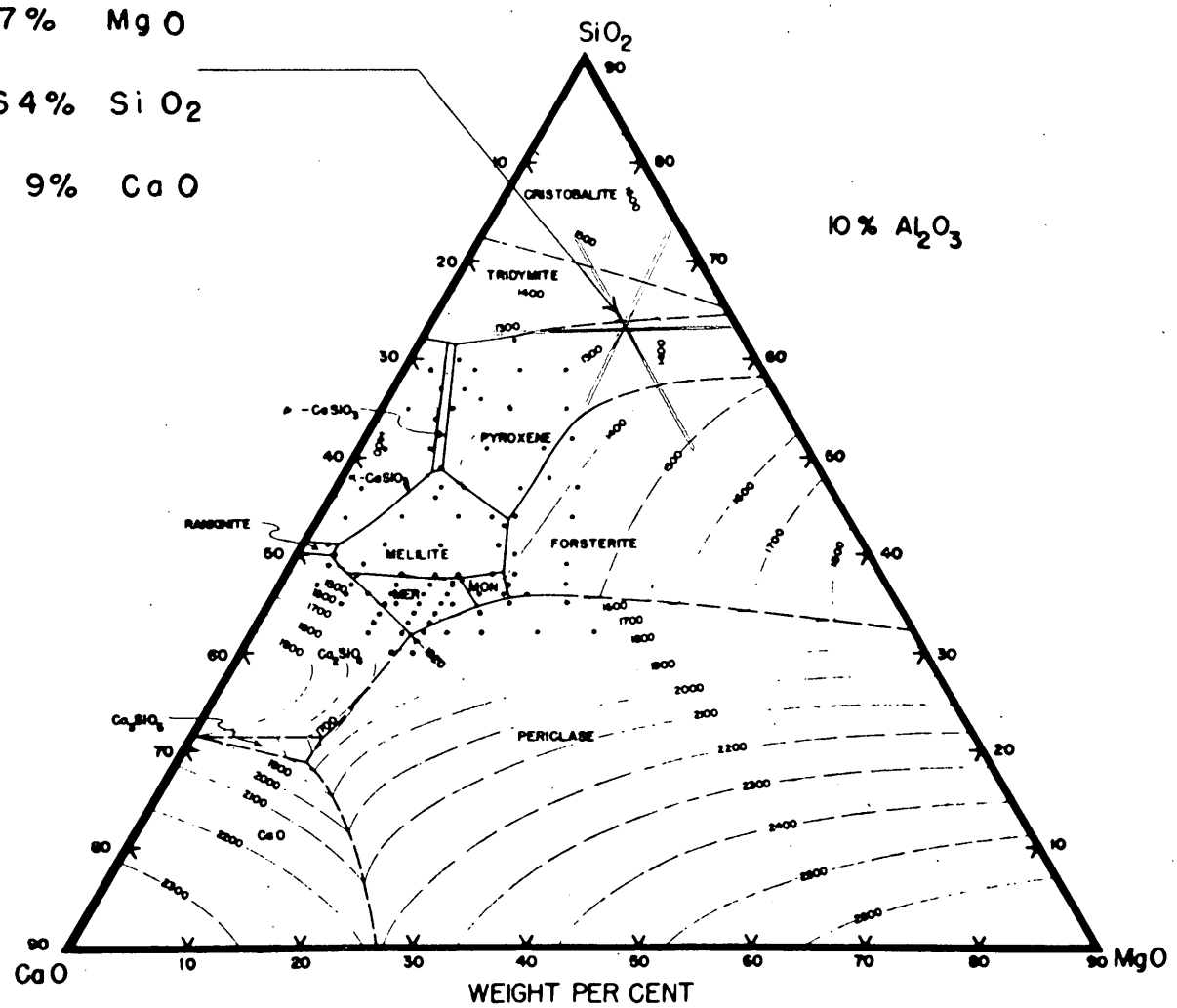


Fig. 4—Liquidus diagram for the 10 pct Al_2O_3 plane. Anorthite, $CaAl_2Si_2O_8$; mullite, $3Al_2O_3 \cdot 2SiO_2$.

Fig. 2

From: January, 1954 JOURNAL of METALS, by

Osborn, De Vries, E.F.Gee and Kramer

15% Al_2O_3

26% MgO

57% SiO_2

2% CaO

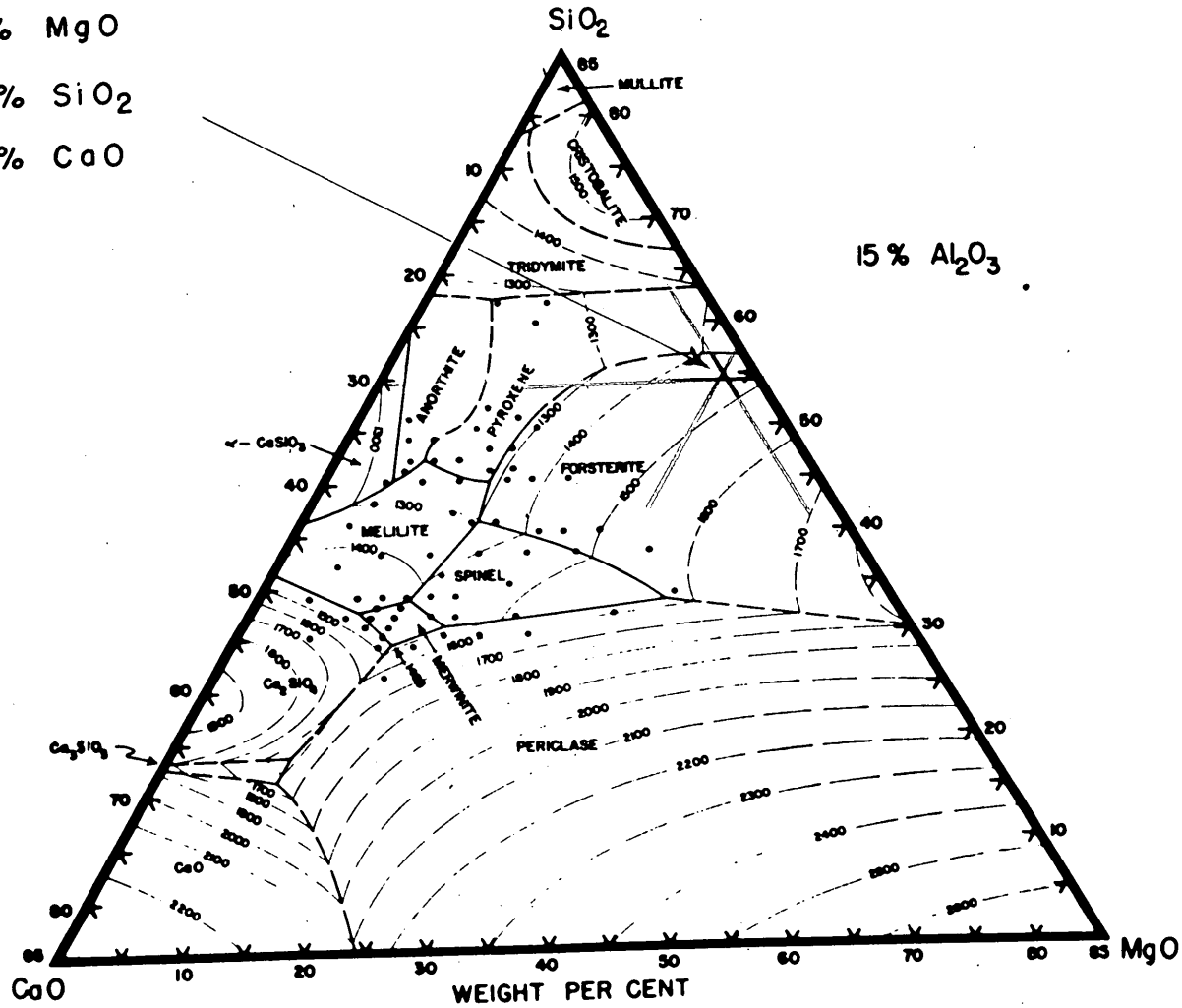


Fig. 5—Liquidus diagram for the 15 pct Al_2O_3 plane. Spinel, $MgAlO_4$.

Fig. 1

From: January, 1954 JOURNAL of METALS, by Osborn, DeVries, E.F. Gee and Kramer

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

July 5, 1957
Re: DMEA 4774
Pacific Nickel Corporation
Red Flats Property
Curry County, Oregon
$83,233 - Nickel

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicant requests assistance in exploring by drilling a property underlain by nickel-bearing laterite and serpentine.

The property consists of two tracts of which one, the westerly, includes the Red Flat prospect which has been the subject of previous applications 3052 and 3773. Both applications were denied.

The applicant has done additional trenching and sampling of the Red Flats area. The trenching probably has supplemented the work done by previous applicants and the U. S. Bureau of Mines, and the drilling proposed would extend materially the drilling program of the Bureau of Mines consisting of 23 holes. A thorough sampling of the hard material below the lateritic top skin would result if such drilling should be carried out.

Probably the Field Team can appraise the proposal without an examination. Perhaps the reasons for denial, good as for the other applications, are still good.

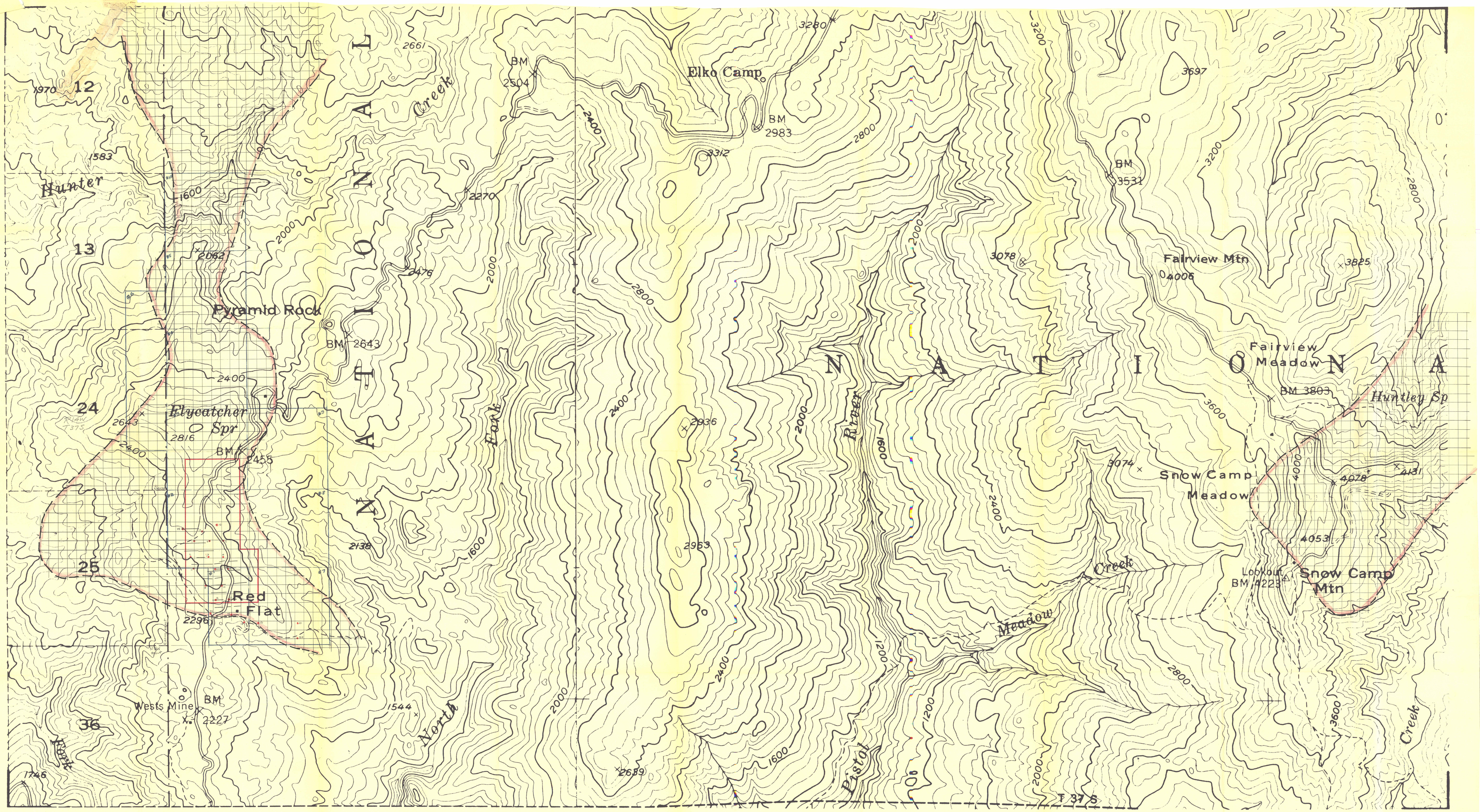
Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

ORIGINAL FILE COPY
DMEA
RECEIVED JUL 8 1957

DATE	INITIALS	CODE
7/9	P.K.	220
7/9	WSM	400



Scale - 1" 800' Mov.