

Minnesota Attorney General: Administrative Rules Proceedings

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Version 3
August 20, 2018

File No. 834

RULE REVIEW CHECKLIST

DATE RULE RECEIVED 7-22-82
DATE FOR REVIEW 7-30-82
DATE DUE 8-5-82

Adopted w/a hearing _____
Adopted w/o hearing ✓
Temporary rule _____

Approved 8-4-82 Disapproved _____ Returned to Agency 8-5-82

Resubmitted _____ Due _____
Approved _____ Disapproved _____ Returned to Agency _____

Date filed w/Secretary of State 8-5-82 Revisor approved 7/26/82 disapproved _____

✓ Rule as Adopted

_____ Rule as Proposed

✓ Order Adopting 7.2.82 Date

✓ Notice of Intent to Solicit Outside Opinion 6.22.81 + comments

_____ Order for rulemaking Not submitted!
N/A date of Hearing

N/A Certificate of Board's Authorizing Resolution

✓ Notice of rulemaking
✓ Sufficiency

✓ Affidavit of Mailing Notice or rulemaking
5.5.82 At least 30 days prior to hearing/adoption

✓ Mailing list Certificate

✓ Publication in State Register
5.10.82 At least 30/~~20~~ days prior to ~~hearing~~/adoption

N/A Hearing Examiner's Report

_____ Chief Hearing Examiner's Report(s)
_____ Approving H.E.'s Report
_____ Approving agency action

N/A Agency's Findings of Fact No changes

N/A LCRAR Report or agency Affidavit

✓ ~~Certificate~~ Resolution of ~~Board's Resolution~~ Executive Council Approving ~~Adopting~~ Rules 6.22.82

N/A Order Approving Incorporation by Reference

✓ Statement of Need and Reasonableness

N/A Petition for Adoption of a Rule

✓ Record (includes transcript or tape, exhibits, comments received by agency, requests for a hearing, and other relevant materials) 1 letter

✓ Certificate of Compliance w/Rulemaking Procedures

✓ Affidavit of Mailing Notice of Submission to Attorney General

✓ Notice of Submission to the Attorney General

SF-00006-02

STATE OF MINNESOTA

DEPARTMENT ATTORNEY GENERAL

Office Memorandum

TO JOSEPH N. ALEXANDER
Commissoner of Natural Resources

DATE: 8/4/82

ATTN : PHILIP J. OLFELT, Assistant Atty. Gen.

FROM : TED A. MARTINEZ
Special Assistant
Attorney General

PHONE: 296-4692

SUBJECT: In the Matter of the Proposed Adoption of Amendments to the Rules of the State Department of Natural Resources Governing Permites to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

Enclosed herewith are the rules you have submitted for approval. These rules have been approved by this office and filed with the Secretary of State. Please note that they have not been filed with the State Register. This must be done promptly by your agency.

Upon receipt and before transmittal to your agency, however, it is important that you recheck these rules as to:

1. Affixation of stamps of the Attorney General and Secretary of State;

2. Coverage by these stamps of all rules submitted; and

3. Inclusion of all pages to the rules in the approved set.

If you have any questions in this regard, please contact me.

TAM:drw
Encs.

cc: Ms. Kathy Burek
Mr. Duane Harves

DNR-7

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
Box 45, CENTENNIAL OFFICE BUILDING • ST. PAUL, MINNESOTA • 55155

DNR INFORMATION
(612) 296-6157

File No. _____

July 22, 1982

The Honorable Warren Spannaus
Attorney General
State Capitol
St. Paul, MN 55155

Attention: Judith Wehrwein
Legal Assistant
Administration Division

Re: Amendment of State's Copper-Nickel Rules - Approval as to Legality and Form

Dear Ms. Wehrwein:

The Department of Natural Resources has adopted amendments to the state's copper-nickel rules without a public hearing pursuant to Minnesota Statutes sec. 15.0412, subd. 4h. This rule change is herewith submitted to your office for approval as to its legality and form.

Attached, to assist you in your review of the procedures we have followed in regard to this rule change, are the following:

(1) Rule as Adopted (4 copies). The first copy reflects the changes made in the rule as originally published in the State Register. The only changes made were the correction of two typographical errors found in the State Register for May 10, 1982.

(2) Order Adopting Amendments of Rules, dated July 2, 1982, signed by the Commissioner of Natural Resources (2 copies).

(3) State Executive Council's resolution, dated June 22, 1982, approving proposed amendments.

(4) Notice of Intent to Solicit Outside Opinion Regarding Proposed Amendments, as published in the State Register on June 22, 1981.

(5) Written material received by the Department of Natural Resources in response to Notice of Intent to Solicit Outside Opinion. Letters, with attachments, were from the following companies:

(a) AMAX Exploration, Inc.
(b) American Shield Company
(c) Anaconda Copper Company
(d) Cominco American Inc.
(e) Exxon Minerals Company
(f) Houston International Minerals Corporation
(g) Ernest K. Lehmann & Associates, Inc.

(6) Notice of Intent to Amend Rules Without a Public Hearing and Rule as Proposed, as published in State Register on May 10, 1982.

(7) Affidavit of Mailing, dated May 5, 1982, of Notice of Intent to Amend Rules Without a Public Hearing.

(8) Mailing List Certificate, dated May 5, 1982, of persons, associations and other interested groups registered with Department of Natural Resources for the purpose of receiving notice of rule hearings.

(9) Statement of Need and Reasonableness

(10) Written comment received by Department of Natural Resources in response to Notice of Intent to Amend Rules Without a Public Hearing. Letter from Western Minerals Exploration Company. (There were no requests for a public hearing.)

(11) Statement of Compliance with Rulemaking Procedures, dated July 14, 1982, signed by Assistant Attorney General Philip J. Olfelt.

(12) Affidavit of Mailing Notice of Submission to the Attorney General and Notice of Submission to the Attorney General, dated July 22, 1982.

A copy of the Rule as Adopted is being submitted to the Revisor of Statutes this same day. If you need any further documents or information for your review, please let us know.

Sincerely,

Elwood F. Rafn, Director
Division of Minerals

EFR:M
Attch.

AG copy

Department of Natural Resources

Minerals Division

Adopted Amendment of Rule Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

Rule as Adopted

6 MCAR S 1.0094 Permits and leases, copper, nickel and associated minerals.

(a) Reletter as A.

(b)(1)-(4) Reletter and renumber as B. 1.-4.

(c) Reletter as C.

(d) Reletter as D.

(e) Reletter as E.

(1) (aa)-(cc) Renumber and reletter as 1. a.-c.

(2) Renumber as 2.

(3) Renumber as 3.

(f) Reletter as F.

G. Form of lease. The form of lease for prospecting for, mining and removing copper, nickel, and associated minerals belonging to the state shall consist of the following provisions, with such insertions, changes, or additions as may be necessary to incorporate the royalty rates and other particulars applicable to each lease as may be authorized under these rules:

This indenture, made this _____ day of _____, 19__, by and between the State of Minnesota, hereinafter called the state, and _____, hereinafter called the lessee, WITNESSETH:

(1) Renumber as 1.

(2) (aa)-(bb) Renumber and reletter as 2. a.-b.

(3)-(7) Renumber as 3.-7.

8. Royalty rates.

a. The royalty rate to be paid to the state by the lessee for the copper, nickel, and associated metals and mineral products recovered from each ton of ore mined from said mining

unit shall be the base rate described hereinafter, plus an additional ____ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

For ores mined by either underground or open pit methods during the unexpired portion of the calendar year in which the lease commences plus the first succeeding ten calendar-year period, the base rate shall be two percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional two percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

For ores mined by underground methods during the second ten calendar-year period, the base rate shall be 2-1/4 percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional 2-1/4 percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the third ten calendar-year period, the base rate shall be 2-1/2 percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional 2-1/2 percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the fourth ten calendar-year period, the base rate shall be 2-3/4 percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional 2-3/4 percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the remaining portion of the lease term thereafter, the base rate shall be three percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude

ore, plus an additional three percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

For ores mined by open pit mining methods, after the first ten calendar-year period, the base rate shall be 33-1/3 percent greater than those shown above for underground ore.

b. If the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore exceeds the special royalty base, as hereafter defined, the lessee shall pay a special royalty in addition to the royalties specified in a. The amount of special royalty to be paid to the state shall be determined by multiplying the special royalty rate by that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base.

The special royalty rate shall be four hundredths of one percent (.04%) of that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base. The special royalty rate shall be subject to increase or decrease each calendar month by multiplying the special royalty rate by a fraction, the numerator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

The special royalty base shall be $50 per ton of dried crude ore, subject to increase or decrease each calendar month by multiplying the special royalty base by a fraction, the numerator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

c. If the special royalty to be paid for any calendar month exceeds 20 percent of that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, the lessee may apply to the commissioner for a modification of the special royalty rate in regard to the amount exceeding 20 percent. Any modification of the lease agreed upon between the lessee and the commissioner must be approved by the state executive council.

9. Value of metal and mineral products. The value of metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly as follows: Multiply the total pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit, by the average market price per pound respectively for that month of each such fully refined metal and of each such mineral product. The total amount of copper and nickel recovered in any form in the mill concentrate shall be valued for royalty purposes as fully refined metal. For the purpose of this lease, associated mineral products shall mean the mineral products other than those that are principally valuable for their copper or nickel content. When less than 50 percent of any associated metal or mineral product recovered in the mill concentrate is sold or otherwise gainfully disposed of, then only the quantity of such associated metal or mineral product actually sold or otherwise gainfully disposed of shall be multiplied by the market price in determining the value of such metal or mineral product for royalty purposes. Add the values thus obtained for each such metal and each such mineral product for the month, and divide the sum by the total number of tons of dried crude ore from the mining unit concentrated in the mill during the month, to obtain the value of the metals and mineral products recovered from each ton of dried crude ore.

The base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly in the same manner, except that the total

pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit shall be multiplied by the respective average of the average market price per pound of each fully refined metal and of each mineral product for each of the 12 complete calendar months of 1981.

The average market price of copper per pound for each month shall be that quoted for domestic refinery electrolytic copper in carload lots, f.o.b. Atlantic Seaboard Refineries, as reported in the "Metals and Minerals Markets" section of the Engineering and Mining Journal. The average market price of nickel per pound for each month shall be that quoted for nickel cathodes, in carload lots, f.o.b. Port Colborne, Ontario, Canada, United States import duty (if any) included, as reported in said journal. The average market price of other metals and of mineral products per pound for each month shall be that quoted for their usual and customary shipping quantities, f.o.b. the usual and customary place of shipment, United States import duty (if any) included, as reported in said journal. If said journal or its successors ceases to furnish such quotations, or its quotations cease to be recognized in the trade, or a particular metal or mineral product is not listed, then the quotations of such other source as the parties may agree upon shall govern.

(10)-(15) Renumber as 10.-15.

(16) (aa)-(ee) Renumber and reletter as 16. a.-e.

(17)-(34) Renumber as 17.-34.

July 26, 1982
ARO191

OFFICE OF THE REVISOR OF STATUTES

Certificate of Approval of Adopted Rules

Agency: Department of Natural Resources

Rule Numbers: 6 MCAR S 1.0094

Rule Title: Adopted Amendment of Rule Governing Permits to Prospect for and Leases to Mine Copper, Nickel, and Associated Minerals

Type of Rules: Permanent X

Temporary _____

Documents Incorporated by Reference: None.

The attached rules are approved as to Form, subject to the following editorical changes:

Page 2, Line 12: delete "seventeen (" and ")"; insert "$" before "17"
Page 2, Line 13: delete "dollars"
Page 2, Line 20: delete "seventeen (" and ") dollars"; insert "$" before "17"
Page 2, Line 26: delete "seventeen (" and ") dollars"; insert "$" before "17"
Page 2, Line 32: delete "seventeen (" and "); insert "$" before "17"
Page 2, Line 33: delete "dollars"
Page 3, Line 3: delete "seventeen (" and ") dollars"; insert "$" before "17"

Steven C. Cross
Revisor of Statutes

APPROVED AS TO LEGALITY
Aug 4 1982
WARREN SPANNAUS, ATTORNEY GENERAL
BY _____
SPECIAL ASSISTANT ATTORNEY GENERAL

Name: Roger J. Helder, Jr.

Title: Assistant Revisor

Phone: 297-2948

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED
AUG 5 1982
Joan Anderson Growe
Secretary of State

10:45 AM

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

In the Matter of the Proposed Adoption of Amendments to the Rules of the State Department of Natural Resources Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

ORDER ADOPTING AMENDMENTS OF RULES

Notice of the Commissioner's intent to adopt amendments to the above-entitled rules without a public hearing was published in the State Register on May 10, 1982, and was sent by the United States mail to all persons on the list maintained by the agency pursuant to Minnesota Statutes 1980, section 15.0412, subd. 4, as amended by Laws of 1981, Chapter 253, Sec. 8, on May 5, 1982. After affording interested and affected persons an opportunity to submit comments for 30 days after Notice, receiving no written requests for a public hearing within the 30-day comment period, reviewing and considering the comments and determining the need for and reasonableness of the amendments to the above-captioned rules, and after approval of the amendments by the State Executive Council on June 22, 1982,

NOW, THEREFORE, IT IS ORDERED that these amendments to the rules identified as governing "Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals," are adopted this 2nd day of July, 1982, pursuant to the authority vested in me by Minnesota Statutes sections 84.027, 93.08-.12 and 93.25.

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

Joseph N. Alexander
Commissioner

Greg Hubinger
(612) 297-2117
Minnesota Energy Conservation Service Manager
Minnesota Energy Agency
980 American Center Building
150 East Kellogg Boulevard
St. Paul, Minnesota 55101

Department of Natural Resources Minerals Division

Notice of Intent to Solicit Outside Opinion Regarding Proposed Amendment of Rules on Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

Notice is hereby given that the Minnesota Department of Natural Resources is seeking information or opinions from sources outside the agency in preparing to amend the royalty provisions of the rules regarding permits to propect for and leases to mine copper, nickel and associated minerals (NR 94(g)(8) & (9)) in order to address the possibility of a "bonanza" mineral deposit. The proposed amendment will be limited to adding a special royalty rate provision to the state copper-nickel leases.

The promulgation of this amendment to the rules is authorized by Minnesota Statutes, §§ 93.08-93.12 and 93.25, which permit the agency, with the approval of the State Executive Council, to adopt rules and regulations for the issuance of permits to prospect for and leases to mine and remove copper, nickel and associated minerals on lands wherein an interest in the minerals is owned by the state.

The Minnesota Department of Natural Resources requests information and comments concerning the subject matter of the proposed amendment to these rules. Interested or affected persons or groups may submit statements of information or comment orally or in writing. Written statements shall be addressed to:

Elwood F. Rafn
Director, Division of Minerals
Department of Natural Resources
Box 45
Centennial Office Building
St. Paul, MN 55155

Oral statements will be received during regular business hours over the telephone at (612) 296-4807 and in person at the above address.

All statements of information and comment shall be accepted until July 20, 1981. Any written material received by the Minnesota Department of Natural Resources shall become part of the record in the event that the amendment to the rules is promulgated.

Steven G. Thorne, Deputy Commissioner
Department of Natural Resources

Office of the Secretary of State

Notice of Vacancies in Multi-member State Agencies

Notice is hereby given to the public that vacancies have occurred in multi-member state agencies, pursuant to Minn. Stat. § 15.0597, subd. 4. Application forms may be obtained at the Office of the Secretary of State, 180 State Office Building, St. Paul 55155; (612) 296-7876. **Application deadline is July 14, 1981.**

THE COUNCIL ON THE ECONOMIC STATUS OF WOMEN has 12 vacancies open for public members; at least 50% shall be women, representative of a broad range of economic interests and vocations and shall include persons who are not regularly employed on a full-time or part-time basis outside their homes. Terms are to be staggered (changed this legislative session). The council studies and makes recommendations to the governor and the legislature on the economic status of women. Members are appointed by the Governor for 2 year terms. Monthly meetings; public members receive $35 per diem plus expenses. For

In the Matter of the Proposed Amendment of Rules Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

AFFIDAVIT OF MAILING

STATE OF MINNESOTA)
) SS
COUNTY OF RAMSEY)

Donna M. Hatt, being first duly sworn deposes and says:

That on the 5th day of May, 1982, at the City of St. Paul, County of Ramsey, State of Minnesota, she served the attached Notice of Intent to Amend Rules Without a Public Hearing by depositing in the State of Minnesota Central Mail System for United States mailing at said City of St. Paul, a copy thereof, properly enveloped, with postage prepaid, on all persons and associations who have requested that their names be placed on file with the Minnesota Department of Natural Resources for the purpose of receiving notice of the proposed adoption of rules by this Department.

Donna M. Hatt

Subscribed and sworn to before
me this 5th day of May, 1982.

M. E. McDonald

M. E. McDONALD
NOTARY PUBLIC-MINNESOTA
RAMSEY COUNTY
My Comm. Expires Sept. 2, 1983

(Will be published in State Register on May 10, 1982)

Department of Natural Resources

Minerals Division

In the Matter of the Proposed Amendment of Rules Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

Notice of Intent to Amend Rules Without a Public Hearing

Notice is hereby given that the Minnesota Department of Natural Resources proposes to adopt amendments to the above-entitled rules without a public hearing. The Commissioner has determined that the proposed amendments of these rules will be noncontroversial in nature and has elected to follow the procedures set forth in Minn. Stat. 1980, § 15.0412, subd. 4h, as amended by Laws of 1981, ch. 253, § 14. The only substantive change to the rules is the addition of a special royalty provision. All other changes shown by strikeout or underlining are renumbering or revisions of style or form made by the Revisor of Statutes pursuant to legislative mandate to make uniform the style and form of rules of all state agencies.

Persons interested in these rules shall have 30 days to submit comments on the proposed amendments. The proposed amendments may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed amendments within the 30 day comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minn. Stat. 1980, § 15.0412, subds. 4-4f, as amended by Laws of 1981, ch. 253, §§ 8-12.

Persons who wish to submit comments should submit such comments to:

Elwood F. Rafn
Department of Natural Resources
Box 45
Centennial Office Building
658 Cedar Street
St. Paul, Minnesota 55155
Phone: (612) 296-4807

Persons who wish to submit a request for a public hearing should submit such written request to Elwood F. Rafn.

Authority for the adoption of the proposed amendments is contained in Minn. Stat. §§ 93.08-93.12 and 93.25. Additionally, a Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed amendments and identifies the data and information relied upon to support the proposed amendments has been prepared and is available from Elwood F. Rafn upon request.

Upon adoption of the final amendments without a public hearing, the proposed amendments, this Notice, the Statement of Need and Reasonableness, all written comments received, and the final Amendments as Adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the final amendments as proposed for adoption, should submit a written statement of such request to Elwood F. Rafn.

A copy of the proposed amendments is attached to this Notice. Copies of this Notice and the proposed amendments are available and may be obtained by contacting Elwood F. Rafn.

Joseph N. Alexander
Commissioner
Department of Natural Resources

Rule as Proposed

NR 94 6 MCAR S 1.0094 Permits and leases, copper, nickel and associated minerals.

(a) Reletter as A.

(b)(1)-(4) Reletter and renumber as B. 1.-4.

(c) Reletter as C.

(d) Reletter as D.

(e) Reletter as E.

(1) (aa)-(cc) Renumber and reletter as 1. a.-c.

(2) Renumber as 2.

(3) Renumber as 3.

(f) Reletter as F.

~~(g)~~ G. Form of lease. The form of lease for prospecting for, mining and removing copper, nickel, and associated minerals belonging to the state shall consist of the following provisions, with such insertions, changes, or additions as may be necessary to incorporate the royalty rates and other particulars applicable to each lease as may be authorized under these rules ~~and regulations~~:

This indenture, made this _____ day of _____, 19__, by and between the State of Minnesota, hereinafter called the state, and _____, hereinafter called the lessee, WITNESSETH:

(1) Renumber as 1.

(2) (aa)-(bb) Renumber and reletter as 2. a.-b.

(3)-(7) Renumber as 3.-7.

~~(8)~~ 8. Royalty rates.

~~(aa)~~ a. The royalty rate to be paid to the state by the lessee for the copper, nickel, and associated metals and mineral products recovered from each ton of ore mined from said mining unit shall be the base rate described hereinafter, plus an additional ____ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

For ores mined by either underground or open pit methods during the unexpired portion of the calendar year in which the

OF STATUTES
BY:
Paul E. Bohde

lease commences plus the first succeeding ten ~~(10)~~ calendar-year period, the base rate shall be two ~~(2)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional two ~~(2)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

For ores mined by underground methods during the second ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and one-quarter~~ ~~(2-1/4)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional ~~two and one-quarter~~ ~~(2-1/4)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the third ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and one-half~~ ~~(2-1/2)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional ~~two and one-half~~ ~~(2-1/2)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the fourth ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and three-quarters~~ ~~(2-3/4)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional ~~two and three-quarters~~ ~~(2-3/4)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the remaining portion of the lease term thereafter, the base rate shall be three ~~(3)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional three ~~(3)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

APPROVED IN THE REVISOR OF STATUTES OFFICE BY:

For ores mined by open pit mining methods, after the first ten ~~(10)~~ calendar-year period, the base rate shall be ~~thirty-three and one-third~~ ~~(~~33-1/3~~)~~ percent greater than those shown above for underground ore.

b. If the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore exceeds the special royalty base, as hereafter defined, the lessee shall pay a special royalty in addition to the royalties specified in a. The amount of special royalty to be paid to the state shall be determined by multiplying the special royalty rate by that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base.

The special royalty rate shall be four hundredths of one percent (.04%) of that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base. The special royalty rate shall be subject to increase or decrease each calendar month by multiplying the special royalty rate by a fraction, the numerator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

The special royalty base shall be $50 per ton of dried crude ore, subject to increase or decrease each calendar month by multiplying the special royalty base by a fraction, the numerator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

c. If the special royalty to be paid for any calendar month exceeds 20 percent of that month's value of the metals and mineral products recovered in the mill concentrate from each ton

APPROVED BY THE REVISOR OF STATUTES OFFICE BY:

of dried crude ore, the lessee may apply to the commissioner for a modification of the special royalty rate in regard to the amount exceeding 20 percent. Any modification of the lease agreed upon between the lessee and the commissioner must be approved by the state executive council.

~~(9)~~ 9. Value of metal and mineral products. The value of metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly as follows: Multiply the total pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit, by the average market price per pound respectively for that month of each such fully refined metal and of each such mineral product. The total amount of copper and nickel recovered in any form in the mill concentrate shall be valued for royalty purposes as fully refined metal. For the purpose of this lease, associated mineral products shall mean the mineral products other than those that are principally valuable for their copper or nickel content. When less than ~~fifty~~ (50) percent of any associated metal or mineral product recovered in the mill concentrate is sold or otherwise gainfully disposed of, then only the quantity of such associated metal or mineral product actually sold or otherwise gainfully disposed of shall be multiplied by the market price in determining the value of such metal or mineral product for royalty purposes. Add the values thus obtained for each such metal and each such mineral product for the month, and divide the sum by the total number of tons of dried crude ore from the mining unit concentrated in the mill during the month, to obtain the value of the metals and mineral products recovered from each ton of dried crude ore.

The base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly in the same manner, except that the total pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit shall be multiplied by the

APPROVED BY THE REVISOR OF STATUTES OFFICE BY:

respective average of the average market price per pound of each fully refined metal and of each mineral product for each of the 12 complete calendar months of 1981.

The average market price of copper per pound for each month shall be that quoted for domestic refinery electrolytic copper in carload lots, f.o.b. Atlantic Seaboard Refineries, as reported in the "Metals and Minerals Markets" section of the Engineering and Mining Journal. The average market price of nickel per pound for each month shall be that quoted for nickel cathodes, in carload lots, f.o.b. Port Colborne, Ontario, Canada, United States import duty (if any) included, as reported in said journal. The average market price of other metals and of mineral products per pound for each month shall be that quoted for their usual and customary shipping quantities, f.o.b. the usual and customary place of shipment, United States import duty (if any) included, as reported in said journal. If said journal or its successors ceases to furnish such quotations, or its quotations cease to be recognized in the trade, or a particular metal or mineral product is not listed, then the quotations of such other source as the parties may agree upon shall govern.

(10)-(15) Renumber as 10.-15.

(16) (aa)-(ee) Renumber and reletter as 16. a.-e.

(17)-(34) Renumber as 17.-34.

~~(h) [Section 8.] Effective date. Theses rules and regulations shall become effective upon filing of same in the offices of the secretary of state and commissioner of administration in accordance with Minnesota Statutes 1965, Section 15.0413, and shall remain in full force and effect until modified, amended, or revoked.~~

APPROVED BY THE REVISOR OF STATUTES OFFICE BY:

CERTIFICATE

STATE OF MINNESOTA

COUNTY OF RAMSEY

In the Matter of the Proposed Amendment of Rules Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

I hereby certify that the list of persons, associations, and other interested groups who have requested, pursuant to Minn. Stat. 1980, § 15.0412, subd. 4, as amended by Laws of 1981, ch. 253, § 8, that their names be placed on file and maintained by the Minnesota Department of Natural Resources for the purpose of receiving notice of the proposed adoption of rules by this Department is accurate and complete as of ___:00 __.m., this 5th day of May, 1982.

Andy Brewer

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Persons who wish to submit comments or a written request for a public hearing should mail them to:

Bill Howard
Insurance Division
500 Metro Square Building
St. Paul, MN 55101

Authority for the adoption of these rules is contained in Minnesota Statutes § 60A.22. Additionally, a statement of need and reasonableness describing the need for and reasonableness of each provision and identifying the data and information relied upon to support the proposed rules has been prepared and is available upon request.

Any person who desires to be advised of the submission of this material to the Attorney General for approval may make this request in writing to the above named person.

Michael D. Markman
Commissioner of Insurance

Department of Natural Resources Minerals Division

Proposed Amendment of Rules Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

Notice of Intent to Amend Rules without a Public Hearing

Notice is hereby given that the Minnesota Department of Natural Resources proposes to adopt amendments to the above-entitled rules without a public hearing. The commissioner has determined that the proposed amendments of these rules will be noncontroversial in nature and has elected to follow the procedures set forth in Minn. Stat. § 15.0412 (1980), subd. 4h, as amended by Laws of 1981, ch. 253, § 14. The only substantive change to the rules is the addition of a special royalty provision. All other changes shown by strikeout or underlining are renumbering or revisions of style or form made by the Revisor of Statutes pursuant to legislative mandate to make uniform the style and form of rules of all state agencies.

Persons interested in these rules shall have 30 days to submit comments on the proposed amendments. The proposed amendments may be modified if the modifications are supported by the data and views submitted to the agency and do not result in a substantial change in the proposed language.

Unless seven or more persons submit written requests for a public hearing on the proposed amendments within the 30 day comment period, a public hearing will not be held. In the event a public hearing is required, the agency will proceed according to the provisions of Minn. Stat. § 15.0412 (1980), subds. 4-4f, as amended by Laws of 1981, ch. 253, §§ 8-12.

Persons who wish to submit comments should submit such comments to:

Elwood F. Rafn
Department of Natural Resources
Box 45
Centennial Office Building
658 Cedar Street
St. Paul, Minnesota 55155
Phone: (612) 296-4807

Persons who wish to submit a request for a public hearing should submit such written request to Elwood F. Rafn.

Authority for the adoption of the proposed amendments is contained in Minn. Stat. §§ 93.08-93.12 and 93.25. Additionally, a statement of need and reasonableness that describes the need for and reasonableness of each provision of the proposed amendments and identifies the data and information relied upon to support the proposed amendments has been prepared and is available from Elwood F. Rafn upon request.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

Upon adoption of the final amendments without a public hearing, the proposed amendments, this notice, the statement of need and reasonableness, all written comments received, and the final amendments as adopted will be delivered to the Attorney General for review as to form and legality, including the issue of substantial change. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the final amendments as proposed for adoption, should submit a written statement of such request to Elwood F. Rafn.

A copy of the proposed amendments is attached to this notice. Copies of this notice and the proposed amendments are available and may be obtained by contacting Elwood F. Rafn.

Joseph N. Alexander, Commissioner
Department of Natural Resources

Rule as Proposed

~~NR-91~~ 6 MCAR § 1.0094 Permits and leases, copper, nickel and associated minerals.

(a) Reletter as A.

(b) (1)-(4) Reletter and renumber as B. 1.-4.

(c) Reletter as C.

(d) Reletter as D.

(e) Reletter as E.

(1) (aa)-(cc) Renumber and reletter as 1. a.-c.

(2) Renumber as 2.

(3) Renumber as 3.

(f) Reletter as F.

~~(g)~~ G. Form of lease. The form of lease for prospecting for, mining and removing copper, nickel, and associated minerals belonging to the state shall consist of the following provisions, with such insertions, changes, or additions as may be necessary to incorporate the royalty rates and other particulars applicable to each lease as may be authorized under these rules ~~and regulations~~:

This indenture, made this _____ day of _____, 19___, by and between the State of Minnesota, hereinafter called the state, and _____, hereinafter called the lessee, WITNESSETH:

(1) Renumber as 1.

(2) (aa)-(bb) Renumber and reletter as 2. a.-b.

(3)-(7) Renumber as 3.-7.

~~(8)~~ 8. Royalty rates.

~~(aa)~~ a. The royalty rate to be paid to the state by the lessee for the copper, nickel, and associated metals and mineral products recovered from each ton of ore mined from said mining unit shall be the base rate described hereinafter, plus and additional _____ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

For ores mined by either underground or open pit methods during the unexpired portion of the calendar year in which the lease commences plus the first succeeding ten ~~(10)~~ calendar-year period, the base rate shall be two ~~(2)~~ percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional two ~~(2)~~ percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

For ores mined by underground methods during the second ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and one-quarter~~ (2-1/4) percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional ~~two and one-quarter~~ (2-1/4) percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the third ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and one-half~~ (2-1/2) percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional ~~two and one-half~~ (2-1/2) percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the fourth ten ~~(10)~~ calendar-year period, the base rate shall be ~~two and three-quarters~~ (2-3/4) percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus

an additional ~~two and three-quarters~~ (2-3/4) percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore; and for the remaining portion of the lease term thereafter, the base rate shall be three (3) percent of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, plus an additional three (3) percent of that portion of the value of the metals and mineral products recovered in the mill concentrate that exceeds seventeen (17) dollars per ton of dried crude ore.

For ores mined by open pit mining methods, after the first ten (10) calendar-year period, the base rate shall be ~~thirty-three and one-third~~ (33-1/3) percent greater than those shown above for underground ore.

b. If the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore exceeds the special royalty base, as hereinafter defined, the lessee shall pay a special royalty in addition to the royalties specified in a. The amount of special royalty to be paid to the state shall be determined by multiplying the special royalty rate by that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base.

The special royalty rate shall be four hundredths of one percent (.04%) of that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base. The special royalty rate shall be subject to increase or decrease each calendar month by multiplying the special royalty rate by a fraction, the numerator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

The special royalty base shall be $50 per ton of dried crude ore, subject to increase or decrease each calendar month by multiplying the special royalty base by a fraction, the numerator of which shall be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which shall be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

c. If the special royalty to be paid for any calendar month exceeds 20 percent of that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, the lessee may apply to the commissioner for a modification of the special royalty rate in regard to the amount exceeding 20 percent. Any modification of the lease agreed upon between the lessee and the commissioner must be approved by the state executive council.

~~(9)~~ 9. Value of metal and mineral products. The value of metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly as follows: Multiply the total pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit, by the average market price per pound respectively for that month of each such fully refined metal and of each such mineral product. The total amount of copper and nickel recovered in any form in the mill concentrate shall be valued for royalty purposes as fully refined metal. For the purpose of this lease, associated mineral products shall mean the mineral products other than those that are principally valuable for their copper or nickel content. When less than ~~fifty~~ (50) percent of any associated metal or mineral product recovered in the mill concentrate is sold or otherwise gainfully disposed of, then only the quantity of such associated metal or mineral product actually sold or otherwise gainfully disposed of shall be multiplied by the market price in determining the value of such metal or mineral product for royalty purposes. Add the values thus obtained for each such metal and each such mineral product for the month, and divide the sum by the total number of tons of dried crude ore from the mining unit concentrated in the mill during the month, to obtain the value of the metals and mineral products recovered from each ton of dried crude ore.

The base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore shall be determined monthly in the same manner, except that the total pounds respectively of copper, nickel, and each associated metal and mineral product recovered during the month in the mill concentrate from the mining unit shall be multiplied by the respective average of the average market price per pound of each fully refined metal and of each mineral product for each of the 12 complete calendar months of 1981.

The average market price of copper per pound for each month shall be that quoted for domestic refinery electrolytic copper in carload lots, f.o.b. Atlantic Seaboard Refineries, as reported in the "Metals and Minerals Markets" section of the Engineering and Mining Journal. The average market price of nickel per pound for each month shall be that quoted for nickel

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

cathods, in carload lots, f.o.b. Port Colborne, Ontario, Canada. United States import duty (if any) included, as reported in said journal. The average market price of other metals and of mineral products per pound for each month shall be that quoted for their usual and customary shipping quantities, f.o.b. the usual and customary place of shipment, United States import duty (if any) included, as reported in said journal. If said journal or its successors ceases to furnish such quotations, or its quotations cease to be recognized in the trade, or a particular metal or mineral product is not listed, then the quotations of such other source as the parties may agree upon shall govern.

(10)-(15) Renumber as 10.-15.

(16) (aa)-(ee) Renumber and reletter as 16. a.-e.

(17)-(34) Renumber as 17.-34.

~~(h) [Section 8.] Effective date. These rules and regulations shall become effective upon filing of same in the offices of the secretary of state and commissioner of administration in accordance with Minnesota Statutes, 1965, Section 15.0413, and shall remain in full force and effect until modified, amended, or revoked.~~

Department of Public Welfare
Support Services Bureau

Proposed Rule Concerning the Investigation and Reporting of Maltreatment of Vulnerable Adults in DPW Facilities (12 MCAR § 2.010)

Notice of Hearing

A public hearing concerning the above entitled matter will be held in Room 83, State Office Building, 435 Park Street, St. Paul, Minnesota 55155 on June 15, 1982, commencing at 9:00 a.m. and continuing until all interested persons have an opportunity to be heard. The proposed rule may be modified as a result of the hearing process. Therefore, if you are affected in any manner by the proposed rule, you are urged to participate in the rule hearing process.

Following the agency's presentation at the hearing, all interested or affected persons will have an opportunity to ask questions and make comments. Statements may be made orally and written material may be submitted. In addition, whether or not an appearance is made at the hearing, written statements or material may be submitted to Jon Lunde, Hearing Examiner, Office of Administrative Hearings, 400 Summit Bank Building, 310 South Fourth Avenue, Minneapolis, Minnesota 55415, 612/341-7645, either before the hearing or within five working days after the public hearing ends. The hearing examiner may, at the hearing, order that the record be kept open for a longer period not to exceed 20 calendar days. The rule hearing procedure is governed by Minn. Stat. §§ 15.0411-15.0417 and 15.052, and by 9 MCAR §§ 2.101-2.112 (Minnesota Code of Agency Rules). If you have any questions about the procedure, call or write the hearing examiner.

Notice is hereby given that 25 days prior to the hearing, a statement of need and reasonableness will be available for review at the agency and at the Office of Administrative Hearings. This statement of need and reasonableness will include a summary of all the evidence and argument which the agency anticipates presenting at the hearing justifying both the need for and the reasonableness of the proposed rule. Copies of the statement of need and reasonableness may be obtained from the Office of Administrative Hearings at a minimal charge.

Rule 10 (12 MCAR § 2.010) establishes standards for the protection of vulnerable adults in facilities licensed by the Department of Public Welfare as established in Minn. Stat. § 626.557 (1980), "Reporting of Maltreatment of Vulnerable Adults."

This rule applies to all residential and nonresidential programs providing services to adults and licensed pursuant to Minn. Stat. §§ 245.78 to 245.812.

This rule contains the following:

1. A list of definitions;

2. The contents required in the program abuse and prevention plan; in the individual plan, and in the internal reporting and investigating policies and procedures;

3. The time frames for: developing the plan; orientation of clients to the plan; developing the individual abuse and neglect prevention plan for each vulnerable adult; review and revision of the individual plan; orientation for clients to the internal reporting system and orientation of reporters to requirements of Minn. Stat. § 626.557 and 12 MCAR § 2.010; and

4. The requirements for review and revision of the plan; for distribution of the plan; for the involvement of the client and/or

RESOLUTION

RESOLVED, by the Executive Council of the State of Minnesota at its meeting on June 22, 1982, that the proposed amendments of the rules governing "Permits to Prospect For and Leases to Mine Copper, Nickel, and Associated Minerals", as submitted and filed with the Secretary of the Council for the Council's June 22, 1982 meeting, are hereby approved pursuant to the authority vested in the Executive Council by Minnesota Statutes, Sections 9.071(10), 93.08 - 93.12 and 93.25.

JAMES J. HINIKER, JR.
Executive Secretary
Executive Council

STATEMENT OF NEED AND REASONABLENESS

IN THE MATTER OF THE PROPOSED AMENDMENT OF THE RULES REGARDING PERMITS TO PROSPECT FOR AND LEASES TO MINE COPPER, NICKEL AND ASSOCIATED MINERALS (6 MCAR § 1.0094)

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
May 3, 1982

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STATEMENT OF NEED - AMENDMENT OF RULES REGARDING PERMITS TO PROSPECT FOR AND LEASES TO MINE COPPER, NICKEL AND ASSOCIATED MINERALS (6 MCAR SECTION 1.0094)

INTRODUCTION

On November 8, 1966, in accordance with Minnesota Statutes 1965, Sections 93.08-93.12 and 93.25, the Commissioner of Natural Resources, with the approval of the State Executive Council, adopted rules and regulations regarding "permits to prospect for and leases to mine copper, nickel and associated minerals." These rules, NR 94 (subsequently numbered 6 MCAR Section 1.0094), promote and regulate prospecting for, mining and removing copper, nickel and associated minerals from lands wherein an interest in the minerals is owned by the state.

Since the adoption of these rules, the state has held six copper-nickel lease sales. In total, 2,143,923 acres of state-owned mineral rights were offered for leasing; and this resulted in the issuance of 1,044 leases, covering 425,313 acres, to 22 companies and individuals. These leased lands were in the counties of Beltrami, Cook, Itasca, Koochiching, Lake, Lake of the Woods, Marshall, Roseau and Saint Louis.

In general, the lessees have made their preliminary evaluations of the leased properties within the first two years of the leases and, therefore, most of the leases are surrendered during that period. As of December 1, 1981, only 15 leases, covering 4,449 acres, were still in effect.

The copper-nickel leasing program has resulted in the payment of 1.66 million dollars of rental to the state as of December 1, 1981. As a result of the exploration conducted under the leases, representing an investment of over 25 million dollars by the exploration companies, the state has received an immense amount of geological, geophysical and geochemical data. This valuable information is used when the Department of Natural Resources makes management decisions to implement legislated mineral and other land use policy. With this data, actions are avoided

which could otherwise adversely affect future exploration, leasing and mining of state-administered mineral lands.

Mining companies, by exploring public and privately owned lands, have discovered large copper-nickel deposits, as well as significant amounts of titanium, iron and vanadium in the Duluth Gabbro Complex. Resource estimates indicate over 4.4 billion tons of copper-nickel deposits,of which approximately 1 billion tons are on state-owned land, occur along the northwestern basal contact of the Duluth Gabbro Complex in northeastern St. Louis and northwestern Lake counties.

Although no mineable deposits have as yet been found on state land in Minnesota's Greenstone formations, significant showings of iron, zinc and copper have been located. Interest in the Greenstone and other formations has continued to be demonstrated by a number of exploration companies.

The last state copper-nickel lease sale was held in 1973. The Environmental Quality Council (renamed the Environmental Quality Board) initiated in 1974, a regional study regarding the potential social, environmental and economic impacts associated with copper-nickel mining. The study covered a limited portion of the Duluth Gabbro Complex. The EQC imposed a moratorium on the acceptance of any site-specific environmental impact statements on any copper-nickel mining development proposal prior to the completion of the study. As a result of this action, the state lease sales were suspended during the period of the study.

Following completion of the "Regional Copper-Nickel Study" in the fall of 1979, the Department contacted the State Executive Council for its approval for the Department to hold a state copper-nickel lease sale. In response the Executive Council requested that the Department first amend the existing royalty provisions of 6 MCAR Section 1.0094 to address the possibility of what is colloquially referred to as a "bonanza" mineral deposit.

The term "bonanza" in the present context refers to an unusually high grade mineral deposit of significant size. With such a deposit, a mining company may

realize "windfall" profits, which are profits remaining after subtracting the normal profits that are necessary to induce investment in this industry. Under certain circumstances, a windfall profit situation may also briefly arise when the price of a metal increases substantially as a result of speculation or brisk demand in boom times.

In order to address a possible "windfall profit" situation, the Department reviewed royalty systems of base metal producing states and foreign countries, and various studies on the base metal mining industry. The Department presented this research to the State Executive Council and on August 22, 1980, recommended that the state continue the present royalty rate structure and add a "special royalty rate" for ore value exceeding $50.00 per ton, of an extra .04% on each dollar increase in ore value. In order to account for inflation, it was also recommended that the $50.00 be indexed to reflect changes in the refined metal prices for the ore produced. The State Executive Council approved this proposed special royalty rate structure.

After development of the language of the proposed amendment to the state copper-nickel rules, the Department solicited outside opinion on the proposed amendment. (The notice to solicit outside opionion was published in the State Register on June 22, 1981.) The responses from the public identified two concerns which seemed significant, and the Department saw the need to amend the proposed special royalty rate to address these concerns.

At the December 15, 1981 meeting of the State Executive Council, the Department recommended that the special royalty rate proposal be amended to index the special royalty rate of .04% to reflect the price changes in the metal market. The effect of this indexing is that the percentage change in the amount of special royalty payable will be the same as the percentage change in the metal prices. The Department also recommended that when the special royalty amount due for any calendar month exceeds 20% of that month's value of the metals and mineral products recovered in the mill

concentrate, the lessee may apply to negotiate a modification of the special royalty rate for the amount exceeding such 20%. The State Executive Council approved these modifications to the proposed special royalty rate structure.

The Department's amendment of 6 MCAR Section 1.0094, as now proposed, is limited to adding a special royalty rate provision to the state copper-nickel leases to address the possibility of a windfall profit due to a high-grade deposit or to substantial increase in the price of a metal or metals. No other changes in 6 MCAR Section 1.0094 are intended at this time.

I. EXISTING ROYALTY RATE STRUCTURE

The state copper-nickel leases are primarily issued through public sale with competitive, sealed bidding. For each lease, the applicants submit a bid royalty rate which is in addition to the basic royalty rates specified in the state leases in accordance with 6 MCAR Section 1.0094. The leases are awarded by the Commissioner of Natural Resources, with the approval of the State Executive Council, to the highest bidder for each lease. No bids are accepted that do not equal or exceed the basic royalty rates specified in 6 MCAR Section 1.0094 and the state reserves the right, through the Executive Council, to reject any or all bids.

The state copper-nickel leases provide that a lessee pays an annual rental and, whenever metals and mineral products are recovered from the ore mined and processed, a royalty on such metals and mineral products. The annual rental, which increases during the first ten years of the lease, is payable throughout the term of the lease, but under certain circumstances the rental can be credited toward earned royalties. The royalty rate consists of a base rate, an additional rate equivalent to the base rate on that portion of the value of the metals and mineral products recovered in the mill concentrate exceeding $17 per ton of dried crude ore, and the bid rate.

The royalty rates are a percentage of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore mined.

This royalty rate mechanism has a built in escalation provision since it is tied to the market prices of metals and adjusts for the fluctuations in those prices.

The state copper-nickel lease provides that the base royalty rate increases during the term of the lease and the rate also varies according to whether ore is being mined by underground or open pit methods. For ore mined by either underground or open pit methods during the first ten years of the lease, the base rate is 2% of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore. For ore mined by underground methods, the rate increases an additional 1/4% for each subsequent ten-year period. For ore mined by open pit methods after the first ten years of the lease, the base rate is 33-1/3% greater than the base rate for mining by underground methods.

The additional royalty rate, which is equivalent to the base rate and changes as the base rate changes during the term of the lease, becomes applicable when the value of the metals and mineral products recovered in the mill concentrate exceeds $17 per ton of dried crude ore. When 6 MCAR Section 1.0094 was adopted in 1966, ore valued in excess of $17 per ton was considered high-grade ore.

The bid royalty rate is also a percentage of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore. This rate does not change during the term of the lease.

II. THE NEED FOR A "SPECIAL ROYALTY" PROVISION

There are two main reasons why a "special royalty" amendment to the existing rules and regulations on copper-nickel mining in Minnesota is needed: (a) as landowner, the state has a legitimate right to share in the windfall profits derived by the mine operator from the discovery and development of high-grade mineral deposits on state lands or derived from metals price increases due to speculation or boom times; and (b) discoveries outside Minnesota (in Canada, Wisconsin and elsewhere) have indicated that potentially richer and more diverse mineral deposits

might be found in the Greenstone and other geological formations.

(A) Anticipating Windfall Profits

Firms operating in extractive industries may realize various kinds of "windfall profits". These are defined as profits remaining after subtracting normal earnings (or normal profits) which are necessary to induce investment in these industries, including rewards for capital risks.

These windfall profits may be realized when the mining firms strike exceptionally rich or high-grade ores. The high profits arise because the operator will receive more revenue for a higher grade of ore, while capital, operating and overhead costs will be about the same as for mining ore of an "average" grade. Although it must be recognized that unusually high-grade deposits of a significant size are extremely rare and it is highly unusual to find such deposits, the state ought to have a mechanism whereby, as landowner, its rights may be properly protected should such a possibility ever become a reality.

As mentioned previously, a windfall profits situation could also occur when metal prices received by the lessee increase substantially because of speculation or brisk demand in boom times. However, such increased prices are usually for a short duration. The mine operator could receive substantial benefit in this type of situation in regard to the precious metals, but normally precious metals are only a relatively minor by-product of a base metal operation.

(B) Anticipating the Discovery and Development of Richer Deposits

When the copper-nickel rules and regulations were adopted in 1966, the royalty provisions were partly based on known copper-nickel deposits in the Duluth Gabbro Complex. Since that time, further discoveries in the Duluth Gabbro Complex and in the Greenstone formation outside Minnesota have shown the potential for a more diverse mineral deposit with a higher value. The Kidd Creek mine near Timmins, Ontario indicates the possibility that an unusually high grade mineral deposit of a significant size might be found in Minnesota.

The value of ore does not depend solely on the primary ore grade, recoverability factor and market price of the contained primary metal. It is also determined by the presence or absence of the by-products or co-products associated with the primary metal, as well by their grades, recoveries, and market prices.

For example, using a "Greenstone Mine Model" (Ref. 6, p. 5-1), the value of ore obtained from such a diverse mineral deposit has been estimated to be worth about $79 per short ton in 1981. This value can be converted to a "copper equivalent" amount by dividing the total value by the prevailing price of copper. Based on the 1981 average domestic producer price (f.o.b. Atlantic Seaboard) of about $0.75 per pound of refined copper, $79 is equivalent to about 105 lbs. of refined copper, which is equivalent to an average copper "grade" of 5.9 percent (assuming a mill recovery rate of 90%). Compared to the 1979 average yield of 8 lbs. of refined copper per ton of porphyry copper actually mined in the U.S. (Ref. 7, p. 13), this copper-equivalent grade of 5.9% represents a very "high grade".

Also, as can be seen in Figure 1, in the twenty-year period 1960-1980, the ore value estimated for the Greenstone Mine Model has been not only consistently higher, but also has been increasing at a higher rate than that estimated for the Duluth Gabbro Mine Model (Ref. 6, p.5-11).

Thus, there is a need to amend the state copper-nickel rules and regulations to address the possibility of a windfall profits situation. It is only fair and reasonable that the state, on behalf of the trust and tax-forfeited funds, share in any windfall profits derived from a deposit found on state-administered land.

III. PROPOSED "SPECIAL ROYALTY" RATE AND ITS IMPACTS

(A) Special Royalty Rate Structure

To address the possibility of a high-grade deposit, the Department proposes to add a special royalty rate to the state copper-nickel leases. This special royalty will be in addition to the existing base and additional royalty rates specified in 6

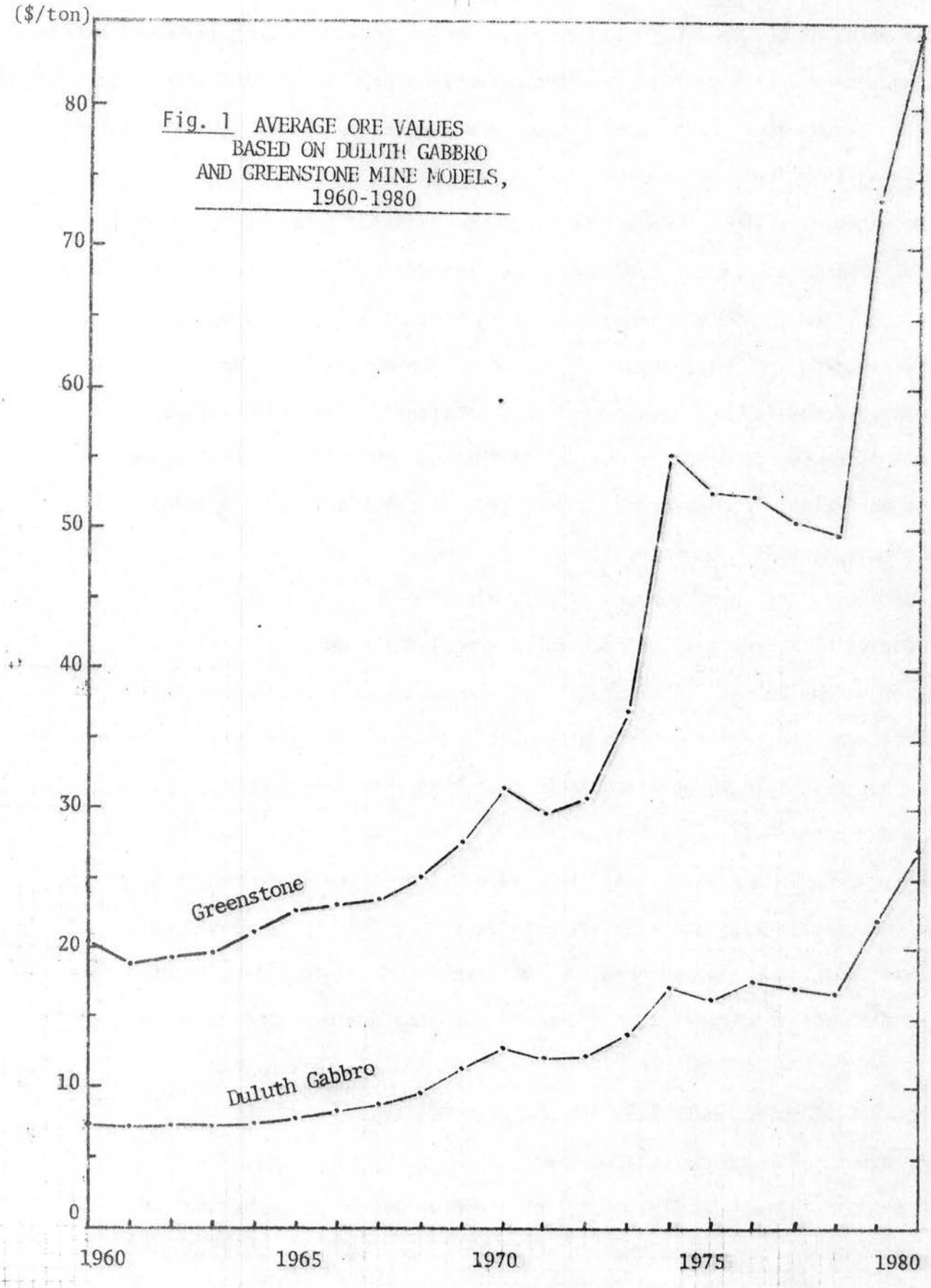


Fig. 1 AVERAGE ORE VALUES BASED ON DULUTH GABBRO AND GREENSTONE MINE MODELS, 1960-1980

(DNR/Minerals Div.)

MCAR Section 1.0094 and any bid royalty rates.

The special royalty will start to apply when the value of the metals and mineral products recovered in the mill concentrate exceeds the special royalty base. The amount of special royalty that will be payable for ore mined and removed from the leased lands will be calculated by multiplying the special royalty rate by that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base.

The special royalty rate will be .04% of that portion of the value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore that exceeds the special royalty base. Furthermore, the special royalty rate will be subject to increase or decrease each calender month by multiplying the special royalty rate by a fraction, the numerator of which will be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which will be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

The special royalty base will be $50.00 per ton of dried crude ore, subject to increase or decrease each calendar month. The special royalty base will be calculated each month by multiplying $50.00 by a fraction, the numerator of which will be that month's value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore, and the denominator of which will be that month's base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore.

The current month's value of the metals and mineral products recovered in the mill concentrate is determined by multiplying the total pounds of each metal and mineral product recovered during the month by that month's average market price per pound of each metal and mineral product. The base value of the metals and mineral products recovered in the mill concentrate is determined by multiplying the total

pounds of each metal and mineral product recovered during the current month by the respective average of the average market price per pound of each metal and mineral product for each of the twelve complete calendar months of 1981. (The third paragraph of 6MCAR Section 1.0094 (g) (9) specifies how the average market price of each metal and mineral product is determined.)

Finally, if the special royalty payable in any calendar month exceeds twenty percent of that month's value of the metals and mineral products recovered in the mill concentrate, the lessee may apply to negotiate a modification of the special royalty rate for the amount exceeding such twenty percent. Any modification of the lease terms must be approved by the State Executive Council.

(B) Special Royalty Formula

Let VB denote the base value of the metals and mineral products recovered in the mill concentrate, and VC denote the value of the metals and mineral products recovered in the mill concentrate in the current period. The proposed amendment defines the portion of the current ore value subject to special royalty (SR) treatment as that which exceeds $50 per ton of dried crude ore, with such $50 subject to increase or decrease by the ratio of VC/VB. Mathematically,

$$\text{Portion of VC subject to SR} = VC - 50(VC/VB) \quad \ldots\ldots\ldots\ldots\ldots (1)$$

The proposed special royalty rate (SRR) is .0004 times that amount of the current ore value that exceeds $50 per ton of dried crude ore, with such rate subject to increase or decrease by the ratio of VB/VC. This may be expressed as follows:

$$SRR = .0004(VB/VC) \times \left[VC - 50(VC/VB)\right] \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

The special royalty amount payable is then obtained by multiplying the said SRR (equation 2) by the portion of VC subject to special royalty treatment (equation 1). Mathematically,

$$\text{Special Royalty Payable} = .0004(VB/VC) \times [VC - 50(VC/VB)] \times \left[VC - 50(VC/VB)\right] \quad \ldots\ldots\ldots (3)$$

Mathematically, this equation can be further reduced to: Special Royalty = $.0004(VB - 50)^2$. However, we have chosen to use equation (3) for our amendment language because it explains the components and reasoning of the proposed special royalty amendment.

Finally, when the special royalty amount due for any calendar month exceeds 20% of that month's value of the metals and mineral products recovered in the mill concentrate, the lessee may apply to negotiate a modification of the special royalty rate for the amount exceeding such 20%. Any such modification of the lease must be approved by the State Executive Council.

(C) Computation of Special Royalty Rate: An Illustration

For the purpose of illustrating the computation of the proposed special royalty rate, the following assumptions are made:

-Amendment to NR 94 becomes effective in June 1982,

-State Lease issued October 15, 1982,

-Bid royalty rate: 2%,

-Base and additional royalty rate: 2.25% (ore mined by underground methods, second ten-year period of lease),

-Average market prices of recovered metals in 1981 ("base" period) and in 1995 ("current" period) are as follows:

Metals Contained In ore	Expected Recovery per ton of ore(1)	Average Market Prices of Refined Metals 12 Months of 1981(2)	January 1995 (assumed)
copper	23.94 lbs	$0.75/lb	$3.38/lb
zinc	113.28 lbs	$0.45/lb	$1.62/lb
silver	3.88 tr. ozs.	$10.52/tr. oz.	$55.70/tr. oz.

(Footnotes (1) & (2) are on top of page 12)

(1) Based on Kidd Creek Mine Model as discussed in Inter-Agency Task Force Report on Base Metal Mining Impacts, published by Minn. DNR, Jan. 1973, Table 5.1, p. 5.3, assuming concentrate recovery rates of 90% for copper, and 80% for zinc and silver.

(2) Actual 12 month averages as quoted by Engineering and Mining Journal. Copper price is that quoted for U.S. producer, FOB Atlantic Seaboard.

First, the current value (VC) of the metals and minerals recovered in the mill concentrate is calculated by multiplying the total quantity of each metal recovered by its respective average market price in January of 1995:

$$VC = (\$3.38 \times 23.94) + (\$1.62 \times 113.28) + (\$55.70 \times 3.88)$$

$$= \underline{\$480.55}$$

Secondly, to obtain the ore's base value (VB) of the metals and mineral products recovered in the mill concentrate, the same quantities of the respective metals and mineral products recovered in January of 1995 are now multiplied by their respective average of the average market price for each of the twelve calendar months of 1981:

$$VB = (\$0.75 \times 23.94) + (\$0.45 \times 113.28) + (\$10.52 \times 3.88)$$

$$= \underline{\$109.75}$$

Thirdly, the special royalty base (SRB) is calculated by multiplying $50 by the fraction of the current value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore over the base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore (VC/VB):

$$SRB = \$50.00 \times (\$480.55/\$109.75) = \underline{\$218.93}$$

Fourthly, the special royalty rate (SRR) is calculated by multiplying .04% by the fraction of the base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore over the base value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude

ore (VB/VC), then multiplying the resulting product by the amount of the current value of the metals and mineral products recovered in the mill concentrate from each ton of dried crude ore which exceeds the above SRB:

SRR = .0004 x ($109.75/$480.55) x ($480.55 - $218.93) = .023900

Fifthly, the total minimum royalty payable on the one ton of ore mined would be calculated as follows:

		% of Total
Base royalty rate x VC = .0225 x$480.55.....	$10.81	39
Additional royalty rate x (VC-$17) = .0225 x ($480.55 - $17.00).....	$10.43	38
Special royalty rate x (VC-SRB) = .0239 x ($480.55 - $218.93).....	$ 6.25	23
TOTAL ROYALTY PAYABLE (w/o bid)...	$27.49	100

Finally if the bid rate is 2%, total royalty payable would be:

		% of Total
Base royalty.....	$10.81	29
Additional royalty.....	$10.43	28
Special royalty.....	$ 6.25	17
Bid royalty (= .02 x $480.55).....	$ 9.61	26
TOTAL ROYALTY PAYABLE (with bid).....	$37.10	100

(D) Impacts of Special Royalty on Total State Royalty Schedule

With the adoption of the proposed special royalty amendment to address the possibility of a windfall profits situation, the state's total royalty will consist of four elements: the base royalty, the additional royalty for ore value

exceeding $17.00 per ton, the special royalty discussed above, and any bid royalty. The impact of the special royalty provision may be seen in Figures 2,3,4, and 5.

These graphs show that above the $50 ore value, the special royalty is an increasing factor in the total royalty schedule. They also show that when the SR is equal to 20% of the value of the metals and mineral products recovered in the mill concentrate, it makes up about 72% to 83% of total royalty, depending on the relevant mining methods and ten-year lease period for which royalties are computed. Figure 5 shows the total royalty payable when there is a bid royalty of 2.0%.

(E) Impacts of Indexing Special Royalty

As Figure 6 shows, four distinct, but related consequences will result from indexing the special royalty base and the special royalty rate to reflect price changes in the metals market.

(1) The special royalty base fluctuates proportionately with metal prices. For example, if ore value rises by 50% between the base period and the current period, the special royalty base will rise from $50 to $75; and if ore value falls by 50%, the special royalty base will fall exactly in the same proportion, to $25.

(2) The effective special royalty rate, as defined in equation (2) on page 10, will remain constant throughout the life of the lease, reflecting the rate it would be at the time when the amendment first becomes effective: that is, .04% per each 1981 dollar of that portion of ore value exceeding the special royalty base.

(3) The point at which the special royalty equals 20% of the value of the metals and mineral products recovered in the mill concentrate also fluctuates with metal prices. As shown by Figure 6, if the royalty schedule is not indexed, it takes an ore value of $596/ton for the special royalty amount to equal 20% of the value of the metals and mineral products recovered in the mill concentrate. However, with the proposed indexing of the special royalty, if the ore value appreciates by 50%, the 20% point will not be reached until the ore value rises to $894/ton (a 50% increase from $596). Conversely, if the ore value depreciates by 50%, then the ore value

Fig. 2 MINNESOTA STATE CU-NI ROYALTY SCHEDULES

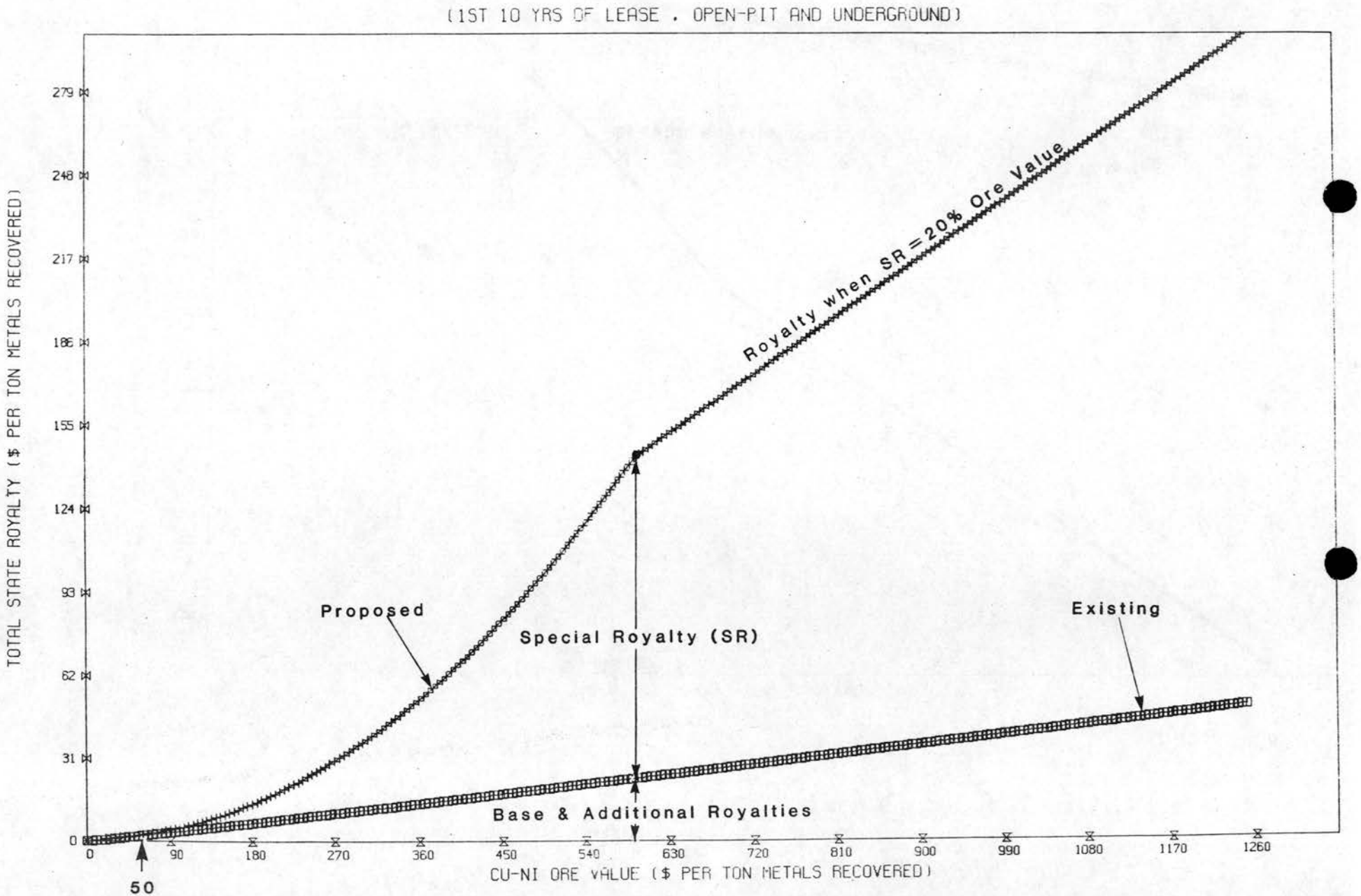


Fig. 3 MINNESOTA STATE CU-NI ROYALTY SCHEDULES

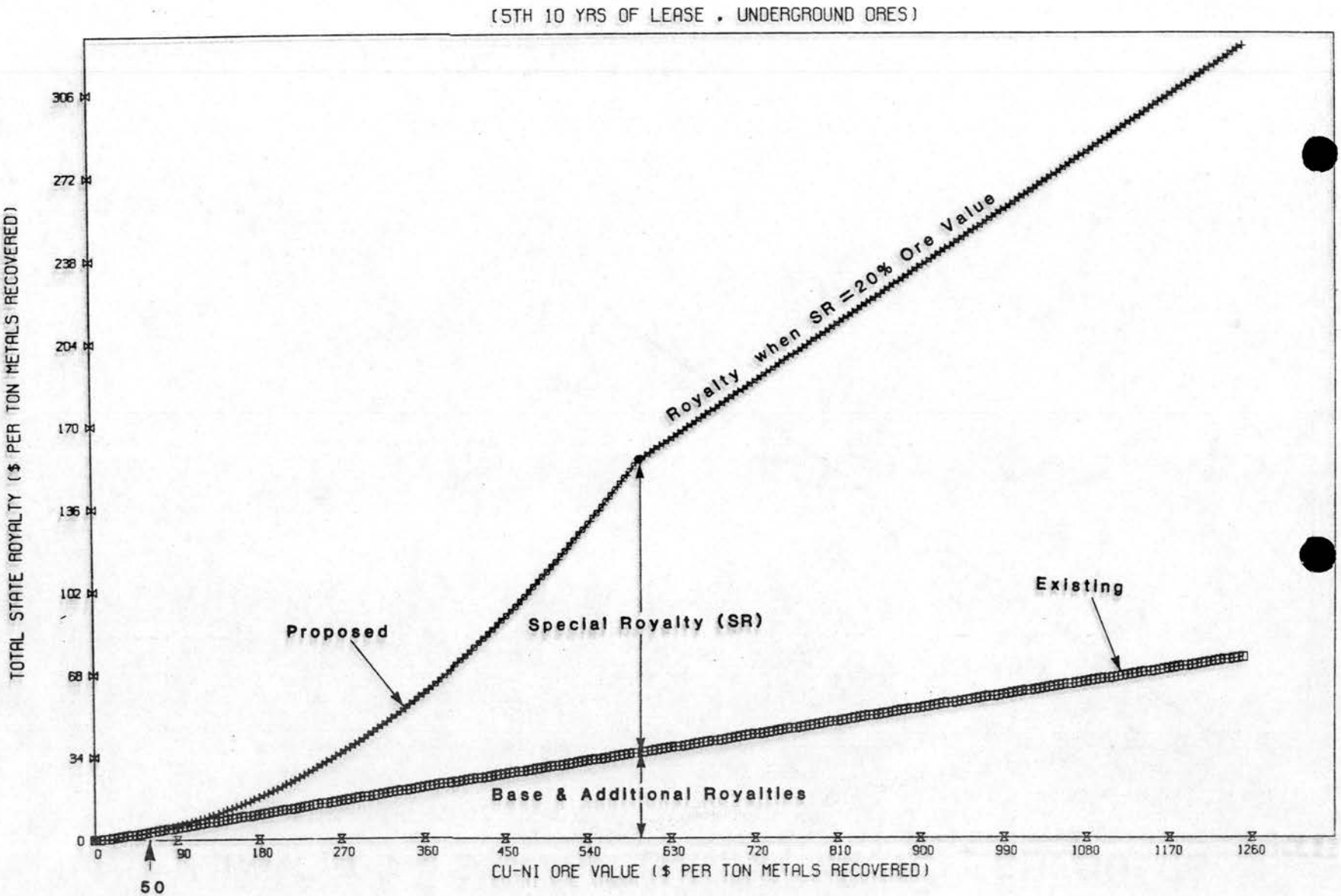


Fig. 4 MINNESOTA STATE CU-NI ROYALTY SCHEDULES

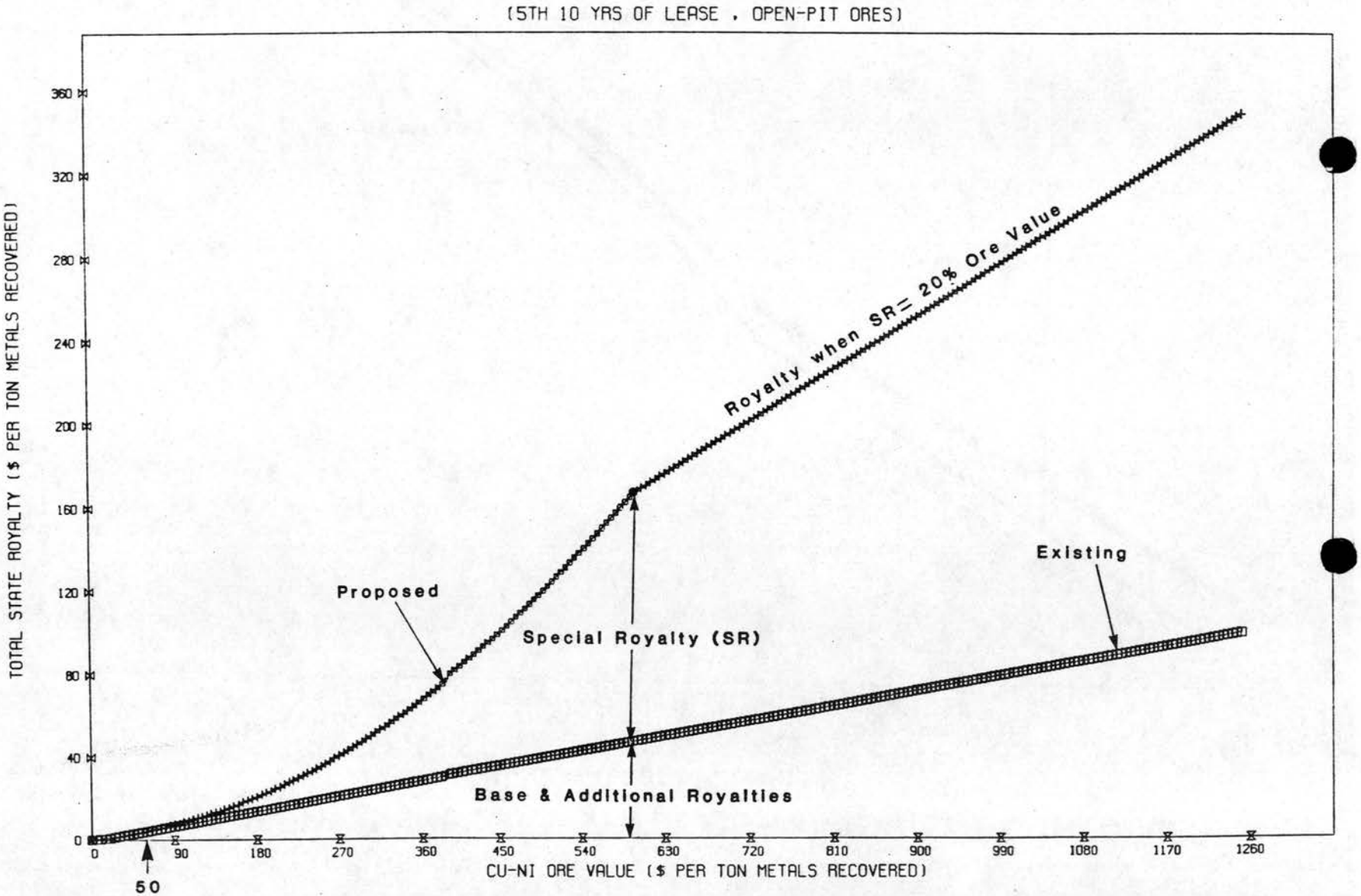


Fig. 5 **PROPOSED MINNESOTA STATE CU-NI ROYALTY SCHEDULES**
(with & without bid royalty)

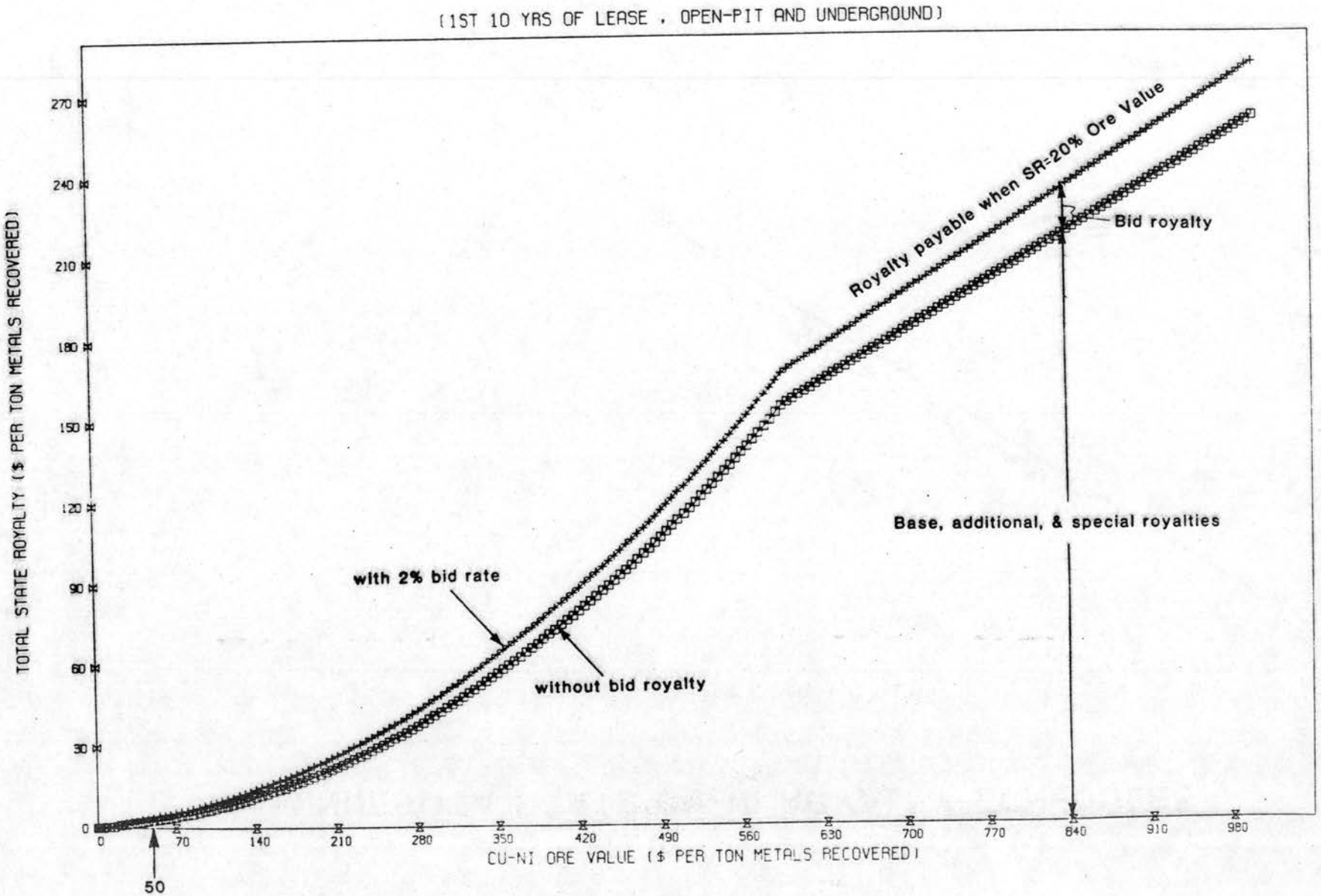
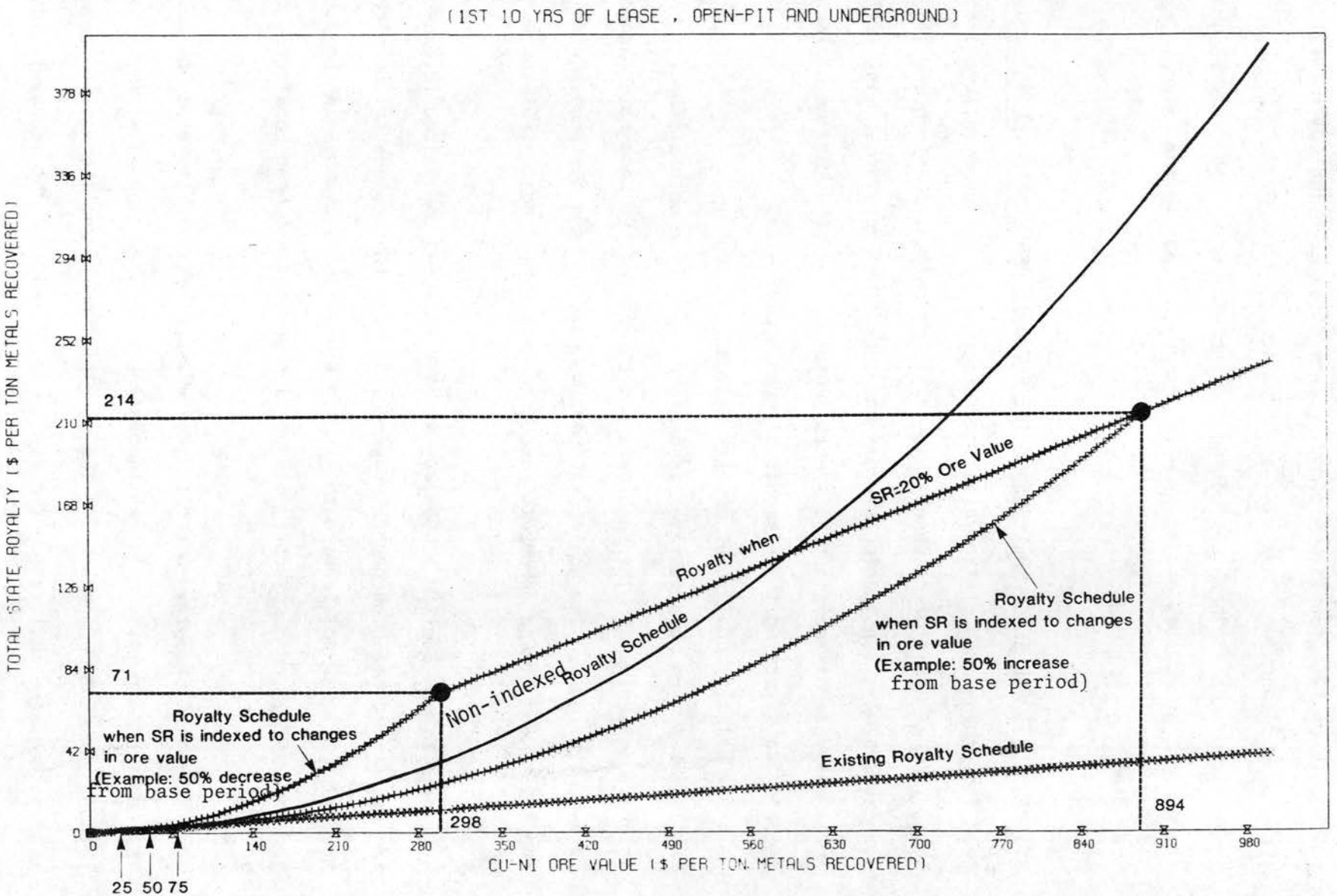


Fig. 6 **IMPACT OF INDEXING SPECIAL ROYALTY (SR) RATE ON MINNESOTA STATE CU-NI ROYALTY SCHEDULE**



would only be $298/ton (a 50% decrease from $596) when the 20% point is reached under the proposed indexing.

(4) Between the base period and the current period, the rate of change, if any, in the special royalty amount payable is proportional to the rate of change in the ore value.

IV. ANALYSIS AND REASONABLENESS OF THE PROPOSED "SPECIAL ROYALTY" PROVISION

The proposed special royalty provision, to be included in future copper- nickel leases, is a result of research in mineral economics literature and study of other non-ferrous metals producing states' and countries' practices. The following is a brief analysis of the proposed special royalty provision, and an explanation of the reasons for selecting the elements of such a provision.

(A) Existing Additional Royalty Rate at $17/ton

The existing royalty rate structure provides for an additional royalty rate which is equivalent to the base rate and changes as the base rate changes during the term of the lease. The additional royalty rate becomes applicable when the value of the metals and mineral products recovered in the mill concentrate exceeds $17 per ton of dried crude ore.

When 6 MCAR Section 1.0094 was adopted in 1966, ore valued in excess of $17 per ton was considered high-grade. However, $17 per ton ore was not considered "bonanza" ore. The $17 was not indexed to fluctuate with price changes in the economy, and, for the past 10 or more years, $17 per ton ore has not been considered a high-grade ore.

The State Executive Council and the Department of Natural Resources have viewed the additional royalty rate, which commences at $17, as a part of the basic royalty rate of the state copper-nickel lease. In other words, the minimum royalty rate for a state copper-nickel lease, for the first 10 years of the lease, is just under 4% of the value of the metals and mineral products recovered in the mill concentrate. This

is considered to be a fair and equitable rate, and no change is proposed to the existing additional royalty rate provisions of the copper-nickel lease. The proposed special royalty rate is being added to address the possibility of a windfall profit situation.

(B) The Special Royalty Base

To determine the value of ore above which the proposed special royalty becomes effective, one has to analyze the three components of this value: the grade of ore, the price of refined metals, and the recovery rate at the concentrator[1]. If copper ore is used as an example, then the ore value at which the special royalty becomes applicable, (the special royalty base) will have to be within the high-grade region of copper ore grade in the U.S.

The evidence exhibited by the historical average grade of copper ore mined in the U.S. (see Table 1) shows that the average amount of copper recoverable from copper ore sold and treated has been steadily declining since 1889. Further, according to the Bureau of Mines (Ref. 7, p. 12), some copper deposits currently under development contain an average of only about 8 lbs. of copper per ton (or 0.4% grade) with a cut-off grade of 4 lbs. (or 0.2% grade).

Table 1 - AVERAGE GRADE OF COPPER ORE MINED IN THE U.S. 1880-1980[2]

1880 .....3.0%	1911-20 .....1.7%	1951-60 .....0.9%
1889 .....3.3%	1921-30 .....1.6%	1961-70 .....0.7%
1902 .....2.7%	1931-40 .....1.6%	1971-80 .....0.6%
1906-10.....2.1%	1941-50 .....1.0%	

(2) Figures for 1880 to 1930 from Ref. 1, p.224. Those for 1931 to 1980 from USBM.

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(1) Although the recovery rate at the concentrator can change due to technological advances, we are assuming that it will remain constant for this brief explanation of the determination of the base value.

Although "high" or "low" is a relative concept, given the present average and declining grade of copper ore in the U.S. (.47% in 1980), an ore tenor of 3.0% copper equivalent and above is considered as high grade. Assuming a constant rate of recovery, a higher grade gives a higher ore value at a given price level.

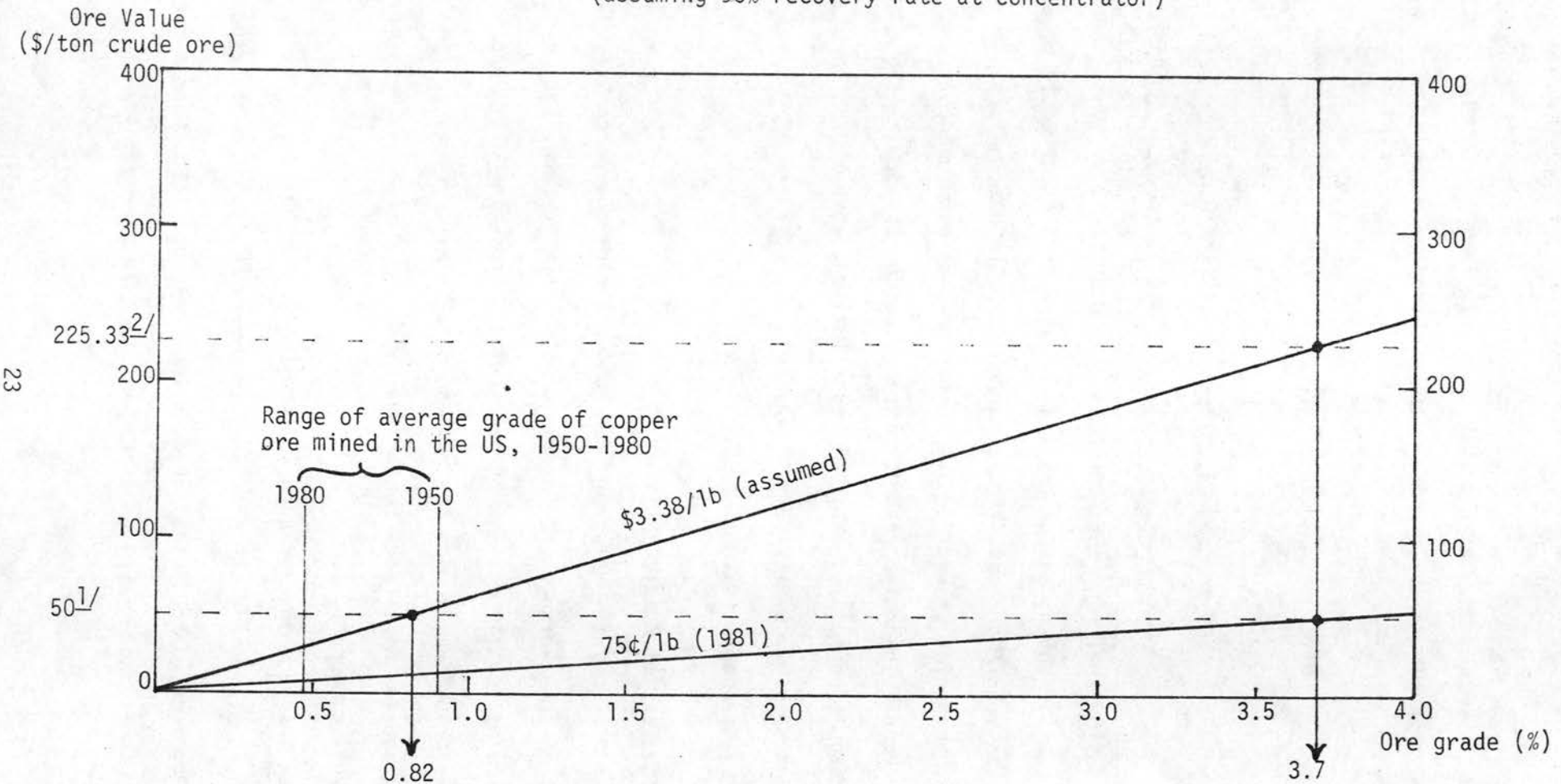
The second component of ore value is the producer price of refined metal excluding delivery charges. Assuming a constant rate of recovery, a higher price gives a higher ore value at a given ore grade.

Again using copper ore as an example, this interaction between price and grade can be seen in Figure 7, which describes the value-grade relationship for copper ore. As this chart shows, at the 1981 domestic average price level of refined copper, f.o.b. Atlantic Seaboard, of $0.75/lb (which is also the average for the last five years), the proposed special royalty base of $50/ton, which corresponds to a grade of 3.7%, falls within the high-grade region of copper ore. It therefore seems reasonable to use $50/ton as the base value of the proposed special royalty provision.

The average price for other base metals has increased in the last twenty years. For the primary base metals, the increases basically reflect the increases in production costs. The prices for the precious metals also reflect production cost increases, and additionally reflect an inherent speculative or investment demand element.

Traditionally, precious metals are considered as real "stores of value," and consequently, there are speculation-induced changes in their prices, both in the futures market and the spot market. For example, the value of ore based on the Greenstone Mine Model has risen from about $21/ton in 1960 to about $79/ton in 1981, or about 276% in twenty-one years. Some of this increase is due to the extraordinary, speculation-induced increase in the prices of precious metals, the recovered quantities of which make up only a very small amount of ore, as shown by Table 2 below:

Fig. 7 VALUE-GRADE RELATIONSHIP FOR COPPER ORE
AT DIFFERENT REFINED COPPER PRICES
(assuming 90% recovery rate at concentrator)



1/Proposed Special Royalty Base at 1981 copper price, $0.75/lb.

2/Proposed Special Royalty Base when copper price increases to $3.38/lb.

TABLE 2 - GRADES & PRICES OF METALS CONTAINED IN GREENSTONE MINE MODEL

Metals Contained In Ore	Expected Recovery per Ton Ore	Average Unit Prices[1] 1960	1981	Percentage Price Changes
Copper	34.74 lbs	$ .32/lb	$ .75/lb	134 %
Nickel	2.52 lbs	.74/lb	3.43/lb	364
Zinc	61.60 lbs	.13/lb	.45/lb	246
Lead	.72 lbs	.12/lb	.37/lb	208
Gold	.02 tr.oz.	35.0/tr.oz	459.61/tr.oz.	1213
Silver	.704 tr.oz.	.91 tr.oz.	10.52/tr.oz.	1056

(1) Annual averages, from Engineering & Mining Journal, various issues.

As discussed above, copper ore with a value of $50/ton would be a high grade copper ore in today's market. The presence of other base metals associated with the copper ore, regardles of whether the copper ore was high grade in and of itself, could also result in a high grade copper-equivalent ore due to the grades and prices of those associated metals. With either situation, when the value of the ore exceeds the proposed special royalty base of $50/ton, the ore will be subject to the proposed special royalty provisions.

(C) The Special Royalty Rate

The special royalty rate, of four hundredths of one percent (.04%) of that portion of the ore value exceeding the special royalty base, has been determined after reviewing royalty systems of base metal producing state and foreign countries and reviewing various studies on the base metal mining industry. In its review, the Department considered various percentage rates and discussed these rates with the State Executive Council.

The states surveyed included Arizona, Utah, New Mexico, Montana, Colorado and Idaho. These states are the principal producers of copper, lead, zinc and precious metals. The foreign countries surveyed included Australia, Canada and Papua New Guinea. Most of these royalty systems have a graduated royalty scale schedule, with

or without a maximum rate, or a flat-rate system with or without escalation. None of these royalty systems as yet have provision for a special royalty rate covering an unusually high grade mineral deposit of a significant size.

The studies reviewed concerned the profitability of the base metal mining industry and physical, financial and economic conditions facing the industry. These studies discussed typical average and cut-off grades of ore mined, historical rates of returns on equity and on investment in the base metal mining industry in the United States, and historical cost and price trends of the industry. (See Refs. 5,7,8 and 9). Briefly, the general outlook for copper and associated metal mining is favorable and the United States will probably remain a major producer. However, the low grade of U. S. copper ores, the high cost of labor as compared with grades of ore and costs in foreign countries, and heavy borrowing by some of the industry have reduced profitability.

After reviewing these studies and royalty systems, the Department reviewed information on some of the known greenstone deposits of Canada and Wisconsin. As indicated previously, it is not possible to draw an exact definition of a high grade deposit versus a "bonanza" deposit. However, the Kidd Creek Mine is generally described as a "bonanza" deposit. As shown on page 11, the Kidd Creek Mine has an average value in 1981 of $109.75 per ton of crude ore. Other "bonanza" deposits in the greenstone formations of Canada include the Sturgeon Lake (Falconbridge) Mine and the Lyon Lake Mine. These mines had, respectively, an average value in 1981 of $177.40 and $132.54 per ton of dried crude ore.

With this data in mind, the Department looked at different possible royalty rates, including .02% through .08%. The goal was to find a special royalty rate that gradually increased with the value of the ore and that would result in a reasonable additional royalty rate for a "bonanza" deposit. The underlying considerations were to provide that the state receive a fair share in a windfall profits situation without the rate being onerous to the operator and without deterring competitive

bidding for leases.

The special royalty rate of .04% was selected since it most nearly meets these goals. For example, with an ore value of $130.00 per ton, which is certainly "bonanza" grade ore in today's metals market, the proposed special royalty will constitute approximately 2% of the total value of the concentrated ore. The amount of 2% has been deemed reasonable in the past for royalty stages in the state copper-nickel leases, as evidenced by the 2% of ore value for the base, the additional 2% for ore value exceeding $17 per ton, and an additional 2% of ore value due to the time progression of the lease.

The other possible rates, ranging from .02% to .08%, were rejected because they did not adequately meet these goals. The lower rates do not add a significant amount of royalty for a bonanza deposit situation, and the higher rates tended to increase so severely that they could become burdensome to a bonanza deposit operation.

The rate of .04% is equivalent to a 1% increase in special royalty per each $25 increase in the ore value above the special royalty base. Rather than have a rate which increased an additional 1 percent or a specified fraction thereof at a certain value of the ore, it was decided that a gradual increase was more equitable for the mining operator and the state. A gradually increasing rate more clearly reflects the relation of royalty to the value of the ore.

The proposed special royalty rate will have a minimal impact on high grade ore worth slightly over $50.00 per ton; and the rate will gradually have a larger impact as the value of the ore increases. Based upon the above described considerations and goals, the proposed special royalty rate of .04% is reasonable.

(D) Indexing of the Special Royalty Rate and Base

The rationale for subjecting the special royalty base to an indexing procedure as proposed is that the effect of price changes in the relevant metals market should be brought to bear on the definition of "high-grade ore value." What is considered as high-grade ore at today's prices may not be true ten or twenty years in the future.

Returning to our previous example, let's suppose that the domestic producer price of refined copper (or "copper equivalent") will rise to $3.38/lb in some future time. If the proposed special royalty base of $50 per ton of dried crude ore remains unaffected by this price change, and assuming a constant recovery rate of 90%, then $50 will in fact correspond to only 0.82%, as shown in Fig. 7, which obviously can hardly be called a high grade.

Therefore, to qualify as high-grade ore value, the special royalty base should be made to change proportionately with the change in the ore value between the present time and the date of special royalty computation. Using the above illustration again, the adjusted special royalty base will then become:

$$\$50 \times \frac{\text{Future ore value/ton}}{\text{1981 ore value/ton}} = \$50 \times \frac{(\$3.38)}{(\$0.75)} = \$225.33$$

Further calculations (*) show that this adjusted special royalty base can be readily translated into a copper grade of 3.7%, which again falls within the high-grade ore region.

The indexing procedure calls for making the special royalty rate constant throughout the life of the lease, reflecting the true rate as it would be at the time when the amendment first becomes effective; that is .04% per each 1981 dollar of that portion of ore value exceeding the special royalty base. For example, suppose a high-grade deposit is found and developed, and metal prices increase fourfold between the base period and that current period. If the special royalty rate is not indexed, the lessee will have to pay an effective rate of .64%, instead of .04% of each dollar of the ore value exceeding the special royalty base. Conversely, if the special royalty rate is not indexed and metal prices decrease twofold, the state will receive only .01% (instead of .04%) of each dollar of the ore value exceeding the special royalty base.

(*) Ore grade = $\frac{\text{Value per short ton}}{\text{price} \times \text{recovery rate} \times \text{2000 lbs}} = \frac{\$225.33}{3.38 \times .90 \times 2000} = 3.7\%$

(E) Authorized Negotiations When Special Royalty Reaches 20% of Ore Value

The need to set a level of special royalty at which negotiations between state and lessee are authorized arises from considerations of operating factors other than just the grade of ore, one of the more important among which being the industry's profitability. In fact, without such a level, the proposed royalty could, theoretically, exceed 100% of the value of the metals and and minerals recovered in the concentrate should a high-grade deposit be found. However, it seems extremely unlikely that the level will be ever reached.

The Comstock Lode, Nev., discovered in 1859, and the Goldfield district Nev., discovered in 1902 are cases in point. Both were extremely rich gold- silver deposits. For example, it has been reported that in one shipment from Goldfield in 1907, one single carload of ore yielded gold valued about $12,800 per ton (Ref. 3, p. 525). Using our proposed special royalty provision but without a ceiling, the special royalty alone for this ore would exceed $65,000 per ton or 5 times that of the ore value.

The twenty-percent level itself has also been selected after considerations of the historical rates of return of the base metals industry in the U. S. For example, for the ten-year period 1969-78, copper mining companies have earned an average rate of return on equity which is roughly 37% lower than that of U.S. manufacturing (Ref. 8, p. 15). In view of the larger risk involved in mining as compared to manufacturing, this is significant. Normally, geologic uncertainty, long lead times in development (that tie up large amounts of capital), socio-economic concerns, and volatility of certain metals' prices tend to dictate that base metal mining yield a greater rate of return than the generally less risky manufacturing ventures.

It should also be noted that, to avoid possible interference with the bidding process, the level of 20 percent is set on the special royalty alone, and not on the total royalty payable.

CONCLUSION

The state, as a landowner, has a legitimate right to share in the windfall profits derived by the mine operator from the discovery and development of a very high-grade mineral deposit on state lands, or from unusual price rises due to speculation or mineral shortages in the market. Also, the discovery of a "bonanza" deposit in Minnesota is a possibility. The state copper-nickel lease does not adequately address these windfall situations, so there is a need to amend the lease to do so.

The proposed special royalty becomes an increasing factor in the amount of total royalty payable as ore value increases. The special royalty base is indexed to fluctuate with metal prices to reflect the changes in the economy from the present time. The special royalty rate is indexed to metal prices to remain constant throughout the life of the lease, reflecting the rate as it would be at the time when the amendment first becomes effective. Finally, to allow consideration of operating factors other than just the grade of the ore, the lessee is eligible to negotiate a modification of the special royalty rate, if the amount of special royalty ever exceeds 20% of the value of the metals and mineral products recovered in the mill concentrate, for the amount exceeding such 20%. Based on its research and studies described herein, the Department of Natural Resources believes that the proposed special royalty is needed, reasonable and should be adopted.

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In the Matter of the Proposed Adoption of Amendments to the Rules of the State Department of Natural Resources Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

STATEMENT OF COMPLIANCE WITH RULEMAKING PROCEDURES

I, Assistant Attorney General Philip J. Olfelt, do hereby declare that I have examined the proposed amendments to the rules and all related documents and that, based on my examination and my personal familiarity with the applicable procedures, the Administrative Procedure Act and the rules of the Attorney General have been followed. Any exceptions are noted below.

Philip Olfelt
Assistant Attorney General

Dated: July 14, 1982

In the Matter of the Proposed Adoption of Amendments to the Rules of the State Department of Natural Resources Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

AFFIDAVIT OF MAILING NOTICE OF SUBMISSION TO THE ATTORNEY GENERAL

STATE OF MINNESOTA)
) SS
COUNTY OF RAMSEY)

Donna M. Holtz, being first duly sworn deposes and says:

That on the 22nd day of July, 1982, at the City of St. Paul, County of Ramsey, State of Minnesota, she served the attached Notice of Submission to the Attorney General by depositing in the State of Minnesota Central Mail System for United States mailing at said City of St. Paul, a copy thereof properly enveloped, with postage prepaid, on all persons and associations who requested notice that the amendments to the above-entitled rules have been submitted to the Attorney General.

Donna M. Holtz

Subscribed and sworn to before me this 22 day of July, 1982.

M. E. McDonald

M. E. McDONALD
NOTARY PUBLIC-MINNESOTA
RAMSEY COUNTY
My Comm. Expires Sept. 2, 1983

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

In the Matter of the Proposed Adoption of Amendments to the Rules of the State Department of Natural Resources Governing Permits to Prospect for and Leases to Mine Copper, Nickel and Associated Minerals

NOTICE OF SUBMISSION TO THE ATTORNEY GENERAL

Pursuant to your request and in accordance with Minnesota Statutes, section 15.0412:

PLEASE TAKE NOTICE that the amendments to the above-captioned rules have been submitted to the Office of the Attorney General on this date, July 22, 1982, for review as to form and legality. Pursuant to 1 MCAR § 1.206B, the Attorney General will not approve the amendments to the rules for at least 8 calendar days after receipt to allow any person or association time to comment on the legality of the amendments to the rules, after which that office will complete its review. If you desire to comment on the legality of the amendments to the above-captioned rules, you should direct your comments to the Office of the Attorney General, G-25 State Administration Building, 50 Sherburne Avenue, Saint Paul, Minnesota 55155, telephone (612) 296-7030. Please note that the above-cited rule of the Attorney General also provides that a copy of any written comments submitted to the Attorney General must be submitted simultaneously to this agency.

There were no changes made in the proposed rules after publication in the State Register and before submission to the Attorney General other than correction of the following two typographical errors found in the State Register for May 10, 1982:

(1) Page 1844, paragraph 8.a., line 2, "and" was corrected to "an";

(2) Page 1845, paragraph 8.b., line 2, "hereinafter" was corrected to "hereafter."

If you have any questions, you may contact: Elwood F. Rafn, Department of Natural Resources, Box 45, Centennial Office Building, 658 Cedar Street, St. Paul, Minnesota 55155, telephone (612) 296-4807.

Steven G. Thorne
Deputy Commissioner
Department of Natural Resources