Head Office: \$80 - 789 West Pender St. Vancouver, B.C. V6C 1H2 Tel (604) 669-3614

Subsidiary: U.S. Chrome Inc., U.S. Nickel Corp. PRECIOUS STRATEGIC METALS

### NEWS RELEASE

April 9, 1987

It is my pleasure to announce to our Shareholders that the official signing of our Company's participation in the low-carbon ferrochromium smelter known as the "SHERWOOD Project" took place in Portland, Oregon, on Friday, April 3, 1987. This smelter is to be constructed at the International Port of Coos Bay, Oregon, at a cost of \$24,000,000 (U.S.).

Pacific Power and Light Company is funding the project in the amount of \$2,000,000 (U.S.) in preferred equity. An incentive electrical supply agreement also has been negotiated subject to the approval of the Oregon Public Utility Commission. This agreement provides a price discount as well as funding for transmission, substation and other electrical facilities in the amount of approximately \$4,000,000 (U.S.). This smelter will use 25/50 Megawatts of energy.

Oregon Governor Neil Goldschmidt, working in concert with the State Economic Development Department, under the direction of Chairman Roger Smith, will co-ordinate the state's major financial contribution to the project. Both Governor Goldschmidt and Chairman Smith have been extremely co-operative in bringing this new industry to Oregon.

The Oregon International Port of Coos Bay is also making a major financial contribution in the form of a fully-serviced site, including a deep-water dock on very attractive terms for the first six years. Much of the credit for this goes to Mr. Frank G. Martin, Jr., the Port's General Manager, who has worked for months to bring the project to Coos Bay.

Head Office: 880 789 West Pender St. Vancouver, B.C. V6C 1112 Tel. (604) 669 3614

Subsidiary: U.S. Chrome Inc., U.S. Nickel Corp. PRECIOUS STRATEGIC METALS

NEWS RELEASE

March 17, 1987

### Formation of SHERWOOD Pacific

WOODING a New Jersey corporation, owner and developer of a proven new high-technology electric melting system which is 93% thermally efficient and produces no environmental pollution, announces formal agreement with P.S.M. Technologies Inc., of Vancouver, B.C., to build a smelting and refining plant in the Pacific Northwest to produce 30,000 tonnes per year of low-carbon ferrochromium by a patented process.

Long term, take or pay contracts for 90% of the initial product capacity have already been signed with major international corporations.

P.S.M. will be a substantial stockholder (30%) in SHERWOOD Pacific and will have the exclusive right to supply chrome concentrate to the venture.

Location of the 25/50 megawatt smelter will be determined this month. Deep-water sites in Oregon and British Columbia are being evaluated.

Gross sales of the low-carbon ferrochromium product start at (U.S.) \$45,000,000 annually and will rise to (U.S.) \$60,000,000 in ten years. Gross profit is in excess of 35% of sales.

P.S.M. Technologies Inc. owns and has under option from Del Norte Chromium and Asamera Minerals (U.S.) Inc. all of the important "Chrome" deposits in Southern Oregon and Northern California.

Engineering studies are progressing as to concentration plant and profit potential on the deposits.

Plans for total financing of this (U.S.) \$24,000,000 project by corporations, governments and with sophisticated investors, are well advanced at this date.

ON BEHALF OF THE BOARD

WILLIAM G. WOOD, PRESIDENT

This News Release is prepared by the Management of the Company and the Vancouver Stock Exchange has neither approved nor disapproved the contents herein.

Head Office: 880 - 789 West Pender St. Vancruiver, B.C. VGC 1112 Tel. (601) 669-3614

"PROJECT CHROMIUM SMELTER"

**PRECIOUS** 

STRATEGIC

**METALS** 

Substitlary: US Chrome loc. US Nickel Corp

### De la control de

To Produce Low Carbon Ferro Chromium

The Company is pleased to announce that on April 11th, 1987, the corporate structure of SHERWOOD Pacific Limited was initiated. This company is formed to construct and operate a Chromium Smelter in Coos Bay, Oregon, to produce low carbon ferro chromium.

P.S.M. Technologies Inc. has a 31.5% interest in the project and has the exclusive right to supply all raw materials required.

The Board of SHERWOOD was elected as follows:

SIR MONTE FINNISTON
F.Eng. FRS Phd. Metallurgy
Retired, C.E.O. British Steel
Deputy Chairman Nuclear Research Centre,
Harwell U.K.
As Chairman of the Board

JOSEPH B. HOWE

BS Physics MS Physics

Group Vice-President Radio Corporation of America

Oversees two plants in New Jersey

As Director and Secretary

GEORGE E. KRUGER

BS Geology Dartmouth

MS Economic Geology U. of Minnesota

AMP Harvard Business School

20 years as Senior Vice-President of Chase Manhattan

Bank in charge of Mineral, Metal Development

Division of the Bank.

As Director.

WILLIAM G. WOOD

President of P.S.M. Technologies Inc. 30 years experience in exploration and development of natural resources.

As Director.

PATRICK J. WOODING

B.Sc. (Eng LOND), C.Eng. FIMechE, FIEE

Past Director of Engineering, Lectromelt, President of
Consarc and has been responsible for many of the
advanced melting projects in the United States and
overseas for the past 25 years.

As President and C.E.O.

### BIOGRAPHY OF MERTON C. FLEMINGS

Merton C. Flemings received his S.B. degree from MIT in the Department of Metallurgy in 1951. He received his S.M. and Sc.D. degrees, also in Metallurgy, in 1952 and 1954, respectively. From 1954 to 1956, he was employed as Metallurgist at Abex Corporation, Mahwah, New Jersey, and in 1956 returned to MIT as Assistant Professor. He was appointed Associate Professor in 1961, and Professor in 1969. In 1970, he was appointed Abex Professor of Metallurgy. In 1975, he became Ford Professor of Engineering and, in 1981, Toyota Professor of Materials Processing. He initiated and became the first director of the Materials Processing Center in 1979, and in 1982 he became Head, Department of Materials Science and Engineering.

Professor Flemings is active in undergraduate and graduate teaching and research in materials science and engineering. He is a member of the National Academy of Engineering and of the American Academy of Arts and Sciences. He is co-author of 210 papers, 19 patents, and two books in the fields of solidification science and engineering, foundry technology, and materials processing. He received the Simpson Gold Medal from the American Foundrymen's Society in 1961, and the Mathewson Gold Medal from the American Institute of Mining and Metallurgical Engineers in 1969. In 1977, he was awarded the Henri Sainte-Claire Deville Medal by the Societe Francaise de Metallurgie. In October 1978, he received the Albert Sauveur Achievement Award. 1970-71, he was overseas Fellow at Churchill College, Cambridge, and Visiting Professor at the Department of Metallurgy, Cambridge University. In 1980, he received the John Chipman Award from the American Institute of Mining and Metallurgical Engi-In 1984 he was elected an honorary member of the Japan Foundrymen's Society, and in 1985 received the James Douglas Gold Medal, also from the American Institute of Mining and Metallurgical Engineers. The Italian Metallurgical Association awarded him the Luigi Losana Gold Medal, 1986.

Professor Flemings' research and teaching concentrate on engineering fundamentals of materials processing and on innovation of materials processing operations. He has worked closely with industry and industrial problems throughout his professional career. He serves as corporate director, as member of the science and technology board, or as consultant to a number of large and medium sized companies. The focus of much of his current activities is the broadening and strengthening of the academic program of the Department of Materials Science and Engineering at MIT.

### Biography of Merton C. Flemings

Date of Birth: Place of Birth: September 20, 1929 Syracuse, New York

Education:

S.B., Metallurgy, Massachusetts Institute of Technology, 1951 S.M., Metallurgy, Massachusetts Institute of

Technology, 1952

Sc.D., Metallurgy, Massachusetts Institute of Technology, 1954

Professional Employment:

Metallurgist, American Brake Shoe Research Laboratory, Mahwah, New Jersey, 1954-1956

Massachusetts Institute of Technology:

Assistant Professor of Metallurgy, 1956-1961 Associate Professor of Metallurgy, 1961-1969 Professor of Metallurgy, 1969-

Abex Professor of Metallurgy, 1970-1975 Associate Director, Center for Materials Science and Engineering, 1973-1977 Ford Professor of Engineering, 1975-1981

Director, Materials Processing Center, 1979-1982

Toyota Professor of Materials Processing, 1981-

Head, Department of Materials Science and Engineering, 1982-

Honorary Memberships: Fellow, American Society for Metals, Elected 1976

National Academy of Engineering, Elected 1976 American Academy of Arts and Sciences, Elected 1980

Japan Foundrymen's Society, Elected 1984

Honors and Awards:

American Exchange Lecturer, International Foundry Congress, Brussels, 1958; Prague, 1963; Moscow, 1973

American Foundrymen's Society: Simpson Gold Medal, 1961; Hoyt Memorial Lecturer, 1964

American Institute of Mining and Metallurgical Engineers:
Mathewson Gold Medal, 1969
Howe Memorial Lecturer, 1974
John Chipman Award, 1980

James Douglas Gold Medal Award, 1985
American Society for Metals:
Henry Marion Howe Medal, 1973
Albert Sauveur Achievement Award, 1978
Italian Metallurgical Association:
Luigi Losana Gold Medal, 1986
National Aeronautics and Space Administration:
Certificate of Recognition, 1979
Cambridge University, England:
Visiting Professor, 1970-1971
Overseas Fellow, Churchill College, 1970-1971
Societe Francaise de Metallurgie:
Henri Sainte-Claire Deville Medal, 1977
Swedish Association of Physical Metallurgists:
Axel Hultgren Memorial Lecturer, 1975

## Professional Membership:

American Association for the Advancement of Science
American Association for Crystal Growth American Foundrymen's Society
American Institute of Metallurgical Engineers American Society for Metals
Institute of Metals, London, England
Professional Engineer, State of Massachusetts

U.S. Government and other Committee Chairmanships: Chairman, Advisory Committee of ARPA-sponsored joint industry-university steel casting program, 1973-1976

Chairman, National Advisory Board Committee on Electroslag Remelting and Plasma Arc Melting, 1974-1976

Chairman, Subcommittee on Electroslag Remelting, U.S.-U.S.S.R. Technology Exchange Agreement, 1974-

U.S. Chairman, U.S.-Japan Cooperative Exchange on Solidification Technology, 1976-

Chairman, National Materials Advisory Board (NMB), Committee on Plasma Processing of Materials, 1982-

Vice Chairman, DEPTH Committee, 1984-

#### Other Committees:

Solidification Committee, Institute of Metals Division, AIME, 1960-

Trustee, Training and Research Institute,
American Foundrymen's Society, 1966-1969
Trustee, Leicester Junior College, 1966-1970
Awards and Lecture Committee, AIME, 1969-1972
International Metallurgical Reviews Committee,

American Society for Metals, 1971-1974
Process Technology Committee, AIME, 1974
Howe Memorial Lecture Committee, AIME, 1974-1977
Process Modeling Activity of Mechanical Working
and Forming Division, ASM, 1978

Committee on Educational Policy, MIT, 1979-1981

AIME, Honors and Awards Committee, 1982ASM, Awards Policy Committee, 1983Committee on Undergraduate Education, Case
Western Reserve University, 1983International Editorial Board, "High Temperature
Materials & Processes", 1983-1986
National Research Council, Commission on
Engineering and Technical Systems, National
Materials Advisory Board, 1984Editorial Panel, "Metallurgical Science and
Technology", 1986-

Papers Published:

Approximately 205 in the fields of solidification science and engineering, foundry technology, and materials processing.

Books:

Foundry Engineering, H.F. Taylor, M.C. Flemings, J. Wulff; John Wiley & Sons, 1959.

Solidification Processing, M.C. Flemings; McGraw-Hill Book Company, 1974.

Solidification Technology, J.J. Burke, M.C. Flemings, A.E. Gorum, eds.; Brook Hill Publishing Company, Chestnut Hill, MA, 1974.

Patents:

Nineteen issued in the fields of solidification science and engineering, foundry technology, and materials processing.

Personal:

Wife: R. Elizabeth ten Grotenhuis-Flemings Children: Anne, Peter, Cecily, Elspeth

### APPENDIX 3

# STRATEGIC AND CRITICAL MATERIALS STOCK PILING ACT (P.L. 96-41, 50 U.S.C. 98 et seq.) as of September 30, 1985

SEC. 1. This Act may be cited as the 'Strategic and Critical Materials Stock Piling Act'.

### FINDINGS AND PURPOSE

SEC. 2. (a) The Congress finds that the natural resources of the United States in certain strategic and critical materials are deficient or insufficiently developed to supply the military, industrial, and essential civilian needs of the United States for na-

tional desense.

(h) Wis the purpose of this Act to provide for the acquisition and retention of stocks of certain strategic and critical materials and to encourage the conservation and development of sources of such materials within the United States and thereby to decrease and to preclude, when possible, a dangerous and costly dependence by the United States upon foreign sources for supplies of such materials in times of national emergency.

### MATERIALS TO BE ACQUIRED: PRESIDENTIAL AUTHORITY AND GUIDELINES

- SEC. 3. (a) The President shall determine from time to time (1) which materials are strategic and critical materials for the purposes of this Act, and (2) the quality and quantity of each such material to be acquired for the purposes of this Act and the form in which each such material shall be acquired and stored. Such materials when acquired, together with the other materials described in section 4 of this Act, shall constitute and be collectively known as the National Defense Stockpile (hereinafter in this Act referred to as the 'stockpile').
- (b) The President shall make the determinations required to be made under subsection (a) on the basis of the following principles:
  - (1) The purpose of the stockpile is to serve the interest of national defense only and is not to be used for economic or budgetary purposes.
  - (2) The quantities of the materials stockpiled should be sufficient to sustain the United

States for a period of not less than three years in the event of a national emergency.

(c) The quantity of any material to be stockpiled under this Act, as determined under subsection (a), may not be revised unless the Committees on Armed Services of the Senate and House of Representatives are notified in writing of the proposed revision and the reasons for such revision at least 30 days before the effective date of such revision.

## MATERIALS CONSTITUTING THE NATIONAL DEFENSE STOCKPILE

SEC. 4. (a) The stockpile consists of the following materials:

- (1) Materials acquired under this Act and contained in the national stockpile on the day before the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.
- (2) Materials acquired under this Act on or after the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.
- (3) Materials in the supplemental stockpile established by section 104(b) of the Agricultural Trade Development and Assistance Act of 1954 (as in effect from September 21, 1959, through December 31, 1966) on the day before the date of the enactment of the Strategic and Critical Materials Stock Piling Revision Act of 1979.
- (4) Materials acquired by the United States under the provisions of section 303 of the Defense Production Act of 1950 (50 U.S.C. App. 2093) and transferred to the stockpile by the President pursuant to subsection (f) of such section.
- (5) Materials transferred to the United States under section 663 of the Foreign Assistance Act of 1961 (22 U.S.C. 2423) that have been determined to be strategic and critical materials for the purposes of this Act and that are allocated by the President under subsection (b) of such section for stockpiling in the stockpile.

- (6) Materials acquired by the Commodity Credit Corporation and transferred to the stockpile under section 4(h) of the Commodity Credit Corporation Charter Act (15 U.S.C. 714b(h)).
- (7) Materials acquired by the Commodity Credit Corporation under paragraph (2) of section 103(a) of the Act entitled 'An Act to provide for greater stability in agriculture; to augment the marketing and disposal of agricultural products; and for other purposes', approved August 28, 1954 (7 U.S.C. 1743(a)), and transferred to the stockpile under the third sentence of such section.
- (8) Materials transferred to the stockpile by the President under paragraph (4) of section 103(a) of such Act of August 28, 1954.
- (9) Materials transferred to the stockpile under subsection (b).
- (b) Notwithstanding any other provision of law, any material that (1) is under the control of any department or agency of the United States, (2) is determined by the head of such department or agency to be excess to its needs and responsibilities, and (3) is required for the stockpile shall be transferred to the stockpile. Any such transfer shall be made without reimbursement to such department or agency, but all costs required to effect such transfer shall be paid or reimbursed from funds appropriated to carry out this Act.

### AUTHORITY FOR STOCKPILE OPERATIONS

- SEC. 5. (a) (1) Except for acquisitions made under the authority of paragraph (3) or (4) of section 6(a), no funds may be obligated or appropriated for acquisition of any material under this Act unless funds for such acquisition have been authorized by law. Funds appropriated for such acquisition (and for transportation and other incidental expenses related to such acquisition) shall remain available until expended, unless otherwise provided in appropriation Acts.
- (2) If for any fiscal year the President proposes certain stockpile transactions in the annual materials plan submitted to Congress for that year under section 11(b) and after that plan is submitted the President proposes (or Congress requires) a significant change in any such transaction, or a significant

- transaction not included in such plan, no amount may be obligated or expended for such transaction during such year until the President has submitted a full statement of the proposed transaction to the appropriate committees of Congress and a period of 30 days has passed from the date of the receipt of such statement by such committees or until each such committee, before the expiration of such period, notifies the President that it has no objection to the proposed transaction. In computing any 30-day period for the purpose of the preceding sentence, there shall be excluded any day on which either House of Congress is not in session because of an adjournment of more than three days to a day certain.
- (b) Except for disposals made under the authority of paragraph (4) or (5) of section 6(a) or under section 7(a), no disposal may be made from the stockpile (1) unless such disposal, including the quantity of the material to be disposed of, has been specifically authorized by law, or (2) if the disposal would result in there being an unobligated balance in the National Defense Stockpile Transaction Fund in excess of \$250,000,000.
- (c) There is authorized to be appropriated such sums as may be necessary to provide for the transportation, processing, refining, storage, security, maintenance, rotation, and disposal of materials contained in or acquired for the stockpile. Funds appropriated for such purposes shall remain available to carry out the purposes for which appropriated for a period of two fiscal years, if so provided in appropriation Acts.

#### STOCKPILE MANAGEMENT

SEC. 6. (a) The President shall—

- (1) acquire the materials determined under section 3(a) to be strategic and critical materials;
- (2) provide for the proper storage, security, and maintenance of materials in the stockpile;
- (3) provide for the refining or processing of any material in the stockpile when necessary to convert such material into the form most suitable for storage and subsequent disposition;

- (4) provide for the rotation of any material in the stockpile when necessary to prevent deterioration of such material by replacement of such material with an equivalent quantity of substantially the same material;
- (5) subject to the notification required by subsection (d)(2), provide for the timely disposal of materials in the stockpile that (A) are excess to stockpile requirements, and (B) may cause a loss to the Government if allowed to deteriorate; and
- (6) subject to the provisions of section 5(b), dispose of materials in the stockpile the disposal of which is specifically authorized by law.
- (b) Except as provided in subsections (c) and (d), acquisition of strategic and critical materials under this Act shall be made in accordance with established Federal procurement practices, and, except as provided in subsections (c) and (d) and in section 7(a), disposal of materials from the stockpile shall be made by formal advertising or competitive negotiation procedures. To the maximum extent feasible—
  - (1) competitive procedures shall be used in the acquisition and disposal of such materials;
  - (2) efforts shall be made in the acquisition and disposal of such materials to avoid undue disruption of the usual markets of producers, processors, and consumers of such materials and to protect the United States against avoidable loss; and
  - (3) disposal of such materials shall be made for domestic consumption.
- (c)(1) The President shall encourage the use of barter in the acquisition of strategic and critical materials for, and the disposal of materials from, the stockpile when acquisition or disposal by barter is authorized by law and is practical and in the best interest of the United States.
  - (2) Materials in the stockpile, the disposition of which is authorized by law, shall be available for transfer at fair market value as payment for expenses (including transportation and other incidental expenses) of acquisition of materials, or of refining, processing, or rotating materials, under this Act.
  - (3) To the extent otherwise authorized by law, property owned by the United States may be bartered for materials needed for the stockpile.

- (d)(1) The President may waive the applicability of any provision of the first sentence of subsection (b) to any acquisition of material for, or disposal of material from, the stockpile. Whenever the President, waives any such provision with respect to any such acquisition or disposal, or whenever the President determines that the application of paragraph (1), (2), or (3) of such subsection to a particular acquisition or disposal is not feasible, the President shall notify the Committees on Armed Services of the Senate and House of Representatives in writing of the proposed acquisition or disposal at least thirty days before any obligation of the United States is incurred in connection with such acquisition or disposal and shall include in such notification the reasons for not complying with any provision of such subsection.
  - (2) Materials in the stockpile may be disposed of under subsection (a)(5) only if the Committees on Armed Services of the Senate and House of Representatives are notified in writing of the proposed disposal at least thirty days before any obligation of the United States is incurred in connection with such disposal.
- (e) The President may acquire leasehold interests in property, for periods not in excess of twenty years, for storage, security, and maintenance of materials in the stockpile.

## SPECIAL DISPOSAL AUTHORITY OF THE PRESIDENT

- SEC. 7. (a) Materials in the stockpile may be released for use, sale, or other disposition—
  - (1) on the order of the President, at any time the President determines the release of such materials is required for purposes of the national defense; and
  - (2) in time of war declared by the Congress or during a national emergency, on the order of any officer or employee of the United States designated by the President to have authority to issue disposal orders under this subsection, if such officer or employee determines that the release of such materials is required for purposes of the national defense.
- (b) Any order issued under subsection (a) shall be promptly reported by the President, or by the officer or employee issuing such order, in writing, to the

Committees on Armed Services of the Senate and House of Representatives.

## MATERIALS DEVELOPMENT AND RESEARCH

SEC. 8. (a)(1) The President shall make scientific, technologic, and economic investigations concerning the development, mining, preparation, treatment, and utilization of ores and other mineral substances that (A) are found in the United States, or in its territories or possessions, (B) are essential to the national defense, industrial, and essential civilian needs of the United States, and (C) are found in known domestic sources in inadequate quantities or grades.

(2) Such investigations shall be carried out in order to—

(A) determine and develop new domestic sources of supply of such ores and mineral substances;

(B) devise new methods for the treatment and utilization of lower-grade reserves of such ores and mineral substances; and

(C) develop substitutes for such essential ores and mineral products.

(3) Investigations under paragraph (1) may be carried out on public lands and, with the consent of the owner, on privately owned lands for the purpose of exploring and determining the extent and quality of deposits of such minerals, the most suitable methods of mining and beneficiating such minerals, and the cost at which the minerals or metals may be produced.

(b) The President shall make scientific, technologic, and economic investigations of the feasibility of developing domestic sources of supplies of any agricultural material or for using agricultural commodities for the manufacture of any material determined pursuant to section 3(a) of this Act to be a strategic and critical material or substitutes therefor.

### NATIONAL DEFENSE STOCKPILE TRANSACTION FUND

SEC. 9. (a) There is established in the Treasury of the United States a separate fund to be known as

the National Defense Stockpile Transaction Fund (hereinafter in this section referred to as the 'fund').

(b)(1) All moneys received from the sale of materials in the stockpile under paragraphs (5) and (6) of section 6(a) shall be covered into the fund. Such moneys shall remain in the fund until appropriated.

(2) Moneys covered into the fund under paragraph (1) shall be available, when appropriated therefor, only for the acquisition of strategic and critical materials under section 6(a)(1) of this Act (and for transportation related to such acquisition).

(3) Moneys in the fund, when appropriated, shall remain available until expended, unless otherwise provided in appropriation Acts.

(c) All moneys received from the sale of materials being rotated under the provisions of section 6(a)(4) or disposed of under section 7(a) shall be covered into the fund and shall be available only for the acquisition of replacement materials.

### ADVISORY COMMITTEES

SEC. 10. (a) The President may appoint advisory committees composed of individuals with expertise relating to materials in the stockpile or with expertise in stockpile management to advise the President with respect to the acquisition, transportation, processing, refining, storage, security, maintenance, rotation, and disposal of such materials under this Act.

(b) Each member of an advisory committee established under subsection (a) while serving on the business of the advisory committee away from such member's home or regular place of business shall be allowed travel expenses, including per diem in lieu of substance, as authorized by section 5703 of title 5. United States Code, for persons intermittently-employed in the Government service.

#### REPORTS TO CONGRESS

SEC. 11 (a) The President shall submit to the Congress every six months a written report detailing operations under this Act. Each such report shall include—

(1) information with respect to foreign and domestic purchases of materials during the preceding 6-month period;

- (2) information with respect to the acquisition and disposal of materials under this Act by barter, as provided for in section 6(c) of this Act, during such period;
- (3) a statement and explanation of the financial status of the National Defense Stockpile Transaction Fund and the anticipated appropriations to be made from the fund during the next fiscal year; and
- (4) such other pertinent information on the administration of this Act as will enable the Congress to evaluate the effectiveness of the program provided for under this Act and to determine the need for additional legislation.
- (b) The President shall submit to the appropriate committees of the Congress each year with the Budget submitted to Congress pursuant to Section 201(a) of the Budget and Accounting Act, 1921 (31 U.S.C. 11(a)), for the next fiscal year a report containing an annual materials plan for the operation of the stockpile during such fiscal year and the succeeding four fiscal years. Each such report shall include details of planned expenditures for acquisition of strategic and critical materials during such period (including expenditures to be made from appropriations from the general fund of the Treasury) and of anticipated receipts from proposed disposals of stockpile materials during such period.

### DEFINITIONS

SEC. 12. For the purposes of this Act:

- (1) The term 'strategic and critical materials' means materials that (A) would be needed to supply the military, industrial, and essential civilian needs of the United States during a national emergency, and (B) are not found or produced in the United States in sufficient quantities to meet such need.
- (2) The term 'national emergency' means a general declaration of emergency with respect to the national defense made by the President or by the Congress.

SEC. 13. Notwithstanding any other provision of law. on and after January 1, 1972, the President may not prohibit or regulate the importation into the United States of any material determined to be strategic and critical pursuant to the provisions of this Act, if such material is the product of any foreign country or area not listed as a Communist-dominated country or area in general headnote 3(d) of the Tariff Schedules of the United States (19 U.S.C. 1202), for so long as the importation into the United States of material of that kind which is the product of such Communist-dominated countries or areas is not prohibited by any provision of law.

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#### APPENDIX 5

## THE WHITE HOUSE Office of the Press Secretary

### For Immediate Release

July 8, 1985

### NATIONAL DEFENSE STOCKPILE POLICY

### BACKGROUND

The President has decided to propose a modernization of the National Defense Stockpile of strategic materials. This proposal comes after 2 years of interagency study and thousands of hours of review at the staff and policy levels at twelve different agencies. The Administration intends to consult and work with the Congress on this important national security program before the new stockpile goals are transmitted.

The National Defense Stockpile is a reserve of non-fuel materials that the United States would require in a conflict, but that might not be available in sufficient quantities from domestic or reliable foreign sources. The previous Administration in 1979 calculated the United States' stockpile needs to be \$16.3 billion for 62 materials using May 1985 prices. Toward this goal, the stockpile contains \$6.6 billion in materials. The USG possesses an additional \$3.5 billion of materials that are surplus to our requirements under the 1979 goals. Thus, unmet materials needs are \$9.7 billion under the 1979 goals.

The President's April 5, 1982, "National Materials and Minerals Program Plan and Report to Congress" announced "a major interdepartmental effort to improve the Nation's preparedness for national mobilization." Part of the review was to address the potential national security impacts of shortages of strategic and critical materials. The review covered the 42 most significant materials in the stockpile. The remaining materials will be reviewed at a later date.

The key elements of the Nation's stockpile policy are as follows:

- The National Defense Stockpile will be sufficient to meet the military, industrial and essential

- civilian needs for a 3-year conventional global military conflict, as mandated by Congress in 1979.
- The conflict scenario used is to be consistent with the scenarios developed by DOD.
- The stockpile should reflect detailed analyses regarding the conflict period: essential civilian, industrial and defense mobilization requirements, foreign trade patterns, shipping losses, petroleum availability, and foreign and domestic demand and production levels for the materials in question.

### POLICY DECISIONS

On the basis of the new stockpile study of materials requirements and supplies during a protracted military conflict, the President has decided that the stockpile for the 42 materials studied will now contain \$6.7 billion in materials and include two tiers.

Goals of \$.7 billion (Tier I) are proposed for materials that would be required during a protracted military conflict that would not be available in sufficient quantities from domestic or reliable foreign sources. The stockpile also will contain a Supplemental Reserve of strategic and critical materials currently valued at \$6 billion (Tier II). The Supplemental Reserve will contain materials that the USG already possesses. This reserve will offer additional assurance against materials shortages during a period of military conflict. Both Tiers of stockpile provide over one year's peacetime levels of imports for such materials as chromium, manganese, cobalt and tantalum. These new stockpile goals will eliminate the \$9.7 billion unmet goal.

The new stockpile will result in surplus materials of \$3.2 billion, as opposed to the \$3.5 billion surplus calculated by the previous Administration. The mix of materials considered to be surplus, however, is different.

The President has decided to sell a portion (\$2.5 billion out of \$3.2 billion) of the surplus materials stocks in a manner—over the next five years—that minimizes market impacts. An interagency group will evaluate ways to ensure that stockpile sales do no cause undue market disruptions.

Receipts from the sales program will go to fill unmet materials goals under the 1984 study, including any goals that may result from analyses of the twenty materials yet to be studied, including any new, high-technology materials; the remainder will go to reduce the deficit. The stockpile goals planning assumptions also will be used for other appropriate mobilization preparedness areas.

#### STUDY PROCESS

The 1984 stockpile study completed by the Administration included a review of the analysis,

methods and assumptions used by the previous Administration in the 1979 study. This review concluded that a number of basic errors and unrealistic assumptions were used in the 1979 study. The present study relied on more realistic assumptions regarding oil availability, essential civilian requirements and domestic materials production. The new stockpile, unlike the one proposed in 1979, does not reflect the stockpiling of materials to ensure non-essential consumer production in a protracted military conflict. The stockpile does reflect essential civilian goods production with per capita consumption at more than twice the WW II level.

In the 1984 study, substantial improvements were made in analytic methods for estimating material requirements and available supply. These changes, the correction of errors and the use of more plausible assumptions, are the primary reasons for the revised goals. The 1984 study was started in 1983 and relied on actual data up to and including 1982 for all phases of the analysis. In all areas, the latest, best available data was used. By contrast, the previous 1979 stockpile goals relied on 1967 data in many cases.

### STOCKPILE GOALS\*

Commodity	Goal (\$M)	Quantities
Beryllium Concentrate		
Antimony	\$ 12.6	4,585 ST
Bauxite	Ψ 12.0	4,505 51
Bauxite, Refractory Grade		
Bauxite, Abrasive Grade		
Bismuth		
Cadmium		
Chromium	84.9	200 TH ST
Cobalt	245.0	22.57 M lbs.
Columbium	243.0	22.37 141 105.
Copper		
Diamond, Industrial, Stones Fluorspar		
Germanium	154.8	146,049.4 kg
	9.9	5,085.5 ST
Graphite, Ceylon	42.0	13,995.9 ST
Graphite, Malagasy Graphite, Other	1.6	2,237.1 ST
lodine	1.0	2,237.131
Lead		
Manganese		
Mercury (Mine) Mica, Muscovite Block	1.3	246.4 TH lbs.
Mica, Muscovite Block Mica, Muscovite Film	0.2	18.7 TH lbs.
Mica, Muscovite 1 iiii Mica, Muscovite Split	21.6	14,391.1 TH lbs
Mica, Phlogopite Block	0.5	85.0 TH lbs.
Mica, Phlogopite Split	1.0	482.6 TH lbs.
Molybdenum	1.0	402.0 111 105.
Nickel		
Platinum Group, Iridium		
Platinum Group, Palladium		
Platinum Group, Platinum		
Quartz Crystal, Natural	0.2	26.5 TH lbs.
Rubber	0.2	20.0 111 103.
Rutile		
Silicon Carbide		
Silver		
Tantalum	72.1	1,900.7 TH lbs.
Tin	72.1	1,500.7 111 103.
Titanium	43.3	3.9 TH ST
Tungsten	40.0	0.0 111 01
√anadium		
Zinc		
-1110		
	\$691.0	

<sup>\*</sup>Goal value based on May 31, 1985, market prices.

Head Office: 880 789 West Pender St. Vancouver, B.C. V6C 1H2 Tel: (604) 669 3614

Subsidiary: U.S. Chrome Inc., U.S. Nickel Corp. PRECIOUS STRATEGIC METALS

### "PROJECT CHROMIUM SMELTER"

### To Produce Low Carbon Ferro Chromium

The Company is pleased to announce that on April 11th, 1987, the corporate structure of SHERWOOD Pacific Limited was initiated. This company is formed to construct and operate a Chromium Smelter in Coos Bay, Oregon, to produce low carbon ferro chromium.

P.S.M. Technologies Inc. has a 31.5% interest in the project and has the exclusive right to supply all raw materials required.

The Board of SHERWOOD was elected as follows:

, SIR MONTE FINNISTON
F.Eng. FRS Phd. Metallurgy
Retired, C.E.O. British Steel
Deputy Chairman Nuclear Research Centre,
Harwell U.K.
As Chairman of the Board

JOSEPH B. HOWE

BS Physics MS Physics

Group Vice-President Radio Corporation of America

Oversees two plants in New Jersey

As Director and Secretary

GEORGE E. KRUGER
BS Geology Dartmouth
MS Economic Geology U. of Minnesota
AMP Harvard Business School
20 years as Senior Vice-President of Chase Manhattan
Bank in charge of Mineral, Metal Development
Division of the Bank.
As Director.

WILLIAM G. WOOD

President of P.S.M. Technologies Inc. 30 years experience in exploration and development of natural resources.

As Director.

PATRICK J. WOODING

BS E "Eng Lond", C.Eng Fifmech E,FIEE

Past Director of Engineering, Lectromelt, President of

Consarc and has been responsible for many of the
advanced melting projects in the United States and

overseas for the past 25 years.

As President and C.E.O.

The accumulated years of total experience of the Board of SHERWOOD with regard to their respective endeavours and expertise is 173 years.

Technical, financial and business administration are all well simulated and the Board of SHERWOOD is dedicated to one objective -- success!

Pacific Power and Light Company is funding the project in the amount of \$2,000,000 (U.S.) in preferred equity. An incentive electrical supply agreement has also been negotiated subject to the approval of the Oregon Public Utility Commission. This agreement provides a price discount as well as funding for transmission, substation and other electrical facilities in the amount of approximately \$4,000,000 (U.S.). This smelter will use 25/50 Megawatts of energy.

Oregon Governor Neil Goldschmidt, working in concert with the State Economic Development Department, under the direction of Chairman Roger Smith, will coordinate the state's major financial contribution to the project. Both Governor Goldschmidt and Chairman Smith have been extremely co-operative in bringing this new industry to Oregon.

The Oregon International Port of Coos Bay is also making a major financial contribution in the form of a fully-serviced site, including a deep-water dock on very attractive terms for the first six years. Much of the credit for this goes to Mr. Frank G. Martin Jr., the Port's General Manager, who has worked for months to bring the project to Coos Bay.

WOODING, a New Jersey corporation, headed by P. J. Wooding, an international leader in the metal melting industry, will license to SHERWOOD all patents, patent applications, and technology and will construct the smelter. The prototype primary melter was installed at full scale in one of Arbed's plants in Luxembourg and operated successfully for 18 months.

P.S.M. Technologies Inc. will provide \$10,000,000 (U.S.) in equity and will have the exclusive right to supply raw material to the project. For this, it will receive a 31.5% interest directly in SHERWOOD. Initial raw material will come from Southern Oregon and Northern California properties, which P.S.M. Technologies Inc. owns or has under option from Del Norte Chromium and Asamera Metals (U.S.) Inc.

Thirty thousand tonnes of L.C.F.C. have been presold on a take or pay basis through two major metal companies for ten years. The smelter construction will be completed in August, 1988, and commissioned October, 1988. Total sales in the first full year of production will be \$45,000,000 (U.S.) increasing to \$60,000,000 (U.S.) in ten years with a gross profit of 35%.

Funding for this project will commence with a private placement. This financing will be announced as soon as the price has been agreed upon.

ON BEHALF OF THE BOARD

WILLIAM G. WOOD, PRESIDENT

Sherwood Project - Coos Bay ferrochrome smelter

11:00 AM April 23, 1987 telephone conversation with Steve Petersen, Oregon Economic Development Department

EDD's participation, a loan of \$2 million, in the Sherwood project contingent upon three conditions being met by Wood/Wooding:

- 1) receipt of satisfactory answers to a body of questions:
  - a) cost and accounting (EDD)
  - b) technical and feasibility (Ralph Nafziger)
- 2) reaching an agreement with the Port of Coos Bay
- 3) reaching an agreement with Pacific Power & Light

Wooding/Wood have concluded 2) and 3)

EDD thought their questions would be incorporated in the negotiations with the Port of Coos Bay - they were not

EDD has just drafted a letter to Wooding with their financial and technical questions — this will be the first that Wooding will have seen them in writing

if the loan could be guaranteed by an outside party, EDD may participate without having their questions answered

Wooding objected at our earlier meeting to disclosing technical details to a USBM employee who could not, by law, abide by a secrecy agreement; EDD is willing to pay an appropriate third party to evaluate these technical details — can we suggest a qualified party?

Steve Petersen views the governor's support as an attitude of general encouragement, not necessarily support for this specific project as presented

Rn

Sherwood project - Coos Bay ferrochrome

Miscellaneous concerns based on reading and conversations with Jerry Gray and Ralph Nafziger

Oregon (2.5 million st) and California (4.0 million st) known podiform chrome deposits are not sufficient justification for building a smelter in Coos Bay

Wood indicated that the Oregon reserves would supply mill for only one year (sometimes it was five years)

Alaska has an additional 4.0 million st - southern Africa has an estimated  $36 \ \underline{\text{billion}}$  st

new furnace purportedly could utilize fines that are waste at other smelters

freight from southwest Oregon could be more than from South Africa  $\,$ 

any deepwater port with cheap electricity would suffice

US ferrochrome market is in the east - world market is saturated

low carbon ferrochrome itself has a very limited market

estimated cost of mill is very low for the products envisioned by Wooding

Wood has chrome properties in Oregon & California, he also has a darlingtonia problem on at least one, the press coverage has been pushing up Precious & Strategic Metals stock on the Vancouver exchange; at what point can he bail out?

Wooding's 93% thermal efficiency on a new furnace is difficult to believe, especially with no documentation

How secure are his "take or pay" contracts?

Ky