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Mining properties in Washington that were involved in the DMA, DMEA, or OME Mineral Exploration Programs, 1950-1974.

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Mining properties in Washington that were involved in DMA, DMEA, or OME Mineral Exploration Programs, 1950-1974

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Introduction

This report and accompanying map (Plate 1) presents information on the Defense Minerals Administration (DMA), Defense Minerals Exploration Administration (DMEA), and Office of Minerals Exploration (OME) mineral exploration programs in Washington. Under these programs, the federal government participated in the exploration costs for certain strategic and critical minerals. Federal funds for mineral exploration under the programs were available from 1950 to 1974, although limited funds for OME administrative work were continued until 1979.

The report reviews the three programs, associated regulations, administrative procedures, and operational techniques. It also describes the various types of informative reports generated by the programs, lists mining properties in Washington that were involved in the exploration programs, and advises on location of compiled exploration information that resulted from the work.

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Defense Production Act programs

The Defense Production Act of 1950 (Public Law 774, 81st Congress) provided financial assistance to private enterprise for the production of goods and services necessary for national security. Title III, Section 302 of the Defense Production Act, provided for encouragement of exploration, development, and mining of critical and strategic metals and minerals. Under provisions of the Act, the Secretary of the Department of the Interior, established the Defense Minerals Administration, within the department, by a Secretarial Order dated December 4, 1950. Along with other duties, the Defense Minerals Administration was to serve as a direct contracting agency for minerals exploration.

Defense Minerals Administration (DMA) program

The DMA program was administered at national headquarters, Department of the Interior building, Washington DC, by a small group of senior mining engineers and geologists, recruited from the minerals industry. These men were widely experienced in mineral exploration and mine development.

The headquarters group developed guidelines, forms, and operational procedures for the government-supported (DMA) minerals exploration program. They prepared pamphlets that described the DMA program, identified minerals classified as strategic and critical, advised on the percentages of exploration costs the government would pay on exploration for the minerals. They developed application forms for use in seeking federal financial assistance, and contract forms for those cases where an application was

approved and a mineral exploration contract was negotiated between the applicant and the federal government.

DMA officials relied on Field Teams composed of U.S. Geological Survey (USGS) geologists and U.S. Bureau of Mines (USBM) engineers for all field work. The United States was divided into regions, with different USGS-USBM Field Teams responsible for field investigations in the different regions. Regional headquarters for Field Team work in Montana, Idaho, Oregon, and Washington was the U.S. Geological Survey Field Office in Spokane, Washington.

The initial step of an applicant seeking Federal financial aid in mineral exploration aid was submittal of an application. The application required description of the real property to be involved, and description of the proposed exploration work. Description of geologic features of the property to be explored also was required, along with an explanation of the strategic mineral or minerals being sought, and reasons for expecting the proposed work to result in a significant discovery. Also required were maps or illustrations of the prospective property that showed location of the proposed work, location of proposed work with respect to property boundaries, and existing mine workings, if any. Many applications contained supporting geologic or engineering reports. These commonly contained maps or illustrations that showed grades and thickness of known parts of the deposit, and other descriptive information.

Upon receipt of an application, DMA officials would request that a field examination of the proposed exploration site be made by the appropriate USGS-USBM Field Team,

and that a report covering the field examination be submitted to DMA headquarters. If the field team application examination report indicated that proposed exploratory work might result in a significant discovery, and if ownership or title to the prospective property was clear, DMA usually entered into an exploration contract with the applicant, who, thereafter, was identified as the contract operator. The exploration contract specified the work to be done, determined the time frame in which the work was to be done, estimated the total exploration costs of the project, determined the amount estimated costs to be paid by the government, and included other pertinent data.

The exploration contract obligated the contract operator to certain responsibilities. These included submittal of monthly progress reports, which were used by the government to justify payment of the government's share of exploration costs for work completed during the reporting period. A final report was required upon completion of the exploration project. This report was supposed to cover all aspects of the exploration project, including accomplishments, costs, and findings. Should ore be mined and sold from the obligated property during the time the exploration contract was in force, the contract operator was obligated to repay the government for its share of the exploration costs at a fixed percentage of funds derived from the sale of the ore. In the event a significant discovery was made by the exploration contract and the government decided the exploration project had been successful, the government issued a Certificate of Possible Production to the contract operator, under which a specified royalty was to be paid to the government on mineral production from the obligated property. The obligated

royalty rate varied according to terms of the Certificate of Possible Production but commonly was 5 percent of the net smelter returns on processed ore, and was for a specified period of time, commonly for 10 years from the date of the contract, or until the government's share of exploration costs had been repaid, whichever occurred first. If no discovery was made, repayment was not required and the contract operator was notified that the government had no lien on the obligated property. The contract operator was not obligated to mine any ore found by contract work, nor was the government obligated to purchase any mineral material found by contract work.

DMA was a short-lived program that was terminated on November 20, 1951.

Defense Minerals Exploration Administration (DMEA) program

The previously described DMA program was concerned with aspects of the minerals field other than mineral exploration. These other aspects included, serving as a claimant agency for materials and facilities, as an advisory agency responsible for a minerals supply expansion program, and as an allocation program for ores and concentrates in short supply. The various aspects, other than mineral exploration, were transferred to the Defense Materials Procurement Agency (DMPA), General Services Administration, on November 20, 1951. As a means of continuing the mineral exploration program started under DMA, the Secretary of the Department of the Interior established the DMEA program within the department, effective November 20, 1951.

The DMEA program was confined to exploration for critical and strategic minerals and was administrated by the same personnel who had formerly administered the DMA

program. It operated from the same national headquarters site. Under the DMEA program, DMEA officials were responsible for processing all exploration applications received under the DMA program and for administrative work involved in completion of exploration contracts started under the DMA program. Some DMA exploration contracts were revised and subsequently executed as DMEA contracts. DMEA also issued Certificates of Possible Production to DMA contracts, if, in the opinion of the government, mine production of ore was likely to result from a successful exploration project. In rare instances the government issued a royally obligation to an exploration contract operator that was similar to a Certificate of Possible Production. Such a royalty obligation was issued to ensure repayment of the government's share of exploration consts, in an instance where exploration work gave good indications of a possible mineral discovery, which would benefit the obligated property, but where the scheduled exploration was terminated by the contract operator short of completion of work specified in the contract. The DMEA program utilized the same USGS-USBM Field Team arrangement, and operated more or less under the same regulations, practices, and procedures established by DMA. It was a much more extensive program than DMA and continued until 1958, when it was terminated.

Mineral Exploration under Public Law 85-701

Government-supported mineral exploration under the Defense Production Act of 1950 was not considered justifiable in 1958, as defense needs of mineral supplies were considered to have been met. It was recognized, however, that there continued to be a

need for mineral raw materials to meet an expanding national economy. To meet this need, Congress, on August 21, 1958, enacted Public Law 85-701, under which governmental financial assistance, on a participating basis, was available to private industry for stimulation of exploration for such raw materials as might be designated by the Secretary of the Department of the Interior. Under this law, the Secretary of the Department of the Interior established the Office of Minerals Exploration program on September 11, 1958.

Office of Minerals Exploration (OME) program

The OME program was similar to the previous DMA and DMEA programs but more restrictive. It was operated under the same Department of the Interior administrative offices and utilized the same USGS-USBM Field Team arrangement as had the previous DMA and DMEA programs. It adhered, more or less, to practices, regulations and procedures that had been established under the two preceding programs. One change in the OME program was allowance of participating funds for the exploration of certain minerals and metals, including gold and silver, that had not been eligible under the two previous programs. Funds for the government-supported mineral exploration program came from annual appropriations to the Department of the Interior.

To economize on costs, all administrative and operating responsibilities of the OME program were transferred to the USGS in 1965. Thereafter, all field functions previously handled by the USGS-USBM Field Team were performed by USGS personnel. Funds allocated to the USGS for participation in OME mineral exploration projects were

terminated in 1974, although limited administrative funds continued to be received by the USGS until 1979. These administrative funds covered costs of such work as closing out existing exploration contracts, preparation of final reports on completed contracts, and continued review and audit of royalty funds received from the sale of ore mined from deposits that had been discovered by the government-supported exploration projects, and subsequently covered by a Certificate of Possible Production, or which, by contract amendment, were obligated to royalty payment. A change in regulations concerning acquisition of federal assistance in financing exploration for mineral reserves in the United States, its territories and possessions became effective on January 19, 1993 (Federal Register, vol. 57, no. 243, December 17, 1992). The change in regulations terminated the OME program.

Filing practices for DMA, DMEA, and OME data

Applications for financial assistance in mineral exploration were sent either directly to national headquarters, Department of the Interior, Washington DC, or else to USGS-USBM Field Team headquarters of the region in which the property to be explored was located. Applications received at a Field Team headquarters were forwarded to the national headquarters in Washington DC. At national headquarters, applications were filed under individual docket numbers, which subsequently were used by both national headquarters and the field team as a means of cataloguing and identifying correspondence and documents related to the particular application or to a resulting exploration contract. The national headquarters file, in effect, became the master file for all compiled

information resulting from the application. Copies of compiled information on applications and on exploration contracts that resulted from the applications also commonly were filed at the Field Team headquarters office in the region where the concerned properties were located. For applications that concerned properties in Washington, the Field Team regional headquarters was at the USGS field office in Spokane, Washington.

After 1965, when OME activities were consolidated under the USGS, OME applications were sent either to the OME office of the USGS in Washington DC, or to field offices of the USGS in Knoxville, Tennessee, Denver, Colorado, Menlo Park, California, or Spokane, Washington, depending on the location of the applicant's property.

Information compiled under the DMA, DMEA, or OME programs

A variety of technical information was generated by the DMA, DMEA, and OME programs. Property and proposed work descriptions together with geologic and analytical information on the target to be explored were submitted with the initial application. Such information commonly was accompanied by unpublished supporting technical reports or production records on the property. Operators of active exploration contracts were obligated by contract terms to submit monthly progress reports that described work that had been completed. Exploration contracts also obligated contract operators to submit final reports on completed projects. These final reports described exploration work that was done, costs, problems, and findings. The USGS-USBM Field

Team wrote application reports that covered initial field investigation of the proposed exploration project, interim reports that covered field investigations of active exploration projects, and final reports that covered accomplishments and findings of completed contracts. After administrative responsibilities for the OME program were transmitted to the USGS in 1965, all reports formerly written by the USGS-USBM Field Team were written by the USGS personnel.

Field team application report

Applications for financial assistance in Washington, once received at national headquarters, Department of the Interior, Washington DC, were transmitted to the regional office in Spokane, with the request that a Field Team examination be made of the applicant's property and proposed exploration project, and that an application report on the examination be prepared and submitted to the national headquarters office. The Field Team application report investigated all factors concerned with the applicant's proposal. Principal attention was given to the geology of the exploration target and to whether the proposed work had a reasonable chance of resulting in a significant discovery. The applicant's maps, illustrative material, and reports were examined at the proposed project site. If the maps were found to be inadequate, new maps or other illustrative material were prepared by the Field Team. Samples of mineralized structures were taken and assayed to check sample values reported by the applicant. The location of proposed work, with respect to existing mine workings and to mining claim or property boundaries was examined as were documents pertaining to the applicants rights to the

prospective property. The estimated costs, time schedule of proposed work, equipment to be used, and operating experience of the applicant or the applicant's supervisor were considered. The proposed work was carefully studied to see if it presented the most logical way of exploring the mineralized target. Modifications of the proposed work often were discussed with the applicant and commonly were adopted.

The Field Team application report, in effect, evaluated the applicant's proposal and the geologic probability of the proposed work resulting in a significant discovery. It provided a basis for the national headquarters decision on whether to approve or deny an application. For applications that subsequently were denied, the application report commonly represented the best-documented source of geologic information on the concerned property.

Exploration contract

An approved application usually resulted in an exploration contract between the federal government and the applicant. The contract was designed to do the work proposed in the application, or that of a modified exploration plan approved jointly by the applicant and the government. Under the contract, the government agreed to participate in the costs of completed work on a prorated basis and for a fixed amount. The percentage of exploration costs to be paid for by the government depended on the principal metal to be explored. For example, the government paid 90 percent of the exploration costs at a uranium deposit but only 50 percent of the costs at a copper deposit. The contract obligated the contract operator to prepare and submit certain

reports. The Field Team also prepared reports that dealt with the exploratory work done by the contract operator.

Exploration contract operator's reports

Monthly progress report

An exploration contract obligated the contract operator to submit a monthly progress report that described exploration work accomplished and costs that had been incurred during the reporting period. Payment to the operator, for the government's share of exploration costs incurred during the reporting period, was based on the monthly progress reports, which usually were brief and factual. Occasionally, the operator would request an amendment to the contract and would use the monthly progress report to justify the request. For example, the exploration work might have uncovered evidence that indicated proposed work in the target area should be changed, in which case the contract operator would use the monthly progress report, along with accompanying maps or geologic illustrations to justify a requested contract amendment. In such instances, the monthly progress report might constitute the only documented information for an amended change in the exploration project.

Final report

An exploration contract stipulated that the contract operator submit a final report upon completion of contract work. This report reviewed exploration accomplishments, problems encountered, findings, and costs. It usually contained maps and geologic sketches to illustrate what had been done and found. In instances where a significant

mineral discovery was made, the report commonly presented estimates of the tonnage and grade of ore reserves found. Final reports on unsuccessful contracts usually were brief and non informative.

Field Team reports

Interim report

Interim reports by the USGS-USBM Field Team, and, after 1965, by the USGS, were based on routine field investigations of a property being explored under an exploration contract. The principal purpose of these investigations was to see that exploration work was being done in conformance to contract specifications. Some interim reports, particularly those that described amended changes in contract specifications, often contained assay information and sketches of the geologic findings.

Final report

A final report by the USGS-USBM Field Team, and, after 1965, by the USGS, described and summarized accomplishments of the exploration contract. The report reviewed the geologic setting of the deposit, geologic structures that controlled the ore body, the mineralogy, and alteration features of the deposit or associated wallrock. It presented information on tonnage and grade of discovered ore reserves, using the contract operator's data, where acceptable, otherwise it presented Field Team calculations, based on contract findings. Final reports included maps, sample and assay data, and other supporting information. The report discussed geologic guides to ore, where they had been determined, and described additional targets that warranted exploration, should the

exploration work have identified such targets. Maps showing location of the completed work with respect to property boundaries were included. The report included a description of completed work, summary of costs and an evaluation of the project. It recommended a Certification of Possible Production when appropriate, or noted the existence of an already declared royalty obligation, should one have been declared previously. Also discussed was whether the government should participate in the funding of further exploration work at the property. The Field Team final report was comprehensive and contained most of the available compiled information on the explored deposit.

Mineral exploration in Washington

The location of mineralized properties in Washington, for which applications for DMA, DMEA, or OME mineral exploration assistance were received, is shown on the enclosed map (Plate 1). Property locations are shown by county, in appropriate townships, and in approximate sections. Property names, location and other identifying information are presented in Table 1, the information based largely on material available in USGS files at Spokane, Washington, prior to 1996. Applications that did not result in exploration contracts are shown on the map by a set of open symbols that differ slightly from the partly filled symbols that mark the sites of properties that were explored under exploration contracts. Exploration contracts that resulted in significant mineral discoveries, and for which Certificates of Possible Production were issued, or which,

because of contract amendment stipulated royalty obligations on ore mined from the obligated property, are shown by similar shaped but solid symbols. All symbols are keyed to the program under which the application was filed. A number near the property symbol on the map keys the property to Table 1.

Many property locations shown on the map are only approximate and are based on indefinite information.

Topographic maps of usable scale, and covering the location of many applicant properties, were not available in parts of Washington when much of government-supported exploration work was done. For properties in such areas, USGS-USBM Field Team members commonly used the applicant's description of the property location. Such location descriptions may have referred to a site as a certain distance from a town or from road or stream junctions. As these distances commonly were measured in miles, the map locations, in terms of section, range, and township were indefinite. Accurate location descriptions in the mountainous northern part of the Cascade Range were especially difficult to obtain. In that area, particularly in the western part of Okanogan County, the northern part of Chelan County and the eastern parts of Whatcom, Skagit, and Snohomish Counties, insufficient land surveys made accurate descriptions of appropriate townships and sections difficult to determine. For example, on Plate l, townships 12 and 15 are shown at normal size in the southern part of the state, but are shown narrowing progressively in east-west dimension to the north, making accurate identification of them and adjoining townships difficult. Topographic maps of the USGS, and maps of the

U.S. Forest Service maps, available in 1998, have helped to identify property locations listed in Table 1 more accurately.

Table 1 lists the docket number under which all material pertaining to the exploration application was filed, the name of the applicant, the property or claim name, strategic and critical minerals of the property, and the location of the property by section, township and range. The map number shown on the right side of the table corresponds to the map number near the property location shown by symbol on the map (Plate l). The symbol shown on the map, at a located site, identifies the type of program that was concerned, whether the application resulted in an exploration contract, and whether exploration done under the contract was successful and the property subsequently covered by a Certificate of Possible Production or obligated to royalty payment by contract amendment.

Table 1 shows that more than one application was filed on many properties. In such instances, the property is identified on the map by the symbol and number applicable to the initial application, whether it was filed under the DMA, DMEA, or OME program. This is for map clarification, for more than one symbol or map number at the same site would be confusing. For properties on which more than one application was filed, Table 1 lists the docket numbers, supporting information applicable to the successive applications, and, in the status column, shows the status attained by the application. For example, an application that was denied by the government or withdrawn by the applicant is shown in the status column as an Application, whereas an application that was approved and for which a contract was negotiated is shown as a Contract. Contracts

under which a Certificate of Possible Production was issued, or which for other reasons obligated the property to repay the government for its share of funds spent on the exploration contract are shown on the status column as Certified Contracts.

Successive applications on a single property resulted from different reasons. The original application may have proposed an exploration plan that was not acceptable to the government and consequently was denied. The original application may have classified the property as a lead-zinc deposit, when production statistics and geological data showed the deposit to have been worked primarily for gold and silver, metals that did not qualify for federal financial assistance under the DMA and DMEA programs, but did under the OME program. An application on a property may have been denied, but the property then came under control by different management, or under another organization, which subsequently filed a revised application on the property that may have led to an exploration contract. In another instance, exploration under a DMA, DMEA, or OME contract may have indicated another target on the same property that also warranted exploration. This determination could have resulted in a separate application and subsequent exploration contract.

Location of compiled DMA, DMEA, and OME data

In 1998, compiled DMA, DMEA, and OME files, covering all government-supported mineral exploration work done in the United States, were located in archive storage at the USGS Field Office, Post Office Building, 904 W. Riverside, Spokane, Washington. Prior to 1996, the Spokane files of the USGS contained only information generated by the

exploration programs in the states of Montana, Idaho, Washington, and Oregon. By 1996, however, the national headquarters master files, which previously had been stored at the National Records Center, Suitland, Maryland, had been transferred to the USGS field office at Spokane, Washington, as had USGS files on DMA, DMEA, and OME business that formerly had been stored at Denver, Colorado, or at Herndon, Virginia.

Information at the Spokane office, on properties involved in the DMA, DMEA, or OME programs, can be made available, upon request, provided the requesting person presents a letter from the property owner authorizing release of the information. With the letter of authorization on hand, reports, maps, or other information requested is sent to a private reproduction firm, where the requested material is reproduced at the expense of the requesting individual. The reproduced material is sent to the requesting individual and the original material is returned to the USGS storage file.

Table 1--Mining properties in Washington that were involved in the DMA, DMEA, or OME mineral exploration programs

Docket No.—Operator	Property-Commodity	Location	Map No. or Status
		CHELAN COUNTY	
DMA-932 Horseshoe Basin Mining and Devel. Co.	Davenport and Glacier claims (zinc-lead-copper)	Sec. 30, T. 35 N., R. 14 E.	135
DMEA-699 Black Warrior Mining Co.	Black Warrior mine (copper-lead-zinc)	Secs. 29, 30, 31, and 32, T. 35 N., R. 14 E.	136
DMEA-3142 Howe Sound Co.	Holden mine (copper)	Secs. 1, 12, and 13, T. 31 N., R. 16 E.	137
OME-6579 Three F Mining Co.	Wash. State Min. Lease No. 58405 (gold)	Sec. 36, T. 28 N., R. 17 E.	138
DMEA-1353 Phantom Creek Copper Co.	Pickwick property (copper)	Secs. 9 and 10, T. 23 N., R 15 E.	139
DMEA-4509 McPhail Engineering Co.	Pickwick property (copper)	Secs. 9, and 10, T. 23 N., R. 15 E.	Application
OME-6229 CaIdo Mining Co.	Caldo claims (Lucky Strike) (gold-silver)	Sec. 4, T. 22 N., R. 17 E.	140
OME-6460 L-D Mines	B Reef property (gold)	Secs. 16, 21, and 22, T. 22 N., R. 20 E	141
		CLALLAM COUNTY	
DMEA-3137 Oberg, Govan, and Gehrke	Bear Creek mine (manganese)	Secs. 13 and 24, T. 30 N., R. 12 W.	105
DMA-922 Rotaary Mills, Inc.	Littleton mine (manganese)	Secs. 23 and 24, T. 30 N., R. 10 W.	106
DMEA-3417 Oberg, Govan, and Gehrke	Bear Creek mine (manganese)	Secs. 13 and 24, T. 30 N., R. 12 W.	Contract

CLALLAM COUNTY-Continued

OMEA-4543 New Wellington Mines Ltd.	Bear Creek mine (manganese)	Secs. 13 and 24, T. 30 N., R. 12 W.	Contract
DMEA-2928 Lewis and Hopper	Crescent mine (manganese)	Secs. 23 and 24, T. 30 N., R. 10 W.	107
DMEA-3638 Peacock and Peacock	Crescent mine (manganese)	Secs. 23 and 24, T. 30 N., R. 10 W.	Contract
OME-6279 O and O Mining Inc.	Gray Wolf, et al., claims (manganese)	Secs. 3 and 4, T. 28 N., R. 4 W.	108

CLARK COUNTY

DMA-1775 C. L. Smith	State lease (mercury)	Sec. 16, T. 2 N., R. 4 E.	156

FERRY COUNTY

DMEA-2985 Attwood Copper Mines, Ltd.	Lone Star mine (copper-gold)	Secs. 1, 2, and 3, T. 40 N., R. 33 E.	35
DMA-1436 Arthur E. Boroughf	Snowstorm, Copper Butte claims, et al. (copper)	Sec. 9, T. 40 N., R. 34 E.	36
DMA-525 Spokane Mining Syndicate	Talisman mine (copper-zinc)	Sec. 4, T. 40 N., R. 36 E.	37
DMA-747 O. Aavestrud and C.J. Weller	Kelly Camp Tungsten mine (tungsten)	Sec. 9, T. 38 N., R. 32 E.	38
DMEA-4831 Thomas Consolidated Mines	Valley mine (selenium)	Sec. 6, T. 37 N., R. 33 E.	39
DMEA-4767 M. P. C. Mining Co.	Dandy, et al., claims (uranium)	Secs. 14, 22, 23, and 26, T. 38 N., R. 34 E.	40
DMEA-4678 Mervyn D. McKenzie	Blue Jay claim No. 2 (uranium)	Secs. 19 and 30, T. 38 N., R. 35 E.	41
OME-6725 Sidney Mining Co.	Burbank property (gold-silver)	Secs. 27, 28, 33, and 34, T. 37 N., R. 32 E.	42
DMEA-4438 H.E. Rogers and L. Salter	Bonnie mine (uranium)	Sec. 30, T. 37 N., R. 37 E.	43

FERRY COUNTY-Continued

DMEA-3723 Nine Mile Mining Co.	Nine Mile mine (tungsten)	Sec. 3, T. 35 N., R. 34 E.	44
DMEA-4988 S. Neace and A. Foskett	Mary Jane claims (uranium-thorium)	Secs. 29, 30, 31, and 32, T. 36 N., R. 36 E.	45
DMEA-4128 Lee H. Scranton	Scranton property (uranium)	Secs. 21 and 22, T. 36 N., R. 37 E.	46
DMEA-1954 Modern Gold Dredging Co.	Big Chief group (tungsten)	Sec. 35, T. 32 N., R. 36 E.	47
DMEA-2504 Hoar and Olson	Tungsten I and 2 claims (tungsten)	Secs. 30 and 31, T. 32 N., R. 37 E.	48
DMA-1590 Virgil D. Taylor	Shamrock Silver Lead mine (nickel)	Sec. 35, T. 31 N., R. 33 E.	49
DMEA-3376 Consolidated Mines and Smelting Co.	Silver Ridge group (molybdenum-copper)	Secs. 5 and 6, T. 29 N., R. 33 E.	50

GRAYS HARB0R COUNTY

DMEA-2682 Consolidated Minerals Corp.	Stevens Creek and Skunk Creek properties (manganese)	Secs. 19, 30, and 31, T. 22 N., R. 9 W.	110
OME-6018 D. Baker and P. Petit	Beach properties (ilmenite-magnetite)	Sec. 36, T. 18 N., R. 12 W.	111

JEFFERSON COUNTY

DMA-1491 M. B. Sheik	Elkhorn claims (manganese)	Sec. 19, T. 26 N., R. 3 W.	109

KING COUNTY

DMA-1979 Priestley Mining and Milling Co.	Lennox Mine (copper)	Secs. 7, 8, 17, and 18, T. 25 N., R. 10 E.	129
DMA-1591 Frank E. Langer	Langer mine (copper)	Sec. 17, T. 25 N., R. 10 E.	130
DMA-1379 Bear Basin Mining Co.	Bear Basin group (Snoqualmie mines) (antimony-manganese)	Secs. 13, 14, 23, and 24, T. 25 N., R. 10 E.	131

KING COUNTY-Continued

DMA-1658 Consolidated Moly., Inc.	Devils Canyon prospect (tungsten)	Sec. 27, T. 25 N., R. 10 E.	132
DMEA-3557 Devils Canyon Mining Co.	Devils Canyon mine (copper-molybdenum)	Sec. 27, T. 25 N., R. 10 E.	Application
DMA-942 Charles Sisenvine	Rainy claim (copper)	Sec. 16, T. 24 N. R. 10 E	133
DMEA-2341 Western States Copper	Rainy mine (copper)	Sec. 16, T. 24 N., R. 10 E.	Cert. Contract
DMEA-4775 Washington Mining Corp.	Royal Reward mine (mercury)	Sec. 8, T. 21 N., R. 7 E.	134

KITTITAS COUNTY

DMEA-4839 Phil Denney	Antimony claims (antimony)	Sec. 11, T. 23 N., R. 14 E.	142
DMEA-145O Cle Elum River Mining Co.	Denney prospect (zinc)	Sec. 11, T. 23 N., R. 14 E.	Application
DMEA-4530 Cle Elum River Mining Co.	Denney prospect (zinc)	Sec. 25, T. 23 N., R. 14 E.	143
DMA-1599 Riley Williams	Lias claims (copper)	Sec. 29, T. 23 N., R 15 E.	144
DMA-1278 Phil Denney	Denney prospect (cobalt)	Sec. 30, T. 23 N., R. 15 E.	145

LEWIS COUNTY

DMA-2216 Eagle Peak Copper Mining Co.	Eagle Peak mine (copper)	Sec. 27, T. 15 N., R. 8 E.	149
DMEA-4810 Ralph Gilliespie	West End Cinnabar prospect (mercury)	Sec. 36, T. 13 N., R. 4 E.	150
DMEA-4843 Ralph Gilliespie	Fern Hill Cinnabar mine (mercury)	Sec. 6, T. 12 N., R. 5 E	151
OME-6432 Ralph Gilliespie	Fern Hill Cinnabar mine (mercury)	Sec. 6, T. 12 N., R. 5 E.	Application

LINCOLN COUNTY

DMEA-3955 Crystal City Mining Co.	Crystal tungsten prospect (tungsten-silver-gold)	Sec. 21, T. 28 N., R. 36 E.	103
DMEA-5054, Crystal City Mining Co.	Crystal tungsten prospect (tungsten-silver-gold)	Sec. 21, T. 28 N., R. 36 E.	Application
OME-6031 Crystal City Mining Co.	Crystal tungsten prospect (tungsten-silver-gold}	Sec. 21, T. 28 N., R. 36 E.	Application
DMA-1816 Fouress Mines, Inc.	Fouress mine (lead-zinc-copper)	Sec. 32, T. 28 N., R. 37 E.	104
OME-6560 Fouress Mines, Inc.	Fouress mine (lead-zinc-copper)	Sec. 32, T. 28 N., R. 37 E.	Application

OKANOGAN COUNTY

DMEA-2586 Border Lord Mining Co.	Boundary mine, (Wolframite Mtn. mine) (tungsten)	Secs. 7 and 8, T. 40 N., R. 22 E.	13
DMEA-1940 R. Ainsley and E. Dilts	Last Chance mine (tungsten)	Secs. 7 and 8, T. 40 N., R. 22 E.	14
DMEA-4436 Schee-Ranium Mines, Inc.	Four Metals group (tungsten-lead-silver)	Sec. 23, T. 40 N., R. 25 E.	15
DMEA-4022 American Strategic Minerals Corp.	Riverside claims (uranium)	Sec. 9, T. 40 N., R. 26 E.	16
OME-6160 Flag Hill Mines Corp.	Wannacut Lake property (Triune mine) (gold-silver-lead)	Secs. 10, and 11, T. 39 N., R. 26 E.	17
OME-6226 Zontelli Bros.	Buckhorn Mtn. deposit (Iron ore)	Secs. 13 and 24, T. 40 N., R. 30 E.	18
DMEA-2461 Mrs. F. A. Gourilie	Ptomigan claims (cobalt)	Sec. 23, T. 38 N., R. 17 E.	19
DMEA-2422 Copper Glance Mining Co.	Copper Glance mine (silver-zinc-copper)	Sec. 35, T. 38 N., R. 20 E.	20
OME-6380 Copper Glance Mining Co.	Copper Glance mine (silver-zinc-copper)	Sec. 35, T. 38 N., R.20 E.	Application

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DMEA-4402 Frank E. Maron	Little Andrews Creek placer (platinum)	Secs. 20 and 21, T. 38 N., R. 22 E.	21
DMEA-5060 Valley Evaporating Co.	Starr mine (molybdenum)	Sec. 8, T. 37 N., R. 26 E.	22
DMEA-3790 Am. Strategic Minerals Corp.	McDaniel lease (uranium and tungsten)	Secs.11, 12, 13, 14, and 24, T. 37 N., R. 26 E.	23
OME-6826 Mohawk Lease, partership	SiIver Peak mine (silver-molybdenum)	Sec. 35, T. 36 N., R. 24 E.	24
DMA-992 Sunny Peak Mining Co.	Mohawk group. (copper)	Sec. 2, T. 35 N., R. 24 E. Sec. 35, T. 36 N., R. 24 E.	25
DMEA-4790 P and H Exploration and Min. Corp.	Blackbird claim (tungsten)	Sec. 1, T. 35 N., R. 24 E.	26
DMEA-3419 E. Dilts and T. Wenzel	Tungsten Queen claims (tungsten)	Sec. 6, T. 35 N., R. 25 E.	27
OME-6765 Geo-Mineral Exploration Co.	Murray claim (silver)	Sec. 28, T. 34 N., R. 24 E.	28
DMA-1767 Sherman Mining Co.	Standard Group of claims (lead-zinc)	Secs. 20 and 29, T. 34 N., R. 26 E.	29
OME-5638 L. Patten and G. Zorn	Ramore group (silver)	Sec. 14, T. 33 N., R. 31 E.	30
DMEA-2510 Alder Gold-Copper Co.	Alder mine (copper)	Secs. 25 and 36, T. 33 N., R. 21 E.	31
DMEA-2193 G.O.P. Antimony, Inc.	Bales prospect (antimony)	Secs. 7, 8, 17, and 18, T. 32 N., R. 22 E.	32
DMA-979 G.O.P. Antimony, Inc	Antimony Queen mine (antimony)	Sec. 11, T. 31 N., R. 21 E.	33
OME-6144 Paymaster Mines, Inc.	Holden-Cambell property (copper)	Secs. 2, 3, 9, 10, 11, and 14, T. 30 N., R. 22 E.	34

PACIFIC COUNTY

DMEA-4668 Columbla Titanium, Inc.	Chinook deposit (monzanite, et al.)	Sec. 22, T. 9 N., R. 10 W.	112

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DMEA-4090 LaSoto-Jones Lead and Zinc Corp.	LaSota-Jones property (lead-zinc)	Secs, 11, 14, 15, 22, and 23, T. 40 N., R. 44 E.	87
DMEA-2908 E. M. Skaug, Jr.	Lucky Strike mine (lead-zinc)	Secs. 26 and 35, T. 40 N., R. 43 E.	88
DMEA-2388 Am. Zinc, Lead and Smelting Co.	Blue Bird group (lead-zinc)	Secs. 25 and 26, T. 40 N., R. 43 E., and Secs. 30 and 31, T. 40 N., R. 44 E.	89
DMA-1166 Am. Zinc, Lead and Smelting Co.	Grand View lease (lead-zinc)	Secs. 14, 15, and 22, T. 39 N., R. 43 E.	90
DMEA-2779 Betchart and Dressel	Oriole mine (lead-zinc-silver)	Secs. 19, 20, 29, and 30, T. 39 N., R. 43 E.	91
DMEA-3957 Dressel and Jones	Oriole mine (lead-zinc-silver)	Secs. 19, 20, 29, and 30, T. 39 N., R. 43 E.	Application
DMEA-2475 Jim Creek Mines, Inc.	Jim Creek mine (lead-zinc)	Sec. 9, T. 38 N., R. 42 E.	92
DMEA-3077 R. C. Wilmot	Red Ridge claims (tungsten)	Secs. 21 and 22, T. 38 N., R. 43 E.	93
DMEA-2894 E. A. Frick	Little Noisy mine (tungsten)	Sec. 17, T. 38 N., R. 44 E.	94
OME-6208 P and H Exploration and Mining Co.	Fairview claims (silver-copper-zinc)	Sec. 10, T. 37 N., R. 43 E.	95
OME-6684 P and H Exploration and Mining Co.	Fairview claims (silver-copper-zinc)	Sec. 10, T. 37 N., R. 43 E.	Application
OME-6294 Triple H & J Mining Co.	Lost Creek claims (uranium)	Sec. 30, T. 36 N., R. 43 E.	96
DMEA-5072 Golden Anchor Mining and Milling Co.	Moonbeam & Blue Bell claims (lead-silver)	Sec. 12, T. 32 N., R. 42 E.	97
DMA-1494 Newport Mining and Leasing Co.	Comstock and Conquest mines (lead-silver)	Secs. 15 and 22, T. 32 N., R. 45 E.	98

PIERCE COUNTY

DMA-2024 Silver Creek Gold and Lead Corp.	Silver Creek property (gold-lead)	Sec. 12, T. 17 N., R. 10 E.	146
OME-6703 B and J Properties	B & J mercury prospect (mercury)	Sec. 18, T. 16 N., R. 6 E.	147
DMEA-1608 Mt. Rainier Mining Co.	Starbo mine (copper-molybdenum)	Glacier Basin, Mt. Rainier National Park, T. 16 N., R. 9 E.	148

SKAGIT COUNTY

DMEA-3412 Twin Sisters Magnesium and Chrome Corp.	Meadow and Leader deposits (chrome)	Secs. 3, 9, and 10, T. 36. N., R. 7 E	8
DMEA-3666 Twin Sisters Magnesium and Chrome Corp.	Alamether, Begonia,and Shaft deposits (chromium)	Sec. 3, T. 36. N., R.7 E..	9
DMEA-2629 J.L. Pape	Tilley Talc and Bridge Creek claims (talc-steatite)	Sec. 22, T. 35 N., R. 12 E.	10
DMEA-2718 William R. Soren	Diamond property (zinc-lead-copper)	Secs. 25 and 26, T. 35 N., R. 13 E.	11
OME-6127 Soren Mining and Milling Corp.	Diamond property (zinc-lead-copper)	Secs. 25 and 26, T. 35 N., R. 13 E.	Application
OME-6233 Soren Mining and Milling Corp.	Diamond property (zinc-lead-copper)	Secs. 25 and 26, T. 35 N., R. 13 E.	Application
OME-6302 Soren Mining and Milling Corp.	Diamond property (zinc-lead-copper)	Secs. 25 and 26, T. 35 N., R. 13 E.	Application
OME-6386 Valumines, Inc.	Diamond property (silver-gold)	Secs. 25 and 26, T. 35 N., R. 13 E	Application
DMEA-1831 William Soren (assignee of C. O. Davis)	Johnsburg mine (lead-silver)	Secs. 27 and 34, T. 35 N., R. 13 E.	12

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DMEA-3934 Lowell A. Kaess	Johnsburg mine (lead-silver)	Secs. 27 and 34, T. 35 N., R. 13 E.	Application

SKAMANIA COUNTY

OME-6147 Wind River Mining Co.	Paradise, et al., claims (gold)	Secs. 3 and 10, T. 5 N., R. 7 E.	154
DMEA-3444 Copper Canyon Mining Co.	Copper Canyon, et al., claims (copper)	Sec. 21, T. 3 N., R. 5 E.	155

SNOHOMISH COUNTY

DMA-1733 Whitechuck, Inc.	Sauk River deposits (black sand)	Secs. 13 and 24, and T. 31 N., R. 10 E.; and Secs. 18 and 19, T. 31 N., R. 11 E.	113
DMEA-3007 Silver Coin Mining Co.	Silver Coin prospect (lead-zinc)	Sec. 11, T. 30 N., R. 9 E.	114
DMEA-2729 Ronald D. Taft	Onofrite and Tiemannite claims (mercury)	Sec. 19, T. 30 N., R. 10 E.	115
OME-6894 Bornite Exploration Co.	Bornite prospect (copper)	Sec. 20, T. 30 N., R. 10 E.	116
OME-6701 Century Explorations, Inc.	Sunrise prospect (copper-molybdenum)	Sec. 9, T. 29 N., R. 10 E.	117
DMEA-2435 R. T. Curtiss and J. C. Rogers	Calumet Lode claim (copper-zinc)	Secs. 27and 28, T. 29 N., R. 10 E.	118
DMEA-4220 Robert T. Curtis	Iowa group (Calumet claims) (copper)	Secs. 27 and 28, T. 29 N., R. 10 E.	Application
DMEA-4687 Howe Sound Co.	Iowa group (Calumet claims) (copper)	Secs. 27 and 28, T. 29 N., R. 10 E.	Contract
DMEA-4938 Rober T. Curtiss	Iowa group (Mint claim) (copper)	Secs. 27and 28, T. 29 N., R. 10 E.	Application
DMEA-3113 Norman C. Chapman	Doris prospect (copper)	Secs. 34 and 35, T. 29 N., R. 10 E.	119
DMA-91 R. B. Taft	Mackinaw mine (copper-nickel)	Sec. 19, T. 29 N., R. 11 E.	120

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DMEA-4724 Mineral Gorge Mining Co	Mineral Gorge property (zinc-copper)	Secs. 29, 30, 31, and 32, T. 29 N., R. 11 E.	121
OME-6103 Mineral Gorge Mining Co.	Mineral Gorge property (zinc-copper)	Secs. 29, 30, 31, and 32, T. 29 N., R. 11 E.	Application
DMA-1487 Gerald C. Burke	Condon-Burke claims (lead-zinc)	Sec. 7, T. 28 N., R. 11 E.	122
OME-6818 George Comonele	Nugget Chief claim (copper-gold-silver)	Sec. 18, T. 28 N., R. 11 E.	123
OME-6593 A. J. Cheff	Silver Creek mine (copper-silver-gold)	Sec. 20, T. 28 N., R. II E.	124
DMEA-4605 Gail Martin	Martin prospect (copper-tungsten)	Sec. 2, T. 27 N., R. 9 E.	125
DMA-1254 Index Mining Co	Sunset Mine (copper)	Sec. 1, T. 27 N., R. 10 E., and Sec. 6, T. 27 N., R. 11 E.	126
DMEA-2612 Granore Co	Sunset mine (copper)	Secs. 1 and 2, T. 27 N., R. 10 E.	Cert. Contract
DMA-1289 J. N. Erlandsun	Empire mine (Iron ore)	Secs. 18 and 19, T. 27 N., R. 11 E.	127
DMEA-2421 Lake Serene Mining Co.	Lake Serene (Wilbur-Index) mine (copper)	Secs. 30 and 31, T. 27 N., R. 10 E.	128

SPOKANE COUNTY

DMEA-4661 North Star Uranium, Inc.	Lehmbecker lease (uranium)	Sec. 1, T. 28 N., R. 44 E.	99
DMEA-3885 Dahl Uranium Mine, Inc.	Dahl Uranium mine (uranium)	Sec. 6, T. 28 N., R. 45 E.	100
DMEA-4151 Affillated Mines, Inc.	Sprague lease (uranium)	Sec. 13, T. 28 N., R. 44. E.	101
DMEA-4800 Mudhole Exploration, Inc	Hanson lease (uranium)	Sec. 33, T. 28 N., R, 45 E.	102

STEVENS COUNTY

DMEA-4036 Robert Alameda	Chief Joseph mine (zinc-lead-copper)	Sec. 3, T. 40 N., R. 38 E.	51
DMA-562 Orient-Eureka Gold Mine Co.	Orient-Eureka claims (lead-zinc)	Secs. 24 and 25, T. 40 N., R. 36 E., and Secs. 19 and 20, T. 40 N., R. 37 E.	52
OME-6605 L and S Mines, Inc.	Uraniwish claims (silver-gold)	Sec. 25, T. 40 N., R. 36 E.	53
DMEA-4049 North Port Copper Co., Inc.	Copper Find claims (copper)	Sec. 27, T, 40 N., R. 38 E.	54
DMEA-432 Mines Management, Inc.	Iroquois mine (zinc)	Secs. 19, 20, 29, and 30, T. 40 N., R. 42 E.	55
DMEA-2123 Pacific N.W. Mining Co.	Lucile mine (lead-zinc)	Secs. 19 and 30, T. 40 N., R. 42 E.	56
DMEA-3072 Grandview Mines	Anderson prospect (lead-zinc)	Sec. 3,T. 39 N., R. 41 E.	57
DMEA-2539 Grandview Mines	Grandview property (lead-zinc)	Sec. 2, T. 39 N., R. 41 E., and Sec. 35, T. 40 N., R. 41 E.	58
DMEA-2929 Grandview Mines	Grandview property (lead-zinc)	Sec. 2, T. 39 N., R. 41 E., and Sec. 35, T. 40 N., R. 41 E.	Cert. Contract
DMEA-4297 Frank and Cora Semtner	Semtner property (uranium-lead)	Sec. 1,T. 39 N., R. 41 E.	59
DMEA-3596 Albert G. Lotze	Gladstone mine (lead)	Secs. 17 and 18, T. 39 N., R. 42 E.	60
DMEA-2269 Mines Management, Inc.	Advance Mine (lead and zinc)	Secs. 8, 17,18, and 19, T. 39 N., R. 41 E.	61
DMEA-325 Grandview Mines Inc.	Scandia mine (zinc)	Sec 23, T. 39 N., R. 40 E.	62
DMEA-3218 George T. Odom	Ore.-Wash. Copper and Tungsten claims (tungsten)	Sec. 19, T. 39 N., R. 38 E.	63
DMA-2166 Farmer Mine Enterprise	Farmer mine (lead-zinc)	Secs. 27, 28, and 34, T. 39 N., R. 41 E.	64
DMEA-3073 Grandview Mines, Inc.	Dosser-Maki-Lotze prospect (lead-zinc)	Secs. 26, 27, 34, and 35, T. 39 N., R. 41 E.	65

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DMEA-1654 Goldfield Consolidated Mines Co.	Sierra Zinc mine (lead-zinc)	Secs. 19, 20, 29, and 30, T.38 N., R. 41 E.	66
DMEA-3300 Bonanza Lead	Bonanza mine (lead)	Sec. 11, T. 37 N., R. 38 E.	67
DMEA-4902 Lonnie Richards	John J. Frostad homestead (nickel-chromium-talc)	Sec. 31, T. 37 N., R. 38 E., and Sec. 6, T. 36 N., R. 38 E.	68
DMEA-3296 Bonanza Lead Co.	Copper Mt. mine (copper)	Sec. 17, T. 36 N., R. 38 E.	69
DMEA-2266 Pioneer Mining Co., Inc.	Longshot claim No. 1 (lead-zinc)	Sec. 18, T. 36 N., R. 41 E.	70
DMEA-5012 Blue Star Mining and Survey Corp.	Brooks-Ashley property (uranium)	Secs. 12 and 13, T. 34 N., R. 39 E.	71
DMEA-2156 Lawrence Hammond	Merikay mine (beryl)	Sec. 33, T. 34 N., R. 42 E.	72
DMEA-3198 Chewelah Copper Co., Inc.	Chewelah mine (copper)	Sec. 32, T. 33 N., R. 41 E.	73
DMEA-1466 Addy Mining Co.	Addy mine (tungsten)	Sec. 19, T. 32 N., R. 38 E.	74
DMEA-4772 Addy Exploration Co.	Addy mine (tungsten)	Sec. 19, T. 32 N., R. 38 E.	Application
DMA-520 Columbia Tungsten Corp.	Columbia property (tungsten)	Sec. 19, 32 N., R. 38 E.	75
DMA-776 C. Carr and J.M. Carr	Edna mine (copper)	Secs. 9 and 10, T. 31 N., R 39 E.	76
DMEA-4192 C. Carr and J.M. Carr	Edna mine (copper)	Secs. 9 and 10, T. 31 N., R. 39 E.	Application
DMEA-2223 Spokane-Idaho Mining Co.	Cleveland mine (lead-zinc)	Secs. 3, 4, 9, and 10, T. 30 N., R. 38 E.	77
DMA-688 Pacific Mining Co.	Blue Grouse Mt. group (tungsten)	Secs. 15, 16, and 17, T. 30 N., R. 42 E.	78

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DMEA-2694 Big Q Tungsten Mine, Inc.	Blue Grouse Mt. group (tungsten)	Secs. 15, 16, and 17, T. 30 N., R. 42 E.	Application
DMEA-3037 Big Q Tungstgen Mine, Inc.	Big Q mine (tungsten)	Secs. 15, 16, and 17, T. 30 N., R. 42 E.	Contract
DMEA-2803 Maxwell R. Baker	Baker property (tungsten)	Sec. 20, T. 30 N., R. 42 E.	79
DMEA-287 Geisbauer and Lower	Togo-Turk mines (copper)	Sec. 6, T. 29 N., R. 38 E.; and Sec. 31, T. 30 N., R. 38 E.	80
DMEA-4671 Geo Resources Corp.	Blue Mountain property (uranium)	Sec. 10, T. 29 N., R. 38 E.	81
DMA-2131 Tungsten Mining and Milling Co.	Germania mine (tungsten)	Sec. 13, T. 29 N., R. 37 E.	82
DMEA-2447 Germania Consolidated Mines, Inc.	Germania mine (tungsten)	Sec. 13, T. 29 N., R. 37 E.	Application
DMEA-4954 North Star Uranium, Inc.	Spokane Indian Reservation Land (uranium)	Sec. 23, T. 29 N., R. 38 E.	83
DMEA-4125 N.W. Uranium, Inc.	N.W. Uranium mine (uranium)	Sec. 1, T. 25 N., R. 37 E.; Secs. 3, 22, 34, T. 28 N., R. 37 E.; and Secs. 25, 35, and 36, T.28 N., R. 37 E.	84
DMEA-4460 Big Smoke Uranium, Inc.	Big Smoke property (uranium)	Sec. 11, T. 27 N., R. 37 E.	85
DMEA-4958 Daybreak Uranium, Inc.	Lowley lease (uranium)	Sec. 13, T. 27 N., R. 37 E.	86

WHATCOM COUNTY

DMA-2191 Western Slope Construction Co.	Mining claims 1-7 (Iron)	Sec. 35, T. 40 N., R. 4 E.	1
OME-6099 McCullough and Eldred	Kidney Creek claim (mercury)	Sec. 20, T. 40 N., R. 7 E.	2
OME-6172 Harold Reade	Church Mt. claims (copper)	Sec. 27, T. 40 N., R. 7 E.	3

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DMEA-2335 Glacier Mining Co.	Glacier mine (Midas et al. claims (copper)	Sec. 4, T. 39 N., R. 7 E.	4
OME-6007 Glacier Mining Co.	Glacier mine (Midas et al. claims (copper)	Sec. 4, T. 39 N., R. 7 E.	Application
OME-6246 Glacier Mining Co.	Glacier mine (Midas et al. claims) (copper)	Secs. 4, T. 39 N., R. 7 E.	Application
DMEA-3921 Evergreen Mines, Inc.	Claim No. 1 (lead-zinc-copper)	Sec. 21, T. 40 N., R. 9 E.	5
OME-6819 Western Go1d Mining, Inc.	New Light mine (gold)	Sec. 27, T. 38 N., R. 17 E.	6
OME-6659 Minerals Technology Corp.	Gold Hill mine (silver)	Sec. 25, T. 37 N., R. 16 E.	7

YAKIMA COUNTY

DMEA-3291 Hidden treasure Mines, Inc.	Hidden Treasure mine (copper-uranium)	Secs. 11 and 15, T. 16 N., R. 10 E.	152
DMEA-2297 R. R. Whiting and M. P. Roumm	Indian Creek prospect (mercury)	Sec. 11, T. 14 N., R. 12 E.	153
DMEA-3594 Indian Creek Mercury Mines, Inc.	Indian Creek prospect (mercury)	Sec. 11, T. 14 N., R. 12 E.	Application