

MAPS SHOWING PLATINUM-GROUP ELEMENT OCCURRENCES IN THE CONTERMINOUS UNITED STATES, UPDATED AS OF 1993

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INTRODUCTION

In conjunction with preparing maps of the geologically permissive areas for the occurrence of platinum-group elements (PGE) in the conterminous United States (Zientek and others, 1988; Peterson, in press), the Mineral Resource Data System (MRDS) has been updated to provide more detailed information about PGE. MRDS now contains 505 records for PGE in the conterminous United States, 109 of which are completely new records, and many others of which are previously existing records that have been updated with PGE information. These maps and table represent the status of the MRDS records as of November 1993; because MRDS is designed to be dynamic, further information about PGE can be added as it becomes important or available.

The initial effort in the 1970's to catalog PGE localities (Blair and others, 1977; Page and Tooker, 1979) involved an extensive literature search for mention of PGE in all types of mineral deposits and provided individual occurrence records for all identified localities of PGE regardless of PGE concentrations or whether the presence of PGE had been verified. Entries included sites where PGE had been mined, where PGE-bearing minerals had been documented, for which PGE analytical information existed, and where someone reported the presence of PGE. This was a valid approach at that time because there was sparse analytical information for PGE. Since that time, much more analytical information has become available, particularly for podiform chromite deposits (Carlson and others, 1985) but also elsewhere within the United States (see, for example, Page and others, 1992). Some of these recent studies, enabled by more sensitive analytical techniques that can now detect very small quantities of PGE, are beginning to suggest that small amounts of PGE may be present in a wide variety of deposit types, some of which are not hosted within the conventional magmatic ore deposits.

For the present study, every effort was made to enter records into MRDS for PGE occurrences in mines or prospects from which PGE have been mined, for which PGE minerals have been documented, or for which analytical data indicate concentrations of PGE either greater than or equal to 100 ppb or, for podiform chromite deposits, in the upper 10th percentile of analyzed deposits. In addition, some occurrences have been included regardless of PGE concentration, such as those for which

scientific data suggest that further study may be warranted to characterize the occurrences (PGE in the Mesozoic basins of the eastern United States, for example) or where the geologic environment is of current interest to explorationists (PGE in black shales, for example). However, to attempt to catalog all known analytical occurrences of PGE within the United States would be a formidable task and not of much use in delineating deposits of potential interest for PGE exploration. Should mining technology or economic conditions change such that very low grade occurrences become targets for PGE production, then the appropriate PGE data should be entered into MRDS.

Because of the differing "occurrence" definitions used when entering MRDS data, the PGE information appears somewhat haphazard; rather than delete those records for which the PGE information is unverified or PGE values are low, the table and map in this paper broadly indicate the relative importance of the records by indicating the knowledge of PGE for each MRDS entry and by showing on the map only those localities that meet the analytical cutoff, identified mineral, or PGE production criteria mentioned above. Several references to PGE localities in the older literature that could not be approximately located or verified have not been included.

In the 1980's the U.S. Geological Survey began publishing mineral deposit models, some of which characterize types of deposits known to contain PGE (Cox and Singer, 1986). Where appropriate, these models have been assigned to the PGE occurrences documented in MRDS (see table 1). Other PGE occurrences that are fairly well described but which do not fit into published models have been given informal deposit-type names. Some occurrences are so poorly understood or so poorly described that it was not possible to determine a deposit type. These have been classified as "unknown."

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TYPES OF PLATINUM-GROUP-ELEMENT OCCURRENCES

The MRDS data file contains 505 records of reported PGE occurrences within the conterminous United States. Of these occurrences, nearly half are in placers, but PGE have also been reported within many types of lode deposits including conventional magmatic PGE-bearing deposits within mafic and ultramafic rocks and unconventional occurrences in mafic and ultramafic rocks as well as occurrences in unconventional environments. For presentation in this report, PGE occurrences have been grouped into six broad deposit-type categories, a miscellaneous category, and a category for unknowns. The six main categories are residual deposits, magmatic sulfide deposits, magmatic oxide deposits, hydrothermal deposits associated with mafic or ultramafic rocks, hydrothermal deposits associated with calc-alkaline porphyry rocks, and deposits associated with alkaline igneous rocks. The miscellaneous deposit-types category includes polymetallic replacement, massive sulfide, epithermal vein, low-sulfide gold-quartz vein, and carbonate-hosted gold-silver deposits plus several occurrences for which there are no models, including a PGE-enriched black shale, platinum in pyrobitumen, a glacial erratic, and sewage sludge. The unknown deposit-types category is for those occurrences about which little is known other than a location (commonly approximate). Some aspects of PGE occurrences in these eight categories are discussed below. References to information specific to certain occurrences or areas are not cited below; see table 1 for citations for individual occurrences.

RESIDUAL DEPOSITS

Placer gold-PGE

PGE-bearing placers have been reported in many states but are most common in the Pacific Coast states. Many of these PGE occurrences are, or are thought to be, accompanied by placer gold derived from known lode deposits within the drainages. PGE in placers, however, have rarely been traced to specific lode deposits, even though permissive host rocks are usually present within the drainages. An exception to this is the reported occurrence of PGE in placers of streams draining New Rambler copper-gold-PGE deposits in Wyoming. The PGE-bearing placers in the conterminous United States have all been classified as placer gold-PGE deposits (Yeend, 1986), even where gold has not been reported to be present because either the gold to PGE ratio or the geologic environment is inappropriate for the occurrence of placer PGE-gold deposits (Yeend and Page, 1986; Singer and Page, 1986).

In most of the placers, the quantity and grade of PGE are such that they could not have been recovered economically alone and, typically, platinum-group minerals (PGM) were discarded. The extremely low grade (for PGE) but very large gold fields on the major rivers at the base of the Sierra Nevada have been the only consistently

productive placer PGE operations in the conterminous United States. Small quantities of PGE have been produced elsewhere, however, particularly from the Waldo area of the Klamath Mountains, Oreg., and from beach sands along the Pacific coast of Oregon and Washington. Total PGE production for California has been estimated at about 30,000 oz (Sjoberg and Gomes, 1981) and for Oregon at 1,500 oz (Mertie, 1969). This compares with about 68.2 million oz gold from those same placers in California and about 213,000 oz gold from those placers in Oregon (Koschmann and Bergendahl, 1968). PGE production from Washington is not known but is likely small, and placers in other states are not known to have produced PGE.

The PGE reported for many placer localities in the older literature are simply reported as platinum rather than as individual PGE and many have not been verified by modern studies. However, two important older studies of PGE placers are those of Day and Richards (1906), who analyzed heavy-mineral contents of black-sand concentrates from placers in the western United States, and of Logan (1919), who made a comprehensive study of PGE occurrences in California. Other old assay reports for placer (and lode) occurrences may or may not be reliable for several reasons; most are considered unverified unless other corroborating evidence is available. Also, visual identification of PGM in placer (and lode) deposits may or may not be reliable, and most of these are considered unverified in this report. For some of the reported localities, the report of PGE is suspect and may have been the wishful thinking of an eager prospector or the cunning of a swindler. Unverified occurrences of PGE in placers (and in other deposit types as well) have been noted in table 1.

Lateritic nickel

Laterites, common in the Klamath Mountains of California and Oregon and in central Washington, are derived from weathering of ultramafic rocks in accreted ophiolite terranes. PGE have been reported in several lateritic nickel deposits (model: Singer, 1986c) but have been confirmed only at the Hanna Nickel Mine, Oreg., where PGE are present in the 10's of ppb range, and at the Rough and Ready Bench, Oreg., where PGE were produced as a byproduct of a placer operation. In fact, the Hanna Nickel Mine has been the only successfully exploited nickel laterite in the conterminous United States. Other laterites may also contain PGE but have not yet been analyzed for them. Based on the very limited analytical data available, PGE-rich laterites comparable to those in Australia, which have parts per million grade zones (Elliott and Martin, 1991), do not appear to be present because of differences in source rocks, but further analysis may be warranted.

MAGMATIC SULFIDE DEPOSITS

Magmatic sulfide deposits containing PGE are generally found in mafic to ultramafic zoned or layered plutons where

they have formed several styles of mineralization from stratiform or stratabound mineralization of the Merensky Reef PGE (model: Page, 1986c), Picket Pin (Boudreau and McCallum, 1986), or Glen Mountains Layered Complex (R.W. Cooper, 1993, oral commun. to M.L. Zientek) type; to disseminated to massive mineralization near the margins of plutons as in Duluth copper-nickel-PGE (model: Page, 1986b), Stillwater nickel-copper (model: Page, 1986d), or synorogenic-synvolcanic nickel-copper (model: Page, 1986e) deposits; and to more discordant, lenticular, or less lithologically constrained mineralization like that of sills in the Mesozoic basins of the eastern United States (Gottfried and others, 1989), several mineralized areas of the Stillwater Complex, and Acoje nickel-copper-PGE deposits (model not yet published).

The most important area of the conterminous United States for magmatic sulfide deposits is the Stillwater Complex, Mont., which is host to the only productive primary PGE deposit in the conterminous United States—a Merensky Reef PGE-type deposit in the Banded series, the uppermost major division of this large layered mafic to ultramafic intrusion. Although thus far exploited only at the Stillwater Mine, this mineralized zone, the J-M Reef, extends the entire length of the complex. Other styles of sulfide mineralization that have also been found in the Banded series include Picket Pin-type deposits related to impermeable horizons and more discordant mineralization as at the Janet 50 and Coors 602 prospects. In the Basal series and locally in the Peridotite zone of the Ultramafic series (the other two major divisions of the Stillwater Complex) are Stillwater nickel-copper deposits, which typically contain 10's to a few hundred parts per billion total PGE. This style of mineralization also extends the length of the complex.

Also important for PGE mineralization is the Duluth Complex, Minn., a large composite intrusive mafic complex related to Keewenawan flood basalt eruptions during the formation of the Proterozoic Midcontinent rift. The base of the complex contains copper-nickel deposits, many of which are known to contain parts per million-level PGE in high-grade zones. Currently, PGE are not known from all of these deposits, but the geologic setting allows their presence. Most of the MRDS records report PGE only at those localities where they are known to be present.

Other layered mafic plutons in which sulfide-related PGE have been found include the Glen Mountains Layered Complex, Okla., the Lake Owen Complex, Wyo., and the Lady of the Lake Complex, Mont., all of which have greater than 500 ppb platinum+palladium in mineralized areas.

Few synorogenic-synvolcanic nickel-copper and Acoje nickel-copper-PGE deposits have been identified within the conterminous United States. The Shamrock Mine, southwestern Oregon, and the Friday Mine, southern California, which contain greater than 500 ppb platinum+palladium, are examples of PGE-bearing synorogenic-synvolcanic deposits. The Illinois River sulfide occurrence, Oregon, contains more than 500 ppb platinum+palladium and is similar to Acoje deposits. At

Preston Peak in northern California, the low 10's of parts per billion PGE mineralization has some similarities to that of Acoje deposits but is not well described by the model and has thus been classified as unknown.

MAGMATIC OXIDE DEPOSITS

Some magmatic segregations in mafic and ultramafic intrusions formed oxide rather than sulfide deposits. The most important of these for PGE in the conterminous United States are Bushveld chromite-type (model: Page, 1986a) chromitite layers in the Peridotite zone of the Ultramafic series in the Stillwater Complex and podiform chromite deposits (model: Albers, 1986) in accreted terranes of the continental margins. Both types of deposits produced only minor amounts of chromite, mainly during war times, when foreign sources were restricted and government support programs were active. Less important in the United States are Alaskan PGE (model: Page and Gray, 1986), PGE-bearing oxide deposits of the Antelope-Pony area of Montana, and PGE-enriched areas of the Humboldt lopolith of Nevada.

The rocks enriched in chromite in the Stillwater Complex are found in several layers extending the length of the complex, all of which contain some PGE. However, the B chromitite layer, which is particularly enriched in PGE, has been informally called PGE-enriched stratiform chromitite (Hammarstrom and Zientek, 1993) because it is sufficiently enriched as to be potentially exploitable for primary PGE deposits. These deposits contain parts per million-level platinum and palladium, whereas the other chromite layers contain less PGE and would not be economic for PGE production alone. These Bushveld chromite-type deposits, if mined for chromium, would not likely produce PGE in the recovery process.

There are numerous podiform chromite deposits in the accreted ophiolite terranes of the Pacific Coast states and some in the Appalachian Blue Ridge province. Many of the deposits in California and Oregon and a few in the eastern United States have been analyzed for PGE and small amounts of PGE are present in virtually all podiform chromite deposits (Carlson and others, 1985; Lipin, 1984). For existing records in which podiform chromite deposits were said to contain PGE, these commodities have been retained regardless of their PGE content as determined by Carlson and others (1985). Of the remaining podiform chromite deposits for which there are analyses, records for those exceeding the upper 10th percentile value of one or more PGE (64 ppb Pt, 10 ppb Pd, 26 ppb Rh, 320 ppb Ru, 170 ppb Ir, see Page and others, 1986) were either updated to show the presence of PGE or added as new records if no record existed. Podiform chromite deposits in Washington have not received the same scrutiny as those in California and Oregon. Three chromite deposits in Washington are reported to contain PGE, one with supporting analytical data, and are included in MRDS; others may also contain relatively high concentrations of PGE but have not yet been analyzed. The very small bodies

of chromite-bearing ultramafic rocks in accreted terranes in the Blue Ridge province of the Appalachian Mountains typically contain PGE in the tens of parts per billion range (Lipin, 1984, oral commun., 1993).

Plutons at Chancelulla Peak, Calif., and Tincup Peak, Oreg., represent mineralized Alaska-type plutons, although the style of mineralization is not typical of Alaskan PGE deposits in that accompanying chromite or other oxides are lacking (M.L. Zientek, written commun., 1993). At Chancelulla Peak, platinum and palladium values range up to 500 ppb but at Tincup Peak, values are only in the 10's of ppb for mineralized samples.

The Antelope-Pony area of Montana is one of several areas of ultramafic rocks in the Archean province of Wyoming and Montana in which are found concentrations of chromite (M.L. Zientek, 1993, written commun.). In the Antelope-Pony area, osmiridium was identified. PGE have also been found in the Red Lodge district, Montana, but not in sufficient quantity (64 ppb Pt+Pd+Rh, Loferski, 1986) to merit inclusion as a MRDS record for PGE at this time.

The Humboldt lopolith hosts magnetite deposits that locally contain more than 500 ppb PGE. The origin of these deposits is not yet well understood, so while they may represent a type of magmatic oxide deposit, they have been classified here as unknown.

HYDROTHERMAL DEPOSITS ASSOCIATED WITH MAFIC OR ULTRAMAFIC ROCKS

Two mining districts have long been known to contain PGE in what are generally thought of as somewhat unconventional settings. Although these deposits are spatially associated with mafic intrusions, the deposit characteristics are more like those of hydrothermal deposits than conventional magmatic segregation deposits. These areas are the Revais Creek area, Montana, and the New Rambler area, Wyoming. In both districts copper, gold, and PGE are the main commodities, although not all the mines in each district are known to contain PGE. The Revais Creek deposits are associated with diorite and gabbro dikes but are also hosted by adjacent quartzite and argillite, particularly in zones of intense shearing and alteration (Buckley, 1992). The New Rambler ores were found in irregular shaped pockets within decomposed, sheared, amphibolitized gabbro and ultramafic rocks that may be related to a quartz-carbonate fissure vein system (M.L. Zientek, 1993, written commun.). One mine in each district has produced several hundred ounces of PGE. Ore samples from some other mines in these districts contain as much as parts per million-level PGE and there are unconfirmed reports of PGE from still other mines in these areas. There are no published deposit models for these deposits and they are insufficiently understood currently, due to poor exposure and intense oxidation, to know whether they belong within a single model or merit separate models. For the MRDS records, these deposits have been assigned the informal model names New Rambler copper-gold-PGE and Revais Creek copper-gold-PGE.

HYDROTHERMAL DEPOSITS ASSOCIATED WITH CALC-ALKALINE PORPHYRY ROCKS

Several porphyry copper (model: Cox, 1986b) and porphyry-related skarn (model: Cox, 1986c) deposits, such as the Mission Mine, Ariz., Santa Rita Mine, N.Mex., Liberty Pit, Nev., and Bingham Mine, Utah, have produced small amounts of PGE as byproducts of the copper mining, although the amount of this PGE production generally is not reported. However, porphyry copper deposits have very low PGE grades, as determined from the small amounts of PGE that are extracted from smelter recoveries. Small quantities of PGE may be present in other deposits related to calc-alkaline rocks as has been found at the Copper Canyon Mine, Nev., and at Carr Fork, Utah, but where smelters receive ore from several mines, the source of any recovered PGE cannot be determined. The nature of the PGE occurrence in porphyry copper and related deposits is not understood. Additionally, one Climax molybdenum deposit (model: Ludington, 1986), the Questa mine in the Red River district, N.Mex., reportedly contains PGE, but this occurrence has not been verified. A few deposits identified as polymetallic veins (model: Cox, 1986a) are reported to contain PGE. The only analytical data come from the Gingerload deposit, Nev., where mineralized samples are reported to contain as much as 600 ppb platinum and PGE minerals have been identified, and from the New Light Mine, Wash., where platinum was found in mill concentrates.

DEPOSITS ASSOCIATED WITH ALKALINE IGNEOUS ROCKS

Three PGE-bearing deposits in the conterminous United States are associated with alkaline rocks and one with a carbonatite. The alkaline associated deposits are the Copper Hill Mine, Colo., in the alkaline Flallard Stock; the Copper King Mine, Mont., associated with the syenite at Goose Lake; and the Comstock Mine, Wash., associated with alkaline rocks of Shasket Creek. All carry as much as parts per million values of platinum and palladium in sulfide concentrates or sulfide-rich rock samples. None of these deposits have produced PGE but their concentrations suggest potential recovery as byproducts of any future mining operations. Unlike the Phalabora deposit, the Iron Hill carbonatite, Colorado (model: Singer, 1986a), is not particularly enriched in PGE. A sample collected for a scientific study ran only 39 ppb platinum.

MISCELLANEOUS DEPOSIT TYPES

Several types of deposits fall into the miscellaneous category, which is simply a collection of deposit types that do not fit into any of the foregoing categories. They all are found in unconventional environments for PGE deposits. Of these, two types are important for PGE while the presence of PGE in many of the others is unverified or a scientific curiosity. The Boss Mine in the Goodsprings district, Nev., has been characterized as a polymetallic replacement-type deposit (D.A. Singer, written commun.,

1993; model: Morris, 1986) from which about 1,200 oz of platinum+palladium have been produced along with gold, silver, copper, and a little lead. Mines in this district are hosted within dolomitized limestone near a quartz monzonite sill or within the sill itself in an area that appears to lack mafic or ultramafic rocks. Geophysical data suggest, however, that an ultramafic mass may underlie the district at depth (D.A. Singer, oral commun., 1993). Although PGE have been reported in old assays of ore collected at several other mines in this district, there have been no recent studies to verify this. Also important because of recent interest in PGE in black shales of China and Canada (Grauch and others, 1991) is the Gibellini deposit in Nevada, where more than 500 ppb platinum has been detected in mineralized samples.

Kuroko massive sulfide deposits (model: Singer, 1986b) and other massive sulfide deposits appear to contain small quantities of PGE as seen in old smelter returns from the Iron Mountain Mine, Calif., and as traces in channel samples at the Broadway claims, Wyo.

Reports of PGE in a few epithermal vein deposits in the western United States are unverified. Generally, these deposits are not well enough described to indicate the type of vein deposit, but they were tentatively classified as Sado epithermal (model: Mosier and others, 1986a) or Comstock epithermal (model: Mosier and others, 1986b) veins. Such vein deposits are not likely candidates for economic concentrations of PGE.

Gold samples from three low-sulfide gold-quartz vein mines (model: Berger, 1986b) in the Alleghany district of the Mother Lode (Calif.) contain as much as 86.4 ppm platinum, indicating that platinum, at least, is present in this type of deposit. There are also unconfirmed reports of PGE from several other possible low-sulfide gold-quartz veins throughout the western United States.

Jasperoid samples collected from mine dumps near Mackay, Idaho, contain as much as 384 ppb platinum and 88 ppb palladium. The deposits have been tentatively identified as carbonate-hosted gold-silver deposits (model: Berger, 1986a).

Verified occurrences of PGE are known from a pyrobitumen sample collected near Fonda, N.Y., from a glacial erratic found near Plattsburg, N.Y., and from sewage sludge collected at a sewage treatment facility near San Francisco, Calif. These occurrences are scientific curiosities.

UNKNOWN DEPOSIT TYPES

Nineteen PGE localities are listed as having an unknown deposit type. A few of these have been discussed above. The literature for most of the rest of these deposits generally had little descriptive information other than a location and commodity list. In a few cases, it was not even possible to determine whether the deposit was a placer or lode.

PRESENTATION OF THE TABLE AND MAPS

For each MRDS record listing PGE as a commodity, table 1 provides a map number (used in this publication only) for those locations plotted on the map (see below); the MRDS record number; name of the deposit used in MRDS; location by county and by latitude and longitude; deposit model assignment, using published U.S. Geological Survey models where appropriate, informal deposit-type designations followed by "(no model)", or "unknown"; a reference list showing in bold type those references that mention PGE; and an indication of the type of PGE knowledge available. This information provides a clear indication of how to find any particular occurrence within the MRDS records and what literature was used to complete the record. The literature cited within MRDS is not intended to be exhaustive for any given property. All unpublished sources are cited in table 1 as "Unpub. data" and in the reference list that accompanies table 1 as "Unpub. data. See individual MRDS record for specific data source." For some records, I could not find all the cited references, particularly some of the unpublished data, and for others, I examined all the cited material but found no reference to the PGE information already contained in the record; this is indicated in the references and PGE knowledge columns of the table.

The conterminous United States map and insets show the locations for those PGE localities compiled in MRDS that meet the geochemical, mineralogical, or production criteria stated above; not plotted are those localities for which the presence of PGE has not been verified or for which analytical values are low. Different map symbols represent occurrences in the deposit-type groupings discussed above. In addition to categorizing occurrences by deposit type, the importance of each deposit is indicated by the size of the symbol used; several deposits that are important from a production, geologic, or historical perspective are shown on the maps with a larger symbol (and are in bold type in table 1).

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Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS) [Occurrences are listed alphabetically by state, numbered consecutively within each state, and names of properties are shown (where known). Property names shown in bold type indicate important localities. Asterisk (*) in Map number column indicates unverified occurrence not plotted on maps. D in Map number column indicates district record not plotted on maps to avoid site record duplication. References shown in bold type contain PGE information; those followed by * indicate reference was not found in this study]

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Arizona								
*	D002502	Blue Knob Nos. 30, 31, 32 Prospects	Maricopa	33°36'50"	112°50'53"	Unknown	Keith and others, 1983 Unpub. data*	Unable to find source of PGE data (may be unpub. data)
*	M045470	Cataract Canyon	Cocoonino	36°07'03"	112°37'20"	Unknown	Blake, 1980 Quirling, 1962	Unverified report of PGE
*	M045469	Columbia Mine	Yavapai	34°02'03"	112°18'33"	Placer Au-PGE	Browne, 1968 Day and Richards, 1906 Galbraith and Brennan, 1970 Johnson, 1972a Lindgren, 1926 Quirling, 1962	\$1.80/ton Pt in black-sand concentrates, 4 lb concentrate from 250 lb gravel (grade = about 33 ppb Pt)
*	MP000050	Detectron and Pegmatite Claims	Maricopa	33°07'09"	112°45'22"	Unknown	McDonnell, 1986 Peterson and others, 1989	51 ppb Pt in chip sample (fire assay)
1	M050387	Mission Mine	Pima	31°59'32"	111°03'49"	Porphyry Cu, skarn related	Argall, 1962 Cooper, 1960 Dayton, 1988 Elevatorski, 1983 Gale, 1965 Keith, 1974 Kinnison, 1966 Richard and Courtright, 1959 Walegna, 1989 World Mining, 1972 Butler, 1937 Elsing and Heineman, 1936 Johnson, 1972a Quirling, 1962 Wilson, 1961	Byproduct PGE in smelter returns (amount unknown)
*	M045468	Plomosa Placers	La Paz	33°37'45"	114°07'06"	Placer Au-PGE		Unverified report of PGE
*	M001911	San Domingo Placers	Maricopa	33°53'41"	112°38'57"	Placer Au-PGE	Galbraith and Brennan, 1970 Johnson, 1972a Quirling, 1962 Wilson, 1961	Unverified report of PGE
*	M004568	Trigo Placers	Yuma	33°03'13"	114°38'33"	Placer Au-PGE	Johnson, 1972a Wilson, 1961	Unable to find source of PGE data
Arkansas								
*	M045425	Batesville	Independence	35°48'39"	091°37'28"	Unknown	Hill, 1924 Quirling, 1962	Unverified report of PGE
California								
1	M045280	Allen Mine	Humboldt	41°15'32"	123°36'08"	Placer Au-PGE	Irelan, 1888 Lowell, 1916 PSFC¹, 1960	Minted gold from property reported to have associated platinum
2	M045336	Altaville	Calaveras	38°06'07"	120°33'17"	Placer Au-PGE	Clark and Lydon, 1962 Clark and others, 1963 Eric and others, 1955 Henderson and others, 1966	Unverified byproduct PGE production
*	M055477	Anderson Valley Placer	Mendocino	39°04'29"	123°27'42"	Placer Au-PGE	Hanks, 1884 Murdoch and Webb, 1966	Unverified report of PGE

3	M045288	Antone Kaus	Del Norte	41°47'42"	123°57'34"	Placer Au-PGE	Logan, 1919 O'Brien, 1952 PSFC ¹ , 1960 Carlson and others, 1985 Dow and Thayer, 1946 Clark and Lydon, 1962 Logan and Franke, 1936 Clark, 1970a Logan, 1919 Spencer, 1971 Clark, 1970a Logan, 1919 Spencer, 1971 Logan, 1919 Watts, 1893	Small byproduct PGE production (about 2.25 oz) 21 ppb Pd in chromitite sample (fire assay) Unverified report of PGE in black-sand concentrates Visual identification of PGM
4	MP00069	Antone Nichelini	Napa	38°30'03"	122°18'20"	Podiform chromitite		
*	M045337	Atlas Gold Dredging Corp.	Calaveras	38°12'10"	120°57'59"	Placer Au-PGE		
5	M045306	Beebe Claims	Trinity	40°35'49"	123°16'48"	Placer Au-PGE		
6	M045338	Beegum Creek	Shasta, Tehama	40°20'47"	122°51'31"	Placer Au-PGE		Small byproduct PGE production (about 5 oz)
*	M045284	Big Lagoon Mining Co.	Humboldt	41°10'44"	124°06'53"	Placer Au-PGE		Assay yielded 0.5 oz/ton Pt in black-sand concentrates (analytical method unknown), (grade = about 57 ppb) 19 ppb Pd, 27 ppb Rh in chromitite sample (fire assay)
7	MP00038	Black Eagle	Siskiyou	41°55'51"	123°09'39"	Podiform chromitite	Allen, 1941b Carlson and others, 1985 Wells and Cater, 1950 Wells and others, 1949 Clark, 1970a Day and Richards, 1906 Logan, 1919	\$290.10/ton Pt in black-sand concentrates, concentration factor not known Small byproduct PGE production (<\$10 in 1916) 330 ppb Ru in chromitite sample (fire assay)
8	M045266	Blue Canyon	Placer	39°15'27"	120°42'40"	Placer Au-PGE		
9	M045317	Blue Nose Mine	Siskiyou	41°34'03"	123°31'47"	Placer Au-PGE		
10	M700420	Bonanza Claim	Del Norte	41°55'57"	123°56'43"	Podiform chromitite	Carlson and others, 1985 Cater and Wells, 1953 O'Brien, 1952 Unpub. data Wells and others, 1946 Bradley and others, 1918 Carlson and others, 1985 Cater and others, 1951 Clark and Carlson, 1956 Lindgren, 1894 Clark, 1970a Day and Richards, 1906	130ppb Pt, 186 ppb Pd, 200 ppb Ir in chromitite sample (fire assay)
*	M045299	Burnt Ranch	Trinity	40°48'39"	123°28'47"	Placer Au-PGE		\$38.40/ton Pt in black-sand concentrates, 4.5 lb concentrates from 1 yd ³ gravel (grade = about 65 ppb) Small byproduct PGE production (about 8 oz/yr, unknown duration) Unverified byproduct PGE production
12	M045344	Butte Creek	Butte	39°41'56"	121°46'55"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	
13	M045314	Callahan	Siskiyou	41°18'46"	122°48'02"	Placer Au-PGE	Clark, 1970a, b Day and Richards, 1906 Logan, 1919 Logan, 1919 Spencer, 1971	
14	M045325	Calpella	Mendocino	39°13'21"	123°12'37"	Placer Au-PGE	Clark, 1970a, b Clark and Lydon, 1962 Logan, 1919, 1925 Logan and Franke, 1936 Carlson and others, 1985 O'Brien, 1952 Wells and others, 1946	Osmidium grain assayed 49% Ir, 32% Os, 10% Pt (analytical method unknown) Small byproduct PGE production (amount unknown)
15	M045335	Camanche-Lancha Plana	Amador, Calaveras	38°13'13"	120°56'09"	Placer Au-PGE		
16	M007475	Carla	Del Norte	41°42'25"	123°57'36"	Podiform chromitite		13 ppb Pd in chromitite sample (fire assay)
17	M045311	Carrier Gulch	Trinity	40°30'59"	123°05'01"	Placer Au-PGE	Clark, 1970a Logan, 1919 Spencer, 1971	Visual identification of PGM; unverified byproduct production

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
California—Continued								
18	M045315	Castella	Siskiyou	41°08'18"	122°18'59"	Placer Au-PGE	Day and Richards, 1906 PSFC ¹ , 1960 Spencer, 1971	\$8.40/ton Pt in black-sand concentrates, concentration factor not known
*	M045275	Cavanaugh Mine	Humboldt	41°12'05"	123°39'46"	Placer Au-PGE	Logan, 1919	Unverified report of PGE
19	MP00049	Chanchelulla Peak	Shasta	40°27'14"	122°59'02"	Alaskan PGE?	Gray and others, 1986	532 ppb Pt, 543 ppb Pd max. in rock samples (fire assay)
20	M045340	Clear Creek	Shasta	40°30'06"	122°26'02"	Placer Au-PGE	Logan, 1919	Small byproduct PGE production (about 3.5 oz)
*	M045282	Clover Flat Placer	Humboldt	40°57'58"	123°38'21"	Placer Au-PGE	Clark, 1970a Irwin, 1960 Laizure, 1925b PSFC ¹ , 1960	Unverified report of PGE
21	M045293	Coon Creek	Del Norte	41°46'03"	123°59'49"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Unverified byproduct PGE production
22	M045310	Corona De Oro Mine	Trinity	40°53'12"	123°31'48"	Placer Au-PGE	Clark, 1970a Logan, 1919	Small byproduct PGE production (a few ounces)
23	M045342	Cottonwood Creek	Shasta, Tehama	40°22'35"	122°17'01"	Placer Au-PGE	Clark, 1970b Logan, 1919	PGM sample contained 33% Pt, 50% Ir, 17% osmium (analytical method unknown)
24	M045294	Craigs Creek	Del Norte	41°47'42"	123°57'34"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Unverified byproduct PGE production
25	M045296	Crescent City Beach	Del Norte	41°44'38"	124°10'13"	Placer Au-PGE	Clark, 1970a Logan, 1919 O'Brien, 1952 PSFC ¹ , 1960 Unpub. data*	Small byproduct PGE production (amount unknown)
*	M045259	Devils Gulch	Mariposa	37°36'34"	119°49'16"	Low-sulfide Au-quartz veins?	Wells and others, 1946 Bowen and Gray, 1957 Castello, 1921 Laizure, 1928	Unverified report of PGE
*	M045331	Douglas Flat	Calaveras	38°07'19"	120°27'22"	Placer Au-PGE	Clark, 1970a Clark and Lydon, 1962 Day and Richards, 1906	\$10.50/ton Pt in black-sand concentrates, 100 lb of concentrates from 60 tons of gravel (grade = about 10 ppb)
26	MP00061	Emma Bell Mine	Siskiyou	41°56'03"	123°09'36"	Podiform chromite	Carlson and others, 1985 Wells and Cater, 1950 Wells and others, 1949	69 ppb Pt in chromitite sample (fire assay)
27	M100460	Estrella Mine	San Luis Obispo	35°22'41"	120°42'06"	Podiform chromite	Allen, 1941b Carlson and others, 1985 Smith and Griggs, 1944 Walker and Griggs, 1953	12 ppb Pd in chromitite sample (fire assay)
28	M045345	Feather River District	Butte	39°27'25"	121°37'01"	Placer Au-PGE	Clark, 1970a Logan, 1919 Mertie, 1969	Produced about 1,965 oz PGE
29	M045265	Folsom	Sacramento	38°36'43"	121°13'11"	Placer Au-PGE	Carlson, 1955 Clark, 1970a, b Logan, 1919	Produced about 5,000 oz PGE
*	M045272	Forks of Salmon	Humboldt	41°22'33"	123°29'27"	Placer Au-PGE	Logan, 1919	Unverified report of PGE

*	M045334	Fourth of July Claim	Calaveras	38°14'22"	120°51'24"	Placer Au-PGE	Clark and Lydon, 1962 Logan and Franke, 1936	Unverified report of PGE
30	M045292	French Hill	Del Norte	41°49'31"	123°58'15"	Placer Au-PGE	Cater and Wells, 1953 Clark, 1970a, b Logan, 1919 O'Brien, 1952	Small byproduct PGE production (amount unknown)
31	M700422	French Hill Chrome Mine	Del Norte	41°48'24"	123°59'09"	Podiform chromite	Bradley and others, 1918 Carlson and others, 1985 O'Brien, 1948, 1952 Sanborn and Rickett, 1948 Unpub. data* Wells and others, 1946	18 ppb Pd in chromitite sample (fire assay)
32	W000377	Friday Mine	San Diego	33°02'21"	116°33'51"	Synorogenic-synvolcanic Ni-Cu	Bilbrey, 1962 Cornwall, 1966 Creasey, 1946 Eric, 1948 Merriam, 1946 Weber, 1963 Unpub. data Clark, 1970a, b Logan, 1919 O'Brien, 1952	310 ppb Pd, 90 ppb Pt, 80 ppb Ir max. in massive sulfide samples (fire assay)
33	M045290	Geo. Cook Claims	Del Norte	41°50'20"	124°01'30"	Placer Au-PGE	Averitt, 1942 Ferguson and Gannett, 1932 Logan, 1941 McCulloch and others, 1964 Unpub. data	Small byproduct PGE production (about 2 oz)
*	M021683	German Bar	Nevada	39°26'20"	120°48'58"	Low-sulfide Au-quartz veins	Ferguson and Gannett, 1932 Logan, 1941 McCulloch and others, 1964 Unpub. data	Pt detected in native gold sample (fire assay, value not known)
*	X025376	Gold Crown	Seirra	39°27'54"	120°50'31"	Low-sulfide Au-quartz veins	Ferguson and Gannett, 1932 McCulloch and others, 1964 Unpub. data	60.7 ppm Pt max. detected in native gold samples (fire assay)
34	M010775	Grey Claim	Napa	38°48'35"	122°22'14"	Podiform chromite	Averitt, 1945 Carlson and others, 1985 Dow and Thayer, 1946	124 ppb Pt in chromitite sample
35	M045304	Hammer Property	Trinity	40°53'26"	123°35'35"	Placer Au-PGE	Clark, 1970a Logan, 1919	Small byproduct PGE production (about 15 oz)
36	M045303	Hawkins Bar	Trinity	40°52'14"	123°31'13"	Placer Au-PGE	Clark, 1970a Logan, 1919	Unverified byproduct PGE production
37	M045308	Henderson Mine	Trinity	40°53'41"	123°33'48"	Placer Au-PGE	Clark, 1970a Logan, 1919	Unverified byproduct PGE production
38	M007280	Hole in the Ground	Del Norte	41°57'13"	124°00'40"	Podiform chromite	Carlson and others, 1985 O'Brien, 1952 Wells and others, 1946	11 ppb Pd in chromitite sample (fire assay)
39	M100203	Holston Mine	Tulare	36°01'26"	118°57'10"	Podiform chromite	Carlson and others, 1985 Goodwin, 1958 Ryncarson, 1948 Unpub. data*	76 ppb Pt in chromitite sample (fire assay)
40	M045260	Huelsdonk Placer	Mariposa	37°36'54"	120°20'56"	Placer Au-PGE	Bowen and Gray, 1957	Unverified byproduct PGE production
41	W025295	Iron Mountain Mine	Shasta	40°40'32"	122°31'36"	Kuroko massive sulfide	Ellers, 1913 Kinkel and Albers, 1951 Kinkel and others, 1956 Unpub. data	PGE reported in smelter returns
42	M045332	Jenny Lind	Calaveras	38°05'25"	120°52'05"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Small byproduct PGE production (amount unknown)
43	M045324	Jessops Gulch	Siskiyou	41°17'49"	123°07'52"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Small byproduct PGE production (about 0.5 oz)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
California—Continued								
44	M100588	Judy Mine	Del Norte	41°55'37"	123°58'52"	Podiform chromite	Carlson and others, 1985 O'Brien, 1952 Unpub. data* Wells and others, 1946	10 ppb Pd, 250 ppb Ir, 410 ppb Ru, 39 ppb Rh in chromitite sample (fire assay)
45	M045300	Junction City	Trinity	40°43'57"	123°05'48"	Placer Au-PGE	Averill, 1938, 1941b Clark, 1970a, b Day and Richards, 1906 Spencer, 1971	Small byproduct PGE production (about 1 oz/yr, unknown duration)
46	W025616	Kangaroo Mountain	Siskiyou	41°55'16"	123°11'26"	Podiform chromite	Carlson and others, 1985 Wells and Cater, 1950 Wells and others, 1949	130 ppb Pt, 69 ppb Rh in chromitite sample (fire assay)
47	M045312	Kingsbury Gulch	Trinity	40°30'31"	123°08'40"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 Spencer, 1971	Small byproduct PGE production (about 2 oz)
48	M045276	Klamath River Mine	Humboldt	41°12'02"	123°39'40"	Placer Au-PGE	Laizure, 1925a Logan, 1919	PGM grains averaged 26.04% Pt, 72.15% Os+Ir, 1.165% Au (analytical method unknown)
49	M045309	Koon Ranch	Trinity	40°52'51"	123°36'07"	Placer Au-PGE	Clark, 1970a Logan, 1919 Snetsinger, 1971a	Iridosmine identified by electron microprobe
50	M045327	La Grange	Stanislaus	37°39'59"	120°28'10"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Small byproduct PGE production (amount unknown)
51	M045262	La Porte	Plumas	39°41'21"	120°58'57"	Placer Au-PGE	Clark, 1970a Day and Richards, 1906	\$19.80/ton Pt in black-sand concentrates, concentration factor not known
52	M100312	Laton Mine	Sonoma	38°37'11"	123°07'50"	Podiform chromite	Carlson and others, 1985 Dow and Thayer, 1946	240 ppb Ir, 570 ppb Ru in chromitite sample (fire assay)
53	M045302	Lewiston	Trinity	40°44'45"	122°48'21"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Unverified byproduct PGE production
54	M045268	Lincoln	Placer	38°54'04"	121°15'31"	Placer Au-PGE	Clark, 1970a, b Logan, 1936	Unverified byproduct PGE production
55	M045298	Lind Mine	Del Norte	41°48'22"	124°01'16"	Placer Au-PGE	Clark, 1970a, b PSFC ¹ , 1960	Unverified byproduct PGE production
56	M045307	Little Creek	Trinity	40°35'09"	123°15'32"	Placer Au-PGE	Clark, 1970a Logan, 1919	Visual identification of PGM
*	M045285	Little River	Humboldt	41°01'40"	124°04'08"	Placer Au-PGE	Irwin, 1960 PSFC ¹ , 1960	Unverified report of PGE
57	M700413	Long Ledge No. 3	Fresno	36°52'10"	119°17'16"	Podiform chromite	Carlson and others, 1985 Logan and others, 1951 Ryneason, 1948	80 ppb Pt in chromitite sample (fire assay)
58	M100179	Lucky Girl Mine	Stanislaus	37°24'08"	121°25'10"	Podiform chromite	Carlson and others, 1985 Walker and Griggs, 1953	13 ppb Pd, 730 ppb Ir, 510 ppb Ru in chromitite sample (fire assay)
59	M045301	Macintosh Mine	Humboldt	40°56'42"	123°37'45"	Placer Au-PGE	Clark, 1970a Spencer, 1971	Erlichmanite identified by electron microprobe
60	M045267	Mammoth Bar	Placer	38°55'14"	121°00'16"	Placer Au-PGE	Snetsinger, 1971b Logan, 1919, 1927 Waring, 1919	Small byproduct PGE production (amount unknown)
61	M045318	Mann and Ross Mine	Siskiyou	41°25'31"	123°30'08"	Placer Au-PGE	Logan, 1919	Small byproduct PGE production (amount unknown)

*	M045326	Mendocino Mining & Milling Co., Inc.	Mendocino	38°57'50"	123°04'00"	Placer Au-PGE	Laizure, 1924 Logan, 1919 O'Brien, 1953	Unverified report of PGE
62	M045271	Michigan Bar	Sacramento	38°29'32"	121°05'24"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 Mertle, 1969	Small byproduct PGE production (12 oz/yr, unknown duration)
63	M045320	Michigan Salmon	Siskiyou	41°14'38"	123°17'27"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 O'Brien, 1947	Small byproduct PGE production (several ounces per year, unknown duration)
64	M045313	Minersville	Trinity	40°49'41"	122°46'07"	Placer Au-PGE	Clark, 1970a, b	Small byproduct PGE production (amount unknown)
65	M045333	Mokelumne River	Calaveras	38°13'59"	120°57'59"	Placer Au-PGE	Clark and Lydon, 1962 Logan, 1919, 1925	Produced about 480 oz PGE
66	M010725	Moore Mine	Napa	38°47'51"	122°20'38"	Podiform chromite	Carlson and others, 1985 Dow and Thayer, 1946	121 ppb Pt, 128 ppb Pd, 450 ppb Ir, 1.67 ppm Ru, 38 ppb Rh in chromitite sample (fire assay) Unable to find source of PGE data
*	M045273	Murray	Humboldt	41°21'45"	123°29'45"	Placer Au-PGE	Averill, 1941a O'Brien, 1948	Unverified byproduct PGE production
67	M045291	Myrtle Creek Placer	Del Norte	41°48'06"	124°03'15"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 O'Brien, 1952	Unverified byproduct PGE production
68	M045295	Nels Christensen Mine	Del Norte	41°47'49"	124°03'01"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Unverified byproduct PGE production
*	M045258	New Year Diggings	Mariposa	37°36'48"	120°21'19"	Placer Au-PGE	Bowen and Gray, 1957 Unpub. data*	Unverified report of PGE
*	M046848	NI-CAL	Del Norte	41°55'41"	123°58'44"	Lateritic Ni	American Metal Market, 1981 Northern Miner, 1977	Unable to find source of PGE data
69	M045322	Niggerhill Hydraulic Mine	Siskiyou	41°14'25"	123°16'48"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 Spencer, 1971	Small byproduct PGE production (amount unknown)
70	M045343	Nimshew	Butte	39°50'33"	121°37'13"	Placer Au-PGE	Clark, 1970a Day and Richards, 1906	\$510/ton Pt in black-sand concentrates, concentration factor not known
71	M045321	Orcutt Hydraulic Mine	Siskiyou	41°13'21"	123°14'55"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Small byproduct PGE production (amount unknown)
*	X025318	Oriental	Sierra	39°27'36"	120°51'28"	Low-sulfide Au-quartz veins	Averill, 1942 Ferguson and Gannett, 1932 Logan, 1941 McCulloch and others, 1964 Unpub. data	86.4 ppm Pt max. detected in native gold samples (fire assay)
*	M045279	Orleans Placer	Humboldt	41°17'36"	123°33'12"	Placer Au-PGE	Averill, 1941a Crawford, 1894a Laizure, 1925b Lowell, 1916	Unable to find source of PGE data
72	M045269	Pacific Gold Dredging Co.	Placer	38°55'10"	121°00'27"	Placer Au-PGE	Logan, 1919, 1927	Small byproduct PGE production (a few ounces per year, unknown duration)
73	M047042	Palo Alto sewage sludge	Santa Clara	37°27'11"	122°08'38"	Sewage sludge (no model)	Gulbrandsen and others, 1978	4 ppm Pd in ash from sewage treatment (semi-quantitative spectrography)
74	W025722	Peg Leg Mine	Siskiyou	41°37'48"	122°43'39"	Podiform chromite	Carlson and others, 1985 Wells and Cater, 1950	170 ppb Ir, 650 ppb Ru in chromitite sample (fire assay)
75	M045323	Peterson Mine	Siskiyou	41°16'19"	123°07'11"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Unverified byproduct PGE production
*	M045287	Pioneer Placer Mine	Humboldt	41°26'32"	124°03'44"	Placer Au-PGE	Ireland, 1888	Unverified report of PGE
76	M045339	Platina	Shasta	40°21'37"	122°53'29"	Placer Au-PGE	Clark, 1970a, b	Unverified byproduct PGE production

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Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
California—Continued								
77	MP000055	Pole Corral	Tehama	40°17'21"	122°56'42"	Podiform chromite	Carlson and others, 1985 O'Brien, 1946 Wells and Hawkes, 1965	2.53 ppm Pt, 12 ppb Pd, 2.93 ppm Ir, 4.93 ppm Ru, 92 ppb Rh in chromitite sample (fire assay)
78	M046992	Preston Peak	Siskiyou	41°49'27"	123°37'14"	Unknown	Snoke and Calk, 1978	10 ppb Pt, 14 ppb Pd, 5 ppb Rh max. in rock samples (fire assay)
79	MP000039	Prospect near Holston Chrome	Tulare	36°01'29"	118°58'25"	Podiform chromite	Carlson and others, 1985	76 ppb Pt in chromitite sample (fire assay)
80	M045329	Putah Creek	Yolo	38°29'37"	122°01'38"	Placer Au-PGE	Clark, 1970a Logan, 1919 Spencer, 1971	Visual identification of PGM
81	MP000062	Questa Prospect	San Luis Obispo	35°21'54"	120°39'37"	Podiform chromite	Carlson and others, 1985	80 ppb Pt, 26 ppb Rh in chromitite sample (fire assay)
82	M045264	Relief Hill	Nevada	39°21'41"	120°51'39"	Placer Au-PGE	Clark, 1970a Day and Richards, 1906 Logan, 1941	\$106.50/ton Pt in black-sand concentrates, 9 lb of concentrates from 1 ton of gravel (grade = about 550 ppb)
83	M045341	Roaring River	Shasta, Tehama	40°23'42"	122°31'28"	Placer Au-PGE	Averill, 1938	Small byproduct PGE production (amount unknown)
84	M045263	Rough-and-Ready	Nevada	39°13'57"	121°07'35"	Placer Au-PGE	Clark, 1970a Day and Richards, 1906	\$15.60/ton Pt in black-sand concentrates, concentration factor not known
*	W025377	Sailor Boy Diggings	Sierra	39°32'16"	121°01'29"	Placer Au-PGE	Clark, 1970a Crawford, 1894b Lindgren, 1911	Unverified report of PGE
85	M045274	Salstrom Mine	Humboldt	41°17'32"	123°33'42"	Placer Au-PGE	Logan, 1919	Small byproduct PGE production (about 3 oz)
86	M045316	Seiad	Siskiyou	41°50'07"	123°11'42"	Placer Au-PGE	Clark, 1970a, b	Unverified byproduct PGE production
87	W025614	Seiad Creek	Siskiyou	41°54'35"	123°08'34"	Podiform chromite	Carlson and others, 1985 Weibelt and Ricker, 1949 Wells and Cater, 1950 Wells and others, 1949	120 ppb Pt, 34 ppb Pd, max. in chromitite samples (fire assay)
*	W025654	Short Bend and River Bend Placers	Siskiyou	41°46'35"	123°19'46"	Placer Au-PGE	Averill, 1935 Clark, 1970a	Unable to find source of PGE data
88	M045289	Siskiyou Fork	Del Norte	41°53'03"	123°48'36"	Placer Au-PGE	Clark, 1970a, b Logan, 1919	Small byproduct PGE production (amount unknown)
89	M045328	Snelling	Merced	37°30'54"	120°23'51"	Placer Au-PGE	Clark, 1970a, b Logan, 1919 Mertle, 1969	Small byproduct PGE production (amount unknown)
90	M007533	Sunset	Del Norte	41°48'05"	123°52'04"	Podiform chromite	Carlson and others, 1985 O'Brien, 1952 Wells and others, 1946	490 ppb Ir in chromitite sample (fire assay)
*	M045281	Surpur Creek	Humboldt	41°21'57"	123°56'47"	Placer Au-PGE	Clark, 1970a PSFC ¹ , 1960	Unverified report of PGE
91	M100580	Sweetwater Mine	San Luis Obispo	35°25'05"	120°45'13"	Podiform chromite	Allen, 1941b Bradley and others, 1918 Carlson and others, 1985 Smith and Griggs, 1944 Unpub. data* Walker and Griggs, 1953	170 ppb Ir, 400 ppb Ru in chromitite sample (fire assay)

92	M007567	Tangerine	Del Norte	41°57'27"	123°52'59"	Podiform chromite	Carlson and others, 1985 Cater and Wells, 1953 O'Brien, 1952 Wells and others, 1946	260 ppb Ir, 1.39 ppm Ru, 45 ppb Rh, max. in chromitite samples (fire assay)
93	M100231	Tedoc Group	Tehama	40°14'29"	122°54'00"	Podiform chromite	Bradley and others, 1918 Carlson and others, 1985 Wells and Hawkes, 1965 Logan, 1919	1.06 ppm Pt, 10 ppb Pd, 850 ppb Ir, 980 ppb Ru, 41 ppb Rh, max. in chromitite samples (fire assay) Small byproduct PGE production (amount unknown) Unverified report of PGE
94	M045319	Ten Eyck Mine	Siskiyou	41°24'11"	123°30'10"	Placer Au-PGE	Averill, 1941a Clark, 1970a Irwin, 1960 PSFC ¹ , 1960	
*	M045286	Two States Mining Co.	Humboldt	41°20'50"	124°04'40"	Placer Au-PGE	Ireland, 1888 PSFC ¹ , 1960 Snetsinger, 1972	
95	M045283	Union Gold Bluff Mining Co.	Humboldt	41°23'22"	124°04'10"	Placer Au-PGE	Carlson and others, 1985	Oxarsite identified by electron microprobe
96	MP000070	Unnamed prospect	Del Norte	41°54'47"	123°53'50"	Podiform chromite	Carlson and others, 1985	390 ppb Pt, 280 ppb Ir, 410 ppb Ru, 76 ppb Rh in chromitite sample (fire assay)
97	MP000066	Unnamed prospect	Del Norte	41°57'17"	124°00'44"	Podiform chromite	Carlson and others, 1985	67 ppb Pt, 550 ppb Ir, 910 ppb Ru, 73 ppb Rh in chromitite sample (fire assay)
98	MP000063	Unnamed prospect	Del Norte	41°54'37"	123°58'38"	Podiform chromite	Carlson and others, 1985	73 ppb Pt, 10 ppb Pd, 30 ppb Rh in chromitite sample (fire assay)
99	MP000058	Unnamed prospect	Del Norte	41°56'44"	123°57'39"	Podiform chromite	Carlson and others, 1985	12 ppb Pd in chromitite sample (fire assay)
100	MP000056	Unnamed prospect	Del Norte	41°52'41"	123°53'36"	Podiform chromite	Carlson and others, 1985	500 ppb Pt, 16 ppb Pd, 43 ppb Rh in chromitite sample (fire assay)
101	MP000052	Unnamed prospect	Del Norte	41°54'28"	123°57'40"	Podiform chromite	Carlson and others, 1985	12 ppb Pd in chromitite sample (fire assay)
102	MP000051	Unnamed prospect	Del Norte	41°56'24"	123°58'14"	Podiform chromite	Carlson and others, 1985	76 ppb Pt, 850 ppb Ir, 1.4 ppm Ru, 61 ppb Rh in chromitite sample (fire assay)
103	MP000045	Unnamed prospect	Del Norte	41°54'55"	123°53'57"	Podiform chromite	Carlson and others, 1985	340 ppb Pt, 280 ppb Ir, 350 ppb Ru, 60 ppb Rh in chromitite sample (fire assay)
104	MP000044	Unnamed prospect	Del Norte	41°54'43"	123°54'01"	Podiform chromite	Carlson and others, 1985	280 ppb Pt, 250 ppb Ir, 400 ppb Ru, 40 ppb Rh in chromitite sample (fire assay)
105	MP000043	Unnamed prospect	Del Norte	41°53'33"	123°51'50"	Podiform chromite	Carlson and others, 1985	180 ppb Ir in chromitite sample (fire assay)
106	MP000042	Unnamed prospect	Del Norte	41°41'31"	123°57'29"	Podiform chromite	Carlson and others, 1985	79 ppb Pt, 11 ppb Pd in chromitite sample (fire assay)
107	MP000041	Unnamed prospect	Stanislaus	37°24'27"	121°25'13"	Podiform chromite	Carlson and others, 1985	300 ppb Ir, 490 ppb Ru, 39 ppb Rh in chromitite sample (fire assay)
108	MP000040	Unnamed prospect	Del Norte	41°55'29"	123°57'27"	Podiform chromite	Carlson and others, 1985	27 ppb Rh in chromitite sample (fire assay)
109	MP000037	Unnamed prospect	Del Norte	41°54'43"	123°54'01"	Podiform chromite	Carlson and others, 1985	350 ppb Pt, 830 ppb Ir, 1.13 ppm Ru, 120 ppb Rh in chromitite sample (fire assay)
110	MP000261	Unnamed prospect	Del Norte	41°57'38"	123°52'57"	Podiform chromite	Carlson and others, 1985	320 ppb Ru in chromitite sample (fire assay)
111	M045261	Upper Feather	Plumas	40°00'37"	121°11'34"	Placer Au-PGE	Logan, 1919 Murdoch and Webb, 1966	Small byproduct PGE production (12-15 oz/yr, unknown duration)
112	M045305	Valdor Dredge	Trinity	40°45'56"	123°05'43"	Placer Au-PGE	Clark, 1970a Logan, 1919	Small byproduct PGE production; largest PGE producer in county
113	M005694	Ward and Lyons Mine	Calaveras	38°16'20"	120°49'21"	Podiform chromite	Carlson and others, 1985 Cater, 1948 Clark and Lydon, 1962 Turner, 1994 Unpub. data*	330 ppb Ir in chromitite sample (fire assay)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
California—Continued								
114	M045277	Weitchpec Bar	Humboldt	41°11'09"	123°42'29"	Placer Au-PGE	Avenill, 1941a Clark, 1970b Logan, 1919 PSFC ¹ , 1960 Page and others, 1973 Spencer, 1971	Ferropalladium, cooperite, sperrylite, rhodian sperrylite identified by electron microprobe and x-ray. Small byproduct PGE production
115	M100289	Western Chrome Nos. 1, 3, 4	Trinity	40°26'04"	123°15'55"	Podiform chromite	Carlson and others, 1985 Wells and Hawkes, 1965	545 ppb Pt, 110 ppb Pd, 33 ppb Rh in chromitite sample (fire assay)
116	M008734	White Cedar	Humboldt	41°23'01"	123°46'45"	Podiform chromite	Carlson and others, 1985 Wells and Hawkes, 1965	101 ppb Pt in chromitite sample (fire assay)
117	M045330	Yuba River District	Yuba	39°12'02"	121°26'12"	Placer Au-PGE	Clark, 1970a E&MJ ² , 1988 Logan, 1919 Mertie, 1969 NMAN ³ , 1976 Romanowitz, 1970	Produced about 6,702 oz PGE
Colorado								
1	M045347	Aspen	Pitkin	39°11'17"	106°49'04"	Placer Au-PGE?	Day and Richards, 1906 Vanderwilt, 1947	\$1.50/ton Pt in black-sand concentrates, 600 lb of concentrates from 1 ton gravel (grade = about 510 ppb)
2	M045348	Buena Vista	Chaffee	38°51'24"	106°07'55"	Placer Au-PGE	Day and Richards, 1906 Vanderwilt, 1947	\$12.90/ton Pt in black-sand concentrates, 27 lb of concentrates from 1 yd ³ gravel (grade = about 100 ppb)
3	D010812	Copper Hill Mine	La Plata	37°24'01"	108°04'22"	Syenite-hosted Cu-Ag-PGE (no model)	Eckel, 1938, 1949 Mertie, 1969 Page and others, 1973 Werle and others, 1984	2.3 ppm Pd, 3.9 ppm Pt max. in copper-sulfide concentrates (analytical method unknown)
*	M045346	Iron Hill Carbonatite	Saguache	38°15'12"	107°04'26"	Carbonatite	Larsen, 1942 Nash, 1972 Temple and Grogan, 1965 Unpub. data Kunz, 1918	39 ppb Pt in rock sample
*	M045415	Iron Hill Placer	Park	39°18'55"	105°53'35"	Placer Au-PGE		PGE reported in auriferous gravel (analytical method unknown)
4	M045350	Liberty	Saguache	37°51'13"	105°33'50"	Placer Au-PGE	Day and Richards, 1906 Vanderwilt, 1947	\$1.80/ton Pt in black-sand concentrates, concentration factor not known
*	D002811	Mark Thomas	La Plata	37°26'15"	107°48'17"	Placer Au-PGE	Unpub. data*	Unable to find source of PGE data (presumed to be unpub. data)
*	M045417	Ouray	Ouray	38°01'38"	107°40'22"	Placer Au-PGE	Day and Richards, 1906 Vanderwilt, 1947	Assay button for gold yielded 1.18% Pt, 4.51% Os+Ir (analytical method unknown)
5	M045416	Roll Call Mining Co.	Saguache	38°14'56"	105°56'56"	Unknown	Kunz, 1918	Assay of ore yielded 5.09 oz/ton Pt (analytical method unknown)
*	M045349	Telluride	San Miguel	37°55'54"	107°47'20"	Placer Au-PGE	Day and Richards, 1906 Vanderwilt, 1947	\$2.70/ton Pt in black-sand concentrates, 1 lb of concentrated from 3 yd ³ gravel (grade = about 0.3 ppb)

Georgia

* M046993	Habersham County. occurrences	Habersham	34°45'00"	083°30'00"	Placer Au-PGE	Hurst and Crawford, 1964	PGM in stream-sediment samples identified visually and by x-ray diffraction, contamination from sieving (material lodged in screens from a previous sample) possible
* M046994	White County occurrences	White	34°40'00"	083°45'00"	Placer Au-PGE	Hurst and Otwell, 1964	PGM in stream-sediment samples identified visually and by x-ray diffraction, contamination from sieving (material lodged in screens from a previous sample) possible

Idaho

* W019287	Bilk Gulch Placer	Bonneville	43°06'25"	111°15'34"	Placer Au-PGE	IDLIS ⁴ , 1975* Ross, 1941 Savage, 1961b Lindgren, 1904 Ross, 1941	Unable to find source of PGE data (possibly 1975 reference)
* M045483	Cottonwood	Idaho	46°06'33"	116°21'28"	Low-sulfide Au-quartz veins	Armstrong and Weiss, 1957 Day and Richards, 1906 Flagg, 1913 Hubbard, 1955 Lorain and Metzger, 1938 Reed, 1934	Unable to find source of PGE data
* M045479	Elk City District	Idaho	45°48'40"	115°25'53"	Placer Au-PGE	Reid, 1960 Ross, 1941 Savage, 1961a Staley, 1946	\$1.50/ton Pt in black-sand concentrates, 14 lb of concentrates from 1 ton of gravel (grade = about 12 ppb)
1 M045484	Frank E. Wilson Ranch	Owyhee	42°55'32"	115°28'27"	Placer Au-PGE	Hite, 1933 Mertie, 1969 Ross, 1941 Staley, 1946	Microscopic identification of PGM in black sands and qualitative chemical test was positive for PGE (nature of test unknown)
2 M045485	Glenns Ferry	Elmore	42°56'45"	115°17'47"	Placer Au-PGE	Hite, 1933 Mertie, 1969 Ross, 1941 Staley, 1946	Microscopic identification of PGM in black sands and qualitative chemical test was positive for PGE (nature of test unknown)
3 W027341	Grand View Placer	Owyhee	42°59'04"	116°04'26"	Placer Au-PGE	Fahrenwald and others, 1939 Hill, 1916 Ross, 1941 Shannon, 1922 Sorenson, 1937 Staley, 1946	Microscopic identification of PGM
* W013800	King Solomon Prospect	Boise	43°51'49"	115°46'10"	Low-sulfide Au-quartz veins?	Ross, 1941 Unpub. data*	Unable to find source of PGE data (presumed unpub. data)
4 M045480	Lucile Bar Placer	Idaho	45°32'04"	116°18'37"	Placer Au-PGE	Day and Richards, 1906 Hubbard, 1955 Lorain and Metzger, 1938 Ross, 1941	\$144/ton Pt in black-sand concentrates, concentration factor not known
5 MP00068	Minidoka	Blaine	42°40'17"	113°26'26"	Placer Au-PGE	Hill, 1916 Shannon, 1922	Microscopic identification of PGM
6 M045487	North Fork, Clearwater River	Clearwater	46°36'55"	116°12'36"	Placer Au-PGE	Anderson, 1930 Day and Richards, 1906 Savage, 1961a Staley, 1940	\$2.40/ton Pt in black-sand concentrates, concentration factor unknown
7 M045482	Payette River	Gem	43°55'54"	116°16'58"	Placer Au-PGE	Day and Richards, 1906 Hubbard, 1955 Savage, 1961c Staley, 1946	\$8.40/ton Pt in black-sand concentrates, 70 lb of concentrates from 1 ton of gravel (grade = about 340 ppb)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Idaho—Continued								
*	M045477	Pierce City District	Clearwater	46°29'28"	115°47'59"	Placer Au-PGE	Anderson, 1930 Day and Richards, 1906 Ross, 1941 Shannon, 1922 Staley, 1946	\$1.20/ton Pt in black-sand concentrates, 25 lb of concentrates from 1 yd ³ of gravel (grade = about 9 ppb)
*	M045488	Rocky Bar	Elmore	43°41'18"	115°17'18"	Placer Au-PGE	Ballard, 1928 Day and Richards, 1906 Ross, 1941 Savage, 1961a Staley, 1946	\$2.27/ton Pt in black-sand concentrates, 5 lb of concentrates from 1 yd ³ of gravel (grade = about 3 ppb)
*	M045481	Shaw Mining District	Ada	43°35'51"	116°02'48"	Placer Au-PGE	Gerry, 1912 Quiring, 1962 Ross, 1941 Staley, 1946	Unverified report of PGE
8	M045486	Tyceska Gold Mining Co.	Elmore	42°59'08"	115°10'31"	Placer Au-PGE	Hite, 1933 Mertite, 1969 Ross, 1941 Staley, 1946	Microscopic identification of PGM in black sands and qualitative chemical test was positive for PGE (nature of test unknown)
9	MP00245	Unnamed Jasperoid occurrences	Butte	43°50'24"	113°27'48"	Carbonate-hosted Au-Ag?	Soulliere and others, 1988	233-384 ppb Pt in 10 samples, 88 ppb Pd in 1 sample from dump (fire assay)
*	M045478	Welch Ground, and Gold Point and Eagle Bend	Bingham	43°12'17"	112°21'43"	Placer Au-PGE	Day and Richards, 1906 Fahrenwald and others, 1939 Hill, 1916 Hite, 1933 Ross, 1941 Staley, 1946	\$21/ton Pt in black-sand concentrates, 1.5 lb of concentrates from 1 ton of tailings (grade = about 18 ppb)
Maine								
*	MP00111	Niles Brook	Oxford or Franklin	45°00'00"	070°42'49"	Placer Au-PGE	Boyle, 1979 Gauthier and others, 1987 Gauthier and Troffier, 1987 Nowlan and others, 1990	Unverified report of PGE (1987 references believed to have cited Boyle in error)
Maryland								
1	M045424	Glyndon	Baltimore	39°28'33"	076°49'04"	Placer Au-PGE	Day and Richards, 1906 Lindgren, 1912	\$19/ton Pt in gravel (grade = about 220 ppb)
Minnesota								
1	W018675	Birch Lake	St. Louis, Lake	47°45'01"	091°49'04"	Duluth Cu-Ni-PGE	Bonnichsen, 1974 Unpub. data	30 ft zone of core averages >2 ppm Pt+Pd (analytical method unknown)
2	MP00113	Dunka Pit	St. Louis	47°43'15"	091°49'27"	Duluth Cu-Ni-PGE	Morton and Hauck, 1987 Unpub. data	High-grade sample contains 10 ppb Pt, 960 ppb Pd (analytical method unknown)
3	W018674	Dunka Road	St. Louis	47°39'50"	091°53'30"	Duluth Cu-Ni-PGE	Bonnichsen, 1972, 1974 Coombes, 1990 Roose and Weiblen, 1986 Geerts and others, 1990 Mining Journal of London, 1989 Morton and Hauck, 1987, 1989 Ripley, 1981, 1986a, b Unpub. data	High-grade area contains as much as 9.4 ppm Pd, 2.0 ppm Pt, (analytical method unknown). Resources are estimated at 185 million tons at 0.004 oz/ton Pt, 0.007 oz/ton Pd

4	W018671	Maturi	Lake	47°48'05"	091°45'20"	Duluth Cu-Ni-PGE	Bonnichsen, 1974 Grosh and others, 1955 Morton and Hauck, 1987 Schluter and Landstrom, 1976 Schwartz and Davidson, 1952 Weiblen, 1989	570 ppb Pt+Pd in ore, weighted average (analytical method unknown)
5	M046566	Minnamax Cu-Ni Prospect	St. Louis	47°37'54"	091°52'59"	Duluth Cu-Ni-PGE	Bonnichsen, 1974 Boucher, 1975 E&MJ ² , 1976 Foote and Weiblen, 1986 Morton and Hauck, 1987, 1989 Ripley, 1986a Severson, 1991 Tyson and Chang, 1984 Unpub. data Weiblen, 1989	One ore sample contains 14 ppm Pt+Pd over 4 ft (analytical method unknown)
6	M046425	Spruce Mine	Lake	47°49'57"	091°40'38"	Duluth Cu-Ni-PGE	Bonnichsen, 1974 Bonnichsen and Tyson, 1975* Cornwall, 1966 Foote and Weiblen, 1986 Grosh and others, 1955 Listerud and Melneke, 1977 Morton and Hauck, 1987 Ripley and Alawi, 1986 Wager and others, 1969 Unpub. data Hauck and Barnes, 1989 Morton and Hauck, 1987 Unpub. data	651 ppb Pt+Pd in ore, weighted average (analytical method unknown)
7	MP00114	Water Hen	St. Louis	47°26'05"	092°06'31"	Duluth Cu-Ni-PGE		One sample contained 1 ppm Pt, 1 ppm Pd (analytical method unknown)
Montana								
1	SP00188	Alaskite	Sweet Grass	45°26'18"	110°02'55"	Other PGE (magmatic oxide—no model)	Czarnanske and others, 1991	5.1 ppm Pt, 3.4 ppm Pd, 0.4 ppm Rh in bulk sample (fire assay)
2	M045427	Antelope-Pony District	Madison	45°40'34"	111°57'23"	Wyoming province chromitite (magmatic oxide—no model)	Page and others, 1973	Osmiridium identified by X-ray diffraction or electron microprobe
3	MP00092	Bay Horse	Sanders	47°15'59"	114°24'34"	Revas Creek Cu-Au-PGE (no model)	Buckley, 1992 Crowley, 1963 Zientek, 1993	0.21 oz/ton Pt+Pd in grab sample (analytical method unknown)
4	SP01096	Benbow Cr-Pt	Stillwater	45°21'46"	109°48'59"	PGE-enriched stratiform chromitite (no model)		2.06 ppm Pt+Pd over 2 ft, surface samples (fire assay)
5	M060101	Benbow Mine	Stillwater	45°21'52"	109°48'22"	Bushveld Cr	Czarnanske and Zientek, 1985 Jackson, 1968 Page and Dohrenwend, 1973 Page and others, 1969, 1972 Peoples and Howland, 1940 Wimmer, 1948 Zientek, 1993 Zientek, 1993	330 ppb Pt, 270 ppb Pd, 19 ppb Rh max. in chromitite samples (fire assay)
6	SP01081	Benbow Ni-Cu	Stillwater	45°21'37"	109°48'49"	Stillwater Ni-Cu		600 ppb Pt, 92 ppb Pd, 4.5 ppb Rh in pulps from drill core (fire assay)
7	M700434	Blakely Cliffs	Sweet Grass	45°27'24"	110°10'03"	Bushveld Cr	Czarnanske and Zientek, 1985 Howland and others, 1949	No published PGE data available for this area
8	SP01091	Blitz	Stillwater	45°22'11"	109°47'23"	Merensky Reef PGE	Czarnanske and Zientek, 1985	No published PGE data available for this area
9	MP00106	Blue Ox Mine	Sanders	47°16'29"	114°24'09"	Revas Creek Cu-Au-PGE (no model)	Crowley, 1963 Ingersoll and others, 1982 Van Loenen and others, 1987	Spectrylite identified. 2.9 ppm Pd, 1.2 ppm Pt, 39 ppb Rh max. in dike sample (fire assay)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Montana—Continued								
10	M060093	Bluebird	Sweet Grass	45°23'19"	109°57'41"	Bushveld Cr	Czamanske and Zientek, 1985 Page and others, 1969 Wimmler, 1948 Zientek, 1993	460 ppb Pt, 120 ppb Pd, 310 ppb Rh in chromitite samples (fire assay)
11	SP01093	Bluebird Cr-Pt	Sweet Grass	45°23'09"	109°57'52"	PGE-enriched stratiform chromitite (no model)	Czamanske and Zientek, 1985	No published PGE data available for this area
12	MP00091	Bluebird Ni-Cu	Sweet Grass	45°23'06"	109°58'00"	Stillwater Ni-Cu	Czamanske and Zientek, 1985 Czamanske and Zientek, 1985 Page and Nokleberg, 1974 Page and others, 1976	No published PGE data available for this area
13	SP01086	Boulder East	Sweet Grass	45°28'16"	110°10'07"	Merensky Reef PGE	Czamanske and Zientek, 1985	No published PGE data available for this area
14	SP01077	Boulder River Ni-Cu (east)	Sweet Grass	45°26'37"	110°09'30"	Stillwater Ni-Cu	Page and others, 1976	32 ppb Pt, 48 ppb Pd max. in surface samples (fire assay)
15	M060099	Boulder River Ni-Cu (Riverside)	Sweet Grass	45°28'23"	110°11'56"	Stillwater Ni-Cu	Czamanske and Zientek, 1985 Page, 1979 Reed, 1950 Roby, 1949	No published PGE data available for this area
16	SP01085	Boulder West	Sweet Grass	45°29'14"	110°12'03"	Merensky Reef PGE	Czamanske and Zientek, 1985	No published PGE data available for this area
17	SP01097	Chrome Lake Cr-Pt	Stillwater	45°21'09"	109°47'44"	PGE-enriched stratiform chromitite (no model)	Zientek, 1993	3,428 ppm Pt+Pd over 4.5 ft, surface samples (fire assay)
18	SP01082	Chrome Lake Ni-Cu	Stillwater	45°21'06"	109°47'48"	Stillwater Ni-Cu	Unpub. data Zientek, 1993	52 ppb Pt, 41 ppb Pd, 2.7 ppb Rh in pulps of drill core (fire assay)
19	MP00098	Chrome Mountain Ni-Cu	Sweet Grass	45°26'02"	110°07'18"	Stillwater Ni-Cu	Czamanske and Zientek, 1985 Page and Nokleberg, 1974 Page and others, 1976 Conn, 1979	67 ppb Pt, 130 ppb Pd, 9 ppb Rh max. in surface samples (fire assay)
20	SP01024	Coors 602	Sweet Grass	45°26'04"	110°05'29"	Discordant PGE mineralization (no model)	Loverling, 1930 Page and others, 1973 Reed, 1950 Simons and others, 1973 WPAMRS ⁵ , 1942	4.4 ppm Pt, 11 ppm Pd over 2.5 ft interval (fire assay presumed)
21	M045434	Copper King Mine	Park	45°07'23"	109°54'23"	Syenite-hosted Cu-Ag-PGE (no model)	Stotelmeyer and others, 1983	Small PGE production. Numerous analytical results. Grab samples from stockpile ran 1.3 oz/ton Pt, 1.06 oz/ton Pd max. (analytical method unknown)
*	SP01141	Copper Queen	Park	45°17'15"	110°34'56"	Unknown	Czamanske and Zientek, 1985 Page and Nokleberg, 1974 Page and others, 1969, 1972 Czamanske and Zientek, 1985 Page and Nokleberg, 1974 Zientek, 1993	0.002 oz/ton Pt max. in chip samples (analytical method unknown)
22	MP00112	Crescent Creek Cr-Pt	Sweet Grass	45°23'15"	110°01'24"	PGE-enriched stratiform chromitite (no model)		640 ppb Pt, 1.5 ppm Pd, 170 ppb Rh max. in chromitite samples
23	MP00095	Crescent Creek Ni-Cu	Sweet Grass	45°23'09"	110°01'10"	Stillwater Ni-Cu		No published PGE data available for this area
24	SP01079	Crescent Peak Ni-Cu	Sweet Grass	45°23'37"	110°01'57"	Stillwater Ni-Cu		130 ppb Pt, 180 ppb Pd, 13 ppb Rh max. in -fill core samples (fire assay)
25	SP01090	Dow	Sweet Grass	45°23'34"	109°56'25"	Merensky Reef PGE	Czamanske and Zientek, 1985	No published PGE data available for this area

26	W026566	Drake Mine	Sanders	47°15'57"	114°24'18"	Revas Creek Cu-Au-PGE (no model)	Buckley, 1992 Crowley, 1963 Harrison and others, 1986 Ingersoll and others, 1982 Van Loenen and others, 1987 Czarnanske and Zientek, 1985 Howland, 1955 Howland and others, 1949 Page and others, 1969, 1972 Wimmler, 1948 Czarnanske and Zientek, 1985 Howland, 1955 Wimmler, 1948 Mertie and others, 1951	About 900 oz Pt produced
27	M060092	East Boulder Plateau	Sweet Grass	45°26'27"	110°07'41"	Bushveld Cr		2.7 ppm Pt, 5.76 ppm Pd, 300 ppb Rh max. in chromitite sample (fire assay)
28	M060091	East Boulder River-Chrome Queen	Sweet Grass	45°25'39"	110°06'10"	Bushveld Cr		No published PGE data available for this area
29	M045432	Eldorado Bar	Lewis and Clark	46°43'45"	111°50'37"	Placer Au-PGE		About 160 oz Pt produced
30	MP00100	Fishtail Creek Ni-Cu	Stillwater	45°20'25"	109°45'25"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Page and Nokleberg, 1974	No published PGE data available for this area
31	MP00094	Forge Ni-Cu	Sweet Grass	45°25'24"	110°06'15"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Page and Nokleberg, 1974 Page and others, 1976	62 ppb Pt, 210 ppb Pd, 9 ppb Rh max. in surface samples (fire assay)
32	SP01087	Frog Pond East	Sweet Grass	45°26'50"	110°06'28"	Merensky Reef PGE	Czarnanske and Zientek, 1985	No published PGE data available for this area
33	MP00101	Frog Pond West	Sweet Grass	45°27'16"	110°08'18"	Merensky Reef PGE	Czarnanske and Zientek, 1985 Segerstrom and Carlson, 1982	No published PGE data available for this area
34	M060088	Gish Mine	Sweet Grass	45°28'39"	110°12'08"	Bushveld Cr	Czarnanske and Zientek, 1985 Howland and others, 1949 Page and others, 1969 Schafer, 1937 Wimmler, 1948 Zientek, 1993	Samples with greater than 500 ppb Pt+Pd have been determined (fire assay)
*	W007422	Gold Coin Mine	Deer Lodge	46°10'29"	113°14'41"	Polymetallic veins	Earl, 1972 Emmons and Calkins, 1913 USGS-USBM ⁶ , 1905-1962	Unverified report of PGE
35	M700432	Initial Cr-Pt	Sweet Grass	45°23'12"	109°56'44"	PGE-enriched straitform chromitite (no model)	Czarnanske and Zientek, 1985 Page and others, 1969, 1972 Wimmler, 1948 Zientek, 1993	10.97 ppm Pt+Pd over 1.2 ft. surface sample (fire assay)
36	M060098	Initial Ni-Cu	Sweet Grass	45°23'09"	109°56'53"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Page, 1979 Roby, 1949	No published PGE data available for this area
37	SP01100	Iron Mountain-Chrome Group (E)	Sweet Grass	45°23'49"	110°02'00"	Bushveld Cr	Czarnanske and Zientek, 1985	No published PGE data available for this area
38	M700433	Iron Mountain-Chrome Group (W)	Sweet Grass	45°24'28"	110°03'02"	Bushveld Cr	Czarnanske and Zientek, 1985 Howland, 1955 Page and others, 1969, 1972 Schafer, 1937 Wimmler, 1948	71 ppb Pt, 270 ppb Pd, 40 ppb Rh in chromitite sample
39	MP00099	Iron Mountain Ni-Cu (Camp)	Sweet Grass	45°24'30"	110°04'29"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Page and Nokleberg, 1974 Page and others, 1976 Zientek, 1993	530 ppb Pt, 2.9 ppm Pd, 100 ppb Rh max. in pulps of drill core (Camp and Iron Creek combined, fire assay)
40	SP01078	Iron Mountain Ni-Cu (Iron Creek)	Sweet Grass	45°24'26"	110°02'45"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Zientek, 1993	530 ppb Pt, 2.9 ppm Pd, 100 ppb Rh max. in pulps of drill core (Camp and Iron Creek combined, fire assay)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Montana—Continued								
41	MP00096	Janet 50	Sweet Grass	45°25'03"	110°02'55"	Disordant PGE mineralization (magmatic sulfide—no model)	Zientek, 1993	692 ppb Pt, 1.278 ppm Pd avg., surface samples (fire assay)
42	MP00263	Lady of the Lake complex	Madison	45°30'54"	111°58'03"	Magmatic sulfide segregation (no model)	Horn and others, 1991, 1992	1.3 ppm Au+Pt+Pd max. in sulfide-rich zones (analytical method unknown)
*	M045429	Little Gold Creek Placer	Granite	46°24'48"	113°07'58"	Placer Au-PGE	Emmons and Calkins, 1913 Lyden, 1948	\$1/ton Pt in black sand concentrates, 5 lb concentrates from 1 ton gravel (grade = about 2 ppb at \$45/oz Pt)
43	M060097	Little Rocky Creek Ni-Cu	Stillwater	45°21'26"	109°48'17"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Howland and others, 1936 Page, 1979 Roby, 1949	190 ppb Pt, 18 ppb Pd max. in surface samples (fire assay)
44	MP00105	Lucky Strike Mine	Sanders	47°16'14"	114°24'13"	Revais Creek Cu-Au-PGE (no model)	Buckleley, 1992 Crowley, 1963 Ingersoll and others, 1982 Lawson, 1973 Van Loenen and others, 1987 Czarnanske and Zientek, 1985	3.2 ppm Pt, 990 ppb Pd, 62 ppb Rh max. in dike samples (fire assay)
45	SP01207	Majestic & Flora B Claims	Sweet Grass	45°30'32"	110°12'50"	Picket Pin mineralization (no model)	Crowley, 1963 Unpub. data*	No published PGE data available for this area
*	D004063	Mayflower Claim	Sanders	47°15'47"	114°24'19"	Revais Creek Cu-Au-PGE (no model)	Day and Richards, 1906 Kemp, 1902	Unable to find source of PGE data
*	M045433	Miles City	Custer	46°25'04"	105°51'43"	Placer Au-PGE		Unverified report of PGE
46	MP00103	Monkey East (Camp Zone)	Sweet Grass	45°25'06"	110°02'46"	Merensky Reef PGE	Czarnanske and Zientek, 1985 Segerstrom and Carlson, 1982	No published PGE data available for this area
47	SP01088	Monkey West	Sweet Grass	45°25'55"	110°04'34"	Merensky Reef PGE	Czarnanske and Zientek, 1985	No published PGE data available for this area
48	MP00270	Mouat Ni-Cu (South)	Stillwater	45°22'37"	109°53'57"	Stillwater Ni-Cu	Attanasi and Bawiec, 1987 Page, 1979 Page and others, 1985a, 1985b Page and Nokieberg, 1974 Premo and others, 1990 Unpub. data Wooden and others, 1991 Zientek, 1993 Zientek and Ripley, 1990 Zientek and others, 1986, 1989	960 ppb Pt, 410 ppb Pd, 18 ppb Rh max. in drill core samples (south and Verdigris Creek combined, fire assay)
49	M060102	Mouat Ni-Cu (Verdigris Creek)	Stillwater	45°22'48"	109°53'44"	Stillwater Ni-Cu	Cornwall, 1966, 1973 Czarnanske and Zientek, 1985 Howland and others, 1936 Page and others, 1969, 1976 Roby, 1949 Unpub. data Zientek, 1993 Zientek and others, 1986	960 ppb Pt, 410 ppb Pd, 18 ppb Rh max. in drill core samples (south and Verdigris Creek combined, fire assay)

50	M060100	Mouat-Sampson Mine	Stillwater	45°23'15"	109°54'21"	Bushveld Cr	Czarnanske and Zientek, 1985 Jackson, 1968 Page and Dohrenwend, 1973 Page and others, 1969, 1972 Peoples and Howland, 1940 Wimmler, 1948 Zientek, 1993	Cooperite, laurite, Pt-Fe alloy identified. 450 ppb Pt, 2.3 ppm Pd, 160 ppb Rh max. in chromitite samples (fire assay)
51	SP01094	Mountain View Cr-Pt	Stillwater	45°22'56"	109°53'57"	PGE-enriched stratiform chromitite (no model)	Zientek, 1993	11.3 ppm Pt+Pd over 6 in., 6.17 ppm Pt+Pd over 4 in., surface samples (fire assay)
52	SP01229	Nicon	Park	45°29'09"	110°13'21"	Stillwater Ni-Cu	Page and others, 1976	170 ppb Pt, 470 ppb Pd, 32 ppb Rh max. in surface samples (fire assay)
53	M060095	Nye Basin (Alice) Cr-Pt	Stillwater	45°22'54"	109°50'50"	PGE-enriched stratiform chromitite (no model)	Czarnanske and Zientek, 1985 Wimmler, 1948	No published PGE data available for this area
54	M060096	Nye Basin (Big Seven)	Stillwater	45°22'22"	109°49'09"	Bushveld Cr	Czarnanske and Zientek, 1985 Peoples and Howland, 1940 Schäfer, 1937 Wimmler, 1948	No published PGE data available for this area
55	M060086	Nye Basin (Lip)	Stillwater	45°22'51"	109°51'27"	Bushveld Cr	Czarnanske and Zientek, 1985 Page and others, 1969, 1972 Wimmler, 1948 Zientek, 1993	110 ppb Pt, 89 ppb Pd, 100 ppb Rh max. in chromitite samples (fire assay)
56	SP01095	Nye Basin Cr-Pt	Stillwater	45°22'11"	109°49'20"	PGE-enriched stratiform chromitite (no model)	Zientek, 1993	Surface samples exceed 500 ppb Pt+Pd (fire assay)
57	MP00097	Nye Basin Ni-Cu (east)	Stillwater	45°22'27"	109°50'05"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985 Page and Nokleberg, 1974 Zientek, 1993	480 ppb Pt, 210 ppb Pd in flotation concentrate from drill core (fire assay)
58	SP01080	Nye Basin Ni-Cu (Lip)	Stillwater	45°22'44"	109°51'08"	Stillwater Ni-Cu	Czarnanske and Zientek, 1985	No published PGE data available for this area
*	D004065	Pay Rock Mine	Sanders	47°15'57"	114°24'18"	Revas Creek Cu-Au-PGE (no model)	Harrison and others, 1986 Unpub. data*	Unverified report of PGE
59	MP00090	Picket Pin	Sweet Grass	45°26'58"	110°03'01"	Picket Pin mineralization (no model)	Boudreau and McCallum, 1986 Czarnanske and Zientek, 1985 Howland and others, 1936	1.4 ppm Ir, 35 ppm Pt, 44 ppm Pd in sulfide-rich sample
60	M045428	Princeton Gulch Placer	Granite	46°25'17"	113°09'49"	Placer Au-PGE	Day and Richards, 1906 Dingman, 1932 Emmons and Calkins, 1913 Geach and Chelini, 1963 Lyden, 1948	\$1.50/ton Pt in concentrates, concentration factor not known
D	M045489	Stillwater Complex	Stillwater, Sweet Grass, Park	45°25'00"	110°00'00"	Merensky Reef PGE, Stillwater Ni-Cu, Bushveld Cr, other occurrences with no published models	Cabril and LaFlamme, 1974 Cabril and others, 1975 Czarnanske and Zientek, 1985 E&MJ ² , 1975 Page and Dohrenwend, 1973 Page and Nokleberg, 1974 Page and others, 1969, 1972, 1976 U.S. Geological Survey, 1971	Only producer of PGE as primary commodity in the conterminous U.S.
61	MP00087	Stillwater Mine	Stillwater	45°23'20"	109°52'16"	Merensky Reef PGE	Bow and others, 1982 Czarnanske and Zientek, 1985 Todd and others, 1982	Only producer of PGE as primary commodity in the conterminous U.S.
62	SP01084	Tecate	Park	45°29'41"	110°14'05"	Merensky Reef PGE	Czarnanske and Zientek, 1985	No published PGE data available for this area
*	M045426	Troy area	Lincoln	48°27'32"	115°52'56"	Unknown	Lyden, 1948 Rowe, 1928	Unverified report of PGE
63	M046539	Warm Springs Gulch Placer	Jefferson	46°27'02"	111°59'07"	Placer Au-PGE	E&MJ ² , 1907 Lyden, 1948	Assays gave \$4-18/ton Pt in gold ore (analytical method unknown)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Montana—Continued								
64	SP01092	West Fork Cr-Pt (Tuttle)	Sweet Grass	45°22'54"	110°00'34"	PGE-enriched stratiform chromitite (no model)	Zientek, 1993	Drilling indicates 3.8 million tons at 0.02 oz/ton Pt and 0.05 oz/ton Pd over 4-ft thickness
65	MP00102	West Fork East (adit)	Sweet Grass	45°23'56"	109°58'05"	Merensky Reef PGE	Czarnanske and Zientek, 1985 Segerstrom and Carlson, 1982	No published PGE data available for this area
66	M060089	West Fork G (Taylor-Fry)	Sweet Grass	45°22'57"	110°00'16"	Bushveld Cr	Czarnanske and Zientek, 1985 Howland, 1955 Page and others, 1969, 1972 Schafer, 1937 Wimmler, 1948	Analytical data of 8 ppm Pt, 11 ppm Pd, 1.7 ppm Rh max. in chromitites samples (fire assay)
67	SP01089	West Fork West	Sweet Grass	45°24'16"	110°00'22"	Merensky Reef PGE	Czarnanske and Zientek, 1985	No published PGE data available for this area
*	MP00093	White Cloud	Sanders	47°16'04"	114°24'40"	Reavis Creek Cu-Au-PGE (no model)	Crowley, 1963	Unverified report of PGE
Nevada								
1	M031094	Azurite Mine	Clark	35°49'34"	115°33'37"	Polymetallic replacement	Hewett, 1931 Knopf, 1915 Longwell and others, 1965	Unverified report of 0.02 oz/ton PGE in jarosite (analytical method unknown)
*	M242261	B.C.H. Minerals Co. Property	Esmeralda	38°01'33"	117°16'55"	Comstock epithermal veins?	Albers and Stewart, 1972 Knopf, 1921 Unpub. data*	Unable to find source of PGE data
2	M242242	Boss Mine	Clark	35°49'10"	115°34'11"	Polymetallic replacement	Beal, 1963 Crampton, 1916 Hewett, 1931 Kennedy, 1915 Knopf, 1915 Lechler and Hsu, 1988 Lind and others, 1923 Longwell and others, 1965 Mudd, 1915 Unpub. data*	Produced about 1,268 oz Pt+Pd
*	M234145	Copper Canyon open pit Mine	Lander	40°33'20"	117°07'00"	Porphyry Cu, skarn related	Blake and others, 1978 Nash and Theodore, 1971 Page and others, 1978 Roberts and Arnold, 1965 Sayers and others, 1967 Stager, 1977 Theodore and Blake, 1975, 1978 Unpub. data	20 ppb Pd max. in rock sample; 10 ppm Pd in gold sample (fire assay)
3	MP00264	Cottonwood Canyon area	Churchill	39°47'31"	118°08'41"	Unknown	Johnson, 1977 Moore, 1971 Reeves and Kral, 1955 Unpub. data	340 ppb Pt, 930 ppb Pd, 30 ppb Rh in rock sample (fire assay)
4	M060449	Ford Mine	Pershing	40°04'05"	118°11'52"	Unknown		69 ppb Pt, 640 ppb Pd, 22 ppb Rh in iron ore sample (fire assay)
5	M232265	Gilbellini Manganese Mine	Eureka	39°12'30"	116°05'22"	PGE-enriched black shale (no model)	Binyon, 1948 Cornwall, 1966 Lechler and Hsu, 1988 Roberts and others, 1967 Unpub. data*	626 ppb Pt, 45 ppb Pd, 37 ppb Rh in mineralized samples (fire assay)

6	MP00109	Gingerload	Clark	35°28'52"	115°07'44"	Polymetallic veins	Lechler, 1988 Lechler and Hsu, 1988	659 ppb Pt max. in rock samples (fire assay). Iridosmine, ferroplatinum identified
7	M045352	Golden Chariot Mine	Clark	35°50'16"	115°31'26"	Polymetallic replacement	Hewett, 1931 Longwell and others, 1965	Unverified report of 0.5 oz/ton Pt in Cu-bearing ore (analytical method unknown)
8	M045354	Great Eastern	Clark	36°37'32"	114°08'49"	Magmatic sulfide segregation (no model)	Bancroft, 1910 Beal, 1965 Cornwall, 1966 Needham and others, 1950 Unpub. data*	0.25 oz/ton Pt max. in ore samples (analytical method unknown)
*	M234147	Iron Canyon placer deposit	Lander	40°32'57"	117°04'57"	Placer Au-PGE	Johnson, 1973a Page and others, 1978 Roberts and Arnold, 1965 Stager, 1977 Theodore and Roberts, 1971 Vanderburg, 1939 Unpub. data	2 ppb Pd in gold samples
*	M055460	Kelly Mines, Inc.	Esmeralda	37°37'25"	118°01'31"	Unknown	Bancroft, 1910	Unverified report of PGE
9	M045355	Key West	Clark	36°37'05"	114°09'58"	Magmatic sulfide segregation (no model)	Beal, 1965 Bow and Loucks, 1991 Cornwall, 1966 Longwell and others, 1965 Needham and others, 1950 Unpub. data*	Small byproduct PGE production (10 oz Pt, 177 oz Pd). PGE constitute 25-55 ppm of sulfide samples (analytical method unknown)
10	M031297	Liberty Pit	White Pine	39°15'28"	114°59'52"	Porphyry Cu, skarn related	Smith, 1976	Byproduct PGE in smelter returns (amount unknown) Unable to find source of PGE data
*	M046568	Natomas Placers	Lander	40°31'08"	117°08'13"	Placer Au-PGE	Hurtl, 1950 Johnson, 1973a Roberts and Arnold, 1965 Stager, 1977 Theodore and Blake, 1975 Vanderburg, 1939	
11	M045356	Oro Arriago Mine	Clark	35°50'44"	115°33'02"	Polymetallic replacement	Hewett, 1931 Knopf, 1915 Longwell and others, 1965	Unverified report of 0.11 oz/ton Pt max. in assays of ore material (analytical method unknown)
*	M241736	Platinum-Palladium occurrence	White Pine	38°51'26"	114°09'40"	Placer Au-PGE	Brown, 1983 Smith, 1976 Whitebread and Brown, 1984	0.026 oz/ton Pt, 0.054 oz/ton Pd max. in panned concentrate samples (fire assay)
D	M046657	Robinson District	White Pine	39°15'24"	114°59'55"	Porphyry Cu, skarn related	Smith, 1976	Byproduct PGE in smelter returns (amount unknown)
New Jersey								
1	MP00246	Unnamed PGE occurrence	Bergen	40°50'14"	073°58'55"	Magmatic sulfide segregation (no model)	Gottfried and Froelich, 1988 Gottfried and others, 1989	35 ppb Pt, 200 ppb Pd max. in rock samples (fire assay)
New Mexico								
*	M045546	Jicarilla Gold Placers	Lincoln	33°51'41"	105°40'21"	Placer Au-PGE	Ellis, 1929 Griswold, 1959 Johnson, 1972b Lindgren and others, 1910 Northrop, 1959 Segerstrom and Ryberg, 1974 Harley, 1934 Johnson, 1972b Jones, 1904 Lindgren and others, 1910 Northrop, 1959	Unverified report of PGE
*	M045549	Las Animas Placers	Sierra	32°57'05"	107°30'05"	Placer Au-PGE		Unverified report of PGE

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New Mexico—Continued								
*	M046390	Ortiz open pit Mine	Santa Fe	35°20'10"	106°09'01"	Sado epithermal veins?	Bachman, 1975 Dale and McKinney, 1959 Elston, 1967 Jones, 1904 Lindgren and others, 1910 McQuiston and Shoemaker, 1981* Northrop, 1959 Owen and Cox, 1865 Unpub. data*	Assay gave 0.048 oz/ton Ir in gold sample (analytical method unknown)
*	M045548	Red River District	Taos	36°42'23"	105°24'10"	Climax Mo	Clark and Read, 1972 Fain, 1910 Lindgren and others, 1910 Park and McKinlay, 1948 Reed, 1922* Schilling, 1956, 1960 Unpub. data*	Unable to find source of PGE data
1	D011550	Santa Rita Mine	Grant	32°47'31"	108°03'59"	Porphyry Cu	Elevatorski, 1983 Ellis, 1929 Gibson and Trujillo, 1966 Hutti, 1939 Jones, 1904 Schilling, 1965 Spencer and Paige, 1935 USGS-USBM ² , 1969, 1970 Unpub. data*	Byproduct PGE in smelter returns (amount unknown)
*	M045545	Tampa Mine	Rio Arriba	36°39'18"	106°08'35"	Sado epithermal veins?	Bingler, 1968, 1974 Jones, 1904 Lindgren and others, 1910 Northrop, 1959 Unpub. data*	Unverified report of PGE
*	M045547	Tecolote Iron District	Lincoln	34°03'43"	105°41'41"	Placer Au-PGE	Lindgren and others, 1910 Northrop, 1959	Unverified report of PGE
New York								
1	MP00110	Fonda	Montgomery	42°57'14"	074°22'22"	Pt in pyrobitumen (no model)	Parnell, 1988	Pt identified as inclusions in pyrobitumen by SEM
2	M045421	Plattsburg	Clinton	44°41'41"	073°26'52"	Glacial erratic (no model)	Kemp, 1902	Glacial erratic (nugget) with 46% PGE and 54% chromite
North Carolina								
1	K001883	Addie	Jackson	35°23'55"	083°09'31"	Podiform chromite	Hunter, 1941 Hunter and others, 1942 Larabee and Sweeney, 1968 Lipin, 1984	21 ppb Pd in chromite-bearing dunite sample (fire assay)
2	K001892	Balsam Gap	Jackson	35°25'32"	083°05'44"	Podiform chromite	Murdoch and Hunter, 1946 Hunter, 1941 Larabee and Sweeney, 1968 Lipin, 1984	10 ppb Pd in chromite-bearing dunite sample (fire assay)
3	K001888	Buck Creek	Clay	35°04'56"	083°37'03"	Podiform chromite	Hunter, 1941 Larabee and Sweeney, 1968 Lipin, 1984	11 ppb Pd in chromite-bearing dunite sample (fire assay)

4	K001726	Democrat	Buncombe	35°47'09"	082°29'53"	Podiform chromite	Carpenter and Hale, 1967 Hunter, 1941 Larrabee and Sweeney, 1968 Ljpin, 1984	12 ppb Pd in chromite-bearing dunite sample (fire assay)
5	K001886	Deposit Number 9	Macon	35°11'26"	083°16'37"	Podiform chromite	Conrad and others, 1963 Hunter, 1941 Larrabee and Sweeney, 1968 Ljpin, 1984 Murdock and Hunter, 1946	11 ppb Pd in chromite-bearing dunite sample (fire assay)
6	M045419	Masons Branch	Macon	35°15'31"	083°22'42"	Placer Au-PGE	Cook and Burnell, 1990 Hidden and Pratt, 1898 Kemp, 1902 Unpub. data*	Microscopic identification of sperrylite. Panned concentrates in area contained 200 ppb Pt max. (neutron activation)
7	M045643	Ned Wilson Branch	Macon	35°16'09"	083°21'51"	Placer Au-PGE	Cook and Burnell, 1990 Hidden, 1898 Kemp, 1902	Microscopic identification of sperrylite. Panned concentrates in area contained 200 ppb Pt max. (neutron activation)
*	M045420	T.T. Erwin Mine	Rutherford	35°29'51"	081°55'08"	Placer Au-PGE	Kemp, 1902 Shepard, 1847	Unverified report of PGE
8	K001884	Webster	Jackson	35°20'20"	083°12'58"	Podiform chromite	Hunter, 1941 Larrabee and Sweeney, 1968 Ljpin, 1984	39 ppb Pd in chromite-bearing dunite sample (fire assay)
Oklahoma								
1	MP00104	Glen Mountains Layered Complex	Kiowa	34°49'24"	098°59'10"	Magmatic sulfide segregation (no model)	Cooper, 1986 Powell, 1986	3.3 ppm Pt, 1.4 ppm Pd max. in rock samples (analyses by Bondar and Clegg and by X-ray Assay Laboratories)
*	D002888	Woodruff Farm	Delaware	36°15'00"	094°43'57"	Unknown	Unpub. data*	Unable to find source of PGE data
Oregon								
1	M015019	Ajax Mine	Grant	44°21'07"	118°45'12"	Podiform chromite	Allen, 1941a Carlson and others, 1985 ODGMI ⁷ , 1941 Thayer, 1940	21 ppb Pd in chromite sample (fire assay)
2	M060562	Anderson	Josephine	42°15'48"	123°41'23"	Placer Au-PGE	Day and Richards, 1906 E&MJ ² , 1916 ODGMI ⁷ , 1952 Ramp and Peterson, 1979	\$323.10/ton Pt in concentrates, 75 lb of concentrates per ton of gravel (grade = about 14 ppm). Small byproduct PGE production
3	M060639	Atlas Gold Dredging	Josephine	42°06'48"	123°32'23"	Placer Au-PGE	Brooks and Ramp, 1968 Mining World, 1941 ODGMI ⁷ , 1952 Ramp and Peterson, 1979	Small byproduct PGE production (amount unknown)
*	M060570	Bear Placer	Josephine	42°13'08"	123°42'45"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Peterson, 1979	Unable to find source of PGE data
*	M013716	Benson Placer	Josephine	42°38'25"	123°29'08"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Peterson, 1979	Unverified report of PGE
*	M061636	Big Bear	Josephine	42°24'11"	123°36'29"	Podiform chromite	Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	PGE below upper 10% of values for chromite samples (fire assay)
4	M060783	Big Four Placer	Josephine	42°30'15"	123°29'07"	Placer Au-PGE	Diller, 1914 ODGMI ⁷ , 1952 Parks and Swartley, 1916 Ramp and Brooks, 1969 Ramp and Peterson, 1979	Small byproduct PGE production
*	M061005	Big Sunshine	Curry	42°42'56"	124°18'20"	Placer Au-PGE	ODGMI ⁷ , 1940 Ramp and others, 1977	Unverified report of PGE

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Oregon—Continued								
*	M061643	Black Bear No. 1 & 2	Josephine	42°01'01"	123°48'37"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979	PGE below upper 10% of values for chromitite samples (fire assay)
5	M061796	Brown Town	Josephine	42°05'00"	123°30'51"	Placer Au-PGE?	Day and Richards, 1906	\$48.30/ton Pt from 146 lb titaniferous hematite, concentration factor not known
*	M045463	Buck Gulch	Baker	44°45'04"	118°16'17"	Placer Au-PGE	Brooks and Ramp, 1968 Hill, 1919 ODGMI ⁷ , 1939	Unverified report of PGE
6	M045456	Bull Run Creek Placers	Grant	44°47'45"	118°23'45"	Placer Au-PGE	Brooks and Ramp, 1968 Ramp and Brooks, 1969	Small byproduct PGE production (amount unknown)
*	M046813	Byram Gulch	Grant	44°21'04"	118°56'19"	Placer Au-PGE	Thayer, 1977	300 ppb Pt, 200 ppb Pd, 10 ppb Rh from magnetic fraction of panned concentrates (fire assay)
7	M015574	Cape Blanco	Curry	42°48'25"	124°31'52"	Placer Au-PGE	Blake, 1854 Griggs, 1946 ODGMI ⁷ , 1940	Small byproduct PGE production (amount unknown)
8	M061545	Carter Creek Divide Claim	Curry	42°12'29"	123°50'37"	Podiform chromite	Ramp and others, 1977 Carlson and others, 1985 Ramp, 1961	26 ppb Rh in chromitite sample (fire assay)
9	M061180	Cass Ranch	Jackson	42°08'32"	122°50'58"	Podiform chromite	Carlson and others, 1985 Ramp, 1961	18 ppb Pd, 26 ppb Rh max. in chromitite samples (fire assay)
10	M014921	Chambers Mine	Grant	44°21'04"	118°48'49"	Podiform chromite	Allen, 1941a Carlson and others, 1985 Hundhausen and others, 1956 ODGMI ⁷ , 1941 Thayer, 1940 Westgate, 1921	10 ppb Pd in chromitite sample (fire assay)
11	M013520	Chickamin Mine	Coos	43°17'00"	124°18'17"	Placer Au-PGE	Brooks and Ramp, 1968 ODGMI ⁷ , 1940 Pardee, 1934	0.09 oz/ton Pt in concentrates, 0.5 lb concentrates from 8 lb sample (grade = about 190 ppb)
*	M025255	Chrome Beach Placer	Curry	42°53'55"	124°29'17"	Placer Au-PGE	Ramp and others, 1977	Unverified report of PGE
12	M060531	Chrome King No. 3	Josephine	42°18'44"	123°49'02"	Podiform chromite	Allen, 1941a Carlson and others, 1985 Ramp, 1961 Unpub. data*	14 ppb Pd max. in chromitite samples (fire assay)
13	M061750	Chrome Ridge	Josephine	42°26'03"	123°43'18"	Podiform chromite	Carlson and others, 1985 Wells and others, 1941 Unpub. data*	32 ppb Rh max. in chromitite samples (fire assay)
*	M061501	Collins	Curry	42°29'08"	124°24'00"	Placer Au-PGE	ODGMI ⁷ , 1940 Parks and Swartley, 1916 Ramp and others, 1977	Unverified report of PGE
14	M061243	Columbia	Josephine	42°38'50"	123°18'48"	Placer Au-PGE	Brooks and Ramp, 1968 Day and Richards, 1906 ODGMI ⁷ , 1952 Ramp and Peterson, 1979	\$191.40/ton Pt in concentrates at 1:100 concentration (grade = about 2 ppm)

15	M045460	Compton Mine	Grant	44°43'57"	118°46'18"	Polymetallic veins?	E&MJ ² , 1916 Hill, 1919 ODGMI ⁷ , 1941 Parks and Swartley, 1916 Quiring, 1962	Ore said to assay 1.1 oz/ton Pt (analytical method unknown)
16	M061794	Corbin	Curry	42°48'17"	124°23'37"	Placer Au-PGE	Diller, 1902 ODGMI ⁷ , 1940 Parks and Swartley, 1916 Ramp and others, 1977	Trace Ir reported in sand concentrates (identification method unknown)
*	M025252	Crystal Terrace Placer	Curry	42°50'55"	124°27'01"	Placer Au-PGE	Ramp and others, 1977	Unverified report of PGE
17	M060536	Deep Gorge Chromite	Josephine	42°18'54"	123°46'55"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	15 ppb Pd in chromite sample (fire assay)
18	M060676	Deep Gravel Mine	Josephine	42°04'30"	123°39'08"	Placer Au-PGE	Brooks and Ramp, 1968 Diller, 1914 ODGMI ⁷ , 1952 Ramp and Peterson, 1979 Shenon, 1933	Small byproduct PGE production (amount unknown)
19	M061795	Divelbiss #2	Curry	42°48'27"	124°23'30"	Placer Au-PGE	Boggs and Baldwin, 1970 Brooks and Ramp, 1968 Diller, 1902 Parks and Swartley, 1916	0.384 g PGM recovered from 22.87 g black-sand concentrates, concentration factor not known (identified visually)
*	M045462	Durkee	Baker	44°30'20"	117°27'38"	Placer Au-PGE	Day and Richards, 1906 Lindgren, 1912 ODGMI ⁷ , 1939	\$6.60/ton Pt in concentrates, 6 lb of concentrates from 1 ton of gravel (grade = about 23 ppb)
20	M013525	Eagle Mine	Coos	43°11'43"	124°21'43"	Placer Au-PGE	Libbey, 1963 ODGMI ⁷ , 1940 Pardee, 1934	Black sand concentrate said to assay \$1/ton Pt, concentration factor 1:2 (grade = about 170 ppb)
21	M061824	Eagle Mountain Prospect	Curry	42°16'16"	123°49'33"	Podiform chromite	Carlson and others, 1985 Ramp, 1975 Ramp and others, 1977	30 ppb Rh max. in chromite samples (fire assay)
D	M025249	Elk River Placers	Curry	42°42'24"	124°20'25"	Placer Au-PGE	ODGMI ⁷ , 1940 Ramp and others, 1977	Unverified report of PGE
*	M060675	Esterley Chrome Mine	Josephine	42°04'42"	123°37'57"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Shenon, 1933 Unpub. data*	PGE below upper 10% of values for chromite samples (fire assay)
22	M060674	Esterley Placer	Josephine	42°04'08"	123°38'00"	Placer Au-PGE	Brooks and Ramp, 1968 Diller, 1914 Mertie, 1969 ODGMI ⁷ , 1952 Ramp and Peterson, 1979 Shenon, 1933 Diller, 1914	Small byproduct PGE production (amount unknown)
23	M060786	Flanagan	Josephine	42°28'15"	123°30'07"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Brooks, 1969 Ramp and Peterson, 1979	Small byproduct PGE production (amount unknown)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Oregon—Continued								
24	M015530	Fletcher Myers Property	Coos	43°13'37"	124°22'13"	Placer Au-PGE	ODGMI ⁷ , 1940	0.04 oz/ton Au+Pt in natural black sand accumulation (analytical method unknown)
25	M045459	Foster	Linn	44°24'55"	122°40'11"	Placer Au-PGE	Day and Richards, 1906 Lindgren, 1912 Parks and Swartley, 1916	\$105.60/ton Pt in concentrates, concentration factor not known
*	M013262	Fry Gulch Mine	Josephine	42°03'35"	123°38'57"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Peterson, 1979 Shenon, 1933	Unable to find source of PGE data
26	M061614	Gardner Mine	Curry	42°11'51"	123°58'51"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and others, 1977	16 ppb Pd, 400 ppb Ru in chromitite sample (fire assay)
27	M013534	Geiger Creek Mines, Inc.	Coos	43°05'55"	124°22'37"	Placer Au-PGE	Libbey, 1963 ODGMI ⁷ , 1940	Unverified byproduct PGE production
D	M045458	Granite Placers	Grant	44°49'18"	118°26'57"	Placer Au-PGE	Brooks and Ramp, 1968 Lumb, 1920	Unverified report of PGE
28	W016701	Greenhorn Placers	Baker, Grant	44°40'53"	118°27'14"	Placer Au-PGE	Brooks and Ramp, 1968 Lindgren, 1901 ODGMI ⁷ , 1939, 1941 Pardee and Hewett, 1914	Unverified byproduct PGE production
29	M060563	Griffin Chromite	Josephine	42°16'06"	123°41'24"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	82 ppb Rh in chromitite sample (fire assay)
30	M045467	Griffith	Grant	44°47'02"	118°18'47"	Placer Au-PGE	ODGMI ⁷ , 1941 Pardee, 1910	1.5 oz/ton Pt in black-sand concentrate, concentration factor not known (analytical method unknown)
*	M014622	H.E. Peoples, Robert Brown	Union, Wallowa	45°10'00"	117°23'00"	Placer Au-PGE	Pardee and Hewett, 1914 Parks and Swartley, 1916 California Mining Journal, 1966	Unverified report of PGE
31	W000690	Hanna Nickel Mine	Douglas	42°57'40"	123°26'20"	Lateritic Ni	Bogert, 1960 Cornwall, 1966, 1973 Cumberledge and Chace, 1968 Hotz, 1964 Mining Journal of London, 1974 Page and others, 1975 Pecora and Hobbs, 1942 Ramp, 1978 Skinner, 1973 Unpub. data*	18.78 ppb Pt, 22.19 ppb Pd, 11.53 ppb Rh, 48.78 ppb Ir, 156.22 ppb Ru avg. for 19 rock samples (fire assay). These numbers are presumed to be unpub. data of N.J. Page, as they do not appear in 1975 reference.
32	M060610	Hawks Rest View	Curry	42°11'33"	123°52'00"	Podiform chromite	Carlson and others, 1985 Ramp, 1961 Ramp and others, 1977	60 ppb Rh in chromitite sample (fire assay)

*	M013261	High Gravel	Josephine	42°02'51"	123°38'23"	Placer Au-PGE	Brooks and Ramp, 1968 ODGMI ⁷ , 1952 Parks and Swartley, 1916 Ramp and Peterson, 1979 Shenon, 1933	Unable to locate source of PGE data
33	M062180	Highland Claim	Jackson	42°20'02"	123°09'52"	Low-sulfide Au-quartz veins?	Kellogg, 1922 Mertle, 1969 ODGMI ⁷ , 1943 Parks and Swartley, 1916 Lindgren, 1912 Lindgren, 1901	Byproduct PGE in smelter returns (0.32 oz/ton, amount unknown)
*	M045461	Hillsboro	Washington	45°30'01"	122°59'24"	Placer Au-PGE	ODGMI ⁷ , 1943	Unverified report of PGE
34	M025518	Hindman Placer	Baker	44°41'28"	118°19'06"	Placer Au-PGE	Lindgren, 1912	Small byproduct PGE production (0.5 oz per cleanup)
*	M025250	Hubbard Creek Beach Placer	Curry	42°44'02"	124°28'28"	Placer Au-PGE	Ramp and others, 1977	Unverified report of PGE
35	MP00262	Illinois River sulfide occurrence	Josephine	42°25'48"	124°00'37"	Acoje Ni-Cu-PGE? (magmatic sulfide—no model)	Foose, 1986 Page and others, 1981	150 ppb Pt, 500 ppb Pd max. sulfide-rich samples (fire assay)
36	M060567	Independence Placer	Josephine	42°14'40"	123°41'12"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Peterson, 1979	Visual identification of PGM in black sands
*	M013535	Iowa Mine	Coos	43°06'43"	124°22'09"	Placer Au-PGE	Libbey, 1963 ODGMI ⁷ , 1940 Pardee, 1934	Unverified report of PGE
D	M013266	Josephine Creek Placers	Josephine	42°13'17"	123°42'31"	Placer Au-PGE	Brooks and Ramp, 1968 ODGMI ⁷ , 1952 Ramp and Peterson, 1979 Spencer, 1971	Small byproduct PGE production (amount unknown)
*	M014790	Kit Carson	Grant	44°42'04"	118°31'03"	Polymetallic veins?	ODGMI ⁷ , 1941	Unverified report of PGE
*	M045464	La Grande	Union	45°20'33"	118°05'07"	Placer Au-PGE	Lindgren, 1912	Unverified report of PGE
*	M015538	Lane Extension Mine	Coos	43°11'20"	124°21'50"	Placer Au-PGE	ODGMI ⁷ , 1940	Unverified report of PGE
37	M046809	Last Chance	Grant	44°20'28"	118°44'00"	Podiform chromite	Stotelmeyer, 1977 Thayer, 1940	0.02 oz/ton Pt in stockpile sample (fire assay)
*	M061644	Last Drink No. 1	Josephine	42°00'45"	123°47'38"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979	PGE below upper 10% of values for chromitite samples (fire assay)
38	M025546	Liberty Chrome	Grant	44°19'50"	118°44'10"	Podiform chromite	Stotelmeyer, 1977 Thayer, 1940	0.02 oz/ton Pt in stockpile sample (fire assay)
39	M046808	Liberty Chrome South	Grant	44°19'39"	118°44'06"	Podiform chromite	Stotelmeyer, 1977 Thayer, 1940	0.02 oz/ton Pt in stockpile sample (fire assay)
*	M046814	Little Indian Creek	Grant	44°21'06"	118°47'12"	Placer Au-PGE	Thayer, 1977	16 ppb Pd in magnetic fraction of panned concentrate (fire assay)
*	M046812	Little Pine Creek	Grant	44°22'42"	118°54'37"	Placer Au-PGE	Thayer, 1977	70 ppb Pt, 70 ppb Pd in magnetic fraction of panned concentrate (fire assay)
*	M061574	Little Siberia	Curry	42°16'36"	123°50'51"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and others, 1977 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
40	M061659	Lucky Strike	Josephine	42°10'25"	123°40'49"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	81 ppb Pt, 300 ppb Ir, 700 ppb Ru, 58 ppb Rh in chromitite sample (fire assay)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Oregon—Continued								
*	M061376	Madden	Curry	42°49'57"	124°28'23"	Placer Au-PGE	Diller, 1914 ODGMI ⁷ , 1940 Ramp and others, 1977	0.02 oz/ton Au+Pt max. in sand samples (analytical method unknown); Pt:Au=1:20
D	M061569	McCaleb Group	Curry	42°16'41"	123°50'06"	Podiform chromite	Page and others, 1975 Ramp, 1961 Ramp and others, 1977 Unpub. data*	11 ppb Pd in chromitite sample (fire assay)
41	MP00071	McCaleb No. 1	Curry	42°16'42"	123°49'55"	Podiform chromite	Carlson and others, 1985 Ramp, 1961	11 ppb Pd in chromitite sample (fire assay)
42	MP00046	McCaleb No. 2	Curry	42°16'41"	123°50'08"	Podiform chromite	Carlson and others, 1985 Ramp, 1961 Ramp and others, 1977	40 ppb Pd max. in chromitite samples (fire assay)
*	M025251	Meek's Placer	Curry	42°45'39"	124°28'30"	Placer Au-PGE	Diller, 1914 ODGMI ⁷ , 1940 Parks and Swartley, 1916 Ramp and others, 1977	Unverified report of PGE
D	M061616	Nickel Mountain Group	Douglas	42°57'40"	123°26'20"	Lateritic Ni	Cumbetidge and Chase, 1968 Page and others, 1975 Ramp, 1961, 1972, 1978	25 ppb Rh in rock sample (fire assay)
43	M014937	North Fork Placers	Grant	44°58'28"	118°43'55"	Placer Au-PGE	ODGMI ⁷ , 1941 Parks and Swartley, 1916 Unpub. data*	Analysis of concentrate from a cleanup gave 6.82% Pt (analytical method unknown)
44	M060747	Old Channel	Josephine	42°34'21"	123°36'30"	Placer Au-PGE	Brooks and Ramp, 1968 ODGMI ⁷ , 1952 Parks and Swartley, 1916 Ramp and Brooks, 1969 Ramp and Peterson, 1979	Small byproduct PGE production (amount unknown)
*	M060541	Oregon Chrome Mine	Josephine	42°20'41"	123°46'28"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
*	M061329	Oregon Mining and Power Co.	Douglas	42°45'22"	123°31'36"	Placer Au-PGE	Day and Richards, 1906 Parks and Swartley, 1916 Pulsifer, 1910 Ramp, 1972	\$67.50/ton Pt in concentrates, 2 lb of concentrates from 1 yd ³ of gravel (grade = about 39 ppb)
*	M061084	Paradise No. 2	Josephine	42°13'11"	123°24'49"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
45	M061358	Parker Electromagnetic Machine Project	Curry	42°33'46"	124°23'20"	Placer Au-PGE	Day and Richards, 1906 ODGMI ⁷ , 1940 Ramp and others, 1977	\$1,022.10/ton Pt in concentrates, concentration factor not known

46	M013526	Pioneer Mine	Coos	43°11'42"	124°21'47"	Placer Au-PGE	Brooks and Ramp, 1968 Libbey, 1963 ODGMI ⁷ , 1940 Pardee, 1934 Ramp and others, 1977 ODGMI ⁷ , 1952 Shenon, 1933 Carlson and others, 1985 Carlson and others, 1985 Himmelberg and Loney, 1973 Page and others, 1975 Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and others, 1977 Allen, 1941a Carlson and others, 1985 ODGMI ⁷ , 1941 Stotelmeyer, 1977 Thayer, 1940 Westgate, 1921 Brooks, 1963 Dole and others, 1948 Hotz, 1964 Hundhausen and others, 1954 ODGMI ⁷ , 1940 Ramp, 1978 Ramp and others, 1977 U.S. Bureau of Mines, 1965 Carlson and others, 1985 Ferns, 1979* Page and others, 1975 Ramp, 1961 Unpub. data* Day and Richards, 1906 ODGMI ⁷ , 1952 Brooks and Ramp, 1968 Libbey, 1963 ODGMI ⁷ , 1940 Ramp, 1978 Ramp and Peterson, 1979 Carlson and others, 1985 Ramp, 1961 Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data* ODGMI ⁷ , 1940	Pt with minor Ir, Ru found in spectrographic analysis of PGE alloy recovered in sluicing Unverified report of PGE Unverified report of PGE 20 ppb Pd in chromitite sample (fire assay) 100 ppb Pt, 20 ppb Pd in chromitite sample (fire assay) PGE below upper 10% of values for chromitite samples (fire assay) 120 ppb Pt, 500 ppb Ru, 64 ppb Rh max. in chromitite samples (fire assay) Ore sample said to assay \$20/ton Pt using wet chemical methods (grade = about 20 ppm at \$34/oz) PGE below upper 10% of values for chromitite samples (fire assay) \$323.10/ton Pt in concentrates, 75 lb of concentrates from 1 ton of gravel (grade = about 14 ppm) Unverified byproduct PGE production Small byproduct PGE production (amount unknown) 100 ppb Pt, 20 ppb Pd, 40 ppb Rh max. in chromitite samples (fire assay) 850 ppb Pt, 900 ppb Ir, 1.6 ppm Ru, 91 ppb Rh in chromitite sample (fire assay) 0.01 oz/ton Au+Pt in black sand sample (analytical method unknown)
*	M025254	Pioneer Placer	Curry	42°53'20"	124°27'53"	Placer Au-PGE		
*	M060672	Platerica Mine	Josephine	42°03'13"	123°38'08"	Placer Au-PGE		
47	MP00054	Prospect near Mud Spring	Josephine	42°05'43"	123°48'42"	Podiform chromite		
48	MP00048	Prospect south of Vulcan Peak	Curry	42°09'43"	123°58'53"	Podiform chromite		
*	M061573	Prospectors Dream	Curry	42°16'38"	123°51'13"	Podiform chromite		
49	M015020	Ray Mine	Grant	44°20'23"	118°46'09"	Podiform chromite		
50	M055858	Red Flat Laterite	Curry	42°20'30"	124°17'23"	Lateritic Ni		
*	M061619	Red Mountain Mines	Jackson	42°03'42"	122°50'19"	Podiform chromite		
51	M060561	Revell Placer	Josephine	42°16'44"	123°41'24"	Placer Au-PGE		
52	M013524	Rose Mine	Coos	43°13'14"	124°21'47"	Placer Au-PGE		
53	M015592	Rough and Ready Bench	Curry	42°07'00"	123°49'05"	Lateritic Ni		
54	M061599	Saddle Chrome	Josephine	42°17'59"	123°48'26"	Podiform chromite		
55	M060792	Salt Rock	Josephine	42°28'16"	123°33'47"	Podiform chromite		
56	M015537	Sengstacken	Coos	43°17'21"	124°17'59"	Placer Au-PGE		

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Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Oregon—Continued								
*	M061553	Shady Cove	Josephine	42°27'29"	123°43'29"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
57	M061386	Shamrock	Jackson	42°36'05"	122°58'33"	Synorogenic-synvolcanic Ni-Cu	Hundhausen, 1952 Ramp, 1978 Shelton, 1956 Unpub. data Thayer, 1977	660 ppb Pd, 23 ppb Pt, 48 ppb Rh in sulfide-rich sample (fire assay)
*	M046811	Sheep Gulch	Grant	44°20'04"	118°54'24"	Placer Au-PGE		15 ppb Pd in magnetic fraction of panned concentrate sample (fire assay) Unable to find source of analytical data in record indicating \$0.12/ton Pt max. in assays
58	M061378	Sixes Beach Placer	Curry	42°51'12"	124°27'50"	Placer Au-PGE	Diller, 1914 ODGMI ⁷ , 1940 Parks and Swartley, 1916 Ramp and others, 1977 Brooks and Ramp, 1968 Collier, 1914 Hill, 1919 Lumb, 1920 Parks and Swartley, 1916 Ramp, 1975 Ramp and others, 1977	Unverified report of PGE
*	M045465	Spanish Gulch Placers	Wheeler	44°27'39"	119°46'33"	Placer Au-PGE	Brooks, 1963 Brooks and Ramp, 1968 Frederick, 1945 Lumb, 1920 ODGMI ⁷ , 1939 Ramp and Brooks, 1969 U.S. Bureau of Mines, 1965 Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	Unverified report of PGE Small byproduct PGE production
59	MP00064	Stevens Placer	Curry	42°12'23"	123°54'43"	Placer Au-PGE		
	M054912	Sumpter Dredges	Baker	44°44'38"	118°12'23"	Placer Au-PGE		
*	M061651	Tennessee Chromite	Josephine	42°11'45"	123°43'12"	Podiform chromite		PGE below upper 10% of values for chromitite samples (fire assay)
60	M060629	Tennessee Pass	Josephine	42°11'35"	123°42'18"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Unpub. data*	450 ppb Pt, 700 ppb Ir, 1.8 ppm Ru, 63 ppb Rh in chromitite sample (fire assay)
*	M015557	The Lagoons	Coos	43°11'18"	124°23'10"	Placer Au-PGE	Griggs, 1946	Unverified report of PGE
*	MP00047	Tincup Peak	Josephine	42°18'42"	123°54'47"	Alaskan PGE	Gray and others, 1986 Unpub. data	52.2 ppb Pt, 53.3 ppb Pd max. in average of rock samples (fire assay)
*	M061596	Twin Cedars Claims	Josephine	42°17'31"	123°48'30"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
61	MP00072	U of O Prospect	Grant	44°20'46"	118°46'34"	Podiform chromite	Carlson and others, 1985	16 ppb Pd in chromitite sample (fire assay)

62	M046810	Unnamed occurrence	Grant	44°21'19"	118°46'21"	Placer Au-PGE	Thayer, 1977	3 ppm Pt, 800 ppb Pd in magnetic fraction of panned concentrate (fire assay)
*	MP00108	Unnamed prospect	Harney	42°13'20"	119°21'12"	Unknown	Miller, 1988	30 ppb Pt, 2 ppb Pd max. in rock samples (fire assay)
63	MP00067	Unnamed prospect	Josephine	42°16'12"	123°49'02"	Podiform chromite	Carlson and others, 1985	200 ppb Pd in chromitite sample (fire assay)
64	MP00060	Unnamed prospect	Josephine	42°16'05"	123°51'58"	Podiform chromite	Carlson and others, 1985	75 ppb Pt, 18 ppb Pd/40 ppb Rh max. in chromitite samples (fire assay)
65	MP00059	Unnamed prospect	Curry	42°12'05"	123°58'51"	Podiform chromite	Carlson and others, 1985	27 ppb Rh max. in chromitite samples (fire assay)
66	MP00260	Unnamed prospect	Grant	44°21'37"	118°55'49"	Podiform chromite	Carlson and others, 1985	26 ppb Rh in chromitite sample (fire assay)
*	M060523	Violet	Josephine	42°26'33"	123°43'40"	Podiform chromite	Carlson and others, 1985 ODGMI ⁷ , 1952 Page and others, 1975 Ramp, 1961 Ramp and Peterson, 1979 Wells and others, 1941 Unpub. data*	PGE below upper 10% of values for chromitite samples (fire assay)
D	M013263	Waldo Area Placers	Josephine	42°03'11"	123°39'14"	Placer Au-PGE	ODGMI ⁷ , 1952 Ramp and Peterson, 1979	Small byproduct PGE production (amount unknown but may be close to 1,500 oz, which is total Oregon output—see text)
67	M045466	Weaver Mine	Baker	44°45'15"	118°16'43"	Placer Au-PGE	ODGMI ⁷ , 1939 Pardee, 1910 Pardee and Hewett, 1914	Pt detected in black-sand sample (analytical method unknown)
*	M061804	Woodcock Creek	Josephine	42°07'56"	123°42'30"	Podiform chromite	Carlson and others, 1985 Page and others, 1975	PGE below upper 10% of values for chromitite samples (fire assay)
68	M061598	Young's Mine	Josephine	42°17'59"	123°48'50"	Podiform chromite	Carlson and others, 1985 Page and others, 1975 Ramp, 1961	30 ppb Pd max. in chromitite samples (fire assay)
Pennsylvania								
*	M045423	Boyetown	Berks	40°25'26"	075°34'20"	Unknown	Kemp, 1902	Unverified report of PGE
1	M045422	Lancaster County	Lancaster	39°58'46"	076°11'07"	Unknown	Kemp, 1902	Pt detected in analysis of sulfide-bearing slate (cupelled button from sample fused with lead oxide and black flux)
2	MP00247	Unnamed PGE occurrence	Cumberland	40°11'50"	076°51'56"	Magmatic segregation (no model)	Gottfried and Froelich, 1988 Gottfried and others, 1989, 1990	21 ppb Pt, 165 ppb Pd max. in rock samples (fire assay)
Texas								
*	M045418	Llano	Llano	30°45'11"	098°40'34"	Unknown	Quirling, 1962	Unverified report of PGE
Utah								
1	W002888	Bingham open pit Mine	Salt Lake	40°31'15"	112°08'42"	Porphyry Cu	Boutwell, 1905 Bray and Wilson, 1975 Butler and others, 1920 Cook, 1961 Eilers, 1913 E&MJ ² , 1977 Quirling, 1962 Unpub. data*	Byproduct PGE in smelter returns (amount unknown)
2	M058105	Blue Hill Prospect	Wasatch	40°32'18"	111°00'17"	PGE-enriched black shale (no model)	Doelling, 1972	8.2 oz/ton Rh avg. in shale samples (wet chemical method)
*	M057559	Carr Fork Mine	Tooele	40°31'53"	112°11'25"	Cu skarn	Boutwell, 1905 Bray and Wilson, 1975 Butler and others, 1920 Cameron and Garmoe, 1987 Cook, 1961 Unpub. data*	0.01 oz/ton Pt, 0.28 oz/ton Pd max. in mineralized limestone (fire assay)

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Utah—Continued								
D	DB01791	Colorado River Placers	Garfield	37°48'42"	110°27'46"	Placer Au-PGE	Doelling, 1975 Hunt and others, 1953 Johnson, 1973b	0.15 oz/ton Pt in black sand, concentration factor not known (analytical method unknown)
*	MP00057	Gold Coin	San Juan	37°35'31"	110°35'49"	Placer Au-PGE	Butler and others, 1920 Johnson, 1973b	Unverified report of PGE
3	M045475	Hite	Garfield	37°48'50"	110°27'18"	Placer Au-PGE	Day and Richards, 1906 Gregory and Moore, 1931 Hunt and others, 1953 Johnson, 1973b	\$4.50/ton Pt in concentrates, concentration factor not known
*	M057667	Horseshoe Bend	Uintah	40°14'41"	109°31'07"	Placer Au-PGE	O'Neill and Gunning, 1934 Butler and others, 1920 Johnson, 1973b	Unverified report of PGE
4	M045476	Jensen	Emery	40°22'11"	109°20'03"	Placer Au-PGE	Day and Richards, 1906 Johnson, 1973b	0.0006 g Pt from assay button weighing 0.2142 g
D	M045472	Kaiparowits	Kane	37°06'38"	111°01'14"	Placer Au-PGE	Gregory and Moore, 1931 Quirling, 1962	Unverified report of PGE
*	DB01811	Klondike Bar	Kane	37°06'40"	111°01'58"	Placer Au-PGE	Butler and others, 1920 Gregory and Moore, 1931 Hunt and others, 1953 Johnson, 1973b	Unverified report of PGE
*	M045474	Split Mountain Gorge	Uintah	40°25'14"	109°14'29"	Placer Au-PGE	Johnson, 1973b O'Neill and Gunning, 1934	Unverified report of PGE
Vermont								
1	W033060	Hinchman Prospect	Windsor	43°31'10"	072°39'42"	Unknown	Perkins, 1904, 1930 Unpub. data	Pulp sample said to contain 0.25 oz/ton Pt (analytical method unknown)
Virginia								
*	W031173	Colleen Prospect	Nelson	37°42'44"	078°56'17"	Unknown	Unpub. data*	Unable to find source of PGE data (presumed to be unpub. data)
1	MP00248	Unnamed PGE occurrence	Loudoun	39°01'17"	077°36'12"	Magmatic segregation (no model)	Froelich and others, 1991 Gottfried and Froelich, 1988 Gottfried and others, 1989	41 ppb Pt, 500 ppb Pd max. in rock samples (fire assay)
Washington								
*	MP00077	Anacortes	Skagit	48°30'09"	122°37'25"	Podiform chromite	Day and Richards, 1906 Derkey and others, 1990 Hunting, 1956	\$4.41/ton Au+Pt in natural black sand
1	MP00076	Beards Hollow Placer	Pacific	46°18'21"	124°03'46"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956	\$58 oz/ton Pt in natural black sand (grade = about 663 ppb)
2	M700442	Cedar Creek Placer	Clallam	48°00'53"	124°40'35"	Placer Au-PGE	Derkey and others, 1990 Hunting, 1955 Pardee, 1929	Small byproduct PGE production (about 5 oz)
*	MP00074	China Camp Placer	Kintitas	47°25'00"	121°05'00"	Placer Au-PGE	Hunting, 1956	Unverified report of PGE
*	N013849	Cle Elum	Kintitas	47°25'53"	121°03'15"	Lateritic Ni	Conrad, 1956, 1973 Derkey and others, 1990 Lamey and Hotz, 1951 Unpub. data	Unable to find source of PGE data

3	M056163	Comstock	Ferry	48°58'00"	118°33'06"	Syenite-hosted Cu-Ag-PGE (no model)	Hunting, 1956 Mutschler and others, 1985 Parker and Calkins, 1964 Purdy, 1951	225 ppb Pd, 3.94 ppm Pt max. in sulfide concentrate (analytical method unknown)
4	M045067	Fort Canby	Pacific	46°17'01"	124°03'05"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	\$.81/ton Au+Pt in natural black sand
5	M045063	Hoquiam	Grays Harbor	46°58'16"	123°52'39"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	\$.02/ton Au+Pt in natural black sand
*	MP00075	Le Roy	Snohomish	47°59'18"	121°26'04"	Unknown	Hunting, 1956 Tabor and others, 1982	Unverified report of PGE
*	M045064	Leadbetter Point	Pacific	46°38'37"	124°02'57"	Placer Au-PGE	Day and Richards, 1906 Pardee, 1929	Trace Au+Pt in analysis of natural black sand
*	MP00073	Leavenworth Placer	Chelan	47°35'54"	120°38'58"	Placer Au-PGE	Hunting, 1956 Pardee, 1929	Unverified report of PGE
*	M056657	Little Chopaka Claims	Okanogan	48°57'39"	119°41'48"	Podiform chromite	Hunting, 1956	Unverified report of PGE
6	M045066	Mad Creek	Chelan	47°49'38"	120°32'21"	Placer Au-PGE	Hunting, 1956 Pardee, 1929 Patty and Glover, 1921	Unverified byproduct PGE production
7	M700274	Moclips Placer	Grays Harbor	47°14'25"	124°13'00"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	\$.17/ton Au+Pt in natural black sand
*	M045065	Nahcotta	Pacific	46°29'45"	124°01'51"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	Trace Au+Pt in analysis of natural black sand
8	M045068	Negro Creek	Chelan	47°26'38"	120°39'40"	Placer Au-PGE	Derkey and others, 1990 Hunting, 1956 Pardee, 1929	Unverified byproduct PGE production
9	M060158	New Light Mine	Whatcom	48°45'41"	120°43'32"	Polymetallic veins?	Patty and Glover, 1921 Bunning, 1981 Derkey and others, 1990 Hunting, 1956 Landes and others, 1902 Moen, 1969	2.6 oz/ton Pt max. in assays of mill concentrates (analytical method unknown)
10	MP00078	Okanogan	Okanogan	48°21'12"	119°33'33"	Unknown	Hunting, 1956 Pardee, 1929	Ore said to contain 0.25 oz/ton PGE (analytical method unknown)
*	MP00081	Oro Fino	Okanogan	48°53'56"	119°30'44"	Placer Au-PGE	Hunting, 1956	Unverified report of PGE
11	M045072	Ozette Beach Placer	Clallam	48°12'33"	124°41'30"	Placer Au-PGE	Derkey and others, 1990 Hunting, 1955 Mertie, 1969 Pardee, 1929	Unverified byproduct PGE production
12	M045062	Point Brown	Grays Harbor	46°55'38"	124°10'25"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	\$.05/ton Au+Pt in natural black sand
13	M045060	Pomeroy	Garfield	46°28'37"	117°35'57"	Placer Au-PGE	Day and Richards, 1906 Hunting, 1956 Pardee, 1929	\$17.36/ton Au+Pt in black-sand concentrates, concentration factor not known
*	M700188	Primary Gold Mine	Skamania	46°21'45"	121°47'37"	Placer Au-PGE; unknown lode	Hunting, 1956	Unverified report of PGE
14	M700343	Ready Cash Claim	Skagit	48°34'56"	122°43'17"	Podiform chromite	Derkey and others, 1990 Hunting, 1956 Pardee, 1929	Chromite ore said to contain 0.245 oz/ton Pt max. (analytical method unknown)
*	MP00079	Riverside	Okanogan	48°30'11"	119°30'16"	Placer Au-PGE	Hunting, 1956 Pardee, 1929	Unverified report of PGE

Table 1. List of platinum-group-element (PGE) occurrences within the conterminous United States that are contained in the U.S. Geological Survey's Mineral Resource Data System (MRDS)—Continued

Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Washington—Continued								
*	M045074	Rogers Bar Placer	Ferry	48°05'20"	118°14'12"	Placer Au-PGE	Collier, 1907 Derkey and others, 1990 Hunting, 1955	Trace Pt reported in assay of ore (analytical method unknown)
15	M045073	Shi Shi Beach Placer	Clallam	48°15'19"	124°41'01"	Placer Au-PGE	Day and Richards, 1906 Derkey and others, 1990 Hunting, 1955 Pardee, 1929	\$613.50/ton Pt in concentrates, concentration factor not known
16	M045069	Similkameen Placers	Okanogan	48°56'23"	119°26'47"	Placer Au-PGE	Derkey and others, 1990 Hunting, 1956 Pardee, 1929 Patty and Glover, 1921	Unverified byproduct PGE production
*	MP00080	Slate Creek Placer	Okanogan	48°59'10"	119°34'17"	Placer Au-PGE	Hunting, 1956	Unverified report of PGE
17	M045077	South Fork Lewis River	Clark	45°48'51"	122°18'57"	Placer Au-PGE	Hunting, 1955 Mertie, 1969 Pardee, 1929 Patty and Glover, 1921	Small byproduct PGE production (about 1.5 oz)
18	M045076	Sunset Creek Placer	Clallam	47°59'20"	124°40'17"	Placer Au-PGE	Derkey and others, 1990 Hunting, 1955 Pardee, 1929	Small byproduct PGE production (about 5 oz)
*	M056168	Walla Walla	Ferry	48°58'12"	118°33'03"	Unknown	Hunting, 1956	Unverified report of PGE
19	M045075	Yellow Banks Placer	Clallam	48°05'40"	124°41'10"	Placer Au-PGE	Hunting, 1955 Pardee, 1929	Unverified byproduct PGE production
Wyoming								
D	W032115	Albany Placers	Albany	41°12'30"	106°15'40"	Placer Au-PGE	Hausel, 1980, 1989 Osterwald and others, 1966	\$5-6/ton Pt in black sand concentrates (visual identification presumed)
*	M045442	Archer Placer Claim	Albany	41°16'02"	106°11'19"	Placer Au-PGE	Hausel, 1980, 1989 McCallum, 1968	Unverified report of PGE
*	M045438	Bear Creek	Albany	41°12'48"	106°15'36"	Placer Au-PGE	Hausel, 1989 McCallum and Orbach, 1968	Unverified report of PGE
1	M045445	Blanche Mine	Albany	41°13'05"	106°17'08"	New Rambler Cu-Au-PGE (no model)	Hausel, 1989 McCallum and Orbach, 1968	17 ppm Pt, 30 ppm Pd max. from high-grade limonite sample from dump (fire assay presumed)
*	MP00082	Broadway	Carbon	41°02'47"	106°45'07"	Undetermined massive sulfide	Hausel, 1989 Osterwald and others, 1966	Trace PGE in channel sample (analytical method unknown)
*	M045447	Centennial Mine	Albany	41°17'48"	106°09'25"	New Rambler Cu-Au-PGE (no model)	Beeler, 1906 Hausel, 1989 McCallum, 1968	Unable to find source of PGE data
*	M045453	Cliff Mine	Albany	41°16'34"	106°11'04"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 Hess, 1926 McCallum, 1968	Unverified report of PGE
*	M045450	Columbine Mine	Albany	41°15'52"	106°11'17"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 McCallum, 1968	Unverified report of PGE
*	M045436	Daves Creek	Albany	41°12'11"	103°15'57"	Placer Au-PGE	Beeler, 1906 Hausel, 1989	Unverified report of PGE
*	M045444	Duchess Mine	Albany	41°13'14"	106°18'01"	New Rambler Cu-Au-PGE (no model)	McCallum and Orbach, 1968 Hausel, 1989 McCallum and Orbach, 1968	Unable to find source of PGE data

*	M045437	Elk Creek	Albany	41°12'56"	106°15'25"	Placer Au-PGE	Hausel, 1989 McCallum and Orbach, 1968	Unverified report of PGE
2	M045451	Empire Mine	Albany	41°16'26"	106°11'36"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 Hess, 1926 McCallum, 1968	1.04 oz/ton Pt, 63.72 oz/ton Pd, 2.84 oz/ton Ir max. in rusty rock samples (analytical method unknown)
*	M045440	Fall Creek Placer	Albany	41°17'07"	106°11'34"	Placer Au-PGE	Hausel, 1989 McCallum, 1968	Unverified report of PGE
*	M045452	Free Gold Claim	Albany	41°16'48"	106°10'20"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 Hess, 1926 McCallum, 1968	Unverified report of PGE
3	W032147	Golden Crown Mining Syndicate	Albany	41°17'13"	106°09'38"	New Rambler Cu-Au-PGE (no model)	Hausel, 1989	0.84 oz/ton Pt max. in ore samples (analytical method unknown)
*	FS00029	Gros Ventre Nos. 1-16 Group	Teton	43°33'06"	110°15'30"	Placer Au-PGE	Osterwald and others, 1966 Unpub. data*	Unable to find source of PGE data
4	M045443	Independence Mine	Albany	41°16'54"	106°11'03"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 McCallum, 1968 Osterwald and others, 1966	0.22 oz/ton Pt, 0.0192 oz/ton Pd, 0.46 oz/ton Ir, 0.302 oz/ton Rh, 0.1002 oz/ton Os max. in ore samples (analytical method unknown)
*	M045439	Independence Placer	Albany	41°16'29"	106°11'05"	Placer Au-PGE	Hausel, 1980 Hess, 1926 McCallum, 1968	Unverified report of PGE
5	M045449	Kentucky Derby Mine	Albany	41°17'10"	106°10'46"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 McCallum, 1968	0.1 oz/ton Pt in rock sample (fire assay)
6	W032386	Lake Creek Mine	Albany	41°07'14"	106°13'42"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 Osterwald and others, 1966	250 ppb Pt, 40 ppb Pd in vein material (fire assay presumed)
7	MP00107	Lake Owen complex	Albany	41°07'56"	106°09'05"	Merensky Reef PGE?	Loucks, 1991	935 ppb Pt, 5 ppb Pd max. in rock samples from mineralized zones (fire assay presumed)
*	MP00086	Lincoln Gulch	Albany	41°06'54"	106°09'33"	Placer Au-PGE	Hausel, 1989	Unverified report of PGE
*	M045435	Moore's Gulch	Albany	41°11'57"	106°15'33"	Placer Au-PGE	Beeler, 1906 Hausel, 1989 McCallum and Orbach, 1968 Osterwald and others, 1966	Unverified report of PGE
8	M045455	New Rambler Mine	Albany	41°13'13"	106°16'52"	New Rambler Cu-Au-PGE (no model)	Day and Richards, 1906 Emmons, 1903 Lind and others, 1923 McCallum and others, 1976 McCallum and Orbach, 1968 Taft, 1918 Theobald and Thompson, 1968	621 oz Pt+Pd produced
*	M045448	Platinum City Mine	Albany	41°16'32"	106°09'30"	New Rambler Cu-Au-PGE (no model)	Hausel, 1980, 1989 McCallum, 1968	Unverified report of PGE
*	M045441	Queen Mill Run	Albany	41°17'16"	106°10'39"	Placer Au-PGE	Hausel, 1989 McCallum, 1968	Ore material said to contain traces of PGE (analytical method unknown)
9	M045454	Queen Mine	Albany	41°16'24"	106°09'57"	New Rambler Cu-Au-PGE (no model)	Hausel, 1989 Hess, 1926 McCallum, 1968	0.03 oz/ton Pt, 0.05 oz/ton Ir in gouge sample (analytical method unknown)
*	W032121	Rock Creek Placers	Fremont	42°23'33"	108°43'44"	Placer Au-PGE	Armstrong, 1948 Hausel, 1980, 1989 Osterwald and others, 1966 Unpub. data*	Unable to find source of PGE data
*	M054827	Silver Crown District	Laramie	41°08'40"	105°08'39"	Porphyry Cu-Au; polymetallic veins	Beckman and Kerns, 1965 Hausel, 1989 Osterwald and others, 1966 Unpub. data	Unverified report of PGE

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Map number	MRDS record number	Property name	County	Latitude (north)	Longitude (west)	Deposit type (Published model names used where applicable)	References cited in MRDS records	Level of PGE knowledge
Wyoming—Continued								
10	MP000084	Unnamed prospect	Albany	41°10'56"	106°08'23"	New Rambler Cu-Au-PGE? (no model)	Hausel, 1989	120 ppb Pt, 1.4 ppm Pd in limonite concentrates (fire assay presumed)
11	MP000083	Unnamed prospect	Albany	41°11'50"	106°11'53"	New Rambler Cu-Au-PGE (no model)	Hausel, 1989	0.87 oz/ton Pd, 1.17 oz/ton Pt max. in gneiss samples from prospect pits (fire assay presumed)
*	M045446	Utopia Mine	Albany	41°17'23"	106°09'19"	New Rambler Cu-Au-PGE (no model)	Hausel, 1989 Hess, 1926 McCallum, 1968	Unverified report of PGE

¹Pacific Southwest Field Committee

²Engineering and Mining Journal

³Nevada Mining Association Newsletter

⁴Idaho Department of Labor and Industrial Services

⁵Work Projects Administration Mineral Resources Survey

⁶U.S. Geological Survey-U.S. Bureau of Mines

⁷Oregon Department of Geology and Mineral Industries

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