### SOME HINTS TO **PROSPECTORS**

#### Other Things of Value Besides Gold and Silver.

The average prospector starts to explore a new country with his pick and pan, but only looks for gold and silver. He follows up the streams and gulches. and if colors of gold are found, traces them to their source. If ledges are encountered they are tested by assay for gold, silver, lead copper; but beyond that, little if any account is taken of the rocks of the country, except as curious freaks of Nature.

In the placer mining of the Black Hills the miners were troubled with heavy pebbles, locally called blackjack. On account of the weight of these and of the same mineral when found in place, it was taken for silver ore, but no silver ore could be found by assay. Finally it was discovered to be stream tin and demand. cassiterite in a matrix of feldspar or mica.

In the beach mining along the Pacific coast line there was generally collected with the amalgam small scales, either a dull lead color or bright like nickel, which were heavier than the amalgam, though untouched by quicksilver. This was thrown away for years, but was nearly as valuable as the gold, ounce for ounce, consisting of platinum and its deposits so far known are limited in size alloys.

In Colorado, at Rock Creek, a canaryyellow deposit was found, in appearance like sulphur and clay, but very heavy. This was found to be a compound of uranium and vanadium, called carnotite, and of good commercial value.

In San Diego county, California, a peculiar deposit was found carrying radiating reddish crystals. Money has been made from this through its constituent of lithium. Lately another deposit has been found where these crystals have been of various colors, some so clear as to be valuable as gems. In Siskiyou county, California, a deposit has lately which is the genuine jade of great value.

There are other deposits of value, beover this western country, in the Sierras as well as the Rockies, and it is the object of this article to call the attention gem stones, non crystalline, very often of prospectors to this phase of explorations.

The writer has made a specialty of these rarer crystallizations and commercial deposits, and writes with confidence on the subject, realizing how often valuable deposits may be passed by.

Of the metals, rutile occurs in twin crystals of glassy red color, in a feldspar gangue, and is now commercially worked in North Carolina.

Molybdenite looks like graphite, occurs on the Pacific coast in quartz; in Mexico, in felsite, and is of value in limited quantities if over sixty per cent. It can be concentrated by saving the slimes.

Wolframite, tungstate of iron, has been found associated with the tin ores of Temescal, Riverside county, California, and is of value.

Cassiterite, tin oxide, only found in granites and its allied minerals, never in slate.

Stibnite, antimony, is of value if near transportation and carrying over fifty and alum. per cent of antimony. It looks like galena, but is fibrous and lighter colored.

Chrome iron has been tound on the Pacific coast, but is not valuable till steel works are located on the bays of charged.

Bismuth is found in one mine in a

county near San Francisco, California, but, like the blackjack of the Black Hills, has so far been considered a valueless product by the prospector, though there is a market for a limited amount.

Lead-This occurs as carbonate (cerussite), a heavy light colored earthy mineral; as sulphide (galena), of a bright lead color; and rarer, as wulfenite, of a bright orange color, and auglesite, the sulphate. The ores of this metal are variable in value according to the expense of transportation, the extent of the ore bodies and the percentage of the metal contents; but, with the present price of lead, many mines formerly idle should now pay a profit.

Sulphur-A bright yellow earth which is generally mixed with volcanic ash, as near Humboldt Wells, Nevada. For years the principal source of supply for the Pacific coast was in Japan, but a deposit is now being exploited in Lower California. It is possible that deposits would be found near some of the extinct volcanoes of California, such as Lassen Buttes. In spite of the increased use of iron pyrites for the manufacture of sulphuric acid, pure sulphur is in constant

Graphite, "black lead"-Small quantities of this are found the length and breadth of California, but only when of superior quality can it compete with that which is artificially made.

Asbestos-A white or greenish mineral, fibrous like wool. Generally the fiber is very short, when the mineral is of little value. Though found in numerous localities on the Pacific coast, the and poor in quality. A good asbestos will be associated with serpentine rocks, and should occur in the Sierra Nevadas and in Siskiyou county, California. For this there is a market.

Mica in large sheets and free from iron has a ready sale.

Crystals-Not all crystals are of value, but it is the gems of which we know little that the prospector should take note, preserving in his book for future reference, locality, nature of country rock and extent of deposit.

A few diamonds have been found in several gold gravel mines of California, and quartz crystals, tons in weight, have been found, greenish and very hard, been shipped from Calaveras county, California. Among other crystals, if specimens are found clear and uniformly colored, they should be saved, particsides the gold and silver contents, all ularly red garnets (almandite), green garnets (ouraroite), and the long crystals of colored tourmalines; while among the valuable specimens of green chrysoprase, agates, onyx, cat's-eye and opals are found.

> The turquoise found in California is superior to that in New Mexico, being without the iron specks of the latter.

> There is no reason to doubt but that other gems exist in the mountain ranges of the Pacific coast, where we have the eruptive actions as shown particularly in the Siskiyous on the border of California and Oregon, and the ranges on the borders of southwestern Nevada and eastern California.

> The Earths-Only a few of these are worthy of the prospector's attention. Kaolin, for porcelain, is too plentiful; but infusorial earth and Fuller's earth look so closely similar to it that, without chemical tests, the difference cannot be

> Magnesite is also white, but heavy, while magnesia resembles soft chalk; but of all these the most valuable would be deposits of niter and borax, gypsum

> Salt, having no magnesia, and if in a deposit of sufficient extent, should find a remunerative market and free the coast from the excessive tariff now

> The writer suggests to all prospectors to save unknown crystals, with the data

of their locality; small specimens of unknown rocks and minerals, and the data connected with them, and submit them to some competent authority for valuation. He may find he has a better proposition than a gold mine.—W. J. Adams, E. M., in Mining and Scientific Press.

TIMBER LAND, ACT JUNE 3, 18+8.—NOTICE FOR PUBLICATION.

United States Land Office,
La Grande, Oregon, July 25, 1002.

Notice is hereby given that in compilance with the provisions of the act of congress of June 1, 1878, entitled "An act for the sale of timber lands in the states of California, Oregon, Nevada and Washington Territory," as extedded to all the Public Land states by act of August 4, 1802.

MELVIN W. SADDLER.

MELVIN W. SADDLER.

of Des Moines, county of Polk, state at Iowa, has this day filed in this office his sworn statement No. 1420, for the purchase of the e<sup>1</sup>/<sub>2</sub> se<sup>1</sup>/<sub>3</sub>, nw<sup>1</sup>/<sub>3</sub> se<sup>1</sup>/<sub>3</sub>, ne<sup>1</sup>/<sub>3</sub> sw<sup>1</sup>/<sub>3</sub> of section No. 22 in township No. Il south, nange No. at EWM, and will offer proof to show that the land sought is more valuable for its timber or stone than for agricultrural purposes, and to establish his claim to said land before the Register and Receiver of this office, at La Grande, Oregon, on Monday, the loth day of November, locz.

He names as witnesses: Francis G. Connelly, Thomas Tweet, of The Dalles, Oregon: Frank Eaglen, of La Grande, Oregon; V. R. Mead, of Sumpter, Oregon.

Any and all persons claiming a fearsely the above.

Oregon.

Any and all persons claiming adversely the above described lands are requested to file their claims in this office on or before said loth day of Nov., logs.

E. W. BAPTLETT, Register.

#### TIMBER LAND, ACT JUNE 3, 1878.-NOTICE FOR PUBLICATION.

United States Land Office,
La Grande, Oregon, July 12, 1902.

Notice is hereby given that in compliance with the provisions of the act of congress of June 1, 1828, entitled "An act for the sale of timber lands in the states of California, Oregon, Nevada and Washington Territory," as extended to all the Public Land states by act of August 4, 1802.

JOANNA E. TRUE,

JOANNA E. TRUE,

of Pullman, county of Whitman, state of Washington,
has this day filed in this office her sworn statement
No. 124 for the purchase of the sw's of section No. 21
in township No. It south, range t o. 35 EWM, and will
offer proof to show that the land sought is more
valuable for its timber or stone than for agricultural
purposes, and to establish her claim to said land before the Register and Receiver of this office at La
Grande, Oregon, on Tuesday, the sist day of October, Igoz.

ber, Iqoa.

She names as witnesses: Rowena Windus and Harry E. True, of Pullman, Washington: William D. Arnold, of La Grande, Oregon, and V. R. Mead, of Sumpter, Oregon.

Any and all persons claiming adversely the above-described lands are requested to file their claims in this office on or before sail sist day of October, loos.

E. W. BARTLETT, Register

TIMBER LAND, ACT JUNE 1, 1898.-NOTICE FOR PUBLICATION.

United States Land Office,
La Grande, Oregon, July 21, 1902. \
Notice is hereby given that in compliance with the
provisions of the act of Congress of June 1, 1878,
entitled "An act for the sale of timber lands in the
States of California, Oregon, Nevada, and Washington Territory," as extended to all the Public Land
States by act of August 4, 1892.

CHARLES O. MO. RELL.

CHARLES O. MO@RELL.

of Pullman, county of Whitman, state of Washington, has this day filed in this office his sworn statement No. 1 you, for the purchase of the elg self, sw 1-4 se 1-4 sw 1-4 of Sec. No. 12 in Tp. No. 12 S. R No. 15 EWA, and will offer proof to show that the land sought is more valuable for its timber or stone than for agricultural purposes, and no establish his claim to said land before the clerk of the Supreme Court at his office at Pendle on, Oregon, on Irilay, the 14th day of November, 1002.

He names as witnesses: Joshua M. Palmerton, Minnie Spaulding, Affred R. Windus, of Pullman, Wash., and William J. Windus, of Collax, Wash. Any and all persons claiming adversely the above described lands are requested to file their claims in this office on or before said lath day of November, 1002.

E. W. BARILEIT, Register.

## NOTICE OF APPLICATION FOR PATENT.

Mineral Application No. 247. Mineral Survey No. 101

Mineral Survey No. 101.

United States Land Office,
La Grande, Oregon, July 10, 1902.

Notice is hereby given that in pursuance of the nited States Mining Laws, A. W. Ellis, whose post-fice address is Sumpter, Baker county, Oregon, as made application for patent for 13-00 acres of acer ground embracing the "Meadow and a portion of the "No Name" placer claims, situated in norganized mining district, Baker county, state of regon, described as follows, to-wit: MEADOW PLACER.

Beginning at Cor. No. 1, identical with ¼ cor. to Sec. 20-32, T. 9 S., R. 17 E. W. M., thence south 80° 55 min. west 660.7 ft. to Cor. No. 2: thence north 1° 12 min. west 660.6 ft. to Cor. No. 3: thence south 81° o min. east 563.8 ft. to Cor. No. 4; thence south 1° 37 min. east 578.6 ft to Cor. No. 1, the place of beginning. A PORTION OF NO NAME PLACER

Beginning at Cor. No. I, whence the 1/2 Cor. to

Co. Praceunknown claimants.

Any and all persons claiming adverse; put tion of said mines or surface ground are reu tion of said mines or surface ground are reu file their adverse claims with the Registe United States Land Office, at La Grande, in f Oregon, during the Sixty days period of tion hereof, or they will be barred by virtu provisions of the Statutes.

E. W. BARTLETT, R. E. W. BARTLETT, Register.

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