

SURVEYING FOR GOLD

The story of the Bohemia Mining District
in Lane and Douglas Counties

By Mark Armstrong and Jim Colton

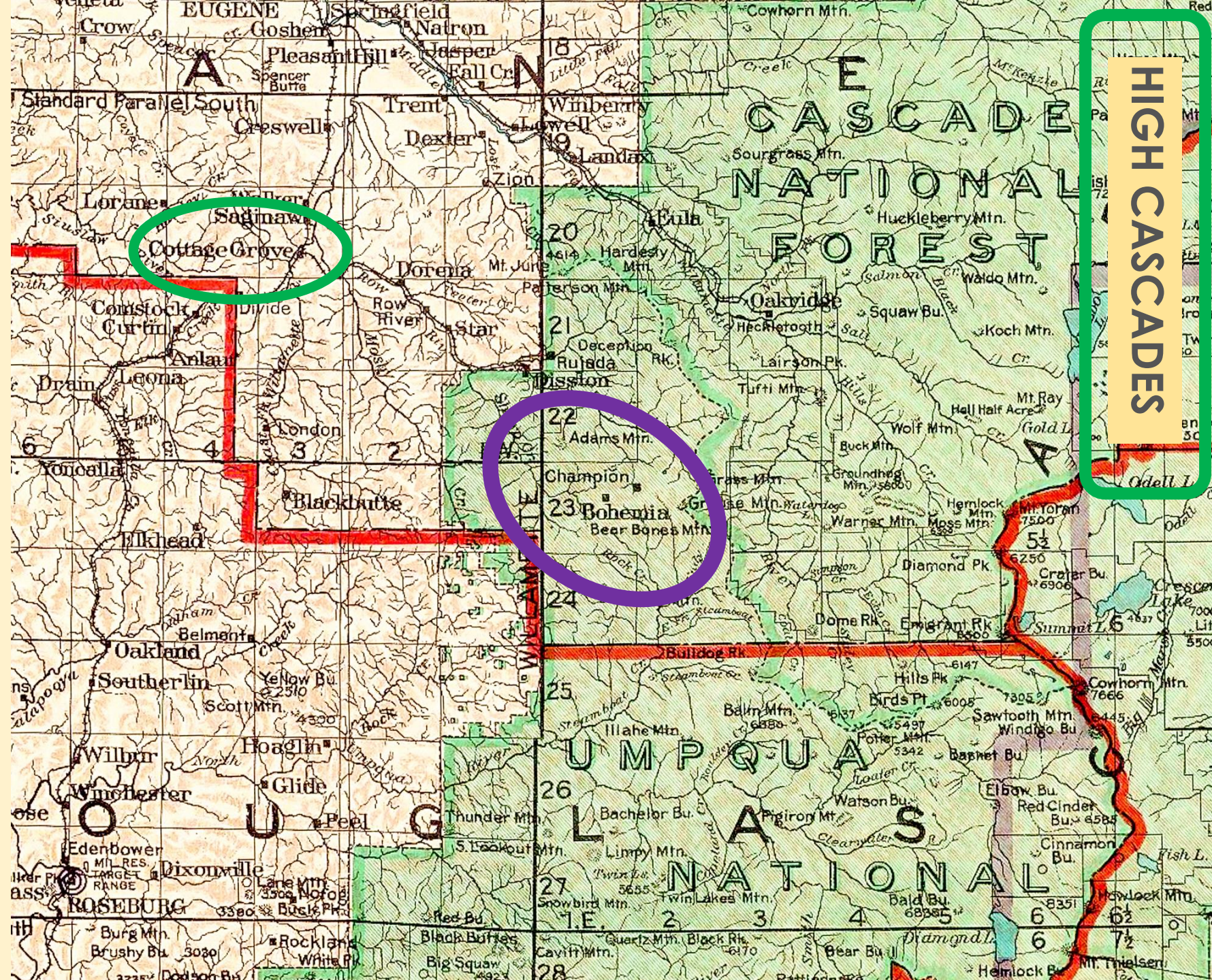
for the OGUG MEETING
June 14, 2019



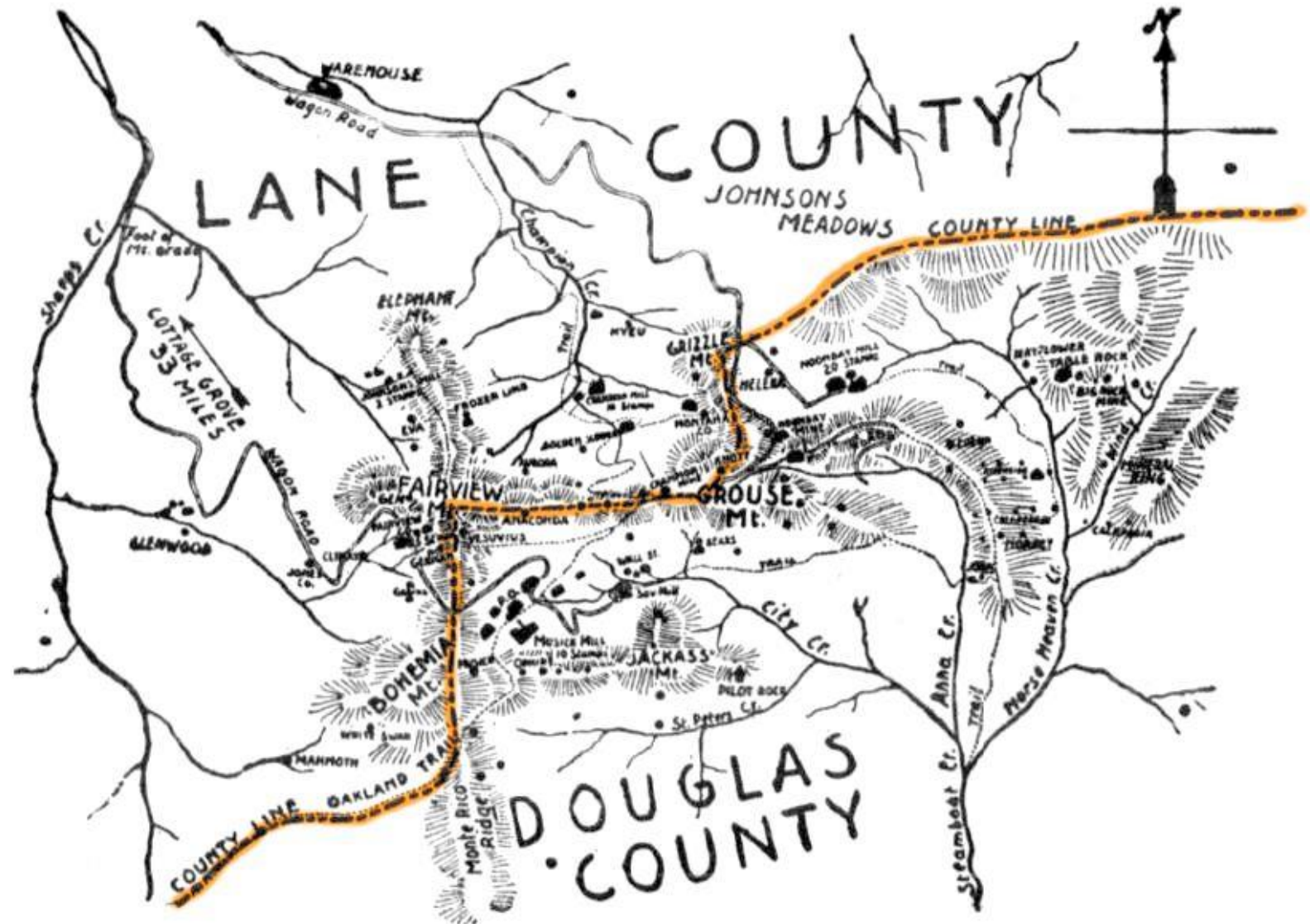
Where is the Bohemia Mining District?

- 45+ miles west of the High Cascades
- 35 miles SE of Cottage Grove
- Largely in:
T. 23 S., R. 1&2 E., W.M.
- U.S.D.A Umpqua National Forest

1922 GLO State Map
→



Map of Bohemia, The Klondike of Oregon



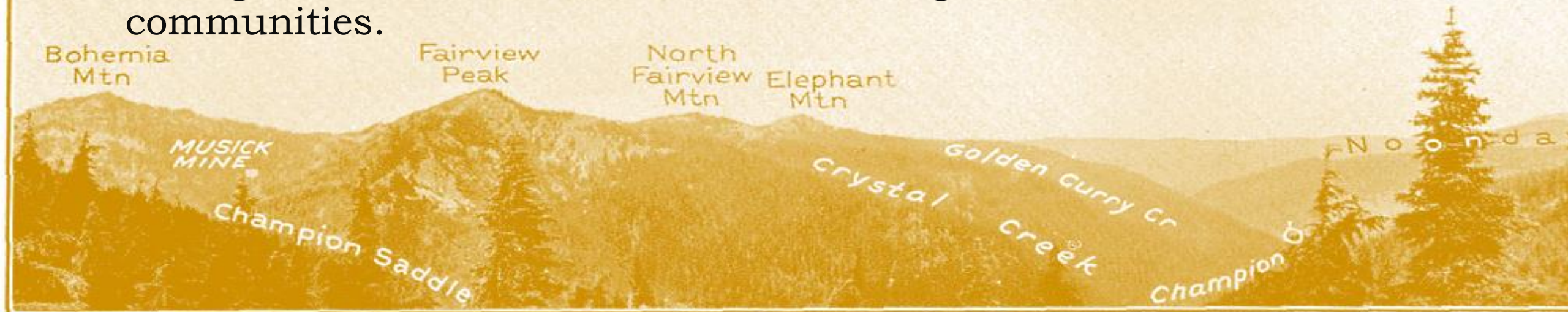
- When the district was founded in 1867 the line between Lane and Douglas Counties was much different.
- It followed the ridgeline up over **Bohemia Mountain** and up to the top of **Fairview Peak** then easterly down the ridge to **Grouse Mtn.** then northerly to **Grizzle Mtn.**
- **Today the District is all in Lane Co.**

DESCRIPTIVE OVERVIEW

- The Bohemia Mining District is part of the Western Cascades (Calapooya Mountains).
- Formed ~40,000,000 years ago during 4 or more volcanic uplift events.
- It is likely they formed over the subduction-zone hot spot close to where the High Cascades are today.
- Over the millennia, glaciation and erosion exposed veins of ore.
- Ore contained gold, silver, lead, zinc, and copper.
- Within a few hundred feet of the ground surface minerals were in an oxidized state and easily crushed and separated.

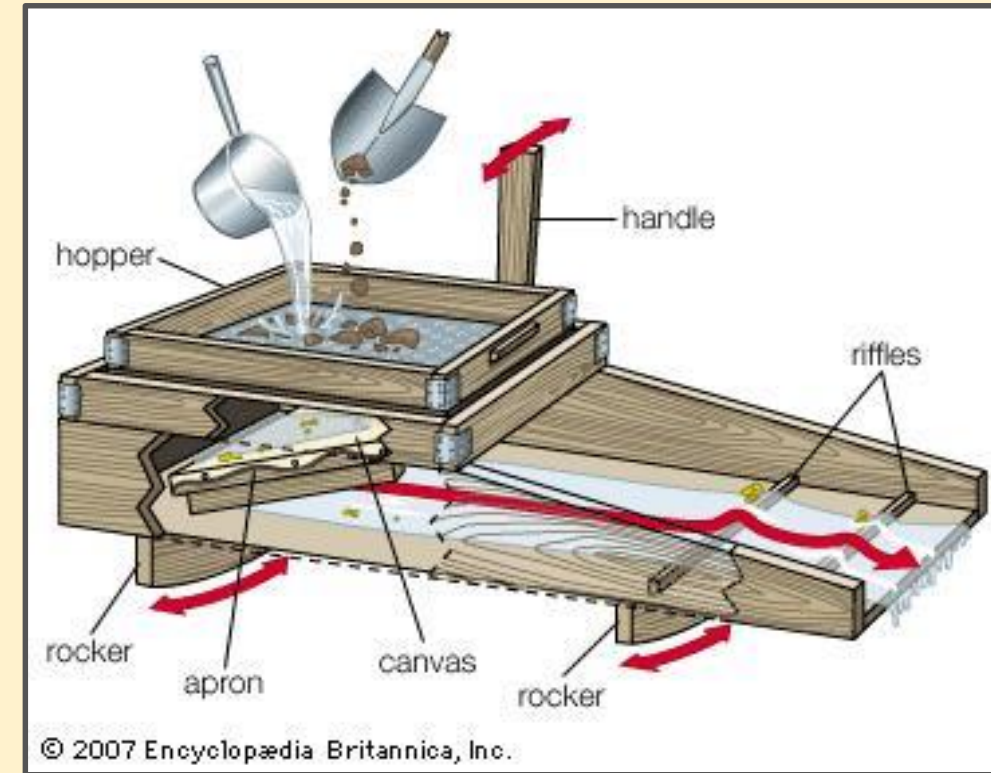
SETTLERS ARRIVED IN DROVES

- For thousands of years the only human trails in the area belonged to the Native Americans of the Kalapuya tribes...
- By 1850, wagon trains crossing the continent on the Oregon Trail delivered settlers to the valley where they staked homesteads in the Willamette and Umpqua watersheds...
- The first stage coach roads were built.
- Cottage Grove, Oakland, and Sutherlin began to flourish as communities.



PLACER GOLD IS DISCOVERED - 1858

- Four settlers, O.P. Adams, W.W. Oglesby, Rufus Adams and William Shields from the Delight Valley and Upper Coast Fork Willamette discovered gold in Sharps Creek. They had no mining skills.
- In 1859, Frank Buoy, and Adams traveled on foot to Josephine County to observe and learn placer mining in the creeks there.
- Oregon was granted Statehood Feb. 14th 1859.
- They returned and fashioned primitive rocker boxes exploring the creeks and basins.
- The higher up in elevation they went the less they found. Unaware that they were walking over veins (ledges) containing gold.



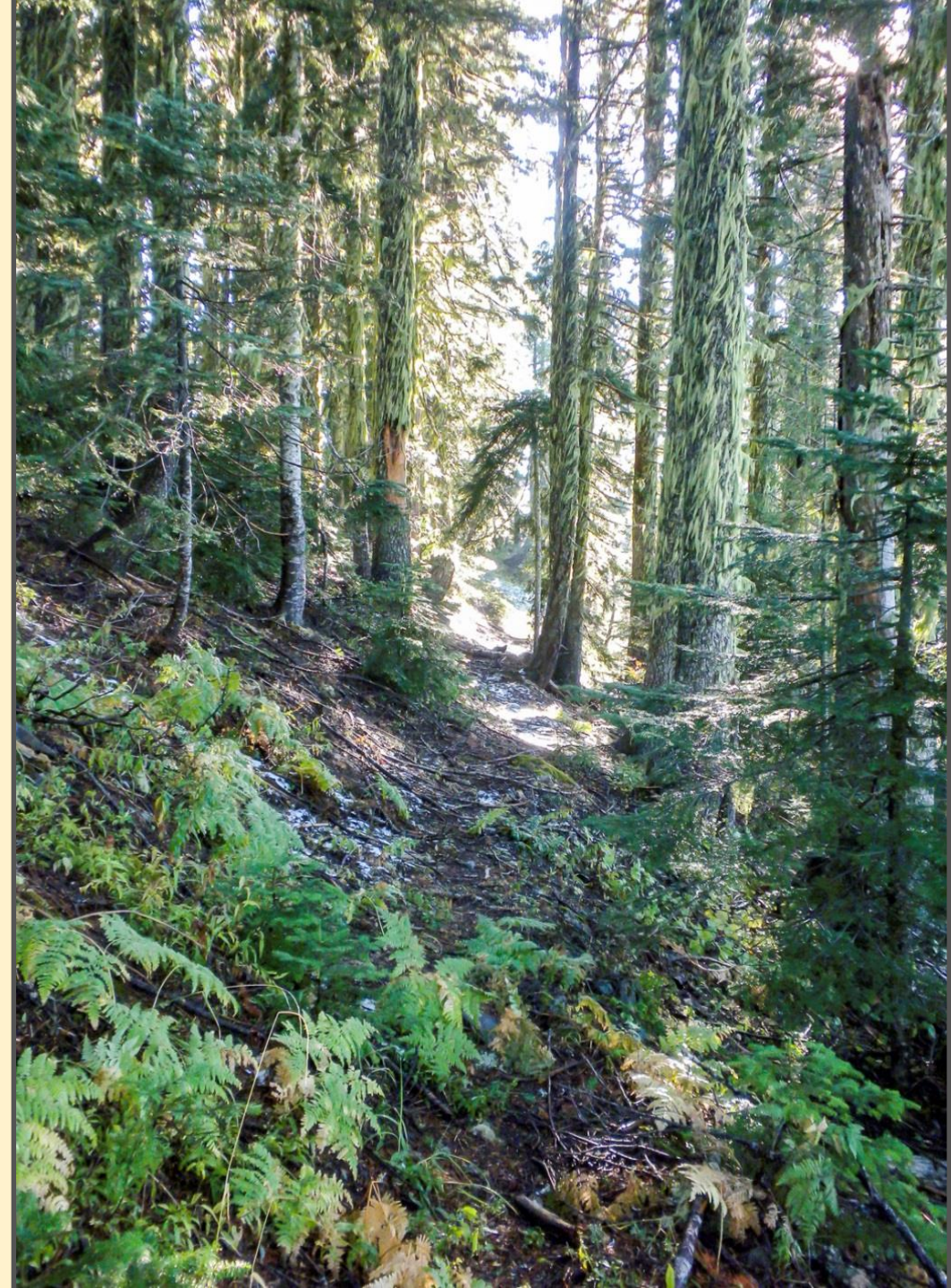
Traditional old
wood rocker
box

The story of how the **Bohemia Mining District** got its name...

- James Johnson (nicknamed Bohemia) and George Ramsey were running from the law. One of them had killed a Native American in Roseburg.
- They ran up the N. Umpqua River, then Steamboat Creek, then City Creek.
- Johnson killed a deer and while dressing it out he looked down in the creek and saw a shiny piece of gold. He and George had some panning skills.
- Johnson staked location claims beginning in 1864 but there were no recorded filings until around 1866 when Douglas Co. sent a clerk up to Bohemia City begin recording the location documents.
- By 1869, Johnson had filed at least a dozen claims. He sold one (the Excelsior Claim) to Steven F. Chadwick who eventually became Oregon's 5th Governor.

THE BOHEMIA TRAIL - 1864

- First organized effort to build a transportation route into Bohemia.
- Parts of it were no doubt over Native American trails along the creeks and ridgelines.
- It reached from Oakland all the way up to Bohemia City in the heart of the mining district which was developing fast.
- Pieces of this trail remain today although they are not easy to find. The F.S. has reclaimed a section for hiking and mountain biking. Bohemia N.R.T. #1407.
- The original trail shows up on the 1955 USGS 15' Fairview Peak and Culp Creek Quad maps of the area. **USGS 1934 Level Line.**



LODE MINING BEGAN IN EARNEST - 1871

- **The Civil War was over and interest in mining increased again.**
- **Joseph Knott purchased the Annie Mine from James (Bohemia) Johnson on top of Grouse Mtn.**
- **Credited with bringing the first stamp mill up into Bohemia, but... they had to build a new wagon road to haul it up there.**

- Built by hand during the summer of 1871. From Sharps and Brice creek confluence up to Grouse Mtn.

- More than 30 men (some Chinese) built the wagon road.

- A 5-stamp mill was hauled by oxen up the trail in 1872 and installed at the mine just before winter hit.

- The exact location of parts of the Knott Trail can be found drawn on many of the Mineral Survey Patent Plats.

**The
Knott
Trail**

**The Knott
Trail in 2017**
Sections of the
trail still remain
today

**This piece is
between
Fairview Peak
and N. Fairview
Peak and may
only be hiked.**

**Other short
sections can be
driven by narrow
off-road
vehicles.**



Upon discovery, claims were located and recorded...

- Any settler that knew the federal laws and how to run a transit and measure with a chain could survey a location claim.
- Many were mine owners locating, surveying and filing their own location claims.
- Mining was in full swing with perhaps a thousand location claims in Bohemia by 1890.

Five steps to filing a location claim:

1. Discovery of lode, ledge, or vein.
2. A valid location survey, notice and posting.
3. Excavation cut of the discovery vein.
4. Marking of the claim corners
5. Preparing and filing the Location Certificate.

Claim size: 1500' long x 600' wide (300' on either side of the discovery vein). Parallelogram shape but could be broken in the middle to follow the vein.

MINERAL PATENT SURVEYS

In order for a location claim to be eligible for patent, many criteria had to be met.

1. Claimant must already have a valid location certificate.
2. Claimant must make application for an official survey to the (GLO) Surveyor General in the State.
3. If application accepted Claimant makes a deposit.
4. Surveyor General assigns a Deputy Mineral Surveyor and order...
 - a. Issues survey instructions
 - b. Assigns a Mineral Survey Number
 - c. Assigned Deputy Mineral Surveyor must strictly follow:
 1. existing mining laws in effect (1872 as amended)
 2. official regulations and instructions
 3. file field notes and official plat to the Surveyor General
5. If Surveyor General approves the field notes and plat (may take many years) the issuance of patent may follow. The survey could be canceled or rejected for any number of reasons.

FIRST MINERAL PATENT SURVEY - M.S. No. 229 - 1891

But there was a problem...

One of the survey requirements was to tie the No. 1 claim corner to an approved section or ¼ section corner within 2 miles of the claim.

None existed at the time and would not for many years...

1891 - Survey No. 575 underway of the W.M. through T. 22 S.

1893 - Survey No. 619 ordered for T. 23 S., R. 1 W.

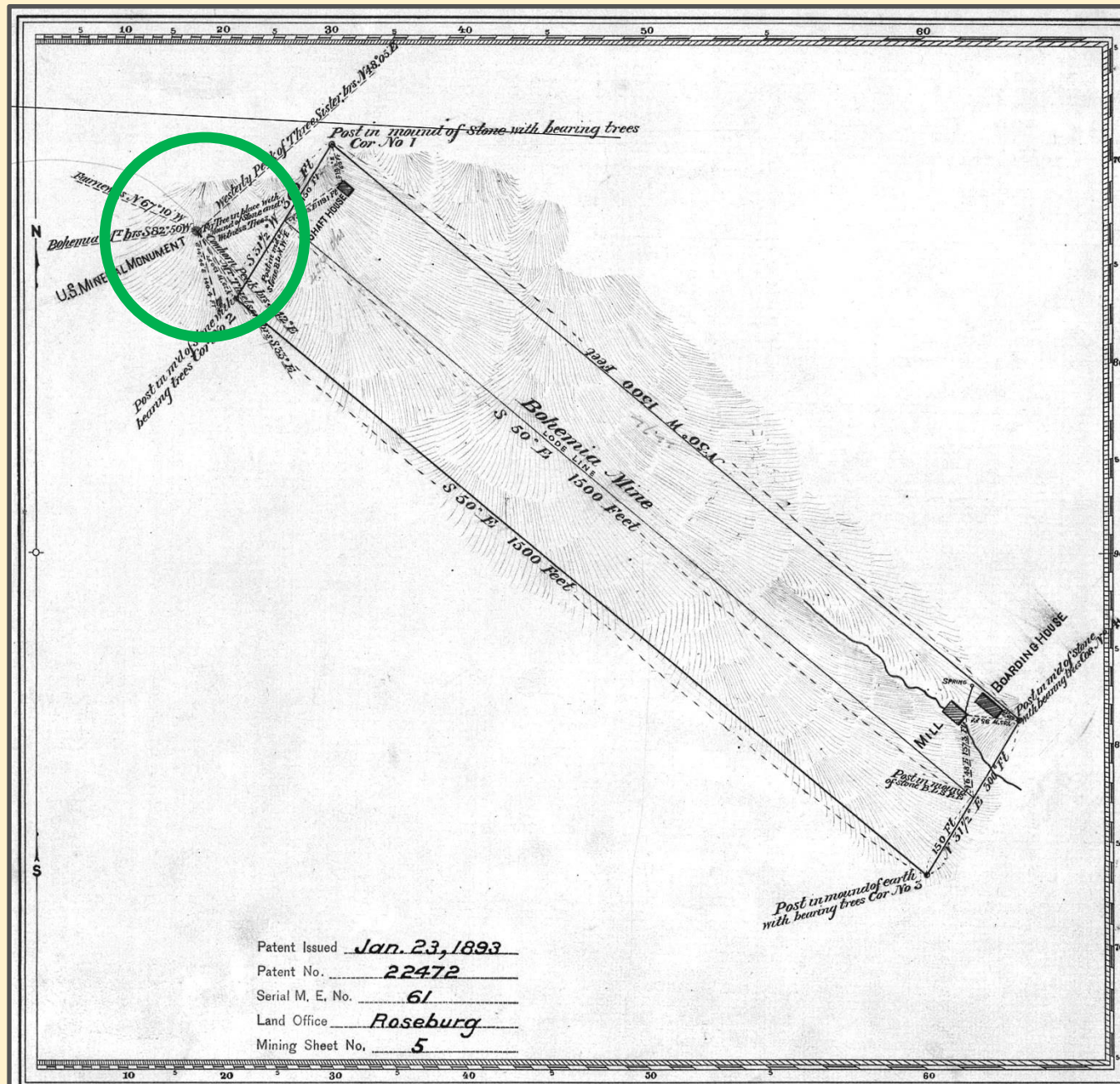
1898 - Survey No. 659 ordered for T. 23 S., R. 1 E. (Rejected)

In such cases the rules did allow for the Deputy Mineral Surveyor to set a control point United States Mineral Monument (USMM) on a prominent view point. It must be chiseled bedrock or large boulder or wood post 6" square, 3 feet in the ground with rock cairn around.

Deputy Mineral Surveyor **Elmer James McCaustland** received instruction for M.S. No. 229 in 1890. He set USMM No. 229 as part of his survey of **M.S. No. 229 - The Bohemia Claim.**

M.S. No. 229 and U.S.M.M. No. 229

- Plat and field notes approved 6-13-1891 by the Surveyor General
- Patent No. 22472 issued 1-23-1893
- USDMS McCaustland used a Heller and Brightly Transit and standard chain to perform the survey in 1891.



Patent Issued Jan. 23, 1893
 Patent No. 22472
 Serial M. E. No. 61
 Land Office Roseburg
 Mining Sheet No. 5

Claim Located August 7th 1876
 Mineral Survey No. 229
 L.O.T. No. 57 Land District.
PLAT
 OF THE CLAIM OF
 Mrs. James P. Finnican
 formerly
 Mrs. E. J. Ladd
 KNOWN AS THE
Bohemia Mine
 IN No Organized MINING DISTRICT,
 Douglas COUNTY, Oregon
 Containing an Area of 10 ²/₁₀₀ Acres.
 Scale of 150 Feet to the inch.
 Variation 21° 7' 30" E
 SURVEYED May 21 to 25 1891 BY
 Elmer J. McCaustland
 U.S. Deputy Mineral Surveyor,
 The Original Field Notes of the Survey of the Mining Claim of
 Mrs. James P. Finnican formerly Mrs. E. J. Ladd
 known as the
Bohemia Mine
 from which this plat has been made, under my direction, have been examined and approved, and are on file in this office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.
 I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon said Mining Claim by claimant or her grantors, and that said improvements consist of:
 Recovery shaft 6 x 6 ft 2 1/2 ft deep, through post @ \$ 8⁰⁰ per ft \$ 576⁰⁰
 One Boarding house 18 x 47 feet built of logs & stobrets }
 with lumber in floor & roof } 100⁰⁰
 one fire stamp engine, boiler, pump &c }
 with necessary buildings, shaft, flumes & pipe. All at \$ 200⁰⁰ }
 Total \$ 2676⁰⁰
 that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.
 And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.
 U.S. Surveyor General's Office. } W. Henry Byars
 Portland Oregon } U.S. Surveyor General for Oregon
 June 13th 1891

USMM NO. 229

- Found and RESET in 1973 by Barnes PE 2128
- **GPS occupation by Colton and Armstrong in 2017.**

Shared Solution

PID: BBFT36
Designation: USMM 229
Stamping: USMM 229 1973 PE2128
Stability: May hold, commonly subject to ground movement
Setting: Set into or on top of metal pipe driven into ground
Description: UNITED STATES MINERAL MONUMENT NO. 229. ALSO KNOWN AS USMM NO. 1. ORIGINALLY SET PRIOR TO 1905 AS HORIZONTAL CONTROL FOR LOAD CLAIM PATENT SURVEYS PRIOR TO THE GLO SURVEYS THAT FOLLOWED LATER IN TIME. THE MARK IS 2.3 KM EAST SOUTHEAST FROM FAIRVIEW PEAK LOOKOUT TOWER, 0.81 KM DIRECTLY EAST OF THE ROAD INTERSECTION AT THE CHAMPION SADDLE, AND 0.32 KM NORTHERLY FROM THE HIGHEST POINT OF GROUSE MOUNTAIN IN THE BOHEMIA MINING DISTRICT. DISK WAS RESET IN 1973 IN PLACE OF THE ORIGINAL MARK.
Observed: 2017-10-06T16:17:00Z
Source: OPUS - page5 1603.24



Close-up View

REF_FRAME: NAD_83(2011) | EPOCH: 2010.0000 | SOURCE: NAVD88 (Computed using GEOID12B) | UNITS: m | SET PROFILE | DETAILS

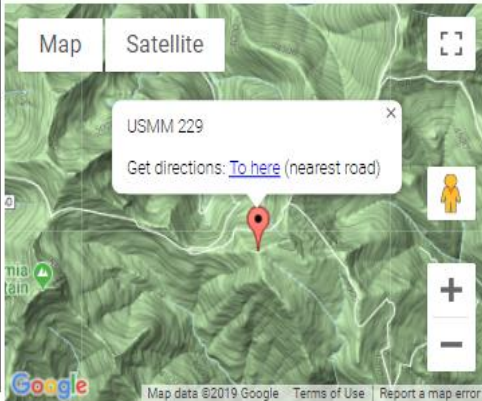
LAT: 43° 34' 42.57293" ± 0.010 m	UTM 10 SPC 3602(OR S)
LLN: -122° 37' 34.57999" ± 0.006 m	NORTHING: 4825126.502m 214552.755m
ELL HT: 1645.607 ± 0.012 m	EASTING: 530174.613m 1328289.260m
X: -2495799.457 ± 0.009 m	CONVERGENCE: 0.25763031° -1.45468353°
Y: -3898633.133 ± 0.014 m	POINT SCALE: 0.99961120 0.99992016
Z: 4375417.869 ± 0.001 m	COMBINED FACTOR: 0.99935331 0.99966219
ORTHO HT: 1668.189 ± 0.025 m	

CONTRIBUTED BY

[geodesyworks](#)
[Geodesy Works](#)



Horizon View



U.S.M.M. No. 589

**This was ordered set
by the Surveyor
General for Oregon in
1915. Monumented by
U.S. Dep. Surveyor
John McQuinn.**

**Orders were to amend
M.S. No. 589A which
was completed by
Mineral Surveyor
Edward Haff 11 years
earlier.**





***4 USMM (USLM) MARKS WERE SET FOR SURVEY CONTROL IN THE BOHEMIA MINING DISTRICT**

USMM No. 229 – 1891 - Found

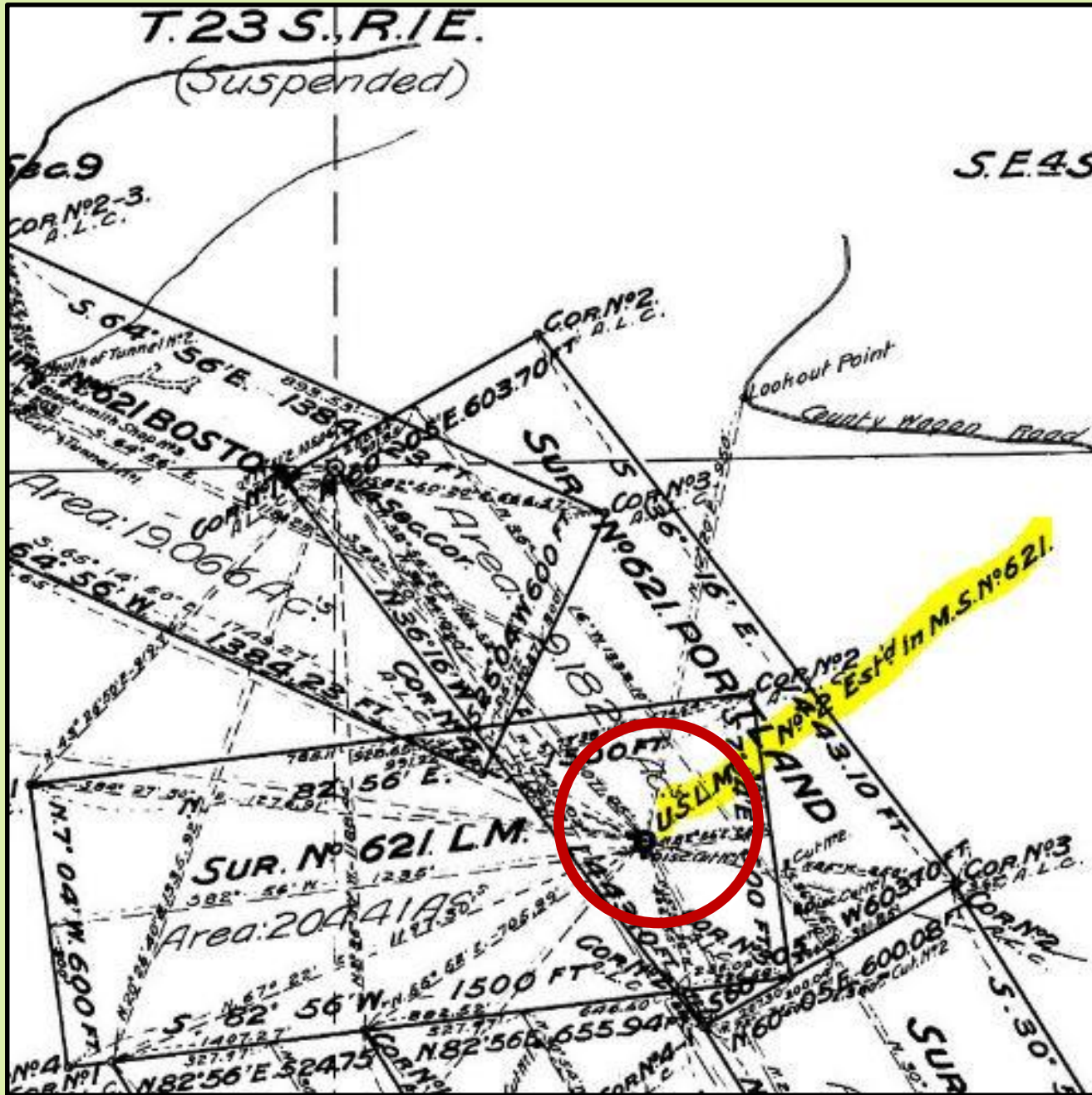
USLM No. 621 – 1905 - Found

USLM No. 625 – 1905 – Considered lost

USMM No. 589 – 1915 - Found

- **No one had ever recovered USLM No. 621 until 2017**
- **It showed up in the Patent Mineral Survey No. 621 plat performed in 1905 by USDMS Edward L. Haff**
- **Found his original field notes in the GLO (now BLM) records**
- **The story begins...**

Historic control monument USLM No. 621



Enlarging a section of the plat for M.S. No. 621 revealed the existence of USLM No. 621 also called USLM No. 2 set by U.S.D.M.S. Edward L. Haff in 1905.

The original field notes were found...



**The original rock cairn was there!!
- with a post hole in the center.**

INSTRUMENT.

This survey was made with a C.L. Berger & Sons No. 2 Transit. The courses were deflected from the true meridian as determined by direct solar observations. The distances were measured with 100-ft. and 500-ft. steel tapes.

NOTE. The U.S.L.M. established in this Survey is located on a prominent point of rocks, and on the apex of the ridge between Judson Rock and Bohemia Creeks, free from timber, and plainly visible from several parts of the property, and in plain sight from the County wagon-road at a point known as Lookout Point.

The monument consists of a fir post 6-ins. square, 8-ft. long, set 3-ft. in the ground with mound of rock 6 ft. at base and 3 ft. high around it; scribed U.S.L.M. *with a Nail a Exact Point* 621; Δ Whence;- a fir tree 20-ins. in dia. blazed and scribed B.T. U.S.L.M. 621, bears S. 23° W. 10 ft.

The confluence of Judson Rock and Bohemia Creeks bears N. 81° 30' W. 1910 ft. Lookout Point on the County wagon-road to Bohemia bears N. 12° 20' E. 950 ft.

The N. $\frac{1}{4}$ Cor. Sec. 16 (suspended) T. 23 S., R. 1 E. of the Willamette Meridian, bears N. 38° 54' 20" W. 1016.53 ft.

Bohemia Mountain bears S. 74° 14' E. about 11,000 ft.

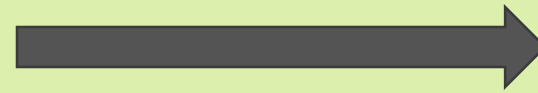
Mount Hope bears S. 39° 16' W. about 8000 ft.

U.S.D.M.S. Edward Haff set one bearing tree for USLM No. 621

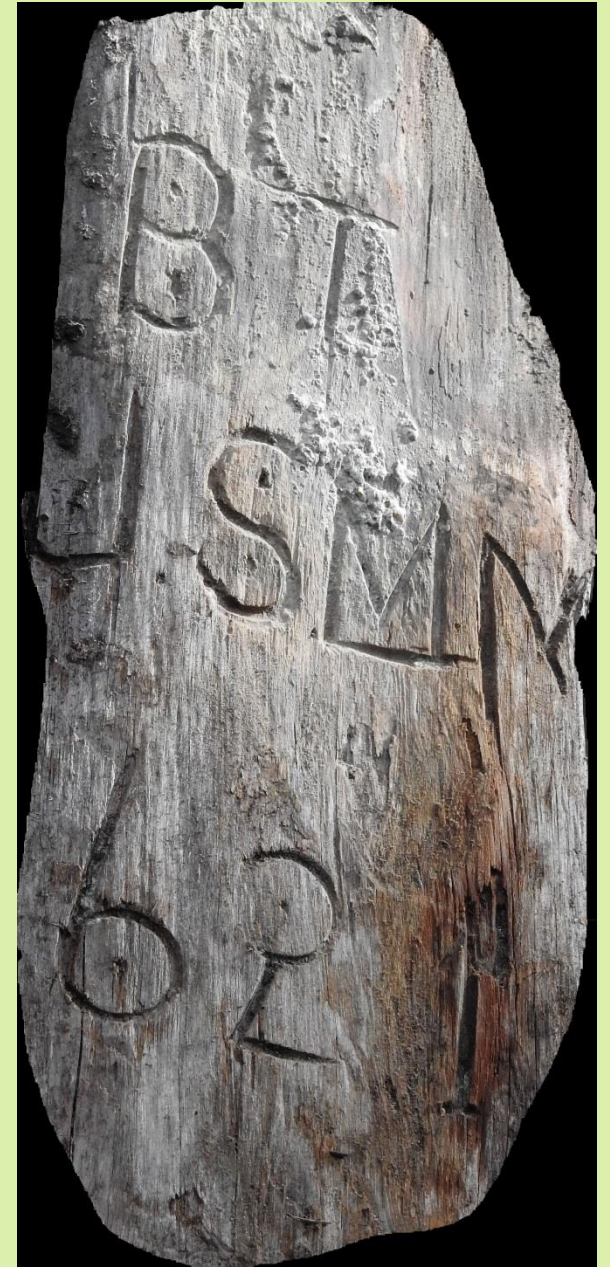


The blaze was still intact after 113 years in a rain forest

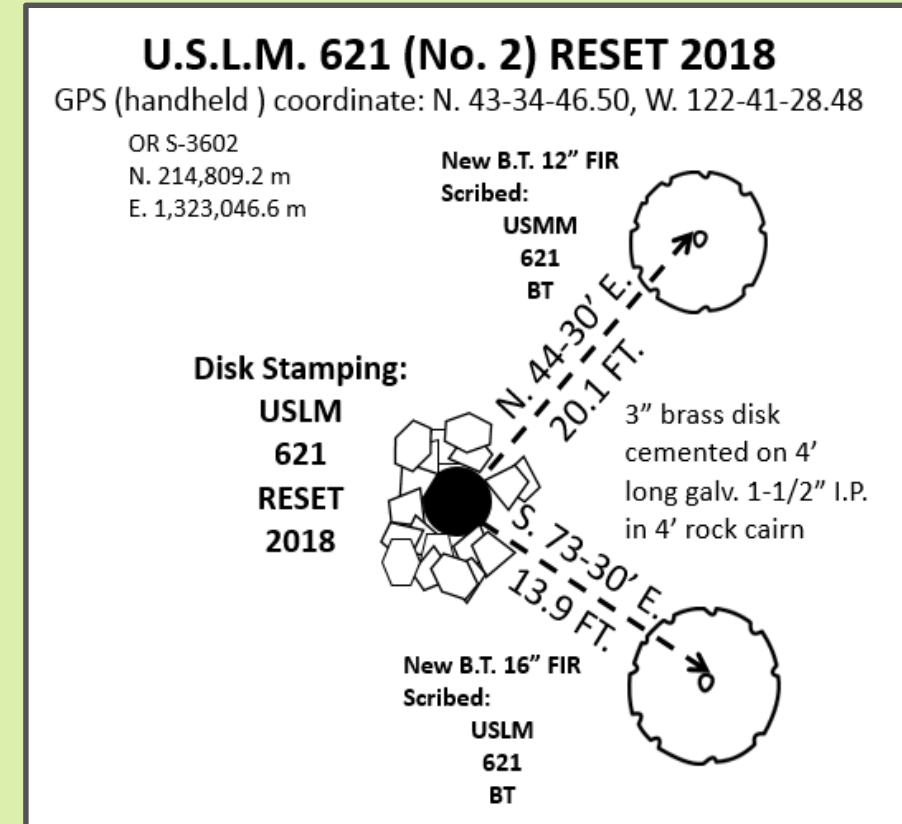
Almost unbelievable!



Note the “L” has an “M” scribed over it. To be correct it was a USMM and not a USLM



The mark was reset with a recycled USC&GS disc with 4-foot galv. Iron pipe back into the original post hole



Haff's notes state there were no trees...they had all been logged by 1905

Now 113 years later the forest is thick with trees.

Two new BT's were set to perpetuated the corner and hand held GPS observation

The most famous mines in Bohemia

The **Annie** (later called the **Noonday**)

The **Helena**

The **Musick**

The **Champion**

The **Vesuvius**

- Mine names seldom correspond with the name of the claim the entrance portal is on.
- Often adits and tunnels run underneath several claim boundaries.
- The major mines have several (many levels).
- Nearly all were first mined from the surface ledge (vein) discovery point.
- The veins or ledges also may have unique names that do not match the claim or mine name.

The **Helena Mine located on the Helena and Laurette Lode Claims**

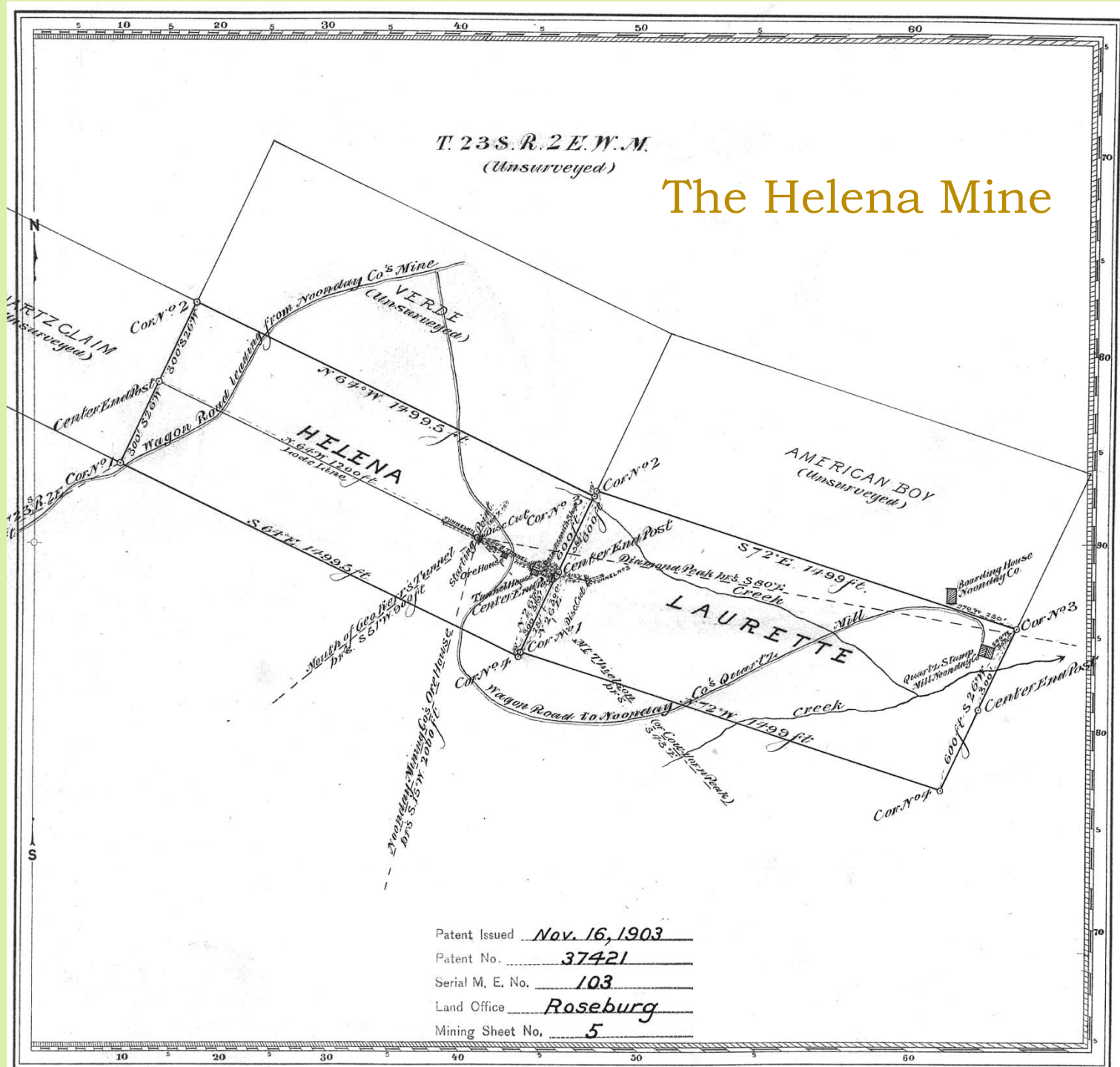
- **C.P Bruneau discovered the ledge in 1896. He was a photographer from Cottage Grove who visited the mines and Bohemia City often to take photos.**
- **He was struck by gold fever and headed out on his own to make a discovery and strike it rich...and he did!**
- **Original location survey in 1896.**
- **Claimant petitioned for patent in 1898.**
- **Surveyor General issued survey instructions in 1899.**
- **Patent survey performed in 1899 by USDMS William F. Briggs.**
- **Mineral Survey No. 360. The 2nd patent in the District.**
- **Plat and field notes approved in 1899.**
- **The patent was granted in 1903.**

The **Helena Mine** located on the Helena and Laurette Claims



The GLO
record plat
of
M.S. No. 360

Surveyed and
platted in
1899 by U.S.
Dep. Mineral
Surveyor
William F.
Briggs



The Helena Mine

T. 23 S. R. 2 E. W. M.
(Unsurveyed)

Patent Issued Nov. 16, 1903
Patent No. 37421
Serial M. E. No. 103
Land Office Roseburg
Mining Sheet No. 5

Claim Located July 24 & 25 1898
Township N° 23 S. Range N° 2 E. (Unsurveyed)
Mineral Survey N° **360**

Lot N°
Roseburg Land District.

PLAT

OF THE CLAIM OF

Chas. Bruneau, P. J. Jennings & R. J. Jennings

KNOWN AS THE

Helena Consolidated Quartz Mine

IN *Bohemia* MINING DISTRICT,
Douglas COUNTY, *Oregon*

Containing an Area of 7.113 Acres.

Scale of 300 Feet to the inch.
Variation 19° 30' East

SURVEYED May 9th 11th 1899 BY

Wm F. Briggs,
U.S. Deputy Mineral Surveyor,

*The Original Field Notes of the Mining Claim of
Chas. Bruneau, P. J. Jennings & R. J. Jennings
known as the*

Helena Consolidated Quartz Mine

from which this plat has been made under my direction & have been examined and approved, and are on file in this Office, and I hereby certify that they furnish such an accurate description of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof.

I further certify that five hundred dollars worth of labor has been expended or improvements made upon said Mining Claim by claimants or their grantors, and that said improvements consist of Tunnel N° 1, 517, 145' - 7450', Tunnel N° 2, 517, 337' - 3370', Tunnel N° 3, 517, 158' - 550', Disc. Cut, Tunnel N° 4, 710, 20' - 500' & Ore House # 50', Tunnel House for Tunnel N° 2 - 50', Blkth Shop # 25', that the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of expenditures upon any other claim.

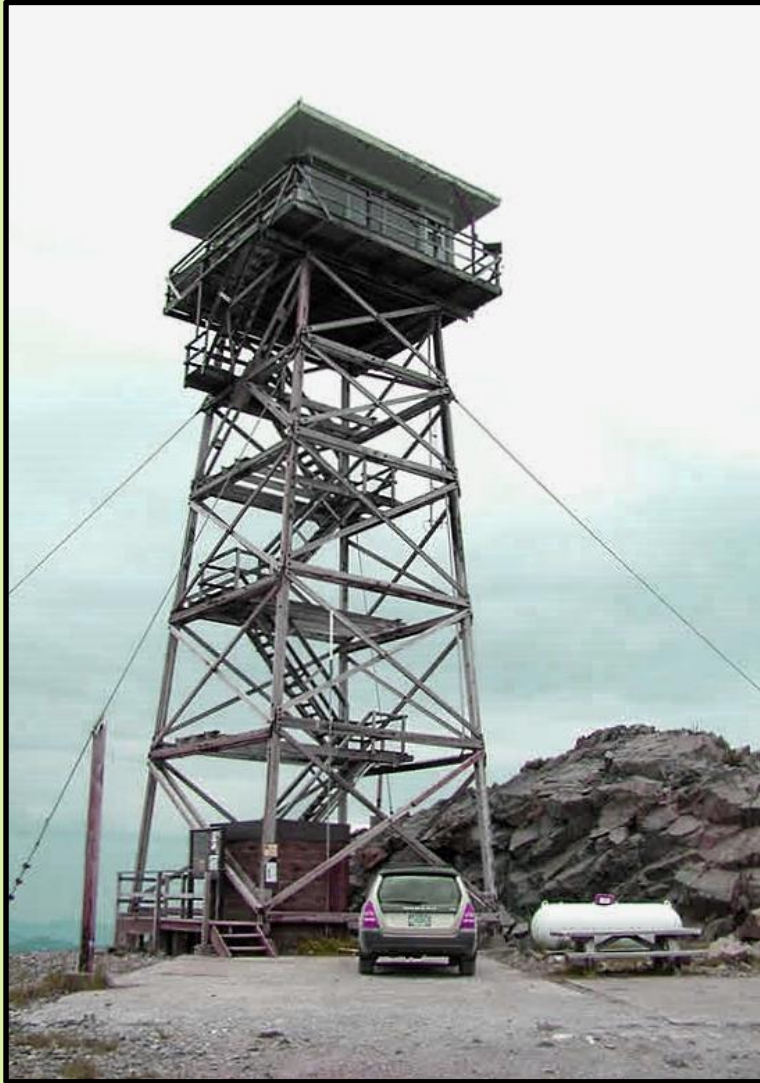
And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved.

U.S. Surveyor General's Office. *Robert A. Nabors*
Portland, Oregon, U.S. Surveyor General for
June 2 1899 *Oregon*

U.S. Deputy Mineral Surveyor William Francis Briggs 1863-1935

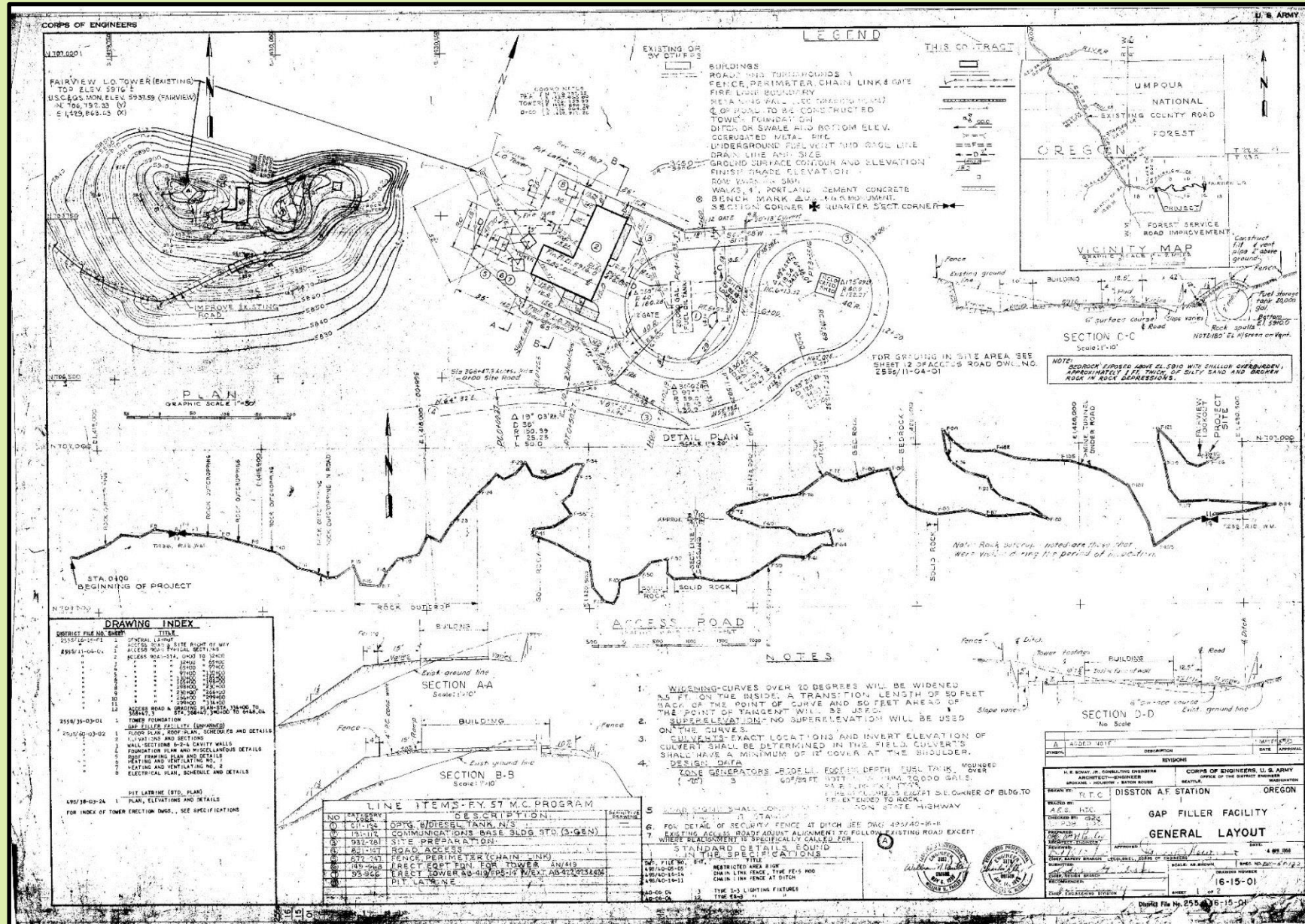
- Born in Canyonville Oregon.
- His family came across the Oregon Trail in 1851.
- His father William Fernando Briggs was the Douglas Co. Surveyor 1872-74 and 1876-78 and built the first sawmill in Douglas, Co.
- William Francis became a surveyor following his father.
- He became a U.S. Deputy Mineral Surveyor in 1886.
- He married Mary J. Briggs in 1887.
- He was appointed Douglas Co. Surveyor in 1887-88.
- Then elected again from 1888-1894 and again from 1900-1902.
- He surveyed more than 35 mining claims in Douglas and Josephine Co. from 1886-1902.
- He was named GLO Special Examiner of Surveys in 1892.

There have been three Forest Service Lookout Towers on Fairview Peak since 1919. Before then there was a flag pole.



A GLO Survey Crew
circa 1925

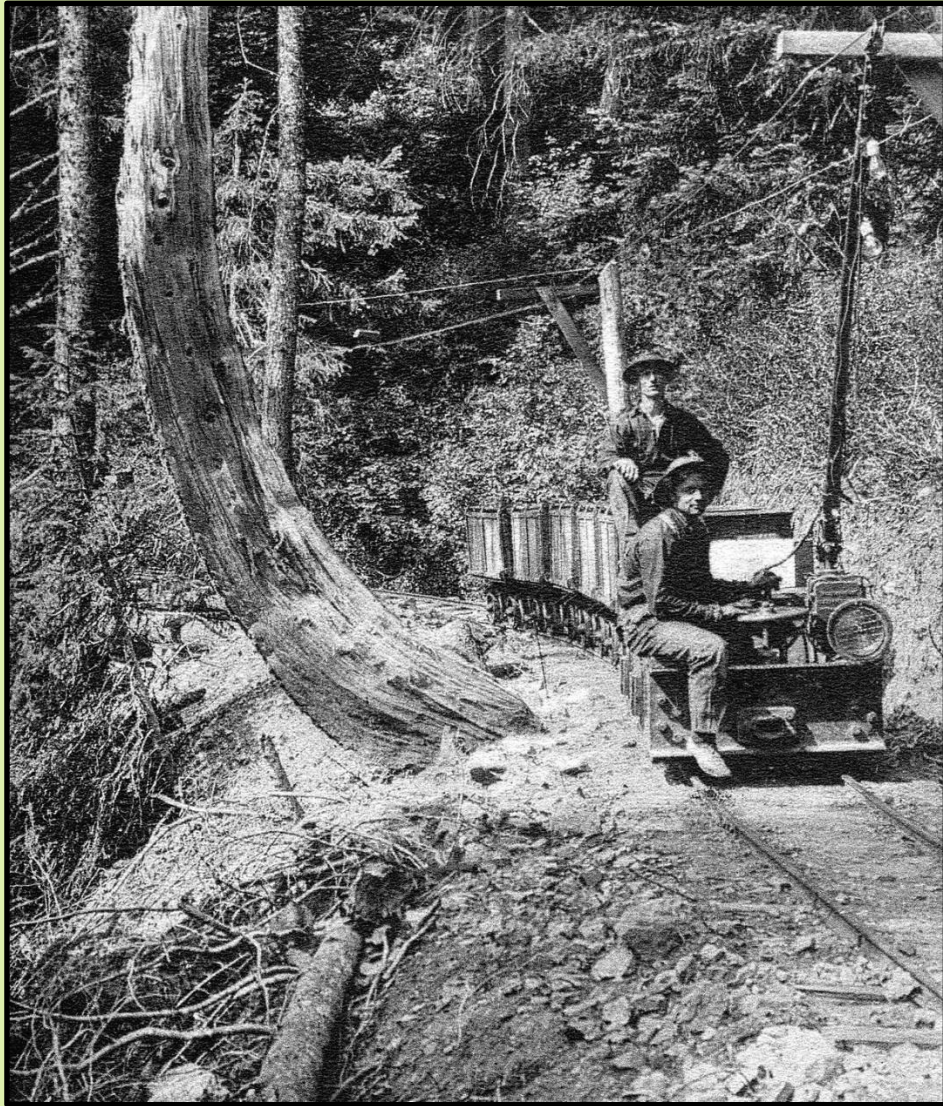
The U.S. Airforce leveled the top of Fairview Peak in 1958 for a GAP radar installation. It was removed 5 years later.



**Today the Bohemia Mining District is largely wilderness
complete with lots of bears and birds**



But it is rich with early surveying history and stories of discovering riches and disaster



QUESTIONS

It's a terribly rugged place...

Steep rocky roads

- not for cars
- 4x4 with clearance required
- late May thru October
- take a good map



The book - Surveying for Gold

- **Content in this slideshow is from a new book (historical reference atlas). Dedicated to the early GLO U.S. Deputy Mineral Surveyors who worked in the district between 1890 – 1946.**
- Every plat of record for the last 150 years
- Mine locations and geology
- How to stake and locate a claim
- What is a patent survey
- Mineral survey procedures
- Dated historical notes of each mineral survey
- Bio of each Deputy Mineral Surveyor –
Many became County Surveyors!
- Mine maps and history
- PLSS history
- Historical USGS Quads
- USGS and USC&GS leveling and horizontal control history
- Early trails and wagon roads
- Photos from then and now
- Stories of working in the district

- ✓ **The atlas is quite large (11" x 17") landscape view and heavy.**
- ✓ **More than 100 maps have been edited in Lr and Ps to make them more readable.**
- ✓ **Very limited edition. Only 500 will be printed.**