

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland 5, Oregon

PAISLEY LEAD-ZINC DEPOSIT

Lake County

Owners: Mr. Frank Boswell, Mr. and Mrs. Russell Cogar, Lakeview.

Area: Eight quartz claims. See attached map.

Location: The deposit is located about 6 miles south of the town of Paisley in Lake County, in the hills which rise abruptly from the valley floor west of Chewaucan marsh. The claims lie in secs. 1, 2, 11, 12, T. 34 S., R. 18 W. The property is reached over an exceedingly rough and steep road which connects with the highway at Paisley 4 1/2 miles from Lakeview. Travel is possible only during the dry season with vehicles having adequate power and clearance.

History: The Gaylord tunnel is reported by Frank Boswell to have been driven around 1900. The property was prospected and worked entirely for gold. Following the early work by Gaylord, ownership passed to a Mr. Brattain, and in turn to Stanley Gray who transferred his interest to Mr. Boswell in 1941. The property at present is idle. No records of production from this property are known. The various owners operated intermittently and on a small scale.

Topography: The deposit is situated in a range of rolling hills dissected by steep-sided canyons whose sides are sparsely covered with brush and trees. A fairly thick soil mantle covers most of the area. Rainfall averages 10 to 15 inches annually, with some light snowfall during the winter months. Water supply is limited to that furnished by a small spring and Brattain Creek which could probably supply sufficient domestic water for a small camp. The deposits are roughly 2000 feet above the Chewaucan valley floor which has an elevation of about 4000 feet.

Development: The Gaylord tunnel consisting of a crosscut 136 feet long with a drift totaling 65 feet; 2 shafts 70 feet deep, one 40-foot shaft and 5 shallower shafts plus several small open cuts constitute the exploration work. Two other tunnels driven years ago are now completely caved. A small cabin is the only building on the ground. The Gaylord tunnel is in fair condition, but timber in the shafts has rotted away. As mentioned above, the road is poor and needs regrading. Possibly a better route could be found down the hillside to the east.

Physiographic Setting: The rounded grass-covered hills southwest of Paisley within which the prospects are located are topographically different from the plateau west of Winter Rim. The Paisley Hills have a very irregular topography caused by differential erosion of a steeply dipping volcanic series. The lack of timber, except in sheltered coves, may be due to rainfall but the elevation is nearly the same as the well timbered plateaus to the west. Even though rainfall may be nearly as great, a different geologic structure is probably responsible for the water table conditions not as favorable for the growth of timber.

The Winter Rim series is composed of nearly horizontal flows, ash, and pumice beds that have been slightly arched to form Deadhorse Mountain. The Chewaucan River forms a general boundary between the two strikingly different topographies.

Stratigraphy and Geologic History: In the vicinity of the Paisley mineral deposit the formation is made up of basic lava flows and pyroclastics (agglomerate and tuff) and a minor amount of lighter colored, more acidic flows that may be rhyolitic. The series dips steeply, in some places it is nearly vertical. Faulting evidently accompanied the marked deformation and may have occurred intermittently for some time afterwards. The strike of the flows appears to trend northwestward.

The vein system, based on observations taken at a few exposures, includes the Gaylord vein which strikes approximately N. 55° W., the vein on the Gray Eagle No. 2 claim striking N. 35° W., and the veins on the Bald Eagle No. 1 and No. 2 claims which have a north-south strike. Some other veins may either have been overlooked or had such poor exposures that their attitudes could not be determined. All of the veins are nearly vertical. No maps, other than a sketch map of the claims prepared by Frank Boswell, are available. Until a detailed map of the area can be made and a more thorough study of the geology is undertaken, the relationship of these apparently divergent veins can not be determined accurately.

Following extrusion and deformation, a long period of erosion reduced the surface to the irregular topography characteristic of steeply dipping beds with differential resistance to erosion. A much younger series of lavas, the Winter Rim series, then poured out over this irregular surface and in many places covered it entirely. However, at Grays Butte, the Coyote Hills, and perhaps in the Paisley Hills, highland rose above the younger flows. If any of the Winter Rim series ever covered the Paisley Hills, they have since been stripped. Dissection, rather than stripping, would be the expected procedure in such an area of high relief and as remnants of the younger series were not seen, it seems more probable that they never covered the Paisley Hills.

The basins and tilted fault block mountains were formed, following extrusion of the Winter Rim series. Winter Rim was uplifted relative to the Summer Lake Basin, its present apparent displacement, plus more than a thousand feet equal to lake bed fill which drill records show.

The large fault that parallels Winter Rim apparently trends west of the Paisley Hills, perhaps parallel to the upper Chewaucan River. There is a

similar fault between the Paisley Hills and the Chewaucan Basin that resulted in a marked uplift of the hills and a renewed erosional cycle by the streams.

The older volcanic series is lithologically similar to volcanics exposed in the Coyote Hills, Rabbit Hills and Grays Butte. These are mapped by the U. S. Geological Survey (1932) as Clarno equivalents. Waring (1908:22) recognized beds along the Chewaucan River of this type and stated:

"The Coyote Hills and Rabbit Hills masses are placed in the older class because they are composed largely of a light-colored glassy or porphyritic rock that seems to have been disturbed and eroded before being surrounded by the basaltic flows. These lavas are much more acid than the surrounding basalt, and they are regarded tentatively as rhyolites, andesites, and trachytes. In three other places - near Lakeview, near the head of Chewaucan River, and between Silver and Summer lakes - similar rocks were found."

The Clarno is the youngest formation that is known to have been mineralized throughout central Oregon. The overlying John Day and younger formations do not show the effects of mineralization which fact also supports a Clarno age for the rock in the Paisley Hills.

The Winter Rim series is similar to flows exposed in Abert Rim and also capping Steens Mountain. As the flows at Steens Mountain overlie beds of Mascall age (upper Miocene), they are therefore younger than the Columbia River basalt and probably lower Pliocene in age. Faulting may have been initiated soon after the Pliocene extrusions but the greater uplift is undoubtedly Pleistocene. Some slight movements have occurred quite recently.

Mineralization: The older volcanics show the effect of hydrothermal alteration and marked mineralization along the fault zones. Sphalerite and galena are the two most abundant minerals. Pyrite, an undetermined silver mineral or minerals and some gold are also present. The mineralization is localized along steeply dipping fault zones which average 3 to 5 feet in

width. The faulting, which appears to be largely strike faulting, in large part preceded mineralization but some movement undoubtedly accompanied it.

Wall rock alteration appears to be chiefly caused by solutions that accompanied the metallic mineralizers. The ferromagnesian minerals within the wall rock itself have been altered to secondary minerals such as chlorite, and the feldspars altered largely to clay and freed silica. Alteration is widespread and hydrothermal solutions penetrated the wall rock for many feet.

A preliminary examination of the veins, of which the Gaylord vein was best exposed and assumed to be perhaps typical, shows a gangue largely composed of quartz with some calcite. The sphalerite and galena at some places are concentrated in lenses; at others the ore is more thoroughly disseminated. The quartz has been broken and intruded by younger quartz. Movement has occurred since mineralization but not recently enough to be displayed by surface dislocation. In the Gaylord tunnel, the most recent movement occurred in a clay gouge along the wall of the vein.

Sampling and Assays: Single channel samples were taken across the veins. In most places the mineralization appeared to be disseminated throughout the vein; in others it was somewhat concentrated and might possibly be mined selectively. Both walls of the Gaylord vein, and possibly all of the other veins, are slickensided and covered with clay gouge, a condition which might make any attempt at selective mining difficult.

A list of assays of the samples taken is attached. It would appear from the assay returns that the Gaylord vein is the most heavily mineralized. No final conclusions as to the relative value of the several veins should be made, however, on the basis of the few preliminary samples taken. Sulphides are present in sufficient quantity in some of the samples to warrant further

sampling and exploration. One object of such a program should be to determine the degree of mineralization at depth, since with the exception of the Gaylord tunnel, all of the samples taken were either at or near the surface.

Maps: A small claim map, based on a sketch provided by Frank Boswell, together with an index map of the area, and a sketch of the Gaylord tunnel are attached.

* * * * *

Report by: E. M. Baldwin
R. S. Mason

January 10, 1947



COPY

STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES

702 WOODLARK BUILDING
PORTLAND 5, OREGON

Sample submitted by Department

Analysis by:

Sample received on September 9, 1946

Analysis requested As reported

Lab. No.	Sample Marked	Results of Analysis				Remarks
		<u>Gold</u> (Au)	<u>Silver</u> (Ag)	<u>Lead</u> (Pb)	<u>Zinc</u> (Zn)	
P-5238	No. 1	0.05 oz.	6.10 oz.	12.49%	12.59%	Gaylord Tunnel - L. hand drift
P-5239	No. 2	0.04 oz.	0.80 oz.	0.55%	1.28%	Gaylord Tunnel - R. hand drift
P-5240	No. 3	0.04 oz.	Trace	Trace	Trace	Gaylord Tunnel - portal
P-5241	No. 4	0.08 oz.	18.50 oz.	14.29%	27.55%	Shaft and out above Gaylord Tunnel
P-5242		0.03 oz.	Trace	Trace	Trace	10' vein SE of Gaylord Tunnel
P-5243		0.015 oz.	Trace	Trace	Trace	Grab from 8' shaft - dump
P-5244		0.015 oz.	Trace	Trace	3.69%	6'6" chip from 8' shaft
P-5245		0.03 oz.	Trace	Trace	0.20%	4'9" chip at 9' shaft - Bald Hagle No. 1.
P-5246		0.10 oz.	Trace	- - -	- - -	Soil at watering trough - Bald Hagle No. 1
...

The Department did not participate in the taking of this sample
and assumes responsibility only for the analytical results.

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon
November 6, 1946

Sample submitted by: Department

Sample received on: September 9, 1946

Analysis requested: As reported

Analysis by:

L. L. NORLAND
Assayer

Lab. No.	Sample Marked	Results of Analysis				Remarks
		Gold (Au)	Silver (Ag)	Lead (Pb)	Zinc (Zn)	
P-5238	1	0.05 oz.	6.10 oz.	12.49%	12.53%	Gaylord Tunnel - (L.) Hand drift. (5'-11" CHANNEL SAMPLE)
P-5239	2	0.04 oz.	0.80 oz.	0.55%	1.28%	Gaylord Tunnel - (R.) Hand drift. (8'-2" CHANNEL SAMPLE)
P-5240	3	0.04 oz.	Trace	Trace	Trace	Gaylord Tunnel 4 th Portal (2'-3" CHANNEL SAMPLE)
P-5241	4	0.08 oz.	18.50 oz.	14.29%	27.55%	Shaft and cut above Gaylord Tunnel. (GRAB SAMPLE)
P-5242	5	0.03 oz.	Trace	Trace	Trace	6' vein S.E. of Gaylord Tunnel. (10' CHIP SAMPLE)
P-5243	6	0.015 oz.	Trace	Trace	Trace	Grab from 8' shaft - Dump. (GRAB SAMPLE NO. 3)
P-5244	7	0.015 oz.	Trace	Trace	3.69%	6'-6" chip from 8' shaft.
P-5245	8	0.03 oz.	Trace	Trace	0.20%	10' chip at 9' shaft - Bald Eagle No. 1. (4'-9" CHIP SAMPLE)
P-5246	9	0.10 oz.	Trace	---	---	Soil at watering trough - Bald Eagle No. 1. (GRAB SAMPLE)
***		*****				*****

GRAB SAMPLE NO 3, (6'-6" CHIP
SAMPLE FROM 8' SHAFT.) (SAME
AS P-5243)

PAISLEY LEAD - ZINC

Sample	Au	Ag	Pb	Zn	Total	Remarks
P-5238	\$ 1.75	\$ 5.52	\$20.23	\$20.67	\$48.17	Gaylord Tunnel - L. Hand drift.
P-5239	1.40	.72	.89	2.11	5.12	Gaylord Tunnel - R. Hand drift.
P-5240	1.40	---	---	---	1.40	Gaylord Tunnel - Portal.
P-5241	2.80	16.74	23.15	45.46	88.15	Shaft and cut above Gaylord Tunnel.
P-5246	3.50	---	---	---	3.50	Soil at watering trough - Bald Eagle #1.

Au @ \$35.00 oz.
 Ag @ 90.5¢ oz.
 Pb @ 8.1¢ lb.
 Zn @ 8.25¢ lb.



**STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES**

702 WOODLARK BUILDING
PORTLAND 5, OREGON

November 6, 1946

Sample submitted by R. S. Mason (D.O.G.A.M.I.)

Analysis by: _____

Sample received on September 9, 1946

Analysis requested As reported

Assayer

Lab. No.	Sample Marked	Results of Analysis				Remarks
		<u>Gold</u> (Au)	<u>Silver</u> (Ag)	<u>Lead</u> (Pb)	<u>Zinc</u> (Zn)	
P-5238		0.05 oz.	6.10 oz.	12.49%	12.53%	
P-5239		0.04 oz.	0.80 oz.	0.55%	1.28%	
P-5240		0.04 oz.	Trace	Trace	Trace	
P-5241		0.08 oz.	18.50 oz.	14.29%	27.55%	
P-5242		0.03 oz.	Trace	Trace	Trace	
P-5243		0.015 oz.	Trace	Trace	Trace	
P-5244		0.015 oz.	Trace	Trace	3.69%	
P-5245		0.03 oz.	Trace	Trace	0.20%	
P-5246		0.10 oz.	Trace	---	---	
***	****	*****	*****	*****	*****	*****

The Department did not participate in the taking of this sample
and assumes responsibility only for the analytical results.



**STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES**

702 WOODLARK BUILDING
PORTLAND 5, OREGON

November 6, 1946

Sample submitted by R. S. Mason (D.O.G.A.M.I.)

Analysis by: _____

Sample received on September 9, 1946

Analysis requested As reported

Assayer _____

Lab. No.	Sample Marked	Results of Analysis				Remarks
		Gold (Au)	Silver (Ag)	Lead (Pb)	Zinc (Zn)	
P-5238		0.05 os.	6.10 os.	12.49%	12.53%	
P-5239		0.04 os.	0.80 os.	0.55%	1.28%	
P-5240		0.04 os.	Trace	Trace	Trace	
P-5241		0.08 os.	18.50 os.	14.29%	27.55%	
P-5242		0.03 os.	Trace	Trace	Trace	
P-5243		0.015 os.	Trace	Trace	Trace	
P-5244		0.015 os.	Trace	Trace	3.69%	
P-5245		0.03 os.	Trace	Trace	0.20%	
P-5246		0.10 os.	Trace	- - -	- - -	
***	****	*****				*****

The Department did not participate in the taking of this sample
and assumes responsibility only for the analytical results.



**STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES**

702 WOODLARK BUILDING
PORTLAND 3, OREGON

November 6, 1946

Sample submitted by R. S. Mason (D.O.G.A.M.I.)

Analysis by: _____

Sample received on September 9, 1946

Analysis requested As reported

Assayer _____

Lab. No.	Sample Marked	Results of Analysis				Remarks
		<u>Gold</u> (Au)	<u>Silver</u> (Ag)	<u>Lead</u> (Pb)	<u>Zinc</u> (Zn)	
P-5238		0.05 oz.	6.10 oz.	12.49%	12.53%	
P-5239		0.04 oz.	0.80 oz.	0.55%	1.28%	
P-5240		0.04 oz.	Trace	Trace	Trace	
P-5241		0.08 oz.	18.50 oz.	14.29%	27.55%	
P-5242		0.03 oz.	Trace	Trace	Trace	
P-5243		0.015 oz.	Trace	Trace	Trace	
P-5244		0.015 oz.	Trace	Trace	3.69%	
P-5245		0.03 oz.	Trace	Trace	0.20%	
P-5246		0.10 oz.	Trace	---	---	
***	****	*****				*****

The Department did not participate in the taking of this sample
and assumes responsibility only for the analytical results.



**STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES**

702 WOODLARK BUILDING
PORTLAND 5, OREGON

August 23, 1947

Sample submitted by R. S. Mason (D.O.G.A.M.I.)

Sample received on July 8, 1947

Analysis requested As reported

Analysis by:

R. L. Hoagland
Assayer

Lab. No.	Sample Marked	Results of Analysis					Remarks
		Gold	Silver	Lead	Copper	Zinc	
P-6243	Gaylord tunnel	0.01 oz.	Trace	0.05%	Trace	0.5%	L. hand face footwall
P-6244	" "	0.06 oz.	0.60 oz.	0.40%	Trace	0.38%	#5 hanging wall 12" wide
P-6245	" "	0.04 oz.	2.00 oz.	2.10%	Trace	<u>4.65%</u>	" " 2 1/2" wide
P-6246	" "	0.01 oz.	0.20 oz.	0.25%	Trace	Trace	R.H. " " 2 1/2" wide
P-6247	" "	0.03 oz.	1.00 oz.	0.75%	Nil	Trace	R.H. footwall 2 1/2" wide
P-6248	" "	0.01 oz.	1.60 oz.	1.30%	Nil	0.4%	Gouge along footwall R.H. D.P.
P-6249	Bogwell's	0.015 oz.	Trace	Trace	Trace	Nil	Watering trough E. end
P-6450	Bogwell's	0.25 oz.	0.82 oz.	-----	-----	-----	Watering trough shaft W end
P-6451	"	0.015 oz.	Trace	-----	-----	-----	Watering trough shaft S end
P-6452	"	0.095 oz.	Trace	-----	-----	-----	70' shaft dump
P-6453	"	0.05 oz.	Trace	-----	-----	-----	6" vein in E side of shaft

SAMPLING AND ASSAYS:

SINCE CHANNEL SAMPLES WERE TAKEN ^{ACROSS THE VEINS.} ~~FROM WALL TO~~ ~~WALL~~ WHERE IN MOST PLACES THE ~~THE~~ MINERALIZATION APPEARED TO BE DISSEMINATED THROUGHOUT THE VEIN; IN OTHERS ~~PLACES~~ IT WAS SOMEWHAT CONCENTRATED AND MIGHT POSSIBLY BE MINED SELECTIVELY. BOTH WALLS OF THE GAYLORD VEIN, AND POSSIBLY ALL OF THE OTHER VEINS, ARE SLICKENSIDED AND COVERED WITH CLAY GOUGE, A CONDITION WHICH MIGHT MAKE ANY ATTEMPT AT SELECTIVE MINING ~~VERY~~ DIFFICULT.

A LIST OF ASSAYS OF THE SAMPLES TAKEN IS ATTACHED. ~~A THOUGH THE SAMPLING WAS I.T.W.~~ WOULD APPEAR FROM THE ~~RESULTS~~ ASSAY RETURNS THAT THE GAYLORD

ASSAY 2

~~THIS IS PROBABLY TRUE ALTHOUGH~~
NO ^{FINAL} CONCLUSIONS AS TO THE RELATIVE
VALUE OF THE ~~SEVERAL~~ VEINS
SHOULD BE MADE, HOWEVER, ON
THE BASIS OF THE FEW ^{PRELIMINARY} SAMPLES
TAKEN. ~~THE PRESENCE OF SULPHIDES~~
~~IN SUFFICIENT QUANTITIES~~ SULPHIDES
ARE PRESENT IN SUFFICIENT QUANTITY
IN SOME OF THE SAMPLES TO
WARRANT FURTHER SAMPLING,
AND EXPLORATION. ONE OBJECT
OF SUCH A PROGRAM SHOULD BE
TO DETERMINE THE DEGREE OF
MINERALIZATION AT DEPTH, SINCE
WITH THE EXCEPTION OF THE GAYLOD TUNNEL,
ALL OF THE SAMPLES TAKEN WERE
EITHER AT OR NEAR THE SURFACE.

PAISLEYS

MAPS: A SMALL CLIMATE MAP, BASED
ON A SKETCH PROVIDED BY
FRANK BOSWELL, TOGETHER WITH
AN INDEX MAP OF THE AREA,
AND A SKETCH OF THE
GROVE TUNNEL ARE ATTACHED.

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STATE DEPARTMENT OF GEOLOGY
AND MINERAL INDUSTRIES

702 WOODLARK BUILDING
PORTLAND 5, OREGON

Nov. 6, 1946

Sample submitted by R. S. Mason (DOGRMI)

Analysis by:

Sample received on Sept 9, 1946

L. D. Hoagland

Analysis requested As reported

Lab. No.	Sample Marked	Results of Analysis				Remarks
		<u>Cold</u> <u>(Au)</u>	<u>Silver</u> <u>(Ag)</u>	<u>Lead</u> <u>(Pb)</u>	<u>Zinc</u> <u>(Zn)</u>	
P-5238		0.050g	6.100g	12.49%	12.53%	GAYLORS TUNNEL L. HAND DUMP
P-5239		0.040g	0.800g	0.55%	1.28%	" " R. HAND DUMP
P-5240		0.040g	Trace	Trace	Trace	" " POSTAL
P-5241		0.080g	18.500g	14.29%	27.55%	SHOULDER OF HIGHWAY GAYLORS TUNNEL
P-5242		0.030g	Trace	Trace	Trace	10' VEIN S.E. OF GAYLORS TUNNEL
P-5243		0.0150g	Trace	Trace	Trace	GRAB FROM 8' SHAFT DUMP
P-5244		0.0150g	Trace	Trace	369%	3' 6" CHIP " " "
P-5245		0.030g	Trace	Trace	0.20%	4'-9" CHIP AT 9' SHAFT BALL BEARER No. 1
P-5246		0.1100g	Trace	—	—	SOIL AT WATERMILL TROUGH BALL BEARER #1

The Department did not participate in the taking of this sample and assumes responsibility only for the analytical results.

PAISLEY LEAD - ZINC

Sample	Au	Ag	Pb	Zn	Total	Remarks
P-5238	\$ 1.75	\$ 5.52	\$20.23	\$20.67	\$48.17	Gaylord Tunnel - L. Hand drift.
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P-5240	1.40	---	---	---	1.40	Gaylord Tunnel - Portal
P-5241	2.80	16.74	23.15	45.46	88.15	Shaft and cut above Gaylord Tunnel
P-5246	3.50	---	---	---	3.50	Soil at watering trough - Bald Eagle #1

Au @ \$35.00 oz.
 Ag @ 90.5¢ oz.
 Pb @ 8.1¢ lb.
 Zn @ 8.25¢ lb.

PAISLEY PB-2N

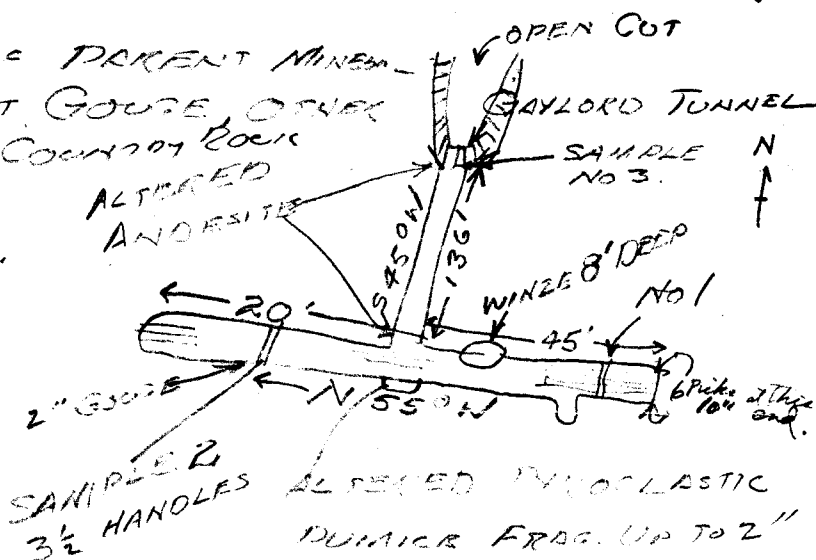
9/22/46

CHAS. GAYLORD ^{PAISLEY} TUNNEL 136' DRIVEN ABOUT 50 YRS AGO.

✓ SAMPLE NO 1 A G-PICK HANDLES WIDE VERTICAL SEAM CHANNEL SAMPLE ACROSS BACK RIGHT HAND DRIFT 20' FROM FACE

✓ P-5239 SAMPLE NO 2 MOST OF PARENT MINERAL G QTS LIES NEAREST GOUGE OTHER SIDE FAULT BRECCIA COMPOSED OF

✓ P-5240 SAMPLE NOS AT PORTAL 2.7" WIDE



T345 R18E

ORIGINALLY LOCATED ABOUT 50 YRS AGO BY GAYLORD OWNERS: FRANK BOSWELL - BOX 1317 LAKEVIEW SINCE 1941 MRS. ESTHER W. COGAR - " MR. RUSSEL COGAR

✓ P-5241 SAMPLE NO 4. OPEN TRENCH AND ~~CUT~~ ^{SINKET} ON HILLSIDE ABOVE GAYLORD TUNNEL IN LINE WITH X-CUT GRAB SAMPLE

✓ P-5242 SAMPLE NO 5 - PROJECT S55E FROM GAYLORD TUNNEL - 10" VEIN SAMPLED. OUTCROP ON NW SIDE OF GULLY

40' SINKET ON VEIN ABOUT 500' NE OF TUNNEL

PAISLEY - P. 2

- ✓ P-5243 SAMPLE NO. 6 8' ^{SHAFT} SAMPLE OF QUARTZ
- ✓ P-5244 SAMPLE NO 7 CHIP SAMPLE ACROSS 6" FACE OF 8' SURET CHECK WITH NO 6
- ✓ P-5245 SAMPLE NO 8 ON BALD EAGLE NO 1 TRENCH & 9' SURET VEIN STRIKE N-S, 4-9" FT
- ✓ P-5246 SAMPLE NO 9. AT WATERING TROUGH. BALD EAGLE #1 SAMPLE OF QUARTZ.

BALD EAGLE NO 2, 5' VEIN STRIKE N-S - VERTICAL
HYDRO THERMALLY ALTERED ANDESITE ON BOTH WALLS?
ABUNDANT DRUSE. 70' VERTICAL SHAFT
PYRITE XTALS

PRESENT ROAD NO GOOD - 6 MILES. CABIN
2000' ABOVE VALLEY. NEW ROAD ^{MIGHT} ~~COULD BE~~
BUILT ON BETTER GRADE TO E. NO TIMBER.
NUMEROUS GOOD ALL YEAR SPRINGS. EARLY WORK

TILLER BRO - BURNS - 10 TON BALL MILL IN
SARGE

BRATTIN AFTER GAYLORD - FOR A ONLY.

STEWART GRAY GAVE INTEREST TO BOSWELL CIRCA 1941

~~SEMP OF BANK TO~~ ESTER L. ~~ALAN COGAR~~
Box 727 ~~LOAN~~

PAISLEY LEAD-ZINC DEPOSIT

LAKE COUNTY

Owners:

Mr. Frank Boswell, Box 1317, Lakeview; Mr. and Mrs. Russell Cogar, Box 727, Lakeview.

Area:

8 quartz claims. See attached map.

Location:

The deposit is located about 6 miles south of the town of Paisley in Lake County, in the hills which rise abruptly from the valley floor west of Chewaucan marsh. The claims lie in secs. 1, 2, 11, 12, T. 34 S., R. 18 E. The property is reached over an exceedingly rough and steep road which connects with the highway at Paisley 45 miles from Lakeview. Travel is possible only during the dry season with vehicles having adequate power and clearance.

History:

The Gaylord tunnel is reported by Frank Boswell to have been driven around 1900. The property was prospected and worked entirely for gold. Following the early work by Gaylord, ownership passed to a Mr. Brattain, and in turn to Stanley Gray who ^{Transferred} ~~gave~~ interest to Mr. Boswell in 1941. The property at present is idle. No records of production from this property are known. The various owners operated intermittently and on a small scale.

Topography:

The deposit is situated in a range of rolling hills dissected by steep-sided canyons whose sides are sparsely covered with brush and trees. A fairly thick soil mantle covers most of the area. Rainfall averages 10 to 15 inches annually, with some light snowfall during the winter months. Water supply is limited to that furnished by a small spring and Brattain Creek which could probably supply sufficient domestic water for a small camp. The deposits are roughly 2000 feet above the ^{Chewanee} valley floor which has an elevation of about 4000 feet.

Development:

The Gaylord tunnel consisting of a crosscut 136 feet long and a drift totaling 65 feet; 2 shafts 70' deep plus several smaller cuts constitute the exploration work. A small cabin is the only building on the ground. The Gaylord tunnel is in fair condition, but timber in the shafts has rotted away. As mentioned above, the road is poor and needs regrading. Possibly a better route could be found down the hillside to the east.

WITH
ONE 40' SHAFT AND 5 SHALLOW
SHAFTS
TWO OTHER TUNNELS DRIVEN YEARS AGO
ARE
NOW
COMPLETELY
CAVEED

ITINERARY

SALINE TRIP (DSM - FMO)

18
16TH. DRIVE TO BURNS - SEE DR. ATWOOD RE OIL WELL IN SE 1/4 SEC 9, T24S, R32E. SEE MRS CARICO - HOSPITAL (SUPT)

19
17TH TO ALKALI LAKE - CHECK SALT POOL EXCAVATION COLLECT MUDS - DRILL WELL E. SIDE OF LAKE.

20
18TH TO ALBERT LAKE - COLLECT MUDS - TO FLAG-STAFF LAKE - CHECK BORAX - TO LAKEVIEW (?)

21
19TH SEE H.A. UTELY. SEE BORT K. SNYDER RE ¹⁰⁵¹ ²⁰¹ ^{WILCOX SUBC - 592 OFFICE - (214 HOME)} ^{- FRANK BOSWELL} PRS. ZN NEAR PAISLEY - COLLECT SUMMER LAKE MUDS. - TO KLAMATH FALLS. - (CALL F.W.L. FROM LAKEVIEW) (CHECK GEN DEL P.O.)

22
20TH KLAMATH FALLS - SEE C.M. HOWARD, SOIL CHEM RE PHOSPHATE (ORE. OR CALIF.?) SEE EDITH McLEOD 413 HIGH ST. K.F. RE URANIUM FROM E. OF TULE LAKE (CHECK WITH F.W.L.?)

CRESCENT 1100 TUE BENT
PRINEMULA

SALINE TRIP

LV PORT 16TH - TO K. FALLS

~~17TH - INSPECT PHOSPHATE AT K. FALLS.~~

~~" " PB-ZN AT LAKEVIEW~~

~~STAY NIGHT AT LAKEVIEW.~~

18TH - INSPECT BORAX AT FLAGSTAFF LAKE.

DRIVE TO ALKALI LAKE

19. INSPECT

16 - TO BURNS - SE $\frac{1}{4}$ SEC @ T29S R32E
OIL WELL - DR ATWOOD (?)
(IS HE BRINGING IN WELL)

17TH - TO ALKALI LAKE

18TH - TO FLAGSTAFF LAKE
(WARREN LAIRD'S RANCH - (JOE BANASCO WILL SHOW)

19TH TO LAKEVIEW - SEE H.A. UTLEY (FAWELL-UTLEY REALTY CO.)

20TH BURT K. SNYDER, LAKEVIEW (PAISLEY PB-ZN)

TO K. FALLS - SEE SON-AGENT - PHOSPHATE
150 SAMPLES.

MRS BOITH McLEOD
413 WEN ST K FALLS
URANIUM - FULL LAB

PAUL BEAL
DRINEVILLE
MINERAL SPRING.

CALL FWL
FROM LAKEVIEW

SALINE TRIP

BULK SAMPLES TO GET
OBSIDIAN FROM GLASS BUTTES
CINDERS FROM S. OF BEND.
PUMICE LUMPS AT BEAVER MARSH
DATONITE - K. FALLS

PEOPLE TO SEE

DR. ATWOOD - BURNS

JOE BONASCO - FLAGSTAFF LAKE (RANCH OF WARREN LAIRD'S)

H. A. UTELY - LAKEVIEW

FRANK BOSWELL " (BURT K. SNYDER)

C. M. HOWARD - K. FALLS

EDITH Mc LEOD - 413 HIGH ST. K. FALLS

PEARL BEAL - PRINEVILLE.

H. W. CHRISTIE - CHEMULT.

Physiographic Setting:

The rounded grass-covered hills southwest of Paisley within which the prospects are located are topographically different from the plateau west of Winter Rim. The Paisley Hills have a very irregular topography caused by differential erosion of a steeply dipping volcanic series. The lack of timber, except in sheltered coves, may be due to rainfall but the ^elevation is nearly the same as the well timbered plateaus to the west. Even though rainfall may be nearly as great, a different geologic structure is probably responsible for the water table conditions not as favorable for the growth of timber.

The Winter Rim series is composed of nearly horizontal flows, ash, and pumice beds that have been slightly arched to form Deadhorse Mountain. The Chewaucan River forms a general boundary between the two strikingly different topographies.

Stratigraphy and Geologic History:

In the vicinity of the Paisley mineral deposit the formation is made up of basic lava flows and pyroclastics (agglomerate and tuff) and a minor amount of lighter colored, more acidic flows that may be rhyolitic. The series dips steeply, in some places it is nearly vertical. Faulting evidently accompanied the marked deformation and may have occurred intermittently for some time afterwards. ~~The faults appear to be generally parallel to~~ The strike of the flows ^{appears} trend *northwestward*

The vein system, based on observations taken at a few exposures, includes the Gaylord vein which strikes approximately N. 55° W., ~~the~~ vein on the Gray Eagle No. 2 claim striking N. 35° W., and the veins on

the Bald Eagle No. 1 and No. 2 claims which have a north-south strike. Some other veins may either have been overlooked or had such poor exposures that their attitudes could not be determined. All of the veins are nearly vertical. No maps, other than a sketch map of the claims prepared by Frank Boswell, are available. Until a detailed map of the area can be made and a more thorough study of the geology is undertaken, the relationship of these apparently divergent veins can not be determined accurately.

Following extrusion and deformation, a long period of erosion reduced the surface to the irregular topography characteristic of steeply dipping beds with differential resistance to erosion. A much younger series of lavas, the Winter Rim series, then poured out over this irregular surface and in many places covered it entirely. However, at Grays Butte, the Coyote Hills, and perhaps in the Paisley Hills, highland rose above the younger flows. If any of the Winter Rim series ever covered the Paisley Hills, they have since been stripped. Dissection, rather than stripping, would be the expected procedure in such an area of high relief and as remnants of the younger series ^{were} ~~was~~ not seen, it seems more probable that they never covered the Paisley Hills.

THE BASINS AND TILTED FAULT BLOCK MTS WERE FORMED

Following extrusion of the Winter Rim series, ~~the basins and tilted fault block mountains were formed.~~ Winter Rim was uplifted relative to the Summer Lake Basin, its present apparent displacement, plus more than a thousand feet equal to lake bed fill which drill records show.



The large fault that parallels Winter Rim apparently trends west of the Paisley Hills, perhaps parallel to the upper Chewaucan River. There is a similar fault between the Paisley Hills and the Chewaucan Basin that resulted in a marked uplift of the hills and a renewed erosional cycle by the streams.

The older volcanic series is lithologically similar to volcanics exposed in the Coyote Hills, ~~and~~ Rabbit Hills and Grays Butte. These are mapped by the U S. Geological Survey ⁽¹⁹³²⁾ as Clarno equivalents. Waring (1908:22) recognized beds along the Chewaucan river of this type and stated:

The Coyote Hills and Rabbit Hills masses are placed in the older class because they are composed largely of a light-colored glassy or porphyritic rock that seems to have been disturbed and eroded before being surrounded by the basaltic flows. The lavas are much more acid than the surrounding basalt, and they are regarded tentatively as rhyolites, andesites, and trachytes. In three other places-near Lakeview, near the head of Chewaucan River, and between Silver and Summer lakes-similar rocks were found.

The Clarno is the youngest formation that is known to have been mineralized throughout central Oregon. The overlying John Day and younger formations do not show the effects of mineralization which fact also supports a Clarno age for the rock in the Paisley Hills.

The Winter Rim series is similar to flows exposed in Abert Rim and also capping Steens Mountain. As the ~~latter~~ flows at Steens Mountain ^(Upper Miocene) rest upon overlie beds of Mascall age, they are therefore younger than the Columbia River basalt and probably lower Pliocene in age. Faulting may have been initiated soon after the Pliocene extrusions but the greater uplift is undoubtedly Pleistocene. Some slight movements have occurred quite recently.

Mineralization:

The older volcanics show the effect of hydrothermal alteration and marked mineralization along the fault zones. Sphalerite and galena are the two most abundant minerals. Pyrite, an undetermined silver mineral or minerals and some gold are also present. The mineralization is localized along steeply dipping fault zones which average 3 to 5 feet in width. The faulting, which appears to be largely strike faulting, in large part

preceded mineralization but some movement undoubtedly accompanied it.

Wall rock alteration appears to be chiefly caused by solutions that accompanied the metallic mineralizers. The ferromagnesian minerals within the wallrock itself have been altered to secondary minerals such as chlorite, and the feldspars altered largely to clay and freed silica. Alteration is widespread and hydrothermal solutions penetrated the wall rock for many feet.

A preliminary examination of the veins, of which the Gaylord vein was best exposed and assumed to be perhaps typical, shows a gangue largely composed of quartz with some calcite. The sphalerite and galena at some places are concentrated in lenses ~~that could be selectively mined;~~ at others the ore is more thoroughly disseminated. The quartz has been broken and intruded by younger quartz. Movement has occurred since mineralization but not recently enough to be displayed by surface dislocation. In the Gaylord tunnel, the most recent movement occurred in a clay gouge along the wall of the vein.

Sampling:

~~Single channel samples were taken from wall to wall across exposures of the various veins on the assumption that the dissemination of the ore ^{THROUGHOUT} within the vein material ^{IS} ~~was~~ such that no selective mining could be practiced. Both walls of the vein(s) are ~~were~~ slickensided and covered with clay gouge. No vein material could be left unmined without danger of sloughing.~~

(SEE NEXT PAGE)

TRACY-FOSTER

Wednesday - Sept. 8. p.m. - Enroute
Grants Pass to Lakeview.

Thursday - With Don Tracy
to look over his new mining
claims in the area to the
southwest of Paisley. Toured
the area of the old Baylord
property and collected samples
at other locations where
mineralization has been found.

ZG-158 Bimbo 8+9

drill cut in altered andesite with
blobs of greenish chlorite, calcite,
& siderite disseminated over 20'
grab sample of several lumps
Au, Ag, Cu.

ZG-159

grab sample from a mineralized
dike-like mass of tuff breccia -
trend N20° to N30° W. tuff is bleached
iron stained with heavy goossan
in some places. (Could this be a
fissure source of ash flow tuff?)
dike or altered zone is about
20' wide and stands 10' above
surface - assay for Hg.

from Survey #1

ZG-160 Mineralized zone
1 to 2' wide adjacent to fine
grained basaltic dikes that trend
N50°E - grab sample assay for Au, Ag,
Pb, Zn

ZG-161 - Cracker Jack #3

Gossan material from mineralized
Breccia zone of intense silicification
20' wide - this is south of
the intrusive (?) hornblende, biotite
diorite. epidote on fractures in
many places

ZG-162

grab sample from big slide area
assay for Pb, Au, Ag.
