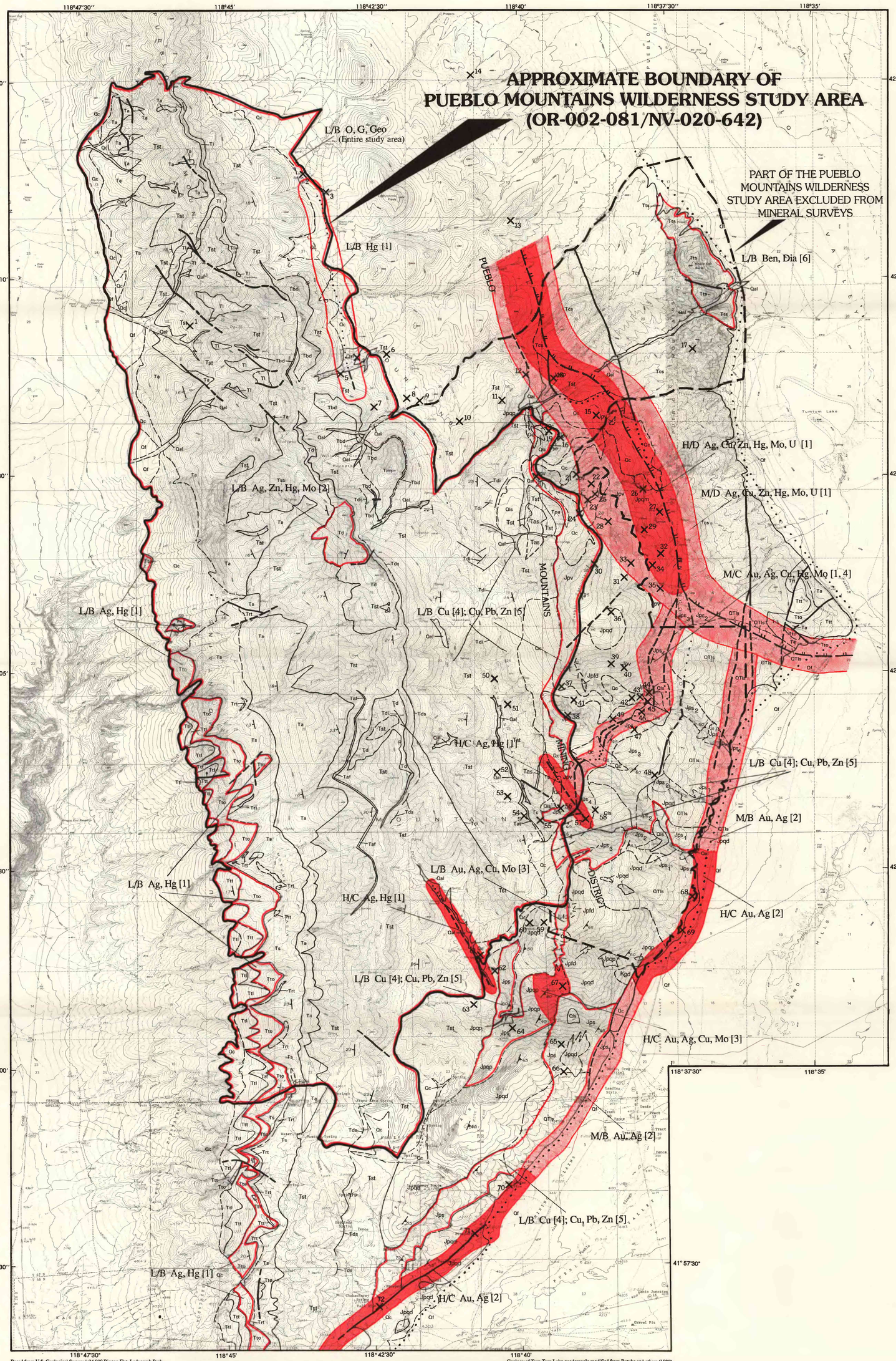


Based from U.S. Geological Survey 1:24,000 Rincon Flat, Ladycomb Peak, Turn Turn Lake, Oregon End Table, Van Horn Basin, 1981; Ashdown 1NW and 2NE preliminary sheets.

SCALE 1:48 000

1 ½ 0 1 2 3 4 5 MILES

1 .5 0 1 2 3 4 5 KILOMETERS

NATIONAL GEODETIC VERTICAL DATUM OF 1929

CONTOUR INTERVALS 20 AND 40 FEET

Geology of Turn Turn Lake quadrangle modified from Rytuba and others (1982). Geology mapped by Dean B. Vander Meulen in 1983, and Robert C. Robacker, Dean B. Vander Meulen, James J. Rytuba, Michael J. Grubensky, and Katherine J. Tegtmeyer in 1984.

17½°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1987

OREGON
AREA OF MAP

EXPLANATION

- Area with high mineral resource potential
- Area with moderate mineral resource potential
- Area with low mineral resource potential

Commodities

Ag	Silver
Au	Gold
Cu	Copper
Hg	Mercury
Mo	Molybdenum
Pb	Lead
U	Uranium
Zn	Zinc
Ben	Bentonite
Dia	Diatomite
O,G	Oil and Gas
Geo	Geothermal resources

[ ] Types of deposits

1 Hydrothermal caldera-related deposits
2 Epithermal vein deposits
3 Porphyry deposits
4 Base- and precious-metal deposits
5 Volcanogenic massive sulfide deposits
6 Sedimentary lake deposits

LEVELS OF RESOURCE POTENTIAL

H High mineral resource potential
M Moderate mineral resource potential
L Low mineral resource potential
U Unknown mineral resource potential

LEVELS OF CERTAINTY

A Available data not adequate
B Data indicate geologic environment, and suggest level of resource potential
C Data indicate geologic environment, indicate resource potential, but do not establish activity of resource-forming processes
D Data define geologic environment and level of resource potential and indicate activity of resource-forming processes in all or part of area

LEVEL OF RESOURCE POTENTIAL	A	B	C	D
UNKNOWN POTENTIAL	U/A	H/B HIGH POTENTIAL	H/C HIGH POTENTIAL	H/D HIGH POTENTIAL
		M/B MODERATE POTENTIAL	M/C MODERATE POTENTIAL	M/D MODERATE POTENTIAL
		L/B LOW POTENTIAL	L/C LOW POTENTIAL	L/D LOW POTENTIAL
				N/D NO POTENTIAL

LEVEL OF CERTAINTY

DESCRIPTION OF MAP UNITS

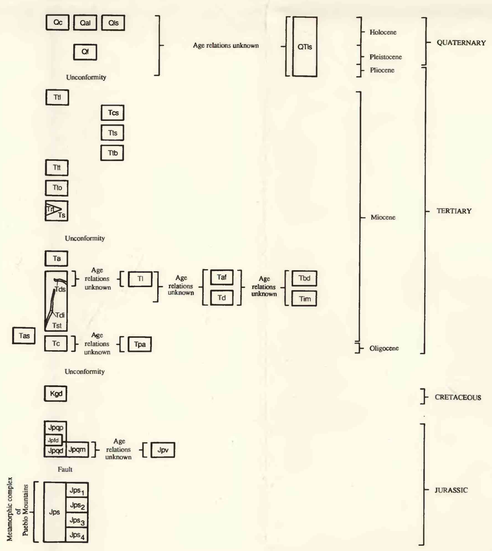
Qc **Colluvium (Holocene)**
Qal **Alluvium (Holocene)**
Qls **Landslide deposits (Holocene)**
Qf **Alluvial fan deposits (Holocene and Pleistocene)**
QTls **Landslide deposits (Holocene to Pliocene)**
Ttl **Lithic tuff (Miocene)**—Tan to brown, rhyolitic ash-flow tuff
Tcs **Conglomerate and sandstone (Miocene)**—Weakly consolidated, massive, gray to grayish-brown conglomerate and sandstone
Tts **Tuffaceous sedimentary rocks (Miocene)**—White to tan tuffaceous sandstone, siltstone, and claystone interbedded with massive beds of bentonite as much as 45 ft thick
Ttb **Tuff breccia (Miocene)**—Green to grayish-green breccia
Ttt **Tuff of Trout Creek Mountains (Miocene)**—Unwelded to densely welded comenditic ash-flow tuff
Tto **Tuff of Oregon Canyon (Miocene)**—Unwelded to densely welded light-bluish-green to white comenditic tuff
Trt **Rhyolite tuff (Miocene)**—Poorly welded, pale-red to light-brown ash-flow tuff
Ts **Sedimentary rocks (Miocene)**—White to tan tuffaceous sandstone and siltstone
Ta **Andesite and quartz latite flows (Miocene)**—Dark-reddish-brown to dark-gray iron-rich andesite and quartz latite flows
Tst **Steens Basalt (Miocene)**—Porphyritic and aphyric, gray to black basalt flows and very minor interflow sedimentary rocks
Tdi **Dikes (Miocene)**—Basaltic dikes and minor sills inferred to be feeders for the Steens Basalt
Tds **Diabase sill (Miocene)**—Medium-grained greenish-gray diabase sill
Tl **Latite flow (Miocene)**—Platy, light-gray, porphyritic latite flow
Taf **Air-fall tuff (Miocene)**—Unwelded to poorly welded, white to gray air-fall tuff; grades vertically into a black vitrophyre
Td **Dacite flows (Miocene)**—Dark-gray to red or reddish-gray, banded dacite flows and flow breccias
Tbd **Biotite dacite (Miocene)**—Dark-gray, fine-grained dacitic flows and associated feeder dikes and sills
Tim **Mafic intrusion (Miocene)**—Fine- to coarse-grained, dark-greenish gray to reddish-brown gabbroic laccolith
Tas **Ashdown Tuff (Miocene and Oligocene)**—Nonwelded to partly welded ash-flow tuff
Tc **Conglomerate (Miocene and Oligocene)**—Interbedded fluviatile conglomerate, sandstone, and very minor siltstone
Tpa **Porphyritic andesite flows (Miocene and Oligocene)**—One or possibly several gray, flow-folded, platy andesite flows
Kgd **Granodiorite (Cretaceous?)**—Leucocratic, foliated, equigranular, fine-grained biotite granodiorite
Metamorphic complex of Pueblo Mountains (Jurassic)—Consists of:
Jpqp **Quartz porphyry**—Metamorphosed, leucocratic, quartz-albite porphyry
Jpfd **Felsic dikes**—Leucocratic, texturally variable dikes, dike swarms, and small intrusive masses
Jpqd **Quartz diorite**—Fine- to medium-grained, equigranular to porphyritic, quartz diorite and minor granodiorite, tonalite, and diorite
Jpqm **Quartz monzonite**—Massive equigranular, medium-grained, hornblende quartz monzonite
Jpv **Volcanic rocks**—A thick sequence of interbedded, metamorphosed, intermediate to felsic, massive volcanic flows and lesser amounts of flow breccia, tuff, agglomerate, and sedimentary rocks
Jps **Schist**—Moderately to strongly foliated, green, gray, and tan schist and mylonitic schist. Protoliths include lava flows, tuff, and volcanogenic sedimentary rocks. Locally divided into:
Jps_1 **Subunit 1**—Dominantly green to dark-green plagioclase-chlorite-epidote schist
Jps_2 **Subunit 2**—Dominantly bluish-green plagioclase-chlorite-white mica schist
Jps_3 **Subunit 3**—Dominantly brown plagioclase-white mica schist
Jps_4 **Subunit 4**—Dominantly dark-green plagioclase-chlorite schist

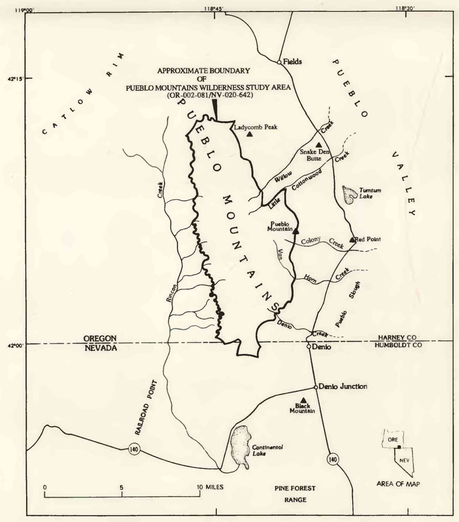
Contact—Dashed where approximate; dotted where concealed
Fault—Dashed where approximate; dotted where concealed
Approximate margin of Pueblo Mountains caldera
Strike and dip of bedding
Strike and dip of foliation
Mine, prospect, or mining claim

Mines, prospects, or mining claims

1. Black Dog group
2. B and H claim group
3. Red Oxide group
4. Black Beauty prospect
5. Raven prospect
6. King Coal prospect
7. Freeman Dorsey prospect
8. Star prospect
9. Cash-Willow Creek group
10. Stumblebum prospect
11. Star of the West prospect
12. Glow 1 and 2 prospect
13. Chukar group
14. Victor group
15. Arizona group
16. Arizona Copper group
17. White House placer
18. Quail prospect
19. Irenes group
20. Lone Star mine
21. King Copper prospect
22. Whale prospect
23. Big Bad John-Willies group
24. Unnamed prospect
25. Pueblo group (placer)
26. Pueblo (Farnham) group
27. Grace mine
28. Blue Bird group
29. Unnamed prospect
30. Ace group
31. Mohawk claim
32. Shamrock prospect
33. Robert Smith prospect
34. Unnamed prospect
35. Climax prospect
36. Unnamed prospect
37. Pueblo claim
38. Bonanza claim
39. Ethel May prospect
40. Lucky Dane claims
41. Colony Creek prospect
42. Viqueen prospect
43. Mammoth No. 1 prospect
44. Coyote Rob prospect
45. Monolith prospect
46. Coyote Roy prospect
47. Keystone prospect
48. Lone Claim prospect
49. Viking claim
50. Pueblo prospect
51. Unnamed prospect
52. F & G claims
53. White Elephant claim
54. Golden No. 1 claim
55. Blue Jay claim
56. Van Horn claim
57. Two Friends claim
58. Pearl mine
59. Unnamed prospect
60. Missouri group
61. Denio Basin group
62. Unnamed prospect
63. Gray Eagle prospect
64. Unnamed prospect
65. Unnamed prospect
66. Denio Mtn. Iron prospect
67. Sulfide group
68. Unnamed prospect
69. Unnamed prospect
70. Cowden mine
71. Unnamed prospect
72. Hall mine

CORRELATION OF MAP UNITS





INDEX MAP

MINERAL RESOURCE POTENTIAL MAP OF THE PUEBLO MOUNTAINS WILDERNESS STUDY AREA, HARNEY COUNTY, OREGON, AND HUMBOLDT COUNTY, NEVADA