5430 0042

(188)

Item 42

Taken from:

.42 Minerals

Inventory and Analysis of the Walker Planning Unit

Carson City District
Nevada and California

by

J. R. Gilbert
1976

see Lyon County - general file, Item 13 for general preface remarks.

Sheet 5 of NW-31-7

Anaconda Weed Heights Copper Mine
copper

Speculative Area NW-31-9

Bluestone Mine
copper

Ludwig Mine
copper; gypsum

Douglas Hill Mine
copper

Casting Copper Mine
copper

Malachite Mine
copper

Mason Valley Mine
copper

McConnell Mine
copper

Western Nevada Mine
copper

Speculative Area NW-31-7

T13N

T12N

R24E

R25E

WELLINGTON QUADRANGLE
NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)

YERINGTON QUADRANGLE
NEVADA
15 MINUTE SERIES (TOPOGRAPHIC)

188
Item 42

NW-31-7
(Cu, Fe, Au,
Ag, gyp, W,
Ti, Mo, U)

(and 35)

AREA: SINGATSE RANGE (Part of Yerington District)
BUCKSKIN MOUNTAINS (Buckskin District)
(copper, iron, gold, silver, gypsum, tungsten, titanium, molybdenum, uranium)

T. 12-14 N., R. 23-25 E.
Lyon and Douglas Counties, Nevada
U.S.G.S. Como, Wabuska, Yerington and Wellington, Nevada quadrangles 1:62,500

GENERAL BACKGROUND

The literature defines the Yerington mining district as the area covering the entire Singatse Range south to Wilson Canyon, the buttes in Mason Valley,and the northwestern Wassuk Range. The Buckskin district covers the hills at the north end of Smith Valley called the Buckskin Range. The Singatse Range-Buckskin Mountains area encompasses all the Buckskin district and that portion of the Yerington district which lies in the Singatse Range west of Yerington.

The area is noted primarily for production of copper and iron. Other minerals which have been extracted in the past include placer gold, silver, iron, gypsum, tungsten, titanium, molybdenum, uranium, pyrophyllite, and turquoise gem.

Mining dates back to 1865, but operations did not become significant until after 1912 when oxidized copper ore was mined for copper sulfate which was used in the amalgamation of silver from the Comstock Lode in Virginia City. Copper production continued intermittently until the 1950's when two large open-pit mines were developed, one for copper at Weed Heights and the other for iron at the north end of the Buckskin Range. These mines were active through the 1960's accounting for significant production from Lyon and Douglas counties. In 1971 the open-pit iron mines closed down, but the Weed Heights copper pit is still in production.

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GEOLOGY AND TECHNICAL DATA

Moore (1969) describes the geology of the Yerington district as follows:

> "The oldest rocks of the district are metamorphosed Triassic andesite, soda rhyolite-felsite, and limestone, with subordinate quartzite, shale, and gypsum (Knopf, 1918). They aggregate at least 8,000 feet in thickness, of which volcanic rock makes up 3,200 feet. The Triassic rocks were intruded, probably during the Cretaceous Period by granodiorite, quartz monzonite, and quartz monzonite porphyry. The intruding granitic rock intensely metamorphosed the Triassic rocks, and metalliferous solutions probably related to it moved along faults and favorable zones, producing the mineral deposits. ...The ore bodies...are contact-metamorphic replacement deposits in limy sedimentary rocks, and porphyry copper deposits in plutonic rocks."

The principal mines included in area NW-31-7 are described as follows:

The Bluestone mine located in SW 1/4 Section 30, T. 13 N., R. 25 E., is the oldest mine in the Yerington district. Copper ore occurs in garnetized limestone which lies in fault contact with granodiorite. Chalcopyrite is disseminated through a gangue composed mainly of epidote which has replaced much of the garnet. Although the mine was active at the turn of the century no production records were made with the State. In 1917 the mine was acquired by Bluestone Mining and Smelting Company which built an 800-ton floatation plant and a two mile spur to the railroad in Mason Valley. Bluestone then operated the mine until 1924 when it was absorbed by Mason Valley Mines Company.

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The Mason Valley mine located in NW 1/4 Section 32, T. 13 N., R. 25 E., lies about a mile southeast of the Bluestone mine. The mine produced copper ore from a 1000 foot long by 150 to 300 foot wide zone in garnetized limestone in contact with felsite tuff and andesite. Primary chalcopyrite and pyrite occurring in the mineralized zone reportedly averaged 16% iron, 18% lime, 12% sulfur, 38% silica, and 3.5% copper (Stoddard and Carpenter, 1950).

Active development began in 1907 but copper was not produced until 1912 when ore was mined for a new smelter constructed in 1911 north of Wabuska. The smelter operated until 1919 when a post-war drop in copper price caused it to close down. Up to that time about 600,000 tons of ore from the mine was direct-smelted. In 1924 Mason Valley Mines Company acquired the Bluestone mine and enlarged the Bluestone mill to 1,200 tons per day to treat sulfide ore from both mines. In 1927 milled ore from the two mines reportedly contained 1.3% copper with a recovery of 91.27% of the sulfide copper. The sulfide copper contained 86.33% of the total copper and with a concentration ratio of 12:1 the concentrate averaged 0.31 ounces of silver and 12.92% copper (Stoddard and Carpenter, 1950). Production continued until 1930 when falling copper prices caused closure of the smelter.

The Malachite mine adjoins the Mason Valley mine about a mile southwest in SE 1/4 Section 31, T. 13 N., R. 25 E. The workings of the two mines connect at the 300 foot level and the ore occurrences and geology of the Malachite are very similar to that in the Mason Valley mine.

The McConnell mine in the SW 1/4 Section 31, T. 13 N., R. 25 E., lies about 1/2 mile southwest of the Malachite mine. The mine began in 1912 and developed an exposed metamorphic deposit of copper ore in garnetized limestone. The deposit in surface configuration was an elliptical body 400 feet by 80 feet with a reported copper content of 3.0% (Stoddard and Carpenter, 1950). The surface ore was highly oxidized consisting primarily of chrysocolla and

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malachite while the underlying primary ore consisted of low copper content chalcopyrite and pyrite in a garnet gangue.

Production began in March 1912 at the rate of 50 tons daily and continued intermittently until 1945.

The Western Nevada mine lies about 1/2 mile south of the McConnell mine in NW 1/4 of Section 6, T. 12 N., R. 25 E. Low grade chalcopyrite and pyrite occur below oxidized outcrops in garnetized limestone.

No copper was produced at the mine until 1915, when the property was acquired by Nevada Douglas Consolidated Copper Company. A main adit 1,000 feet long penetrated the ore zone 238 feet below the oxidized outcrop and a 400 foot winze with cross cut levels was also developed.

The Ludwig mine located in SE 1/4 Section 27, T. 13 N., R. 24 E., produced copper and gypsum. The copper ore occurs on a fault contact of limestone with garnetite. Copper carbonates occur in a quartzose gossan. Early production consisted of oxidized ore to be used in the silver amalgamation process at Virginia City. By 1907 a 400 foot shaft with cross cuts to the vein every 100 feet had exposed excellent oxide ore consisting of carbonates on the first three levels and cuprite with chalcocite on the fourth level. Because of the excellent showings Nevada Douglas Company purchased the mine in 1907 and constructed the Nevada Copper Belt Railroad in 1911 to service this mine and other copper mines in Mason Valley. Further development of the Ludwig mine continued into primary sulfide ore at a depth of 680 feet and proved disappointing. The sulfide was mainly pyrite.

Within 200 feet of the Ludwig copper mine is a large body of gypsum trending parallel to the copper mineralized belt and lying between intrusive granitic rocks to the west and brecciated limestone to the east. The gypsum, presumed to become anhydrite

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about 200 feet below the surface, is in fault contact with the limestone. The ore was reportedly averaging 96% pure in 1911 and 1912. With the completion of the Nevada Copper Belt Railroad in 1911 a quarry was opened in the gypsum and operated to the end of 1912. Daily shipments of 75 tons were sent to a plaster mill in Reno. In 1923 Standard Gypsum Company obtained a lease and operated the quarry until 1930.

The Douglas Hill mine located in NW 1/4 Section 35, T. 13 N., R. 24 E., is about 1/2 mile southeast of the Ludwig copper mine on the crest of Douglas Hill. Copper ore predominantly oxidized as chrysocolla and copper pitch with some primary chalcopyrite occurs in a large mass of andradite garnet which caps Douglas Hill. The garnet resulted from replacement of massive limestone overlying a series of fine-grained garnetites.

In 1907 the mine was acquired by Nevada Douglas Company. A shallow, long tunnel was driven and ore was produced. from open cuts and mill holes. Because of high alumina content in the ore, smelting, costs were high and 5.0% copper content was necessary to derive a profit (Stoddard and Carpenter, 1950).

The Casting Copper mine is situated about 3/4 mile south of the Ludwig and about 1/2 mile southwest of the Douglas Hill mine in SE 1/4 Section 34, T. 13 N., R. 24 E. The ore-bearing zone lies along a fault where garnetized rock abutts massive limestone. The primary ore is chalcopyrite with a surface enrichment zone of chalcopyrite, chalcocite, covellite, and chrysocolla.

In 1913 Nevada Douglas Copper Company reported great tonnage of high-alumina ores too low grade for direct smelting and too oxidized for floatation concentration. A 350 foot shaft had revealed no shipping grade ore below the 200 foot level. An elaborate reduction plant was constructed in 1915, but it proved a costly failure. In the war years, 1916-1919, production increased and much ore was shipped to outside smelters.

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Since 1919 there has been practically no reported production and no attempt was made to reopen the mine even during the World War II times of premium prices.

The Montana Yerington mine located in SE 1/4 Section 18, 13 N., R. 25 E., lies about a mile west of Weed Heights. Ore occurs not in replacement bodies in limestone but in a vein occurring in a fault zone which brings Tertiary rhyolites against granodiorite. Copper ore consists primarily of chalcopyrite with slight chalcocite enrichment. In the period 1912 through 1914 a 300 foot inclined shaft was driven and a reported 2000 tons of 5.0% copper ore was extracted (Stoddard and Carpenter, 1950).

The Anaconda Company Weed Height copper mine is located 2 miles west of Yerington in the S 1/2 Section 16, and the N 1/2 Section 21, T. 13 N., R. 25 E., and is the only presently producing mine in the Yerington district. The mine originally called the Empire Nevada mine became active in 1907 and exploited oxidized copper ore in short ridges of granodiorite and quartz monzonite porphyry which protruded above the alluvial plain just west of Yerington. Subsequent exploration revealed the presence of a large body of low grade ore and in 1941 International Smelting and Refining Company a subsidary of the Anaconda Copper Company acquired the property. From 1941-1945 a major exploration program was conducted in which nearly 70,000 feet of drill hole and 3,500 feet of underground advance were completed (Wilson, 1963). This exploration confirmed the presence of a suspected major disseminated copper deposit containing approximately 60,000,000 tons of ore with a copper content of 0.9% to 0.95% (Moore, 1969). Greater than half of the ore was oxidized as chrysocolla. An open pit mine was developed and the first production came in 1953. The ore body consists of quartz monzonite porphyry in which chalcopyrite and pyrite ore is dispersed as minute discrete grains in the porphyry groundmass and as narrow, randomly oriented seams. These seams and veinlets are best developed within a zone of quartz diking in the central, high grade portion of the deposit (Wilson, 1963).

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Small amounts of bornite, covellite, and molybdenite occur but no appreciable gold or silver has been discovered.

The Guild Placer mines are located about 7 miles northwest of Yerington in Sections 18 and 19, T. 14 N., R. 25 E., and Sections 13 and 24, T. 14 N., R. 24 E. Placer gold occurs in both surface unconsolidated gravel and underlying cemented gravel indicative of an ancient river channel. The surface gravels are composed of slightly stratified, uncemented sand with small, subangular rock fragments and contains angular gold flakes often fine enough to float on water. The cemented gravels are composed largely of well-rounded boulders and contain coarse, nuggety gold indicative of considerable stream load abrasion. The fine gold was apparently derived locally from quartz veins at the head of the canyon while the coarse gold was transported from a more distant source and concentrated in the old Tertiary stream channel that crosses the property.

The gold was discovered in 1931 and was sampled with about 35 shafts sunk to bedrock. Recovered gold reportedly ran 30¢ per cubic yard at $20.67 per ounce for gold (Stoddard and Carpenter, 1950). Mining started in 1932 when the price of gold increased. The first method of extraction utilized a power shovel which loaded into cars for delivery to a fixed washing plant. Water for the washing operation was pumped from the valley. In 1934 a dragline was used to remove the overburden and a power shovel delivered the material to a portable, truck-mounted washing plant. In 1935 operations were discontinued because of tailing disposal problems and inability of the washing plant to follow the migrations of the pay streak.

Several other placer properties lie south and west of the Guild placers. Geology and gold occurrence is similar and although these properties have yielded some gold, the costs of extraction and generally lower gold prices have resulted in uneconomical operations in the past.

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The Buckskin mine located about 9 miles west of Yerington in NE 1/4 Section 13, T. 13 N., R. 23 E., is the oldest mine in the Buckskin district. Gold and copper were produced from veins and replacement bodies in sheared and altered Mesozoic andesite. There are no known recorded production statistics.

The Minnesota mine is located at the northeast end of the Buckskin Range in Section 19 (projected) T. 14 N., R. 24 E., and unsurveyed township, and until recently was an active iron ore producer. The mine was originally worked for copper and not until 1943 was iron ore extracted. Little is known of the early history,but in 1908 the mine was patented with little copper shipped. In 1943, however, Strategic Minerals Inc. of Hawthorne acquired the mine and started mining iron ore from an open pit. From 1943 to 1945, 1500 tons of ore were mined for use as high-density concrete aggregate for ship ballast. From March 1952 to March 1953 Standard Slag Company under lease from the property owners mined 60,000 long tons of iron ore averaging 58% iron for shipment to Japan (Reeves and others, 1958). In 1971 after expiration of a 25 year contract with the Japanese, the mine closed down and has been inactive ever since.

The mine is in a Triassic-Jurassic metasedimentary and metavolcanic inlier in intrusive granodiorite and quartz monzonite porphyry. The metamorphic rocks form an apparently conformable sequence of limestone, quartzite, hornfels, conglomerate, partially dolomitized limestone, and felsite. Small intrusive bodies of Tertiary andesite cut the older rocks and Tertiary dacite caps the sequence. Iron ore occurs principally as magnetite in replacement deposits in highly-fractured dolomite. Some pyrite and chalcopyrite occur with the magnetite. When the mine closed down the open cut had reached a depth of 400 feet below the original outcrop. At this level the ore zone had a maximum width of 400 feet and a length of 700 feet (Moore, 1971).

Corundum - andalusite mineralization occurs at the Blue Danube or Blue Metal prospect at the south end

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of the Buckskin Range about 1 1/2 miles southwest of the Buckskin Mine in SW 1/4 Section 14, T. 13 N., R. 23 E. The property is described in Moore (1969). In general, the deposit consists of sericitized shear zones in weakly metamorphosed Mesozoic andesite. Contained within the sericitic zones are aggregates of minute and poorly-formed crystals of corundum and andalusite. The main shear zone is about 50 feet wide and 300 feet long, strikes N. 25 - 30° E, and has a steep northwest dip. The corundum-andalusite mineralization is largely confined to a 50 by 75 foot zone on the surface of the main shear zone. The highest grade material consists of sericite with quartz, rutile, and 18% - 23% by weight, andalusite and corundum. Underground workings show the corundum andalusitic mineralization is absent 70 feet below the outcrop. No production is recorded from the property.

Turquoise deposits are described at two prospects in the Singatse Range - Buckskin Mountains area by Morrissey (1968). The turquoise occurs as seams and veinlets in highly fractured zones in altered porphyritic quartz monzonite and ranges from dark blue to bluish-green. The pure blue variety is translucent and very hard and makes fine gems.

CURRENT ACTIVITY

In addition to continuing operation of the Weed Heights mine the Anaconda Company has conducted exploration for copper and iron in its approximately 20,000 acres of claims in the Singatse Range over the past few years. This exploration has revealed two areas of probable interest for future development. The area surrounding the present Weed Heights pit reportedly contains considerable undeveloped copper ore at depth. The area in the vicinity of Carson Hill and the Guild Placer property has reported substantial copper oxide values at or near the surface and possible additional deposits at depth. Sufficient ore reportedly exists to classify these two areas as identified reserves containing both subeconomic submarginal reserves and economic indicated and inferred

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reserves (Areas 1 and 2 respectively in NW-31-7 on the Mineral Inventory Overlay).

Other recent exploration programs conducted in the area include extensive drilling around the Buckskin Mine conducted by Phelps Dodge Corporation and a drilling program initiated by Standard Slag Company around the Minnesota iron mine. These programs were completed in the early 1970's and revealed sufficient copper and iron ore to define an identified economic reserve containing indicated and inferred reserves associated with a subeconomic submarginal reserve in the northern Buckskin Range and a subeconomic submarginal reserve in the Buckskin mine area, (Areas 3A, 3B, and 4 respectively on the Mineral Inventory Overlay).

Clark T. Guild has applied for patent for placer gold contained in alluvial deposits on the old Guild-Bovard claims, now the Bovie-Lew and Bovie-Lew Nos. 1-3 placer claims. Patent is for approximately 320 acres in Sections 8 and 17, T. 13 N., R. 24 E.

No new large scale exploration activity is presently underway but the area is covered with mining claims many of which show a record of consistent assessment work.

ACCESS

Both paved and dirt roads emanating from Yerington afford ready physical access to practically any part of the Singatse - Buckskin area. Past and present mining and exploration activities in the mountains and continuing agricultural efforts in the valleys have resulted in a proliferation of unimproved roads so that practically any part of the subject area can be reached.

PRODUCTION STATISTICS

Published production in the Singatse - Buckskin area is primarily from patented property. Couch and Carpenter (1943, p. 94) recorded total production in

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the Yerington district through 1940 as 2,649,851 tons of copper, lead, gold, silver, and gypsum at a value of $17,003,283. The total production from the district through 1965 was approximately $272,208,763 (Moore, 1969, p. 26). Recorded production from the chief mines of the district are listed below. Statistics are taken from Stoddard and Carpenter (1950, p. 84-94) from patented land unless otherwise indicated.

Mine	Period	Tons	Value
Bluestone	1917-1920	400,000 copper	$3,570,000
Mason Valley	Through 1914	288,900 copper	-
Bluestone and Mason Valley	1912-1930	1,701,794 copper	7,735,881
Malachite	NO RECORD PRODUCTION		
McConnell	1912-1914	14,702 copper	106,785
	1944-1945	700 copper	11,000
Western Nevada (unpatented)	1944-1945	3,700 copper	40,000
Ludwig	1906-1907	3,035 copper	184,029
	1912-1913	180,000 copper	1,800,000
	1923-1930	200,000 gypsum	400,000
Douglas Hill	1883-1891	-	271,804
	1907-1914	68,905 copper	-
Casting Copper	Through 1914	29,000 copper	-
	1916-1919	128,000 copper	2,250,000
Montana Yerington (unpatented)	NO RECORD PRODUCTION		
Guild Placer	NO RECORD PRODUCTION		
Buckskin	NO RECORD PRODUCTION		

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The Empire Nevada underground mine, precursor of the Anaconda Weed Heights copper pit reported an early production of 11,038 tons of copper at a value of $95,647 during the period 1918-1920 (Moore, 1969, p. 26). The next recorded production was from 1953-1965 when the Anaconda Company operated the present Weed Heights open pit. Copper production statistics for the period are taken from Moore (1969, p. 28) and are shown below:

Copper Production of the Anaconda Company's Yerington Mine Through 1965

Year	Copper in Pounds: Precipitates	Concentrates	Total	Average Price Per Pound (cents)	Value
1953	1,850,674	--------	1,850,674	28.8	$532,990
1954	54,250,266	--------	54,250,266	29.7	16,112,330
1955	70,647,114	--------	70,647,114	37.5	26,492,670
1956	65,021,590	--------	65,021,590	41.8	27,179,020
1957	56,320,696	--------	56,320,696	29.6	16,670,930
1958	53,275,169	--------	53,275,169	25.7	13,691,720
1959	40,448,929	--------	40,448,929	29.8	12,053,780
1960	85,391,545	--------	85,391,545	30.6	26,129,810
1961	57,761,201	5,015,455	62,776,656	29.2	18,330,780
1962	52,731,565	21,240,901	73,972,466	29.8	22,043,790
1963	49,153,802	37,224,791	86,378,593	29.9	25,827,200
1964	40,669,785	35,205,735	75,875,520	31.2	23,673,160
1965	45,440,900	31,574,556	77,015,456	34.3	26,416,300
TOTAL	672,963,236	130,261,438	803,224,674	----	$255,154,480

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Production from the Minnesota mine is taken from Moore (1969, p. 29) and is shown as follows:

Production of Minnesota Iron Mine Through 1966 in Long Tons. Data to Nearest 500 Tons

Year	Long Tons
1944	1,500
1945	
1952	60,000
1953	
1954	9,000
1955	18,500
1956	273,000
1957	309,500
1958	235,500
1959	315,000
1960	379,000
1961	282,000
1962	178,000
1963	330,000
1964	410,500
1965	460,000
1966	457,500
TOTAL	3,719,000

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POTENTIAL FOR DEVELOPMENT

The presence of the Yerington Weed Heights copper pit, one of the largest operating copper mines in Nevada, and the results of recent exploration in the Singatse and Buckskin areas attest to the excellent potential for large, economic, base metal deposits in area NW-31-7. Areas 1, 2, 3, and 4 in NW-31-7 (see Mineral Inventory Overlay) denote (not necessarily in order of importance) those areas containing identified economic and subeconomic reserves primarily of copper and iron.

It is presumed one or more of these areas will be developed when the Weed Heights pit is mined out. With an increase in copper prices development may begin sooner. Development could take several forms. The reported depth and character of deposits in the area immediately adjacent to the Weed Heights pit and its close proximity to the plant facilities suggest the possibility of an in-place leaching operation whereby acid solutions would be pumped through the copper deposits and collected as copper-impregnated liquors. The copper-bearing solutions could then be fed to the nearby floatation plant. In general, sufficient copper values to counterbalance increased costs of underground mining would have to be present before an underground operation would be contemplated.

The geologic conditions at Carson Hill, however, would favor development of an open-pit operation. Since good copper values occur at or near the surface and the terrain is generally rolling, an operation involving only minimal stripping and relatively shallow benching would provide sufficient ore to make the venture worthwhile.

It is unlikely that the Minnesota open-pit iron deposit will be further exploited. Most of the economic ore had been mined out by the expiration of the Japanese contract in 1971. Unpublished industrial opinion is that sufficient reserves are not present to warrant reopening the open-pit operation.

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Reported possible copper-iron deposits in association with the mine, however, could result in future development in the immediate area utilizing existing mine facilities.

MANAGEMENT OPPORTUNITIES

It is in the Singatse Range - Buckskin Mountains area and the East Mason Valley - Northern Wassuk area that the greatest potential for large-scale mining operations exists. To a great extent the development of these locatable mineral areas is controllable by BLM only in regards to lands needed for auxilliary facilities, right-of-way, tramroads, etc. Nevertheless, there exists a need to know where development is likely to take place.

Development opportunities exist for the economic deposits in the immediate vicinity of the Weed Heights mine, at Carson Hill, and in the vicinity of the Minnesota mine. The estimated order of importance for development is indicated on the Minerals Management Opportunities Overlay.

Based upon the best knowledge available the most important economic area in the Singatse Range - Buckskin Mountains area and the second most important in the planning unit is deemed the area immediately adjacent to the present Weed Heights open-pit. The close proximity to existing facilities would allow development with minimum transportation costs. The presence of substantial quantities of oxide ore would insure the continued operation of the floatation plant. If the suggested leaching operation was attempted old underground workings might be used to provide access for the acid solution to the ore. The leaching solutions would likely reach the oxide plant by gravity flow for deposits located in the higher parts of the Singatse Range.

The second most important economic area in the Singatse Range - Buckskin Mountains area and the third most important in the planning unit is the one in the vicinity of Carson Hill. The opportunity exists to

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develop the near surface oxide ores probably by open pit. This operation would also supply needed ore to the existing oxide plant. The possibility of sulfide ore at depth would also mean the sulfide plant would be assured a source of material. Environmental impact particularly visual would be less severe for a surface mine in the Carson Hill area than for an operation in the same area as the Weed Heights pit due to its more distant location from the Yerington area; yet haulage distance would not be significant.

The least significant economic area is probably in the vicinity of the Minnesota mine. It is farthest away from present facilities and reportedly contains lower value ore than the other two areas. An operation here would likely be similar to the present Minnesota mine and would utilize any existing facilities at the present mine.

Additional lands needed for any of the three economic areas would likely be only for tailing and dump sites as most plant facilities already exist at Weed Heights. Estimated additional lands are included in the delineated development areas on the Mineral Management Opportunities Overlay.

The opportunity also exists to protect the economic areas including lands needed for auxillary facilities.

For those subeconomic submarginal areas in the Singatse - Buckskin area the opportunity exists to protect the lands from disposal or removal from the mineral inventory pending economic or technological advances that promote their development. There is an opportunity also to further identify deposits within these areas.

For the remainder of the speculative area there exists the opportunity to protect the land from withdrawal or restriction under the general mining laws to allow for discovery of possible valuable mineral deposits. There also exists the opportunity to identify any discovered mineral deposits.

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COMPANIES AND CLAIMANTS ACTIVE IN THE AREA

1. The Anaconda Company
   P. O. Box 1007 - Weed Heights, Nevada
   Claims: AAA, BBB, CCC, DDD, Ann, View, Ant, Eon, Oversight, Led, Cat Lode Claim Groups, Arc millsite, Tim placer (?)
   (390+ lode, placer, and millsite claims)

2. The Anaconda Company
   Smith-Harcourt
   P. O. Box 11309 - Tucson, Arizona 85706
   Claims: BUC, Nevada, Lorraine Lode Claim Groups
   (approx. 200 lode claims)

3. Anaconda, Darby
   Darby-Gitsh & Duval
   Reno, Nevada
   Claims: Darby's Copper Claim Group
   (90+ lode claims)

4. Basin Range Company
   E.M. Adrian
   Box 993 - Yerington, Nevada
   Claims: "Low" Lode Claim Group
   (26 lode claims)

5. Bear Creek Mining Company
   E. 7821 Sprague Avenue - Spokane, Washington
   Claims: BSW Lodes Nos. 1-47
   (47 claims)

6. Coronado Mining Group
   809 Transamerican Building
   177 N. Church - Tucson, Arizona
   Claims: A, B, C, and Anode Claim Groups
   (102 lode claims)

7. Darby, Lawrence
   P. O. Box 107 - Yerington, Nevada
   Claims: Noonday No. 1 Claim, Nevada Oro Claim
   (2 lode claims)

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8. Earth Sciences Inc.
Earth Sciences Road - Golden, Colorado
Claims: Y-1, Y-2, Y-3
(1 40-acre and 2 160-acre placer claims)

9. Eutheon, G. and L.
c/o Pat Moran
308 N. Nevada Street - Carson City, Nevada
Claims: Homestake Copper Lode Claim Group
(4 claims)

10. Guild, Clark J.
102 Rott Way - Reno, Nevada
John A. Baker - Box EE, Yerington, Nevada
Ralph Hall & Pitwood
Claims: Aqua Lode Claim, Blue Metal Group, Bovie-Lew and Midas Placer Group
(4 lode and 9(?) 40-acre placer claims)

11. Guild, Clark J. and Clark J. Guild Jr.
102 Rott Way - Reno, Nevada
Claims: Nuggett and Judge Claim Groups
(18 lode claims)

12. Humble Oil and Refining Company
Box 120 - Denver, Colorado 80201
Claims: Standard Slag Lodes 45-47, 49, 51, 53, 81-85
(11 lode claims)

13. Luethe, R.D.
290 Penelope Drive - Sparks, Nevada
Claims: Sharlynn Claim Group
(116 lode claims)

14. Mapa, Michael R.
Box 539 - Yerington, Nevada
Claims: Fey Nos. 1-23
(23 lode claims)

15. Minerals Exploration Company
1708 W. Grant Road - Tucson, Arizona 85705
Claims: Bob Nos. 1-11, CF Lode Claim Group, Tim Nos. 1-62, AG Nos. 1-54, AN and AB Lode Claim Group, Sin Lode Claim Group, Low Lode Claim Group
(333+ lode claims)

16. Montana Associates
(no address)
Claims: Montana Associates Placer Claim Group
(68 80-acre placer claims)

17. Murdock, J.S.
83 N. 100 W. - Cedar City, Utah
Claims: Lucky Boy Claim Group
(35 lode claims)

18. Murphy, E.T.
Route 2, Box 784 - Yerington, Nevada
Claims: Singatse Lode Claim Group
(unknown number claims)

19. Newport, Samuel
(no address)
Claims: Nevada and Vermont Lode Claims Groups
(10 lode claims)

20. Palosky, Kenneth
Box 345 - Babbitt, Nevada
Claims: Nick Lode Claim Group
(16+ lode claims)

21. Phelps Dodge Corporation
R.B. Ludden
2180 Arcane Avenue - Reno, Nevada
Claims: BU Group
(75 lode claims)

22. Reade, R.L., et al
Yerington, Nevada
Claims: Standard Magnesia Company Placer Claim Group
(11 80-acre placer claims)

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23. Regan, John
Box 921 - Yerington, Nevada
Claims: Summit Nos. 1-10, Gold Lode and Iron Quartz Claim Groups
(18 lode claims)

24. Rink, E. and R.
302 E. Proctor Street - Carson City, Nevada 89701
Claim: Mickey Summit Lode Claim

25. Schillinger, A.W.
1585 Surf Way - Reno, Nevada
Claims: STU Group
(78 lode claims)

26. Standard Slag Company
P. O. Box 4400 - Reno, Nevada
Claims: Standard Slag's Lode Claim Group
(51 lode claims)

27. Stoltze, Robert
Box 10392 - S. Lake Tahoe, Nevada
Claim: World 48 lode Claim

28. Volgamore, John H.
130 Linden Street - Reno, Nevada
Claims: SS Lodes Nos. 118, 120, 122, 124, 126
(5 lode claims)

29. Ziegelman, Richard D.
Route 1, Box 2165 - Colfax, California
Claims: Zig Lode Claim Group
(unknown number claims)

SELECTED REFERENCES

Couch, B.F. and Carpenter, J.A., 1943, Nevada's metal mineral production (1859-1940 inclusive): Nevada Univ. Bull. v. 37, no. 4., Geol. and Min. Ser., no. 38.

Mallery, H.W., 1975, Mineral patent application for the Bovie-Lew and Bovie-Lew Nos. 1-3 placers in Lyon County, Nevada: Unpublished mineral report. U.S. Bur. Land Management, Carson City District, Nevada.

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May 1976

Moore, J.G., 1969, Geology and mineral deposits of Lyon, Douglas, and Ormsby Counties, Nevada: Nevada Bur. Mines Bull. 75.

Moore, Lyman, 1971, Economic evaluation of California-Nevada iron resources and iron ore markets: U.S. Bur. Mines Inf. Circ. 8511.

Morrisey, F.R., 1968, Turquoise deposits of Nevada: Nevada Bur. Mines Rept. 17.

Reeves, R.G., 1964, Iron, in Mineral and water resources of Nevada: Nevada Bur. Mines Bull. 65, p. 101-112.

_____, Shawe, F.R., and Kral, V.E., 1958, Iron ore deposits of west-central Nevada: Nevada Bur. Mines Bull. 53, pt. B.

Richman, V.B. and Chichester, L.G., 1968, Mineral exploration surface damages to public lands - state mining laws and industry custom, unpublished report, U.S. Bur. Land Management, Denver Service Center.

Stoddard, C. and Carpenter J.A., 1950, Mineral resources of Storey and Lyon Counties, Nevada: Nevada Univ. Bull., v. 44, no. 1, Geol. and Min. Ser., no. 49.

Wilson, J.R., 1963, Geology of the Yerington Mine: Mining Cong. Jour. v. 49, no. 6, p. 30-34.

Partial field examination J.R. Gilbert April and May 1976.

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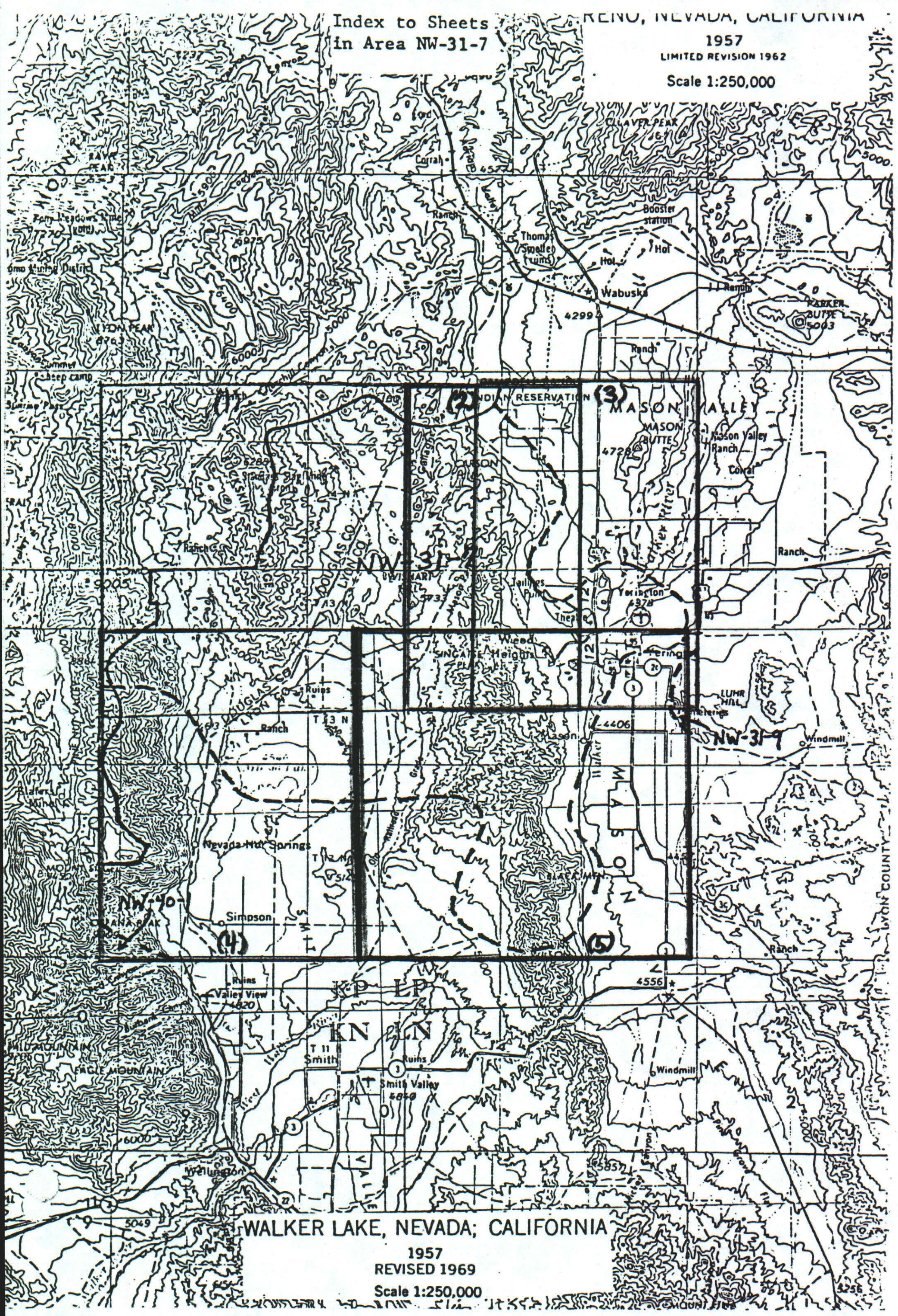
Walker URA
May 1976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NW-31-9
NW-40-1
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(3)
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INDIAN RESERVATION
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MASON BUTTE
Mason Valley Ranch
Wabuska
Booster station
Thomas Smelter (ruins)
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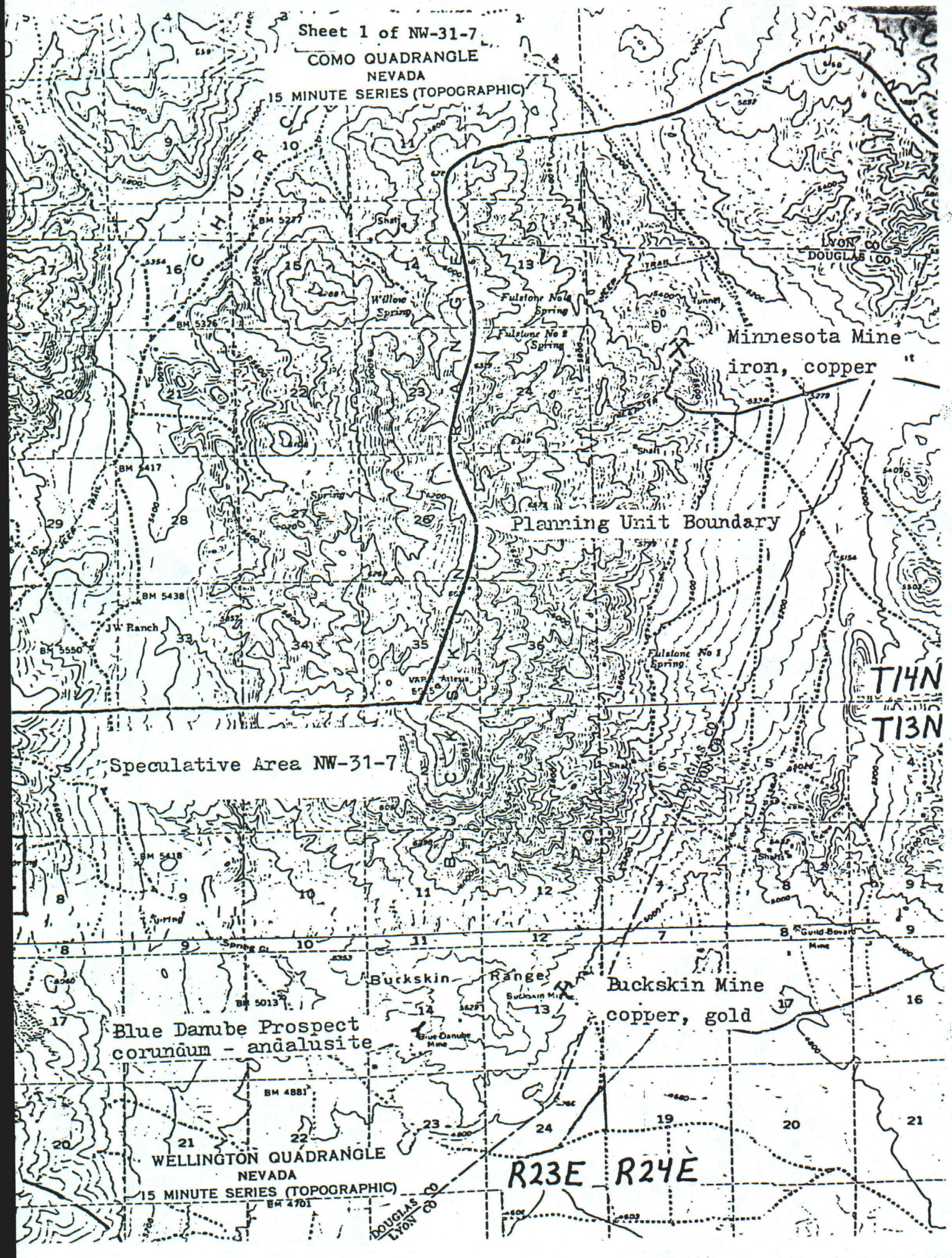
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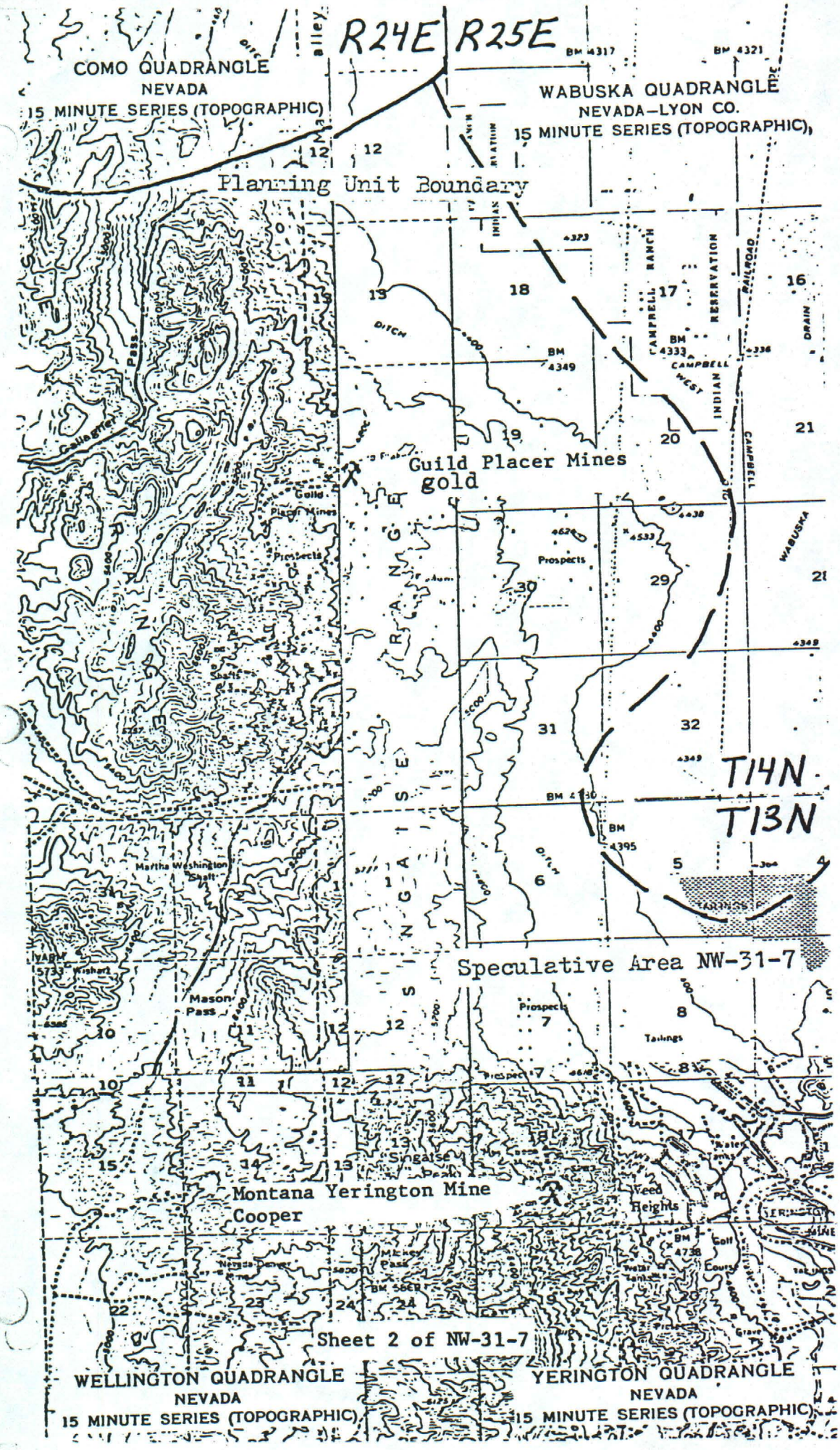
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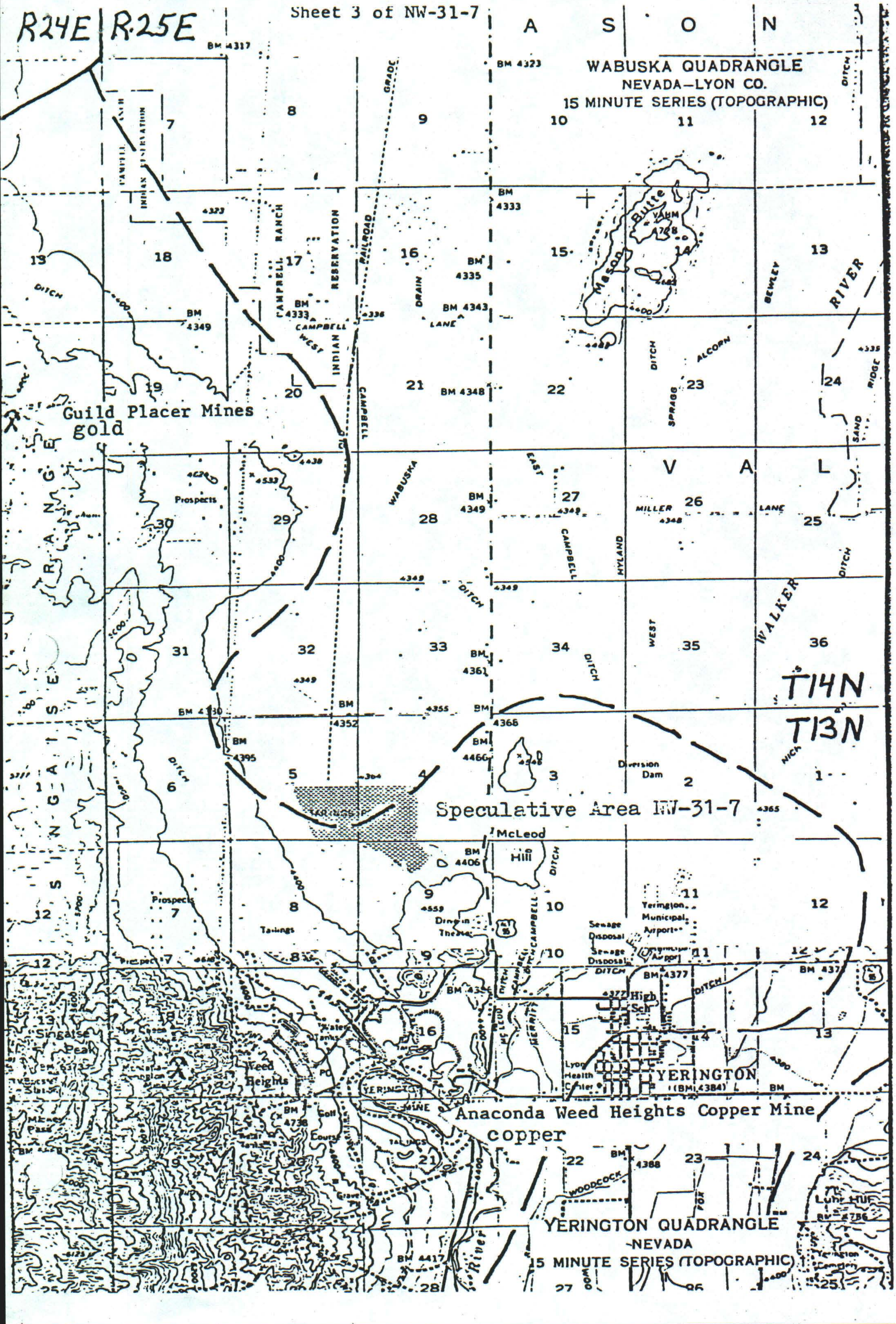
15 MINUTE SERIES (TOPOGRAPHIC)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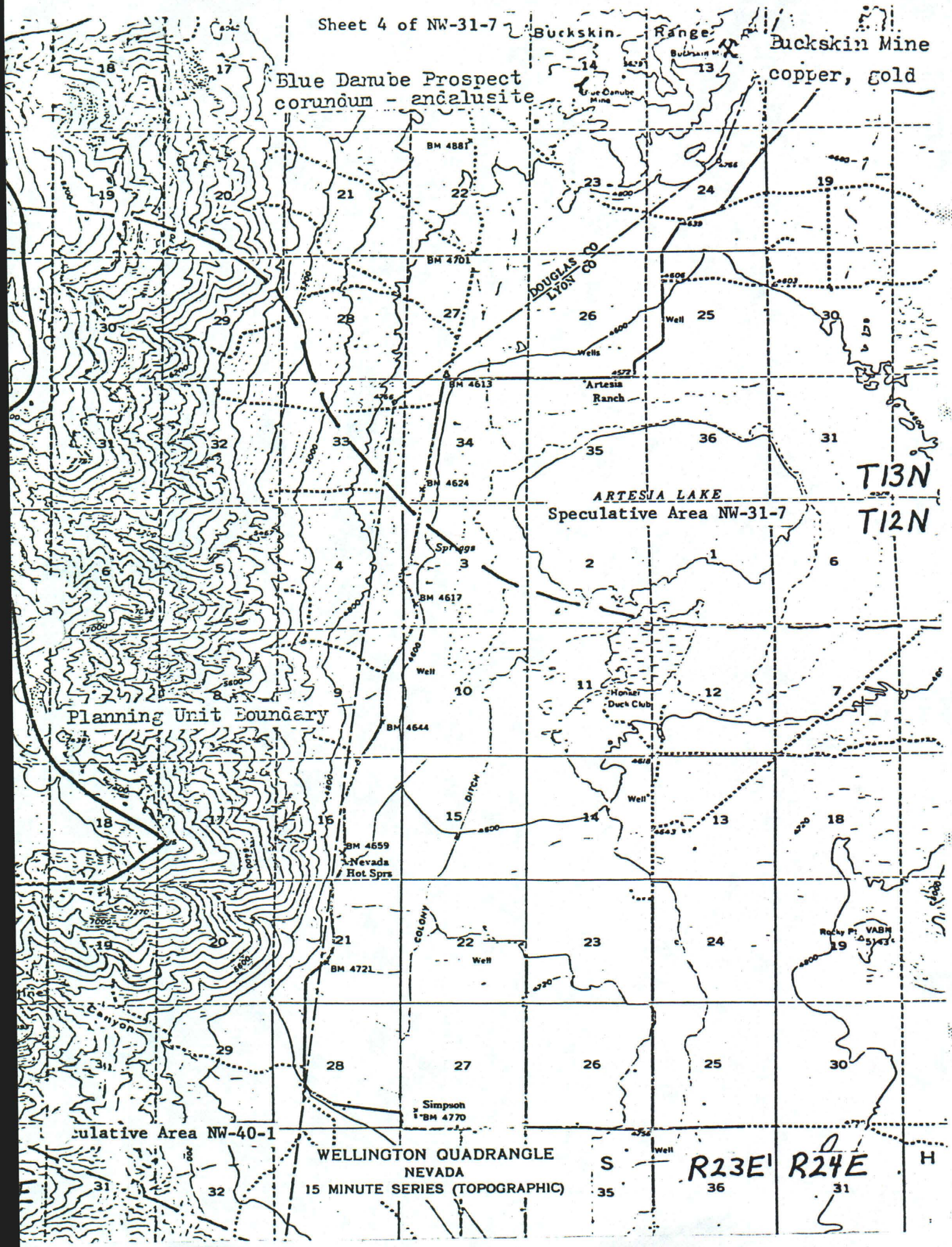
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Buckskin Mine
copper, gold
Blue Danube Prospect
corundum - andalusite
Blue Danube Mine
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BM 4701
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LYON CO
Well
Wells
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