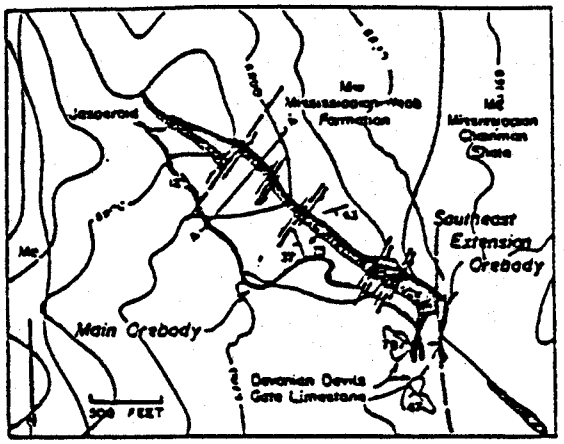
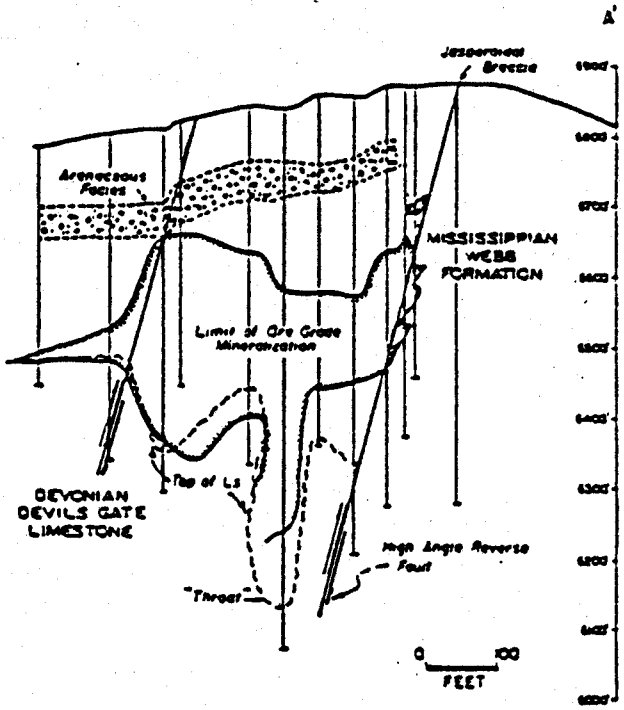
2940 0047

Figure 24. After Thoreson, (1987)

Figure 25. After Thoreson, (1987)



Plan map of the Rain gold deposit. From Knutsen and West, 1984



Generalized cross section through the Rain ore body. From Knutsen and West, 1984

Newmont recently announced the discovery of a deeper 3 million ton ore body called GNOME, located about 2,000 ft south of Rain in a similar geologic setting. Extensive drilling has been conducted at Emigrant Spring, about 2 miles east of Rain.

The Railroad district, about 5 miles south of the Rain Mine, produced copper-lead-zinc-silver ore from contact deposits in Paleozoic limestones intruded by Tertiary granite. Westmont, in a joint venture with Amax, is exploring the RAILROAD-BULLION property where a small gold deposit is rumored to have been discovered in the Mississippian Webb Fm or Chainman Shale. The prospect contains extensive bold outcrops of baritic jasperoid containing anomalous gold values.

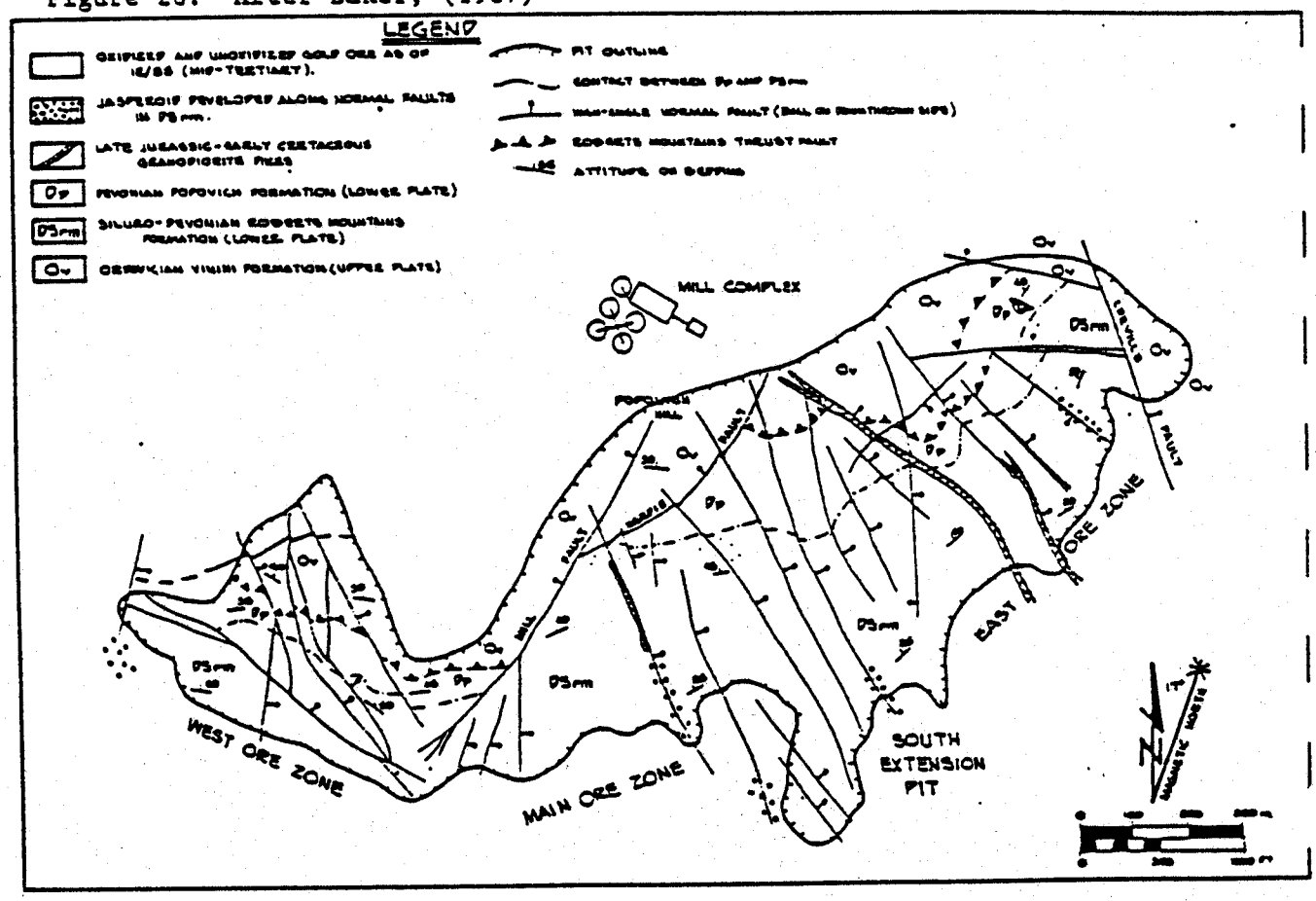
280.6 EXIT 280 CENTRAL CARLIN. The world-famous CARLIN MINE is located about 18 miles northwest of the town of Carlin. Lower-plate carbonate units of the Roberts Mountains Formation, exposed in the Lynn window, host the majority of ore (fig. 26). The Carlin ore bodies characteristically occurred as stratabound and stratiform pod-like bodies within the thin-bedded laminated silty dolomite beds in the upper part of the Roberts Mountains Formation. Northeast-trending normal faults served as important ore controls for the stratabound ore as well as direct control for the tabular vein-like West ore zone and a cylindrical to pipe-shaped ore body in the East ore zone. The mine operated from 1965 to 1986 when open-pit reserves were exhausted. Over 4 million ounces of gold were produced from 4 ore zones having combined original reserves of 18.5 million tons averaging .27 opt gold.

283.5 Building on right is an old mill once used in processing diatomite mined from lake beds in the Miocene Humboldt Formation north of highway.

285.3 At 9:00, well-exposed, reddish, lowermost Mississippian Webb Formation (west) resting on poorly exposed Ordovician Vinini Formation (east).

285.4 At 3:00, across the river is a fault separating Diamond Peak Formation on the east and lower Mississippian Webb Formation on the west. The Webb forms smooth slopes and the Diamond Peak forms rugged outcrops. Composed of Antler orogenic debris, the Webb Formation is the oldest formation in this area.

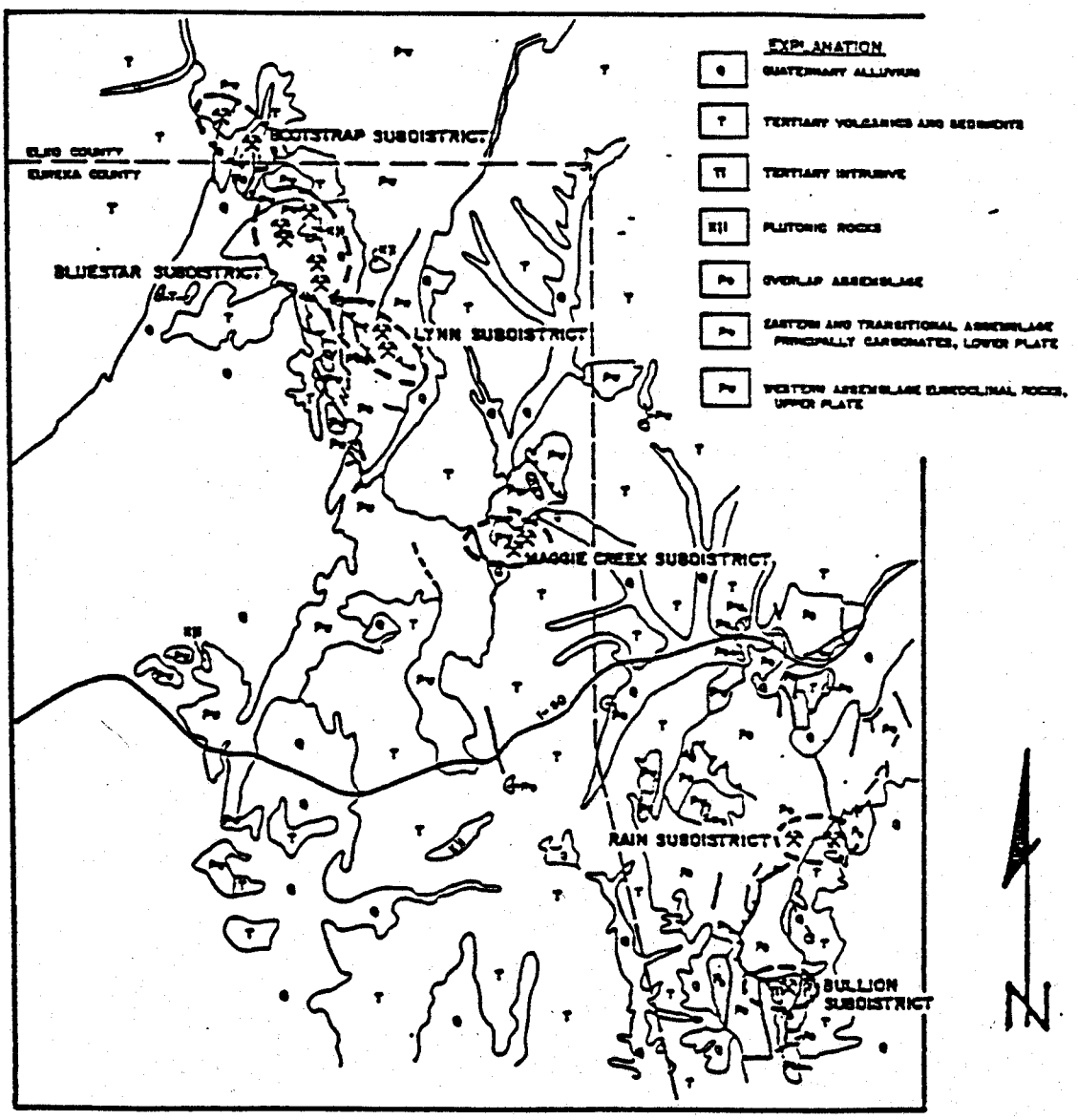
Figure 26. After Baker, (1987)



Generalized geologic map of the Carlin gold mine.

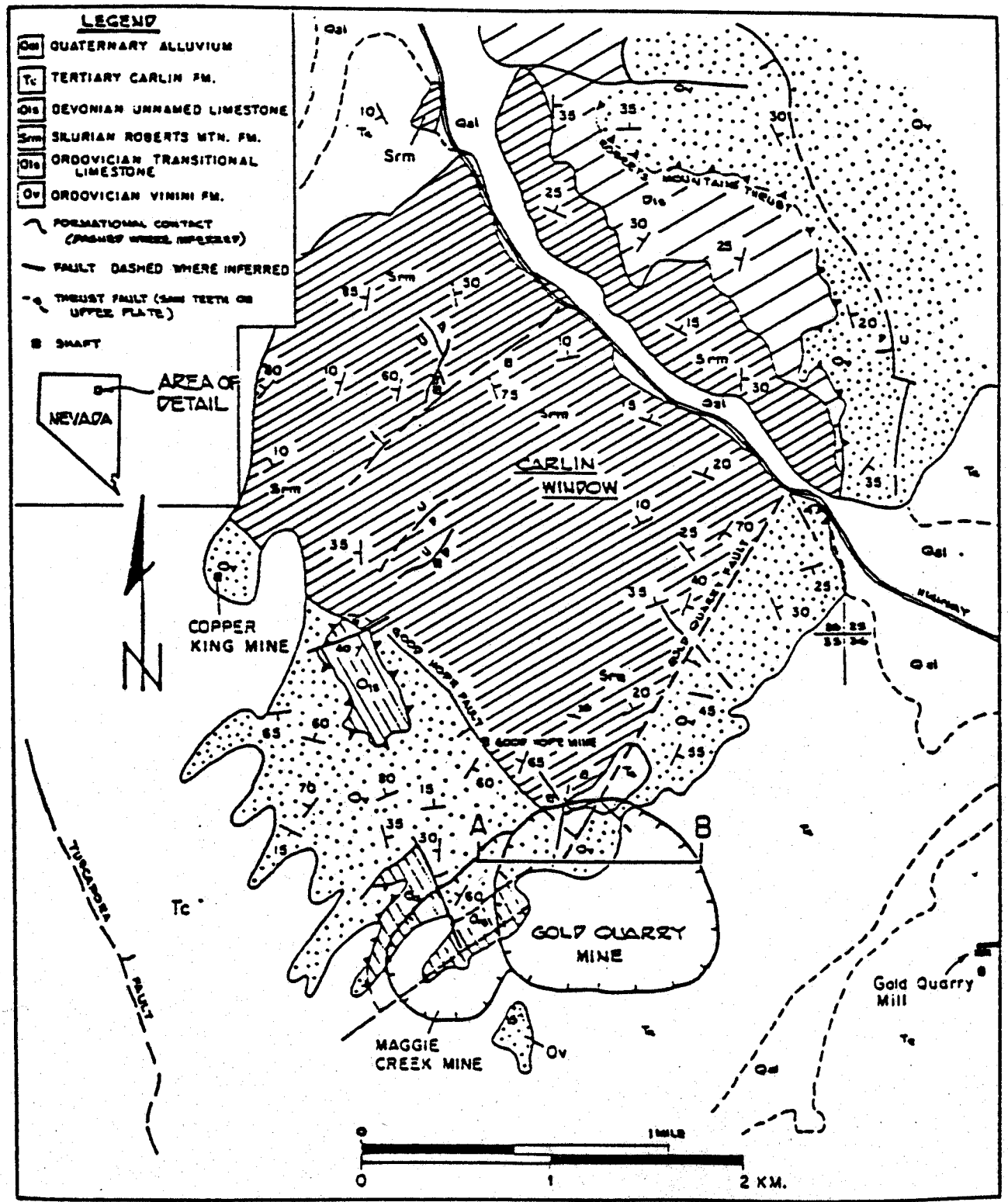
285.5 Just before we enter the tunnel a brief view of the Diamond Peak/Strachearn unconformity is seen on the left. Nearly vertical, red to purple conglomeratic flysch units of the Diamond Peak Formation are seen, overlapped by moderately dipping Strathearn beds. The Diamond Peak flysch represents the acute phase of uplift in the west from Early Mississippian to Early Pennsylvanian time. At this locality the Moleen and Tomera Formations have been eroded and the Strathearn rests unconformably on the Diamond Peak. The Strathearn is roughly equivalent in age to the Antler Peak Limestone. Although these two units locally contain thin sand and pebbly sand layers, this lithology contrasts sharply with that of the preceding orogenic units and marks the end of the Antler orogeny in this region. The unconformity represents regional deformation of late Middle Pennsylvanian age. The deformation postdates the Antler orogeny and has been termed the Humboldt orogeny by Kerner (1977).

Figure 23. After Knutsen, (in press)



GENERALIZED GEOLOGY MAP
OF THE CARLIN TREND
EUREKA AND ELKO COUNTIES, NEVADA

Figure 21. After Rota, (1987)



General geology of the Maggie Creek mining district