

The Goldrun Project, Adelaide District, Humboldt County, Nevada

By Cortus Properties LLC

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Introduction – Regional Tectonic Setting

- Outlined in brown in Figures 1 and 2 is a left-lateral pull-apart basin, active in Eocene time, and herein referred to as the Carlin pull-apart basin. This basin and its contained gold deposits developed in a relatively short period of time, from 42 to 35 million years ago (Late Eocene Epoch of the Tertiary Period). The gold deposits together, within a space of about 32,400 square km (12,500 square miles), with produced and remaining known gold resources of around half a billion ounces, constitute the second largest concentration of gold on Earth – after the Witwatersrand in South Africa. The Goldrun project area lies in the western dilatant corner of the Carlin pull-apart basin.
- The Carlin pull-apart basin represents the earliest transtensional development of pull-apart basins that coalesced through Tertiary time to ultimately form the Great Basin (Newton, 2020). This Eocene period of intense magmatic and hydrothermal activity was also the first time that the lower crust in this region was cracked open after 80 million years of fertilization by fluids and magmas above a shallowly subducted slab that stretched from what is now California to Colorado, during the Laramide orogeny.

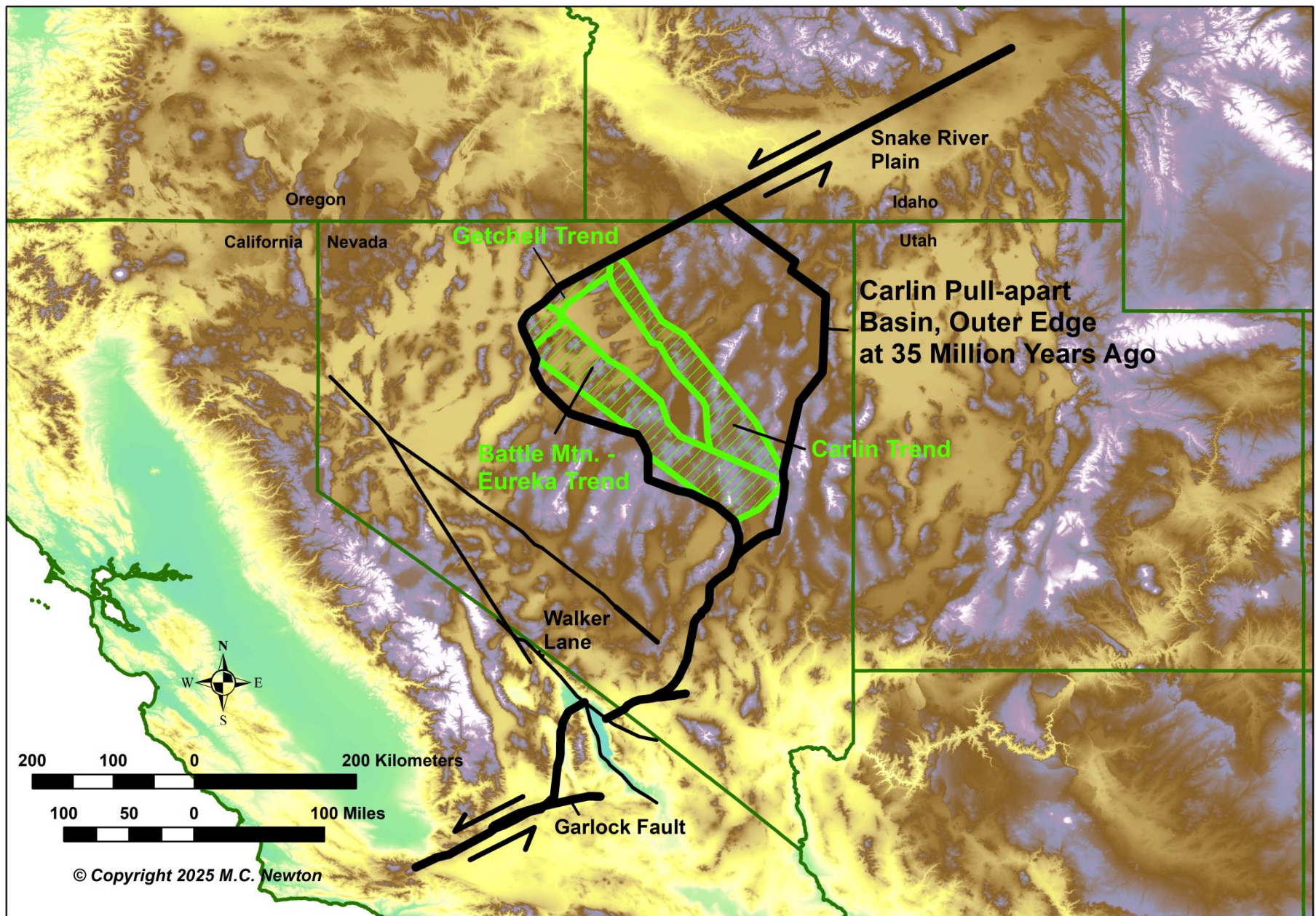


Figure 1. Carlin sinistral pull-apart basin (black outline) at 35 million years ago. Three famous gold trends in green stripes.

- The three major well-known gold trends in northern Nevada, the Carlin trend, the Battle Mtn.-Eureka trend and the Getchell trend are shown in green stripes in Figures 1 and 2. Each of these three trends is marked by Jurassic-Cretaceous and Eocene-aged igneous intrusive and volcanic rocks. These three magmatic trends were inherited from Mesozoic time and reactivated in Eocene time. They are deep-seated fault zones that periodically channeled magmas to shallow levels in the crust at the same locations. These intrusive centers are outlined with red ovals in Figure 2. They range from 44-62 km apart, with an average spacing of around 50 km.

- Eocene igneous intrusions commonly traveled up the same structures as the Mesozoic intrusions, and were the sources of metals and heat giving rise to gold-depositing hydrothermal systems. Within the red ovals in Figure 2, the red circles are individual gold deposits, which commonly show a N-S orientation to the clusters of deposits. This is due to the N-S trend of Tertiary-aged normal faults, the main conduits for mineralizing hydrothermal fluids.

- The Goldrun Project of Cortus Properties LLC (Cortus) lies at the intersection of the Getchell and Battle-Mtn.-Eureka trends, in the pink oval in Figure 2. It is the next “bead on the string” of Eocene intrusive/gold mineralized centers marked by the red ovals in Figure 2. Despite its location and decades of exploration in the district, American Metals Exploration Corp. (Ammetex), which owns half of Cortus, was the first to identify the gold-skarn and Carlin-type gold targets, which have never been drilled.

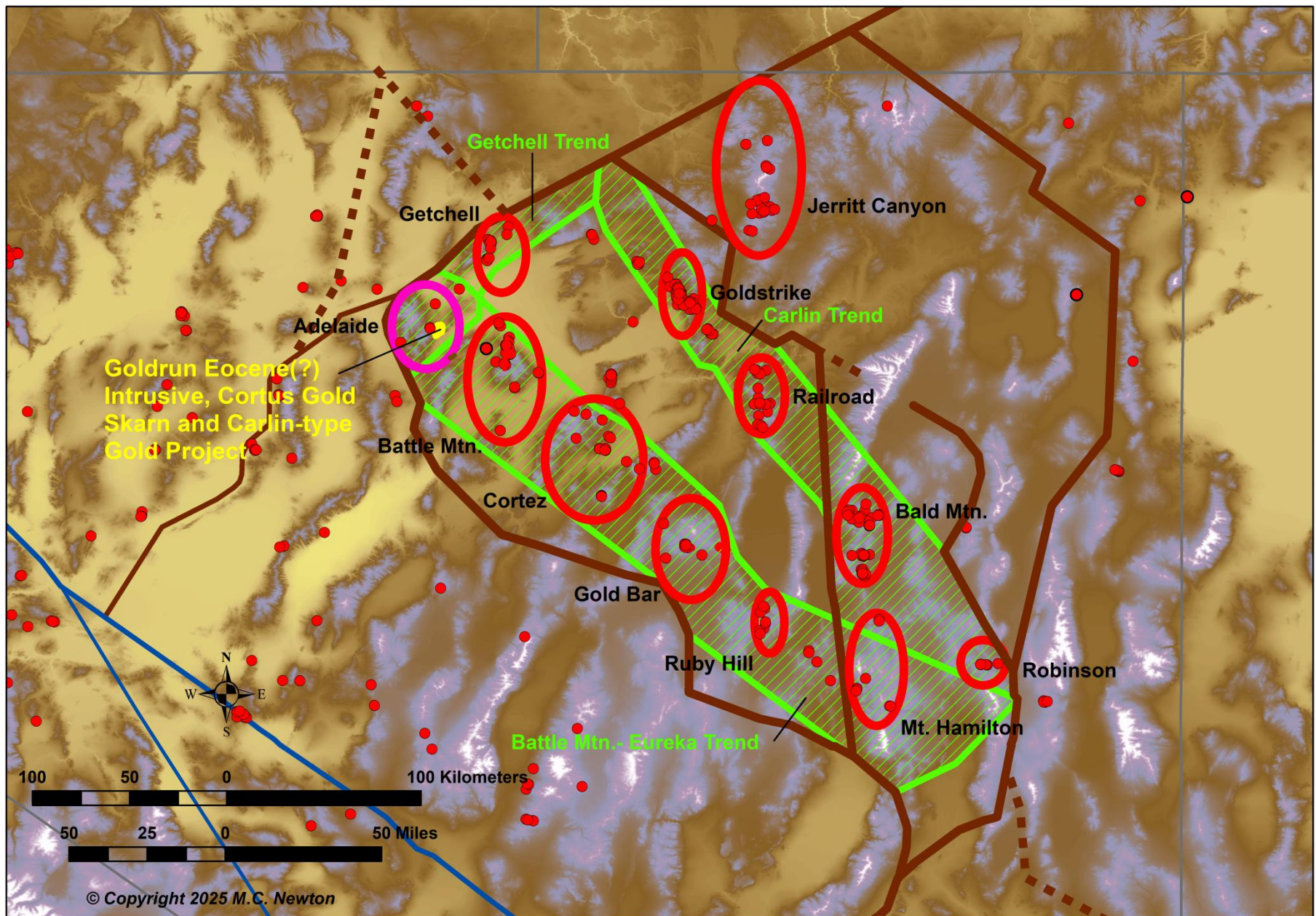


Figure 2. Three gold trends in green stripes within the Carlin pull-apart basin. Clusters of gold deposits (red circles) and intrusive centers in red ovals. Goldrun intrusive in yellow.

Goldrun Project

- The Goldrun project area is 42 km NW of the Eocene 14 million ounces of gold Phoenix-Fortitude gold-copper skarn complex and 21 km NW of the newly developed 6 million ounces of gold Eocene Converse gold-skarn deposit, along the Battle Mtn. – Eureka trend. It lies 47 km SW of the 20+ million ounces of gold Eocene Turquoise Ridge mine along the Getchell Trend.
- At Goldrun, a possible Eocene intrusive body, outlined in yellow in Figure 3, was identified by Ammetex from a ground magnetic survey. Follow-up geologic mapping identified aphyric intermediate dikes that are altered and host gold-bearing quartz veins. These fine-grained dikes are quite distinctive from the Cretaceous coarse-grained biotite quartz granites. The dikes are inferred to be associated with an underlying Eocene intrusive body. Soil survey results strongly suggest there may be both a gold-copper skarn deposit and a Carlin-type gold deposit at Goldrun.
- The magma body intruded into the southern end of a long narrow pull-apart basin (Golconda basin) that was a dilational jog in the Getchell Trend fault system (see Figure 3). This pull-apart basin was localized as an apical graben in the core of a S-plunging anticline, the axis of which is traced in green in Figure 4. Within the Carlin pull-apart basin, there is a strong association of gold deposits with apical graben faults that developed in the cores of Paleozoic to Mesozoic anticlines, an example being the 20 million ounces of gold Pipeline deposit.

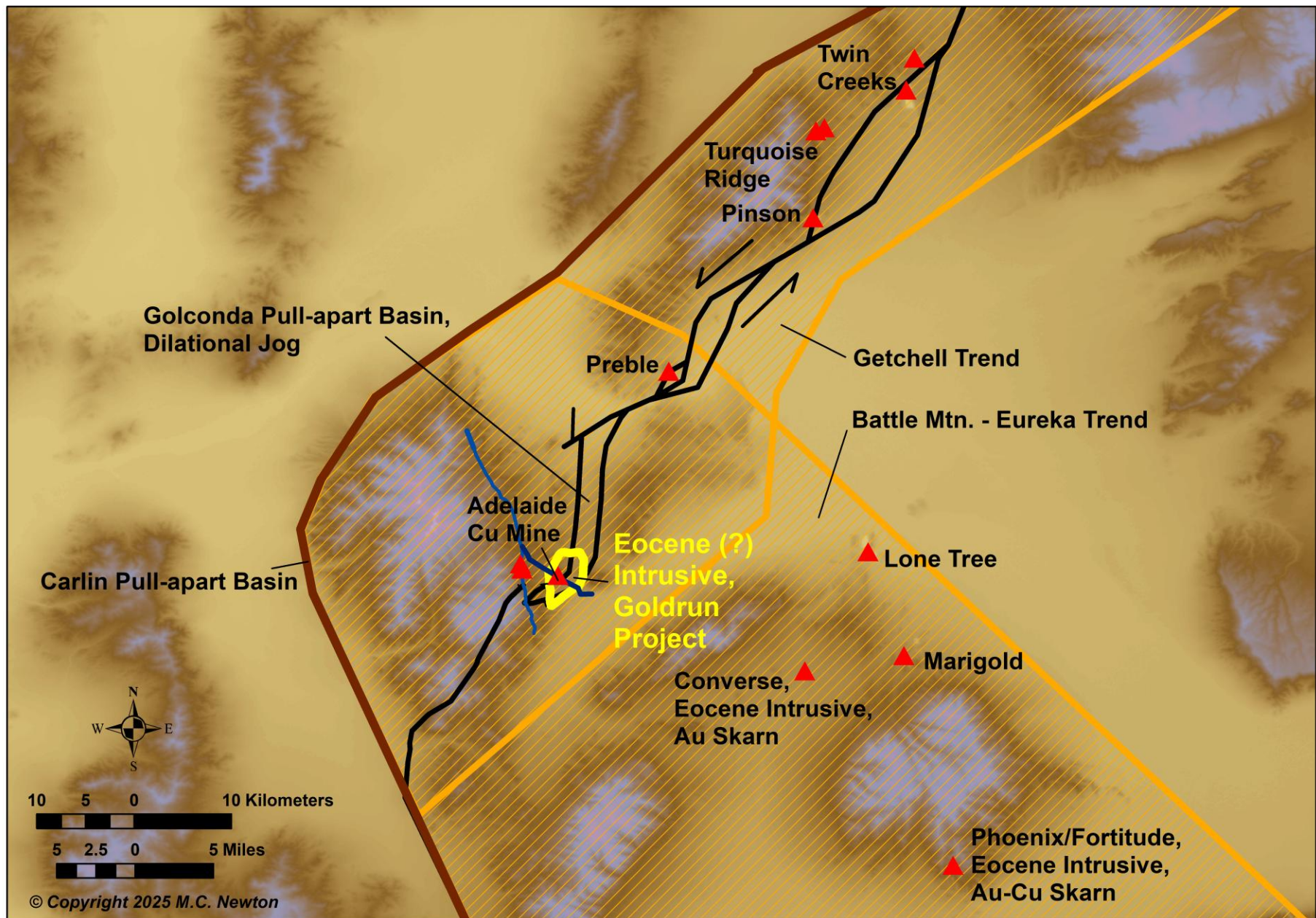


Figure 3. Getchell Trend fault dilatant jogs (black lines). Goldrun intrusive in south end of Golconda pull-apart basin (in yellow). Adelaide Cu mine is Cu skarn deposit.

- In Figure 4, mapped pluton exposures in the Goldrun project area, ranging in age from Jurassic to Tertiary, are shown in pink. The Adelaide district was the site of repeated igneous intrusion, typical of other intrusive centers with clusters of Eocene gold and copper deposits, such as nearby Battle Mountain and Getchell. A Cretaceous-aged molybdenum porphyry was discovered in the southern part of the Adelaide district in the 1970's.
- The Miocene-aged epithermal gold deposits of Adelaide Crown are located on the west side of the district (see Figure 4), and this is where almost all exploration in the district has been focused. To the east, the Adelaide Cu mine, (see Figure 4), is in Cu skarn.
- The Adelaide district is a multi-aged intrusive center with mineralization known to range from Cretaceous to Miocene age, yet no Eocene gold mineralization has yet been identified in this next “bead on the string” of major Eocene gold districts. The case is made here that there is an Eocene-aged intrusive body underlying the east side of the district, that was responsible for the Adelaide copper skarn deposit and for a gold-copper skarn system buried to the south of the Adelaide mine, similar to Converse and Phoenix, 20 to 40 km respectively along trend. The Eocene intrusion may also have fueled the hydrothermal formation of a Carlin-type gold deposit to the east.

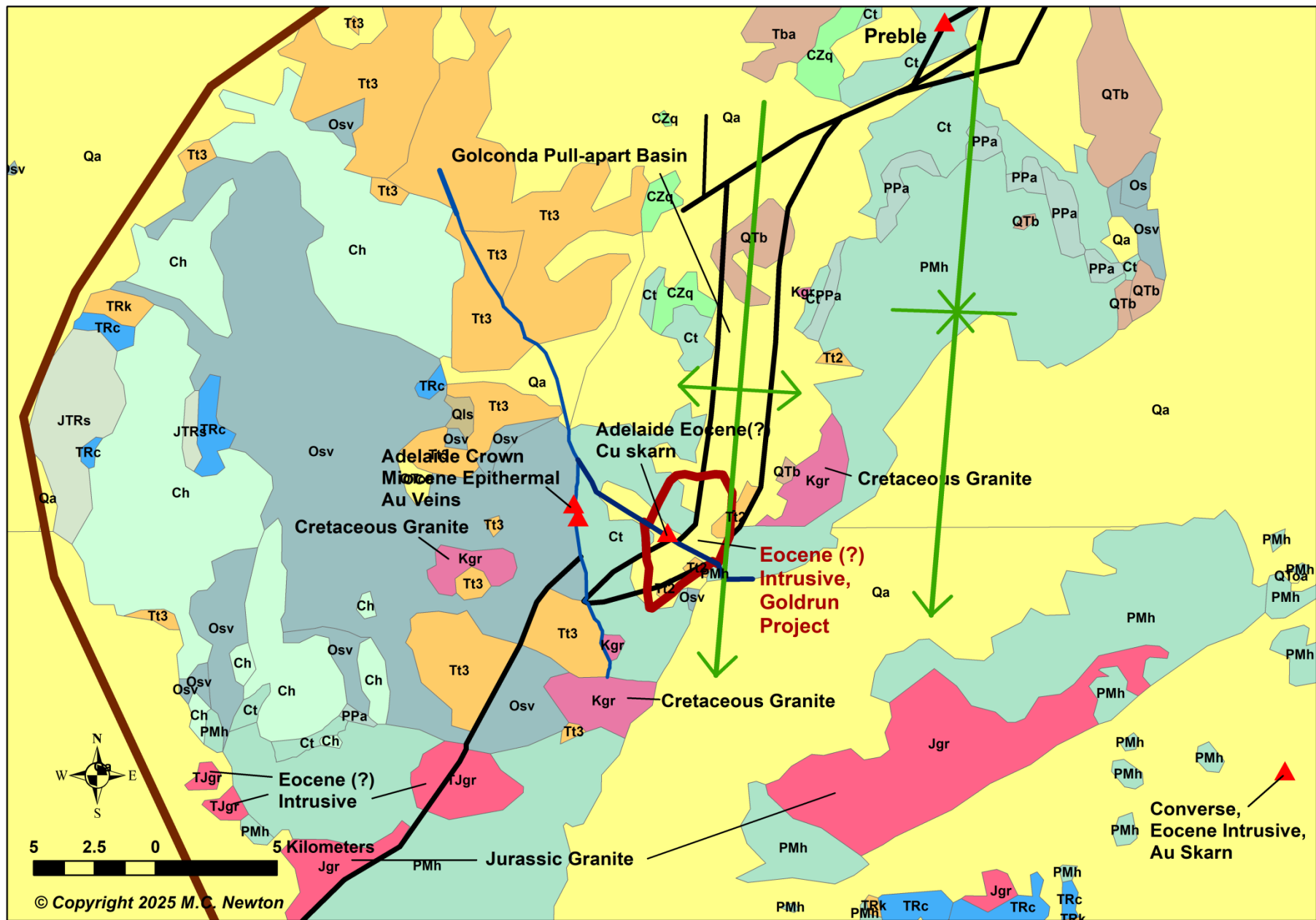


Figure 4. Geologic map showing Jurassic to Tertiary plutonic rocks in pink (after Stewart and Carlson, 1978). Within this intrusive center, an Eocene intrusive body is suggested at Goldrun, outlined in brown.

- Figure 5 shows the results of the ground magnetic survey. Brown colors denote magnetic highs, probably due to buried igneous rocks. White/purple colors adjacent to magnetic highs look like intense magnetic low zones, but they are probably dipolar artifacts and are really magnetic highs. The brown line outlines the magnetic highs and approximates the outline of what Cortus believes is an Eocene intrusive body. This age interpretation is reinforced by the location of the intrusion within an Eocene pull-apart basin and the association of gold mineralization with intermediate dikes, discussed above.
- Outlined in yellow in Figure 5 is a magnetic low zone showing in blue to green colors. This magnetic low is interpreted to be a zone of hydrothermal alteration within the intrusive, marks the exit area of such fluids and underlies and is laterally adjacent to possible skarn in the country rocks.

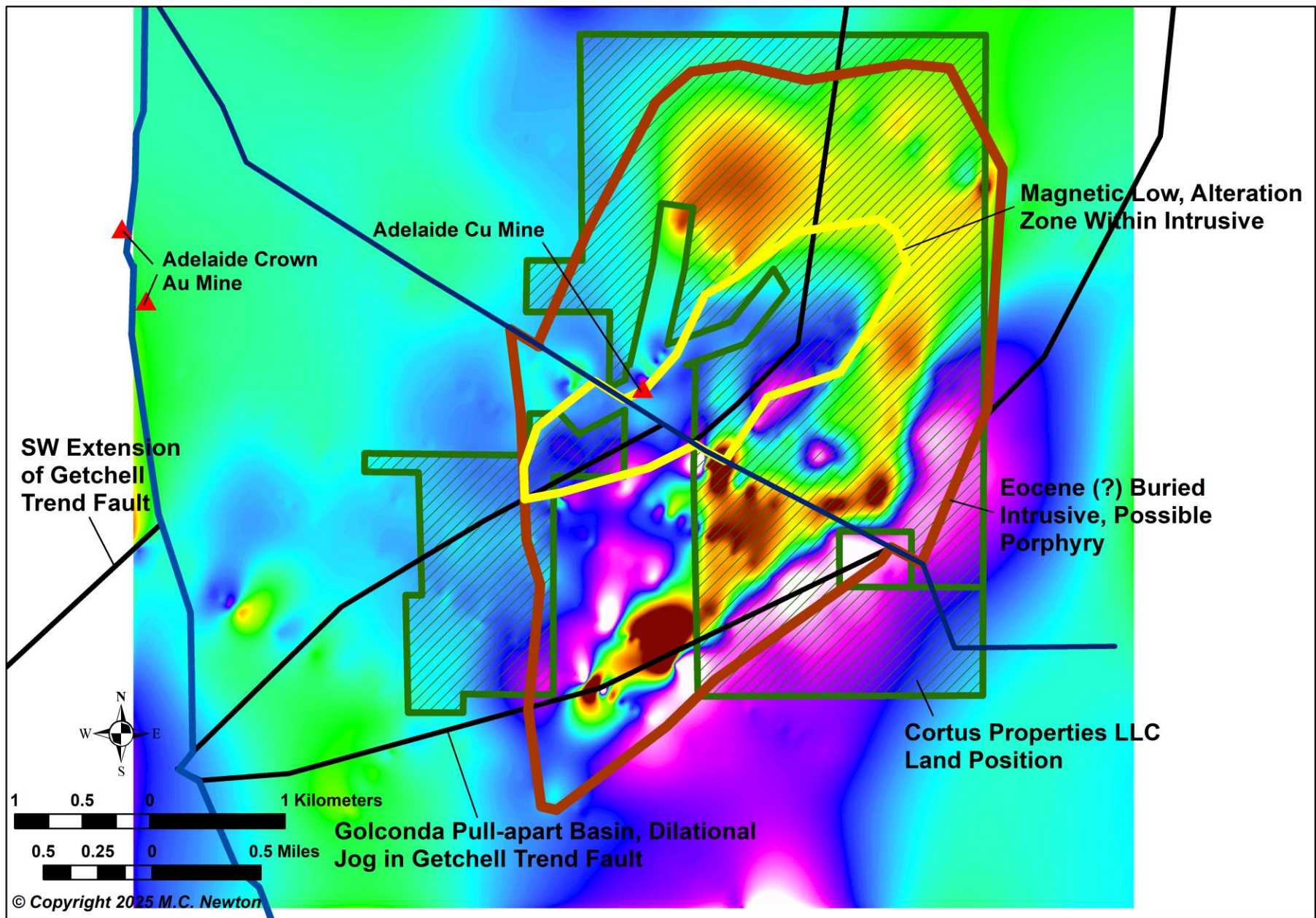


Figure 5. Ground total magnetic intensity reduced to pole. Brown and white/purple colors are magnetic highs, blues are magnetic lows. Yellow outline is inferred alteration zone.

- Figures 6-10 show results of Ammetex's reconnaissance soil geochemical survey. The lines were widely spaced, about 800 meters apart, and samples were taken about every 60 meters along the lines. The samples were analyzed by the Ionic Leach method at ALS Laboratories. The soil results were gridded by kriging - red and yellow colors denote higher values and blue and green colors indicate lower values. The absolute values are not as important as the patterns of highs and lows. The soil geochemical patterns may be either related to secondary processes such as weathering or to primary chemical zonation within a mineralized body. In a case like Goldrun, where the probable mineralized source is shallow and strongly primarily zoned, as is gold skarn, the soil geochemical patterns are mainly related to the underlying mineral zonation.

- Figure 6 shows selenium (Se) in soil. Note that there is a marked zone of concentrated Se highs confined to south of the Northwest fault. High Se values are common in high-temperature mineral assemblages, and here Se may be defining the area of most intense skarn hydrothermal activity. Note the strong Se highs in the inferred high temperature proximal skarn zone (outlined in purple) and along the inferred axis of hydrothermal fluid flow (blue arrow).

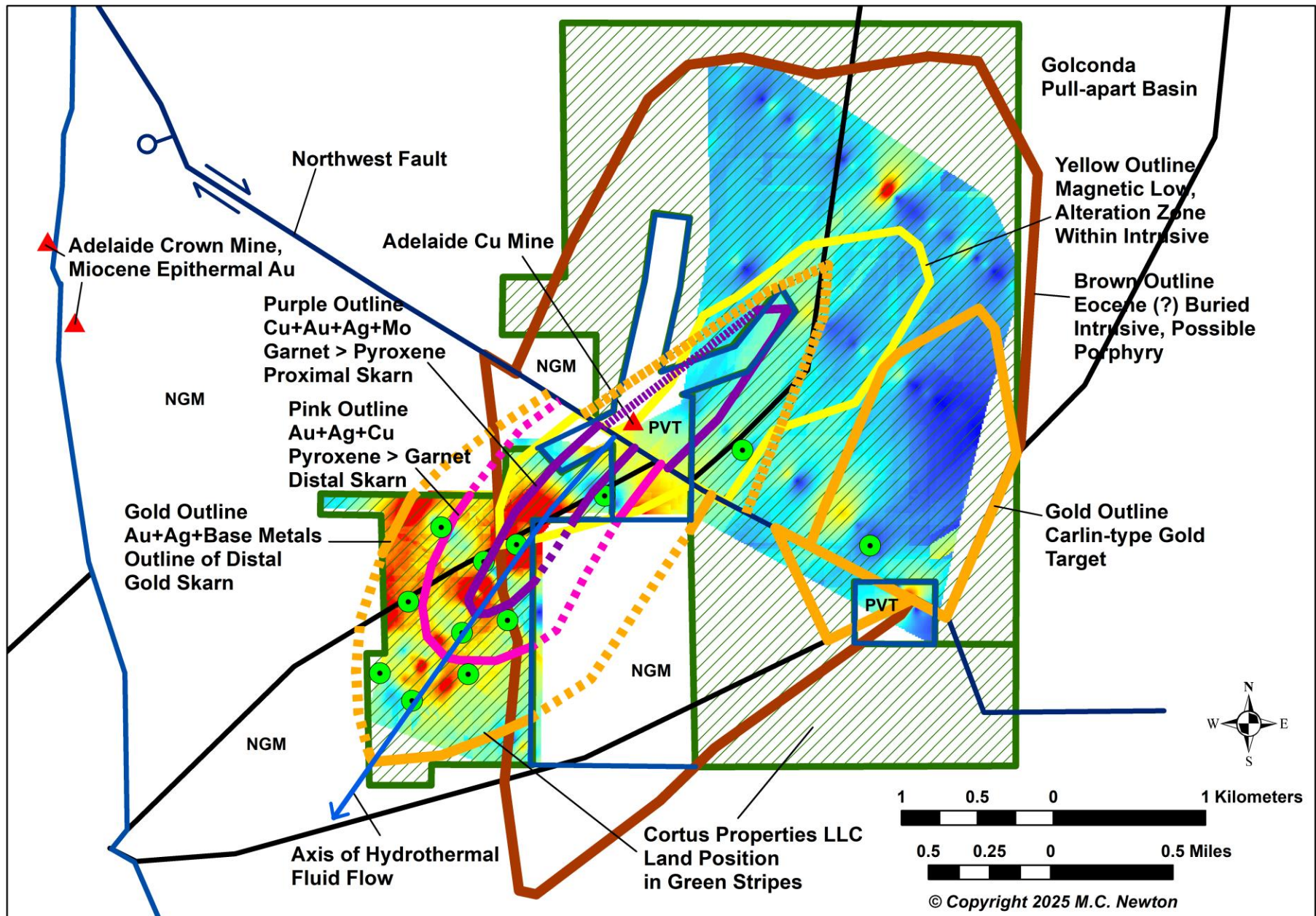


Figure 6. Selenium (Se) in soil. Se is associated with high-temperature minerals. Note cluster of high Se values over inferred proximal skarn zone (purple outline) and along the fluid flow axis.

- An indication of skarn is the zonation of rare earth elements that would be variably enriched in different alteration minerals. For example, in proximal, highest temperature skarn, garnet is commonly a dominant mineral. Farther away from the heat source, pyroxene becomes more dominant than garnet. Heavy rare earth elements (HREEs) are enriched in garnet relative to light rare earth elements (LREEs) and the reverse is true in pyroxenes. So, above a skarn system, soils may show variations in the ratio of LREEs to HREEs, and thereby demarcate proximal versus distal skarn.
- Figure 7 shows the distribution of the ratio LREE/HREE in soil. Along the southwestern edge of the inferred Eocene intrusive, a zone of low LREE/HREE, showing as blue colors, is outlined in purple and is interpreted to represent proximal skarn, high in garnet, and possibly high in copper +/- gold and silver.
- In Figure 7, the zone between the purple and pink outlines, shows high LREE/HREE in red and yellow colors, in stark contrast to the low values in blue colors in the proximal zone. This suggests there is more pyroxene present than garnet and that this zone is the inner zone of distal skarn. High gold grades may be present in this zone in a gold skarn system.

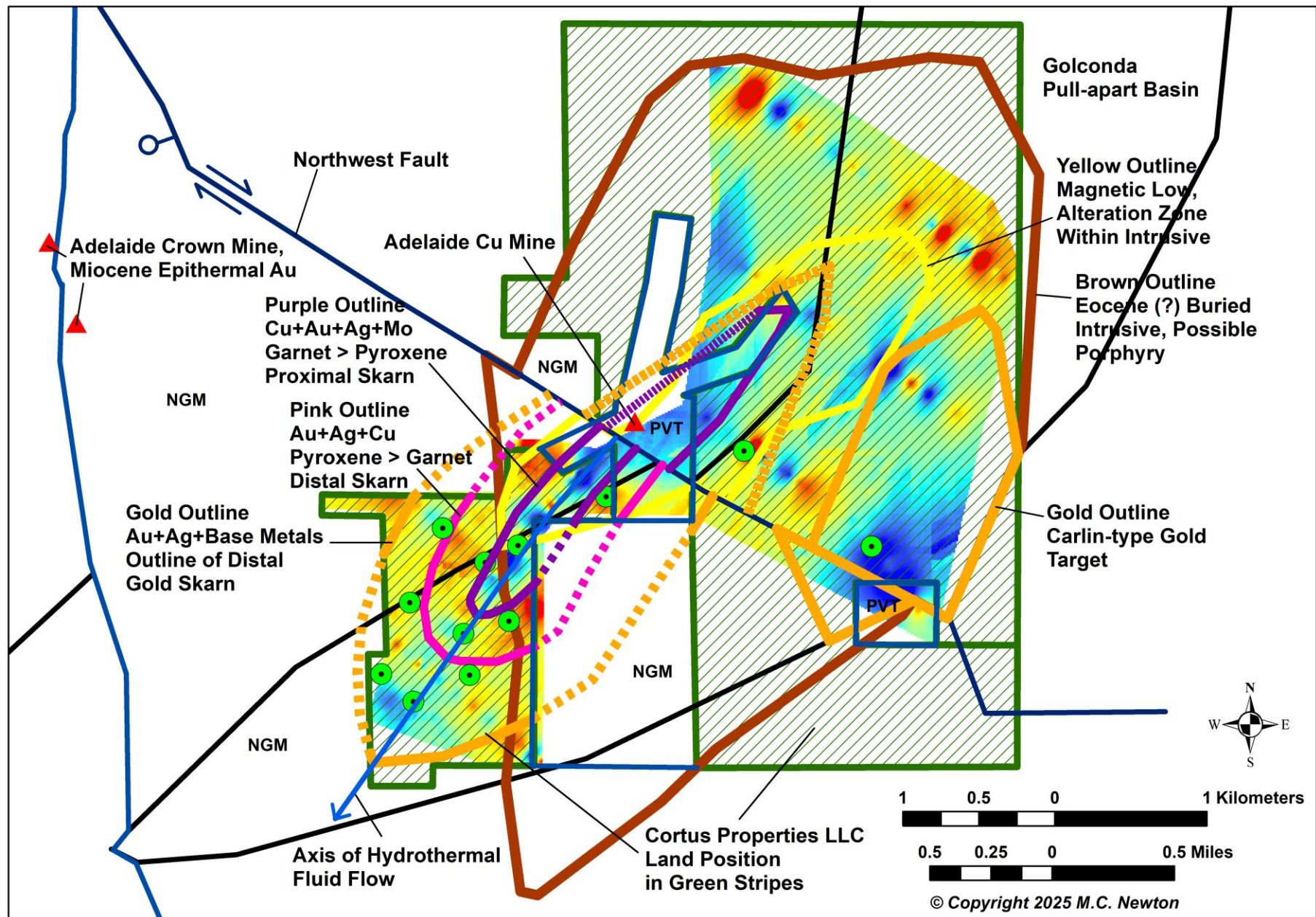


Figure 7. Ratio LREE/HREE in soil. This ratio is lower in garnet and higher in pyroxene. Note low values (in blue) in proximal skarn and higher values (red/yellow) between pink and purple lines.

- The pink line may also mark the boundary between inner and outer zones of distal skarn. Base metals + silver + gold are enriched in the outer zone as demonstrated by the base metal nickel (Ni), showing as red outside the pink line in Figure 8. The abundance of nickel is also an indication that this is a skarn system, as it is commonly found in skarns and porphyries and is rare in epithermal or Carlin-type gold deposits. For example, in Figure 8, the Au anomalies are outlined in gold and it is notable that Ni is high in the western anomaly but relatively low in the eastern anomaly that is a Carlin-type gold target.
- Note also that there are highs of nickel within the inferred proximal skarn zone (outlined in purple). Copper (Cu) (see Figure 9) and other base metals and silver (Ag) (see Figure 10) show similar enrichment in the inferred outer distal skarn zone and spot highs in the inner distal skarn and proximal skarn zones.
- In Figures 6-11, the blue arrow marks the inferred main path of hydrothermal fluids emanating from the intrusive. From this zone, fluids may have migrated to the west, up the northwest Golconda graben fault.

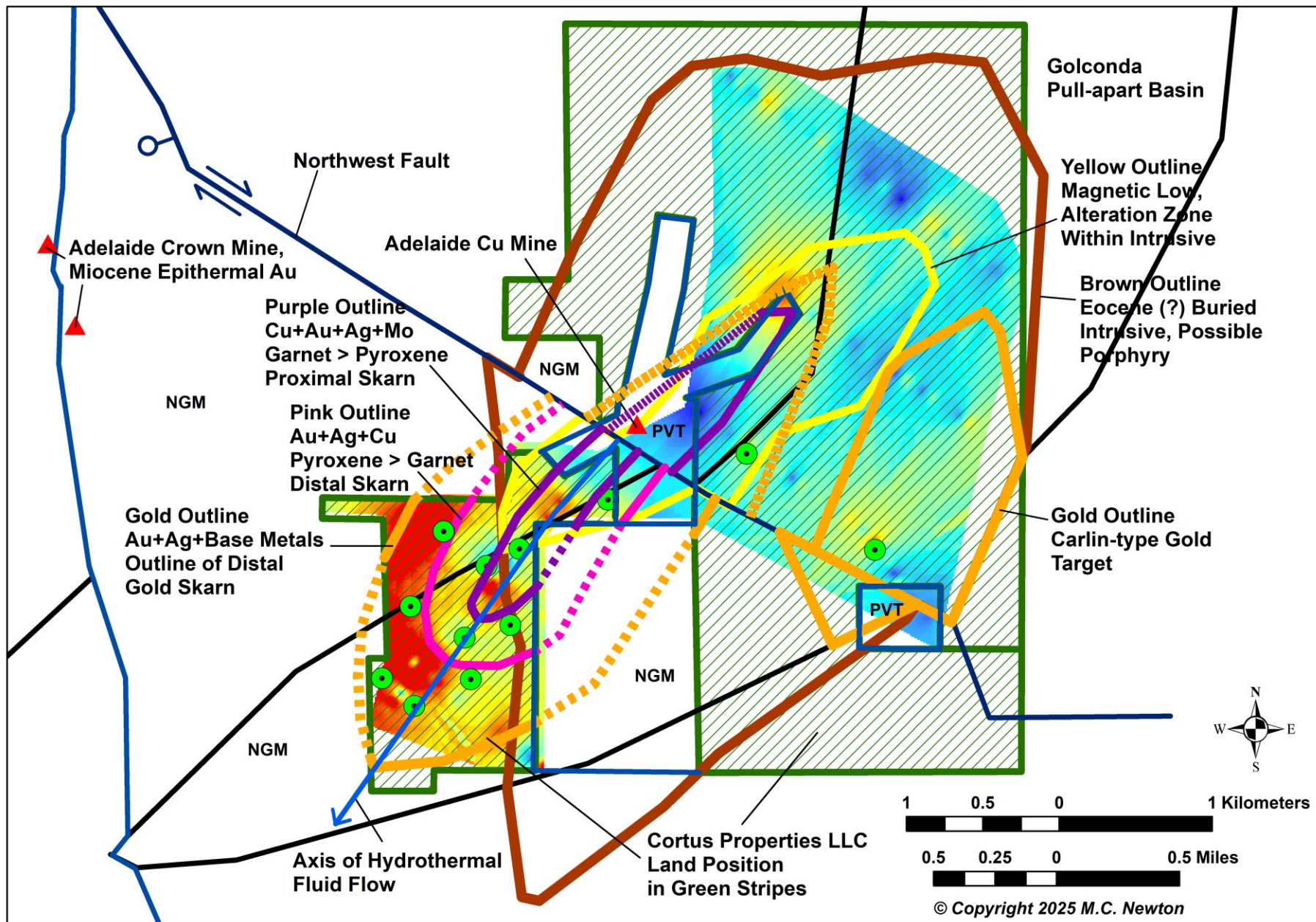


Figure 8. Nickel (Ni) in soil. Ni is associated with skarns and is showing a marked zone of high values (in red) outside the pink line, suggesting a base metal-rich outer zone of distal skarn.

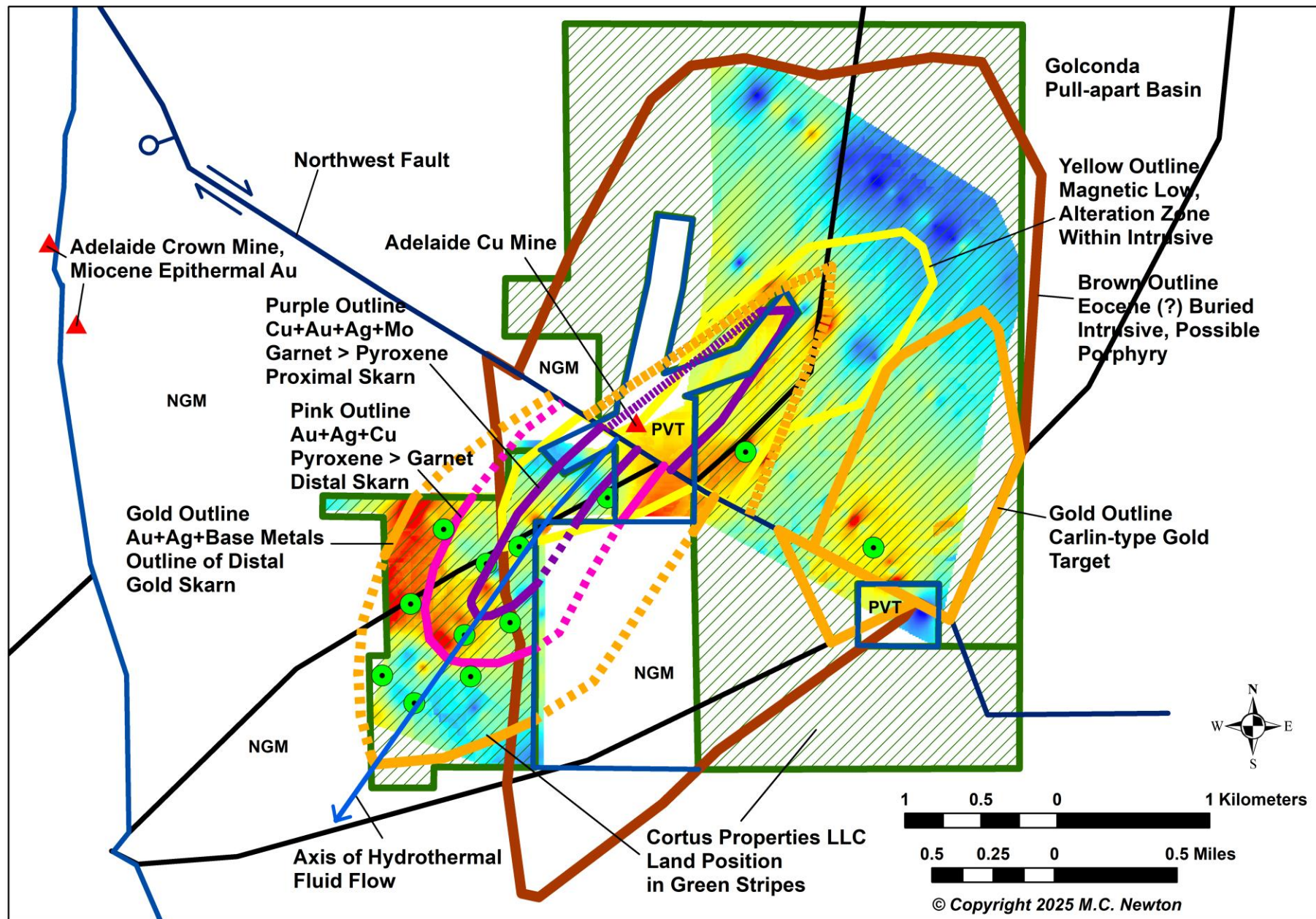


Figure 9. Copper (Cu) in soil. Cu is showing enrichment in soils over all three skarn zones outlined in figure. Note high zones outside pink line and cluster of highs along the fluid flow path (blue arrow).

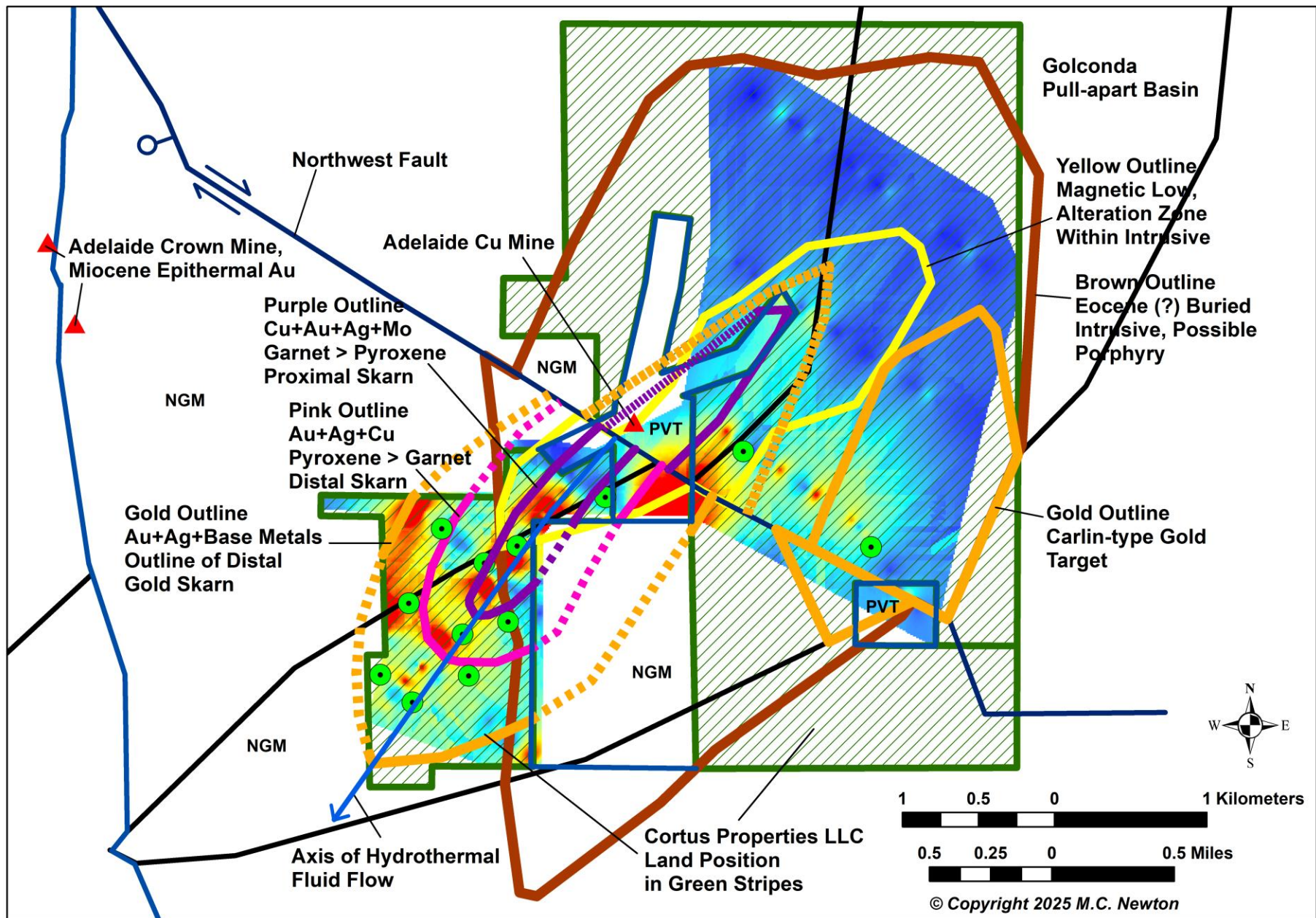


Figure 10. Silver (Ag) in soil. Ag is showing showing similar but stronger highs than Cu. Silver values in dump rock samples ran up to 400 g/t Ag in veins and the skarn is expected to be silver-rich.

- Gold (Au), shown in Figure 11, is showing highs in all three skarn zones and the gold line outlines the extent of western gold anomalies and, by inference, the extent of gold skarn.
- Likewise the gold line on the east side of Figure 11, outlines the eastern gold anomaly and the Carlin-type gold target, which appears to have been controlled by the intersection of the Northwest fault and the southeastern graben fault bounding the Golconda pull-apart basin.
- Similarly, the western geochemical anomaly and the magnetic low in the intrusive (alteration zone) are located at the intersection of the Northwest Fault and the northwestern graben border fault. The possible gold skarn deposit appears to be confined to the southwest (down-dropped) side of the Northwest Fault. This fault was probably active both before and after mineralization. Post-mineral movement resulted in both left-lateral separation along the fault and down-dropping of the south block. This suggests that the block south of the fault will have a nearly complete vertical section of skarn, buried beneath thin alluvium.
- The skarn zones suggested by the strong soil anomalies will be at shallow depth. The probable host rocks are in the Cambrian Preble Formation (see Figure 12) which contains organic-rich meta-mudstones throughout the formation and carbonate rocks in the middle part and is the host rock at the Carlin-type Preble gold deposit 23 km to the northeast.

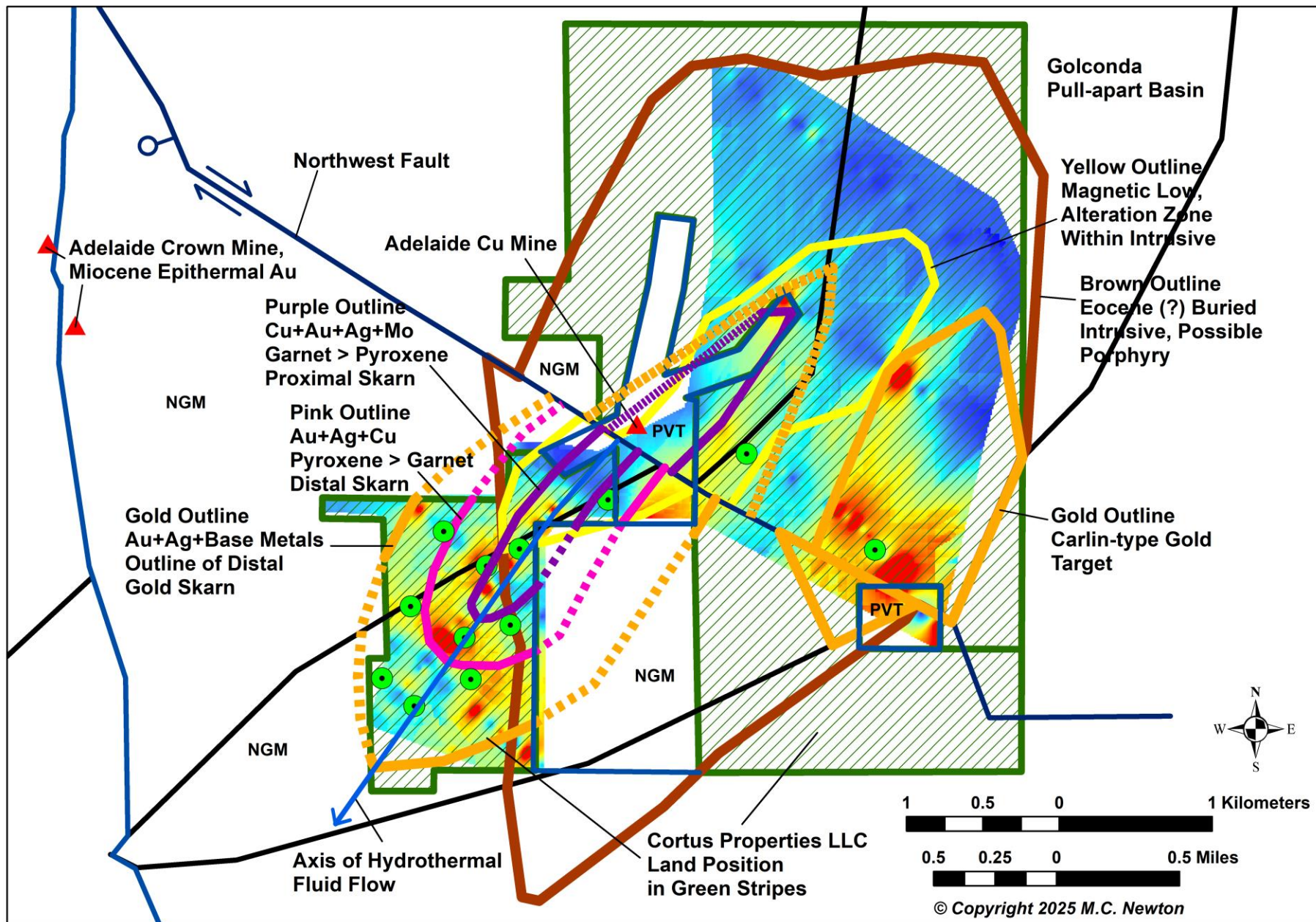


Figure 11. Gold (Au) in soil. Au is showing spot highs in all three skarn zones and strong highs in the eastern anomaly. Gold values ranged up to 2.6 g/t Au in vein dump rock samples.

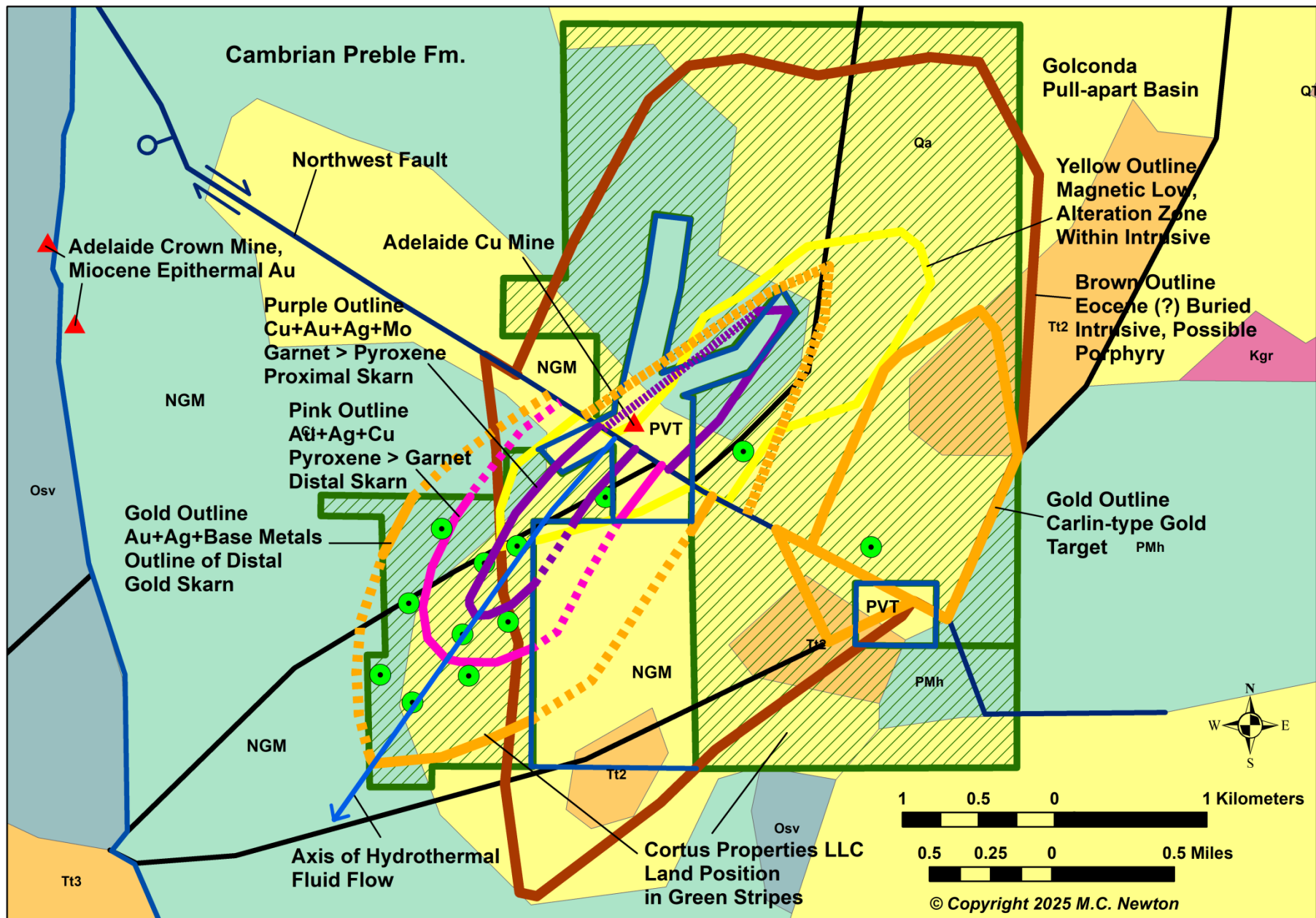


Figure 12. Geologic map of the Goldrun project area (after Stewart and Carlson, 1978), suggesting that the skarn target will be near surface and in the Preble Formation, a known gold deposit host.

- Cortus Properties LLC is owned 51% by Metalero Mining Inc. and 49% by American Metals Exploration Corp. Cortus has 160 unpatented mining claims, totaling approximately 3,000 acres (1,200 hectares), in the green striped area in the previous figures. There are no other stakeholders and no underlying royalties.
- Adjacent patented claims around the Adelaide mine can be purchased. Any other unpatented claims or private ground in the area, that are not controlled by Nevada Gold Mines (NGM), can also be purchased. Except for the NGM property, Cortus will have most of the entire Eocene intrusive body, Au-Ag-Cu skarn and Carlin-type Au targets covered.
- Figures 6-12 show 12 planned drill holes in green circles. There were only a few historical drill holes, in the vicinity of the Adelaide mine, that went no more than 300 feet deep. Neither the gold skarn target or the Carlin-type gold target have ever been drill tested. The project is drill-ready, and Cortus is actively looking for partners to share in the maiden drilling program.

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References:

- Newton, M.C., III, 2020, Cenozoic tectonic evolution of the Great Basin: in Kautz, F.R. and Pennell, W.M., eds.: Vision for Discovery: Geology and Ore Deposits of the Great Basin, Geological Society of Nevada 2020 Symposium Proceedings, p. 1301-1311.
- Stewart, J.H. and Carlson, J.E., 1978, Geologic Map of Nevada, Digital Version 2003: U.S. Geological Survey, Open File Report 03-66, 33 p.