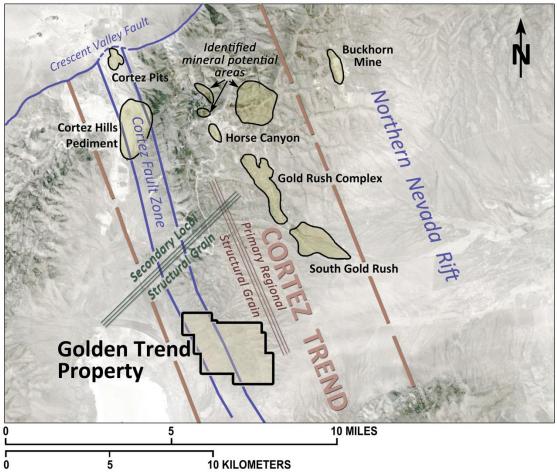
# Golden Trend Project

A rare opportunity to explore a large, highly prospective, land package in the shadow of Barrick's operating and developing mines in the Cortez District of Nevada.

The <u>Golden Trend Project</u> consists of 111 unpatented mining claims totaling 2,220 acres. The project is in the heart of the developing Cortez district and diamond drilling has intercepted mineralized host rocks similar to those at the nearby Cortez Hills and Gold Rush deposits that contain ~30 million drilled ounces of gold. Excellent drill targets have been identified.



This figure shows the relationship between the footprints of Barrick's ore bodies and the Golden Trend Property.

# Compare this district to the Carlin Trend of 30 years ago.

Available for lease, option, JV or purchase.

For more information contact:
David R. Shaddrick, President
Rubicon Resources Inc. (a private Nevada Corporation)
(775) 746-2071 (dshaddrick@aol.com)

# The Golden Trend Project

Of

Rubicon Resources Inc. (a private Nevada Corporation)

The critical points about the Golden Trend Project are:

- This is brownfields exploration that will shortly be <u>headframe</u> exploration as Barrick continues to develop this major district
- A mineral system has been documented at Golden Trend and mineralized lower plate host rocks have been intercepted in drilling
- Carlin type districts evolve over years and it is clear that Golden Trend is in the heart of this district

The following is an update of a paper published by the Geological Society of Nevada in 2004 (Shaddrick, 2004). Minor changes have been made to the original paper to reflect a change in ownership. The basic data and interpretations remain valid today.

Subsequent to the publication of the paper, J-Pacific Gold Ltd. (now Sona Resources Corp.) drilled three holes (two in 2004 and one in 2005 – Map pg. 3) in an attempt to test the ideas presented in the report. The holes are located on the following geology map and the work is thoroughly documented in two NI 43-101 compliant reports authored by Dana Durgin (QP), the project geologist. They are posted on Sedar under filings by Sona Resources Corp.

The first hole (Core -2,000 ft.) was an attempt to drill one of the *upthrown* blocks discussed in the attached paper. It was drilled near one of the high angle structures and, unfortunately, deflected into the structure and then northward into a downthrown block. It stayed in fault gouge and siliceous upper plate rocks for its entire depth.

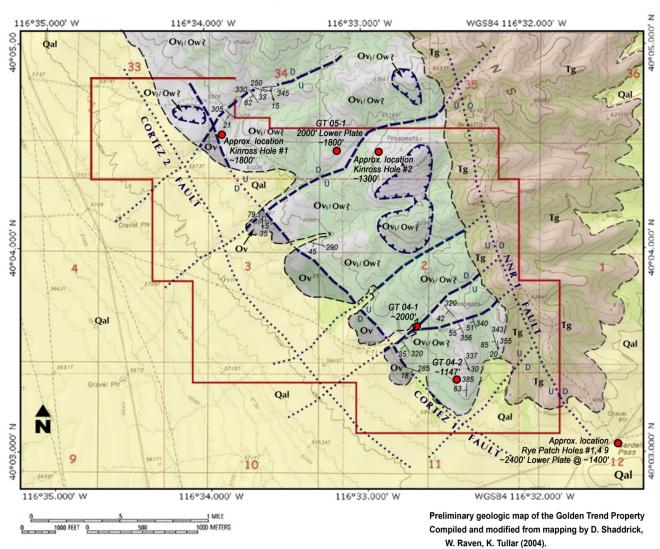
The second hole (RCR – 1147 ft.) was sited on what was interpreted as a *upthrown* block in an area of surface alteration and anomalous geochemistry. The hole encountered strongly sheared and broken black shales and siliceous siltstones and was lost at about 1147 ft.

The third hole (Core – 2,000 ft.) was drilled the following year. It was sited near the northern boundary of the property, *again* on what was interpreted as a *downthrown* block. The hole penetrated a thick sequence shales and siliceous siltstones interpreted to be Ordovician Vinini Formation and, below about 1800 feet, a sequence of locally brecciated calcareous siltstones and silty limestones as well as an igneous breccia with a calcite matrix. Recently (2015) the calcareous siltstones and silty limestones have, on the basis of fossil evidence, been demonstrated to be Devonian age (Harry Cook, personal communication). The rocks are interpreted to be the same lower plate stratigraphic interval hosting the ore deposits at the Gold Rush and Cortez Hills Mines (*total* >30 million ounce Au resource) a few miles to the North and East. These rocks are geochemically anomalous in arsenic, barium, zinc and antimony. The upper part of the hole (185-200 feet) cut a zone of gold mineralization with three 5 foot samples averaging 0.618 grams per ton gold.

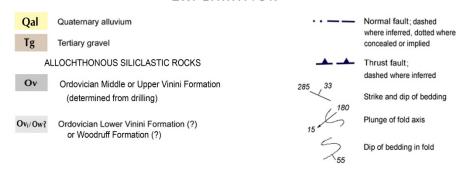
The premise that lower plate rocks are at relatively shallow depth in interpreted upthrown blocks has been demonstrated.

All data, core, cuttings and pulps are available for review. Contact: <a href="mailto:DShaddrick@aol.com">DShaddrick@aol.com</a>.

# **Golden Trend Geology and Deep Drill Hole Locations**



#### EXPLANATION



# The Golden Trend Project

By

David R. Shaddrick Shaddrick & Associates, Reno, Nevada, USA 2004 (updated 2015)

#### INTRODUCTION

The Golden Trend Project is an early-stage exploration project located in Eureka County, Nevada, in the heart of the Battle Mountain – Eureka Trend (Fig. 1). The descriptions and illustrations of this work are, in large part, interpretive and represent a working hypothesis that will be tested by drilling and additional surface work where appropriate.

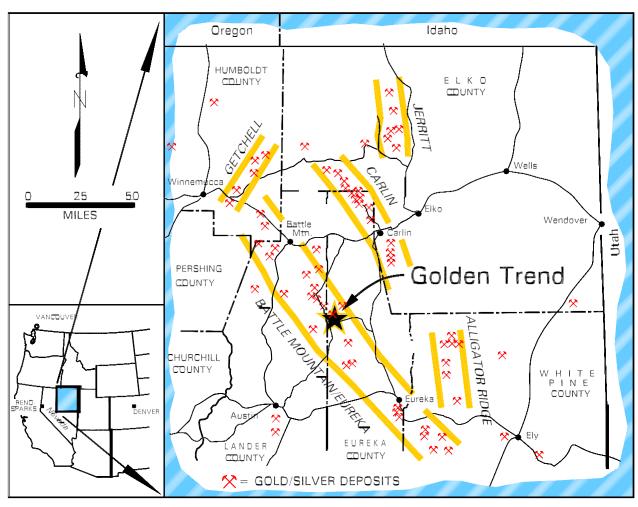


Figure 1. Golden Trend location map and Northeastern Nevada index showing the distribution of known gold and silver deposits and the major gold trends. Compiled from Bonham (1991) and Shaddrick (unpublished data).

The property covers parts of Sections 1, 2, 3, 10, 11 and 12 of T25N, R48E, and Sections 33, 34, 35 and 36 of T26 N, R48E, Mount Diablo Base and Meridian (MDBM). It consists of 111 unpatented mining claims (Fig. 2) 100% owned by Rubicon Resources Inc., a private Nevada corporation.

Early prospecting and exploration activity within the project area has been limited. There is

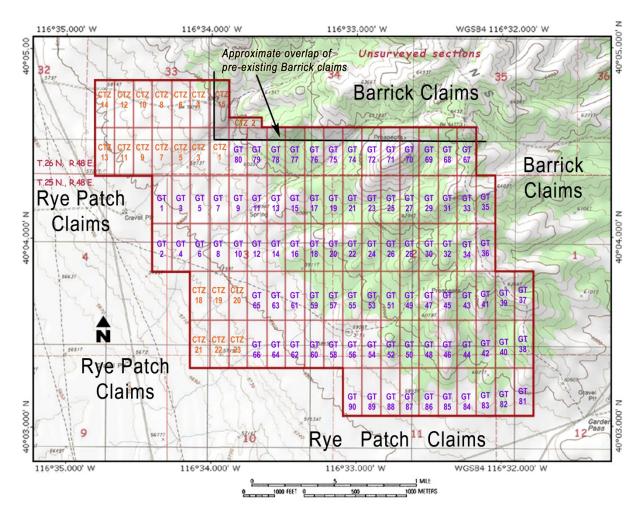


Figure 2. Golden Trend Project property map.

evidence on the ground of precious metal prospecting dating to the early 1900's and numerous barite prospects dating to the 1950's and 1960's. A number of pre 1980 drill holes have been located but no data is available concerning them. Starting in the early 1980's, drilling, trenching, geophysics, geochemistry and geologic mapping have been completed on all or part of the property by Noranda, Rocket Resources, and Claimstaker Resources Ltd/J-Pacific Gold Inc. An essentially complete record of this work has been preserved.

### PROJECT GEOLOGY

Golden trend occupies much of what can be considered a micro terrane bounded by the Cortez fault system on the West, the Northern Nevada Rift ("NNR") on the East, the outcrop of the Roberts Mountain Thrust ("RMT") on the North and an indistinct transition zone to the south of Garden Gate Pass. Within this micro terrane stratigraphic and structural relationships in the exposed upper plate rocks are relatively consistent and can be projected from one place to another. Deformation styles and structural fabrics within the siliciclastic rocks appear to be relatively homogenous and penetrative across the project area.

Although considerable time, by several workers, has been spent mapping the project area, review and field verification indicates that it is incomplete and in some cases poorly done. There is considerably more information to be derived from a proper job of geologic mapping. The work of Shaddrick (1994) is preliminary and only covers a portion of the project area. Raven (1994) provided lithologic descriptions at grid points over the majority of the project area but made no stratigraphic or structural observations/interpretations. Many of his rock types are incorrectly given broad extent and importance. The work of Tullar and Chipp (1998) is relatively complete and accurate. There is, however, no interpretation associated with the work. The compilation map (Fig. 3) draws on all three works as well as unpublished regional data developed by the author. This is a preliminary interpretation map only and would certainly evolve with further work.

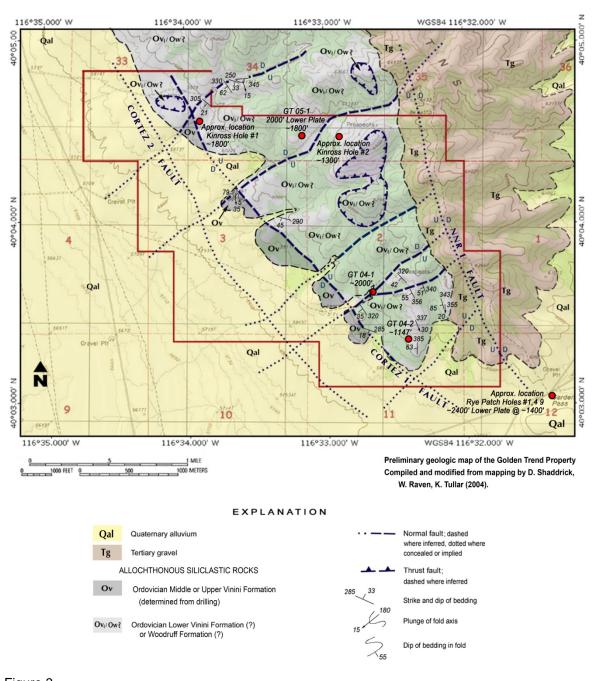


Figure 3.

### **STRATIGRAPHY**

The detailed stratigraphy which underlies the Golden Trend area is not well known. The project lies within a broad transition zone between better known, but differing, stratigraphic sections to the Northwest and Southeast and correlations between these areas are ambiguous at best (Fig. 4). Extensive work has been done by exploration companies but this data is not available to the public. The following discussion relies heavily on the work of others, numerous personal communications with local experts and limited mapping in the project area.

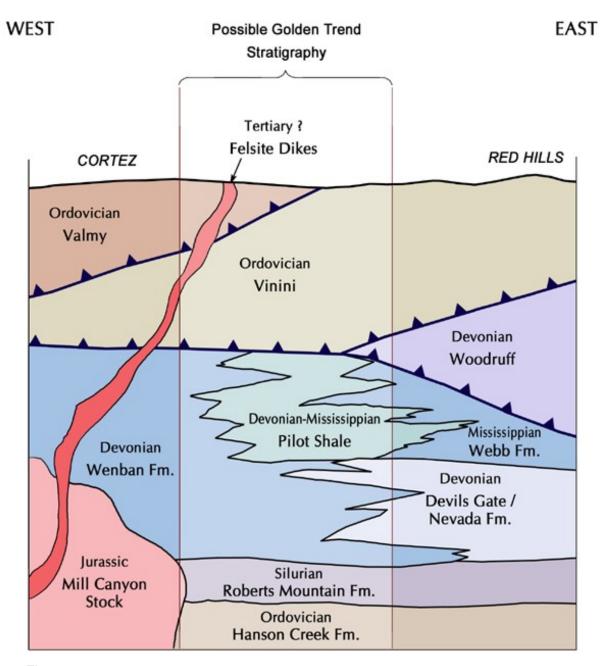


Figure 4. Simplified illustration of expected stratigraphy at Golden Trend.

Exposed rocks consist of Western Assemblage siliciclastic lithologies including siltstones, shales, argillites, quartzites and limestones with locally abundant black chert. The transition from siliceous sedimentary rocks to chert is often gradational and replacement textures, although rare, do occur. It is likely that much of the chert is diagenetic. Rare, but diagnostic, phosphatic nodules occur locally. Drill logs and cuttings piles from old drill holes west of the inferred Cortez 1 fault reveal a thick sequence (up to 600 feet) of black siliceous siltstones with minor black chert, diagnostic green chert and locally abundant fine grained pyrite.

The several klippen shown on Figure 3 are pink to tan, fine grained, well sorted quartzites that appear to be in structural contact with the underlying siliceous shales but, other than the nearly flat orientation, nothing is known of the character of this structure.

These rocks have been assigned to the Ordovician Vinini Formation (Gilluly and Masursky, 1965; Roberts et al., 1967; Stuart and Carlson, 1976). Both Roberts et al. (1967) and Gilluly and Masursky (1965) provide descriptions of the Vinini Formation in the area. The base of the Vinini is nowhere exposed and in all areas it structurally overlies other units most commonly the carbonate rocks of the RMT lower plate. The top of the formation is also nowhere exposed and in all areas is either a structural or erosional surface. Descriptions of the lowermost exposed sections of the formation correlate well with the rocks exposed between the Cortez 1 and NNR 1 faults at Golden Trend. The presence of phosphatic nodules, in particular, indicates that these rocks may be Lower Vinini Formation. On the other hand, the assemblage of rocks found in drill cuttings and described in old drill logs to the West of the Cortez 1 fault is consistent with descriptions of the Middle and Upper sections of the Vinini Formation. The lack of quartzites and limestones as well as the occurrence of green chert are considered diagnostic.

An alternative interpretation has been presented by Mathewson (2004, Personal Communication). It is possible that much of the section exposed between the Cortez 1 and NNR 1 faults is, in fact, the Upper Ordovician/Lower Devonian Woodruff Formation. The exposed rocks at Golden Trend do, indeed, match descriptions of portions of the Woodruff Formation. The woodruff commonly is in structural contact with the overlying Vinini Formation and rests on the RMT.

#### **IGNEOUS ROCKS**

Igneous rocks are rare on the Golden Trend property itself and the minor occurrences have received little attention. They are limited to a few small dikes and sills ranging from felsite to diabase. Several trenches and drill holes have been focused on these dikes during earlier exploration programs. It has been inferred that, as in other areas, these dikes occupy through going structures. Some of the igneous rocks are altered (mostly argilization) and anomalous levels of gold and arsenic have been encountered in drilling.

### STRUCTURAL ARCHITECTURE

In broad terms, the structural architecture of the golden trend project is made up of four major elements, the Cortez fault system (down to the west) which bounds the western part of the project area, the graben faults (down to the east) of the Northern Nevada Rift which bound the Eastern part of the project area, the RMT, which is not exposed on the property but can be reasonably inferred to occur at some depth below the surface, and a series of northeasterly striking high angle normal and reverse faults. The project area is, therefore, a northwesterly trending horst broken into up-thrown and down-thrown polygonal blocks by northeasterly striking fault sets. Within this complex horst the exposed siliciclastic rocks of the allocthon generally strike northwesterly and dip westerly at 20 to 50 degrees. These rocks have been deformed into a number of recumbent folds,

small thrusts (ramps?) and associated breccias subparallel to the observed bedding. These structures are interpreted to be related to the transport of the allocthon.

The geologic map (Fig. 3) indicates two elements of the Cortez fault system. The Cortez 1 Fault has been exposed in trenching and is expressed as a topographic break along much of the western edge of outcrop. Old drill logs indicate a gravel cover of from 5 to 35 feet overlying inferred Middle or Upper Vinini Formation rocks as described above which yields a down-to-thewest displacement for this fault. The western-most quartzite klippe, lies west of the Cortez 1 fault and north of the northern-most cross fault. The elevation of this klippe is approximately 400 feet lower than the others indicating an approximate magnitude for the combined displacement on the cross fault and the Cortez 1 fault.

The Cortez 2 fault is defined by a rapid increase of gravel thickness of up to 500 feet as indicated by old drilling. This would be the offset of the last movement but earlier offsets may have been considerably larger. These offsets on the Cortez faults are interpreted to be essentially vertical, late extension. This yields a combined displacement on the order of at least 800 to 1000 feet to the west of Golden Trend.

The NNR 1 Fault (Fig. 3) has been mapped by Gilluly and Masursky (1965) and is also indicated in old drill logs as well as a geophysical survey East of the property. The details of this structure have not been worked out.

The northeasterly striking cross faults are not exposed in outcrop. Enough evidence is available, however, to clearly indicate their existence and, in some cases, their geometry and offset directions. All of the cross faults are inferred from topographic linears and mapped offsets in several siliceous and cherty beds that occur within the exposed lithologic assemblage. The sense of movement on these structures is also inferred from these lithologic offsets. The apparent straight traces of these structures imply a near vertical dip and the offsets are interpreted to be essentially vertical.

The ductile structures within the exposed rocks of the project area consist of a series of overturned folds and associated sole faults as well as many subsidiary small folds, lineations and cleavages. One such set is well exposed just north of the property boundary (Fig. 5). The recumbent folds verge eastward and plunge at gentle angles to the south. Subsidiary folds also plunge southward. Widely distributed, scab-like, outcrops of silicified, clast-supported breccia are interpreted to be the soles of eroded recumbent folds. The fragments in these breccias are made up entirely of lithologies identical to the enclosing rocks.

#### **MINERALIZATION**

Two styles of mineralization are exposed on the property. The first consists of fracture and fault fillings of black clay gouge and minor quartz veining with minor malachite, azurite and iron oxides after pyrite and possibly chalcopyrite. This style is associated with elements of the Cortez fault system. It has been exposed in trenching and provides geochemically anomalous values of copper, arsenic, lead and zinc. The second is vein and locally bedded barite which is exposed in pits, trenches and shallow shafts on the central and southern part of the property. Minor malachite and azurite occur locally with this style of mineralization but iron oxides are limited. This barite is interpreted to be hydrothermal. Most of the gold, arsenic and mercury anomalies identified by soil geochemistry appear associated with this type of mineralization (Figs. 6, 7 and 8). Considerably more geochemical work is planned for the next phase of exploration.



Figure 5. Recumbent folds looking south. Heavy lines indicate probable sole faults. Arrows indicate the traces of the axial planes

#### MODEL

The object of the exploration program at Golden Trend is the discovery of a world class "Carlin-Type" gold deposit similar to Pipeline or Cortez Hills – or one of the high grade feeders similar to the Meikle mine. Anything else can be expected to be small and should be considered no more than a target of opportunity.

The essential first order elements of the "Carlin Type" model are the presence of an amenable host rock, the appropriate structural setting to allow access for hydrothermal fluids and the presence of a metal bearing hydrothermal system.

At Golden Trend, the exploration model (Fig. 9) envisions ore grade mineralization as replacements of carbonate rocks beneath the RMT. Mineralization will be focused on high angle structures spatially related to the strong north-northwest structural grain of the region as well as northeasterly striking cross structures. These structures will be locally mineralized and replacement ores will extend from them into the reactive rocks of the lower plate. They will exhibit relatively weak alteration and geochemical signatures at short distances from ore and extremely subtle signatures, focused on through going structures in the unreactive rocks of the upper plate.

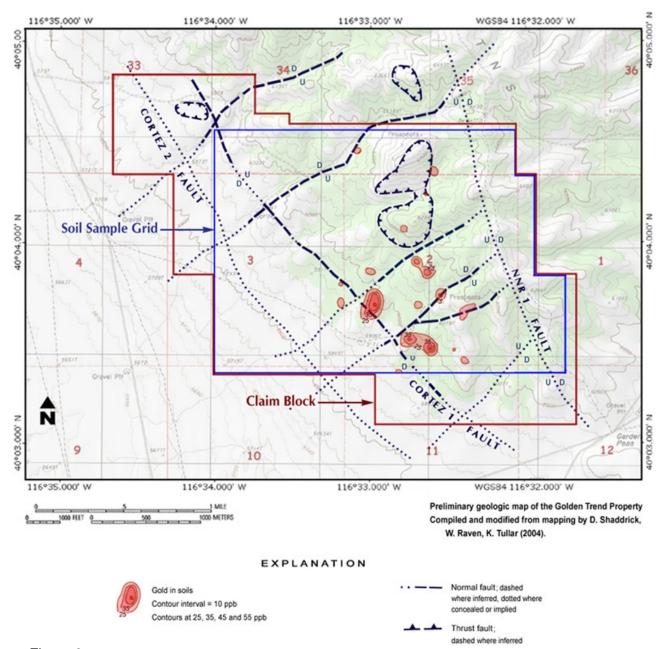


Figure 6. Gold in soils.

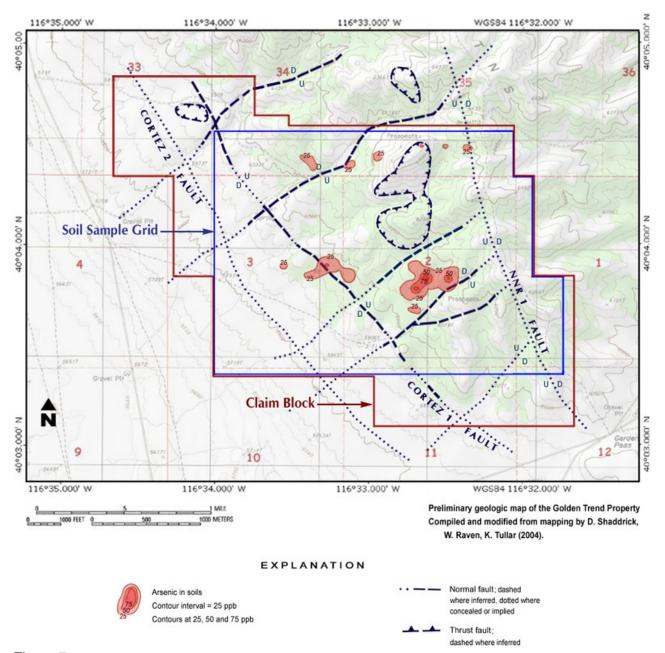


Figure 7. Arsenic in soils.

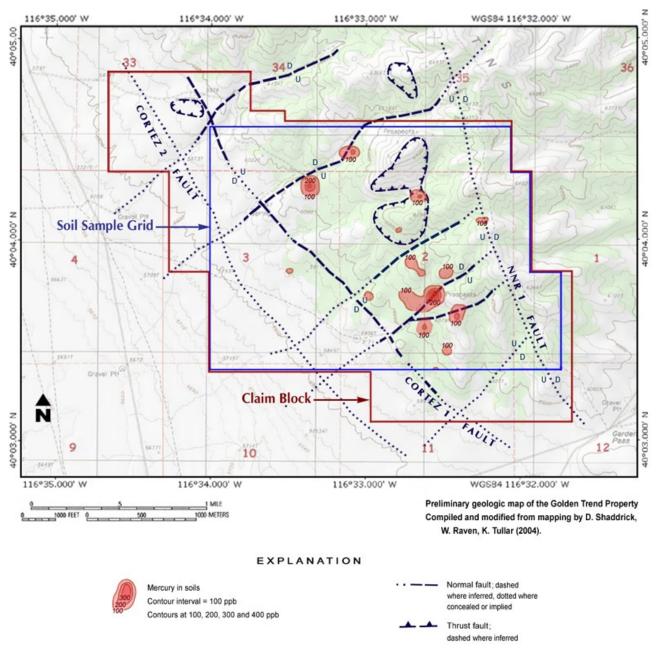


Figure 8. Mercury in soils.

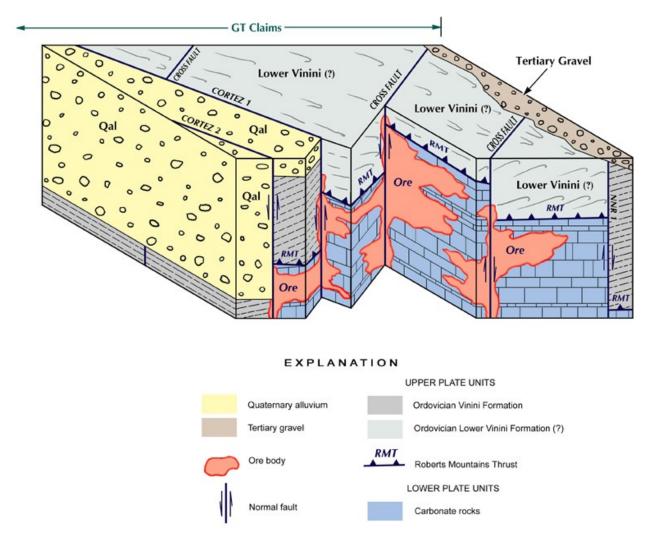


Figure 9. Generalized "cartoon" of the Golden Trend exploration model. Not to scale.

### TARGETING STRATEGY

The initial location of the claims was based on the observed structural trends from Cortez and Horse Canyon. The original thought was that this "structural corridor" might provide access for mineralizing fluids to amenable host rocks in the lower plate of the RMT. It was thought that the RMT might be at a shallow depth below the property. This was based on two observations from published geologic mapping. First, that the outcrop pattern of the RMT a few thousand feet to the north seemed to reflect that of a slightly folded surface gently plunging to the south under the property. Second, that the property represented a horst bounded by high angle faults on the east and west making it a stratigraphic, as well as structural high relative to the surrounding area.

The observations, interpretations and conclusions regarding the three elements of a "Carlin Type" model with respect to Golden Trend are summarized below.

*First*, is there a structural framework adequate to deliver metal bearing fluids to potential depositional sites?

- 1. The Cortez fault system, which has been interpreted to be an offset of the "Pipeline Corridor" structures (McCormak and Hays, 1996), has been projected through the property based on published mapping and previous drilling. It has been exposed in trenching.
- 2. Analysis of topographic linears coupled with geologic mapping indicates the presence of high angle cross structures.

This "plumbing system" (Fig. 3) would clearly be adequate for the movement of a considerable volume of hydrothermal fluid.

**Second**, is there evidence of a metal bearing hydrothermal system?

- 1. Iron oxides after pyrite and possibly chalcopyrite as well as malachite and azurite are exposed in several areas of the property.
- 2. One of the trenches from an earlier exploration program exposed a part of the Cortez fault system which was filled with black clay gouge, iron oxides and limited silica replacement of the wall rock.
- 3. The barite occurrences are interpreted to be hydrothermal in origin and are associated with the occurrence of malachite and azurite as well as argillic alteration of the surrounding rock.
- 4. Soil sampling has returned locally anomalous values in gold, arsenic and mercury (Figs. 6, 7 & 8).
- 5. Drilling on some of the small felsic dikes exposed on the property returned strongly anomalous arsenic values as well as weakly anomalous gold values.

Clearly, metal bearing hydrothermal solutions have moved along some of the structures and through some of the rocks exposed on the property. Further, the soil geochemistry indicates that this hydrothermal system is a gold bearing system.

**Third**, how deep is the lower plate? Several lines of evidence support the idea that the RMT is at relatively shallow depths at Golden Trend:

1. The mapped outcrop pattern of the RMT as mentioned above.

From this pattern it is clear that the trace across the ridge North of the property roughly parallels topography implying a shallow dip. Actually, it appears that the thrust is a broadly curviplanar surface, probably gently folded by the intrusion of the Mill Canyon stock, and appears to plunge at a shallow angle to the south. A simple three-point problem on the broad nose of this folded thrust indicates a plunge in the range of 20 to 30 degrees.

## 2. Stratigraphy.

As discussed in the section on Stratigraphy, above, the exposed allocthonous rocks can be interpreted to be either the lowermost units of the Vinini Formation which would rest on the RMT or the Woodruff

Formation which, if present would rest on the RMT. These units are often only a few hundreds of feet thick.

# 3. Exposed ductile structures.

The decollement zone of the RMT is characterized by recumbent folds, ramps, duplicated stratigraphy and localized breccia zones (Fig. 10). Such features are exposed in the siliciclastic rocks on and near the property. They are interpreted to be a result of the easterly verging regional deformation associated with the Roberts Mountain Thrust. If this is true, the axial planes of the recumbent folds would be subparallel to the current dip of the thrust planes of the RMT and the fold axes would plunge in a direction perpendicular to the transport direction of the allocthon, and at an angle subparallel to the dip of the thrust surface (Fig. 11). These axes universally plunge southerly at approximately 20 to 30 degrees. This roughly agrees with the angle determined in paragraph one above. Projecting a 20 degree plunge southward to the property from the outcrop of the RMT to the north places the RMT at less than 1000 feet in the center of the property.

# 4. Northeasterly striking cross structures.

Analysis of outcrop patterns and topography indicate that these structures are high angle, some having normal displacement and others reverse displacement. This results in a series of "horst and graben" style offsets along the north – south axis of the property. The RMT under the upthrown blocks would be at a considerably higher elevation than under the down-thrown blocks. The amount of offset is unknown but it is possible that the RMT could be as little as 300 feet from the surface under one of them.

These interpreted and inferred lines of evidence clearly support the idea that the RMT could be at a relatively shallow depth below the surface in several areas of the property.

# CONCLUSIONS AND RECOMMENDATIONS

The essential elements of the exploration model can be reasonably inferred to exist at Golden Trend. We have observational and analytical evidence of the structural setting and the hydrothermal system but only interpretative and inferential evidence for the occurrence of amenable host rocks within drillable depths. The essential question at this point is, therefore, how far down is the RMT? This can only be answered by drilling.

This, then, is the next step in the program – drill to the lower plate by the quickest and least expensive method possible. Enhancing this relatively simple approach by focusing on the simultaneous occurrence of high angle structure, exposed alteration and anomalous geochemistry will maximize the probability of drilling mineralization if the lower plate is found.

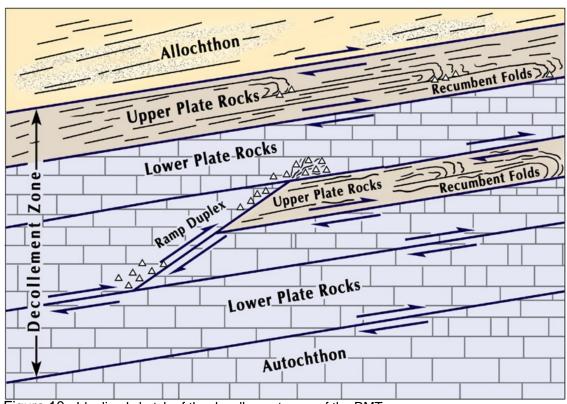


Figure 10. Idealized sketch of the decollement zone of the RMT.

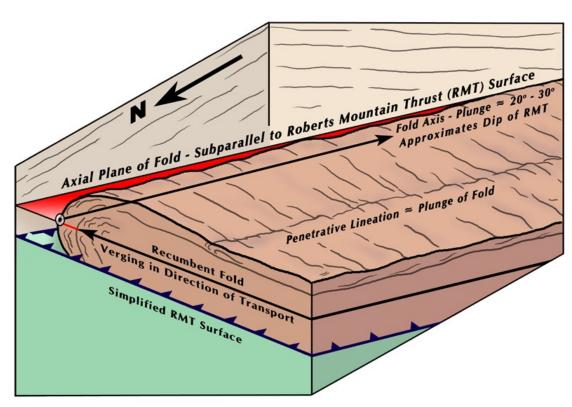


Figure 11. Idealized sketch of the relationship between the RMT and the ductile features within the decollement zone.

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