

TEPEE PROPERTY

822703

Introduction

The Tepee property covers a silver-lead prospect situated in southeastern British Columbia. It is a fissure-replacement type and crosscuts sediments of Pre-Cambrian age. Certain of its features are comparable to the nearby St. Eugene Mine, a major silver-lead deposit now inactive.

The mineral district is similar in nature and geologic setting to the productive Coeur d'Alone district of northern Idaho, some one hundred miles further south.

The holding consists of ¹⁶~~63~~ claims, named Endaco and ~~Tepee~~ ^{Tepee}. No record of previous staking on the prospect is known.

The northwest extension of the claim group ties to properties covering the St. Eugene vein system.

The claims are held by J.E. Pinchbeck, Kimberley, and D.L. Pighin, Cranbrook, British Columbia.

The prospect responded favourably to initial exploration by Mercury Exploration Limited. Bulldozer trenching established the presence of an encouraging vein structure.

Location and Access

The property is in the Fort Steele Mining Division at latitude 49°15'N and longitude 115°45'W on map sheet 82 G.4 and 5. It is eighteen miles south of Cranbrook at elevation 6000 feet in the upper reaches of Tepee Creek.

Access is obtained by twelve miles of truck-road from Highway 3/95 south of the town of Moyie. The Alberta Natural Gas pipeline with its service road traverses centrally through the property.

Geology

Sediments of the Creston formation, Pre-Cambrian age, underly the property. Beds dip 20-25 degrees east and are on the east limb of the Moyie anticline, a major structure with shallow north plunge.

The property features a vein of ferruginous material that extends 1200 feet, open both ends, with widths of two to nine feet. The vein cross cuts the Creston sediments at a stratigraphic position about 1500 feet above the Aldridge formation. It strikes east and shows minor offsets by inferred faulting. The vein is steeply dipping, direction is uncertain but evidence suggests to the south.

The widest section of vein material is seen in the most westerly exposure, at a point where there is a marked swing to the southwest in strike.

Mineralization

The vein material is mainly goethite, limonite, magnetite, and hematite. No sulfide minerals are recognized other than the rare occurrence of jamesonite, a sulfantimonide of lead and iron.

The material is massive in occurrence. Brecciated wall-rock is locally included. Chlorite alteration is associated.

Grab samples of the limonitic vein material gave the following

results:

	oz/T Au	oz/T Ag	%Pb	%Zn	%Cu		
No. 475 (P.H. Sevensma)	0.02	1.0	0.66	0.15	0.34		
No. 509 (R.E. Gifford)	0.01	1.4	1.20	0.28	0.15		
No. 522 (R.G. Gifford)	Tr	2.9	1.52	Tr	0.07	Fe	Mn
No. 1501 (D.L. PUGHIN)	Pyrolusite + Psilomelane	.2	.05	.115	.20	22.8	41.9
No. 1502 (D.L. PUGHIN)	Goethite	.2	.27	.09	.09	38.8	1.05

Conclusions

The gossan is believed to represent the weathered residue of an underlying sulfide deposit carrying values in silver, lead and copper.

The competent Aldridge formation underlying the Tepee vein structure is considered in the district to be a more favourable host. Conceivably, this is within practical exploration limits.

The magnetite-chlorite assemblage in the deposit is similar to that found in the uppermost workings of the St. Eugene Mine, on strike four miles to the northwest. The vein may represent an ore-forming structure similar in nature to that which hosts the St. Eugene deposits.

The St. Eugene Mine produced 1,062,000 tons averaging 7 oz/t Ag, 15% Pb and 5% Zn from three orebodies. Production was from a mineralized vein system having a known extent of some 11,000 feet on strike and 4000 feet down dip. The largest orebody of the three, the Lakeshore, produced 700,000 tons of ore material. Its disposition with respect to topography suggests as much ore again may have been removed by erosion. Thus a single ore-shoot has a size potential for 1½ million tons. Gross value at present metal prices of the St. Eugene ore is \$76 per ton taking silver at \$2.00/oz. lead at 15.5¢/lb. and zinc at 15.5¢/lb. The attractive profit possibilities in ore of this type help to offset the difficulties encountered in exploration of steep-dipping structures.

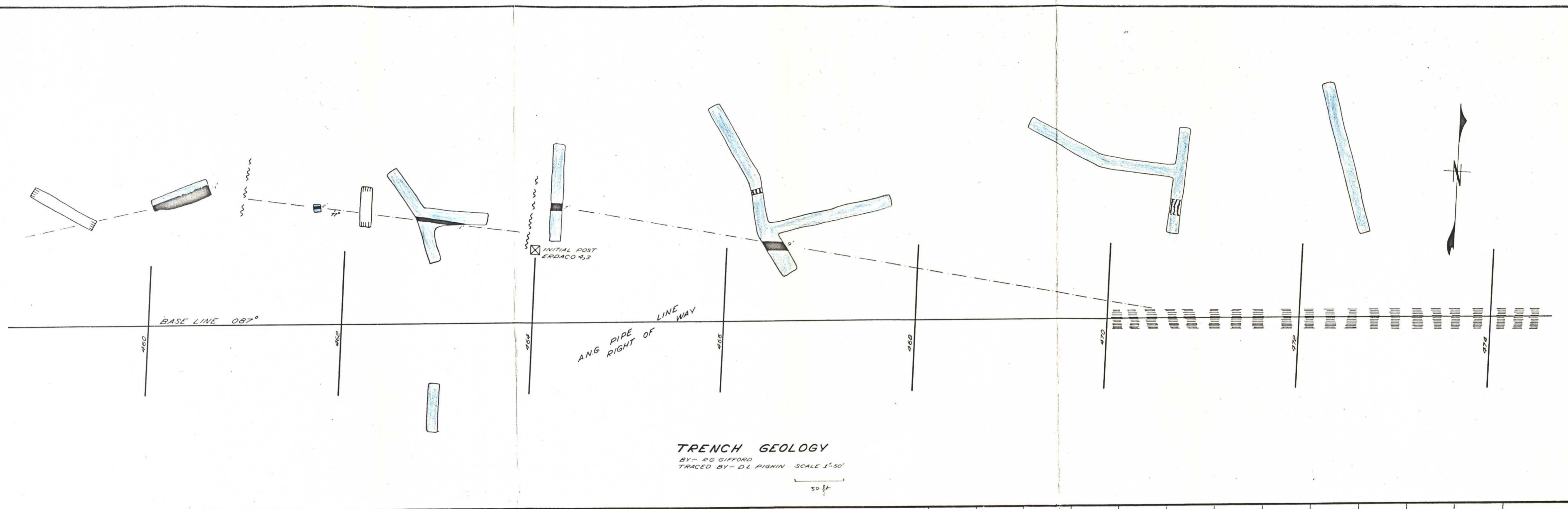
Further work on the Tepee property has the potential for discovery of orebodies equal in size to those already mined at the St. Eugene.

Recommendations

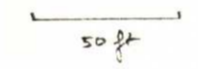
Exploration of the property should proceed in two stages. First, determine the unweathered character of the deposit at shallow depth. Then, exploratory underground development in ore material to investigate the deeper, more favourable Aldridge host.

A drill programme of 5000 feet in eight holes is recommended for the initial step. The first four holes should test to a 400-foot depth with intent to establish the nature of mineralization and structure. The remaining four holes would test for grade and continuity to an 800-foot depth.

R. Gifford P. Eng
R. G. Gifford



TRENCH GEOLOGY
 BY - R.G. GIFFORD
 TRACED BY - D.L. PIGHIN SCALE 1"=50'

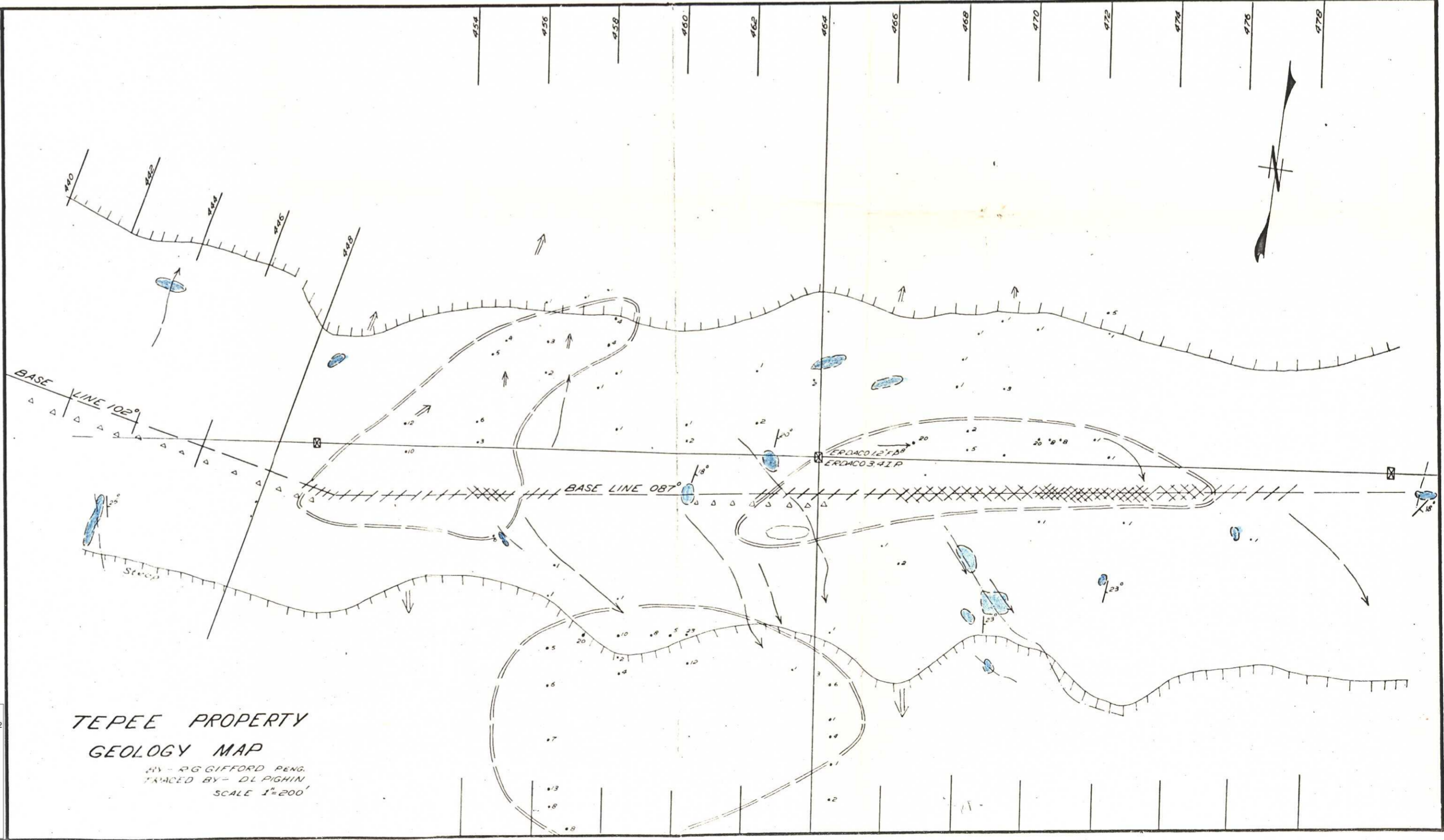


TRENCH LEGEND

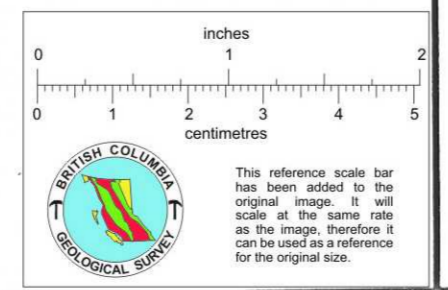
- VEIN SEVERELY WEATHERED, BOUNDARIES INDISTINCT; STRIKE EASTERLY, DIP NEAR VERTICAL; WIDTHS SHOWING MAINLY QUARTZITE, MAGNETITE, SERRULATED HEMATITE, LIMONITE, PIRROUSITE, PSYLOMELANE; FREQUENTLY FORMS MATRIX IN BRECCIATED HOST; LOCAL JAMESONITE, ADAMITE ASSOCIATED QUARTZ STRINGERS, CHLORITE, EARTHY HEMATITE
- HALL ROCK ARGILLITE, ARGILLACEOUS QUARTZITE; BEDDING STRIKES NORTHERLY, DIPS SHALLOW, EASTERLY ABUNDANT WITH WHOLESALE IN RUBBLE OF PIPELINE EXCAVATION; LARGEST MASSIVE BLOCK 3'
- MINOR CHLORITE, EARTHY HEMATITE TRACE OF VEIN
- TRENCH
- BEDROCK EXPOSED
- PROXIMITY TO BEDROCK UNCERTAIN

GEOLOGY MAP LEGEND

- ABUNDANT, FREQUENT, UNFREQUENT MINERALIZED FLOAT
- #6 NO. OF MINERALIZED FLOAT IN A 30' RADIUS
- 1, 2, 3 CONSPICUOUS MAGNETITE DISSEMINATED IN SEDIMENTS
- OUTCROP CRESTON FORMATION
- LOCAL SLOPE DIRECTION
- MARKED STEEPENING OF SLOPE
- AREA OF ABUNDANT MINERALIZED FLOAT
- BEDDING TRACE
- RUN OFF CHANNEL



TEPEE PROPERTY GEOLOGY MAP
 BY - R.G. GIFFORD PENG.
 TRACED BY - D.L. PIGHIN
 SCALE 1"=200'



This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.