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subcropping Rosebery Group sediments to the west of the Owen Shear, and coincides with the steep eastern slope of the Marionoak valley. The anomalous zone is a function of both these features, as soil cover is very poorly developed on this slope, with bedrock being very shallow. The samples in the majority of cases would be almost C horizon samples, with the remainder representing B horizon. The zone does not represent a favourable target for base metal sulphide deposits.

Zone 2

This zone occurs on grid lines 400N:600W-800W, 500N:500W-800W, 600N:400W-800W, and can be traced northwards on two prongs to line 900N. All elements, copper, lead, zinc, barium and manganese, outline the anomalous zone. The manganese values are very high, with several values of greater than 1%. A costean was excavated across this zone to test the source of the anomalies. A glacial filled valley was exposed, which in turn was covered by manganese rich sandy clays. Channel sampling of the costean gave a best sample value of 590 ppm Cu, 280 ppm Pb, 1850 ppm Zn 1200 ppm Ba and 11.0% Mn. It is apparent that the above background base metal values are associated with the high manganese. This would also be the relationship within the A⁰ sampling.

Zone 3

This zone occurs in the south-west of the grid area, extending northwards from line 1000S:130W-360W, to line 400S:320W-600W. There is no outcrop in this part of the grid, but float mapping indicates that it overlies a tuffaceous part of the Primrose Pyroclastics. Extrapolation of the geology from the Pieman River and the Hydro-Electric Commission road, indicates that this geochemical zone may be related to Unit 2 of Perkin. This unit of tuffaceous shales is known to contain base metal sulphides where it outcrops on the Pieman River. No detailed exploration has been carried out over this zone, but further work will be recommended.

Zone 4

This is a broad zone of anomalous lead, zinc, copper and barium, extending northwards from 400S:600E-800E to 300N:500E-800E. The topography