



MIDWAY OCCURRENCE
(1040/16W)

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INTRODUCTION

The Midway stratabound massive sulphide discovery which is located approximately 96 kilometres west of Watson Lake, Yukon Territory, was examined on September 9 and 10. The property comprises 240 Yukon claims

CRETACEOUS		LEGEND
	CASSIAR BATHOLITH	
Kqm	Quartz monzonite, granodiorite	
MISSISSIPPIAN AND LATER		
Mu	Serpentinite, dunite, peridotite	
UPPER DEVONIAN TO MISSISSIPPIAN		
SYLVESTER GROUP (UPPER)		
DMv	Greenstone, agglomerate; dacitic tuff; minor chert, metadiorite	
MIDDLE TO UPPER DEVONIAN		
SYLVESTER GROUP (LOWER)		
uD	Slate, argillite, chert, siltstone, chert-arenite, greywacke, chert pebble conglomerate, minor limestone	
MIDDLE DEVONIAN		
McDAME GROUP		
mD	Dolomite, fossiliferous limestone	
CAMBRIAN, ORDOVICIAN, AND SILURIAN		
EOS	Dolomite, dolomitic sandstone and siltstone, graptolitic black shale, platy siltstone, calcareous phyllite, phyllitic limestone skarn, hornfels, limestone, quartzite	

Symbols

High-angle fault; ball on downthrown block	
Antiform	
Contact: defined; assumed	
Road	
Stratabound barite	
Stratabound massive sulphide	
Mineral occurrence in carbonate rocks	
Exhalite horizon	

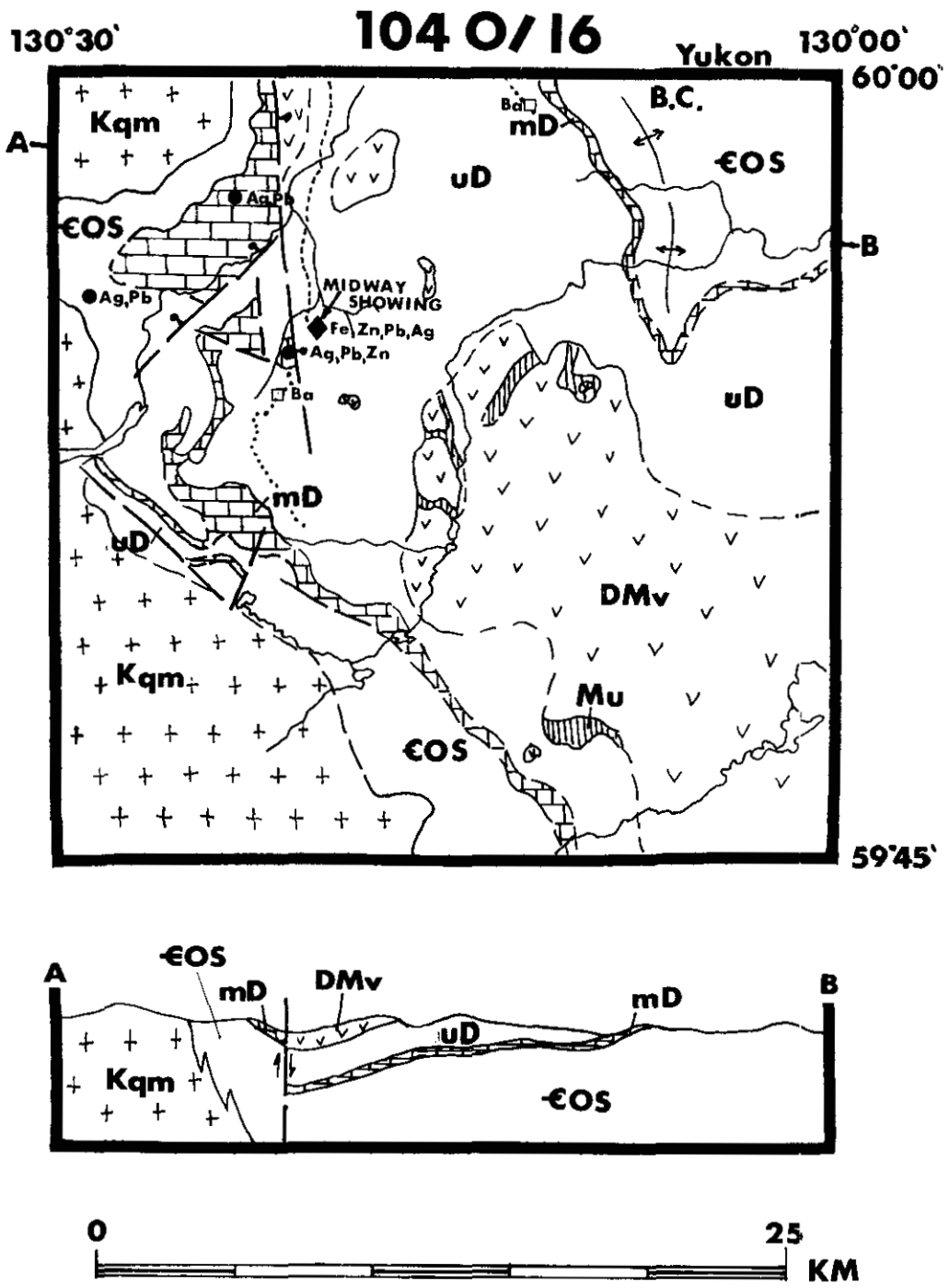


Figure 1. Generalized geology in vicinity of the Midway showing, Jennings River map-area; geology and legend modified from Gabrielse (1969).

and 881 British Columbia claim units accessible via a rough four-wheel-drive road that connects with the Alaska Highway near Rancheria (Milepost 702). The property was acquired by Cordilleran Engineering on behalf of Regional Resources Ltd. during 1980 and is currently under option to Amax of Canada Ltd.

STRUCTURAL SETTING

The Midway showing is located within a north-trending belt of Middle to Late Devonian basinal facies sedimentary rocks (Figure 1). These rocks are preserved within the core of a major synclorium that is bounded and intruded by the Cretaceous Cassiar Batholith (Kqm) to the west and the Lower Cambrian carbonates of the Atan Group to the east (Gabrielse, 1969). Unlike areas east of the Rocky Mountain Trench, deformation within the synclorium is relatively minor and broad open folding is the predominant structural style. The stratigraphic succession is locally offset by high angle normal and reverse faults.

STRATIGRAPHIC SETTING

The host rocks for the Midway showing are black silty shales and siliceous argillites of the lower part of the Sylvester Group. These rocks conformably overlie Middle Devonian McDame limestone (mD) (Gabrielse, 1969) and therefore are probably late Middle to Early Late Devonian in age. Detailed mapping and measurement of stratigraphic sections by Cordilleran Engineering and Amax Exploration geologists has defined three major coarsening upward sedimentary cycles (units 1, 2, and 3, Figure 2) in the lower part of the Sylvester Group (uD) (Figure 2). These cycles, that typically begin with a relatively thin sequence of interbedded shale, silty shale and baritic and/or pyritic exhalite, grade up section into progressively coarser, thicker, and more calcareous turbidites. These coarsening upward cycles suggest an increasing proximity to a source area with time, perhaps as a result of eastward advancing crustal uplift. Coarse clastic rocks of unit 3 are overlain by mafic to felsic volcanics of the upper part of the Sylvester Group (DMv). These volcanic rocks appear to be largely subaerial in origin.

MINERAL OCCURRENCES

Trenching on the property has exposed a zone of stratabound recrystallized massive pyrite that averages 2 metres in thickness over a strike length of approximately 40 metres. High-grade concentrations of zinc mainly as diffuse bands of blonde-coloured sphalerite occur locally within the massive pyrite. Minor amounts of galena are also present. Elsewhere on the property several baritic and pyritic exhalite horizons have been discovered that can be traced for considerable distances north and south of the showing. A 4-metre-thick bedded barite occurrence (Ewen barite) was

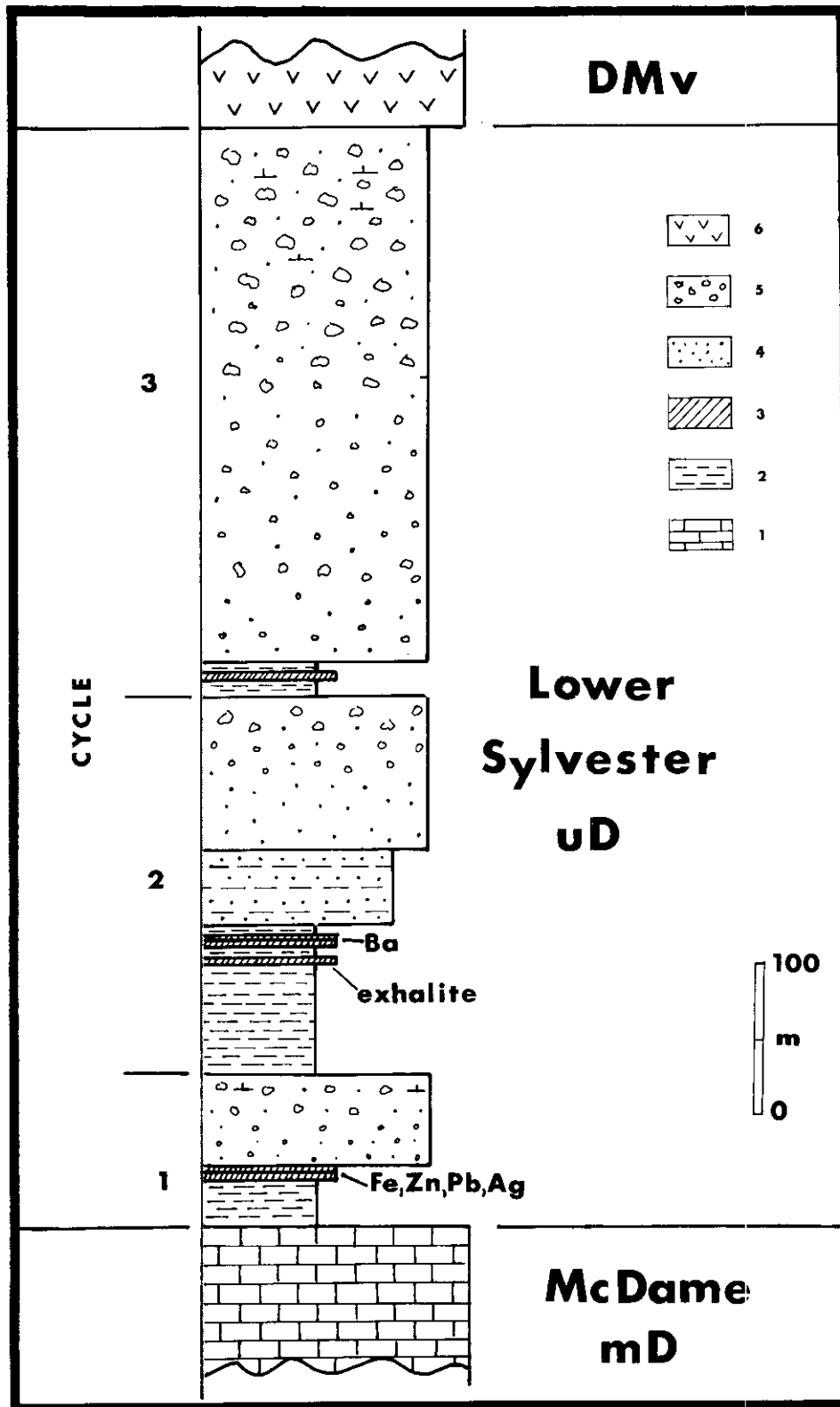


Figure 2. Idealized stratigraphic column for the Midway property showing location of exhalite zones (cross hatched) and sulphide and barite mineralization (black lines). 1 - limestone; 2 - shale, silty shale; 3 - siliceous exhalite, chert; 4 - siltstone, sandstone; 5 - conglomerate, sandstone; 6 - mafic to felsic volcanic rocks.

discovered in the northeast corner of the property near the British Columbia-Yukon boundary.

Six diamond-drill holes, totalling 853 metres, were completed late in the year in the vicinity of the Discovery showing (see Regional Resources News Release, November 23, 1981). Results of this work indicate the presence of three southeast-dipping mineralized zones. The Lower Zone which is locally absent overlies Middle Devonian dolostone, varies from 1 to 2.5 metres in thickness, and has combined zinc-lead grades ranging from 2.65 to 23.39 per cent and silver values ranging from 1.24 to 22.59 ounces per ton. This zone is locally lead-rich.

The Lower Zone is overlain by 70 metres of argillites and sandstones which are the footwall rocks of the Middle or Discovery Zone. Drill intersections indicate that this zone varies from 4.6 to 11.2 metres in thickness and has combined zinc-lead grades ranging from 4.56 to 13.36 per cent and silver grades ranging from 1.26 to 5.03 ounces per ton. Ten to 12 metres above the Discovery Zone is the Upper Zone which ranges from 0.43 to 3.2 metres thick and has combined lead-zinc grades ranging from 2.62 to 13.15 per cent and silver grades ranging from 0.63 to 6.52 ounces per ton. Both the Discovery and Upper Zones are predominantly zinc-rich. Interbedded argillites and sandstones overlie the Upper Zone.

ACKNOWLEDGMENTS

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REFERENCE

Gabrielse, H. (1969): Geology of the Jennings River Map-Area, British Columbia (1040), Geol. Surv., Canada, Paper 68-55, 37 pp.