

[Page 43 - A Geology Walk up the Clyburn Valley](#)ISSUE : [Issue 67](#)

Published by Ronald Caplan on 1994/8/1

the conditions were very buoyant at that time. This kind of rock forms in a subduction zone. Today these zones would be found as island arcs around the western Pacific or in the Caribbean. At surface they would be volcanic. But deep down below the volcanoes are the magma chambers that are feeding the volcanoes. And if the subduction zone ceases--if one plate stops diving down underneath another plate--then these magma chambers get trapped down there without ever getting to the surface to erupt as volcanoes. And the kind of rock that crystallizes is a diorite, like these black-and-white speckled rocks that we have here. And this is one of the characteristics of the Bras d'Or terrane, is a series of later Precambrian diorites and tonalites, approximately 555 million years old. Dr. Rob Raeside stands beside the opening of what is apparently an adit for the gold mine that was worked in the Clyburn Valley circa 1913. The boulder serves as a kind of roof, and the face of it has been worked to a flat surface. The handmade entrance is obvious. And they've been brought to the surface very, very quickly. When a subduction zone is stopped, when the one plate stopped diving underneath the other one, the equilibrium was re-established. And instead of the suction force as one was being pulled down underneath, the whole thing bounced back up to the surface again--very, very quickly. And we're left with these latest Precambrian rocks, as fossil remains of the ancient subduction zone. old fields which seem to have been nestled in a little embayment behind the alluvial fan. As we go down the slope, we cross two or three more of these distributary channels. This next one apparently was active last winter. I don't remember this one being active when I was working here 5 years ago. But this channel has obviously just been used by Franey Brook. You can see leaves in it which were piled up by this spring's floods. There was water flowing on the surface there, this last spring. As we go on now, having crossed Franey Brook, we'll go down the upstream side of the alluvial fan, and we will cross some

COMMERCIAL G.Landry's Vacuum Service Ltd. I SEPTIC SYSTEMS CLEANED  
INSTALLED\* REPAIRED BACKHOE BULLDOZER RENTAL PORTABLE TOILET RENTAL &  
SERVICE Front Lake Rd. Sydney 564-8413 ?? / SERVING ALL OF CAPE BRETON '  
PIONEER READY-MIX LIMITED SERVING CAPE BRETON • READY MIX CONCRETE •  
CONCRETE SEPTIC TANKS • PATIO BLOCKS PRIME BROOK, SYDNEY 539-5217 (Rob  
is looking at three different kinds MICROWAVES Don's TV & VCR Repair I , Warranty  
Depot for RCA, GE, Sanyo MTC, Magnasonic, Samsung REPAIR TO MOST OTHER  
MAKES • PHONE/FAX: 902-562-2366 • CONVERTERS IIIIIIIII fl'.krt'. ' MfWaWw'.,  
Specialists in FREE ESTIMATES Phone:539-4111 • No structural changes No more  
painting • Clean from inside 4Mefut' 'itftmUuuH 341 Welton St., Sydney  
SERVING ALL OF CAPE BRETON PRODUCTS LTD. BATTERED WOMEN and your  
children if you need help: 539-2945 TRANSITION HOUSE