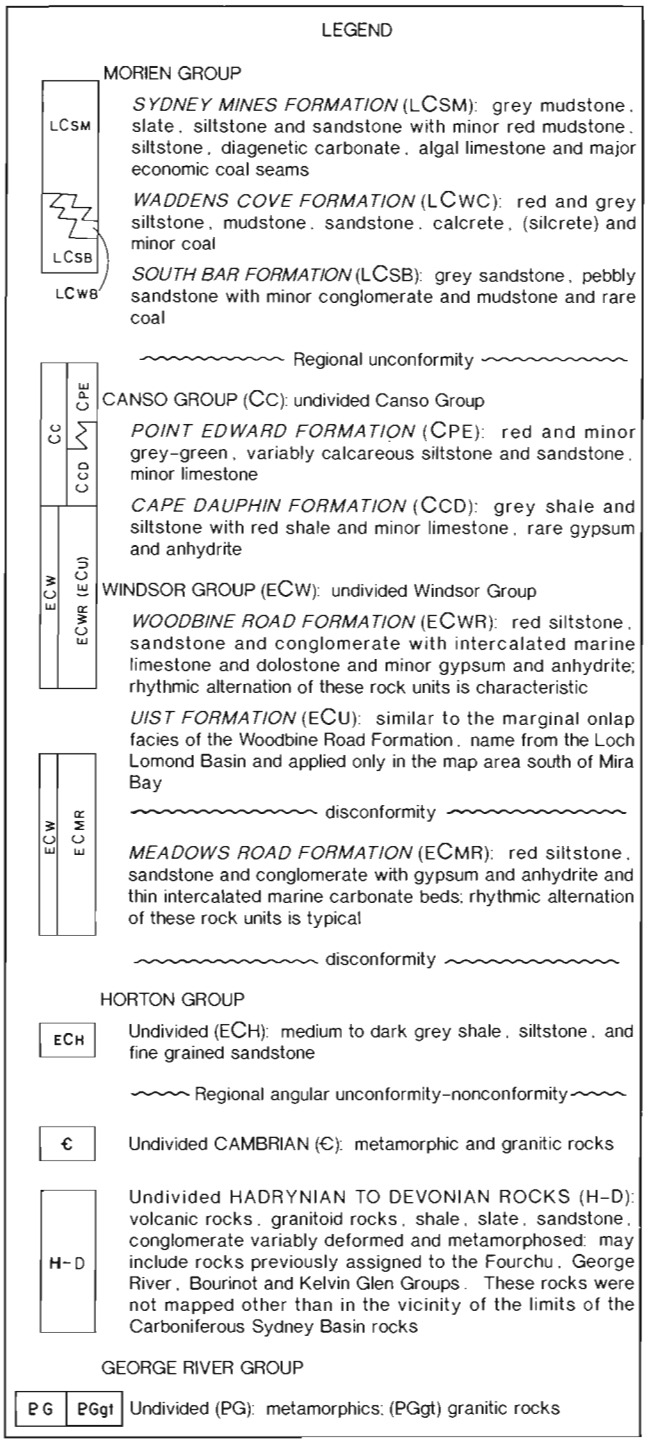
CHAPTER 12. VICTORIA COUNTY



modified after Boehner and Giles, 1986

Figure 12-1. Geological legend for Victoria County gypsum and anhydrite occurrence maps.

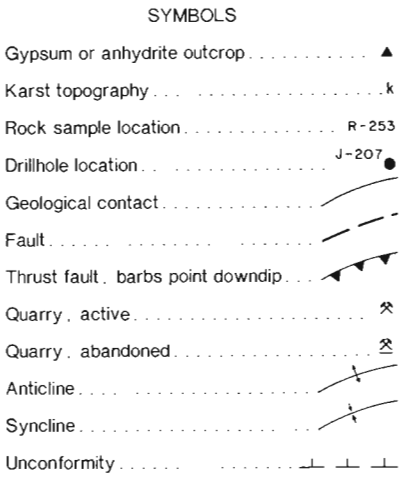


Figure 12-1. Continued.

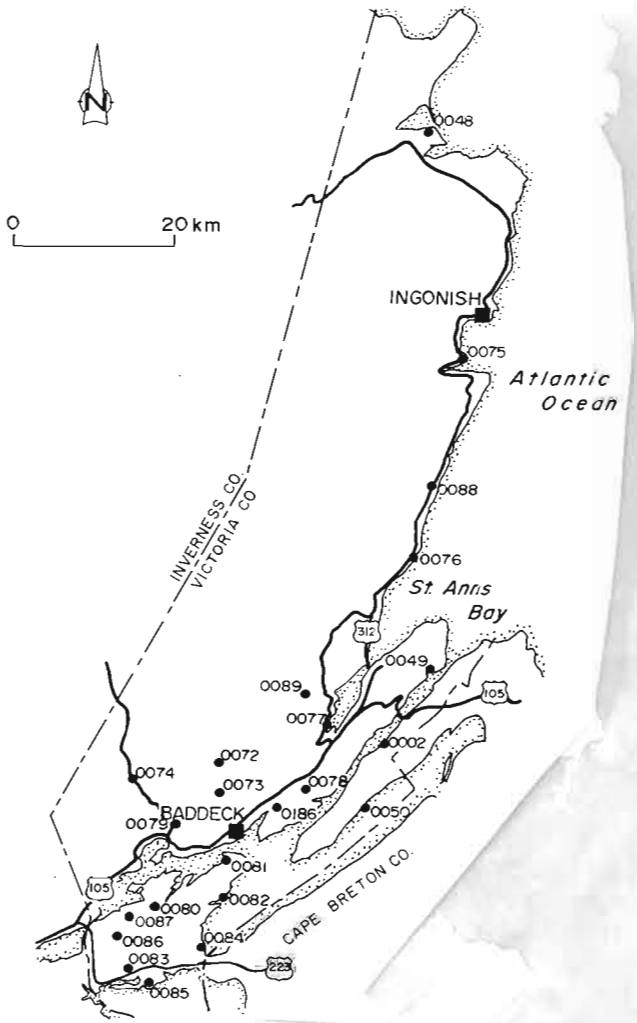


Figure 12-2. Location map for Victoria County gypsum and anhydrite occurrences by reference number.

BIG HILL (0078)
NTS 11K/02D
UTM 682000 E 5114000 N

The Big Hill area is located 10 km east-northeast of the Village of Baddeck, Victoria County (Fig. 12-3). Outcrops can be seen along the Trans-Canada Highway 105 at Glen Tosh; beside a secondary road between Big Hill and Plaister Mines; as well as along Big Harbour Brook. In addition, two diamond-drill holes (BH-1 and -2) were completed in the area by Asarco Exploration Company of Canada Ltd. in 1974 (Cameron, 1974).

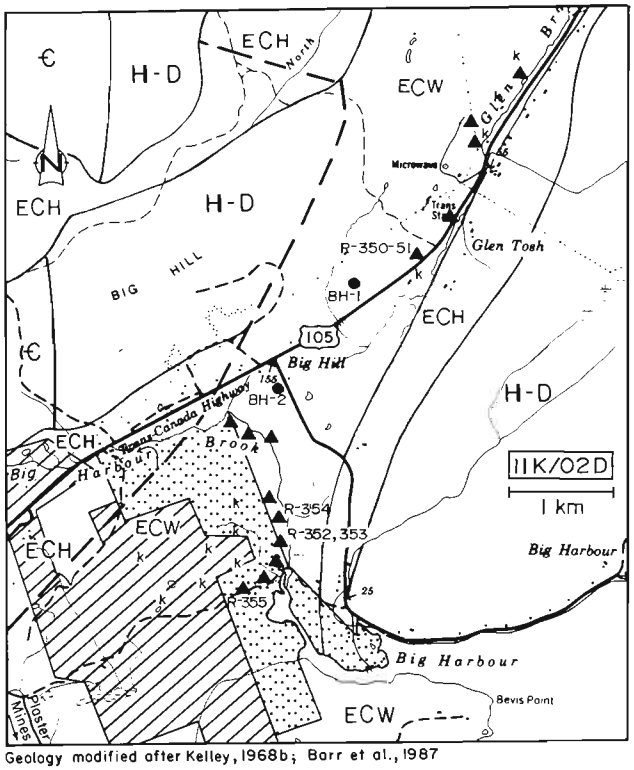


Figure 12-3. Location and geology of the Big Hill occurrence area. See Figures 12-1 and 12-2 for legend and location.

Regional geological mapping by Kelley (1968b) and Barr et al. (1987) showed the area to be underlain by undivided Windsor Group sedimentary rocks which are underlain to the east and northeast by Horton Group clastics and to the west and northwest by Horton Group clastics and older metamorphics. This defines a northeasterly trending synform which widens in the Big Hill area, extending southeast at Big Harbour towards Boularderie Island.

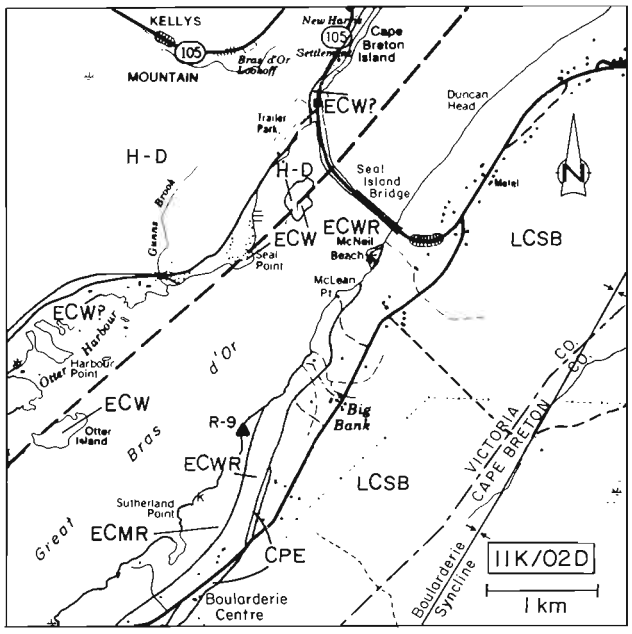
Occurrences on the surface in the Big Hill area consist mainly of fine grained, massive, light blue anhydrite similar to that seen in the St. Anns Harbour area (0077). These are locally hydrated to fine grained, massive, white gypsum of high purity (+90%). Asarco's (Cameron, 1974) two drillholes were both abandoned in anhydrite at depths in excess of 230 m below surface. Minor interstitial silt and carbonate described in these cores are common in Cycle 1 (A Subzone) of the Windsor Group. Carbonate outcrops in Big Harbour Brook, in the western portion of the area, towards Baddeck Bay, indicate the presence along the Horton-Windsor contact of a Meaghers Grant type facies underneath the basal sulphate.

Little drilling has been carried out in this area to date so it is not possible to assess the full economic potential of the Big Hill area. The surface outcrop and drillhole intersections of the basal sulphate unit give evidence of the vast amounts of sulphates available here, however the observed hydration appears to be limited to the near surface. Should hydration be enhanced by clastic interbeds or by fault structures in the area, then the potential for sizable deposits of high purity gypsum would be very good in this occurrence area. The area is also highly prospective as a source for high purity, fine grained, massive anhydrite. The Big Hill area has excellent potential for substantial anhydrite deposits as well as gypsum, but requires further drilling.

BOULARDERIE CENTRE (0002)
NTS 11K/02D
UTM 692000 E 5120000 N

This area is located approximately 3 km south-southwest of the Seal Island Bridge, on the southwestern shore of Boularderie Island (Fig. 12-4). Several small (1-2 m^2) outcrops of white gypsum can be found along the waters edge in this area and hummocky terrane can be seen on the overlying area.

Boehner and Giles (1986) determined this area to be underlain by the Meadows Road Formation dipping to the east and south at 25-27° into a syncline which runs the length of Boularderie Island. This occurrence is of geological interest only.



Geology after Boehner and Giles, 1986

Figure 12-4. Location and geology of the Boularderie Centre occurrence area. See Figures 12-1 and 12-2 for legend and location.

DINGWALL (0048)
NTS 11K/16C
UTM 692000 E 5195000 N

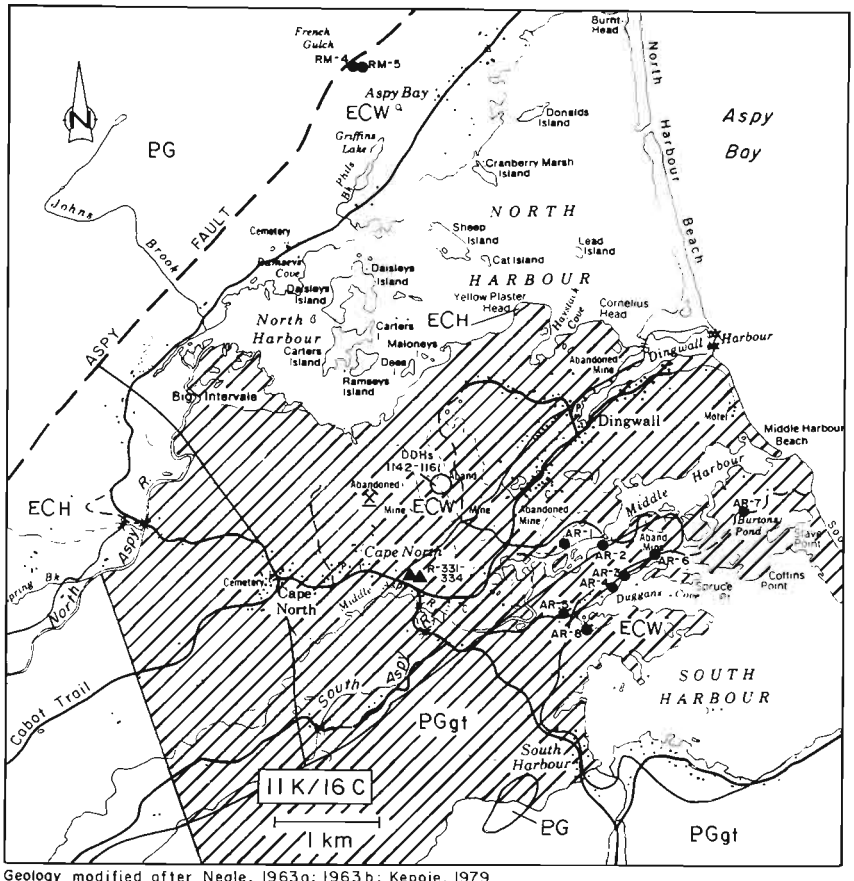
The Dingwall occurrence is located in and around the Village of Dingwall, Victoria County (Fig. 12-5). Atlantic Gypsum Products began producing gypsum at Dingwall in 1933 having acquired the gypsum leases for the area from H. B. McCurdy in 1926. Operations were taken over by the National Gypsum Company in 1936 who increased production from the quarries in order to supply its markets in the United States (King, 1985).

Production peaked in the final year (1954) when 1 012 231 t were produced from National's Quarries at Dingwall (Province of Nova Scotia, 1955). Operations were halted in 1955, not due to a lack of material, but because National was in the process of consolidating its numerous quarries by opening up its huge open-pit at Milford, Halifax County. Another consideration may have been the long term problems of siltation in Dingwall Harbour. Hill (1952) described extensive and costly measures which might be undertaken to prevent siltation in the Harbour which, at the time, required regular dredging to maintain.

King (1985) indicated that National Gypsum still holds gypsum leases over much of the area around Dingwall.

The gypsum deposits at Dingwall lie in a northeasterly trending trough that plunges to the northeast under Aspy Bay (Neale, 1963a; 1963b). Carboniferous Horton Group and Windsor Group rocks are fault bound to the northeast by the Aspy Fault with Precambrian igneous and metamorphic rocks. Carboniferous rocks unconformably onlap Precambrian igneous and metamorphic rocks to the southeast. Horton Group clastics disconformably underlie the Windsor Group to the southwest in the area of the North Aspy River. The Windsor Group to the southeast onlaps directly onto Precambrian rocks in the vicinity of Middle Harbour and South Harbour.

Gypsum and anhydrite at Dingwall are from the lower part of the Windsor Group. Although no detailed



Geology modified after Neale, 1963a; 1963b; Keppie, 1979
National Gypsum (lease)

Figure 12-5. Location and geology of the Dingwall occurrence area. See Figures 12-1 and 12-2 for legend and location.

stratigraphic studies have been undertaken in the area, it is believed that these rocks belong to Cycle 1 (A Subzone) of the Windsor Group. Sulphates dominate the Windsor Group in the Dingwall area with only minor interbeds of limestones and clastics in the section.

National Gypsum drilled 20 holes (DDHs 1142-1161) in the area of one of the mines at Dingwall in 1946 (Province of Nova Scotia, 1947b). All holes were collared directly in gypsum with no overburden. Apart from one hole which bottomed in gypsum at 25.9 m, the greatest thickness of gypsum drilled was 8.2 m. All holes passed through generally thin gypsum layers into anhydrite below.

In 1975 Asarco Exploration drilled eight holes (AR-1 to AR-8) in the Dingwall area in search of base metals (Cameron, 1975). The best gypsum intersection was in hole AR-1 which encountered 19.5 m of gypsum before encountering a zone of mixed gypsum and anhydrite then anhydrite below. Overburden in the area is generally shallow, around 8 m or less except where solution cavities were encountered.

Substantial amounts of gypsum and anhydrite remain accessible to mining in the Dingwall area. Shallow overburden and apparently gently dipping strata would make these deposits amenable to open-pit mining, however shipping problems resulting from siltation in Dingwall Harbour remain a serious hindrance to development in the area.

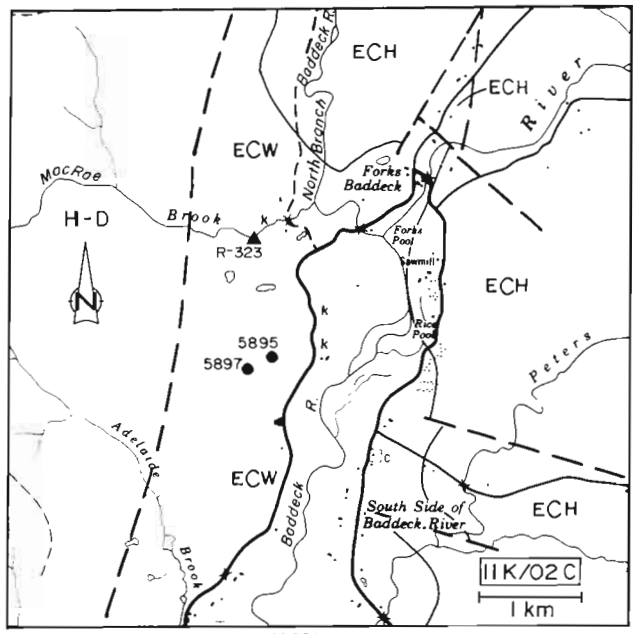
FORKS BADDECK (0072)
NTS 11K/02C
UTM 670660 E 5115660 N

Forks Baddeck is located 8 km north of the Village of Baddeck, Victoria County (Fig. 12-6). The occurrence consists of a small outcrop of pinkish-white, nodular gypsum on the southern side of MacRae Brook, 700 m upstream from where the Brook empties into the North Branch Baddeck River. Numerous probable sinkholes can also be found in the immediate area north of the Brook. Further karst is evident along an apparent northerly trending Windsor-basement contact.

Geological mapping by Kelley (1968b) placed the rocks of this area in the undivided Windsor Group. These are underlain to the north and east by Horton Group clastics and in fault contact to the west with Devonian or earlier intrusives. Kelley (1968b) found the area to be extensively faulted with the Windsor-Horton contact offset in many places. No stratigraphic interpretation has as yet been attempted on the Windsor Group units.

Two drillholes, completed in this area in 1972 by a Nova Scotia Department of Mines core drill for DEVCO (Record Nos. 5895, 5897) encountered interbedded siltstone, limestone and minor gypsum (Province of Nova Scotia, 1975a). These units probably belong to the Upper Windsor, however no correlations were attempted at the time of drilling and the present location of the core is unknown.

This area and its occurrence is of geological interest only. Little or no development potential exists at the present time in the Forks Baddeck area.



Geology modified after Kelley, 1968b

Figure 12-6. Location and geology of the Forks Baddeck occurrence area. See Figures 12-1 and 12-2 for legend and location.

FRENCH RIVER (0088)
NTS 11K/08C
UTM 695950 E 5152200 N

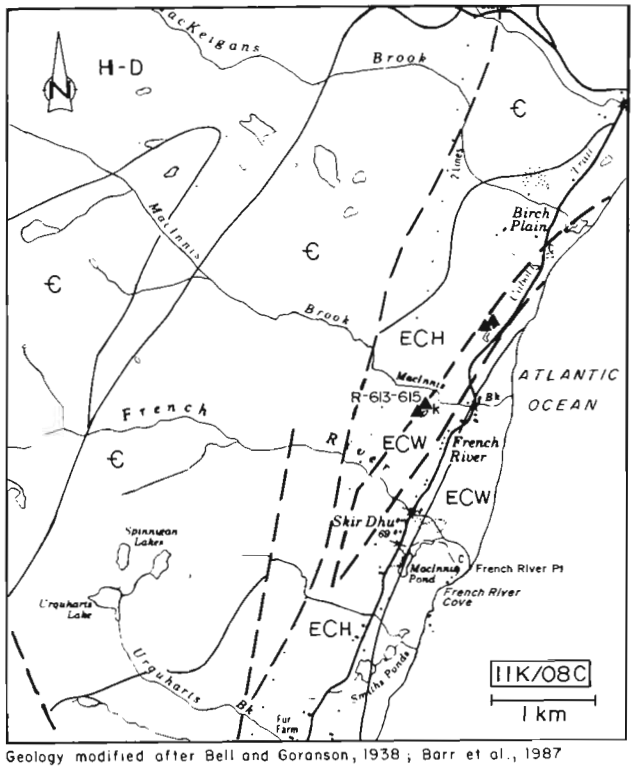
The occurrence at French River consists of two separate outcrop areas approximately 900 m apart (Fig. 12-7). They are located just west of the Cabot Trail, 25 km north of Englishtown, Victoria County.

Originally mapped by Bell and Goranson (1938) with recent updating of the basement rocks by Barr et al. (1987), the area is shown to be underlain by a fault-bound block of undivided Windsor Group units. These are underlain to the east and west by Horton Group clastics.

Only the southern outcrop area was sampled; the second can be observed from the Cabot Trail and in

airphotos of the area. The southern outcrop includes a cliff face in excess of 10 m in height which runs north-northeast for about 100 m. It is composed of high purity, white, fine grained gypsum over high purity, blue-grey anhydrite. A taller slope covers the base of this face. Karst is heavy in the area immediately west of the face, but diminishes away from the face toward the west. The block of sulphate ends abruptly about 150 m west of the first face. The two areas probably represent a continuous unit of Cycle 1 (A Subzone) material. MacInnis Brook flows between these outcrop areas and probably has eroded away the intervening section.

The French River outcrop areas are of minor economic interest due to their limited size, however they should be the subject of additional investigation to determine the true extent of the gypsum as well as the purity and extent of the underlying anhydrite.

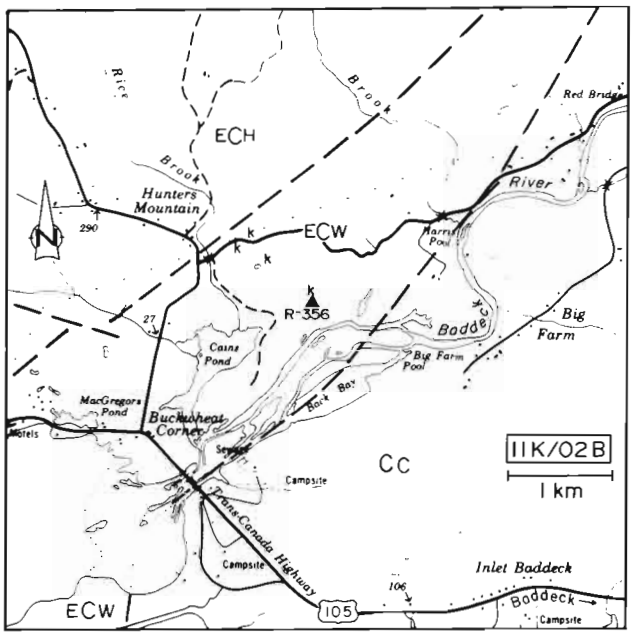


Geology modified after Bell and Goranson, 1938 ; Barr et al., 1987

Figure 12-7. Location and geology of the French River occurrence area. See Figures 12-1 and 12-2 for legend and location.

HUNTERS MOUNTAIN (0079)
NTS 11K/02B
UTM 666400 E 5007840 N

The Hunters Mountain occurrence is located near the mouth of the Baddeck River, approximately 6 km west of the Village of Baddeck, Victoria County (Fig. 12-8).



Geology modified after Kelley, 1968b

Figure 12-8. Location and geology of the Hunters Mountain occurrence area. See Figures 12-1 and 12-2 for legend and location.

A small outcrop of fine grained, light grey gypsum can be found along an old woods road north of the River. Numerous small sinkholes occur just north of the area.

Regional mapping by Kelley (1968b) described the area as a northeasterly trending band of undivided Windsor Group sedimentary rocks in fault contact with Horton Group clastics to the northwest and younger clastics of the Canso Group to the southeast. Very few outcrops can be found in the immediate area and no drillhole information is available to further substantiate the regional mapping interpretation.

The Hunters Mountain occurrence is, at this time, solely of geological interest. Limited karst in the area extends to the northeast and may warrant some further investigation to determine its extent. A small drilling program could be carried out to define the sulphate units in the area and the extent of their hydration.

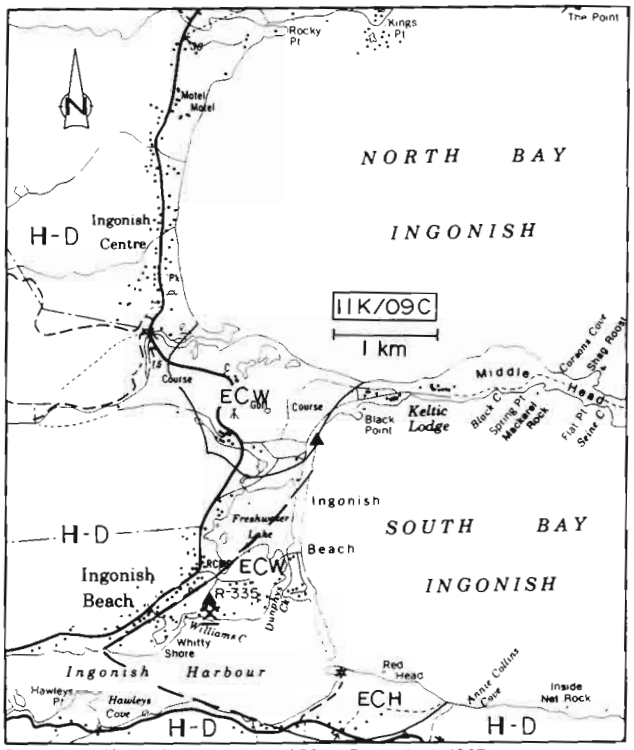
INGONISH BEACH (0075)
NTS 11K/09C
UTM 698800 E 5168200 N

The occurrences around Ingonish Beach are found within the Village of Ingonish Beach along the beach area south of Keltic Lodge and east of the Cabot Trail (Fig. 12-9). Gypsum was produced at Ingonish Beach in

the past. Production was reported between 1925 and 1929 totalling 240 568 t (Nova Scotia Department of Mines, Annual Reports, 1926-1930).

Recent geological mapping in the area by Barr et al. (1987) combined with that of MacLaren (1956b) which differentiated the Horton and Windsor Groups, constitutes the extent of geological mapping in the Ingonish Beach area. Stratigraphic interpretation of the Windsor Group units has not been attempted, however the sulphates seen at this location appear to belong to either Cycle 1 or 2 (A or B Subzone).

Although the gypsum found at Ingonish Beach is of good quality, it appears to be of limited areal extent and most of the immediate area is presently inhabited. The occurrences here are of geological interest only.



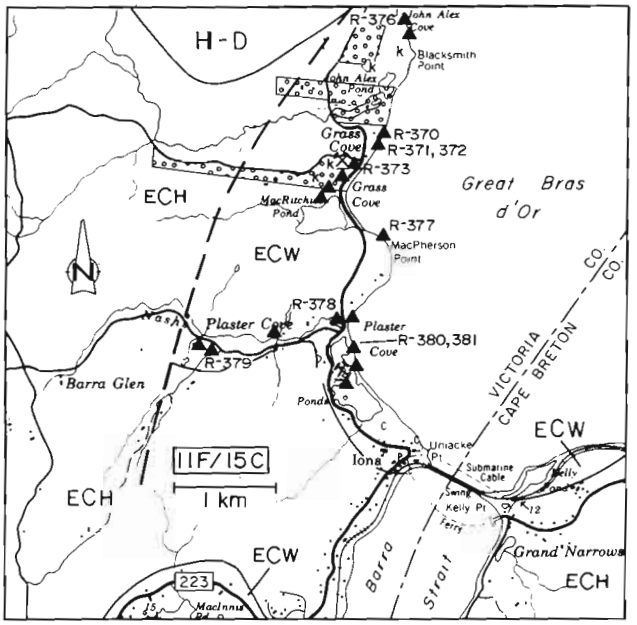
Geology modified after MacLaren, 1956b; Barr et al., 1987

Figure 12-9. Location and geology of the Ingonish Beach occurrence area. See Figures 12-1 and 12-2 for legend and location.

IONA (0084)
NTS 11F/15C
UTM 669400 E 5094600 N

The Iona occurrence area is located just north of the Village of Iona, Victoria County (Fig. 12-10). It includes all the Windsor Group outcroppings from Plaster Cove north to Blacksmith Point, from the shore of Great Bras d'Or inland to Barra Glen.

Nova Scotia Department of Mines, Annual Reports recorded that gypsum was produced from a deposit at Grass Cove between 1914 and 1932 excluding 1918. Total production was 95 513 t, all of which was calcined in a plant on the site and shipped via boat and train to markets as far away as New Zealand.



Geology modified after Weeks, 1955; Clemiss, 1978; Keppie, 1979
Fundy Gypsum (fee simple)

Figure 12-10. Location and geology of the Iona occurrence area. See Figures 12-1 and 12-2 for legend and location.

Regional mapping by Weeks (1955) showed that, except for a small granite body to the north, all of this area was underlain by units of the Windsor Group. This interpretation has since been refined, and mapping carried out by Amax Exploration Inc. (Clemiss, 1978) indicated that units of the Cycle 1 (A Subzone) Windsor Group basal sulphate and basal carbonate seen locally are underlain or in fault contact to the west and south with Horton Group clastics. These clastics were included by Weeks (1955) in the Windsor Group.

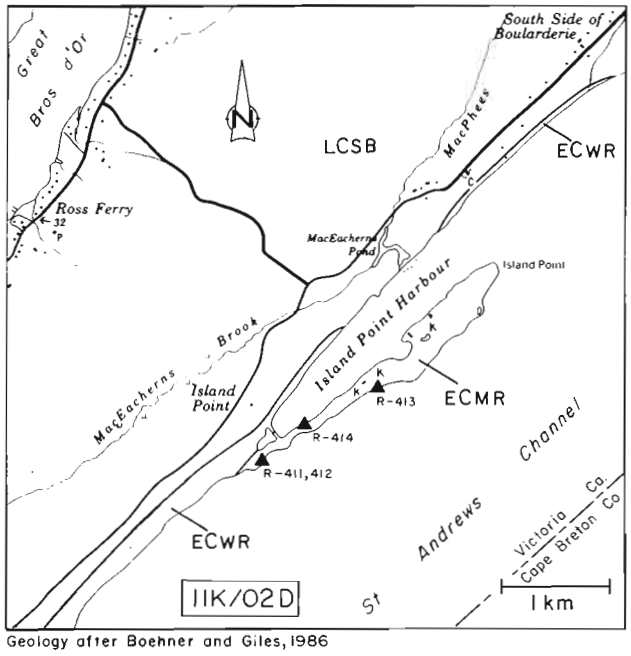
Unfortunately, no diamond-drill holes appear to have been completed in the area which might have passed through the sulphate horizons into underlying rocks. Outcrops and karst areas are confined to the Grass Cove and Plaster Cove areas. High purity gypsum appears to be the surface hydration of the underlying high purity anhydrite which can be seen in some exposures. Much of the area is deeply eroded leaving little area available for further gypsum exploitation.

According to King (1985), Fundy Gypsum Company Limited still owns three small parcels of land in this area

including the Grass Cove Quarry area. This fact, in addition to the apparently limited vertical and areal extent of hydration, would greatly diminish the potential for future development.

ISLAND POINT (0050)
NTS 11K/02D
UTM 690000 E 5111500 N

Island Point, on the southern side of Boularderie Island, is underlain by Lower Carboniferous rocks of the Windsor Group Meadows Road Formation (Boehner and Giles, 1986) (Fig. 12-11). These strata dip to the northwest and are overlain by clastic sedimentary rocks of the Upper Windsor Group Woodbine Road Formation and the Morien Group South Bar Formation.



Geology after Boehner and Giles, 1986

Figure 12-11. Location and geology of the Island Point occurrence area. See Figures 12-1 and 12-2 for legend and location.

A total of 12 diamond-drill holes were completed in the area in 1956, however it is not yet known which company had this work performed (Domtar Gypsum, confidential company report). Drill results established that a thin cap of limestone, about 3 m thick covers the gypsum on the northern end of Island Point. The thickness of the gypsum varies from 6.1-18.3 m and hydration often extends below the high tide mark. Domtar Chemicals Limited, when investigating the property in 1968, estimated a minimum of 10.9 Mt of gypsum reserves on it (Domtar Gypsum, confidential company report). The sole analysis found from Island Point had a gypsum content of 96.6% (Domtar Gypsum, confidential company report). Previous investigation by Curry (1945) estimated a greatly diminished tonnage figure for the area of 4.5 Mt. Differences could be attributable to the additional subsurface information available to Domtar at the time of its investigations.

The Island Point deposit is located on deep water and has accessibility via St. Andrews Channel to the Bras d'Or Channel out of the Bras d'Or Lakes. Difficulties could arise from mining an island with much of the gypsum lying below the high tide level. This area is rapidly being developed as cottage lots, a fact which may prevent any resource development in the future.

JAMESVILLE (0085)
NTS 11F/15C
UTM 665600 E 5089700 N

The Jamesville occurrence area is located from 2-9 km west of the Village of Iona, Victoria County (Fig. 12-12). It extends from Iona (0084) in the east to Ottawa Brook (0083) in the west, Cains Mountain in the north to the shores of Bras d'Or Lake in the south. The area is an extension of the Ottawa Brook occurrence area to the west.

Weeks (1955) mapped this area as part of his Grand Narrows map sheet. He mapped all of the units as Windsor Group. More recent work (Clemiss, 1978) assigned the clastic rocks found in the northern part of this occurrence area to the Horton Group which underlies the Windsor. Some of Amax Exploration Inc.'s drillhole evidence from the Ottawa Brook occurrence area (0083) also suggested that the Horton/Windsor contact may be, in some places, a faulted relationship (Clemiss, 1978). Since no drillhole information exists in this area, it is not possible to determine the true nature of this contact.

Portions of the basal sulphate of Cycle 1 (A Subzone) can be seen in outcroppings along the shore of Bras d'Or Lake and the Canadian National Railway line at Jamesville and east at MacInnis Pond. Further to the southwest along the shore at Red Point East and Red Point West sections of interbedded, sulphates, carbonates and siltstones can be found. Most of the units exposed at Red Point East strike approximately east-west and dip moderately to the south (20-30°); at Red Point West near Ottawa Brook similar units strike slightly more to the southeast. These probably represent units of Cycle 2 (B Subzone) or above, however no detailed stratigraphic interpretation has been undertaken in the area.

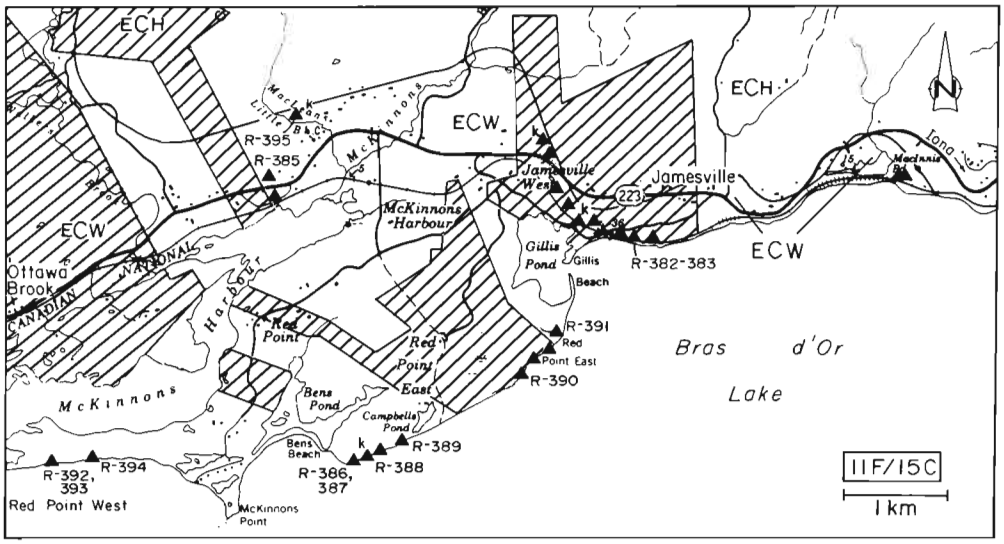


Figure 12-12. Location and geology of the Jamesville occurrence area. See Figures 12-1 and 12-2 for legend and location.

Little opportunity exists for development in the Jamesville occurrence area. The Cycle 1 (A Subzone) sections present are usually only hydrated to a few metres where exposed and areas of deeper hydration which are indicated by karst topography are limited in extent. The potential Cycle 2 (B Subzone) areas are generally very low lying and are found along the shores of Bras d'Or Lake. MacKinnons Harbour, a prominent topographic feature in the area is probably a reflection of dissolution of a portion of the Windsor Group units in the area. Nonetheless a few drillholes in the Red Point East area would help to clarify the geology and the economic potential for gypsum and anhydrite in this occurrence area.

JUBILEE (0086)

NTS 11F/15C

UTM 658100 E 5093600 N

The Jubilee occurrence area is located 2-3 km southeast of the Village of Little Narrows, Victoria County (Fig. 12-13). It encompasses all surface and subsurface sulphate occurrences found between the Little Narrows area (0087) to the north and northeast, and the Ottawa Brook area (0083) to the south.

Some minor gypsum production has occurred in this area in the past, however it would have been reported with the Little Narrows figures and is not considered here. The Jubilee area has been the subject of base metal investigations since the mid 1930s and as a result a total of 115 drillholes have been completed in the area. Much information is available on the Cycles 1 and 2 (A and B Subzones) units which underlie much of this locale.

Regional geological mapping for this area was included in Weeks, 1955; Kelley, 1968b; and Clemiss, 1978. The area is dominated by a Horton Group high (Clemiss, 1978) surrounded by units of the Cycle 1 (A Subzone) of the Windsor Group. Although the Horton-Windsor contact is in some places faulted by northwesterly trending structures, it appears to be conformable (Stewart, 1978). These Windsor Group units are also underlain by Horton clastics to the southeast in the vicinity of Cains Mountain.

Although exploration at Jubilee took place between the mid 1930s and late 1970s the majority of drilling was

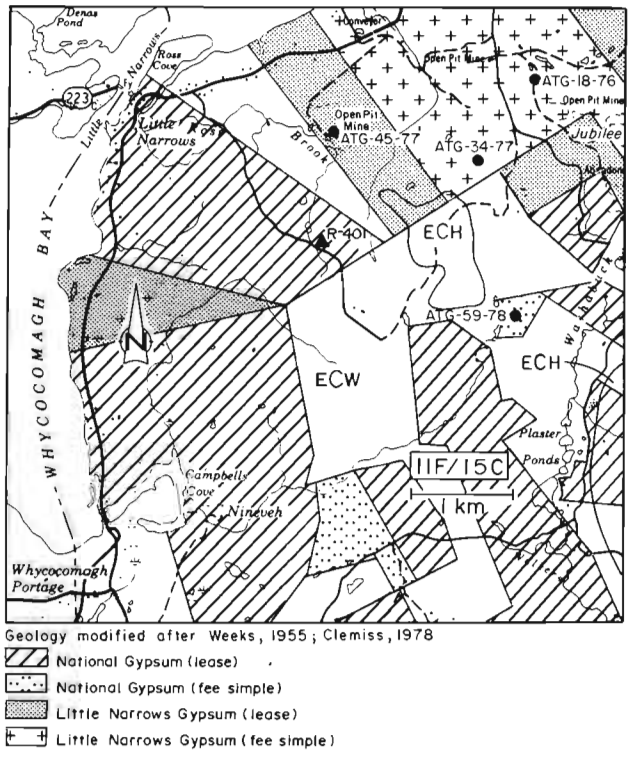


Figure 12-13. Location and geology of the Jubilee occurrence area. See Figures 12-1 and 12-2 for legend and location.

carried out by Getty Mining, Amax Exploration and Texasgulf Canada Limited between 1972 and 1979 (Hein et al., 1988). Hein et al. (1988) used the drillhole data to propose the existence of a horst which trends northwestward from the Horton high as well as a second horst along the eastern flank of the high. Maximum vertical displacement along any of these structures appears to be <170 m with displacement diminishing to the northwest along all structures. Cross-sections drawn from drill logs of holes peripheral to the Horton-Windsor contact show the dips of that contact into the surrounding basins to be gentle in all directions. These dips vary from 0-20° to the west, northwest, north and northeast, to 10-15° to the east through south of the Horton high.

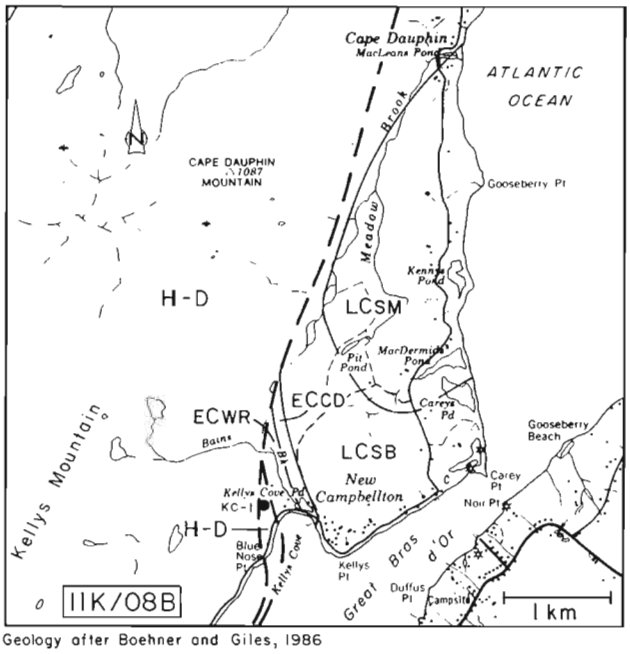
Virtually all of the drilling in the Jubilee occurrence area encountered the thick sulphates and minor carbonates of the Cycle 1 (A Subzone). Holes as far to the northwest as ATG-45-77 collared in this Cycle (Clemiss, 1978). More distant drillholes towards the northwest unfortunately were triconed. Undoubtedly some of these would have contained some materials from the Cycle 2 or above (B Subzone or above).

Surprisingly, hydration to gypsum of the basal anhydrite in the Jubilee area is minimal. Elongated ponds or lakes and adjacent cliff exposures around the Horton high are evidence of a typical dissolution zone along the Horton-Windsor contact, however there do not appear to be any areas of thick gypsum to be found. The prominent northwesterly trending structures evident in the area would commonly provide excellent plumbing for hydration in the basal sulphate, but again the numerous drillholes in the area encountered few areas of extensive hydration. Maximum hydration encountered along the basal contact was 34.75 m in hole ATG-59-78 (southeast of the Horton high) and numerous holes encountered 3-5 m of gypsum adjacent to northwesterly trending faults. Elsewhere hydration was usually <3 m in thickness.

Development potential for gypsum in the Jubilee area is limited. Although possibilities do exist for small deposits along the basal contact areas which have not yet been drilled, most of the gypsum rights are held by large gypsum companies. Potential for anhydrite in this area is excellent with large tonnages of fine grained, high purity anhydrite available at or near surface. Virtually all of the Jubilee occurrence area is held by companies and individuals under mining lease (Little Narrows Gypsum Co. Ltd.), development licence (Canamax Resources and Lionel York), or exploration licences in addition to the gypsum rights holdings seen on Figure 12-13.

KELLYS COVE (0049)
NTS 11K/08B
UTM 697000 E 5129500 N

The Kellys Cove occurrence is located 7 km northeast of the Seal Island Bridge, at the base of Kellys Mountain in Victoria County (Fig. 12-14). No evidence of gypsum can be seen on the surface in this area, however gypsum was intersected by drilling during Scotia Limestone's 1978 investigation of the area for dolomite (MacNeil, 1978).



Geology after Boehner and Giles, 1986

Figure 12-14. Location and geology of the Kellys Cove occurrence area. See Figures 12-1 and 12-2 for legend and location.

Regional geological mapping by Boehner and Giles (1986) showed that a small block of interbedded clastics, carbonates and gypsum underlies a portion of the Kellys Cove area. These units belong to the Woodbine Road Formation of the Windsor Group. They are in fault contact with older metamorphosed dolomite to the west and are overlain by clastics of the Canso Group to the east.

One drillhole, KC-1, passed into Windsor Group strata at depth and through a single gypsum horizon. MacNeil (1978) interpreted these beds to be steeply dipping to the east. A total of 21 m of gypsum was cored in this hole, with a true thickness in the order of 16.2 m.

The steeply dipping nature of the beds and lack of areal extent of the Windsor Group at Kellys Cove would suggest that there is limited potential for development of gypsum. This occurrence is of geological interest only.

LITTLE NARROWS (0087)
NTS 11F/15C
UTM 659000 E 5095500 N

Little Narrows has been the site of gypsum production since 1936 (Fig. 12-15). Originally held by the Iona Consolidated Gypsum Corporation (Domtar Gypsum,

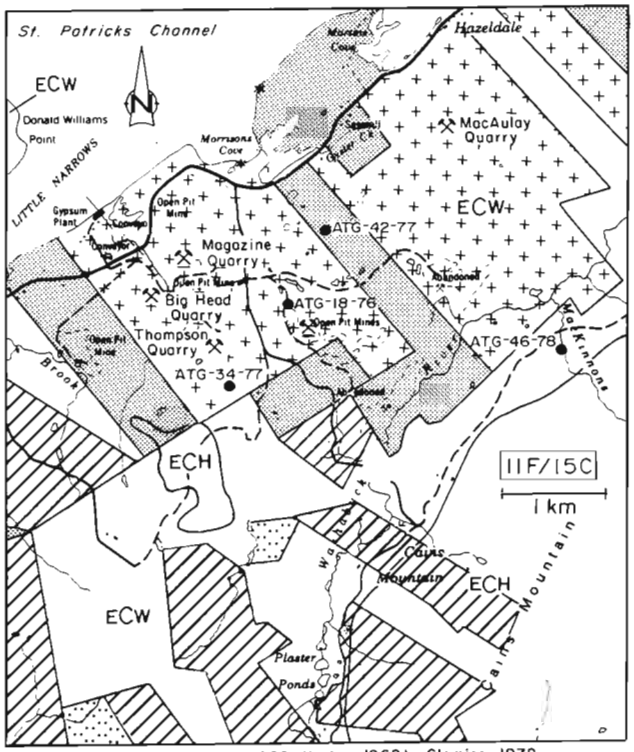


Figure 12-15. Location and geology of the Little Narrows occurrence area. See Figures 12-1 and 12-2 for legend and location.

confidential company report) construction of facilities commenced in 1935 under the name of the Victoria Gypsum Company Limited (King, 1985). It produced gypsum at Little Narrows until 1954 when, in December, its properties and gypsum holdings were sold to the Little Narrows Gypsum Company Ltd. Production has continued to the present under this Company name.

Between 1936 and 1987 a total of 21 408 429 t of gypsum and 1 460 335 t of anhydrite were produced (Nova Scotia Department of Mines and Energy, Annual Reports, 1937-1988). The majority of this material was extracted from the Magazine Quarry, which is at present almost exhausted, as well as numerous other smaller sites in the area. Operations were halted from 1943-1945 inclusive due to labour and transportation shortages caused by World War II. The highest annual production rate for gypsum at Little Narrows was 1 113 955 t in 1988 (Nova Scotia Department of Mines and Energy, 1989). Gypsum and anhydrite are shipped in crude form from the Little Narrows site on company owned and chartered vessels to destinations in Quebec, Ontario and the United States eastern seaboard.

The deposits at Little Narrows are located in a moderately disturbed sequence of Lower Windsor Group rocks (Cycles 1 and 2 (A and B Subzones)) just north of the Jubilee Horton high (0086). These units are overlain by Upper Windsor Group rocks (Cycles 3 and above (Subzones C and above)) to the north and west and underlain by Horton Group clastics to the south and southeast. The Windsor strata trend roughly northeasterly in this area and dip to the northwest under St. Patricks Channel. Northwestward trending high angle faults noted at Jubilee (Hein et al., 1988) have also been observed in the Little Narrows area (Holleman, 1976).

The quarry areas at Little Narrows have been extensively drilled and stratigraphic interpretations made in order to facilitate mining, however very little of this information is publicly available. Holleman (1976) is the most useful reference presently available on the deposit area.

According to Holleman (1976) and Lewis and Holleman (1983) the main production quarry, up until 1990, the Magazine Quarry, lies within interbedded sulphate, carbonate and siltstone near the base of Cycle 2 (B Subzone) of the Windsor Group. The Big Head Quarry, southwest of the Magazine, and the Thompson Quarry, south of the Magazine, both produce lesser amounts of gypsum and anhydrite from the thick massive sulphate units near the top of the Cycle 1 (A Subzone). The exact geological relationship between these Quarries cannot be determined with the available information, however the presence of northwesterly trending high angle faults might explain the close proximity of the thick A Subzone sulphates at the Big Head Quarry and the interbedded B Subzone section at the Magazine Quarry 300 m away. The structure of the units in the Magazine Quarry was described by Holleman (1976) as a broad syncline plunging 17° to the northwest. A northward trending, high angle fault was also noted by Holleman (1976) along the eastern margin of the Quarry, but no estimate of the amount of displacement

was found. It was noted that the block to the east was uplifted relative to the Quarry section.

Records are available for only four diamond-drill holes in the Little Narrows area. All of these, completed during the base metal exploration work around the Jubilee area, are widely separated and not very near the active quarries. Hole ATG-18-76 was located approximately 700 m along strike northeast of the Thompson Quarry and was collared and completed in massive anhydrite (Clemiss, 1978). Located approximately 300 m south of the Thompson Quarry, hole ATG-34-77 was collared in anhydrite and passed through 100 m of anhydrite before encountering the basal carbonate and underlying Horton. Hole ATG-42-77, located about 1000 m east of the Magazine Quarry was collared in B Subzone or above and passed through 180 m of interbedded siltstone, carbonate and sulphate before encountering the thick basal sulphate. Hole ATG-46-78 was drilled in the eastern portion of the Little Narrows area. It is located near the Windsor-Horton contact and encountered sulphates and infill material in the solution trench before entering the Horton Group at around 118 m (Clemiss, 1978).

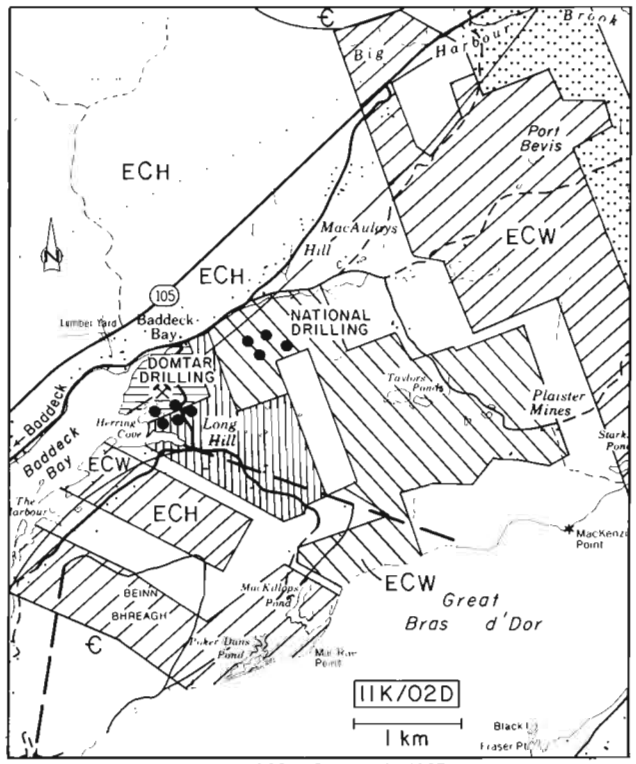
In general the Windsor Group rocks found in the Little Narrows area dip gently and thicken towards the northwest in the direction of St. Patricks Channel. These units are offset by high angle, northwesterly trending faults, the frequency of which is not known. Some folding is also noted in the interbedded Cycle 2 (B Subzone) units.

Over the past few years the Little Narrows Gypsum Company Ltd. has begun to develop a new quarry known as the MacAulay Quarry. It is located approximately 2 km northeast of the Magazine Quarry and appears to be the same geological section (Cycle 2 (B Subzone)) as was mined in the Magazine Quarry. Less information is available on this area than on the Magazine and therefore no conclusions can be drawn as to the potential reserves which may exist there. This area projects into the Washabuck Bridge region (0080). It is interesting to note that much work has been done at the Little Narrows plant site in recent years to refurbish those facilities.

Vast amounts of high purity anhydrite are available on the Little Narrows property. This includes the Thompson and Big Head Quarries where much material is already exposed and readily available.

LONG HILL (0186)
NTS 11K/02D
UTM 679000 E 5110500 N

The Long Hill deposit area, for the purposes of this description, includes those areas lying between Baddeck Bay to the west and Plaister Mines to the east, Highway 105 to the north and the Great Bras d'Or Channel to the south (Fig. 12-16). This area is located 5 km northeast of the Village of Baddeck, Victoria County.



Geology modified after Kelley, 1968b; Barr et al., 1987

- National Gypsum (lease)
- National Gypsum (fee simple)
- Domtar (lease)
- Domtar (fee simple)
- Republic Gypsum (fee simple)

Figure 12-16. Location and geology of the Long Hill occurrence area. See Figures 12-1 and 12-2 for legend and location.

Gypsum was produced from quarries in this area as far back as the mid 1870s when Duncan MacDonald of Montreal operated a small quarry "west of Plaister mines...." (Jennison, 1911). Another small operation was run by the Victoria Gypsum Mining and Manufacturing Company at Port Bevis in the 1890s (Jennison, 1911). Unfortunately production records maintained by the

Nova Scotia Department of Mines during those days were incomplete. Later in the 1920s through the early 1940s, gypsum was produced from a quarry at Long Hill (Red Head or Herring Cove, historical names). First set up by the North American Gypsum Company Ltd. in 1927, this property was taken over by the Gypsum, Lime and Alabastine Co. (GLA) in 1939 and finally became the property of Domtar Gypsum in 1959 (King, 1985). It was operated from 1927-1941 during which time a total of 90 662 t were produced (Nova Scotia Department of Mines, Annual Reports, 1928-1942).

Virtually all of this area is owned or has its gypsum rights leased by gypsum companies. Most of these holdings have changed hands a number of times over the years (King, 1985), but no gypsum has been produced here since 1941. National Gypsum (Canada) Ltd., Domtar Gypsum and Republic Gypsum all currently hold gypsum rights over portions of this area.

During the 1950s and early 1960s Domtar Gypsum and its predecessors drilled numerous holes in the area of the old GLA Quarry. In 1956, National Gypsum drilled a total of 84 diamond-drill holes on a property which was held at that time by H. B. McCurdy and now is held by Republic Gypsum immediately to the east of Domtar's property. Although much of Domtar's drilling information is not publicly available, the National data were submitted to the Nova Scotia Department of Mines by Republic Gypsum Co. in 1969 (Oldale, 1969) and constitutes the bulk of the geological information available on the area.

Regional geological mapping by Kelley (1968b) and Barr et al. (1987) indicated that much of this area is underlain by units of the undivided Windsor Group. These form a low-lying easterly trending synform in the area of Long Hill which widens to the east towards Plaister Mines and northeast towards Port Bevis. The Windsor Group is underlain by older Horton Group clastics which form more resistant promontories to the north-northwest and south-southwest of Long Hill. These contacts are either unconformable or faulted. This area resembles Georgia-Pacific Corporation's Sugar Camp deposit (0041), Inverness County, where Cycle 1 (A Subzone) Windsor Group is found lying between two Horton Group areas and the intervening calcium sulphate horizon is deeply hydrated.

All of the drilling carried out in this area by several companies is confined to an area 2000 m northeast and southeast of the old GLA Quarry at Long Hill. Overburden is generally <15 m thick over much of this area, however deeply eroded and infilled solution trenches are seen along the Windsor-Horton contacts. Hydration depths are also greatest along these contacts and can exceed 50 m at some points, although gypsum thicknesses in the order of 30 m are much more common. Outcrops in the area are dominated by anhydrite with thin gypsum surface-hydration caps. These can be seen paralleling the Windsor-Horton contact in the area south of Taylors Ponds and are described by Oldale (1969).

Although many of the drillholes in the Long Hill area encountered some mudstone or sandstone intervals within the hydration zone, these sections appear to consist of postdepositional infill material. No drilling or surface evidence of these interbedded carbonates, calcium sulphates and clastics of the Cycle 2 (B Subzone) of the Windsor Group have been noted in this area. Most of the gypsum seems to be the hydrated basal anhydrite of the Cycle 1 (A Subzone), deepest along the Windsor-Horton contact and in part removed and infilled after hydration. Oldale (1969) covered the results of National Gypsum's 1956 drilling program in some detail. Gypsum thickness and anhydrite top contour plans and cross-sections help one to visualize the deposit. He concluded that the 'North Zone' of Republic's property contains up to 23.6 Mt of gypsum. This, in addition to the reserves defined on Domtar's property, represents a significant potential resource.

Development of the abundant gypsum and anhydrite present in the Long Hill area will be dictated by nongeological factors, specifically cultural and environmental concerns. Domtar Gypsum attempted to gain public support for a mining project which would have reopened a quarry at the old GLA site in late 1987, early 1988. Initially, local response was quite favourable; however, in the end, residents of the Baddeck area argued that such an operation would detract from the scenic nature of an area whose primary industry is tourism. Domtar decided to put its plans on hold and has since put its efforts into other properties. Development of the gypsum reserves in the adjacent property held by Republic Gypsum will probably run into the same opposition as the Domtar project. All other factors, such as quality of stone, overburden thickness, loadout sites and shipping make this area ideal for development.

LOWER WASHABUCK (0081)

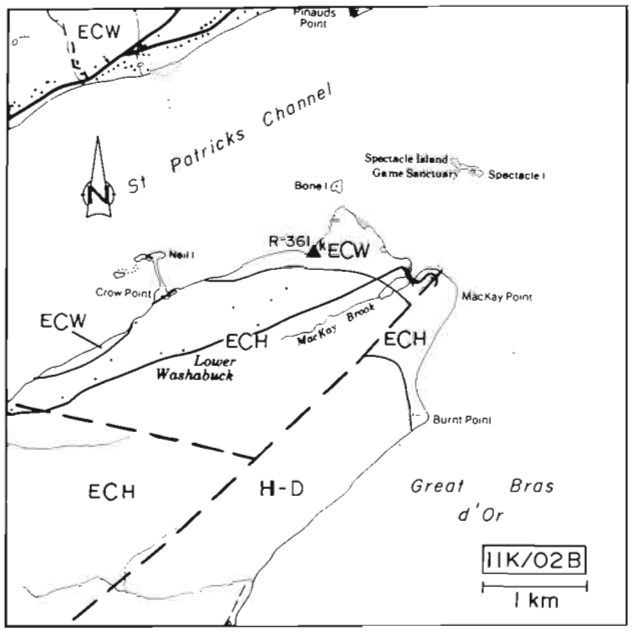
NTS 11K/02B
UTM 673600 E 5104340 N

The occurrence at Lower Washabuck consists of one small block of silty, selenitic, medium- to coarse-grained, light grey to orange gypsum found along the shore of St. Patricks Channel just south of Bone Island (Fig. 12-17).

A minor area of gently rolling karst can also be seen at this locale.

Kelley (1968b) mapped this area as underlain by undivided Windsor Group sedimentary rocks which are in turn underlain by Horton Group clastics to the south. It is not possible to determine what portion of the Windsor is present at this locale, however it is probably units of Cycle 1 (A Subzone).

No economic potential is envisaged at Lower Washabuck because the waters of St. Patricks Channel cover most of the area believed to be underlain by the Windsor Group. Insufficient exposure exists to make this occurrence of interest geologically.



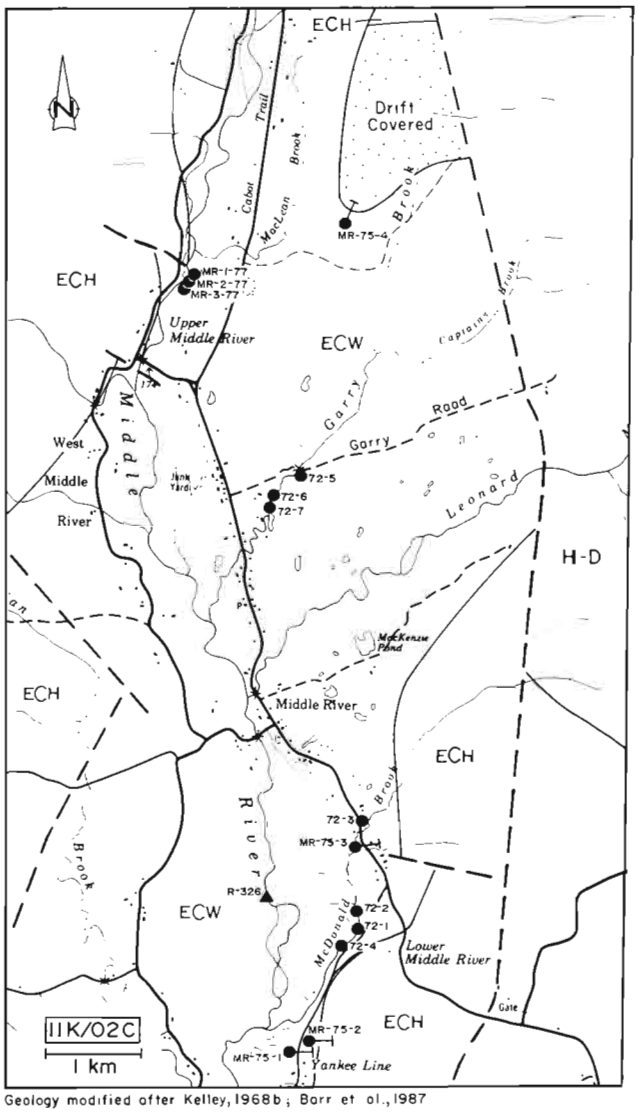
Geology modified after Kelley, 1968b

Figure 12-17. Location and geology of the Lower Washabuck occurrence area. See Figures 12-1 and 12-2 for legend and location.

MIDDLE RIVER (0074)

NTS 11K/02C
UTM 660280 E 5111640 N

The Middle River area is located 15 km west and north of the Village of Baddeck, Victoria County (Fig. 12-18). The Cabot Trail transects the valley of Middle River which dominates the local topography. Overburden is thick in the valley and surface occurrences are rare with only one gypsum outcrop found in an area of approximately 40 km^2 underlain by rocks of the Windsor Group. Numerous drillholes have encountered sulphates in the Middle River area.



Geology modified after Kelley, 1968b; Barr et al., 1987

Figure 12-18. Location and geology of the Middle River occurrence area. See Figures 12-1 and 12-2 for legend and location.

The Nova Scotia Department of Mines drilled a series of holes for DEVCO in the Middle River area in 1972-73, three of which encountered gypsum and anhydrite (72-2, 72-4 and 72-5) (Province of Nova Scotia, 1975b; 1975c). Getty Mines Ltd. drilled in the area in 1975 and again in 1977 as part of a base metal exploration program (Bryant, 1975). Four out of seven of these holes encountered gypsum and anhydrite (MR-75-3, MR-75-4, MR-2-77 and MR-3-77). Drilling was distributed over three areas, Upper Middle River, Garry Road and Lower Middle River (Fig. 12-18).

Regional geological mapping by Kelley (1968b) described the Middle River area as undivided Windsor Group sedimentary rocks in a general synform, underlain

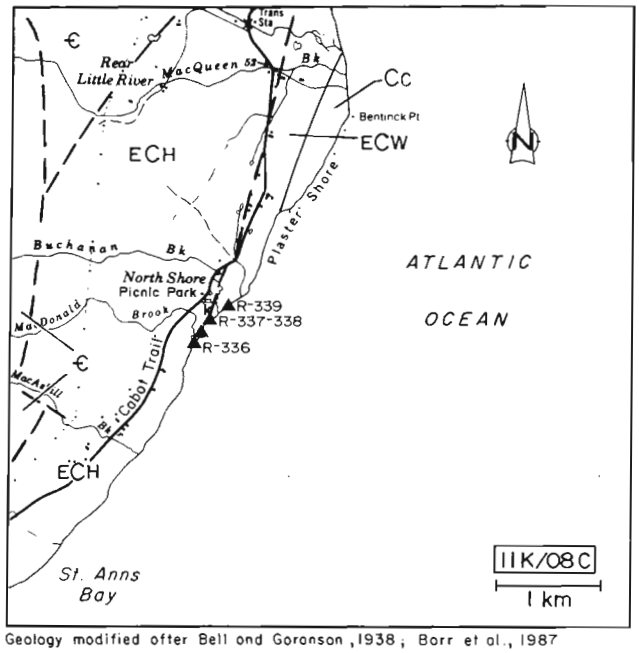
to the west, northwest and southwest by clastics of the Horton Group. They are also in fault contact with Devonian or older igneous rocks to the east, northeast and southwest. Bryant (1975) concluded that the Cycles 1, 2 and probably 3 (A, B and probably C Subzones) of the Windsor were present in the drilling and that these units were gently folded (axis north-south) and faulted.

Thick overburden in the area masks much of the karst topography which would normally be evident over gypsiferous zones. The drillholes which encountered sulphates indicate that hydration has occurred to considerable depths (maximum 288.59 m in hole MR-75-3) (Bryant, 1975). Although stratigraphic interpretations of the area need to be refined it appears that Cycles 1 and 2 (A and B Subzones) are present in the Middle River section.

Gypsum has been mined from Cycles 1 and 2 (A and B Subzones) at Little Narrows Gypsum Company Ltd.'s Little Narrows Quarry (0087) for many years. Therefore the deep hydration seen in some portions of the Middle River area make it a prospective area for additional work.

NORTH SHORE (0076)
NTS 11K/08C
UTM 694000 E 5143000 N

The occurrence at North Shore is located along the coast of St. Anns Bay in the vicinity of the Plaster Picnic Park (Fig. 12-19). This Park is 16 km north along the Cabot Trail from the Englishtown, Victoria County. Approximately 700 m of discontinuous, high purity, fine grained, white and light blue gypsum and anhydrite outcrop can be seen along the shore. At the southern end of the exposures the sulphates are apparently underlain to the west by badly weathered red to grey-green siltstones. North of the Park area, along the shore, there appears to be a faulted block of Horton Group sandstone between two sulphate blocks (not shown on map).



Geology modified after Bell and Goranson, 1938; Barr et al., 1987

Figure 12-19. Location and geology of the North Shore occurrence area. See Figures 12-1 and 12-2 for legend and location.

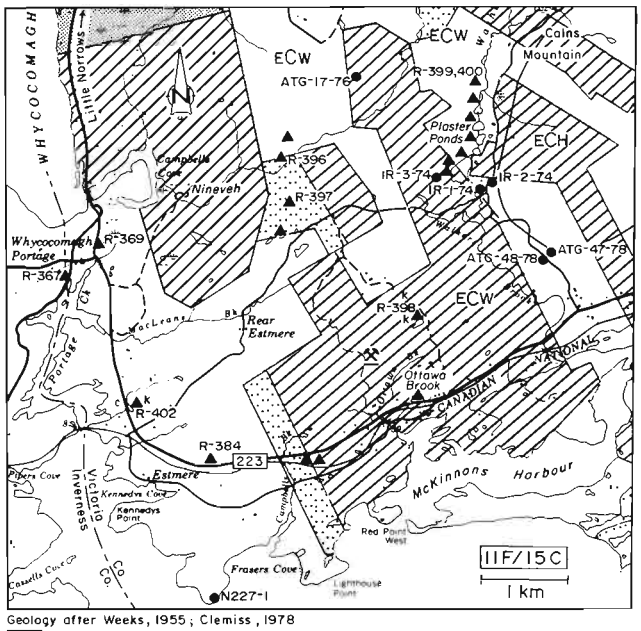
Geological mapping in the area by Bell and Goranson (1938) and Barr et al. (1987) concluded that undivided Windsor Group rocks are dipping steeply eastward along the shore in the occurrence area, in fault contact with Horton Group clastics to the west and overlain by clastics of the Canso Group to the east. The units seen at North Shore appear to be members of the Cycles 1 or 2 (A or B Subzones).

As is the case elsewhere along this shore, the sulphates found are of good quality, however there appears to be an insufficient volume of material present to be of economic interest. The exposures seen at North Shore are of geological interest.

OTTAWA BROOK (0083)
NTS 11F/15C
UTM 659000 E 5090000 N

The Ottawa Brook occurrence area lies 3-4 km south of the Village of Little Narrows, Victoria County (Fig. 12-20). It includes all surface and subsurface occurrences from Whycocomagh Portage in the west to Cains Mountain in the east, from Nineveh in the north to McKinnons Harbour in the south. It represents a continuation of the Jubilee occurrence (0086) to the north and the Jamesville occurrence (0085) to the east.

Historical records (Nova Scotia Department of Mines, Annual Reports, 1908-1928) showed that gypsum was produced in the Ottawa Brook area between 1907 and 1927 or 1928. Although production figures are not available for this whole period, they were recorded for 14 years at total production 396 092 t. These reports mentioned as many as five sites operating at one time including one underground. However, the majority of the gypsum was mined from one elongated pit located about 600 m north of the Canadian National Railway trestle at Ottawa Brook. Stone was moved by a small rail line to loadout facilities on McKinnons Harbour 1.6 km south of the quarry. The Newark Gypsum Company (Newark Plaster Co.) ran this operation for the 20 years that it was active.



Geology after Weeks, 1955; Clemiss, 1978

National Gypsum (lease)

National Gypsum (fee simple)

Little Narrows Gypsum (lease)

Figure 12-20. Location and geology of the Ottawa Brook occurrence area. See Figures 12-1 and 12-2 for legend and location.

Weeks (1955) carried out the regional mapping of this area as part of his Grand Narrows map. Base metal exploration in the area, carried out principally by Amax and Texasgulf during the 1970s has greatly increased the detail of the local geological mapping (Clemiss, 1978). Recent work by Hein et al. (1988) contains additional geological information on the Jubilee area (0086) to the north.

Most of the Ottawa Brook occurrence area is underlain by units of the sulphate dominated Cycle 1 (A Subzone) of the Windsor Group. These are underlain by clastics of the Horton Group to the east and overlain to the south and west by younger (Cycle 2 (B Subzone) and above) Windsor Group sedimentary rocks towards the deeper portions of the basin.

A typical Cycle 1 (A Subzone) sequence can be observed at Plaster Ponds. Drillhole IR-2-74 contains basal Windsor carbonate resting on Horton conglomerate. IR-1-74 passed through a portion of the dissolution trench and IR-3-74 encountered +290 m of basal sulphate (Amax Exploration Inc., 1977-78).

Outcrops to the south in the area of the old quarry at Ottawa Brook are interbedded red clastics, minor carbonates as well as sulphate horizons. Airphotos of the area indicate contorted bedrock features in the quarry area which probably reflect the dissolved sulphate horizons. All evidence suggests that these units are probably part of Cycle 2 (B Subzone).

Drillholes ATG-47-78 and ATG-48-78, located south of Cains Mountain, on the eastern side of the Ottawa Brook occurrence area, were completed near the Windsor-Horton contact (Clemiss, 1978). Hole ATG-47-78 encountered what was described as a fault zone containing brecciated carbonates, clastics and sulphates near the Horton-Windsor contact. Approximately 150 m to the southwest of hole ATG-47-78, hole ATG-48-78 encountered interbedded carbonates, sulphates and minor clastics (Clemiss, 1978). This section may belong to Cycle 2 (B Subzone) or above as well. Further detailed work is required to determine the direction and displacement of the faulting in this area.

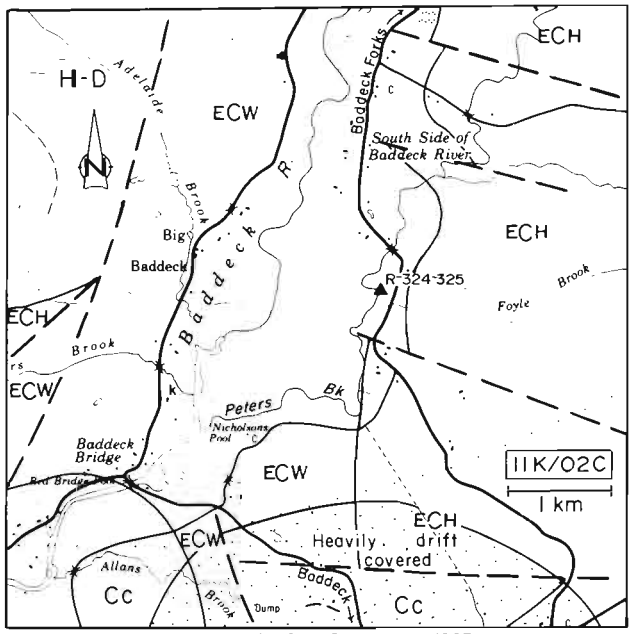
The deepest drillhole in the area (N227-1) is located at Estmere where, in 1981, Noranda Exploration drilled to a depth of 860 m as part of a regional potash exploration program (Cooper, 1981). This hole which intersected a section of saline evaporites, is believed to have collared in units of the Cycle 3 (C Subzone), and was abandoned in the upper part of the Cycle 1 (A Subzone) due to drilling difficulties.

Development potential for gypsum in the Ottawa Brook occurrence area is fair to good. Cycle 1 (A Subzone) units are very common here, however the line of small lakes called Plaster Ponds probably represents what was once a very large body of gypsum which has been dissolved. Elsewhere the amount of surface hydration of the basal sulphate appears to be quite limited. Units of Cycle 2 (B Subzone) in the vicinity of the old Ottawa Brook Quarries probably hold some potential for development. Much additional work would be required to determine what resources might be present. Unlimited tonnages of high purity anhydrite are present in this area particularly between Plaster Ponds and Jubilee.

The gypsum rights for the western and southern portions of this area are held under lease agreements by National Gypsum (Canada) Ltd. (Fig. 12-20). A few small blocks are also held by National in fee simple. These holdings would limit the possibilities of gypsum production by other companies, but should not interfere with anhydrite because it is a mineral under the Mineral Resources Act and subject to licensing. The main line of the Canadian National Railway runs through the area and shipping possibilities exist via the Bras d'Or Lakes.

PETERS BROOK (0073)
NTS 11K/02C
UTM 671960 E 5111700 N

The Peters Brook occurrence is 4 km north of Baddeck, Victoria County, on the eastern bank of the Brook approximately 400 m downstream from the paved road between Baddeck and Forks Baddeck (Fig. 12-21). The



Geology modified after Kelley, 1968b; Barr et al, 1987

Figure 12-21. Location and geology of the Peters Brook occurrence area. See Figures 12-1 and 12-2 for legend and location.

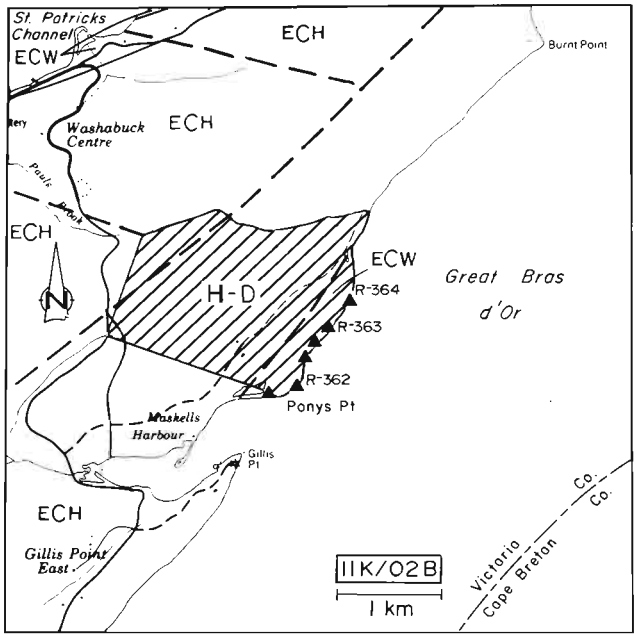
exposure consists of a discontinuous outcrop approximately 100 m long of massive, fine grained, light brown to yellow limestone overlain by a nodular, light grey to white gypsum which is overlain by a white, laminated gypsum unit. The gypsum is concealed above and is 3 m thick at this point. Bedding, taken from the carbonates is 000/23°W. A block of light brown fossiliferous limestone can be seen at the northern end of the outcrop area.

Regional mapping by Kelley (1968b) included the occurrence in undivided Windsor Group rocks. These are underlain to the east by Horton Group clastics and are in fault contact with Devonian (or older) intrusives to the west. The Windsor units probably belong to the Cycle 2 (B Subzone), however further work would be required to substantiate this, because to the north Kelley (1968b) believed the Windsor-Horton contact to be offset by faulting at numerous points.

A few probable sinkholes are evident in this area which for the most part lies within the Valley of the Baddeck River. The occurrence itself is of geological interest only.

PONYS POINT (0082)
NTS 11K/02B
UTM 672800 E 5100000 N

The Ponys Point occurrence consists of several gypsum outcroppings over 1 km long along the southern side of the Washabuck peninsula, northeast of Ponys Point (Fig. 12-22). Several smaller (1-5 m high by 5-50 m long) exposures of fine- to medium-grained, high purity, white to light grey gypsum are scattered along the shore.



Geology modified after Kelley, 1968b

National Gypsum (lease)

Figure 12-22. Location and geology of the Ponys Point occurrence area. See Figures 12-1 and 12-2 for legend and location.

Regional mapping by Kelley (1968b) has this locale underlain by undivided Windsor Group rocks in fault contact with Devonian or earlier igneous rocks to the northwest.

This occurrence is of geological interest only because there is limited areal extent of the Windsor material to be found above the waters of the Great Bras d'Or.

QUARRY ST. ANNS (0089)
NTS 11K/07A
UTM 681250 E 5125500 N

The Quarry St. Anns area is located 20 km northeast of the Village of Baddeck, Victoria County (Fig. 12-23). It

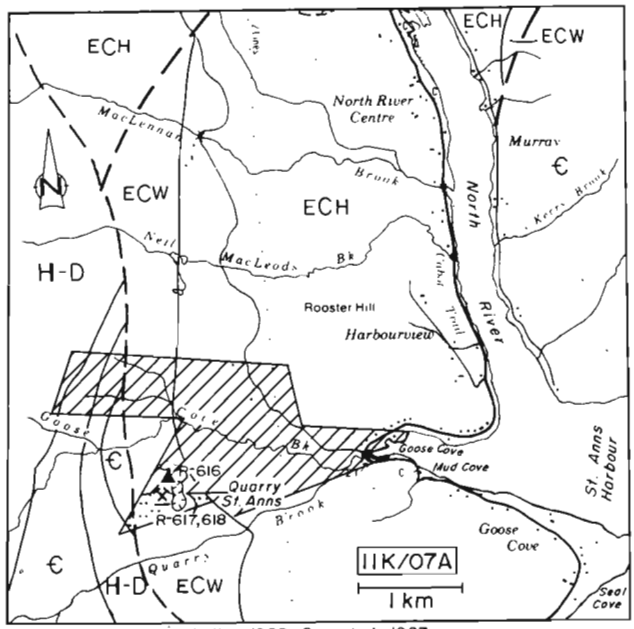


Figure 12-23. Location and geology of the Quarry St. Anns occurrence area. See Figures 12-1 and 12-2 for legend and location.

includes the site of a turn of the century gypsum quarry (origin of the place name). Historical records (Nova Scotia Department of Mines, Annual Reports, 1885-1917) reported that gypsum was produced from the site at Quarry St. Anns from at least 1884-1916. Unfortunately, reports of individual quarry activities during this period are sporadic and production figures are available for only twelve of those years.

The Victoria Gypsum Company of Baddeck (later Victoria Gypsum, Mining and Manufacturing Company Limited) produced stone from an open-pit until 1916, at which time it was reported that underground operations were to commence at the site. Nova Scotia Department of Mines, Annual Reports after 1916 do not mention the Quarry St. Anns site. Although all reports stated that gypsum was produced here, one Annual Report made reference to the sale of land plaster which may have referred to anhydrite. Of the years reported, maximum production was in 1914 with a total of 36 304 t produced (Nova Scotia Department of Mines, Annual Report, 1915). Shipments were made out of St. Anns Bay via either Munro Point or Seymour Point (it is unclear which was used). Some of the gypsum rights and property at Quarry St. Anns are presently held by the National Gypsum Company who bought portions of the property once held by the Victoria Gypsum Company.

Kelley (1960) and more recently Barr et al. (1987) mapped the area as being underlain by undivided Windsor Group rocks. These are underlain to the east by clastics of the Horton Group and in fault contact with older igneous and metamorphic units to the west. Although records of drillholes are unavailable for the area, the massive sulphate units exposed in the quarry area appear to belong to the Cycle 1 (A Subzone) of the Windsor Group.

The quarry is approximately hour glass shaped, 200 m long and elongate north-south. It has faces up to 15 m in height, the top halves of which are fine grained, white gypsum. A small lake lies 100 m north of the old workings and the heads and karst appear to end 300 m south of the quarry.

In general the gypsum and anhydrite at Quarry St. Anns appear to be a block of material which remains intact between the areas of dissolution along the courses of Goose Cove Brook to the north and Quarry Brook to the south. Airphoto interpretation (not yet ground checked) indicates there may be a second block of the basal sulphate unit located north of Goose Cove Brook.

Although the areal extent of the basal Windsor at Quarry St. Anns appears to be quite limited, some diamond drilling could be undertaken to further evaluate the site's economic potential. The reference to the development of an underground mine in 1916 would suggest possible gypsum horizons lying beneath the anhydrite seen at surface and these should be investigated. Major development at the Quarry St. Anns site appears to be unlikely.

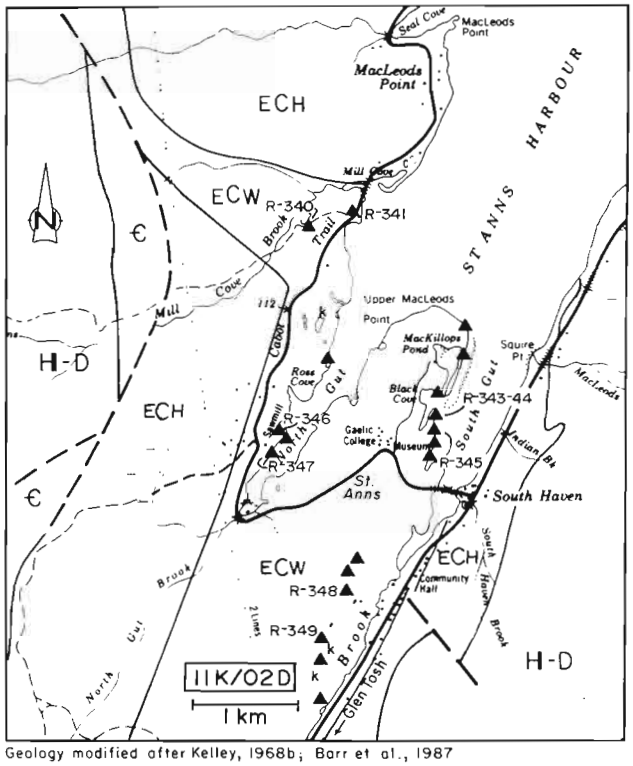
ST. ANNS HARBOUR (0077)
NTS 11K/02D
UTM 684000 E 5120000 N

Several individual occurrences can be found in the St. Anns Harbour area (Fig. 12-24). They extend from Mill Cove Brook in the north, along the western side of North Gut, and the western side of South Gut southwest towards Glen Tosh. The area is 15 km northeast of the Village of Baddeck, Victoria County.

All of the occurrences consist of massive, fine grained, white gypsum overlying massive, light blue anhydrite which appears to belong to Cycle 1

(A Subzone) of the Windsor Group. These occurrences are unusual in that in some cases anhydrite and anhydritic gypsum can be found at the surface.

Regional geological mapping by Kelley (1968b) and Barr et al. (1987) established that the area is underlain by a northeasterly trending trough of Carboniferous material. This is flanked to the southeast and northwest by older igneous and metamorphic basement rocks. The trough appears to be a synform having older Horton Group clastics underneath the Windsor Group marine sedimentary rocks (Fig. 12-24). Detailed stratigraphic



Geology modified after Kelley, 1968b; Barr et al., 1987

Figure 12-24. Location and geology of the St. Anns Harbour occurrence area. See Figures 12-1 and 12-2 for legend and location.

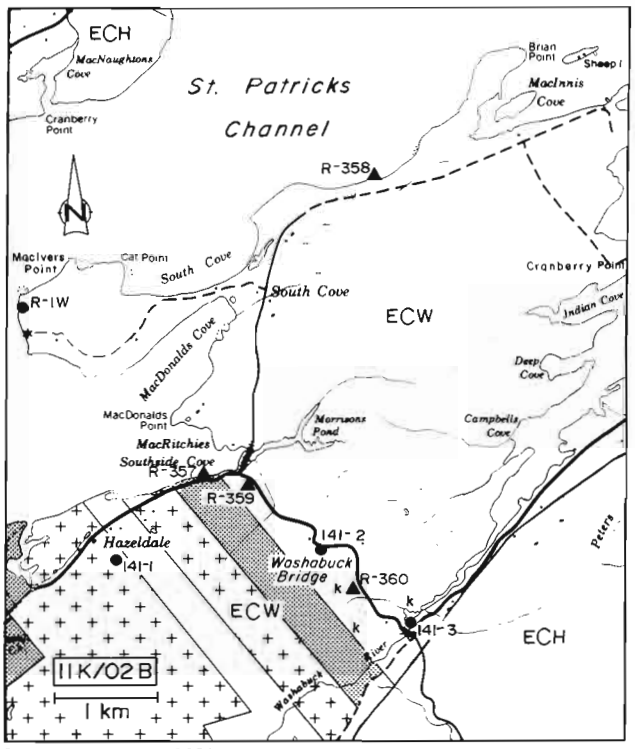
interpretation has not been attempted in the area. Hydration, for the most part, appears to be shallow over much of the area and therefore there is little potential for significant gypsum. The presence of anhydrite near surface does suggest that the area might be prospective for deposits of high purity anhydrite of the type used in gateside packing in coal mines.

WASHABUCK BRIDGE (0080)
NTS 11K/02B
UTM 663800 E 5097500 N

The Washabuck Bridge occurrence encompasses an area from Hazeldale, (Fig. 12-25) south to the Washabuck River, east to Cranberry Point, north to MacInnis Cove and west to MacIvers Point. The available information consists of several outcrops, some karst topography and four diamond-drill holes.

Regional geological mapping by Kelley (1968b) showed the area as underlain by undivided Windsor Group sedimentary rocks. These units are underlain to the southeast by Horton Group clastics and are bounded to the north and west by the Horton Group; however, this contact lies beneath St. Patricks Channel and is undefined.

In 1974 St. Joseph Explorations Ltd. drilled a total of 481.74 m in three holes in this area (McCulloch, 1974c). Hole 141-1 (T.D. 145 m) at Hazeldale encountered an interbedded sequence of sulphates, carbonates and clastics which is similar to the quarry section described at Little Narrows Gypsum's Magazine Quarry (0087) by Holleman (1976). No stratigraphic correlation was attempted by St. Joseph at the time of drilling, however the section probably represents a somewhat disturbed section of Cycle 2 (B Subzone). The two other holes are located to the southeast towards the Windsor-Horton contact. Hole 141-2 appears to have been collared and stopped in the basal sulphate passing



Geology after Kelley, 1968 b

Little Narrows Gypsum (lease)

Little Narrows Gypsum (fee simple)

Figure 12-25. Location and geology of the Washabuck Bridge occurrence area. See Figures 12-1 and 12-2 for legend and location.

through 35.51 m of overburden and then 128.47 m of gypsum containing minor amounts of calcareous siltstone and mudstone. Nearest the contact, hole 141-3 encountered 8.53 m of overburden, 25.3 m of what was described as unconsolidated siltstone, 84.43 m of gypsum, a partially filled cavity and 10.36 m of basal limestone before entering what appears to be a Horton Group sandstone. In 1981 Chevron Standard Limited drilled a potash exploration hole at MacIvers Point 2000 m to the northwest of hole 141-1 (Dekker, 1982). This hole, designated R-1W, reached a total depth of 1185 m. The company believed that they had collared in the Cycle 3 (C Subzone) of the Windsor Group, passed through a complex, folded sequence of clastics, carbonates, sulphates and salt before being stopped in basal anhydrite (Dekker, 1982).

Although the actual drill core has not yet been inspected the Washabuck Bridge occurrence is an extremely interesting one. The area adjacent to the Horton-Windsor contact, where holes 141-2 and 141-3 were drilled, appears to be deeply hydrated and may host significant volumes of economic gypsum. Northwesterly, towards the centre of this Carboniferous basin, the geological section rapidly becomes more complex and therefore less amenable to large scale mining of gypsum.

Currently, producing companies hold much of this area in fee simple or under rights agreements, however it appears that those lands east of the secondary road at Washabuck Bridge are not presently held. Although there is only limited information on this area it should be considered very prospective for further drilling to confirm the deep hydration indicated in the available drillholes.

This area has a long history of gypsum mining, is sparsely populated and most of the immediate vicinity is covered by scrub bush. St. Patricks Channel is presently used by Little Narrows Gypsum to ship its stone out of the Bras d'Or Lakes to market, therefore shipping facilities could probably be made within 2-4 km of a quarry site.