



Areas underlain by thick deposits of coarse-grained stratified glacial drift have excellent ground-water potential. Suitable for exploration to locate wells that should yield sufficient quantities of water to meet municipal and industrial requirements. Deposits are thinner and wells would be less productive along the margins of these areas.



Areas underlain by thin deposits of coarse-grained stratified glacial drift and stream gravel have low to moderate ground-water potential. Suitable for exploration to locate shallow wells and infiltration galleries that should yield sufficient quantities of water for domestic, commercial, and light industrial use.



Areas underlain by fine-grained stratified glacial drift and swamp deposits have low ground-water potential. These deposits generally will yield sufficient water for domestic wells only. In places, thin lenses of gravel with higher yields may underlie these deposits, but these lenses may not have adequate storage or recharge to produce high yields on a sustained basis.



Areas underlain by deposits of unstratified glacial drift (called till or "hardpan") and bedrock ("ledge") have low ground-water potential. In general, wells in either till or bedrock will yield only enough water for domestic or light commercial use. Till and bedrock underlie the stratified glacial drift of the map units listed above.



Water wells in stratified glacial drift



Water wells in glacial till and bedrock



Test borings



Basin boundary

WATER WELLS AND TEST BORINGS

Number	Owner	Location	Total to Depth (in ft)	1/ Depth Bedrock (in ft)	1/ Aquifer	Yield 1/2/ (in gallons per minute)
1.	Reginald Sylvester, Jr.	Sutton	372	6	Rock	2
2.	Village of Lyndonville	Lyndon	53	NR	Sand & Gravel	400
3.	Horace G. Wheeler	Banville	15	9	Till & Rock	15
4.	Town of St. Johnsbury	St. Johnsbury	70	NR	Gravel	800
5.	East Barnet Water Company	Barnet	20	NR	Sand	5
6.	Caledonia Sand & Gravel Company, Inc.	Waterford	250	32	Rock	22
7.	Town of Lunenburg	Lunenburg	400	6	Rock	7
8.	Town of Canaan	Canaan	120	NR	Sand & Gravel	60
9.	Beecher Falls Manufacturing Company	Canaan	30	NR	Sand & Gravel	300

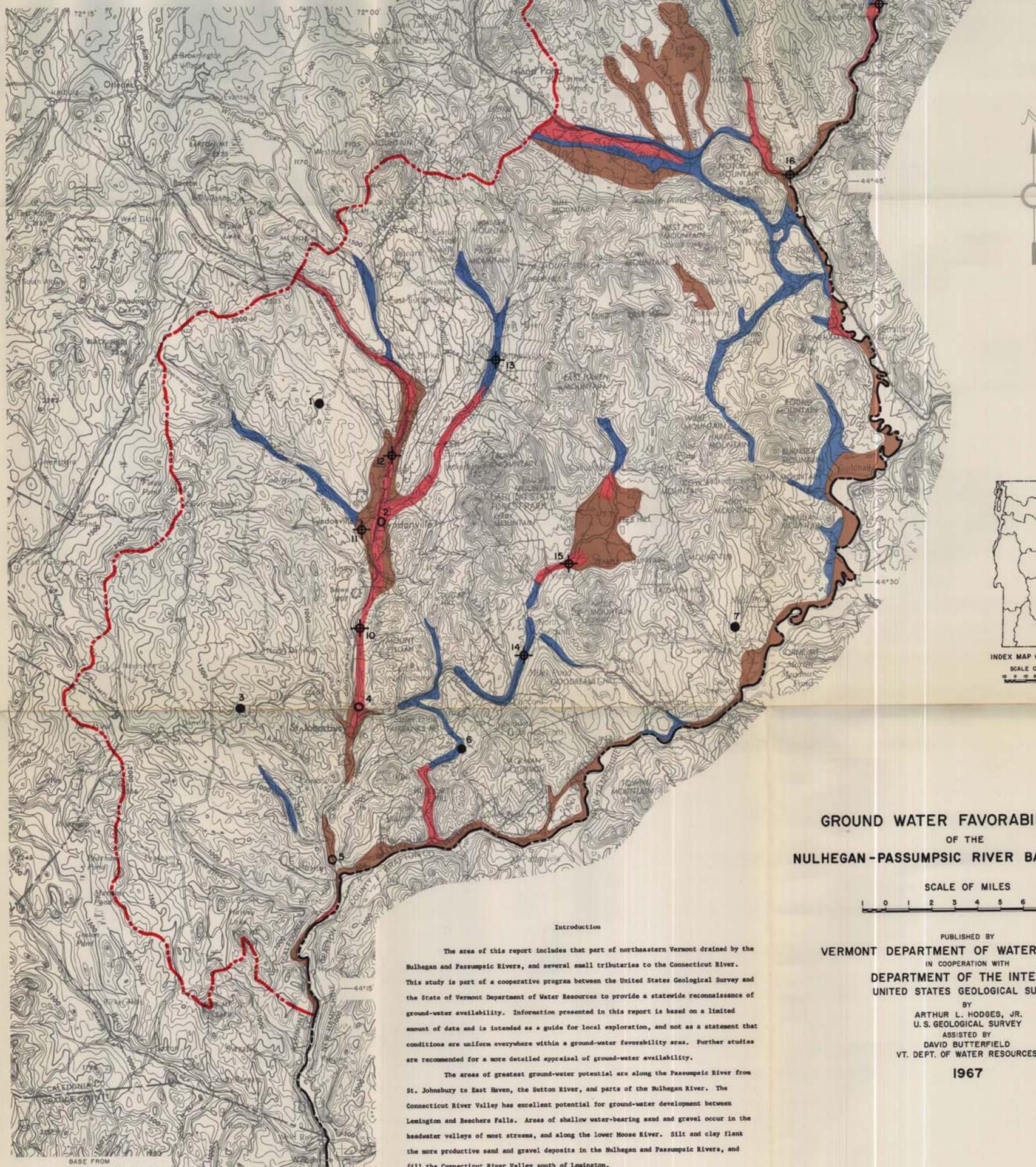
NR Not Reached
 1/ Reported by owner or driller
 2/ May be limited by capacity of pump

TEST BORINGS (Vermont Department of Highways except as noted)

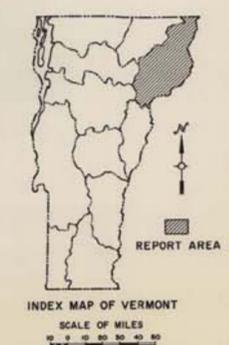
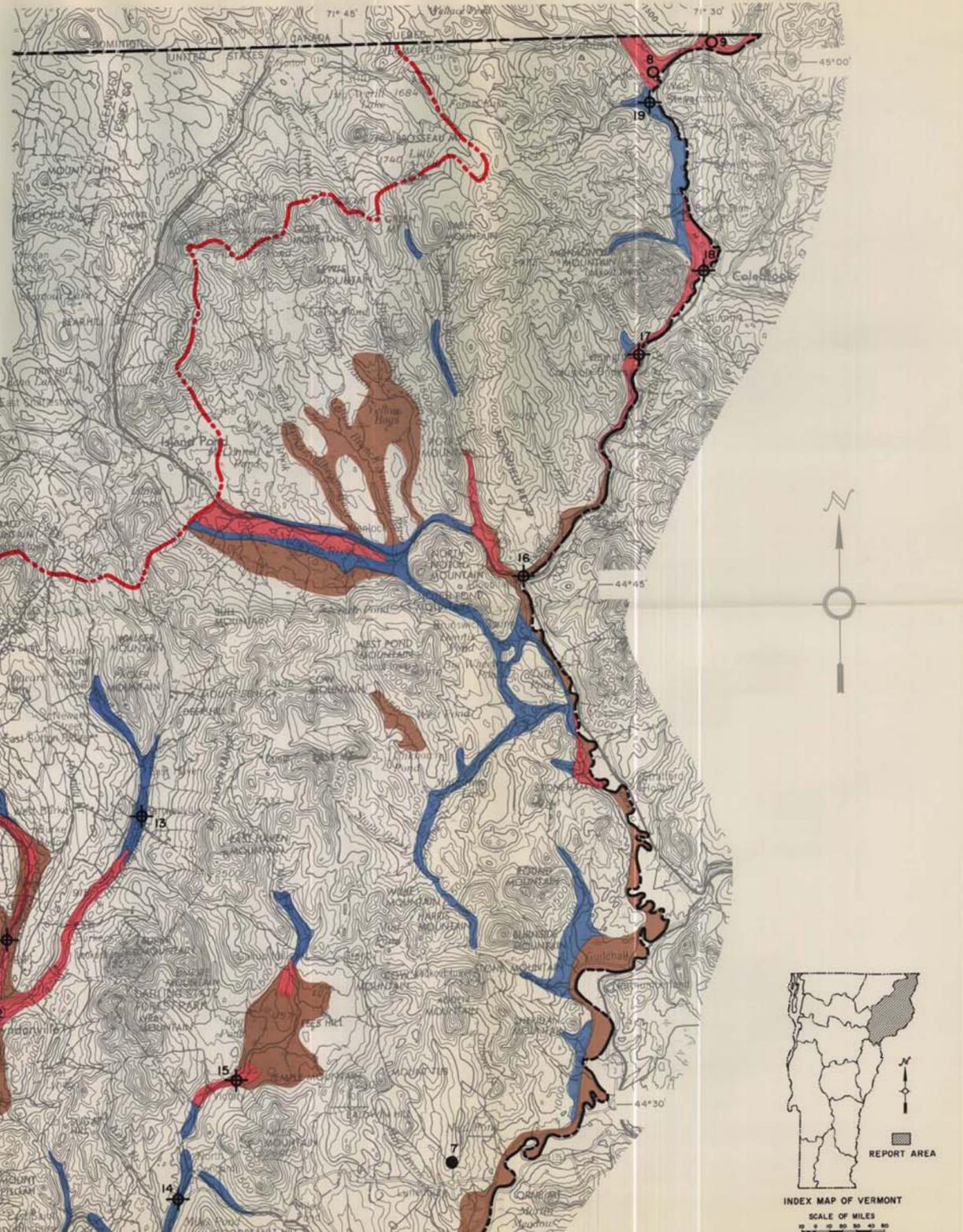
10.	St. Johnsbury - U.S. Route 5 over Passumpsic River 3 miles North of St. Johnsbury Maximum 60 feet sand & gravel on southeast side of crossing.	Elevation Not Available
11.	Lyndon - Vt. Route 122 bridge over Passumpsic River between Villages of Lyndonville & Lyndon Center Fine sand 0 - 20 ft Clay 20 - 40 Till 40 - 50	Elevation 700 ft
12.	Lyndon - U.S. Route 5 bridge over Calendar Brook approximately 1/4 mile South of Lyndon-Barke Town line Soil & sand 0 - 10 ft Sand, some fine gravel 10 - 24 Sand with clay 24 - 37 Not to bedrock	Elevation 733 ft
13.	East Haven - State Aid Highway 1 over East Branch of Passumpsic River (450 feet East of Vt. Route 114) Maximum 25 feet all coarse gravel over bedrock	Elevation Not Available
14.	Concord - (2 miles North Northeast of Village of Concord) U.S. Route 2 over Moose River Maximum 20 feet sand & gravel over till or bedrock	Elevation 970 ft
15.	Victory - Proposed Victory Dam on Moose River (U.S. Corps of Engineers' borings), 250 feet South of Moose River Topsoil with cobbles 0 - 5 ft Brown silty sandy gravel 5 - 15 Gray silt & sand 15 - 20 Nested boulders 20 - 34 Gray clay with fine sand seams 34 - 35 Gray sandy silt 35 - 44 Gray silty gravelly sand with boulders 44 - 62 Brown silty gravelly sand 62 - 70 Brown sandy silty gravel with probable bedrock fragments 70 - 75 Not to bedrock	Elevation 1,156 ft
16.	Bloomfield - Vt. Route 103 crossing to North Stratford, New Hampshire (Vermont side only) Coarse sand & gravel 0 - 15 ft Fine sand, minor gravel 15 - 42 Fine gray sand, minor clay 42 - 50 Not to bedrock	Elevation 884 ft

- 17. Lemington - Mill Brook bridge on Vt. Route 102 approximately 0.1 mile North of Lemington
Stones & clay 0 - 4 ft
Silt & clay 4 - 17
Coarse sand 17 - 18
Blue clay 18 - 21
Sand & gravel (hard packed) 21 - 26
Not to bedrock
- 18. Colebrook, New Hampshire - bridge over Connecticut River (Vermont side)
Fine sand & silt 0 - 29 ft
Fine to medium sand, some silt 29 - 48
Clean sand & gravel, few pebbles 48 - 51
Not to bedrock
- 19. Canaan - Vt. Route 102, fish hatchery bridge over Keyer Brook
Sand & gravel 0 - 10 ft
Gravel, some fine sand, trace clay (possible till) 10 - 25

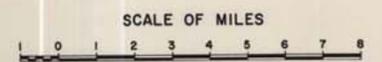
Elevation 1,000 ft
 Elevation 1,004 ft
 Elevation 490 ft



BASE FROM UNITED STATES GEOLOGICAL SURVEY



GROUND WATER FAVORABILITY MAP
 OF THE
 NULHEGAN-PASSUMPSIC RIVER BASIN, VERMONT



PUBLISHED BY
 VERMONT DEPARTMENT OF WATER RESOURCES
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Introduction
 The area of this report includes that part of northeastern Vermont drained by the Nulhegan and Passumpsic Rivers, and several small tributaries to the Connecticut River. This study is part of a cooperative program between the United States Geological Survey and the State of Vermont Department of Water Resources to provide a statewide reconnaissance of ground-water availability. Information presented in this report is based on a limited amount of data and is intended as a guide for local exploration, and not as a statement that conditions are uniform everywhere within a ground-water favorability area. Further studies are recommended for a more detailed appraisal of ground-water availability.
 The areas of greatest ground-water potential are along the Passumpsic River from St. Johnsbury to East Haven, the Sutton River, and parts of the Nulhegan River. The Connecticut River Valley has excellent potential for ground-water development between Lemington and Beecher Falls. Areas of shallow water-bearing sand and gravel occur in the headwater valleys of most streams, and along the lower Moose River. Silt and clay flank the more productive sand and gravel deposits in the Nulhegan and Passumpsic Rivers, and fill the Connecticut River Valley south of Lemington.