

MAIN MAP LEGEND

- Topography**  
Surface contours and elevation in feet (interval 500 feet)
- Geology**  
Geological boundary
- QUATERNARY**  
Qd Unconsolidated deposits
- CRETACEOUS**  
Klb Labiche Formation  
Kd Dunvegan Formation  
Ksh Shaftesbury Formation
- DEVONIAN**  
Dum Undivided Middle to Upper Devonian: Grosmont, Ireton, Cooking Lake, Beaverhill Lake, and Slave Point Formations  
Dmm Undivided Middle Devonian: Fort Vermilion, Watt Mountain, Muskeg, and Prairie Evaporite Formations  
Dml Undivided Lower to Middle Devonian: Methy McLean River and LaLoche Formations
- ARCHEAN**  
A Undivided Granitic Plutonic Rocks
- Note: In the main map legend the designation Dml should read, Undivided Middle Devonian.

- Lithology**
- Clay
  - Sand and gravel
  - Sand
  - Sandstone
  - Sandstone, oil-impregnated
  - Silt
  - Siltstone
  - Shale
  - Limestone
  - Dolomite
  - Salt, anhydrite and gypsum
  - Granitic plutonic rocks

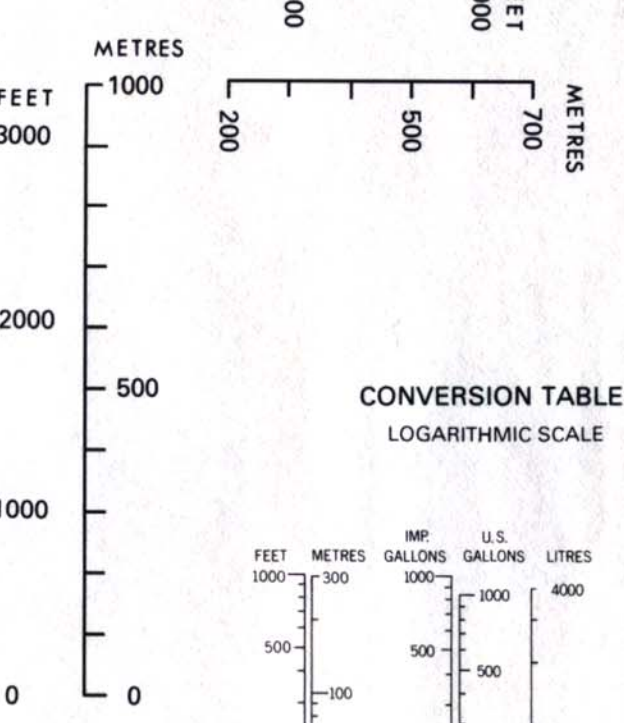
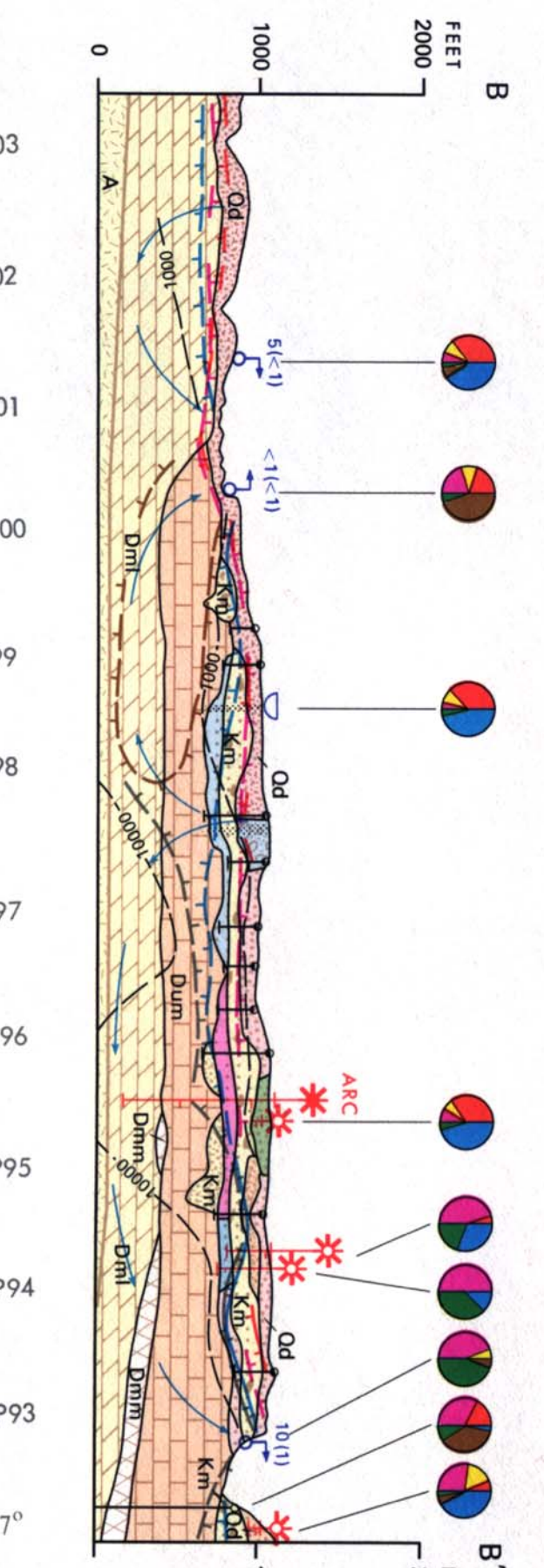
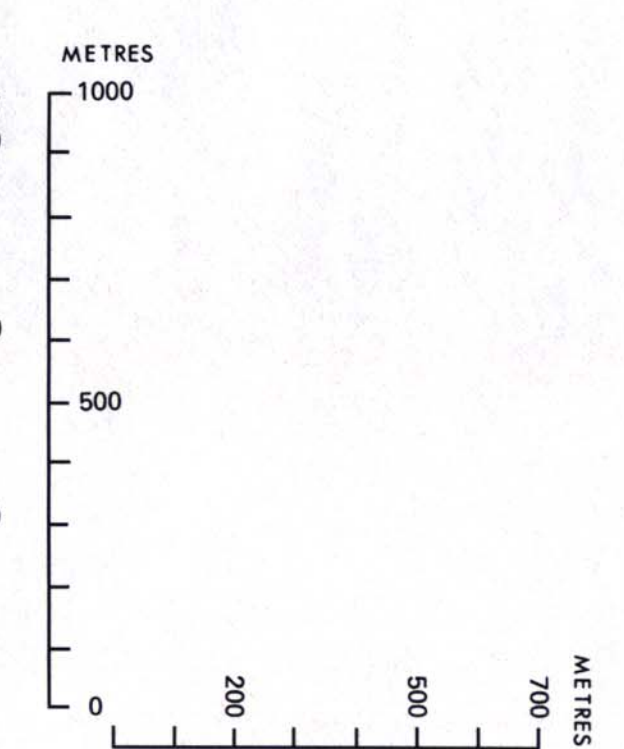
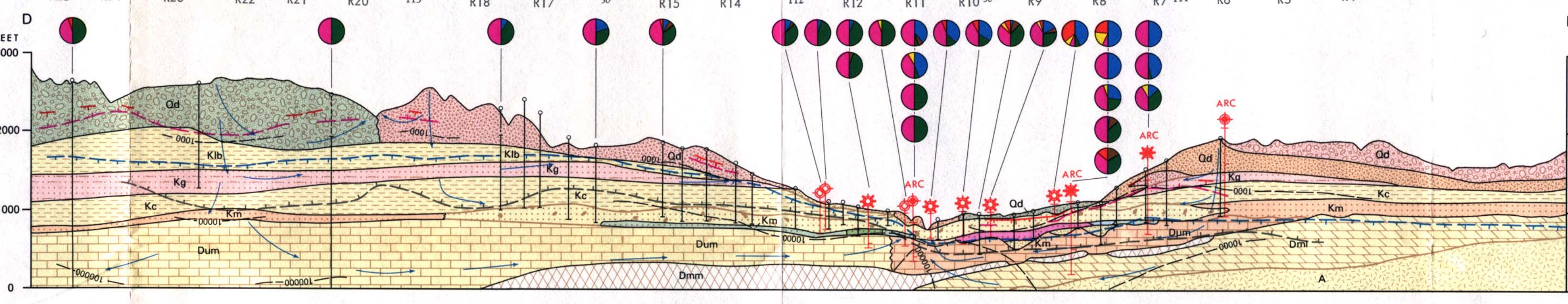
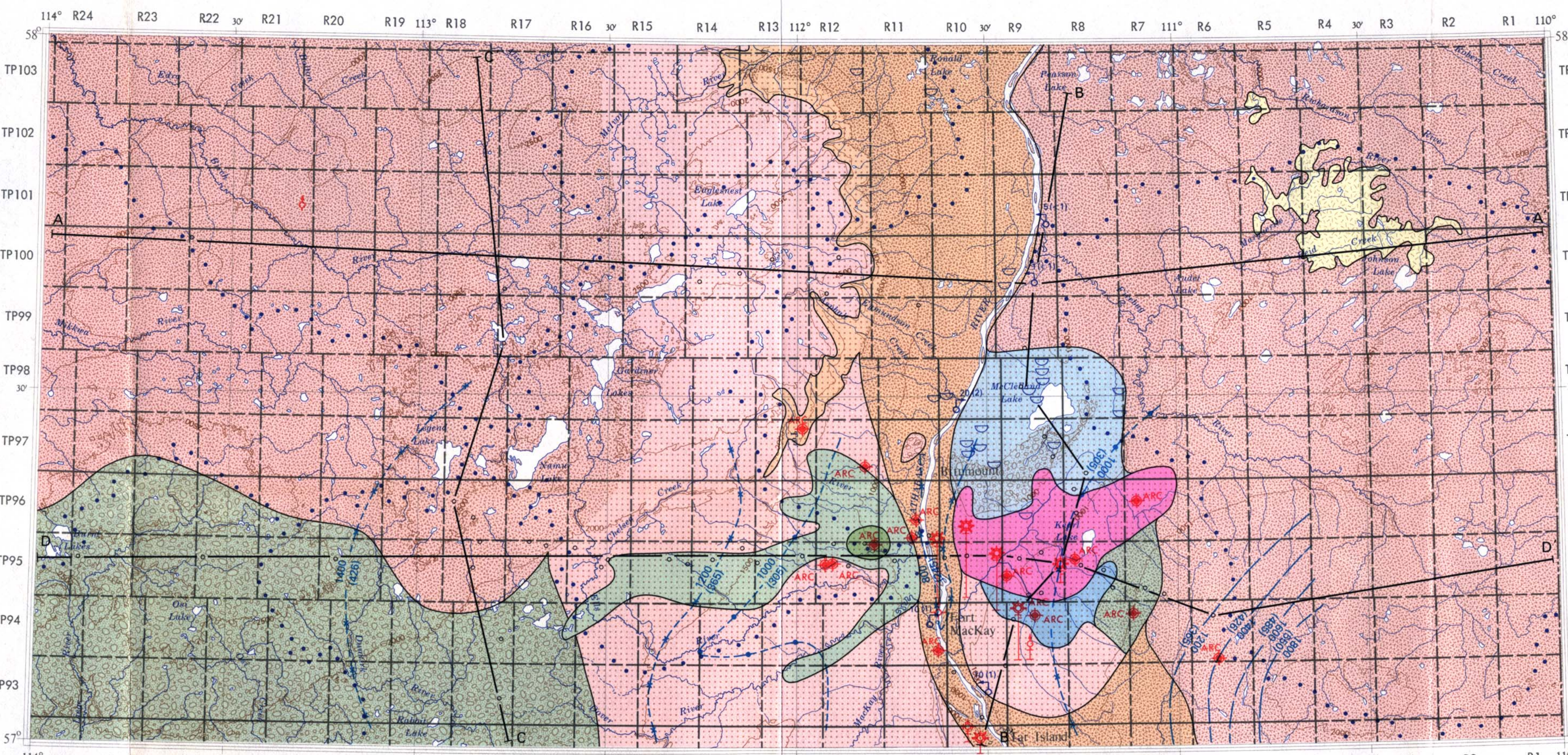
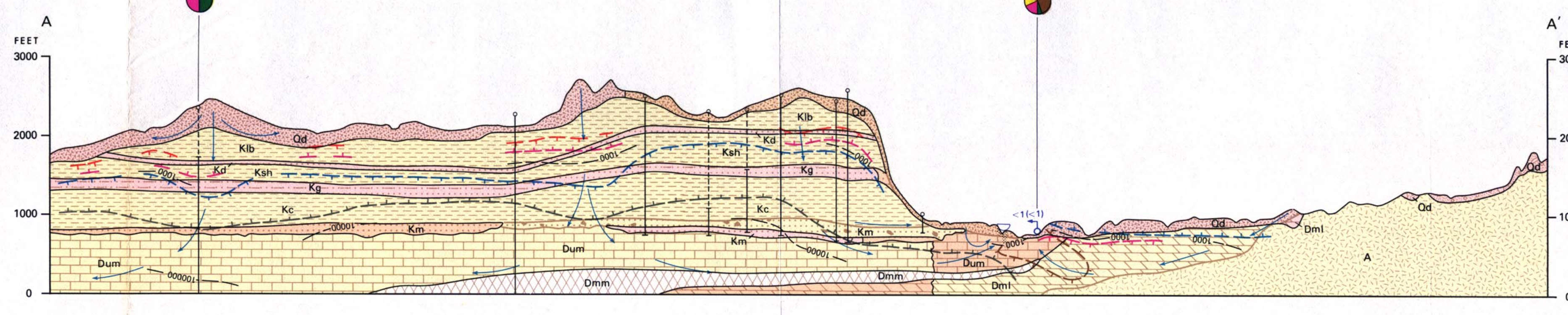
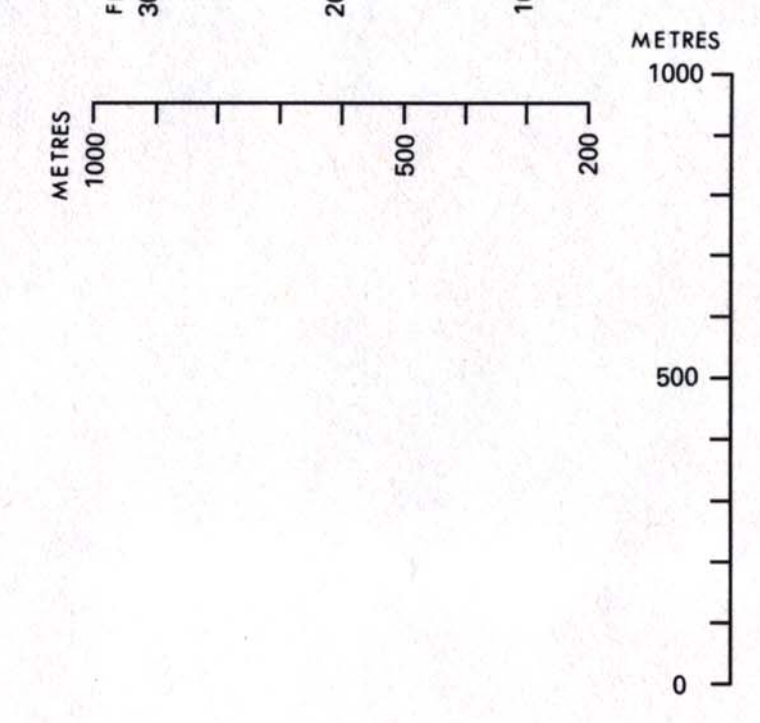
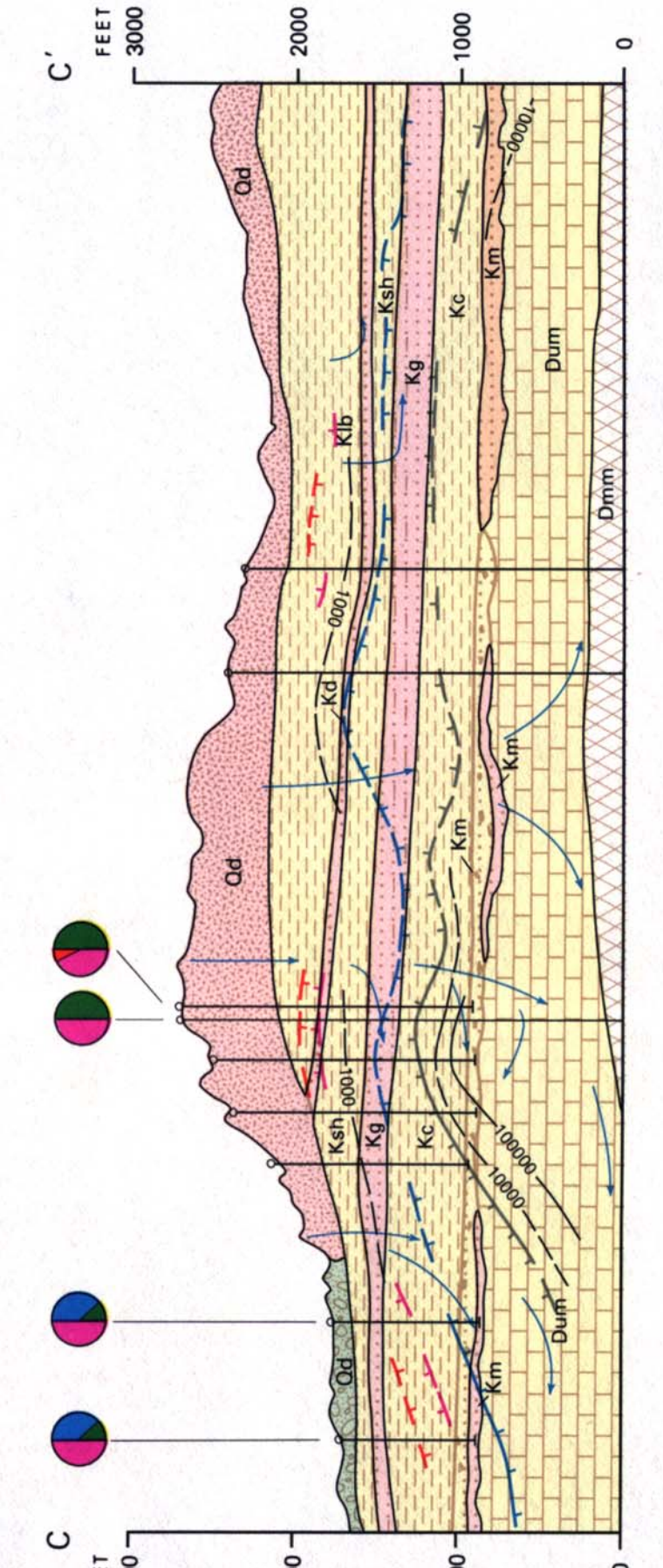
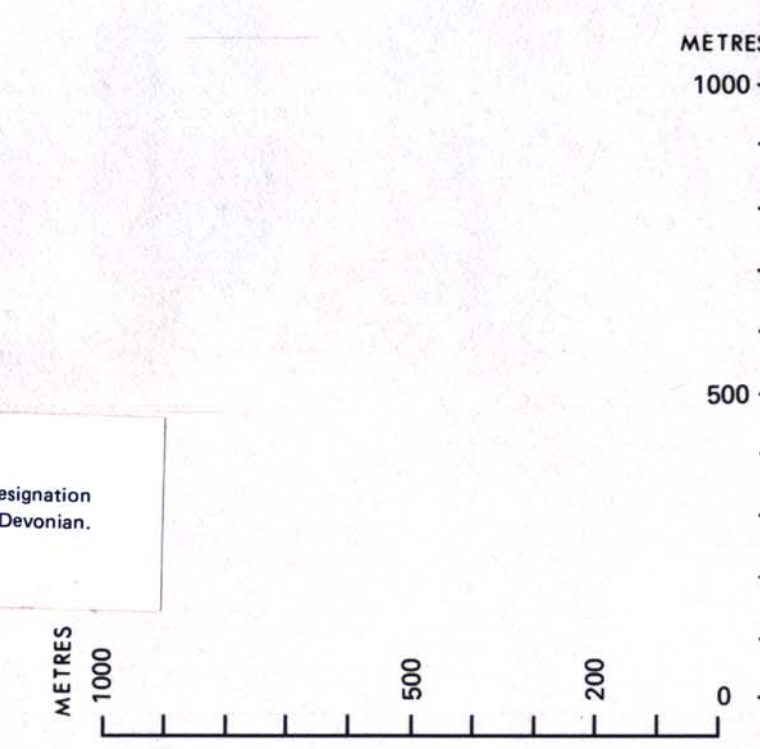
- Hydrography**
- Lake or slough, perennial
  - Lake or slough, seasonal
  - Stream, perennial
  - Stream, seasonal
  - Surface water divide

- Hydrogeology**
- Spring, flow rate unknown
  - Spring, flow rate in igpm (L/sec)
  - Nonpumping water level contour in the bedrock (elevation in feet followed by metres in brackets) and vertical component of groundwater movement
  - Direction of groundwater flow

- Groundwater Probability†**
- Range of average expected yield of wells in imperial gallons per minute (l/sec)
- |                     |  |
|---------------------|--|
| more than 500 (>38) | Probable: estimated from quantitative information (pump tests, bail tests, etc.) |
| 100-500 (8-38)      | Possible: estimated from qualitative information (flow regime, lithology, etc.)  |
| 25-100 (2-8)        |  |
| 5-25 (0.4-2)        |  |
| 1-5 (0.1-0.4)       |  |
| <1 (<0.1)           |  |
- †The indicated average expected yields to wells are predictions based on the best data available at the time of map compilation; due to data shortcomings and special conditions, local discrepancies between predicted and actual yields are inevitable. Multiplier completion may be necessary to obtain the yield indicated.

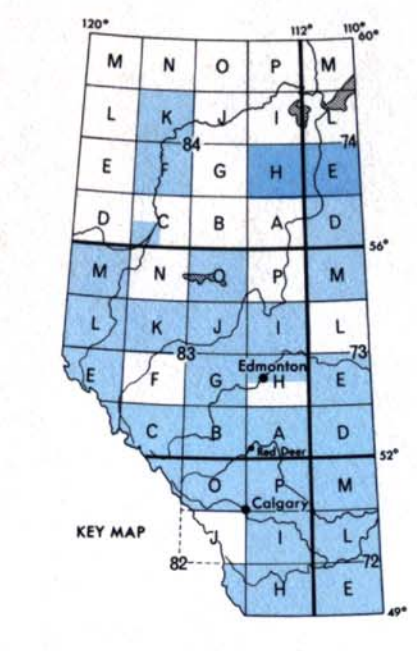
- Wells and Other Artificial Works**
- Depth Scale
- Water well, flowing
- Water well, 20-year safe yield calculated from a good bail test or a short pump test
- Water well, 20-year safe yield calculated from a pump test of sufficient length to reflect regional hydraulic conditions
- Observation well:  
With automatic recorder  
Without automatic recorder
- Location of Alberta Research Council test hole\*
- Shothole, flowing
- Structure testhole
- Other testholes (oil well, gas well etc.)
- Depth of exploratory well
- Line of hydrogeological profile
- \*Observation well sites may contain wells of various depths

- Hydrochemistry**
- Calcium  
Magnesium  
Sodium + potassium
- Sulfate  
Chloride  
Nitrate
- Carbonate + bicarbonate
- Note: When the yellow Mg pie sector is absent, Ca + Mg are represented as a unit by the red pie sector.
- Total dissolved solids in parts per million:  
defined  
approximate
- Isogram along which calcium + magnesium constitute 60 percent of total cations\*; teeth indicate direction of lesser calcium + magnesium content:  
defined  
approximate
- Isogram along which sodium + potassium constitute 60 percent of total cations\*; teeth indicate direction of lesser sodium + potassium content:  
defined  
approximate
- Isogram along which carbonate + bicarbonate constitute 60 percent of total anions\*; teeth indicate direction of lesser carbonate + bicarbonate content:  
defined  
approximate
- Isogram along which sulfate constitutes 60 percent of total anions\*; teeth indicate direction of lesser sulfate content:  
defined  
approximate
- Isogram along which chloride constitutes 60 percent of total anions\*; teeth indicate direction of lesser chloride content:  
defined  
approximate
- †Determined on equivalents per million basis



**CONVERSION TABLE**  
LOGARITHMIC SCALE

FEET	METRES	IMP. GALLONS PER MINUTE	U.S. GALLONS PER MINUTE	LITRES PER SECOND	CUBIC FEET PER SECOND	CUBIC METRES PER DAY
1000	300	1	1	0.063	0.028	0.00056
500	150	0.5	0.5	0.031	0.014	0.00028
100	30	0.1	0.1	0.0063	0.0028	0.000056
50	15	0.05	0.05	0.0031	0.0014	0.000028
10	3	0.01	0.01	0.00063	0.00028	0.0000056
5	1.5	0.005	0.005	0.00031	0.00014	0.0000028
1	0.3	0.0001	0.0001	0.000063	0.000028	0.00000056



HYDROGEOLOGICAL MAP  
BITUMOUNT-NAMUR LAKE  
ALBERTA  
NTS 74E-84H

All elevations in feet above mean sea level.  
Vertical exaggeration of the hydrogeological profiles is approximately 40X.  
An expanded legend and explanatory notes (Earth Sciences Report 72-12) for use with this hydrogeological map series is available from Alberta Research Council, Edmonton, Canada.  
Map to accompany Earth Sciences Report 78-6.  
Hydrogeology by G.F. Ozorav, D.A. Hackbarth and A.T. Lytviak.  
Drafted by R.W. Swenson.  
Cartographic editing by A.R. Campbell.