

ERRATA TO MAIN MAP LEGEND

At the centre of Profile C-C' (in line with Tp 78-79 on the main map), the letter symbol connected to two small, yellow colored areas is correctly Kp (not Km). The two small, yellow colored areas are the "Oil Impregnated sandstone and shale".

Main Map Legend, the symbol of the Pelican Formation should be correctly: Kp (not Kp); also Kp should be read (instead of Kp) on Profile A-A', top of right centre.

Main Map Legend, Groundwater Probability, the explanation of the yellow color symbol is correctly: $<1 < 0.3$.

MAIN MAP LEGEND

Topography

Surface contours and elevation in feet (interval: 500 feet)

Geology

Geological boundary

QUATERNARY

- Unconsolidated deposits
- Sand and gravel or sand and silt and gravel
- Sand

CRETACEOUS

- Waini Formation
- Labiche Formation
- First White Specks Zone
- Second White Specks Zone
- Base of the Fish Scale Zone
- Pelican Formation
- Joli Fall Formation
- Grand Rapids Formation
- Chenower Formation
- McMurray Formation
- Km

DEVONIAN

- Devonian Limestone

Lithology

- Sand and silt and gravel
- Sand
- Sandstone
- Shale
- Shale and sandstone
- Oil impregnated sandstone and shale
- Carbonate

Hydrography

- Lake or slough, perennial
- Lake or slough, seasonal
- Marsh, meadow
- Stream, perennial
- Stream, intermittent
- Surface water divide

Groundwater Probability

- Range of average expected yield of wells in imperial gallons per minute (L/mc)
- Probable, estimated, from quantitative information (bore logs, test logs, etc.)
- Possible, estimated, from qualitative information (bore logs, test logs, etc.)
- 20 (0.7-2.3)
- 10 (0.3-1.0)
- 5 (0.1-0.4)
- 1 (0.1-0.3)

Boundary of yield area

The indicated average expected yields, to wells, are predictions, based on the best data available in the time of map compilation, due to data shortcomings and special conditions, and are not intended to be used for design purposes. Further investigations are indicated. Non-quantitative compilation may be necessary to obtain the yield indicated.

Wells and Other Artificial Works

Depth scale



Water well, nonflowing

Water well, flowing

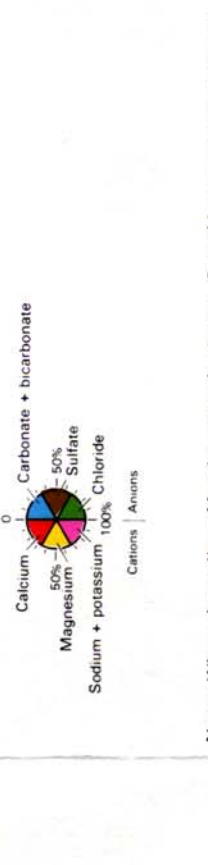
Water wells, 20-year safety yield calculated from a good bore log or a short pump test

Structure, existing

Depth of testhole

Line of hydrogeological profile

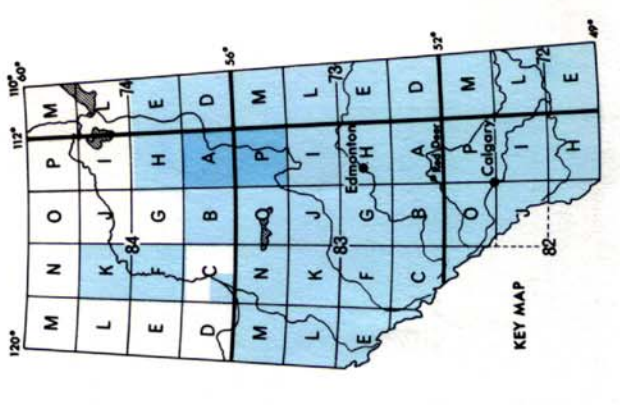
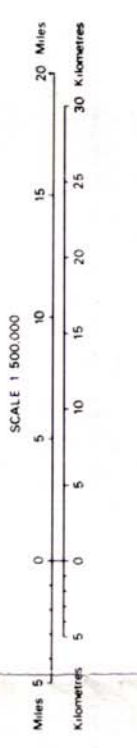
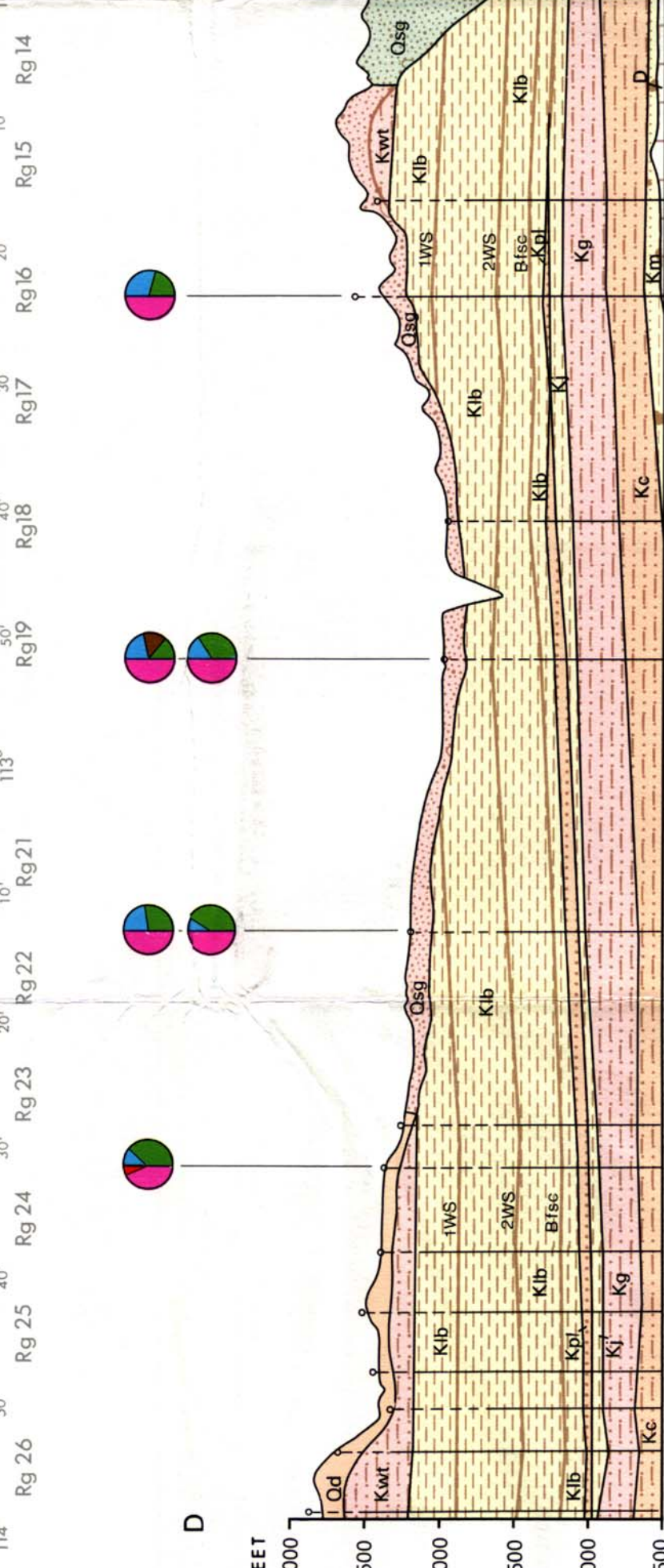
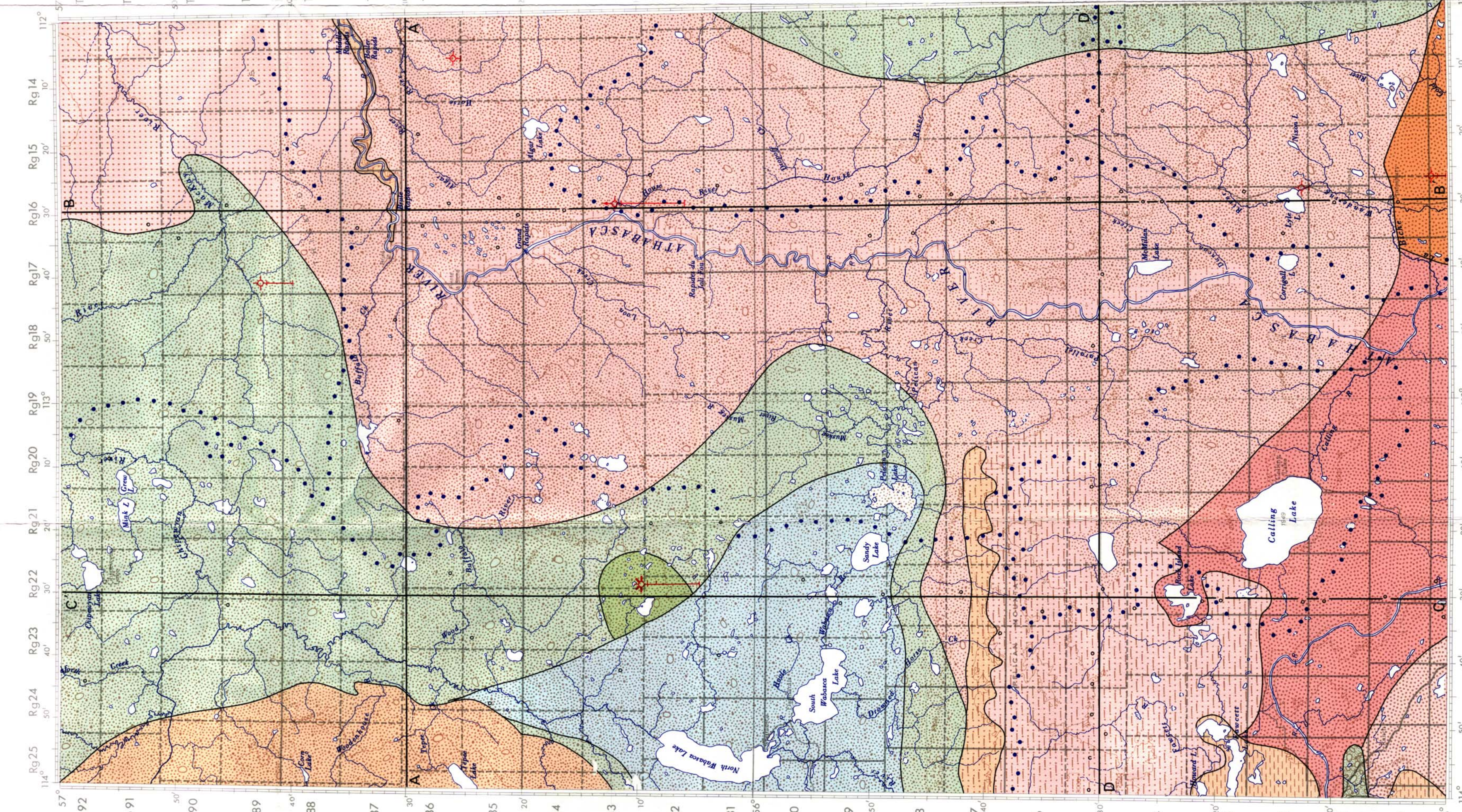
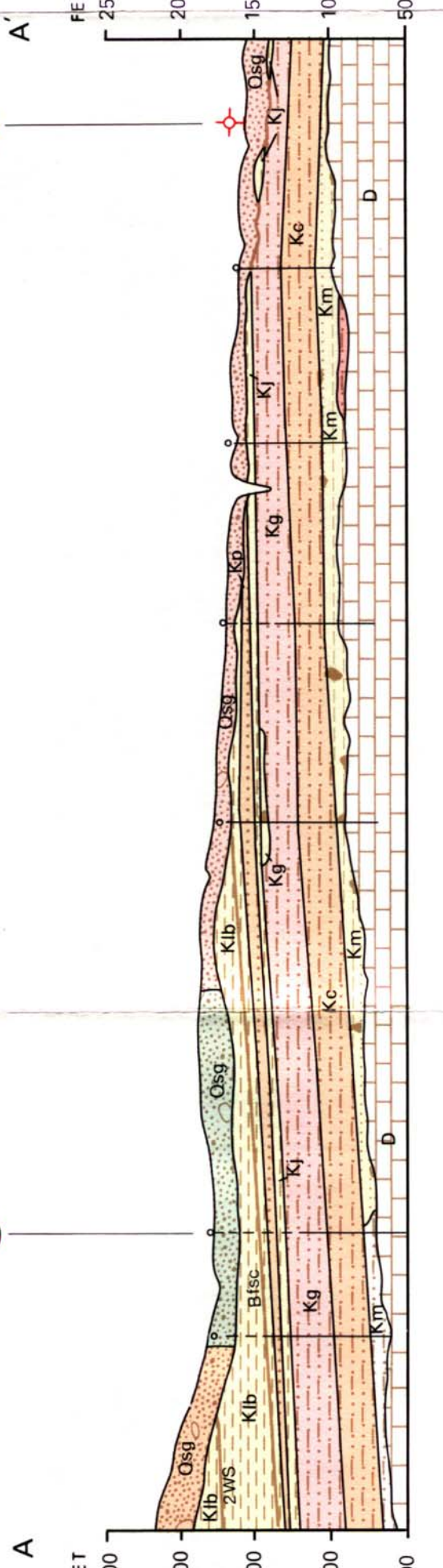
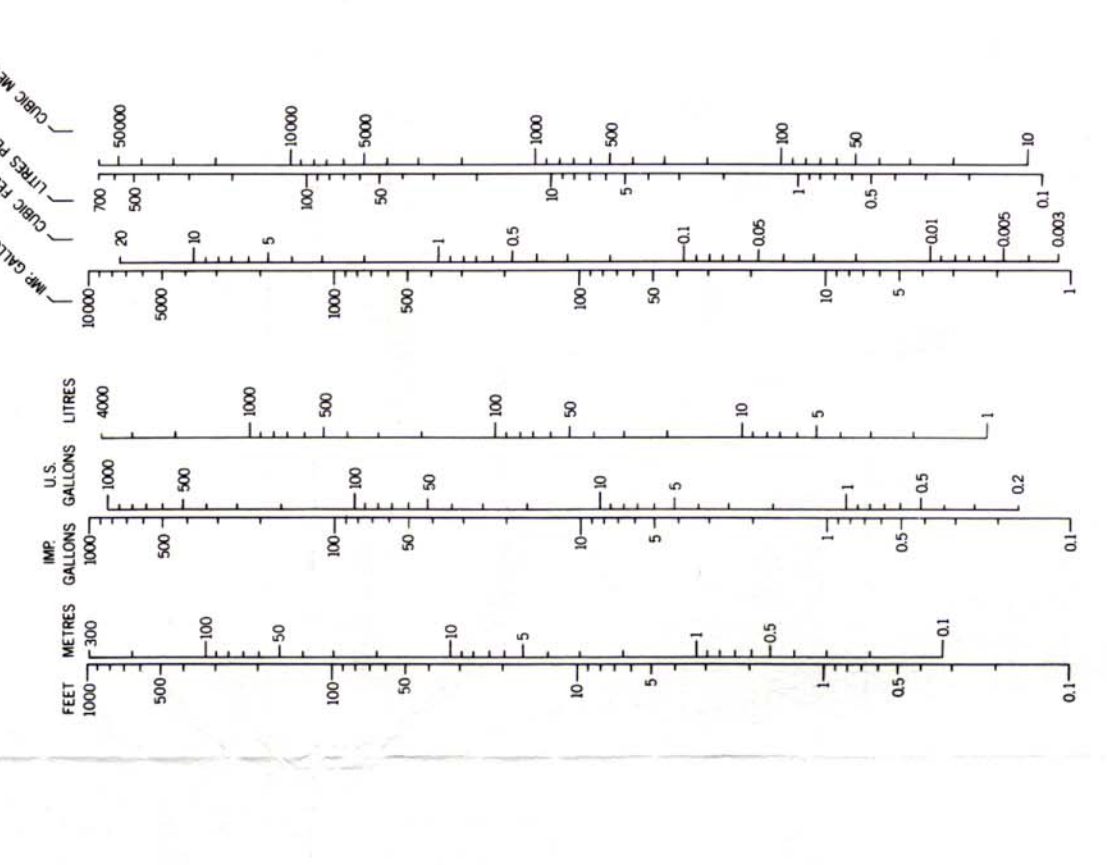
Hydrochemistry



Note: When the yellow Mg pie sector is absent, Ca + Mg are represented as a unit by the red pie sector.

CONVERSION TABLE

LOGARITHMIC SCALE



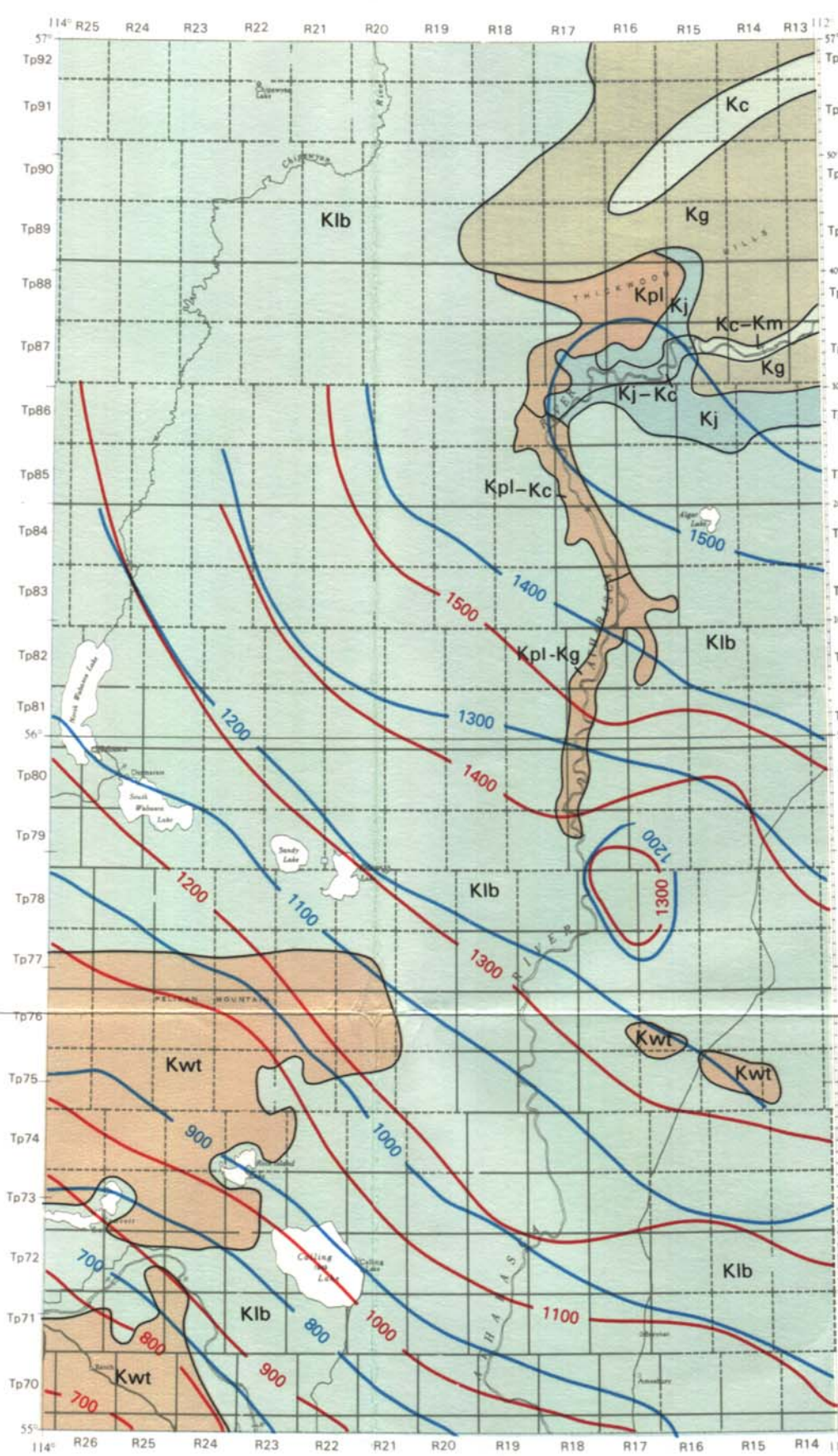
**HYDROGEOLOGICAL MAP
PELICAN - ALGAR LAKE
ALBERTA**

NTS 83P-84A

All elevations in feet and metres above mean sea level.
Vertical exaggeration of the hydrogeological profiles is approximately 80X.
An expanded legend and explanatory notes (Earth Sciences Report 72-17) for use with this hydrogeological map series is available from Alberta Research Council, Edmonton, Canada.

Map to accompany Earth Sciences Report 80-1.
Hydrogeology by G. Ozoray.
Drafted by J.K. Mathis.

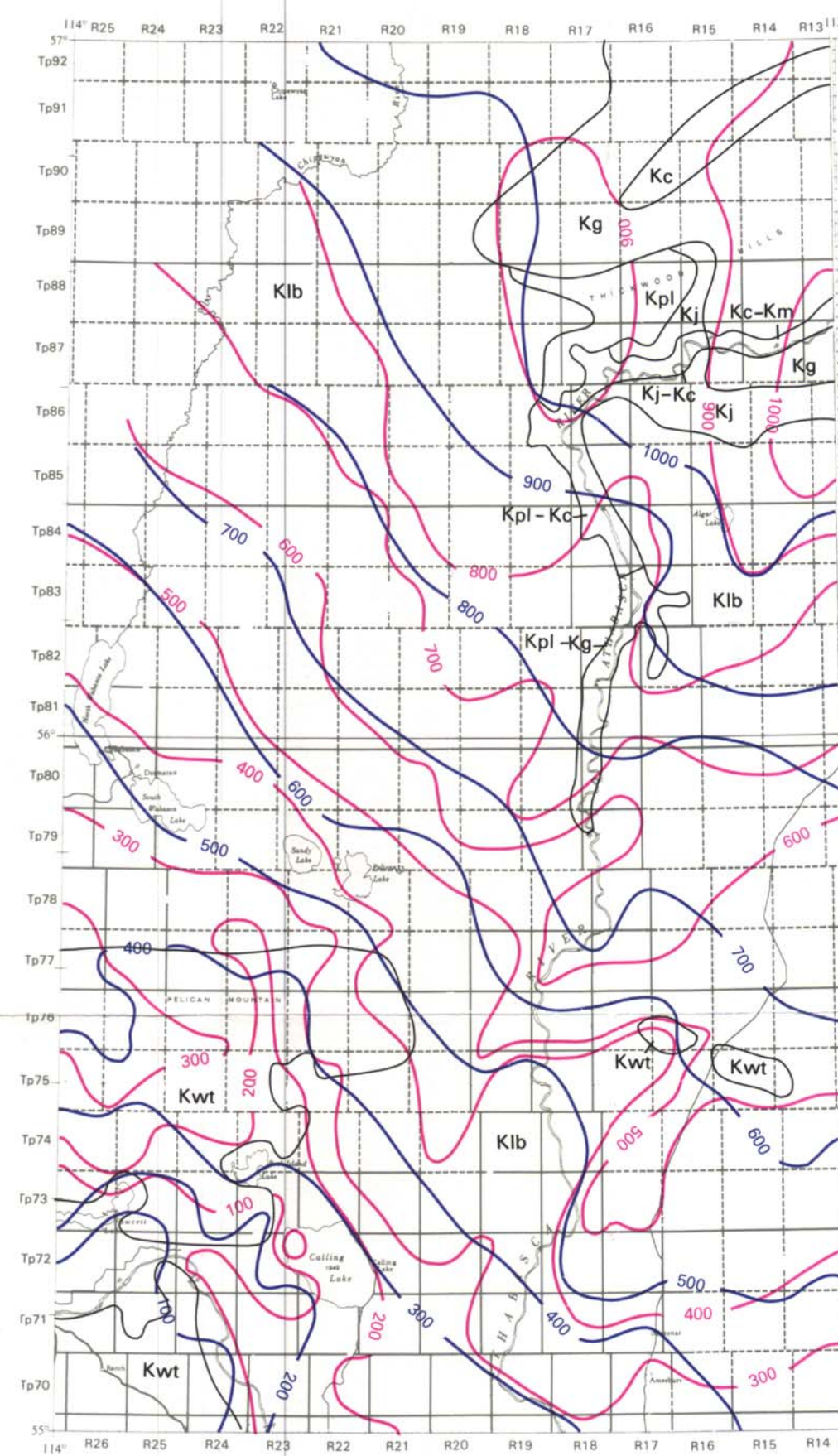
GEOLOGY I



LEGEND

Wapiti Formation: grey feldspathic, clayey sandstone; grey bentonitic mudstone and bentonite; scattered coal beds; nonmarine.
Kwt
Labiche Formation: dark gray shale beds and silty shale; ironstone partings and concretions; silty fish scale bearing bed in lower part; marine.
Klb
Pelican Formation: fine-grained quartzose sandstone, silty and glauconitic in lower part; marine.
Kpl
Joli Fou Formation: dark grey fossiliferous shale, silty interbeds in upper part; marine.
Kj
Grand Rapids Formation: fine-grained quartzose and feldspathic sandstone, laminated siltstone and silty shale; thin coal beds; shoreline complex.
Kg
Clearwater Formation: dark grey fossiliferous, silty shale; laminated siltstone and fine-grained cherty sandstone; glauconitic sandstone (Wabiskaw Member) near base; marine.
Kc
McMurray Formation: thick-bedded quartzose sandstone and siltstone; oil-impregnated; grey silty shale interbeds in upper part; nonmarine to diatitic.
Km
 Rock unit boundary
 Structure contour on top of Viking-Pelican Sandstone (ft. amsl)
 Structure contour on top of Grand Rapids Formation (ft. amsl)

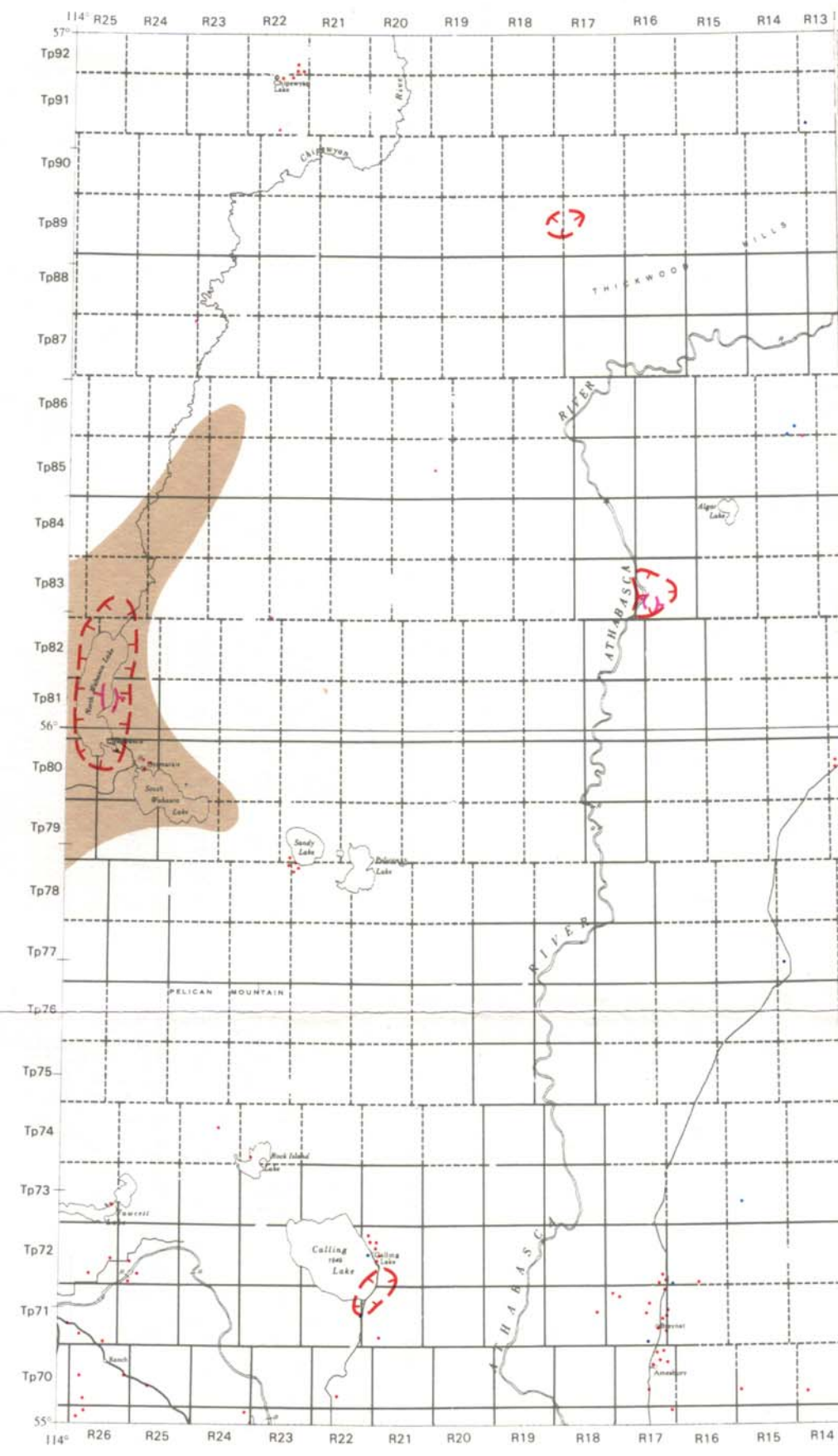
GEOLOGY II



LEGEND

Kwt Wapiti Formation
Klb Labiche Formation
Kpl Pelican Formation
Kj Joli Fou Formation
Kg Grand Rapids Formation
Kc Clearwater Formation
Km McMurray Formation
 Rock unit boundary
 Structure contour on top of the Devonian (ft. amsl)
 Structure contour on top of the McMurray-Wabaska Sandstone (ft. amsl)

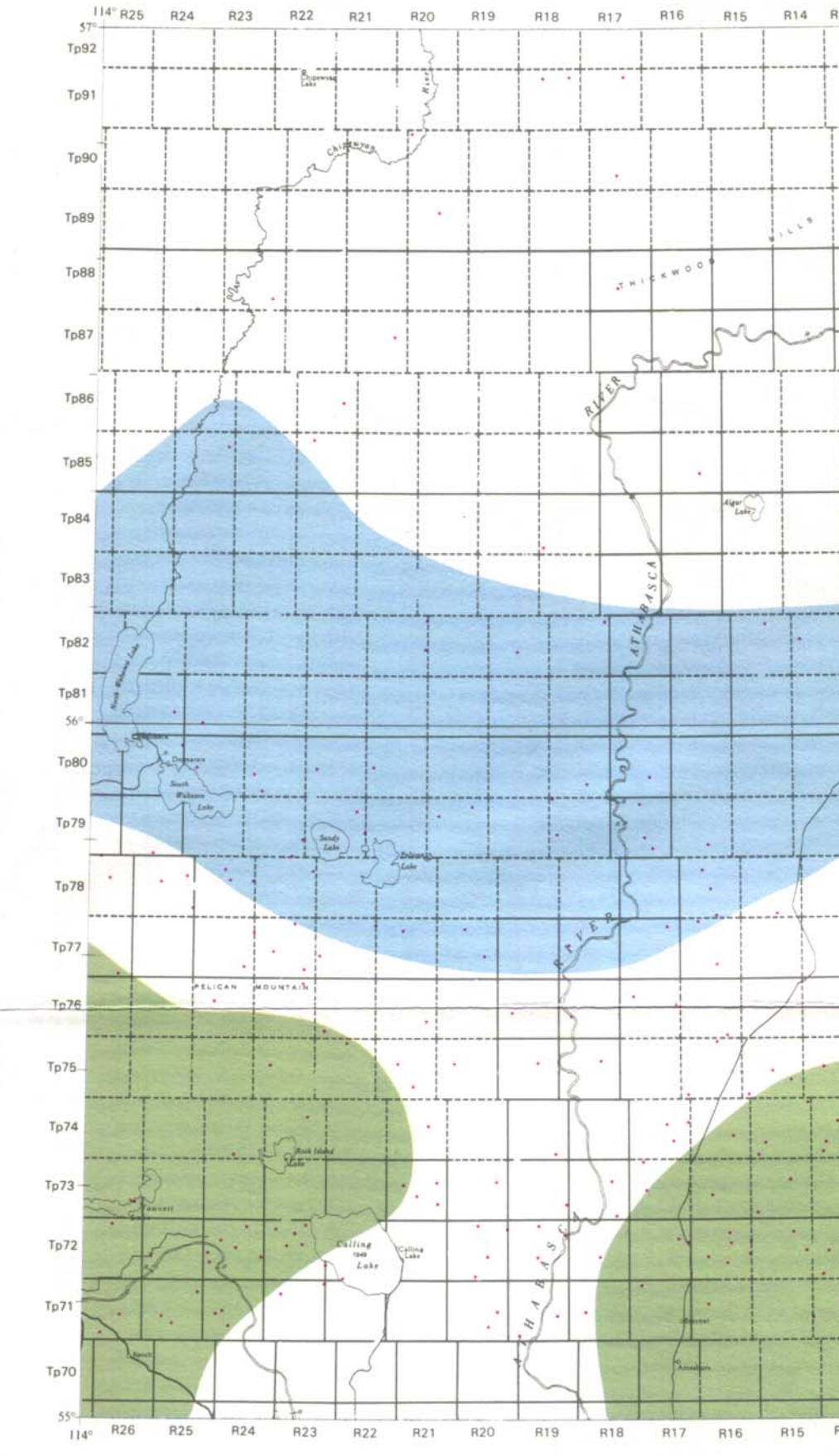
HYDROCHEMISTRY: DRIFT



LEGEND

Data control point marking the location of a water well
 Data control point marking the location of a surface feature
 Data control point marking the location of a spring
 Data control point marking the location of a structure testhole
 Sulfate constituting over 60 percent of total anions*
 Isogram along which calcium and magnesium constitute 60 percent of total cations*; teeth indicate direction of lesser calcium and magnesium content:
 approximate
 Isogram along which sodium and potassium constitute 60 percent of total cations*; teeth indicate direction of lesser sodium and potassium content:
 approximate
 *determine on equivalents per million basis.

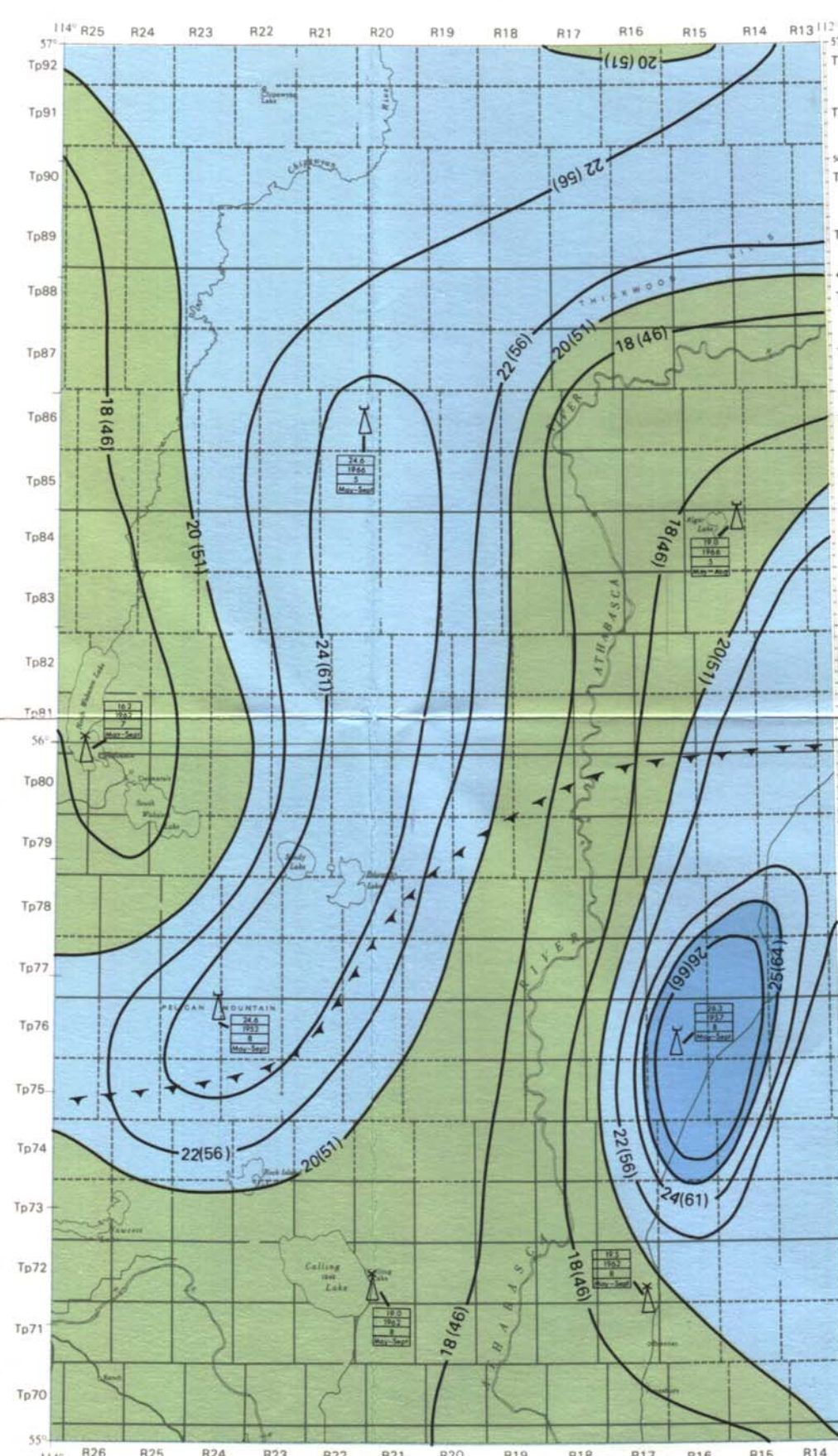
HYDROCHEMISTRY: BEDROCK



LEGEND

Data control point marking the location of a structure testhole
 Carbonate and bicarbonate constituting over 60 percent of total anions*
 Chloride constituting over 60 percent of total anions*
 *determined on equivalent per million basis.

METEOROLOGY



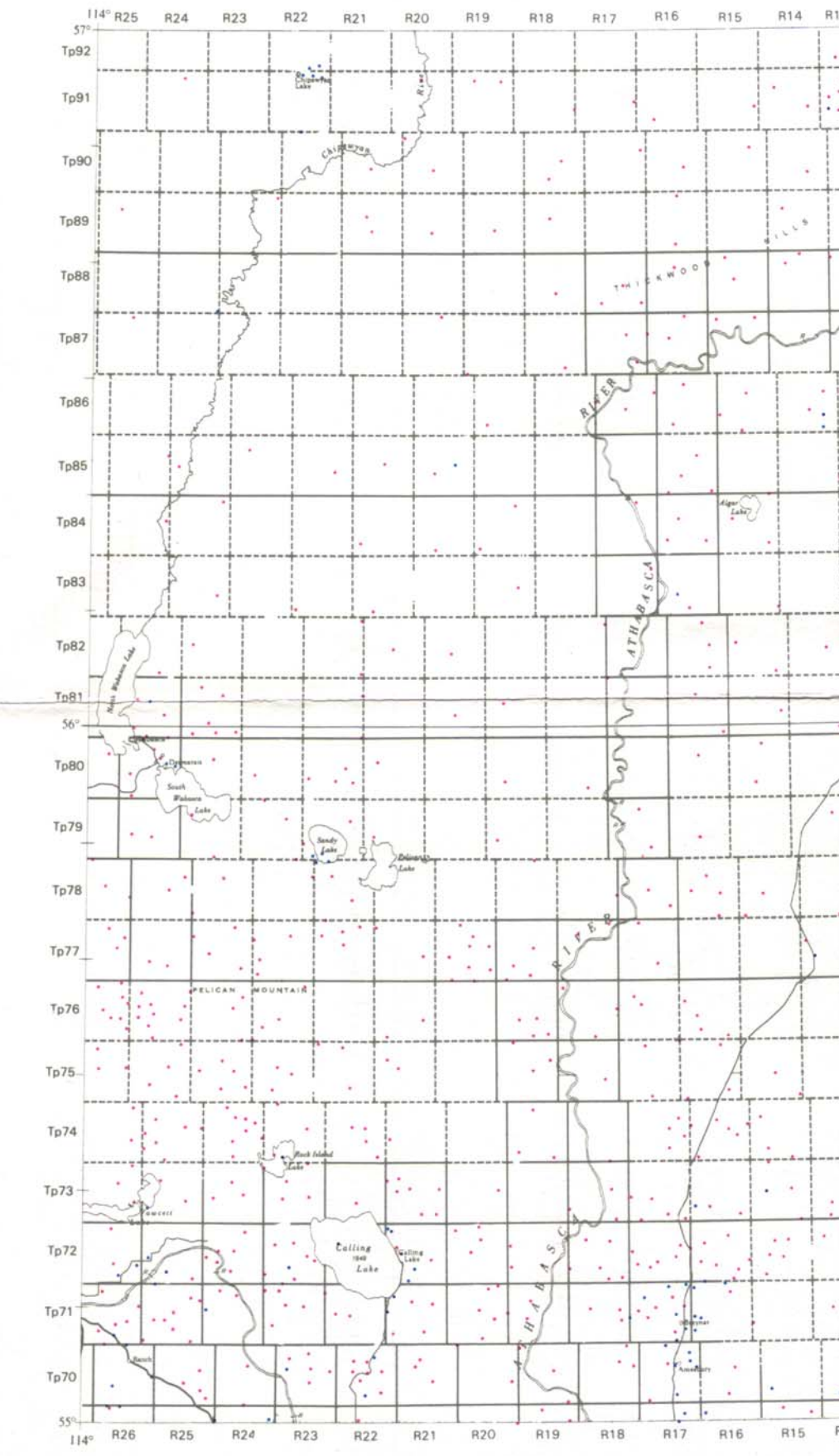
LEGEND

Isohyet, mean annual precipitation in inches (cm)
 Mean annual precipitation in inches (cm):
 15 to 20 inches (38 to 51 cm)
 20 to 25 inches (51 to 64 cm)
 25 to 30 inches (63 to 76 cm)
 Boundary of climofrost (teeth point toward frost-free area)
 Meteorological station
 Standard rain gauge
 Precipitation data:
 Mean annual precipitation estimated in inches
 Year of commencement of observations
 Number of years in average
 Months of record
 Source: The climate of the Prairie Provinces (R.W. Longley, 1972)
 Precipitation Means, Alberta Forestry Stations (Stankov, 1971)
 Permafrost in organic soils of Northern Alberta (Lindsay and Odynsky, 1966)

LEGEND

Data control point marking the location of a water well with no yield data
 Data control point marking the location of a well with yield data
 Data control point marking the location of a hydrologic surface feature
 Data control point marking the location of a structure testhole with lithology or E-log only

DATA DENSITY



ALL MAPS
 SCALE 1:100,000
 Miles 0 10 20
 Kilometers 0 10 20 30

HYDROGEOLOGICAL MAP
 PELICAN-ALGAR LAKE
 ALBERTA
 NTS 83P-84A

Base map provided by Surveys and Mapping Branch, Department of Energy, Mines and Resources, Ottawa, modified by Surveys Branch, Alberta Transportation, Edmonton