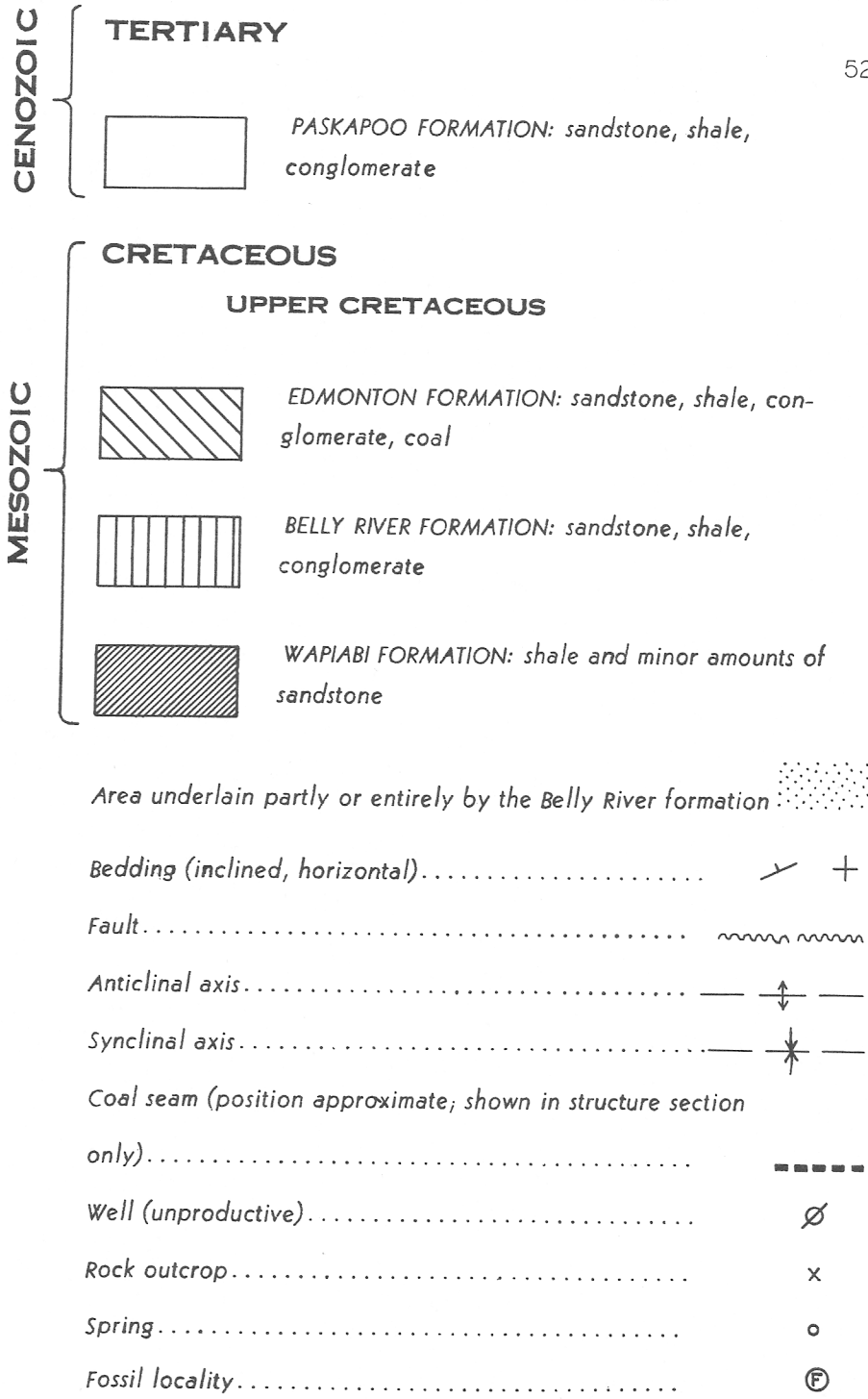


LEGEND



DESCRIPTIVE NOTES

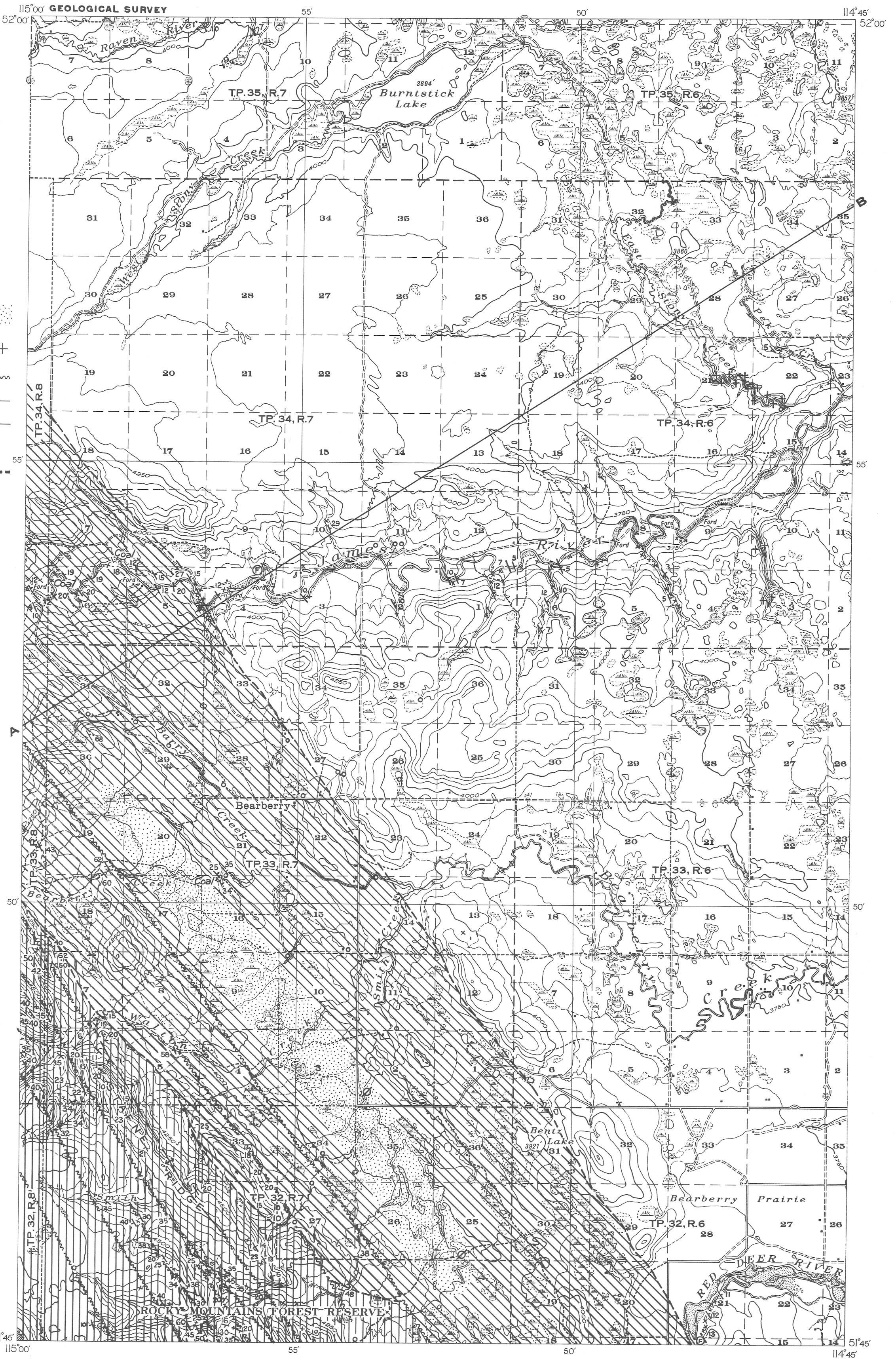
Petroleum Structures No. 1 well (Ls. 4, Sec. 2, Tp. 33, R. 7) passes through Belly River strata to a depth of 2830 feet, and through Wapiabi beds from 2830 to 4620 feet. At 4620 feet is a fault and below it Belly River beds are repeated.

The entire Belly River formation, as measured in the adjoining Fallentimber map-area to the south, is about 3600 feet thick. It consists of hard, grey and brown sandstone interbedded with green-weathering black shale. Yellow-weathering, coarse grained feldspathic sandstones with thin, chert-pebble conglomerate lenses predominate at the top of the formation. A quartzite, chert, and porphyry, cobble-conglomerate, poorly exposed on the south branch of Walton Creek just west of Sec. 33, Tp. 32, R. 8, is arbitrarily chosen to mark the contact of the Belly River and Edmon-ton formations.

The Edmonton formation is about 3000 feet thick. It consists of soft, light grey and light buff sandstones interbedded with crumbly green shale and carbonaceous shale. Thin coal seams are found at irregular intervals throughout the formation. The sandstones are much softer than those of either the Belly River or Paskapoo formations. A thin conglomerate bed containing boulders of shale and sandstone is exposed on James River and is arbitrarily assumed to mark the Edmonton-Paskapoo contact.

Not more than the lower 3000 feet of the Paskapoo formation is present in this area. It is formed largely of grey sandstones, weathering buff and yellow. These are interbedded with light green and grey-brown shales. The sandstones at the base are particularly massive and commonly form prominent hills.

Structural conditions within the area of the Edmonton formation are largely unknown as outcrops are confined almost entirely to the valleys of James River and Bearberry Creek. It is probable that the Monarch anticline, exposed on Red Deer River in the area to the south, extends across Bearberry map-area with its axis parallel to, and approximately two and one-half miles west of, the Edmonton-Paskapoo contact. In line with the assumed continuation of this structure an anticline was observed on James River just west of the western boundary of the map-area. The existence of the fault paralleling this structure on the west is also inferred from known occurrences of faulting on James and Red Deer Rivers. Neither the strike nor the dip of the fault encountered in Petroleum Structures No. 1 well is known. From the well section it seems likely that Belly River strata underlie the drift over a considerable area about the well, though lack of rock outcrops has prevented the drawing of even its approximate boundaries. No information was obtained from the Mount Stephen No. 1 well (Sec. 25, Tp. 32, R. 7). In the southwestern part of the map-area is an anticlinal structure that appears to plunge southward. Considerable high-angle faulting is associated with it.



PRELIMINARY MAP 40-19

BEARBERRY

WEST OF FIFTH MERIDIAN
ALBERTA

Scale, 1/63,360 or 1 Inch to 1 Mile

Approximate magnetic declination, 22°30' East.

LEGEND

