

1. SUMMARY

1.1 Drilling

Mt. Winter-1, located approximately 65 km west of the Mereenie Oil and Gas Field and 308 km southwest of Alice Springs (Figure 1), was spudded on November 29, 1981, using the P.D.S.A. No. 4 Rig. The well was drilled in Oil Permit 178 of the Northern Territory. Partners in the well included:

Pancontinental Petroleum Limited (Operator)

Magellan Petroleum (N.T.) Pty. Limited (Permit Holder)

United Canso Oil & Gas Limited

The Moonie Oil Company Limited

Amadeus Oil N.L.

Apollo International Minerals N.L.

Farmout Drillers N.L.

Charles Davis Limited

International Energy Development Corporation of

Australia Pty. Limited

The 26" conductor hole was drilled with gel-water and 20" conductor set at 24m. The cement was drilled out with a 17½" bit using air but, because of sand caving, at 34m the drilling fluid was changed to mud. The 17½" hole was drilled to 166m, where 13-3/8" casing was set. Drilling with a 12¼" bit using air was continued to 430m, at which point water influx to the well became too great for the air equipment to handle, so drilling was resumed using mud. Lost circulation occurred at 694m, and was not remedied by the use of 4 LCM pills and 3 attempts to set cement plugs. Consequently the drilling fluid was changed back to air, with the addition of foam. Drilling with air/foam continued to 1296m, where 9-5/8" casing was set.

8½" hole was then drilled with air, with foam added when water was encountered. At 2344m, the air equipment would not unload the hole, so the drilling fluid was changed back to mud. At 2454m a salt formation was encountered, so salt was added to the mud. Drilling continued using a saturated

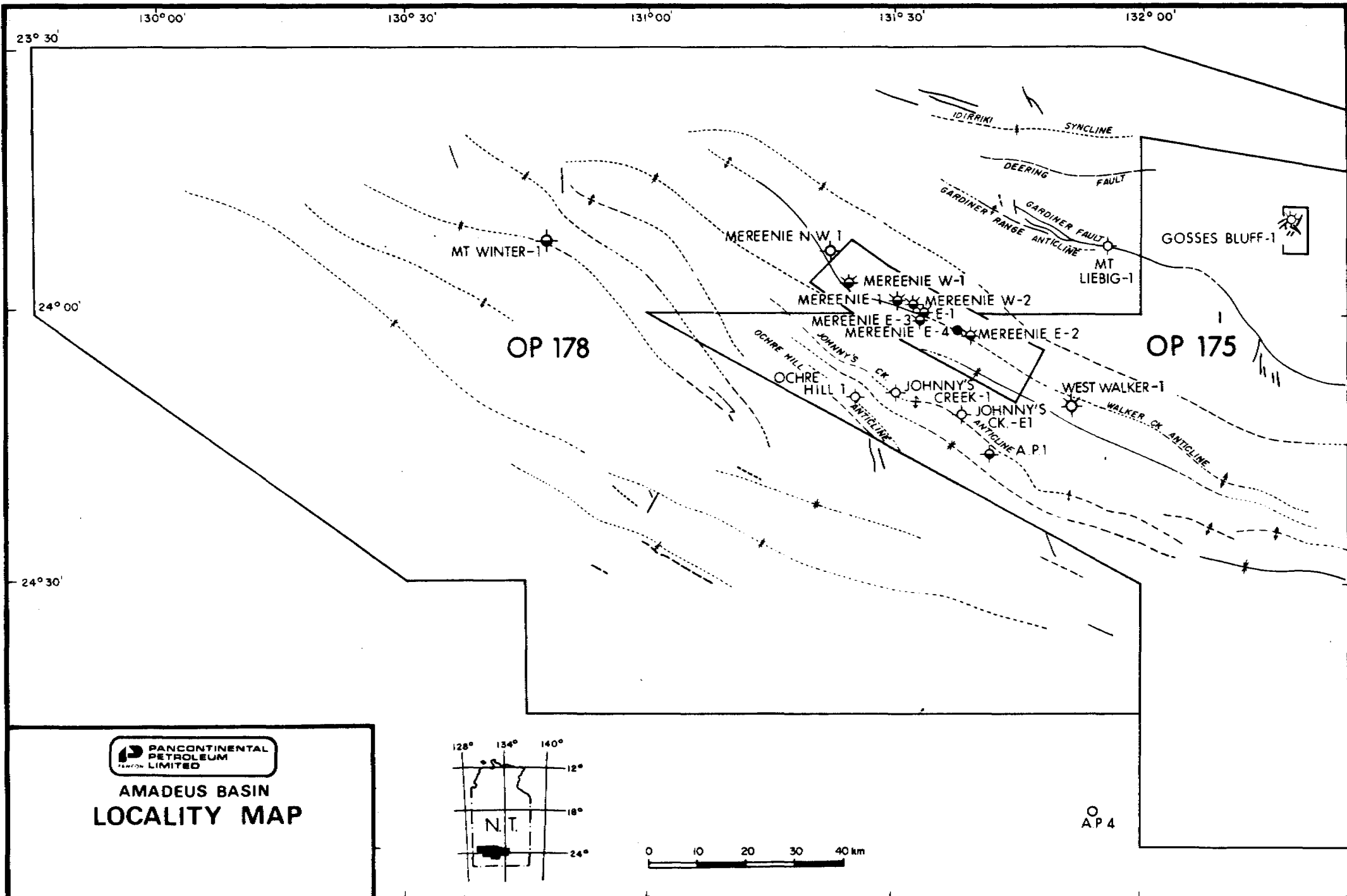


FIGURE 1

salt mud to total depth of 2650m. After logging, the well was plugged and abandoned.

1.2 Geological

Mt. Winter-1 was drilled to total depth of 2650 mKB (Driller) in late 1981 and early 1982. The well was drilled to assess the hydrocarbon potential of the Cambrian section, and to investigate the stratigraphic succession below the basal Cambrian unconformity. The well was designed particularly to investigate the stratigraphy, reservoir and source rock potential, and maturation history of these sub-Cambrian sediments. The Cambrian stratigraphic succession at Mt. Winter-1 was anticipated to be similar to that penetrated by Ochre Hill-1 and as mapped in the Mt. Forbes area, 30 kms to the northwest in the Cleland Hills (Wells et al., 1965).

Mt. Winter-1 penetrated 252m of Early Ordovician siltstone, shale, sandstone and carbonate and 1233m of Cambrian sandstone, siltstone and shale unconformably overlying more than 1165m of Late Proterozoic sandstone, siltstone, shale, dolomite and evaporites. The well failed to intersect commercial deposits of hydrocarbons although significant oil shows were encountered in the basal Early Ordovician Stairway Sandstone and in siltstone near the top of the late Proterozoic Bitter Springs Formation.