

Geoscience Honour Roll Citation – Ralph W. Edie

Any geologist who has spent much time working on the Mississippian rocks in southeastern Saskatchewan should have come across a reference to Ralph W. Edie. Any geologist who has looked at a sufficient amount of core from wells drilled in the 1950s and 60s may have also encountered Ralph's penciled notations on the surfaces of pieces of core.

Ralph Edie was born in Alberta at Smoky Lake in 1921. He obtained his elementary and high schooling in Waskatenau, Alberta, and entered the University of Alberta in 1940, graduating with a B.Sc. in mining engineering in 1945. He spent two years carrying out geological explorations for gold in the area around Yellowknife, N.W.T. before returning to the University of Alberta to obtain a Master's degree in geology. Upon completion of his Master's, he enrolled in graduate school at the Massachusetts Institute of Technology where he completed a Ph.D. program in 1952. Although Ralph's early geological experience was obtained through his involvement in mapping in the Precambrian Shield, some of which was done in Northern Saskatchewan, upon graduation from M.I.T. he was employed as a research geologist from 1952-1954. At first he worked for the Texaco Exploration Company in Calgary and later with Shell Oil. In 1955 and early 1956 he worked as a petroleum geologist for Alex McCoy and Associates but left to join John Andrichuk in forming the firm of Andrichuk and Edie.

Ralph began his association with the Mississippian in southeast Saskatchewan in the mid-1950s and maintained an interest in it well into the 1960s. He was a frequent visitor to the Saskatchewan Subsurface Geological Laboratory where he commonly occupied core tables 1 and 2, seldom for periods shorter than a work-week. His major contribution to Saskatchewan geoscience evolved from core studies done during the mid-1950s, culminating in his 1958 seminal paper entitled "Mississippian sedimentation and oilfields in southeastern Saskatchewan", published in the AAPG Bulletin. This paper presented a shallow to deep water depositional model for the Mississippian rocks of southeast Saskatchewan, described the lithologic components of the various facies of the model and identified the reservoir facies and trapping mechanisms for the oilfields of the area. Although there have been variations proposed, his depositional model is the basis for all others. Publication of this paper led to an AAPG Distinguished Lecture tour in 1958, the title of the lecture being "Limestone Facies and Stratigraphic Traps". In 1963 Ralph published a second significant paper resulting from his work on the Mississippian of Southeast Saskatchewan, it was entitled "Distribution and behaviour of oil and water in Mississippian limestone reservoirs, southeastern Saskatchewan". That paper published in the Journal of Canadian Petroleum Technology emphasized the need for detailed geological knowledge of reservoir rocks for the better prediction of their performance during primary and secondary recovery.

In the oil industry, the value of any depositional model lies in its ability to predict potential oil occurrences. Ralph's model became the template for success for his firm and clients for which he worked. In association with Thunderbird Petroleum Ltd. and Oakland Petroleum Ltd., the firm of Andrichuk and Edie was involved in drilling over

200 exploratory and field extension wells in southeast Saskatchewan. The exploratory wells were particularly significant as they led to discoveries of stratigraphic trap fields at Pinto, Northgate, Carnduff and northeast Steelman.

Ralph's interest in Saskatchewan geology did not stop with the Mississippian. He also worked on the Middle Devonian Elk Point Group, and in 1959 he published a paper in the AAPG Bulletin entitled "Middle Devonian sedimentation and oil possibilities, central Saskatchewan, Canada". He also became involved in the controversy regarding the origin, timing and nature of the Avonlea Fault through a paper published in a 1956 issue of the Journal of the Alberta Society of Petroleum Geologists. Immediately following obtaining his Ph.D. from M.I.T., Ralph also published two papers related to work he did in the Goldfields area of northern Saskatchewan. One described the petrology of the rocks and the other reported on the hydrothermal alteration.

I believe that the late Dr. Ralph Edie is a worthy candidate for the Saskatchewan Geological Society Geoscience Honour Roll, and it is my pleasure to nominate him. Unfortunately, this Honour Roll induction is posthumous as Dr. Edie died on April 17, 2007.