

Geological Review for Thermal Extent**Edam Area TWP 48-19W3M**

Geological and geophysical mapping of sediments within the Mannville group in the Edam area of Western Saskatchewan, has identified Waseca formation reservoirs that could support thermal recovery. These Waseca sediments were deposited as nearshore marine and non-marine (channel) deposits that are widespread throughout the Edam area. The mineralogy of the Waseca is such that the sands are predominately quartz grains with little clays and cores in the general area suggest that a porosity of 31% and an oil saturation of 80% to be representative of the reservoir of interest.

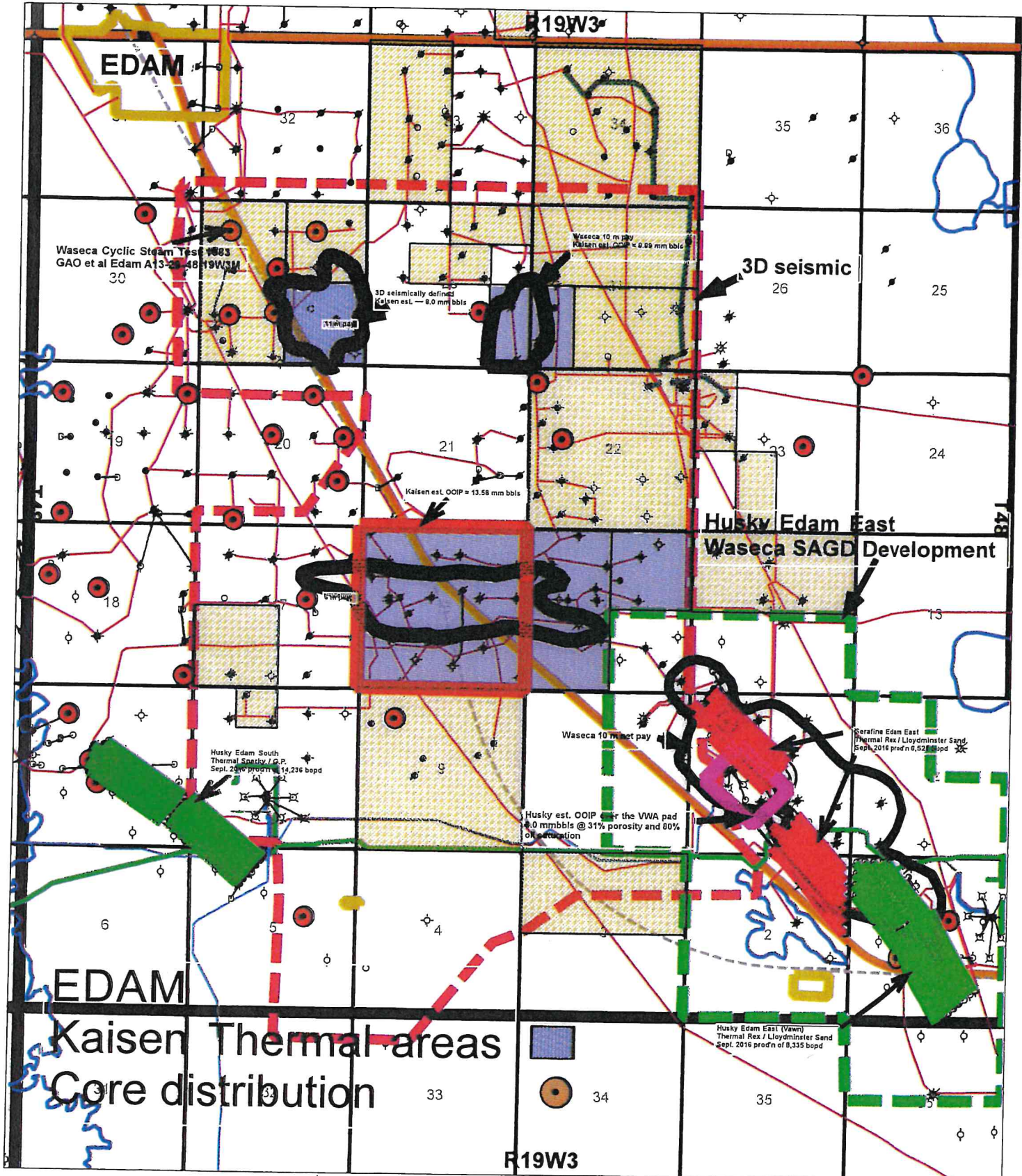
Husky Energy has identified an area (borders Kaisen land to the SE) at Edam East (Vawn) where the original oil in place for the Waseca has been mapped within a 10 m net pay contour interval to contain an estimated 34 MMstb. The OOIP within the 10m contour is in line with Husky's current Waseca bookings and is in line with their typical reserve bookings and experience in the Lloydminster area thermal project. In conversation with Husky personnel (December 5, 2016), their vast experience in thermal recovery has led them to assess areas with 7m of net pay to apply thermal recovery methods.

Kaisen has identified and mapped three distinct areas of potential thermal recovery in the Waseca formation that is based on similar parameters that Husky has published. The opportunities of reservoir development within the Waseca are based on stratigraphic well control and 3D seismic. Combined OOIP of these three areas is +/- 30 MMstb.

SW ¼ 27 and SE ¼ 28-48-19W3M: OOIP within the 10m net pay contour (pay up to 17m) estimated at 8.89 MMstb.

SE ¼ 29-48-19W3M: OOIP within the 10m net pay contour, seismically defined and one well with 11m pay, estimated at 8.0 MMstb

Section 16-48-19W3M: maximum net pay of 9m, estimated at 13.58 MMstb



Center: 53.1412, -108.7107

Scale: 1:52,000

