23 CONCLUSION

Japan Canada Oil Sands Limited (JACOS) currently operates the Hangingstone Demonstration Project, using Steam Assisted Gravity Drainage (SAGD) thermal oil recovery technology. The Demonstration Project, in operation for 11 years, produces about 7500 barrels per day (bpd), and has a licensed maximum capacity of 11,000 bpd.

Based on technical and operational knowledge obtained from operating the Demonstration Project, the company intends to build and operate a commercial SAGD operation, with a capacity of up to 35 000 bpd. The Expansion Project will be developed in one single stage. Actual timing will depend on the timing of regulatory approval as well as market conditions at the time of project sanction.

The Proposed Facilities will be designed to incorporate accepted industry standards and to meet regulatory standards and objectives. Through project design and additional mitigative measures, the Project is expected to have a minimal environmental impact.

This Environmental Impact Assessment has been prepared following Terms of Reference from Alberta Environment. A comprehensive methodology has been used to assess the effects of the Project on 16 VECs:

- Air Quality
- Noise
- Hydrogeology
- Hydrology
- Surface Water Quality
- Fish and Fish Habitat
- Terrain and Soils
- Vegetation
- Wildlife
- Biodiversity and Fragmentation
- Land and Resource Use
- Visual Aesthetics
- Historical Resources
- Traditional Ecological Knowledge and Land Use
- Human and Ecological Health
- Socio-economics

The effects of the Project have been assessed for three cases:

- Baseline Case (including the existing conditions and existing and approved projects)
- Application Case (including the Baseline Case with the effects of the Project)
- Planned Development Case (including past, existing and anticipated future environmental conditions)

Effects have been assessed for three project components: construction, operation, and decommissioning and reclamation.

The effects of the Project on the Atmospheric Environment, Noise, Hydrogeology, Hydrology and Surface Water Quality are assessed as being not significant. Standards and objectives will be met in most cases, with modelled exceedances likely due to natural variation or due to regional effects unrelated to the Expansion Project. Construction and operation of the Expansion Project are not expected to affect the Athabasca River.

The effects on the biophysical receptors (Fish and Fish Habitat, Vegetation and Wetlands, Wildlife, Terrain and Soils, and Human and Ecological Health) are assessed as being not significant, as changes to these VECs will not result in long-term alterations to the present conditions. In the case of Human and Ecological Health, the Project is not expected to result in exceedances of hazard quotient or incremental lifetime cancer risk benchmarks.

Effects of the Project on Land Use are assessed as being not significant. The Project will not limit the existing land uses or conflict with existing land use policies. Effects on Historical Resources are assessed as not significant since damage to historic sites or artifacts is not expected. While there may be short term effects on use of the Expansion Project area for activities such as hunting, berry picking and harvesting of medicinal plants, the Expansion Project is not expected to affect long-term Aboriginal traditional land use.

The Project is assessed as having a net positive economic effect on the region. While there is expected to be a slight net increase in the demand for social services due to the Expansion Project, social effects are assessed as not significant.

Accidental events, such as spills, gas releases, forest fires and explosions have the potential to cause significant effects but the project design using accepted industry standards and preventive measures in place indicate the likelihood of such events is low.

The findings of the EIA support the conclusion that JACOS can construct, operate and decommission the Hangingstone Expansion Project in a manner that will not have significant effects on the environment.