



Oriente Pipeline Feasibility Study Petrolera Ameriven SA

A crude oil export pipeline system and diluent return pipeline system to transport and distribute heavy crude oils from the Orinoco Oil Belt of southeastern Venezuela (Hamaca and Cerro Negro Fields).

Penspen provided the following services:

- Design and Operations review to confirm the technical and economic viability of the Oriente pipeline system
- Crude Batching (separation methods, cross-contamination limits etc)
- Operational philosophies and scales of cost
- Operating interfaces and impacts with associated projects
- Robustness of proposed operating regime and sensitivity to system upsets

Profile:

30" NS 150km Diluted Crude Pipeline from Cerro Negro to PTO

30" NS 62km Diluted Crude Pipeline from Hamaca to PTO

42" NS 157km Diluted Crude Pipeline from PTO to Jose

Diluted Crude Oil Pumping and Storage Facilities at Cerro Negro, Hamaca and PTO

Diluted Crude Oil Receipt and Storage Facilities at Jose

Capacity Diluted Crude from PTO to Jose 248,000 bpd

20" NS 157km Diluent Pipeline from Jose to PTO

16" NS 62km Diluent Pipeline from PTO to Hamaca

20" NS 150km Pipeline from PTO to Cerro Negro

Diluent Pumping and Storage Facilities at Jose and PTO

Diluent Receipt and Storage Facilities at PTO, Hamaca and Cerro Negro

Capacity Diluent from Jose to PTO 64,000 bpd

Overall Project Value: US\$ 700 million



Penspen Contract: Engineering Consultancy Services