HSE Challenges operating in the Sakhalin Offshore Environment

Installation Piltun B Platform

23 April 2014, Norsk Olje & Gass
Pieter Swart
Sakhalin Island
Climate - Sakhalin Island

- Remote
- Lack of infrastructure
- Low population density – 600,000
- Seismically active area
- Rich onshore and offshore wildlife
- Territory: 87,100 km²
- Length: 948 km
- Min. width: 30km
- Mountain areas 66%
- Extreme Climate
- Regional center: Yuzhno-Sakhalinsk
- Military Activity
Sub Arctic Offshore HSE Challenges

Special HSE measurements

- Sea-Ice
- Cold Water
- Fog
- Remotelessness
- Cyclone Storm & Currents
- Snow & Ice accumulations
- Temperature Contraction & expansion
Offshore Conditions in the Sea of Okhotsk

- Temperatures range from +25 to −40 degrees
- Offshore ice from December till June
- Waves up to 10 metres significant
- Temperature offshore can drop to −40 degrees with wind chill
- Frequent fog in spring and summer
- Strong currents in summer
- Earthquake zone
Sakhalin Phase II – Project Overview

- Piltun-B platform
- Piltun-A year round production
- Lunskoye-A platform
- Onshore processing facility
- Oil and gas (multiphase) pipelines
- Booster station
- LNG plant and oil export terminal
Piltun B Platform Transport & Installation

Piltun-Astokhskoye-B

- 4 leg concrete gravity base.
- Topside 28,000 tonnes.
LMU INSTALLATION (CASTORO 8, 2006)
Some Specific HSE Measures

With fleet of Ice class vessels and offshore workforce of 500+, numerous HAZIDs/HAZOPs, RA’s and SIMOPS meetings were held to have agreed:

• Clear Communication plans
• Agreed Adverse Weather procedure
• Personnel transfer plan incl Rescue
• Marine Operations manual
• Vessel Inspection & Certification
• Personnel Travel briefing pack
• Emergency Response Plan incl Medivac / Test
• Oil Spill prevention and response plan
Vessel utilized for the GBS preparation activities in May 2007
2007 – Piltun B Topside loadout

- Loadout in Korea of 28,000 t topside
- Ready to tow to Sakhalin June 2007.
- A world heaviest shipping – 34,200 t. ready to go
PA-B Topside on Tow to Sakhalin
July 1st 2007 Topside approaches GBS
PA-B Installation in the Fog
Ballasting down
5th of July 2007 – Installation Safely completed with 500,000 manhours without LTI and/or Incident
PILTUN-ASTOKHSKOY
A FIXED PRODUCTION PLATFORM 7.5 MILES
SAKHalin ISLAND IN 105' WATERS (2006)