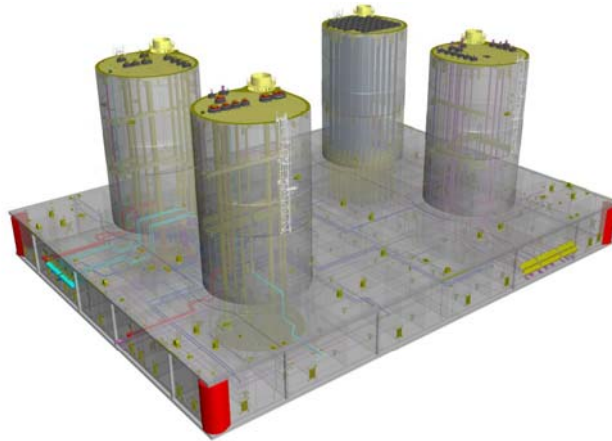




Date: 26.01.11

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Project Presentation Sakhalin-1 Arkutun-Dagi GBS Project

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From reservoir to processing facility

We provide oil companies with cost-effective solutions for development of oil & gas resources in a safe and environmentally sound manner - world class project execution -



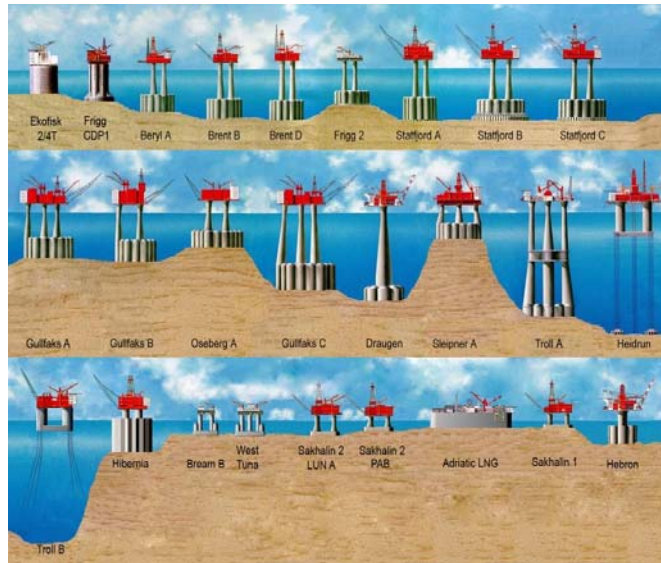
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Concrete GBSs by Aker Solutions since 1971



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HSES



OUR ULTIMATE GOAL:

NOBODY GETS HURT
NO NEGATIVE IMPACT TO THE
ENVIRONMENT

OUR ACHIEVEMENTS SO FAR:

680 DAYS
4.5 MILL MANHOURS
WITHOUT LTI'S
NO ENVIRONMENTAL INCIDENTS



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GBS Concept



Design Challenges

- Topsides weight vs. functional requirements
- Drifting ice ridge loads on GBS and pipeline burial depth
- Winterization to -40F
- Concrete design and construction for an arctic environment with high seismic activity
- Maximum use of Russian labour and services
- High focus on environmental issues in a sensitive area, e.g. grey whales protection
- Ice Abrasion Resistant Concrete



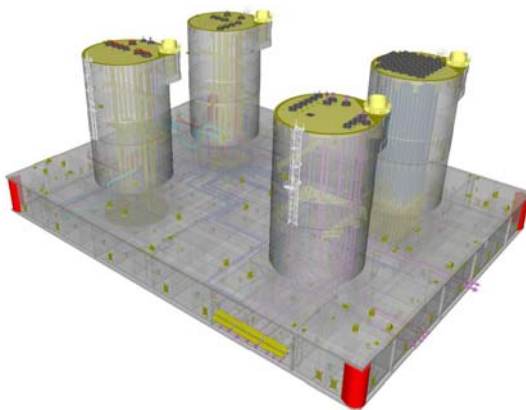
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GBS Key Figures



GBS Key Figures:

Weight:	~156.400 t
Concrete volume:	~52.300 m ³
Rebar quantity:	~19.300 t
Post-Tensioning:	~3.000 t
Steel Skirt:	~1.100 t
Mechanical Outfitting:	~1.200 t
Outfitting Steel:	~2.300 t

Conditions*:

Water Depth, LAT:	33,6 m
Level ice up to:	1,4 m
Wave heights up to:	16 m
Wind speeds up to:	160 km/hr

Possible earthquake activities

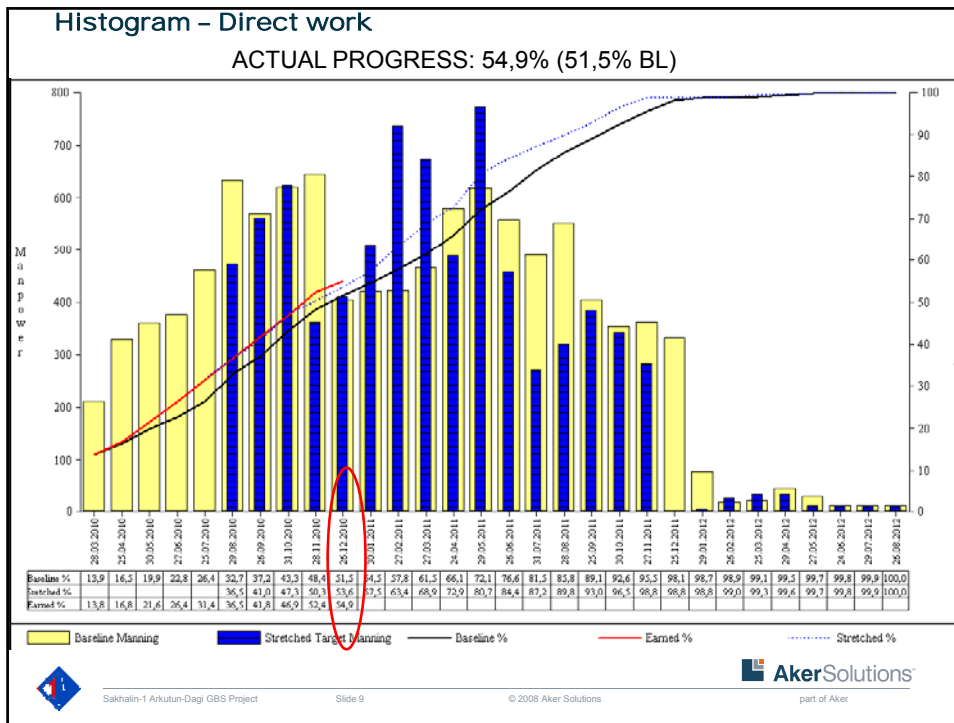


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Sakhalin 2 CGBS Project Construction Site with Casting Basin (dry dock)



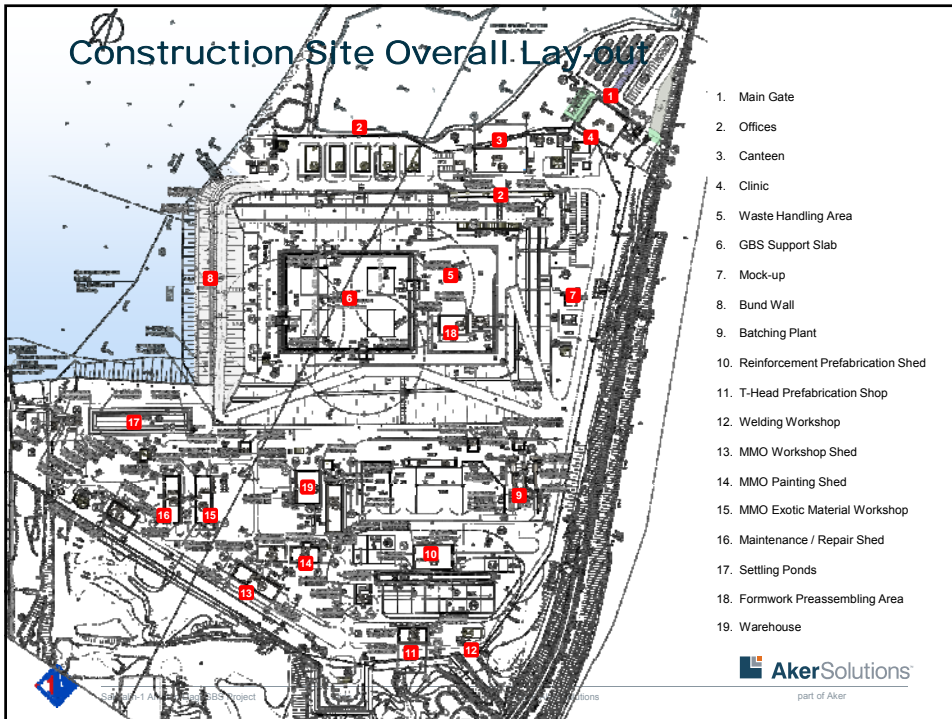
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Construction Site Overall Lay-out



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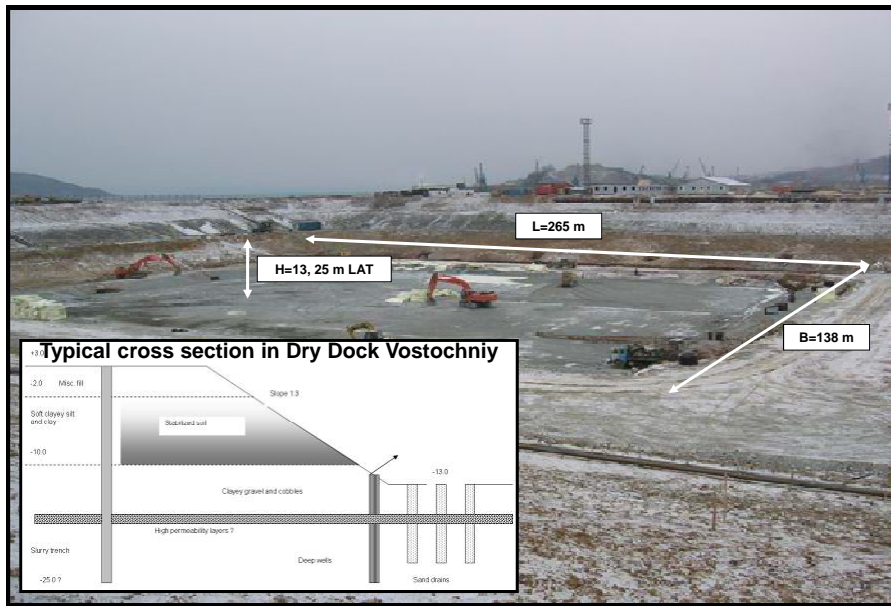
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Construction of the Vostochniy Dry Dock (15.01.04)



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Accommodation Camp

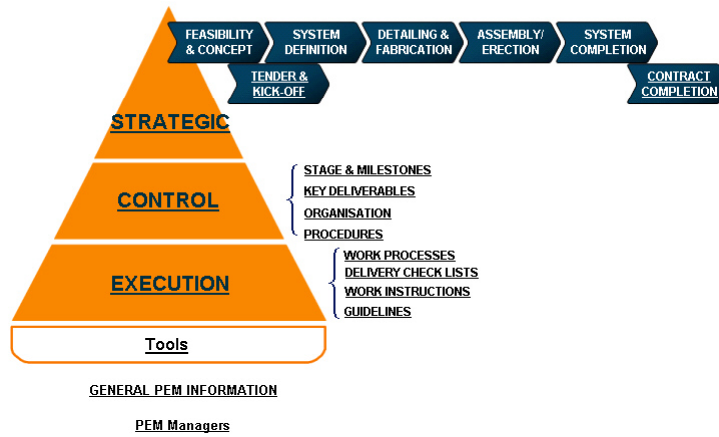


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Aker Solutions Project Execution Model (PEM)



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GBS (Gravity Base Structure) – Regulatory Leadership

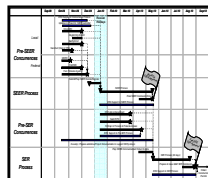
Our Actions



Managing Permits, Approvals and Licenses (SRO) without causing Construction delays will satisfy the Ultimate Client: Russian Federation Authorities



Regulatory and Quality alignment with Local Authorities



Regulatory targets being on Schedule



SRO membership for Aker Contracting Russia

Results

- GBS Proekt SEER/SER concluded
- No delays caused by Regulatory
- 70 out of 120 permits obtained
- Hands on Experience in Russia
- Russian Content has priority



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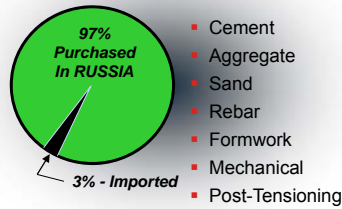
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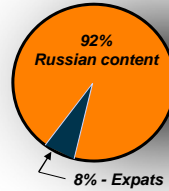
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Russian content on the project

Materials (weight ratio)



Manpower



- All rough materials: cement, sand, aggregate, rebar, steel profile etc.
- All trucks (exception – dumpers for basin digging), earthmoving equipment, mobile cranes and construction fleet (floating crane, tugs, barges, vessels)
- All personnel transportation services
- All Fuel, Wood, Electricity, Water, Telecommunication, Tools and majority of other consumables



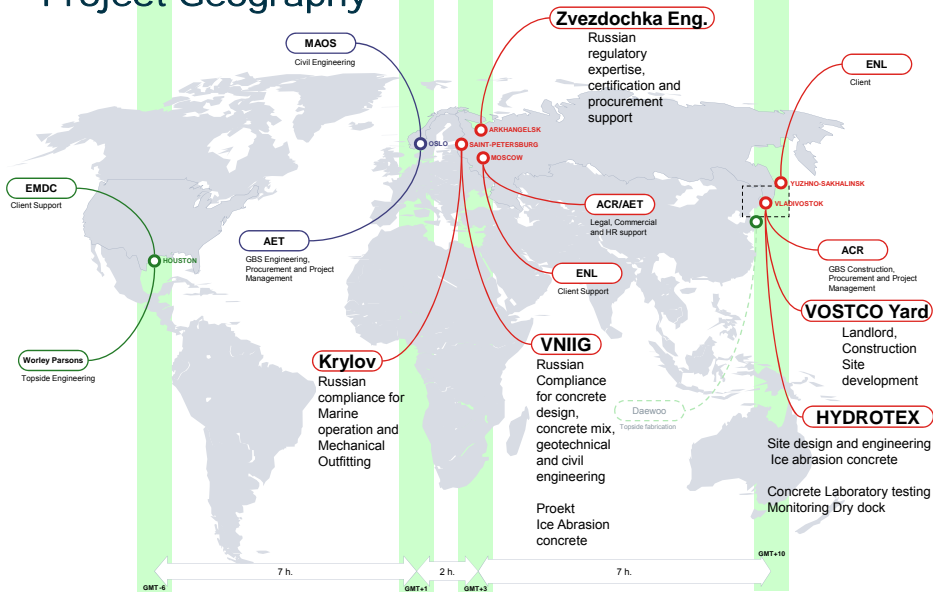
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Project Geography



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Project Geography / Local content



Prefabrication and installation of mechanical parts of GBS:

- Far East plant "Zvezda"
- Dalzavod
- Nakhodka Ship Repair Yard
- Dalmormontazh-Vostochniy

Civil construction (Concrete, rebar, formwork):

- Rosdorsnabzhenie (RDS)
- ANBU (Nakhodka, local)
- and other various local companies

Materials:

- Rebar: "Amurmetal" (Amursk)
- Cement: "DV Cement" (Spassk)
- Crushed rock and sand – local companies



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Prefabrication (Steel Skirt, 6MO Piping, etc.)



DALZAVOD - STEEL SKIRT SECTION PREFABRICATION



ZVEZDA - STEEL SKIRT SECTION PREFABRICATION



NMP - 6MO WELDING



DALZAVOD/SLAVYANKA YARD



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GBS Construction (Major activities)



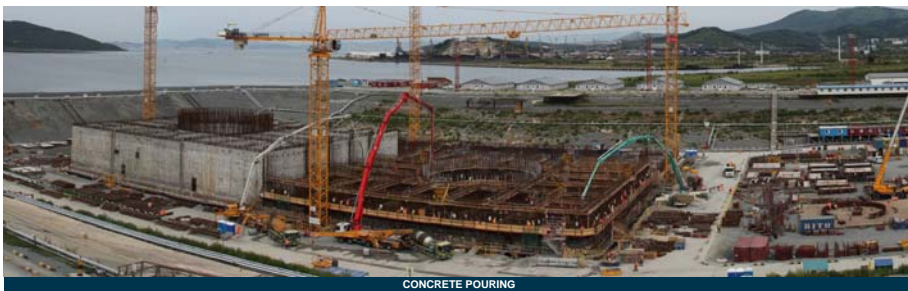
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GBS Construction (Major activities)



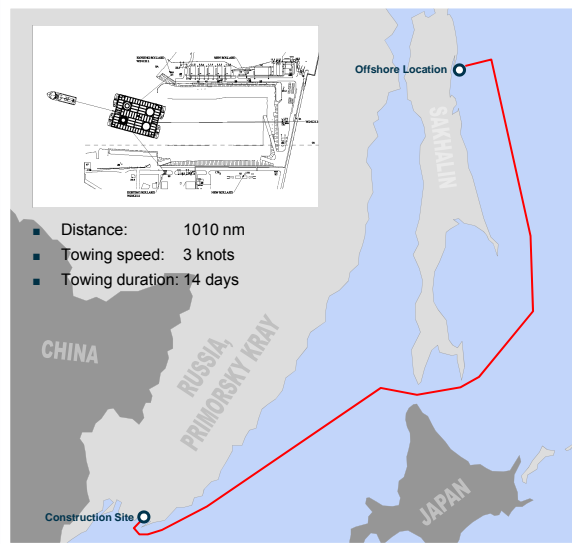
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Towing and Installation



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Concrete Main Advantages

- Ability to withstand harsh environment
 - Low temperatures
 - Seismic
 - Ice
- Potential for oil storage
- Use of local material
 - Sand
 - Crushed rock
 - Cement
 - Rebar
- Use of local sub-contractors/labour



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One Team – One Goal!

Project Team focused on **Common Vision and Goals, The collective result and People development**



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Project Social Responsibility



Engagement in Local Community Activities



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