Coordination Meeting with Russian Industry and Associations

1st June 2010
The Framework Agreement for Cooperation in the Development of the First Phase of the Shtokman Gas Condensate Field was signed with StatoilHydro Company on 25 October 2007.

The Framework Agreement for Cooperation in the Development of the First Phase of the Shtokman Gas Condensate Field was signed with TOTAL Company on 13 July 2007.

**SHTOKMAN Phase 1 partnership**

ГАЗПРОМ 51%

(ОАО Gazprom)

СЕВМОРНЕФТЕГАЗ

Total 25%

(Total Shtokman B.V.)

StatoilHydro 24%

(Hydro Oil & Energy Intl. B.V.)

A Such a Partnership and the strong support from Gazprom represent a powerful asset for the Project.
Shtokman Development AG (SDag)

- **Scope**
  - Organize, design, finance, construct and operate during 25 years the “SHTOKMAN Phase 1 development“
  - Production plateau of 23.7GSM³/year, 7.5mtpa LNG - 5% gas for local market, the rest piped to the North Stream pipeline Project
  - SDag and its Shareholders support the technical & economical risks of the Phase 1 development.

- A single integrated and dedicated Project team Gazprom + Total + StatoilHydro

- Synergy of Russian and European cutting-edge skills and technologies
  - Sharing of knowledge and resources optimization

February 21st, 2008
• Challenges were identified at start of the project, expected… and they were there!

• …leading to a timely split of the Final Investment Decision
  – FID1: offshore + gas export facilities – March 2011
  – FID2: LNG plant – December 2011

• Among the main Project drivers identified:
  – Russian Content
  – Capex / Opex
  – Schedule
Introduction

• Arctic: significant untapped O&G reserves yet to be developed

• Thousands of installations onshore and offshore but arctic is a step-out of today’s industry knowledge envelope

• Arctic projects = f (firsts)
  – New technologies
  – Many operational constraints
  – Ability to manage unfamiliar challenges

Arctic remaining resources (Bboe)

Sources: IHS-WoodMacKenzie
• **Gas & condensate field in the Russian Barents Sea**
  – Discovered in 1988
  – Super giant field: 3800GSM3 (135Tcf)
  – Water depth: 320-340m (1100ft),
  – Area: 1600km² (620mi²)
  – Offshore at 550km (340mi) from Kola peninsula
  – 7 discovery/appraisal wells

• **Too large to be developed at once, full field development in 3 phases of 23,7GSM³/year (~2.4Bscf/d) each (400,000boepd)**
  – Phase 1: 7.5mtpa LNG & 11.2GSM³/y pipe gas
  – Onshore plant near Teriberka, 120km (75mi) eastward of Murmansk
SHTOKMAN Ph. 1 development: main challenges

Technical challenges

– Large scale project
  • Design capacity, trunkline, etc.
– Remote location: 550km (340mi) from mainland
  • Open sea, no other nearby development
– Arctic environment
  • Ice & icebergs, etc.
– Environmentally sensitive ecosystem
– Operating conditions
  • Weather season limitations
    ❆ installation windows
  • Complex logistics, EER response time
  • Winterization (Offshore & Onshore)
Harsh environment: arctic conditions

- Harsh metocean conditions
  - Extreme conditions equivalent to Northern North-Sea.
- Polar lows: very low pressures with heavy winds rising up.
  - Unpredictable and hazardous.
- Atmospheric and sea spray icing.
- Onshore Construction site is under extreme weather conditions:
  - Lowest temperature is -34°C during winter with a minimum average of -8.5°C in Feb.
  - Wind: 30% of the year, wind is over 30km/h, max. is 108km/h during winter.
  - Snow: 1.2m. Snow drift: 1.5m. 77 days per year of snow storm (55 days from Dec. to Mar.) - Twice more than in Sakhalin
  - Thaw period to be considered from Apr. till Jun.
  - Visibility: very poor due to polar night (from Dec. to Feb.), fog, snow fall, sea spray.

Barents Sea
Shtokma

- Wind 28.0m/s
- Hmax 23.3m
- Hs 12.5 m
- Max Temp = 12.0°C
- Water depth: 320-340m
Sea Ice & Icebergs at SHTOKMAN

- **SHTOKMAN field is located on the edge of winter ice**
  - Occurrence every 3 to 5 years

- **Extreme ice conditions**
  - Ice thickness: 2m (6.5ft)
  - Ridge size
    - Consolidated layer: 3m (10ft)
    - Total height: 29m (95ft)

- **Ice drift reversal events**
  - Impact on FPU operations (ice-vanning)

- Icebergs in open waters and embedded in sea ice
  - Can come from Franz Joseph Land and Novaya Zemlya glaciers

- 220 icebergs observed around SHTOKMAN area over 48 years
  - Cases of iceberg caught in ice

- In 2003, more than 15 icebergs have been observed close to the field
  - 2 of them weighting more than 3 million tons

- (Potential) Collision with FPU
  - Statistically, once in 110 years, if not managed
Size of Phase 1 Project

- Floater to process 71.2MSM$^3$/d of gas (2.5Bcf/d), incl. FG
  - One of the biggest floater worldwide
  - Ice resistant & disconnectable
  - Topsides > 40,000t
  - Flare size
  - Turret size & number of risers
  - Emergency, Evacuation & Rescue

- Dual dry 2-phase 36” trunklines:
  - Distance + rough seabed topography

- 7.5mtpa LNG plant
  - A mega LNG train in a very remote area
  - Utilities & support (service harbor, very large camp, etc.)
FPU design

- Design competition ONGOING (hull shape & design, mooring & riser buoy / turret, TS layout, LQ…)
- Design to resist most of ice and iceberg actions (design conditions)
- Disconnection in the last resort
- Ensure target operability / minimize downtime due to ”ice threats” ❄️ winterization

Local ice Loads:
- Class rules (ice)
- ISO-based approach (ice & icebergs)
- FPU as double-acting vessel

Global ice & iceberg loads:
- ISO-based probabilistic calculations
- Ice basin model testing
- Coupled dynamic numerical simulations

Mooring loads and FPU heel angle:
- Dynamic analysis
- Ice basin model testing

SHTOKMAN: first floating platform to operate in ice conditions
Integrated specific design SS-flowlines-risers-FPU-trunklines

- **Accounting for the particular context and non-conventional aspects of the SHTOKMAN project**
  - Design & technical challenge issues
  - Remote location (550km from shore)
  - Harsh environment (Barents sea, sea ice conditions, icebergs, polar low...)

- **Safety issues (HAZID, HAZOP)**
  - HC inventories, flare, marine, helicopters, environment...

- **Constructability, installation, operating philosophies**

- **Qualification programme:**
  - FPU disconnection, EER...
  - 36” connectors
  - Etc.

A smoother pipeline profile has been achieved during FEED.

---

**SIMPLE & ROBUST PROCESS**

**MAINLY GAS PRODUCTION**

**CONDENSATE SPIKED IN 2-PHASE EXPORT LINES (2x36”)**
Phase 1 Offshore overall scheme
Phase 1 Onshore facilities – Time split FID1 and FID 2
Situation near Teriberka

No local infrastructure and no O&G industry in Murmansk area
Onshore overall scheme – 3D digital model

View of Phase1 in Zavalishina valley
SHTOKMAN Phase 1 development status

- Offshore: all CFTs launched & technical offers received
  ... evaluations are ongoing
- Onshore: LNG plant studies completed, but Russian norms lead to a very large footprint. A Work Value Exercise (WVE) was necessary before launching a CCFT (standardized practice for Outstanding project)
- Both Offshore and Onshore projects did not face the same challenges, and did not progress at the same pace
- To keep the momentum and produce gas by 2016, the Board of Directors (BoD) decided to **time split** the FID in 2 stages:
  - FID 1 for offshore and gas export facilities
  - FID 2 for LNG plant
SHTOKMAN Phase 1 development phasing: FID 1
Phase 1 Onshore facilities – Time split FID1 and FID 2
Environmental challenges

Environment is very sensitive and relatively untouched by man. Onshore land area is pristine. Important fisheries area offshore. Project area is huge: covers nearly 600km in one of the most hostile and isolated environments on earth.

Shtokman Development AG’s mandate is to respect the fragile and sensitive Barents Sea arctic ecosystem (zero harmful discharge). SDAG policy is to comply with environmental requirements of the Russian Federation and World Bank as well as best industry practices.
SHTOKMAN Phase 1 development status

- OVOS and ESHIA completed for initial scheme
- Public hearings started
- Procedure for ecological expertise initiated

- Many arctic studies performed

Ice expeditions, 2007-2009, AARI
Report “LTU for ice conditions at SGCF and along Trunkline route”, 2008, AARI

Studies “Ice conditions monitoring at SGCF and along Trunkline route” have been performed since 2003 and will continue. (Arctic and Antarctic Research Institute)
SHTOKMAN Phase 1 development status

- Letter of Intent signed with WWF

WWF suggested to take the opportunity of offshore surveys to embark birds and marine mammal observers

22.08.2009 - 07.10.2009

Ship route and observed field map

Minke whale

White-beaked dolphin

Harbour porpoise
SHTOKMAN Phase 1 development status

• Social & Economical, Historical, Cultural & Archeological Surveys (performed by FRECOM from 2007 to 2009)

Main directions of studies

• The history of the Murmansk Region
• Natural resources of studies performance area
• Social and economic data of studies performance area: Murmansk, urban settlement Tumany, rural settlement Teriberka
• Sanitary and epidemiological situation and health of population at area of studies performance
• IP and traditional natural resources use in the impact zone
• Social studies in the impact zone
• Interaction programs and modes between the Company and local population

• 3 world war monuments (fortified firing point) inside of survey site, 2008.
• 5 stones – seids inside of survey site, 2008.
• 26 archeological sites of historical and cultural heritage (mesolithic, neolithic age, early metal and middle ages) were discovered during works performance in 2008 and 2009.
• 12 well known archeological sites – neolithic dwelling sites – early metal age (discovered in seventies as a result of literature and archive materials analysis)
Russian Content in Shtokman Phase 1

Definition and Principles

Call for Tenders in Progress

Expectations

Moscow

01.06.2010
Definition – what is the Russian Content?

- Russian goods, equipment and materials – goods, equipment and materials produced and fabricated in Russia and supplied by a Russian venture (organization). The origin of such goods, equipment and materials should be confirmed by a respective Certificate of Origin issued by the relevant RF authority (Chamber of Commerce and Industry).

- Services / works of Russian origin – services / works delivered / performed by a Contractor using 100% of Russian staff, the origin of the above to be confirmed by a respective Delivery Act specifying the location of work.
• Broad Russian Content in the Project is a mandatory condition for FID

  – Assurance of Project support from Russian industry
  – State support for assurance of favorable investment climate at Arctic Offshore projects including taxation, legal and customs aspects
Provisions of SDAG governing documents

• Selection of Contractors and Suppliers is based on CFT procedures

• Priority of Russian Contractors and Suppliers provided the competitiveness

• Additional priority for Contractors and Suppliers registered in work site area.
Project specificity in view of the Russian Content

• Potential advantages of Russian Contractors and Suppliers:
  – Competitive in many types of work and supplies
  – Experience in the Russian Arctic operations

• The Russian experience in such big scale and technically challenging projects is limited
  – For schedule and quality compliance it is necessary to use the advanced international experience and invite leading suppliers and contractors experienced in similar projects

• Need for broad industrial cooperation and adjustment of contractual strategies to assure efficient Russian Content and transfer of the leading world experience to Russian companies
  – SDAG is giving the priority to the transfer of technology
Assurance of the Russian Content

• Scope of Russian Content
  – Definition of works and supplies which may be implemented by Russian suppliers and contractors

• Scenarios of Russian suppliers and contractors involvement:
  – **Individual involvement**
    Preference will be given to Russian bidders provided they satisfy competitive selection requirements and demonstrate the ability to assure the Schedule, Budget and Quality.
  – **Consortium between Russian and International contractors**
    Gain synergy from combination of international technologies and operational experience in Russia (Russian normative base, harsh climate conditions, restricted access, etc.)
  – **Subcontracted by international contractors**
    Available experience and competitiveness satisfying part of the overall bid scope

• CFT procedures are the key instrument to maximize Russian Content provided assurance of the Schedule and Budget
Measures to assure Russian content

• Business unit to assure Russian content was established in SDAG
• Study the market of Russian manufactures and contractors
• Russian manufactures’ and contractors’ database is published (700 items)
• Had more than 200 meetings with companies and organizations
• Working out of the list of possible Russian supplies and works
• Clear instructions to tenderers to assure Russian content; recording procedures for bidding results and work monitoring; appropriate contracts’ adaptation
• Workshops with industry based applying tapering approach (from general information to subject meetings)
  – Project process flow and facilities composition
  – Bidding terms and conditions
  – Basic terms of contracts
  – Meetings with contractors of specific tenders
  – Training modules
A look back on events & initiatives 2009
ШТОКМАН

О компании  Тендеры  Поставщикам  Российское участие  Экология и безопасность  Контакты

Поставщикам

- База данных потенциальных российских поставщиков и подрядчиков
- Презентационные материалы
- Спецификация оборудования

на главную  карта сайта  
рус  eng

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База данных потенциальных российских поставщиков и подрядчиков

С англоязычной версией базы данных можно ознакомиться здесь.

© 2009, «Штокман Девелопмент АГ».
Database of potential Russian contractors and suppliers

COMPANY NAME: 

REGION: -select-

CITY: -select-

CORE BUSINESS: HEAT EXCHANGERS / HEAT TRANSFER EQUIPMENT

Search result
1. AQUATECHNIKA, LLC
2. ARKHPROMKOMPLEKT, OJSC
3. BORISOGLJESK MACHINEBUILDING ENTERPRISE (BORMASH), LLC
4. BORSHIMMASH, OJSC
5. BUGUS MINSKY MECHANICAL PLANT, OJSC
6. COMPRESSOR MOSCOW PLANT, OJSC
7. CRYOGENMASH, OJSC
8. CRYOGENNAYA TECHNICA, LLC
9. DZERSHINSHIMMASH, OJSC
10. EAST SIBERIAN MACHINEBUILDING PLANT, OJSC
11. OELYMASH, OJSC
Презентационные материалы

- Вращающееся оборудование для береговых объектов
  419 Кб.
- Промышленная арматура для береговых объектов
  278 Кб.
- Промышленная арматура для морских объектов
  722 Кб.
- Семейство контрактов Штокман Девелопмент АГ
  172 Кб.
- Руководство для российских поставщиков и подрядчиков
  158 Кб.
- Управление ОТ, ПБ и ООС в ШДАГ
  339 Кб.
- Требования ШДАГ по обеспечению и контролю качества
  205 Кб.
- Типо-ЕПС-контракт компании ШДАГ
  172 Кб.
- Береговая трубопроводная арматура и фланцы для Штокмановского проекта
  116 Кб.
- Береговые металлоконструкции для Штокмановского проекта
  1580 Кб.
Спецификации оборудования

Спецификация на разрозненное технологическое оборудование для береговых объектов Штокман
141 Кб.

© 2009, “Штокман Девелопмент АГ”.
Russian content in the Project – two-sided process involving rights and liabilities

• SDAG shall:
  - work out bidding procedures taking into account interest and capacities of the Russian industry
  - apply transparent and public bidding process to assure priority to Russian contractors and suppliers
  - assure regular dialogue with the Russian industry to support Russian contractors and suppliers participation in bidding procedures based on “equal opportunities” principle

• SDAG assumes that Russian contractors and suppliers will:
  - apply state-of-the-art industrial methods and high standards in their activity
  - assure reasonable marketability of public international bidding procedures
  - take organization measures to promote their participation in bidding procedures to improve marketability
How to Quantify Russian Content

Contractors and Suppliers Reports including:
- Contract price (total and those awarded to Russian companies);
- Used man-hours (total and those spent by Russian citizens);
- Employment (total and positions occupied by Russian citizens);
- Number of Agreements on license transfer to Russian companies.

### Table 3. Values (Russian Expenditures) and Positions for Calculation of “Russian Content”

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Main Contractor 1</th>
<th>Main Contractor 2</th>
<th>Main Contractor ..</th>
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<tr>
<td>Subcontractor 1</td>
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<td>Supplier 1</td>
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<tr>
<td>Supplier ..</td>
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</tbody>
</table>

- **RUSSIAN CONTENT REPORT**
- Attachment to Invoice N _____ dd
Call For Tenders in Progress – Offshore part
Phase 1 Offshore overall scheme – List of Main Contracts
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-100
Подводный добычный комплекс
(проектирование, закупки, сооружение)
Subsea Production System EPC
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-101

Поддержка при монтаже ПДК и обслуживание во время эксплуатации месторождения

SPS Life of Field Support and Services
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-102

Монтаж темплетов и конструкций на шельфе

Offshore Installation of Templates and Structures
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-103
Проектирование, закупки, производство, установка выкидных линий Flowlines EPC
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-104
Проектирование, закупки, производство, установка шлангокабелей, линии закачки воды / монтаж райзеров
Services Lines and Risers Installation
Phase 1 Offshore overall scheme

OFF-200
Проектирование, закупки, производство, установка плавучей добычной платформы FPU EPSCC for FPU
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-300
Поставка линейной трубы
Linepipe Supply
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-301
Trunkline Weight Coating
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-302
Проектирование, закупки, производство, укладка линейной части трубопровода
Pipeline Installation EPCI
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-303
Проектирование, закупки, производство, укладка волоконно-оптической линии связи
Fibre Optic Cable EPCI
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-304
Поставка клапанов
Supply of Valves
Phase 1 Offshore overall scheme – List of Main Contracts

OFF-305
Проектирование, закупки, сооружение манифольда подводных трубопроводов PLEM PLEM EPC
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<thead>
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<th>Description</th>
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<td>OFF-101</td>
<td>Поддержка при монтаже ПДК и обслуживание во время эксплуатации месторождения SPS Life of Field Support and Services</td>
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<td>OFF-102</td>
<td>Монтаж темплетов и конструкций на шельфе Offshore Installation of Templates and Structures</td>
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<td>OFF-103</td>
<td>Проектирование, закупки, производство, установка выкидных линий Flowlines EPC</td>
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<tr>
<td>OFF-104</td>
<td>Проектирование, закупки, производство, установка шлангокабелей, линии закачки воды / монтаж райзеров Services Lines and Risers Installation</td>
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<td>OFF-200</td>
<td>Проектирование, закупки, производство, установка плавучей добычной платформы FPU EPSCC for FPU</td>
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<td>OFF-301</td>
<td>Утяжеляющее покрытие</td>
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<td>Проектирование, закупки, производство, укладка линейной части трубопровода</td>
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<td>OFF-303</td>
<td>Проектирование, закупки, производство, укладка волоконно-оптической линии связи</td>
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<td>Поставка клапанов</td>
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<td>Проектирование, закупки, сооружение манифольда подводных трубопроводов PLEM</td>
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<td>Услуги по направленному бурению/каротажу в процессе бурения/скважине для сброса стоков</td>
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<td>Услуги по буровым растворам и растворам для заканчивания скважин</td>
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<td>OFF-403</td>
<td>Организация сбора и удаления отходов</td>
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<td>Электрокаротаж</td>
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<td>OFF-405</td>
<td>Услуги и закупки по заканчиванию в нижнем интервале</td>
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<td>OFF-406</td>
<td>Услуги и закупки по заканчиванию в нижнем интервале</td>
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<td>OFF-408</td>
<td>Закупки труб нефтяного сортамента</td>
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<td>OFF-409</td>
<td>Услуги и закупки по заканчиванию в верхнем интервале</td>
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</tbody>
</table>

- *Directional Drilling/LWD/WD Services*
- *Drilling and Completion Fluid Services*
- *Waste Management*
- *Wire line Logging*
- *Lower Completion Procurement and Services*
- *Well Testing Services*
- *OCTG Procurement*
- *Upper Completion Procurement and Services*
Drilling services contracts

Организация сбора и удаления отходов

Waste Management
<table>
<thead>
<tr>
<th>COM-150</th>
<th>Integrated Logistics Base</th>
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<tbody>
<tr>
<td>COM-151</td>
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<td>COM-179</td>
<td>Platform Supply Vessel</td>
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<td>COM-180</td>
<td>Multi Role Vessel</td>
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<td>COM-181</td>
<td>Emergency RR Vessel</td>
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<tr>
<td>COM-182</td>
<td>Anchor HTS vessel</td>
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</tbody>
</table>
Expectations

Shtokman is a complex project

The maximization of the Russian content is a «surgical» process, contract by contract, for each and every International contractor.

The main objective is to maximize the transfer of technology to gain some real experience/expertise for phase 2 and 3 and other development in Arctic

A step by Step approach contract by contract is recommended to build offshore expertise in Russia
An example – Sub-sea potential Russian Content

System components for local fabrication ("Union")
EXAMPLE OF SUBSEA TEMPLATES UNDER CONSTRUCTION- 6 Units

Transfer of technology Up to 50% ?
Module Construction

Construction of large, medium and small modules and prefabrication in sheltered zones is promoted

Transfer of Technology

Step by Step approach
Trunk lines – 2x 36”x 550 km

Line pipe supply
Internal coating
Concrete coating
Transport

Up to 100% ?
FID 1 onshore gas & condensate plant: 100% from design to commissioning

- Condensate storage and offloading system
  Design, supply, transport, construction: 100%

- Condensate export line & roads
  Design, supply transport, installation: 100%

- Receiving facilities – Gas treatment & condensate stabilization
  Design, supply transport, installation: 100%

- 8km 2x36” pipe
  Supply, transport, installation: 100%

- Site preparation: 100%
Line pipe manufacturing, coating, handling…
Flowlines 16” and 1100km of 36” pipe

Up to 100%?
Logistics Base

Up to 100%?

- Over head crane
- Large items storage
- Mezzanine
- Heavy duty racking system
Integrated Logistics Base Concept

Up to 100% ?

Offices & Accommodations

Mud & cement plant

Jetties & berthing facilities

Various workshops & warehouses
LINE PIPE STORAGE YARD EXAMPLE  Up to 100%?

Shtokman development
550,000 Tonnes
95,000 Pipes
Required surface:
400,000 m²
SHTOKMAN Development fleet
Installation Vessels, Emergency Response Vessels, Platform Supply Vessel, Anchor Handling Tugs,

Up to 100%?

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length overall</td>
<td>c. 110 m</td>
</tr>
<tr>
<td>Length in waterline</td>
<td>c. 100 m</td>
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<tr>
<td>Breadth at dwl, midships</td>
<td>c. 24.0 m</td>
</tr>
<tr>
<td>Breadth at dwl, max</td>
<td>c. 28.0 m</td>
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<td>c. 30.0 m</td>
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<td>Draught at dwl</td>
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<table>
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<th>Parameters</th>
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<td>Length in waterline</td>
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<td>Breadth</td>
<td>c. 21.0 m</td>
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<tr>
<td>Draught, scantling</td>
<td>8.2 m</td>
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<tr>
<td>Depth to main deck</td>
<td>11.2 m</td>
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<tr>
<td>Deadweight</td>
<td>4200 t</td>
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</table>

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Values</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Length in waterline</td>
<td>c. 85 m</td>
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<tr>
<td>Breadth at dwl, midships</td>
<td>c. 23.5 m</td>
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<tr>
<td>Draught at dwl</td>
<td>8.0 m</td>
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<tr>
<td>Draught, scantling</td>
<td>8.5 m</td>
</tr>
<tr>
<td>Depth to main deck</td>
<td>11.2 m</td>
</tr>
<tr>
<td>Deadweight</td>
<td>c. 3000 tonnes</td>
</tr>
<tr>
<td>Bollard pull</td>
<td>150 - 200 tonnes</td>
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</table>
SDAG Rotary Wing and Fixed Wing Activities

- Transport of passengers to and from Mainland hub and Offshore

- Emergency Response (ER), including Medical evacuation (MEDEVAC).

- Search & Rescue operations (SAR).

- Ice and iceberg flight survey

- Stand by helicopter at onshore base and FPU (Floating Production Unit)

OPERATIONS, FACILITIES AND PERSONNEL: 100%
SHTOKMAN Phase 1: conclusions

FID 1 drivers:

• All technical challenges addressed and solved without compromise on safety
• All commercial offers for Offshore CFT to be received by September 2010
• FID 1 in March 2011 is achievable
• Preliminary results of Offshore CFT show that competition is on… and current market conditions are favorable.
• Russian Content considerations still to be finalized but will definitely be part of the contracts
• Schedule, Capex and Russian Content should form an optimum balance to manage FID 1.
Russian Content SHTOKMAN Phase 1: conclusions

Russian Content is one of the most important Challenges for SDAG

SDAG can’t do miracle alone, we all need to join our forces

What could be “a” potential successful recipe for a sustainable Russian Content?

• SDAG to continue playing a strong and active role
• International contractors to understand that there is no way to be part of the project without a strong Russian content
• Decision to launch the project to be taken in March 2011
• Russian contractor to be ready and have a pro-active approach, ready to compete, and have an Industrial approach (build expertise..)
• Help of Politics is essential
Phase 1 FID1 is in the process to take off, Russian Industry shall be onboard the plane!

A New Frontier is in the process to be opened

A stepping stone for future development if an industrial and sustainable approach is taken by all the 4 players (SDAG, International Contractors, Russian contractors, & Politics)

…..And a major training program is one of the next following steps
Спасибо!