

## Sakhalin & the Russian Far East - 2010 Project Development & OSR Readiness

## “Sakhalin & the Russian Far East - 2010 Project Development & OSR

I intend to cover 3 Main Topics:

- 1) What was the basis and development of the OSR System on Sakhalin and in the Russian Far East -- How was Ecosheff Ltd formed and what other organizations are part of the overall OSR capability
- 2) The current status of oil & gas development, the future and the increased OSR capability
- 3) With the infrequency of oil spills, how can we determine if our Organization & “*System*” is *Response Ready*?

## Who is William Stillings & Is It Worth Your Valuable Time To Listen To Him Today ?

*Or asked another way:*

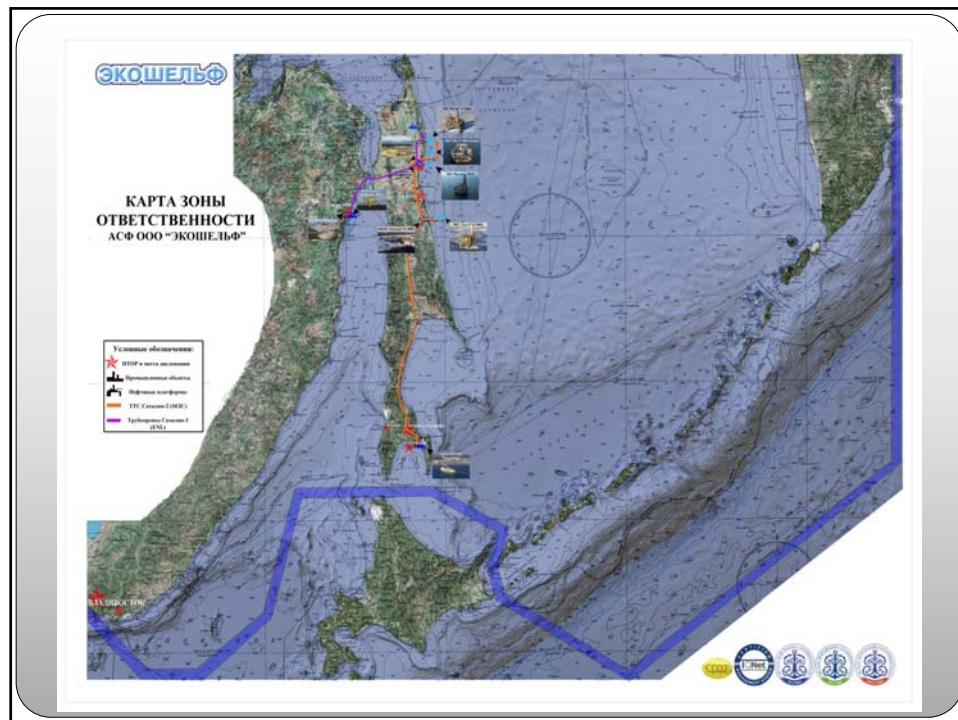
How Did this “*American*” become an  
Oil Spill Response “*Expert*” on  
Sakhalin Island and the Russian Far  
East?

## Sakhalin & the Russian Far East - 2010 Project Development & OSR Readiness

First it is important to note that I do not represent, nor am I  
a spokesman for any of the oil spill response  
organizations or oil companies that I will discuss today.  
*[Except Ecoshef Ltd]*

The Company information that I will present is available  
on the various company's web sites

The opinions are solely mine!



## My Career Began In California in the 1960's

1. During my university years in California I worked summers w/ State Fire Service – responding to Wild Land Fires
2. Shell Refinery '66-'68 – ERT Member
3. '68 – I Went to work at the "New" San Francisco Bay Area -Exxon" [then Humble Oil] Refinery

Hippy  
Revolution  
&  
Viet Nam War



## Career in the 70's

1. In 1971, the San Francisco Oil Spill Mutual Aid Co-Operative - Clean Bay was formed – I was nominated by my refinery as a responder
2. I Responded to Several Bay Area Spills w/Clean Bay
3. During the late 70's my refinery had a number of "small" spills // I was made a  
*'Responsible Person'*

## Career in the 80's

1. During the late '70's – there were a number of significant spills in the US and overseas
2. In the early '80's Exxon formed an “International Response Team” -- I was nominated a member [we trained annually]
3. *The morning of Good Friday, March 23<sup>rd</sup> 1989 I responded to the Exxon Valdez Oil Spill and worked for 2 years as 1 of 3 Oil Spill Response Managers through the end of clean up operations in 1990.*

## Career in the 90's

1. After the Valdez Spill – the USA passed the Oil Pollution Act of 1990 [OPA-'90] – Alaska was singled out for increased regulation
2. I was requested to become General Manager of Cook Inlet Spill Prevention & Response Inc. [CISPRI] so I resigned from Exxon {I had fallen in love with Alaska}
3. *Cook Inlet Alaska has the second most sever tide and currents in the world – and heavy, 1 year winter ice which moves rapidly on the 5 m tide cycles*

## Cook Inlet Alaska



## Winter Ice - Upper Cook Inlet



## Sakhalin – Lun-A – Spring Ice



## Winter Surfing in Cook Inlet Alaska





## Career in the 90's

1. At CISPRI we developed broken ice, winter oil spill response techniques – worked at CISRI – 4 yrs 1990 – early 1995
2. *In the winter of 1994/1995 there were a series of pipeline breaks in the Komi Republic of Russia [1500 km north of Moscow] – the World Bank and EBRD funded the clean up and I was requested to be the Project Manager*
3. During 1995 & 1996 - we recovered 125,000 Tons of oil – in the northwestern Russian Arctic

## Career in the 90's

1. In the late summer of 1996, my former associates at Exxon decided to drill an exploratory well off the East Coast of Sakhalin
2. They asked our company to perform Oil Spill standby for their drilling operation
3. So, I traveled to Sakhalin Island



## Career in '90s

1. That year, 1996, I met Anatoly Yanchuk, at that time, Director of the Russian State Marine Pollution Control, Salvage & Rescue Administration -- Sakhalin Basin Salvage Authority -- [SakhBASU] located in Korsakov, Sakhalin Island, Russia
2. At the 1997 International Oil Spill Conference in Ft Lauderdale Florida, we agreed to form the Russian OSR Company, -- *Ecoshelf Ltd.* - we had approx. 20 people

## Ecoshelf Ltd – OSR Vessel Agat



Vessel is owned by the Russian Federation

## Career in 2000's

1. Ecoshelf Ltd now provides OSR & Waste Management Services to many of the companies on Sakhalin Island, at the Prigorodnoye [Sakh-2] OET & LNG Terminal and at the [Sakh-1] Oil Terminal on the Mainland at DeKastri – *today we have in excess of 200 employees*
2. As we discuss the state of OSR in the Russian Far East; it certainly is no longer only Ecoshelf. All of the operators have their own extensive capabilities and there are other response companies... *and with mutual aid agreements we are ready*

## So That is My Background

1. Learned OSR in California in the formative years of the industry
2. Was a Project Manager on 2 of the larger oil spills in history
3. As the General Manager at CISPRI in Cook Inlet Alaska our team developed moving, broken ice OSR
4. I learned to work with Russians during the tough early years of perestroika in the Russian arctic
5. I have been in Sakhalin since 1996 and continue to enjoy it!

## Career in 2000's

### Two tips for you today

- There is no such thing as an OSR *"Expert"*
- Oil Spill Response "Managers" know Safety, Logistics and Waste Management are the keys to effective oil spill response

## The Sakhalin-1 Consortium

Exxon Neftegas Limited, an affiliate of Exxon Mobil Corporation, is the operator of the Sakhalin-1 Project.

Other participants in the Consortium are: Russian companies, Sakhalinmorneftegas-Shelf and RN-Astra; the Japanese company Sakhalin Oil and Gas Development Co., Ltd.; and India's ONGC Videsh Ltd.

## The Current Sakh-1 Operation



**Orlan Summer**



**Chayvo Onshore Processing Facilities –  
Drill Rig Yastreb in the Distance**



**Orlan in Winter Ice**

## SAKHALIN-1 PROJECT CONTINUES TO ACHIEVE MILESTONES

On October 2, 2008 -- The Sakhalin-1 Consortium, announced that more than 20 million tons (157 million barrels) of Chayvo field crude oil have been produced and loaded into over 200 tankers at the De-Kastri Export Terminal in the Khabarovsk Krai.



DeKastri Oil Terminal







## Phase 1 of the Sakhalin-1 Project

Phase 1 of the Sakhalin-1 Project produces crude oil and natural gas from the Chayvo field.

Future phases of the Project will include developing the Odoptu and Arkutun-Dagi fields, expanding the Chayvo Onshore Processing Facility, and further developing Chayvo gas.



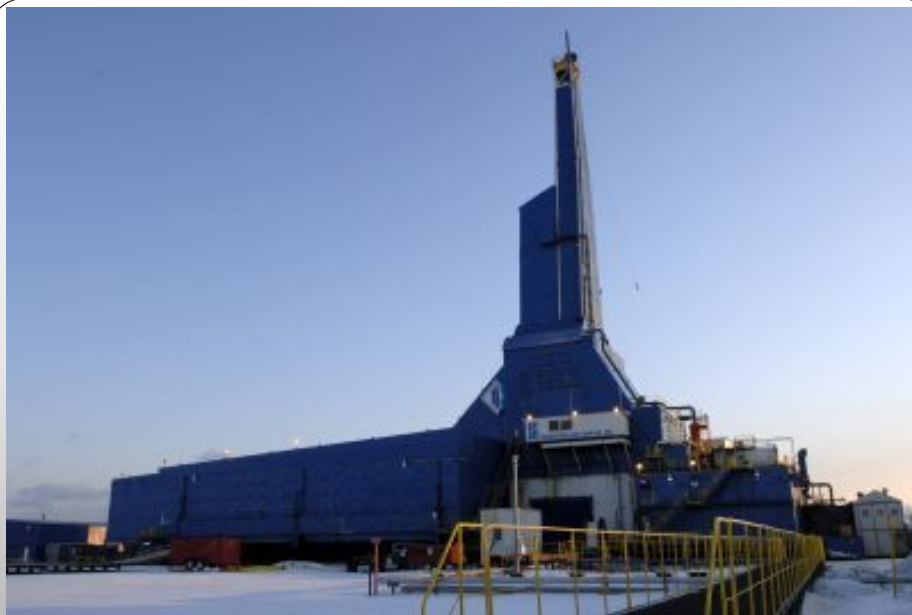
Chayvo Drill Rig – Yastreb {Eagle}

## ENL is Committed to Continuous Efforts to Improve Environmental Performance Throughout it's Operations.

ENL has invested over US\$ 700 million through 2007 on environmental safeguards, equipment and studies, including various archaeological, ornithological, bathymetric, meteorological, seismic, top soils, fisheries, stream crossing, waste management, bioremediation and oil spill response studies & equipment.

## Odoptu Field Oil and Gas Development;

The next phase of the Sakhalin-1 project, will produce oil and gas from the Odoptu field, located off the northeast coast of Sakhalin Island near Piltun Bay, approximately 35 miles (55 km) north of current Chayvo operations



**The Yastreb has been moved from Chayvo to Odoptu**

## **Arkutun-Dagi Development**

The off-shore Arkutun-Dagi development will produce oil and gas from a field, located approximately 25 kilometers off the northeast coast of Sakhalin Island, just east of the Chayvo field. The project plans include developing the field through a new offshore drilling and production platform, which includes a gravity base substructure and topsides facilities.

## **Sakh-1 OSR – 2010**

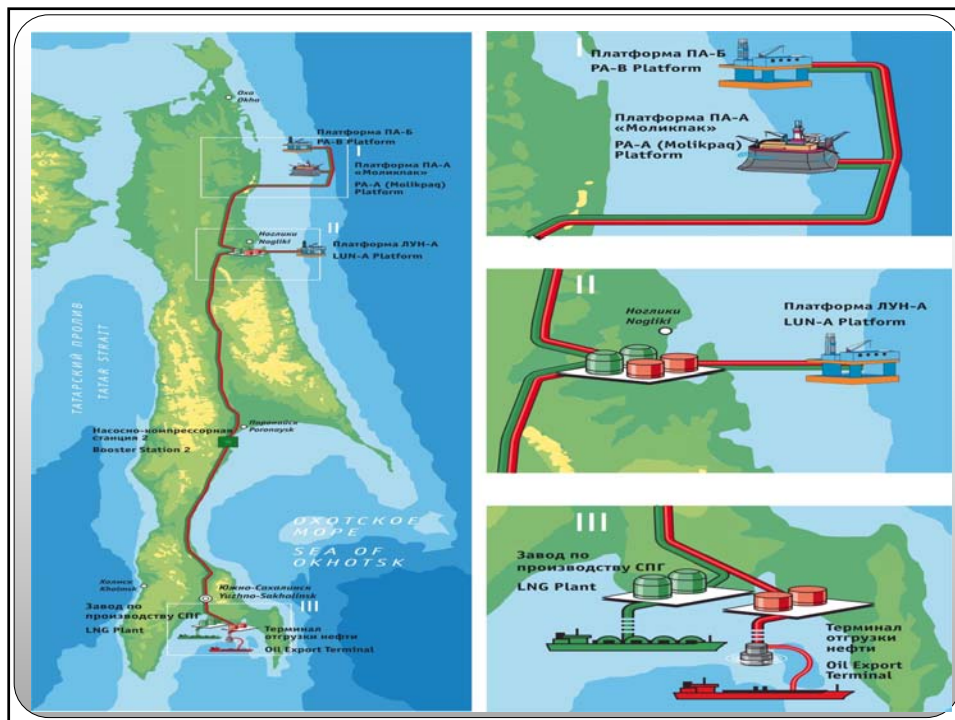
- 1) Full time OSR standby at Chayvo & DeKastri – Ecoshelf Ltd. & Island General Services
- 2) Full time off-shore OSR Standby
- 3) Well trained company & contractor personnel

Sakhalin Energy Investment Company  
Sakhalin – 2 Project

# Sakhalin Energy Investment Company Ltd

Sakhalin Energy is a unique partnership drawing upon global oil and LNG expertise and experience.

Under the shareholding structure of Sakhalin Energy, Gazprom holds 50% plus 1 share, Shell 27.5% minus 1 share, Mitsui 12.5% and Mitsubishi 10%.



## Piltun B - Platform



On 22 July 2009 Sakhalin Energy exported 200<sup>th</sup> oil cargo.

The Sakhalin Island, a PRISCO-owned tanker on long-term charter to the company, delivered 100,000 tons of oil to a refinery in South Korea.

On 22 July 2009 Sakhalin Energy exported 200<sup>th</sup> oil cargo.

Sakhalin Energy exported 5,5 mln tons of oil from the Company's offshore facilities in the Sea of Okhotsk in 2009.

## Tanker Loading in Prigorodnoye





## LNG Delivery From the Sakhalin-2 Project to Japan

On 18 February 2009 Russian President, Dmitry Medvedev, opened Russia's first liquefied natural gas (LNG) plant built by Sakhalin Energy

LNG Tanker Loading @ Prigorodnoye,  
Sakhalin Island Russia



## 100<sup>th</sup> LNG Cargo to Asia Pacific

During the last days of January 2010 a major milestone was achieved at the Prigorodnoye Asset - the 100<sup>th</sup> tanker carried Russian liquefied natural gas from the LNG plant to Sakhalin Energy customers in Japan.

## LNG Tanker Loading



## Sakhalin Energy Has an Excellent Record of Spill Prevention

Since production operations began in 1999 the total volume of oil spilled at Sakhalin Energy operated assets is approximately 0.56 tons, while total production was approximately **19.2** million tons (140 million barrels) of oil or about *one barrel for every 35 million barrels produced.*



SEIC Oil Spill Response – Ecoshef Vessel Agat

## **Operational Personnel Have Been Trained for Specific OSR Issues**

SEIC has also developed their own  
Emergency Response Teams

Overview & Certification (MorEcoTech) located in Vladivostok), Environmental Awareness for OSR, Course for OSR equipment operators. Emercom courses: Basic Fire Fighting, Emergency First Responders and Emercom ER&OSR courses have also been completed by staff.

## **All SEIC's Operational Facilities Now Have Complete OSR Equipment at a Cost of Over \$12 million USD**

OSR equipment for the onshore pipeline system has been placed in the five Emergency Response Depots (ERD) built along the pipeline route and another set of OSR equipment in Prigorodnoye. Onshore Response Companies – Ecospas & Ecoshelf provide 24 hr OSR standby

## SEIC's Pipeline & Terminal Operations Have Full Time OSR Standby

Additionally, SEIC has offshore standby contracts w/ Ecoshelf Ltd. at their platforms and at their Oil Export & LNG Terminal @ Prigorodnoye in Aniva Bay

## SEIC & ENL Operations Have Full Time OSR Standby

SEIC, as has ENL, also outfitted their full time rig and terminal vessels with state of the art **"ARCTIC"** winter ice capable OSR equipment supplied by Lamor

*Lamor's daughter company – "Clean Globe International" is a partner in Ecoshelf Ltd since 2008*

## Distinguished Achievement Award

In May 2009 the Offshore Technology Conference (OTC), chose Sakhalin Energy to receive their Distinguished Achievement Award for Companies, Organisations and Institutions.

Sakhalin Energy was awarded the offshore industry's highest recognition for the Sakhalin-2 Phase 2 Project's significant and unique achievements in developing offshore technology.

## Oil Terminal 2009 Award

Sakhalin-2 Oil Export Terminal (OET) and LNG jetty also won the Oil Terminal 2009 international prize competition in 2009 in Saint Petersburg.

The first Russia LNG jetty won the Breakthrough of the Year nomination and Oil Terminal - in the Environmental Safety and Breakthrough of the Year

The ***Sakhalin Salmon Initiative*** Won –  
“Best Program Demonstrating Corporate  
Philanthropy Policy and Social Investment  
Principles”

SEIC also introduced the *Sakhalin Salmon Initiative [SSI]*. SSI sponsors salmon conservation activities. Launched during an international conference in October 2006. Sakhalin Energy is one of SSI’s main sponsors. Program Budget is \$8.8 million.

Students Who Participated w/  
SSI





Sakhalin Salmon Initiative –  
**Sustainability: New methods in studying salmon**

**Goal of Project:**

Support the Sakhalin salmon fishery and help Sakhalin companies to receive market incentives internationally from the growing market need for sustainably harvested seafood.

**Objectives of Project:**

- Help fishing companies of Sakhalin to receive Marine Stewardship Council (MSC) certification.
- Receive recommendations through the MSC certification process regarding improving sustainability of the salmon fishery.
- Establishment of contacts between fishing companies undergoing the MSC certification process and leading international seafood buyers.



## Sakhalin-3 – Rosneft /Sinopec

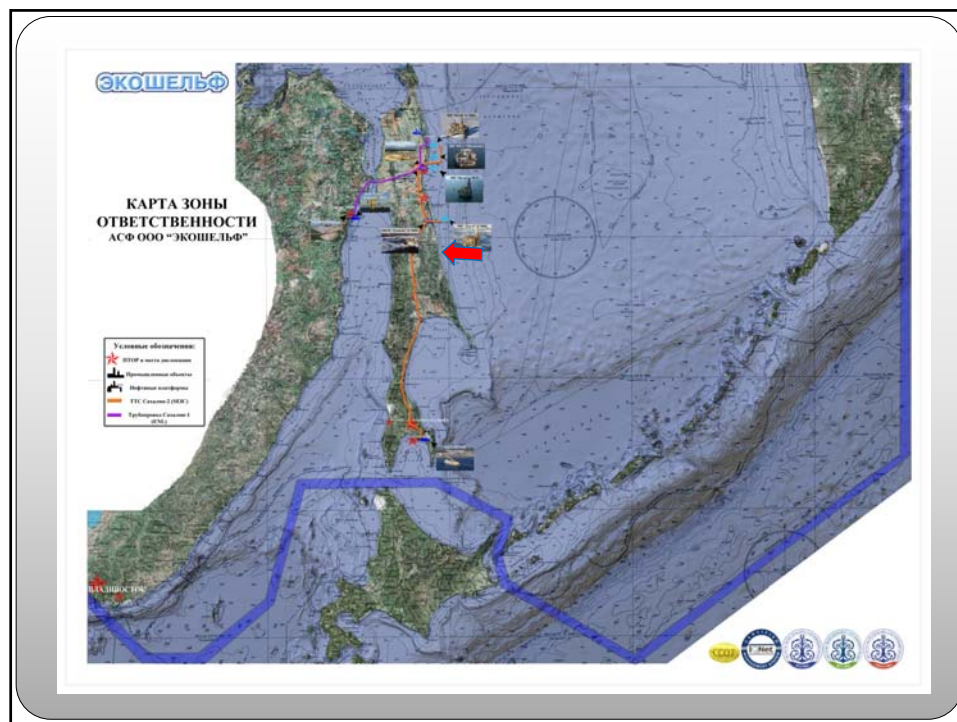
Rosneft, together with China Petroleum and Chemical Corporation (Sinopec), is involved in the exploration of the Veninsky licensed block of the Sakhalin-3 project.

The 5,300 sq.-km block is located on Sakhalin shelf of the Sea of Okhotsk. Sea depth in this area ranges from 25 to 150 meters.

Project participation:

Rosneft — 74.9%

Sinopec — 25.1%



## Sakhalin - 3— Rosneft /Sinopec

Exploration began in the 1960s, and in the mid-1990s, seismic surveying activities were begun. In April '03, Rosneft obtained a exploration license to this block.

The existing project plan envisages onshore drilling of 5,000-8,500 meter-deep exploration wells using cutting-edge drilling techniques similar to those employed at Sakhalin-1.

## Sakhalin - 3— Rosneft /Sinopec

In 2006, the first exploration well was drilled, tested and liquidated.

The second prospecting well was drilled at the Veninsky block during 2008 and penetrated more than 10 gas saturated strata and inter-strata.

Reserves at the field are being analyzed

## Gazprom -- Sakhalin-3

Gazprom, the world's biggest gas producer, was slow in entering projects on Sakhalin.

The situation changed when Gazprom bought control in the giant Sakhalin-2 oil and liquefied natural gas project from Royal Dutch Shell. Gazprom has signed a preliminary agreement to supply China National Petroleum Corp (CNPC) with about 70 billion cubic meters of gas.

## Gazprom -- Sakhalin-3

**LOS ANGELES, Oct. 20 –2009**

Russia's state-owned OAO Gazprom plans to start production at the Sakhalin-3 project's Kirinsky field in 2011 or 2012, 2-3 years ahead of schedule, according to a senior company executive.

## Gazprom -- Sakhalin-3

"Accelerating the development of the Sakhalin-3 field could provide Gazprom with volumes needed for the Khabarovsk-Vladivostok pipeline"

## Gazprom -- Sakhalin-3

When asked about the chances of Japanese companies taking part in the Sakhalin-3 project, Medvedev reminded reporters that Gazprom already has contracts with Royal Dutch Shell PLC, Mitsui, and Mitsubishi, which hold stakes in the Sakhalin-2 project.

"Those contracts stipulate that Gazprom give priority to the three firms..."

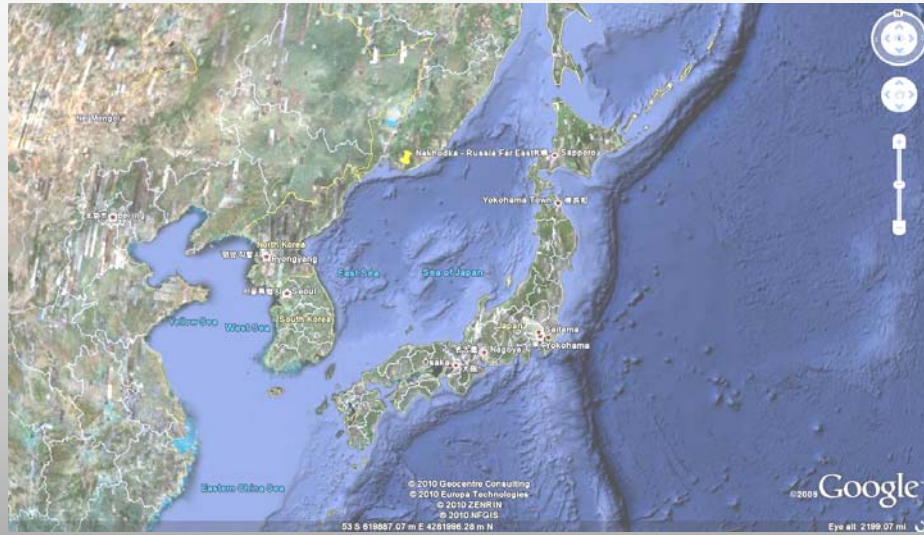
## EASTERN SIBERIA – PACIFIC PIPELINE

Construction of a large oil port in Kozmino Bay (at Nakhodka, Russia Far East) will be completed in 2010.

The oil terminal being at least 15 meters in depth will be capable of handling tankers of up to 200,000 tonnes in displacement". It will be the end point of ESPO oil pipeline.

PortNews reports

## NAKHODKA & THE SEA OF JAPAN



## EASTERN SIBERIA – PACIFIC PIPELINE

Transneft *[100% Russian State owned]* operates one of the largest networks of oil pipelines in the world. The company moves crude oil through more than 30,000 miles of pipeline stretching across Russia, Eastern Europe and Asia. *Yahoo Finance*

## EASTERN SIBERIA – PACIFIC PIPELINE

***Monday, 28 December 2009***

Russian Prime Minister Vladimir Putin, today formally opened the first section of a Siberia-Pacific oil pipeline network envisioned as eventually helping deliver Russian crude to Japan, China and Asia-Pacific markets.

## EASTERN SIBERIA – PACIFIC PIPELINE

At the ceremony at the new export terminal at the port of [Kozmino](#) at *Nakhodka* - Primorsky Krai, bordering China and North Korea in Russia's Far Southeast, Prime Minister Putin pressed a computer mouse button to start crude flows to fill a 100,000-ton tanker, which officials said will sail to Hong Kong. ***Monday, 28 December 2009***



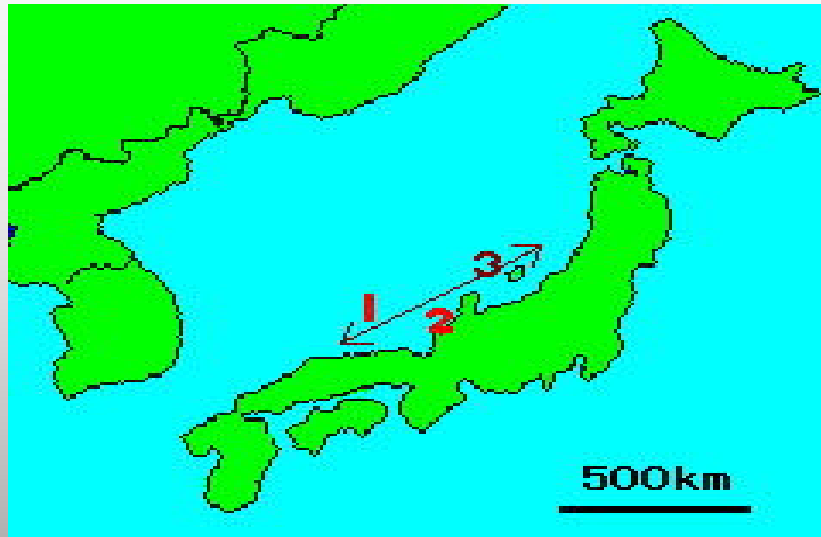
### Kozmino Terminal – Nakhodka Russia



### ***Tanker NAKHODKA Oil Spill in the Sea of Japan - 1997***

On Jan 2, 1997, in the sea of Japan, the Russian tanker *NAKHODKA*, with a cargo of about 19,000 Tons of heavy fuel oil, en-route from Shanghai, China to Petropavlovsk, Russia, broke up in the stormy weather.

## TANKER NAKHODKA SPILL MAP



### ***Tanker NAKHODKA Oil Spill in the Sea of Japan***

*For more information on the Nakhodka spill see  
the paper presented by Mr. Todd Moller to the  
PAJ – July 1997*

## EASTERN SIBERIA – PACIFIC PIPELINE

Reports say Russia plans to export up to 3.1 million tons of crude through the terminal in the first quarter of 2010

With it's opening in 2009 it became the 3<sup>rd</sup> largest sea terminal in Russia

On 22 July 2009 Sakhalin  
Energy exported 200<sup>th</sup> oil cargo.

Sakhalin Energy exported  
**5,5 mln tons** of oil from the Company's  
offshore facilities in the Sea of  
Okhotsk in 2009.

## EASTERN SIBERIA – PACIFIC PIPELINE

At the initial phase oil will be delivered to the port by railway for further shipment to the Asian Pacific Region including Japan, up to 15 million tonnes per year.

At the second phase, to be completed by Sept 2012, the terminal will be capable of pumping 50 million tons PortNews reports.

## EASTERN SIBERIA – PACIFIC PIPELINE

Figures published in the World Bank's monthly World Finance Review suggest that *(Transneft)* oil pipeline bursts grew from about 19,000 in 2002 to more than 22,000 in 2005.

## EASTERN SIBERIA – PACIFIC PIPELINE

The Kozmino Terminal does have a significant stockpile of OSR Equipment, much of it supplied by Lamor

Additionally, they have a full time Oil Spill Response Group

## NAKHODKA & THE SEA OF JAPAN



## So Let's Talk About Readiness

How can we assure that our Oil Spill  
Response System is *"READY"*

??

## How to Determine If Your OSR Team IS Ready

Fortunately Oil Spills Occur Infrequently !

So how can Management assess if the  
organization is ready to respond?

*Asked another way - What can  
Management do to assure OSR  
readiness?*

## How to Determine If Your OSR Team IS Ready

A Company Does Not Have a Conscience

*Only the People Who Manage and Work for the Company do!*

## How to Determine If Your OSR Team IS Ready

Make OSR as high a priority  
as SAFETY

## How to Determine If Your OSR Team IS Ready

Based Upon the volunteer response to the 1997 Nakhodka Spill – OSR responders in Japan are respected !

Work with that respect – make OSR duty a privilege to which workers request to be assigned

## How to Determine If Your OSR Team IS Ready

Provide The Group The Best Personal Protective Equipment [PPE]

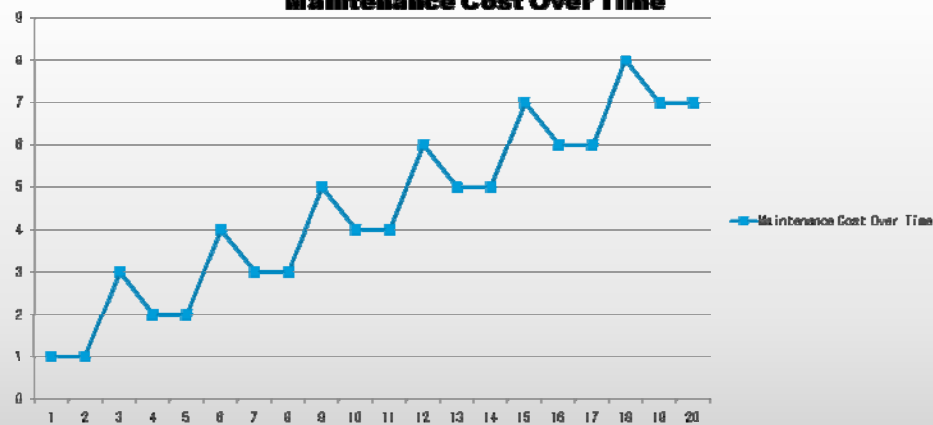
Senior Managers -- attend training session and award ceremonies



## How to Determine If Your OSR Team IS Ready

The following "Charts" are "Hypothetical"  
They assume a 20 yr cycle  
With a tri-annual exercise program with a  
"major" exercise ever 3<sup>rd</sup> year

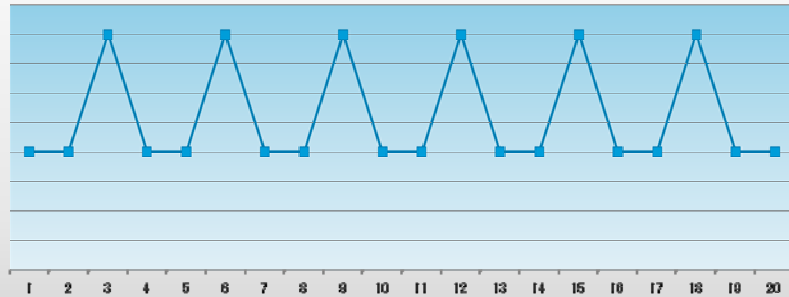
**Maintenance Cost Over Time**



How to Determine If Your OSR Team IS Ready

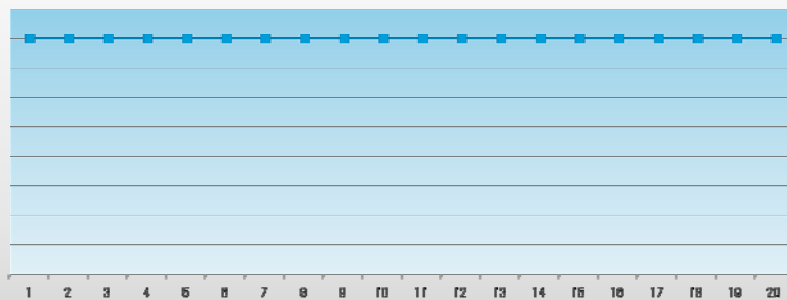
Equipment Lifecycle Maintenance  
Cost

OSR Activities Over 20 Years



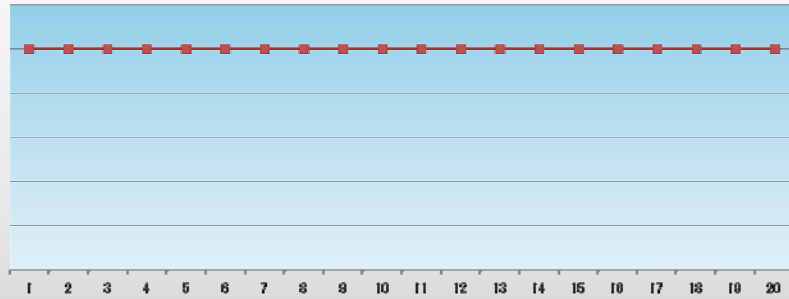
How to Determine If Your OSR Team IS Ready  
Annual or Tri-Annual Drill & Exercise  
Budget

OSR Activities Over 20 Years



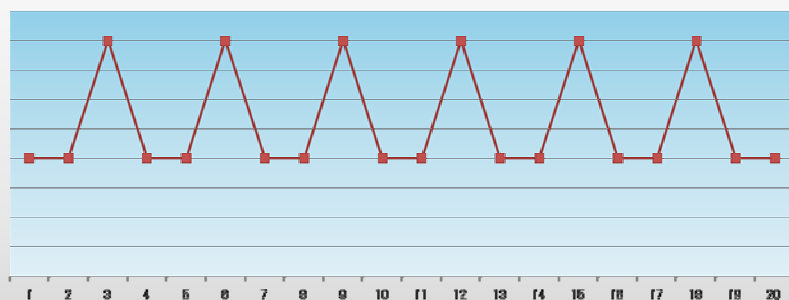
How to Determine If Your OSR Team IS Ready  
Drills & Training Exercises

OSR Activities Over 20 Years



How to Determine If Your OSR Team IS Ready  
Personnel Turnover

OSR Activities Over 20 Years



How to Determine If Your OSR Team IS Ready  
Equipment Damage During Training



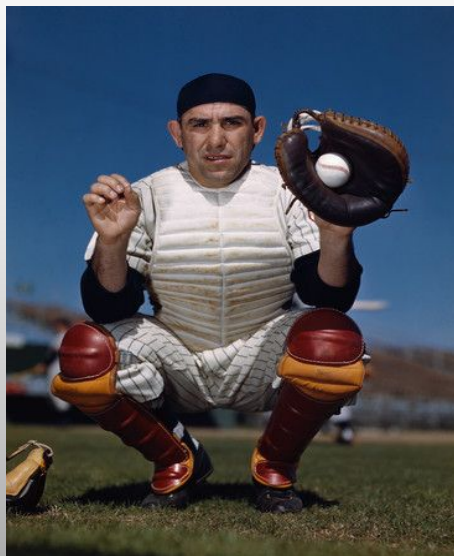
## How to Determine If Your OSR Team IS Ready

- Set Team Goals and Reward Achievement
- Make the people want to practice and excel
- Senior Managers -- attend training session and award ceremonies – Lead by example

## How to Determine If Your OSR Team IS Ready

One of the most innovative "Table Top Exercises" I ever attended was a *senior management all day - Oil Spill Exercise* In Cook Inlet

Yogi Berra



## Yogi Berra

Berra, Yogi (Lawrence Peter Berra) 1925–  
American baseball player and manager

An outstanding catcher with the New York Yankees (1946–63) Berra was the American League's Most Valuable Player - 1951, 1954, & 1955, he hit 358 career home runs and appeared in 14 World Series. He managed the Yankees and Mets leading each team to the pennant (Yankees, 1964; Mets, 1973).

Berra is renowned for his unintended, ironic humorous comments. -- **Berraisms**

## Yogi Berra

*You Can SEE a lot by  
Looking !!!*

Make it Important – Your Team  
Will Be Ready !

*IF YOU, THE SENIOR  
MANAGERS, MAKE IT  
IMPORTANT -- IT WILL BE  
IMPORTANT !!*

**THANK YOU FOR NOT LEAVING  
AFTER THE FIRST SECTION !!**

? Questions ?