

EXPLORATION DAY 2014



London, January 29th 2014



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Exploration Outlook

Marcos Mozetic

1

Current geographical deployment in Exploration to lever growth



Summary of Exploration Activity in 2013

Finalised wells	22 (+1 Appraisal)
Positive	9
Negative	14
Continued drilling	4 (2explo+2app)
Exploration success	39 %
Unrisked Prospective R. W.I	E 1,500 Mboe
Prospective Resources W.I.	E 302 Mboe
Contingent Resources W.I.	+300 Mboe

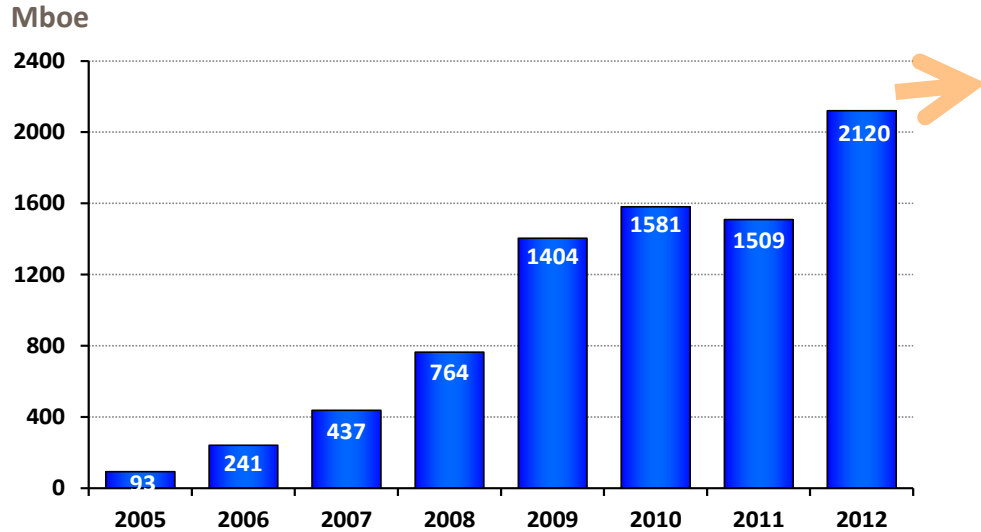
We continue adding +1.5 ^(1.8) prospects per well drilled
 Exceeded our goal for new ventures (28 blocks/projects added)

2013 Exploration activity



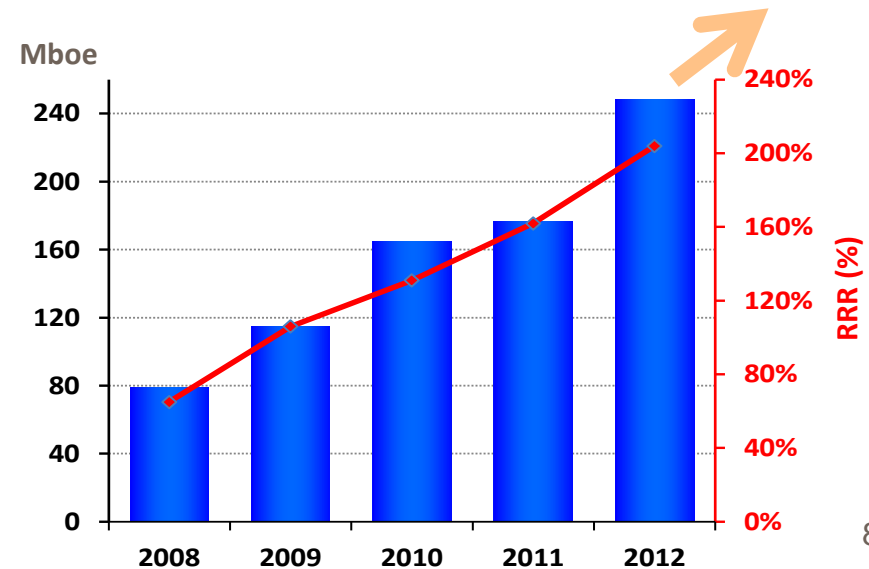
2013

Continue notable improvement in reserve replacement, without exhausting contingent resources bank



Contingent Resources
3C (Mboe)

Reserve Replacement
Ratio

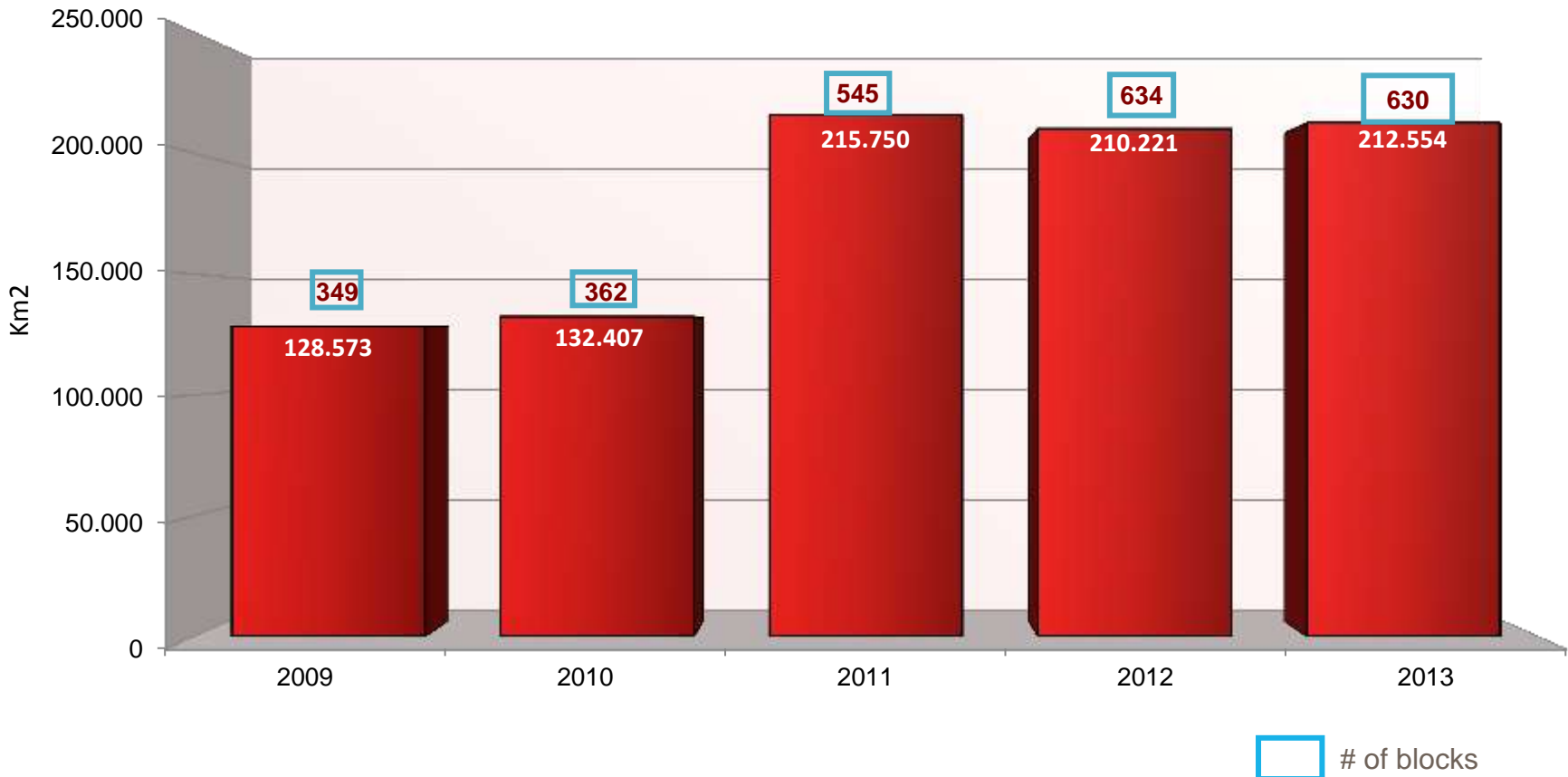


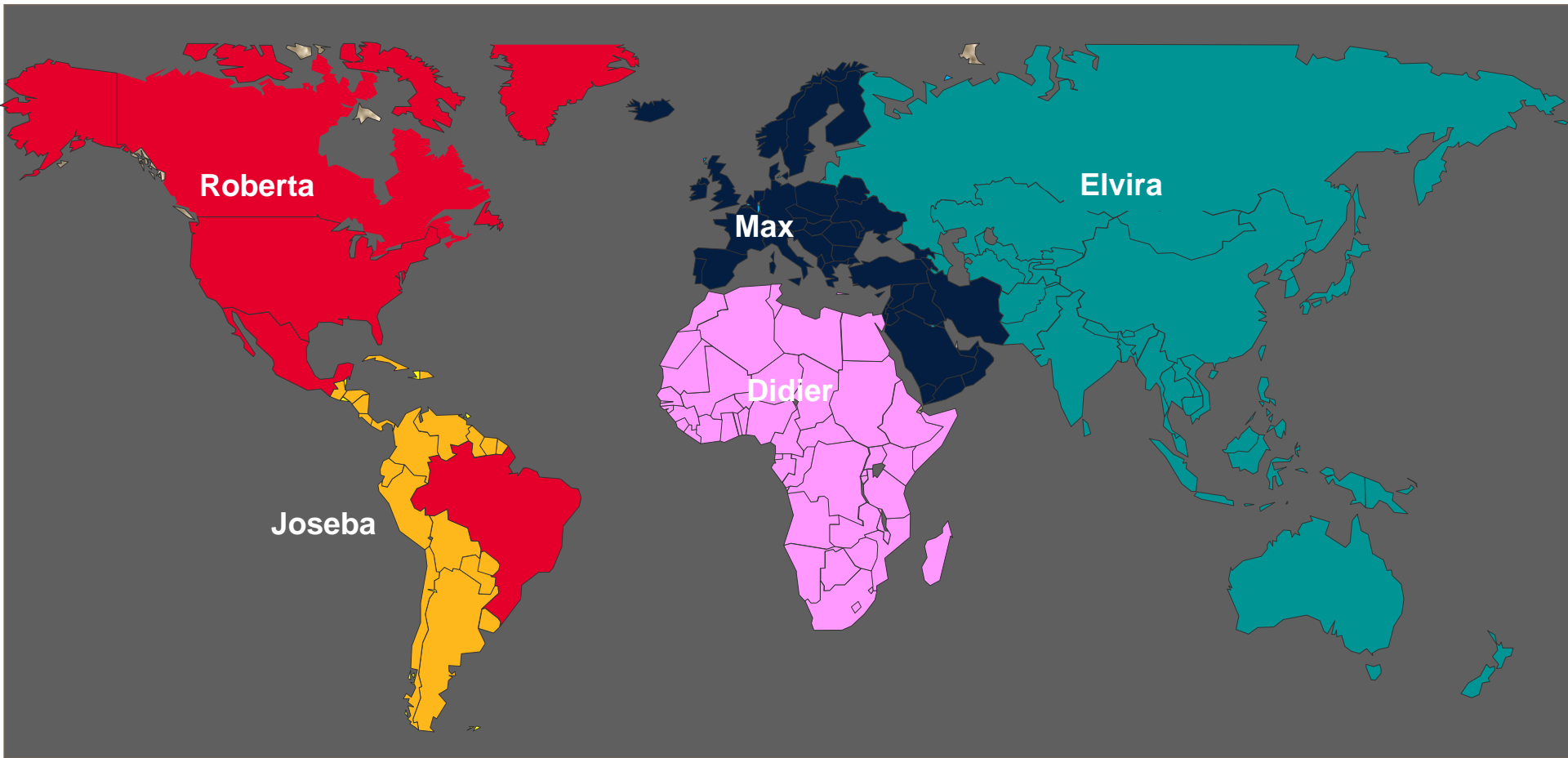
Countries with drilling activity during 2014



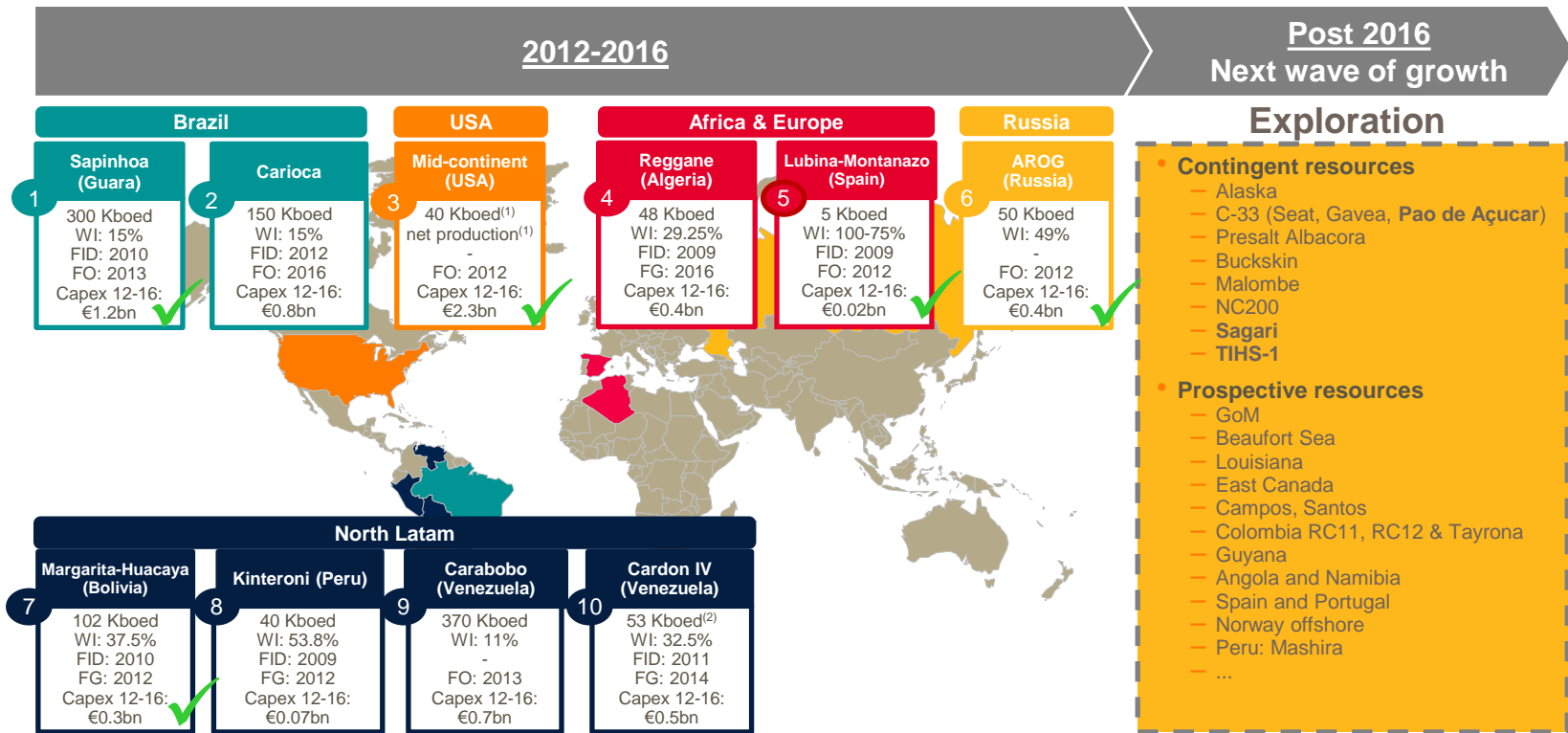
Repsol Exploration Net Acreage Evolution

DGU Net acreage evolution





Repsol Key Projects



Note: all production figures indicate gross plateau production; WI = Repsol Working Interest; FID = Final Investment Decision; FO: First Oil; FG: First Gas; Net capex 2012-2016, excluding G&G and G&A.
 1. Average Repsol net production post royalties 2. Phase I gross production

✓ Producing as of December 31st 2013

Europe Middle East

Max Torres

2

Europe



Europe: Growth in high potential plays while looking for contracts value in:

- 1) Norway
- 2) Romania
- 3) Offshore Bulgaria
- 4) Spain
- 5) Portugal

Europe Exploration Growth Themes and Update

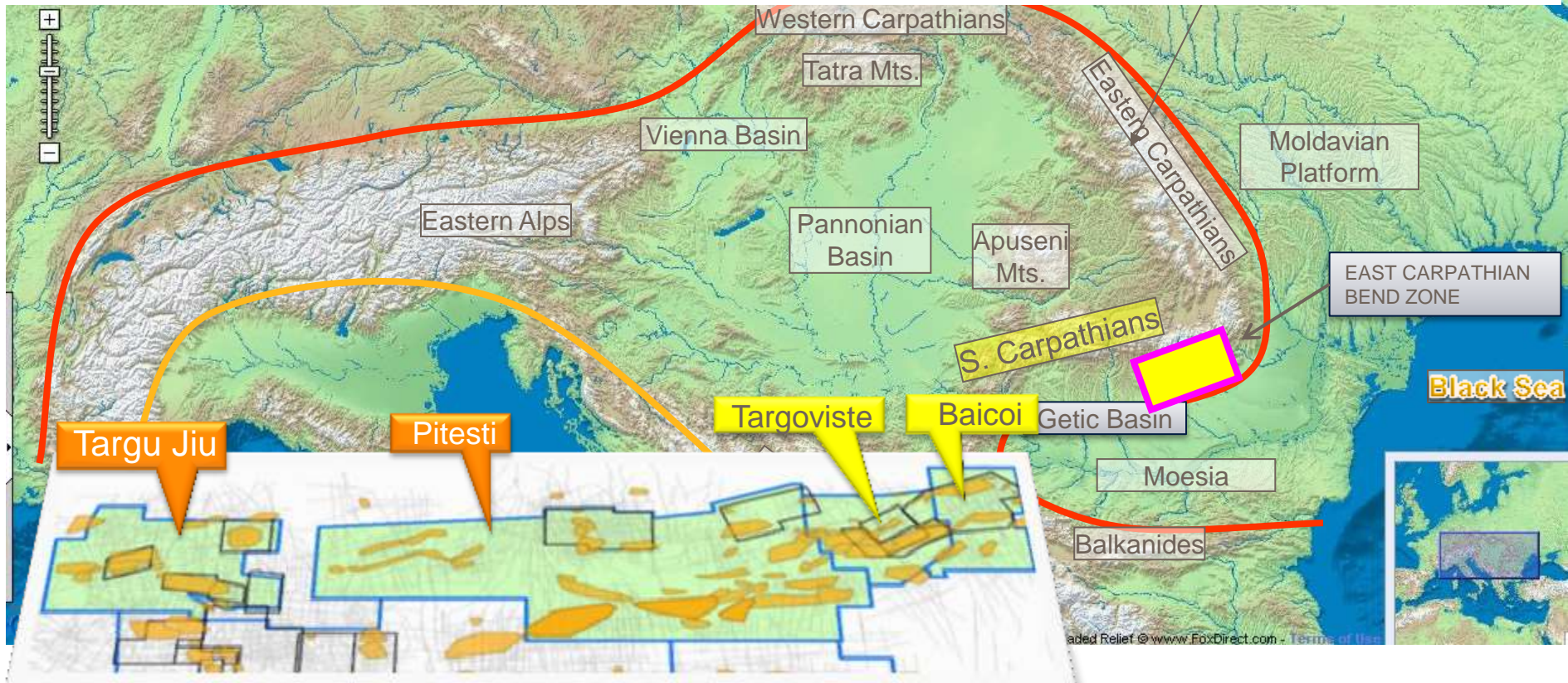
- 2013 Drilled Portfolio based on high risk / impact prospects with poor results in Norway and Ireland: Dunquin, Darwin, Bonna. Migration and charge issues.

- 2013 Taken positions in high potential blocks with favourable fiscal and contractual regimes:
 1. Non Operated 49% Onshore Romania Petrom JV
 2. Non Operated 30% Bulgaria Offshore Deepwater Han Asparuh
 3. Operated and non operated NCS Blocks (PL692, PL628, PL704, PL705, PL711, PL721). Additionally, pending 3 APA 2013 awards.

- Europe growth rationale and plays :
 - a) *Onshore producing thrust belt exploration of Deep Plays in the Southern Carpathian with seasoned operator as OMV Petrom*
 - b) *Upfront exploration cost recovery in high potential plays in NCS (Barents and Norwegian Seas)*
 - c) *Plays in proven source rocks systems and frontier as Tertiary Mediterranean, Adriatic and Black Sea.*

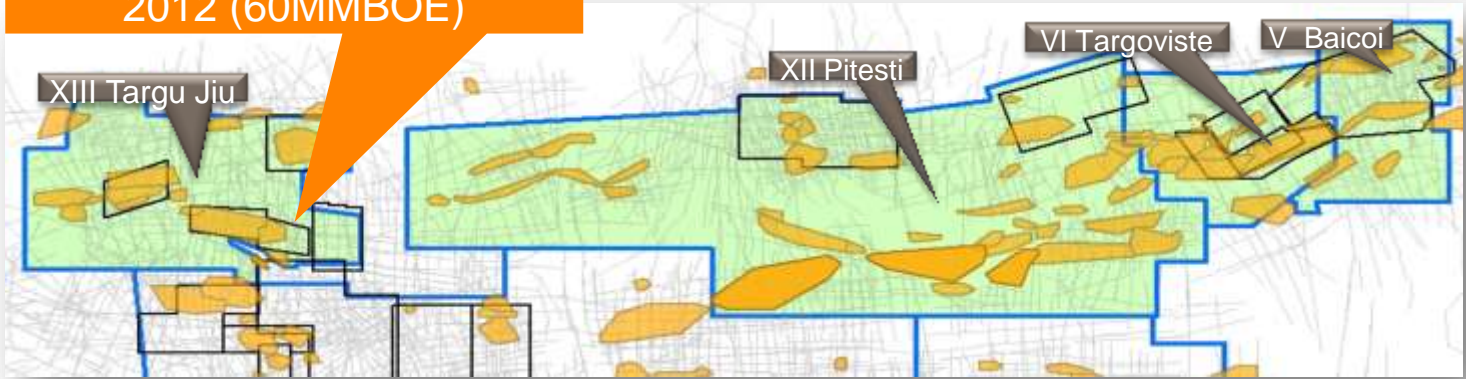
A New Region: East Europe - Romania

- Signed four blocks located in the prolific and producing South and East Carpathian thrust belt in a 51% OMV Petrom (Operator) 49% Repsol. Commitment 3 wells 2014.
- Exploring proven deep targets (below 2500 m) using new 3D seismic programs.
- Prospects consists of a stack of imbricates of Oligocene- L. Miocene age rocks.



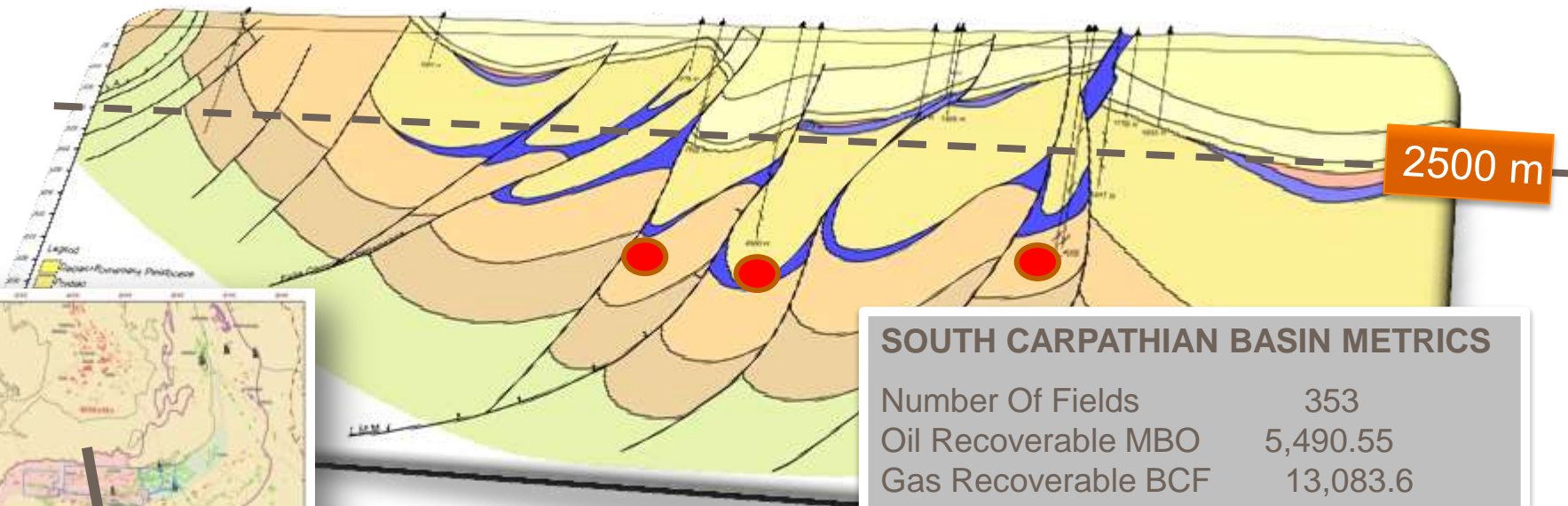
Romania Petrom Repsol JV

OMV Petrom Totea Discovery
2012 (60MMBOE)



● Deep Targets

← Producing Fields →



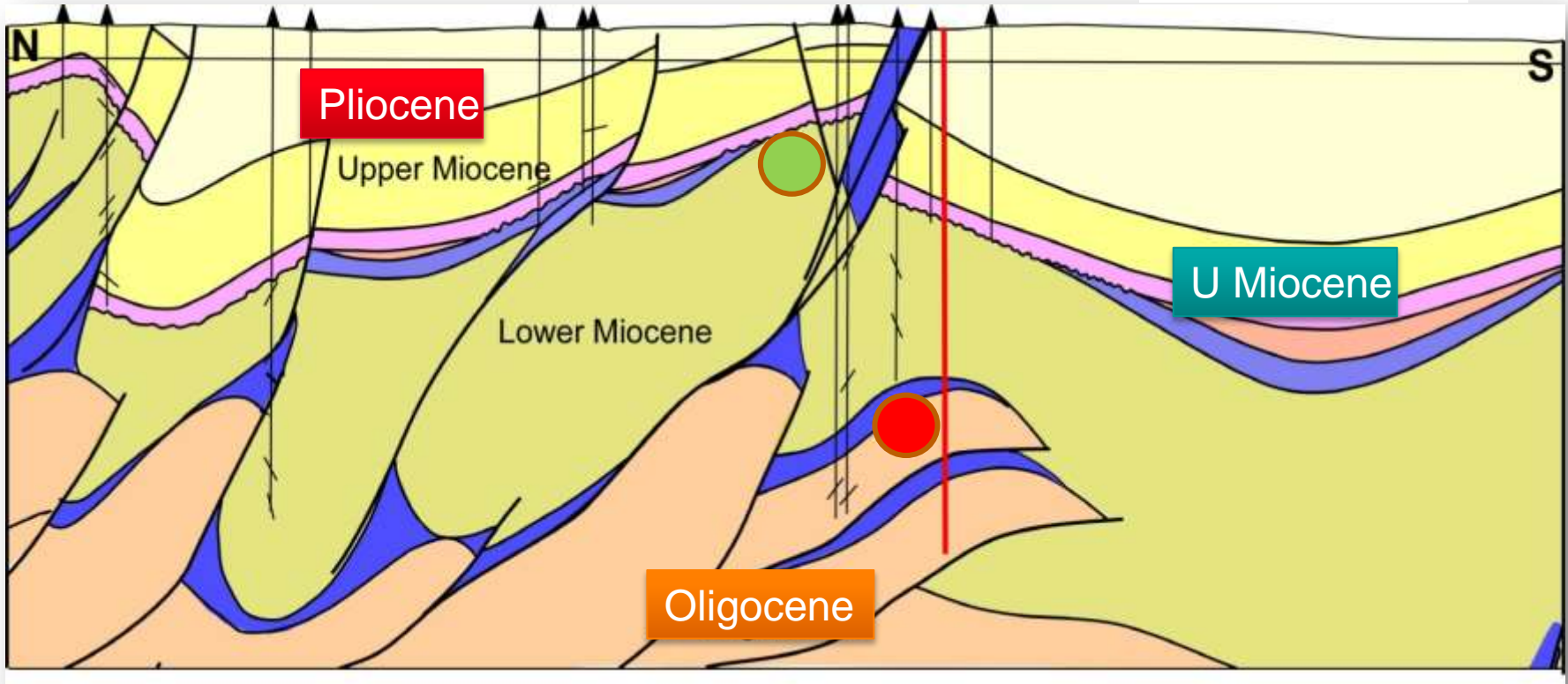
SOUTH CARPATHIAN BASIN METRICS

Number Of Fields	353
Oil Recoverable MBO	5,490.55
Gas Recoverable BCF	13,083.6
Recoverable MBOE	7991.6



Romania Petrom Repsol JV

-  Shallow Production
-  Deep Targets



Romania Theme:

Exploring deep horizons in mature onshore producing areas with attractive contracts terms using new 3D seismic programs.

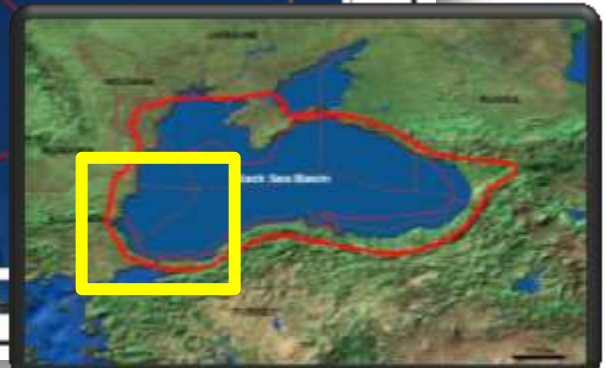
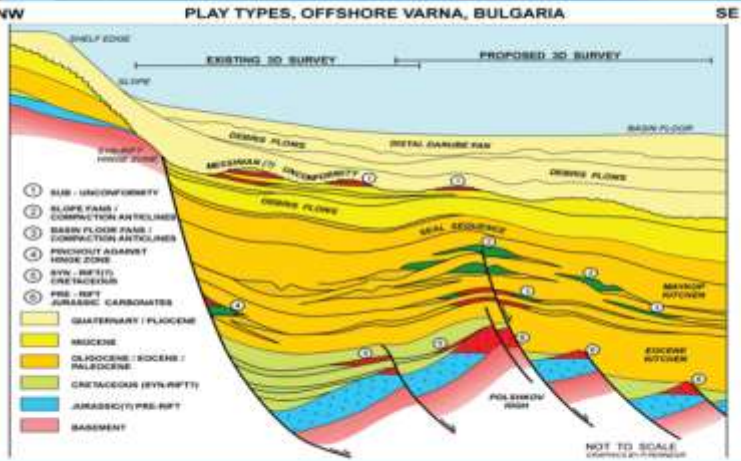
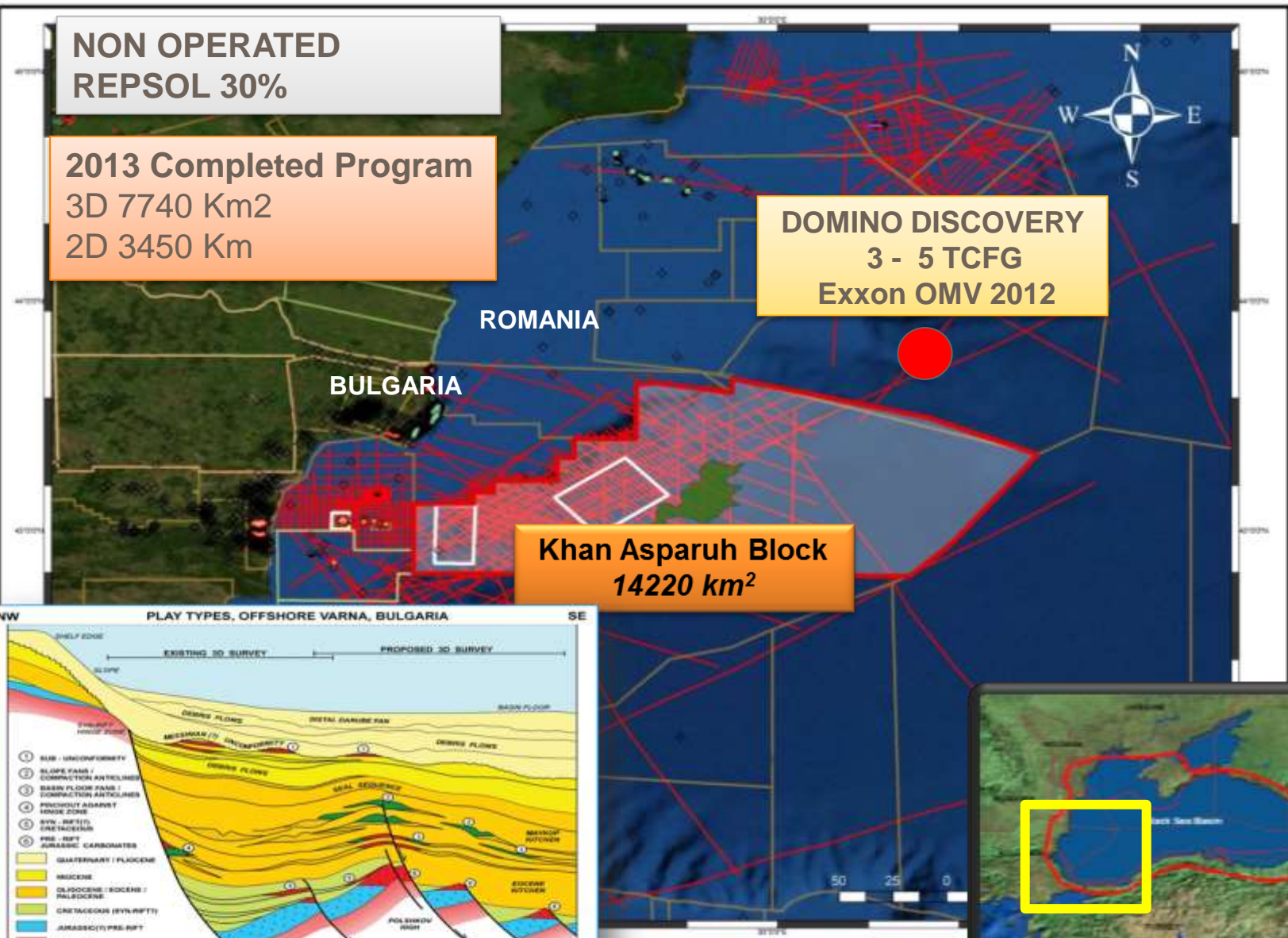
Bulgaria: Han Asparuh Block

NON OPERATED
REPSOL 30%

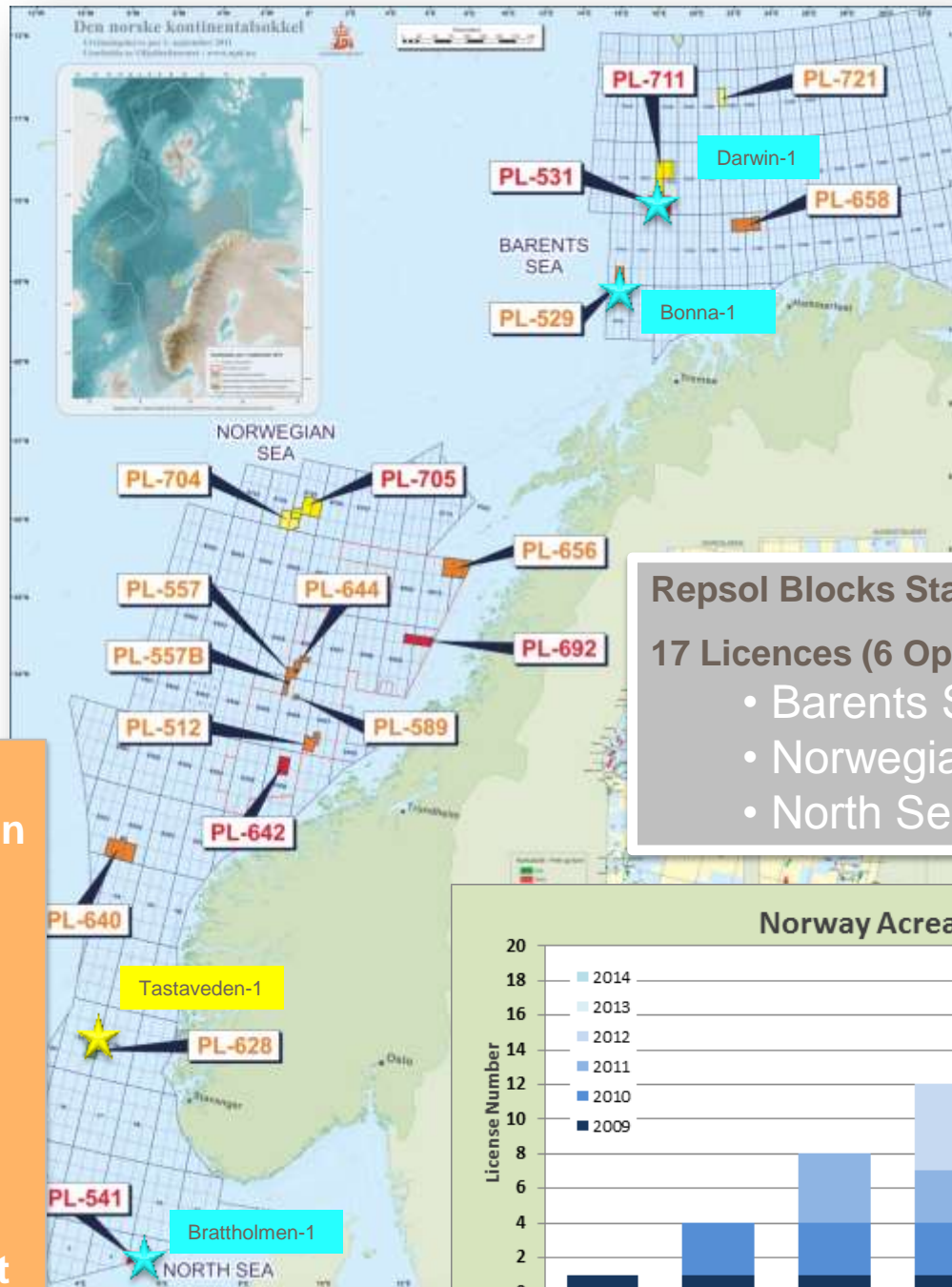
2013 Completed Program
3D 7740 Km²
2D 3450 Km

DOMINO DISCOVERY
3 - 5 TCFG
Exxon OMV 2012

Khan Asparuh Block
14220 km²



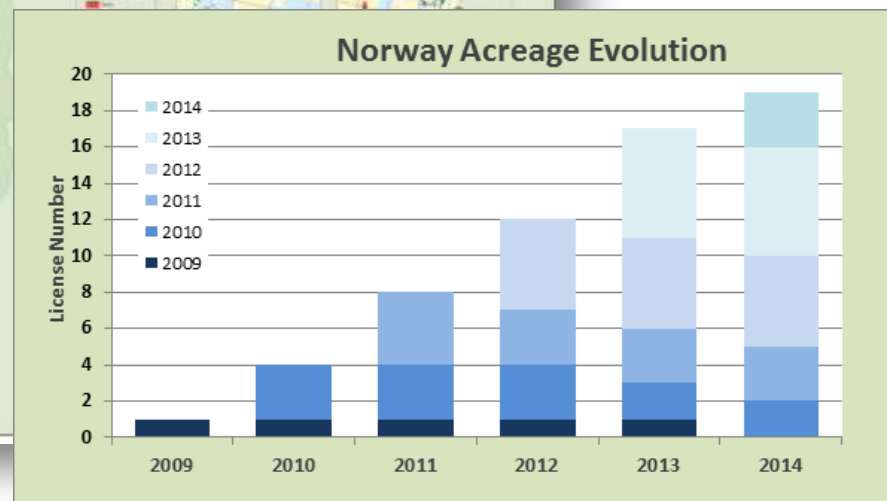
Repsol Norge Active Licenses



Repsol Blocks Status 2014:
17 Licences (6 Operated)

- Barents Sea: 5 (2)
- Norwegian Sea: 10 (3)
- North Sea: 2(1)

- Key Drivers**
- Licenses concentrated in Norwegian and Barents Seas seeking higher potential.
 - Exploring for new frontier plays.
 - Operated remote wells.
 - Significant growth position in 4 years
 - Upfront exploration cost recovery contract.



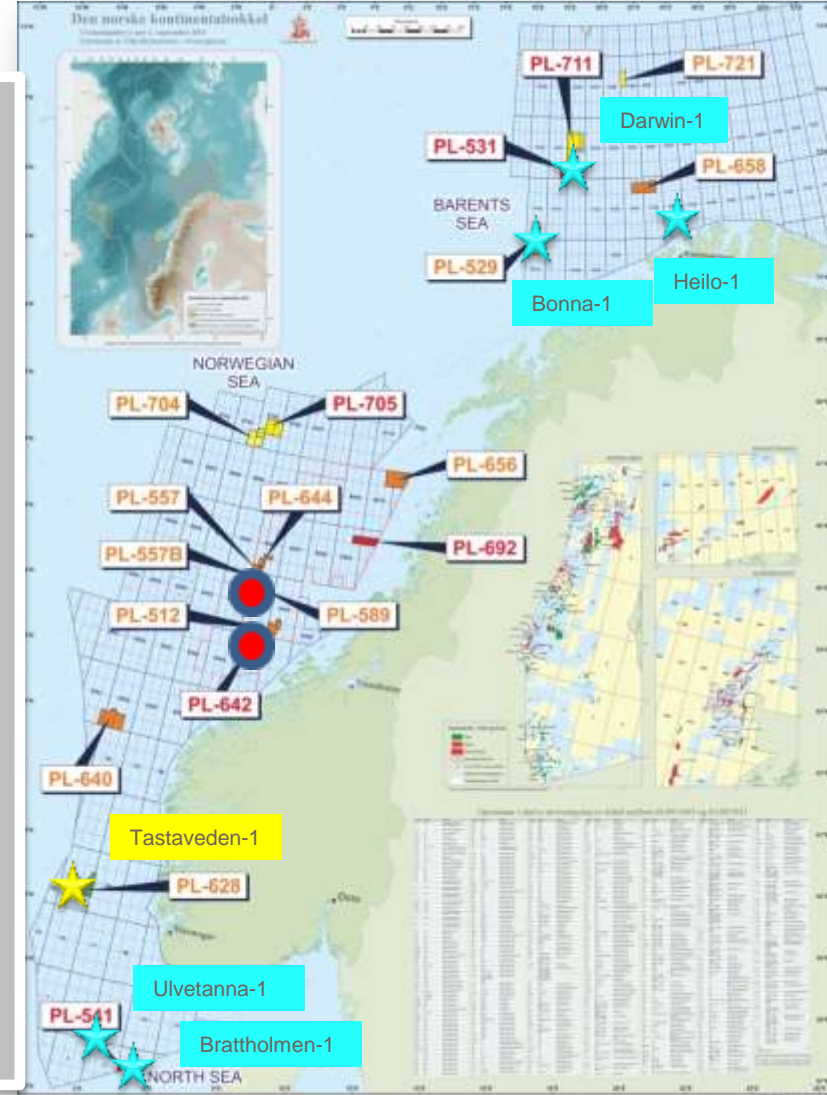
Repsol Norge 2013 Results and 2014 Outlook

- 2013 Drilling: 3 wells drilled, 2 operated, all negative.

a) On proven plays: Brattholmen-1
Main cause of failure was lack of migration.

b) On new Plays: Darwin-1 and Bonna-1, additionally lack of reservoir, failed to open the Lower Tertiary/Upper Cretaceous play in Southwestern Barents Sea.

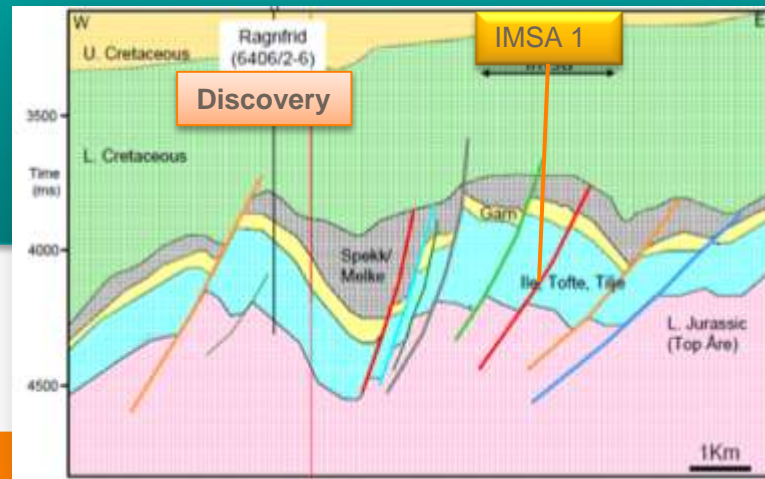
- 2014 – 2015 Commitment wells: Tastaveden (Drilling, spud Jan. 2014), Imsa-1 (July 2014), Hagar-1 (2015, operated).



Repsol Norge 2014 Wells

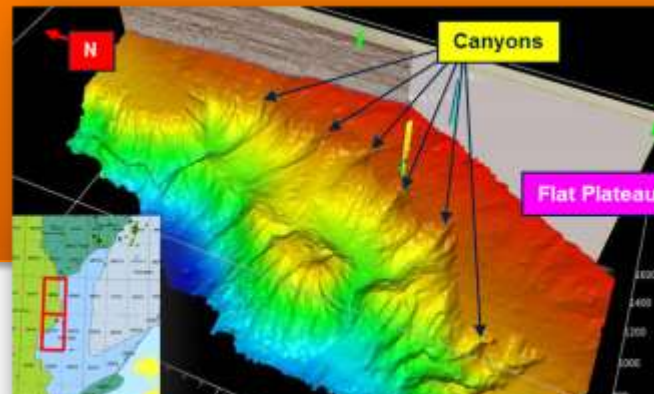
IMSA 1: PL589 License (Non Operated)

- Structural Trap: Tilted fault block with middle Jurassic stacked reservoir sands
- Oil and gas objective. On trend with discoveries (Ragnfrid)
- Water Depth: 261m
- Target Depth: 4520m
- TD: 5240m
- Spud 2Q 2014

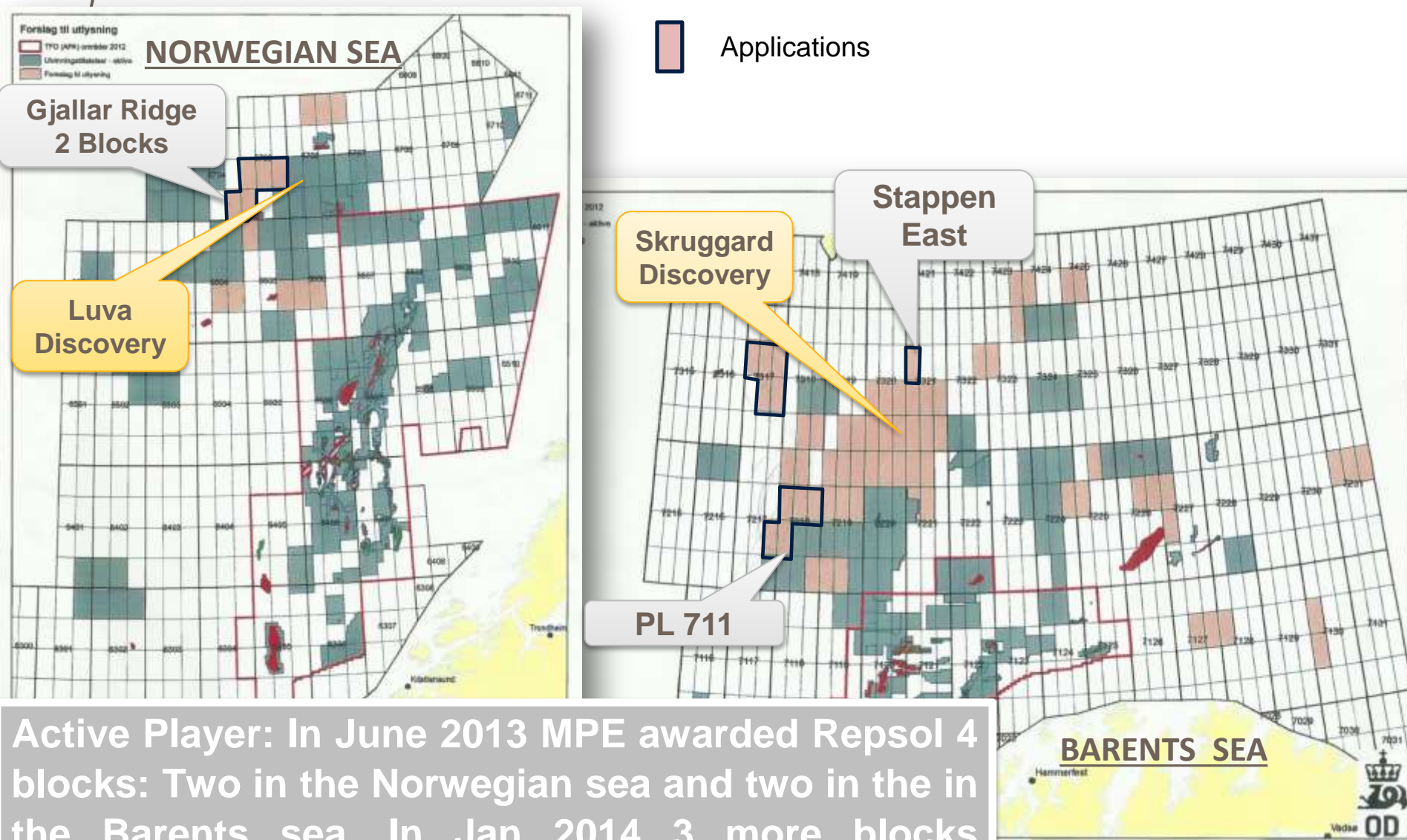


HAGAR 1 PL642 (Operated)

- Combination Trap: 3 way structural dip closure of Upper Jurassic fault scarp apron deposits
- Oil and gas target.
- Water Depth: 250m
- Target Depth: 3200m
- TD: 3600m
- Spud 1stQ 2015



NCS Bid Round 22 Success

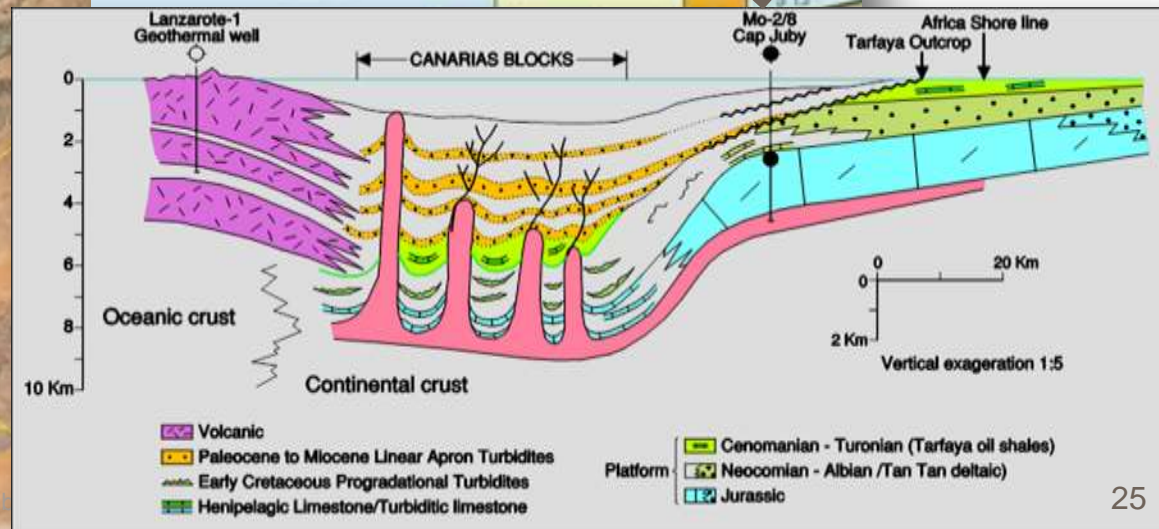
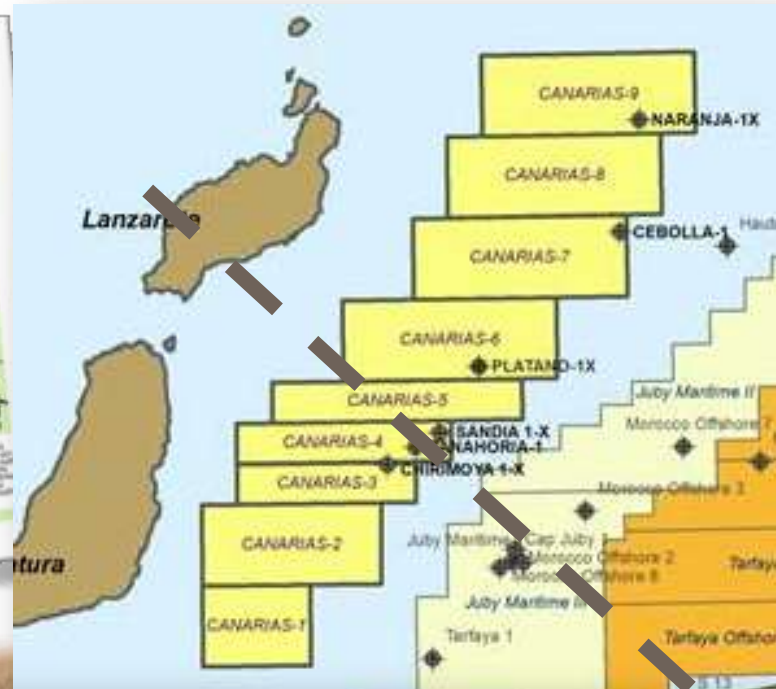
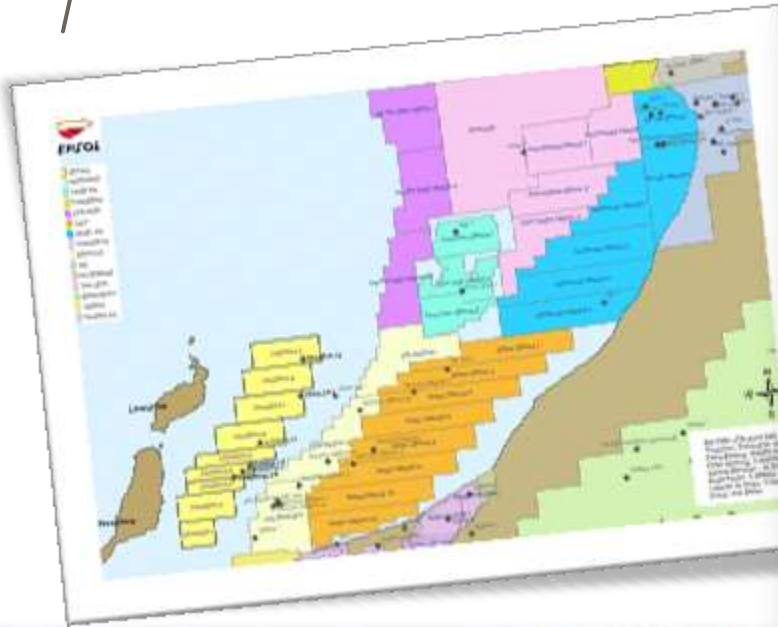


Active Player: In June 2013 MPE awarded Repsol 4 blocks: Two in the Norwegian sea and two in the in the Barents sea. In Jan 2014 3 more blocks awarded (Not in map)

Repsol Iberian Exploration Activities Position in Portugal and Spain



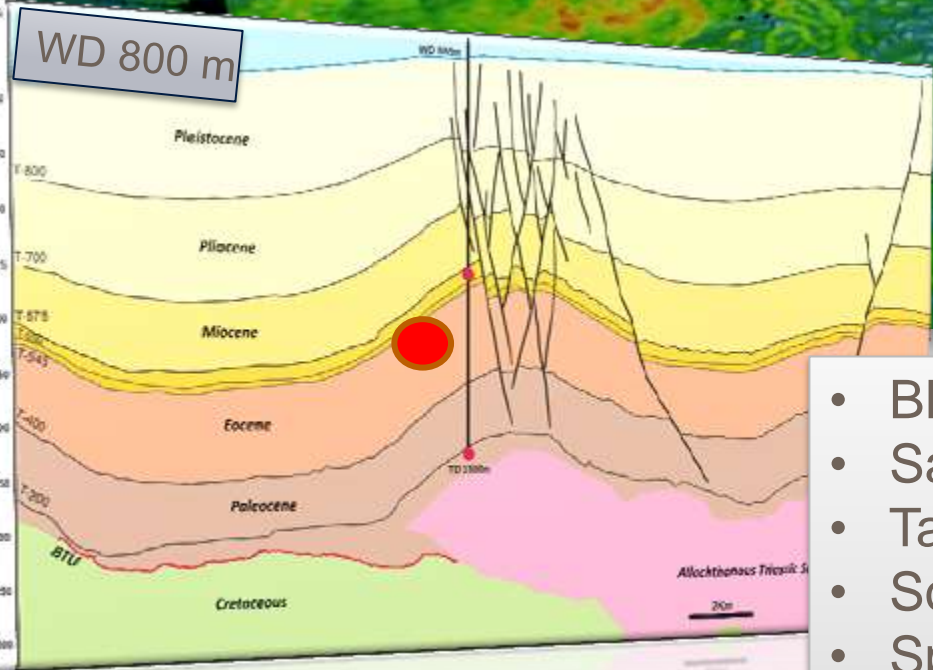
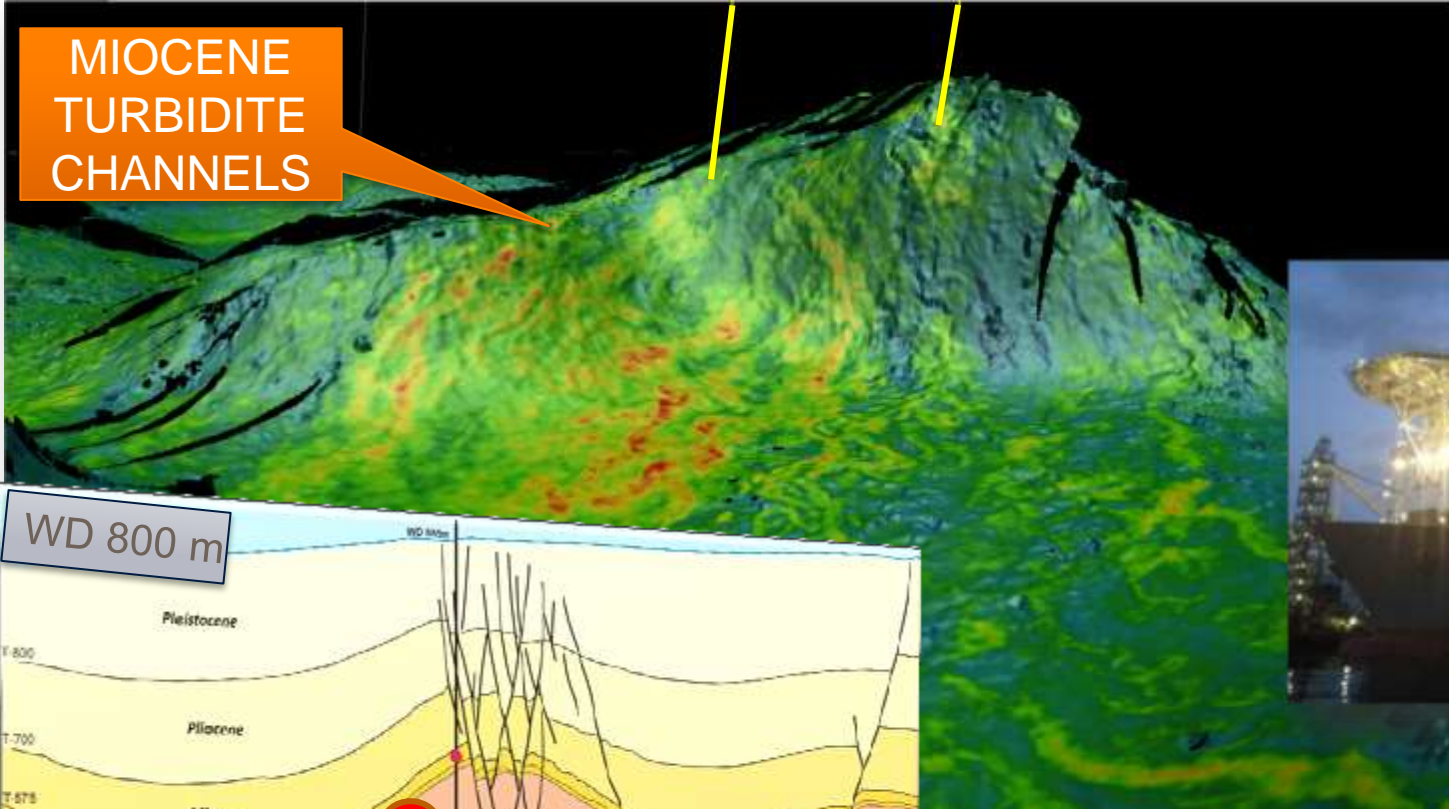
Canary Islands: A new play opener



Canary Islands Blocks Type Prospect

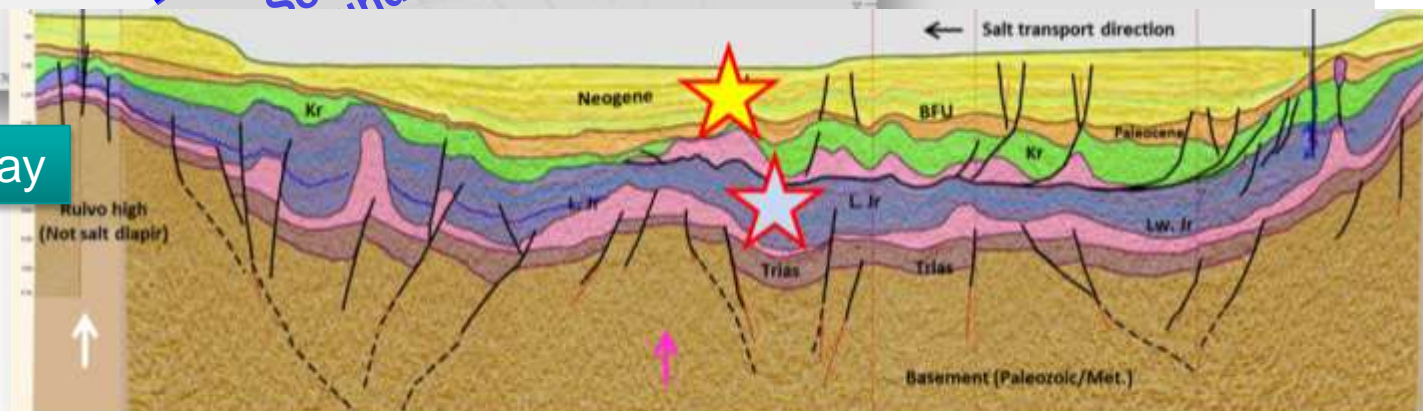
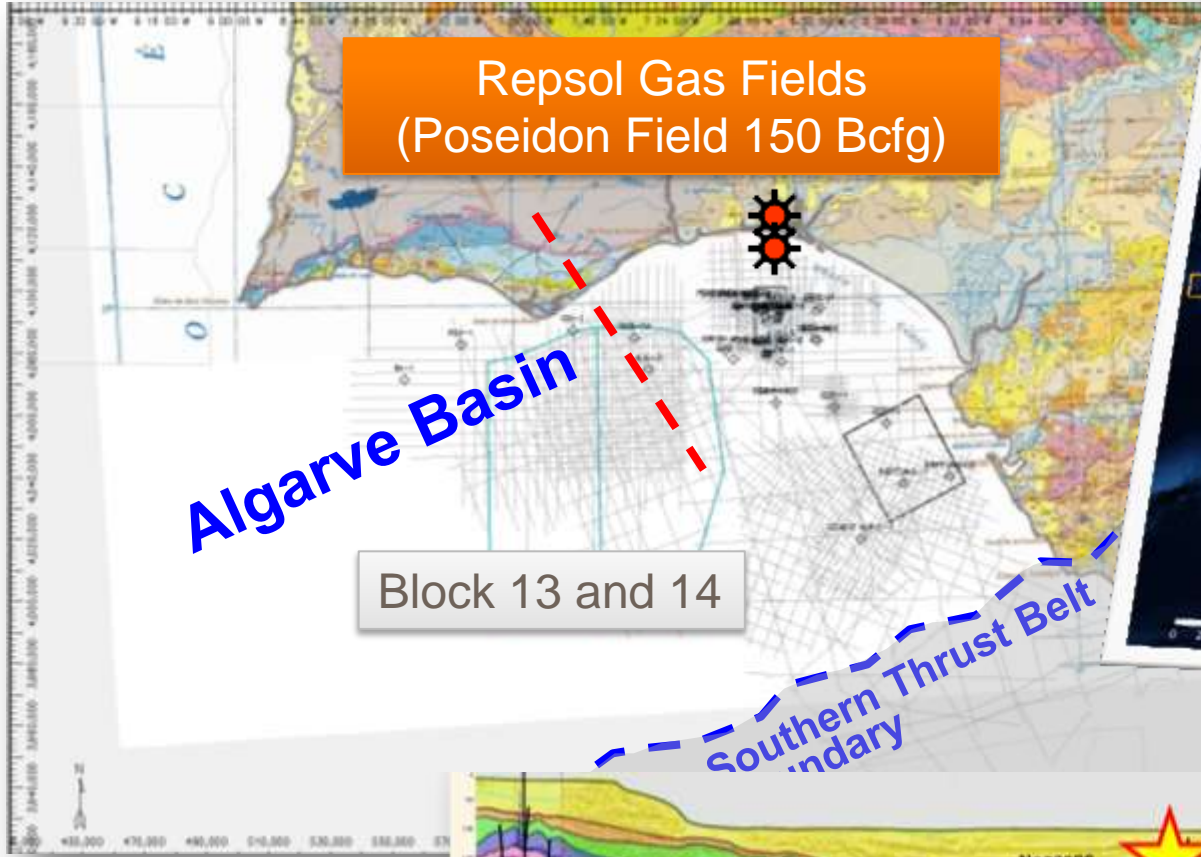
MIOCENE
TURBIDITE
CHANNELS

Rowan
Renaissance
Drillship



- BBOE Multi prospect Tertiary Play
- Salt cored 4 way dip closures
- Target Reservoirs: Miocene Turbidites
- Source: Turonian Shales
- Spud 2Q 2014. Awaiting Permits.

Portugal Algarve Tertiary Gas Play



Biogenic Gas Play



Sub Salt Play

Algarve Tertiary Biogenic Gas Play

Cadelinha Prospect

MIOCENE
TURBIDITE
CHANNELS

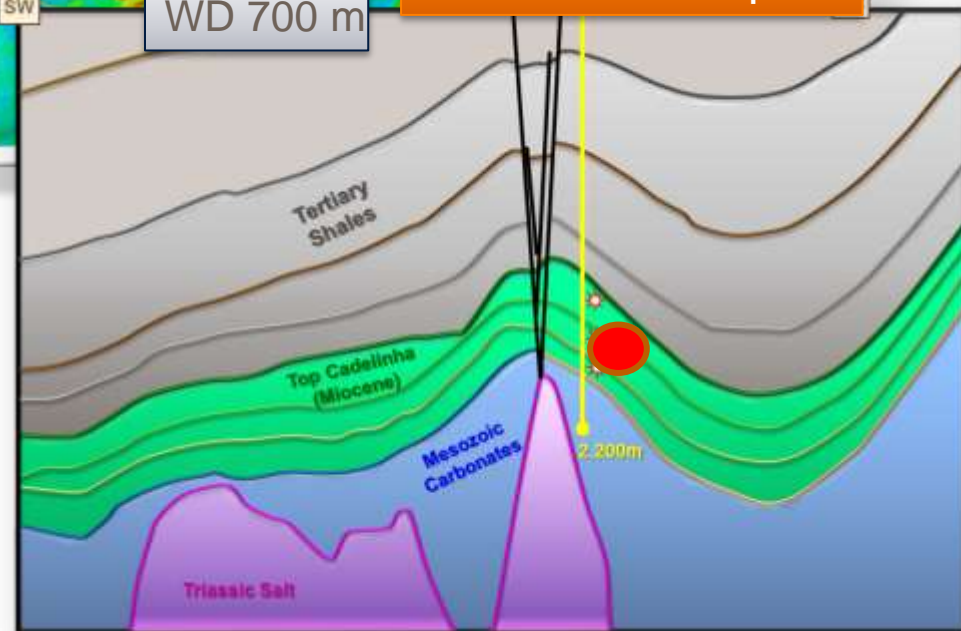
SW

WD 700 m

Cadelinha Prospect

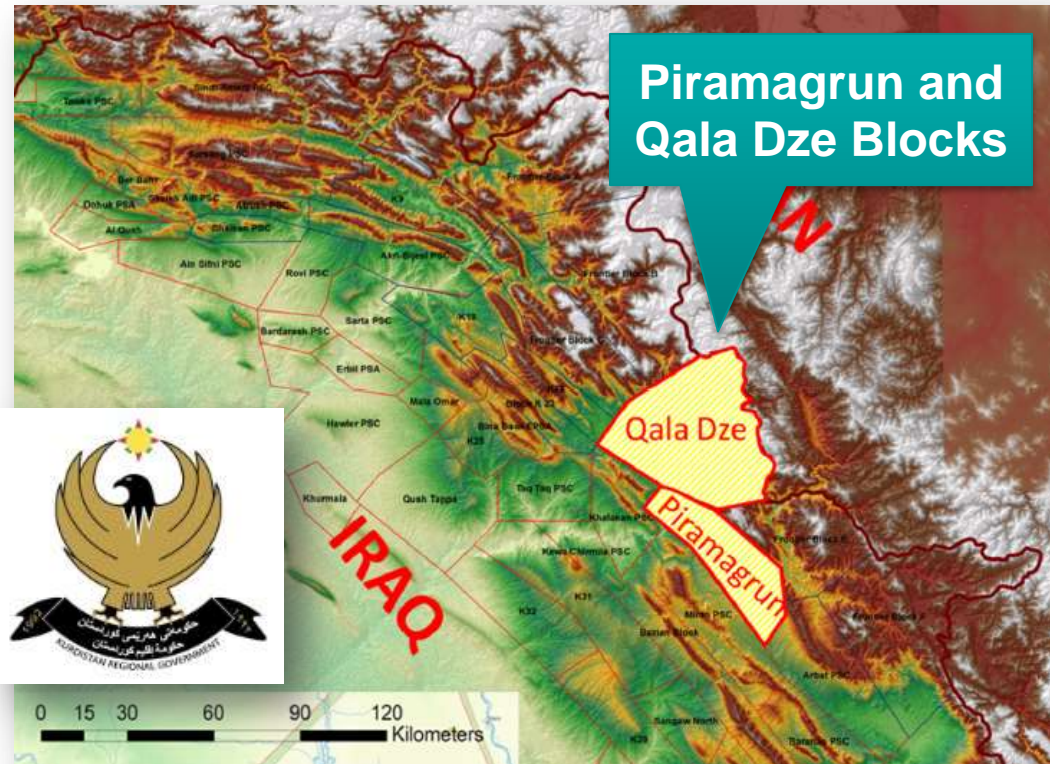
FABO

- Biogenic Gas Play
- Analogy with Poseidon Field
- Target Miocene Turbidites
- Source: Tertiary Shales
- Spud 4Q 2014.

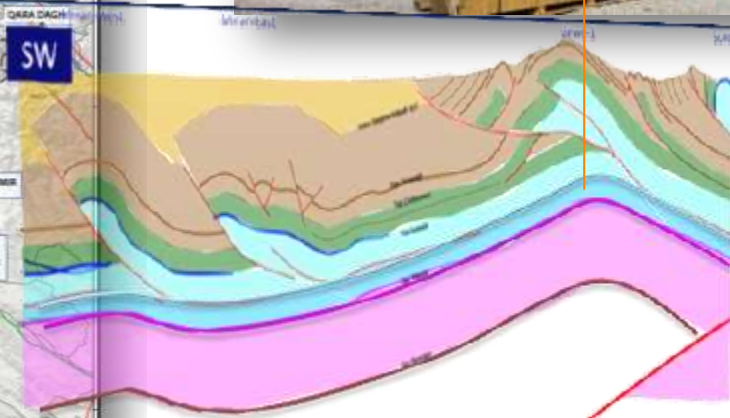
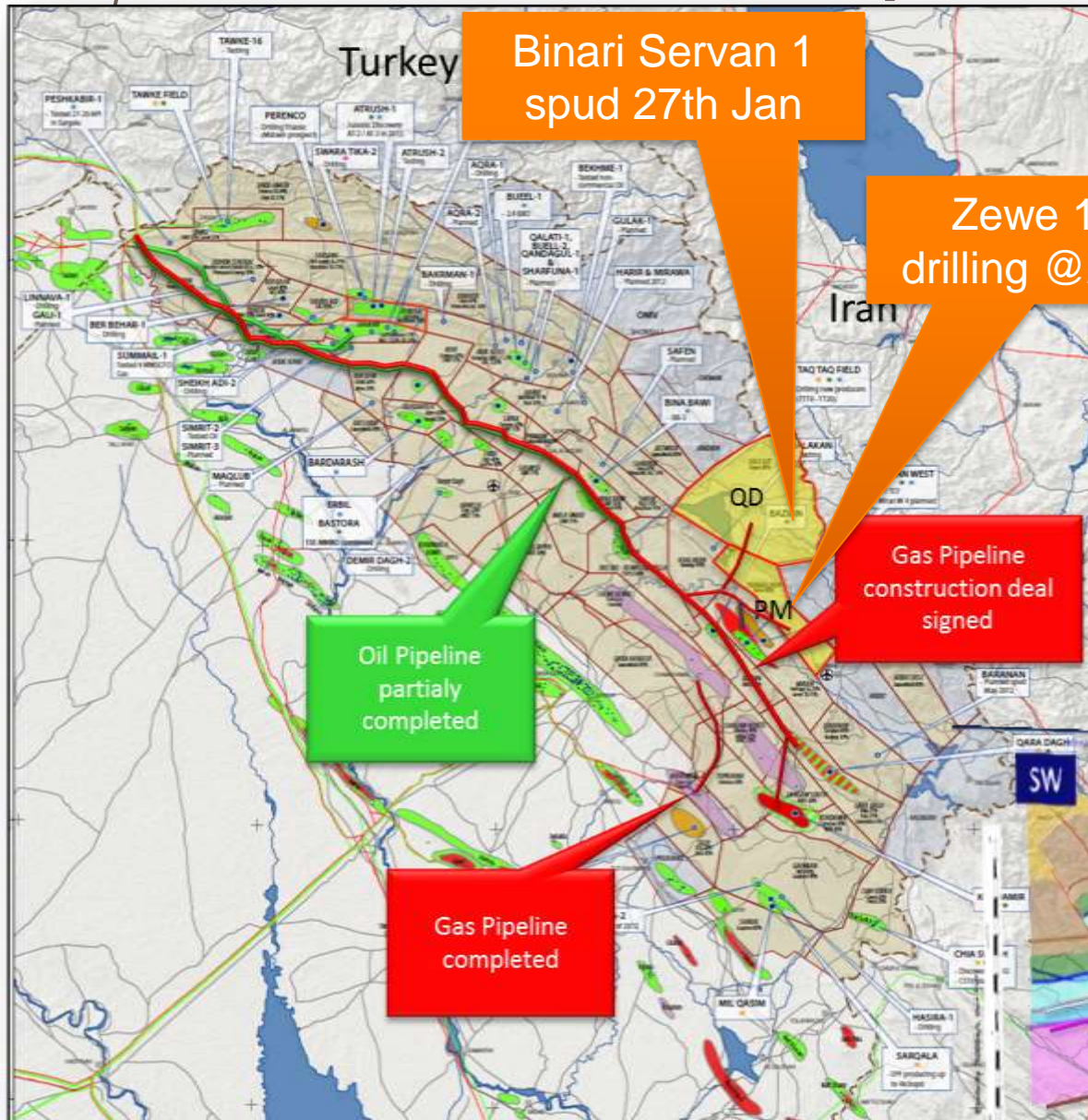


Middle East Exploration: Kurdistan

- Plays and growth rationale:
 - Thrust belt exploration of Kurdistan Zagros Fold Belt in multibillion barrels play.
- Drilling portfolio high impact prospects in PIRAMAGRUN and QALA DZE concessions (Wi: 40%). 2013: Divested 40% to Maersk.
- Seeking growth in high potential blocks in the region

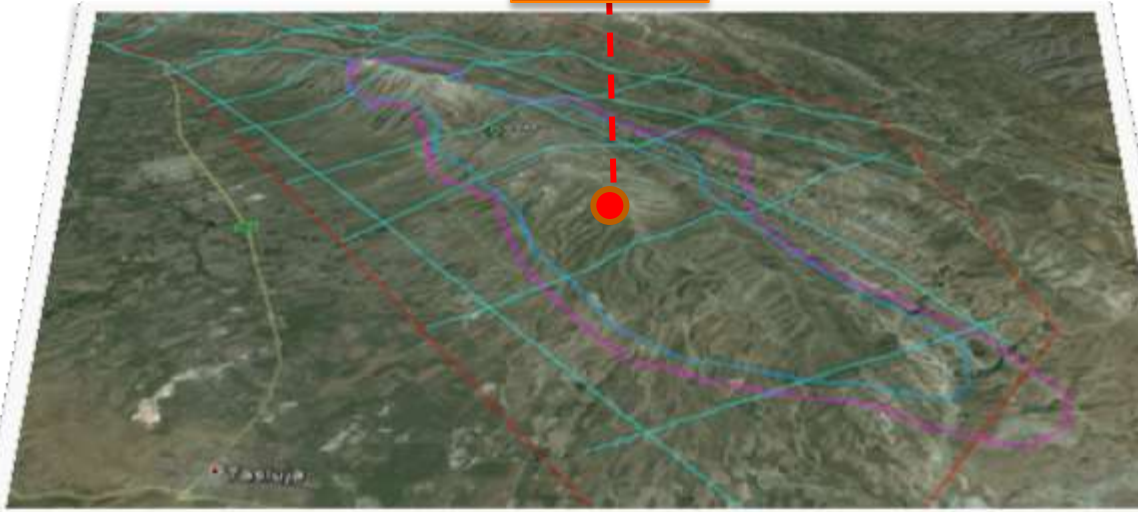


Kurdistan Fields and Pipeline



Piramagrun Block: Zewe Prospect

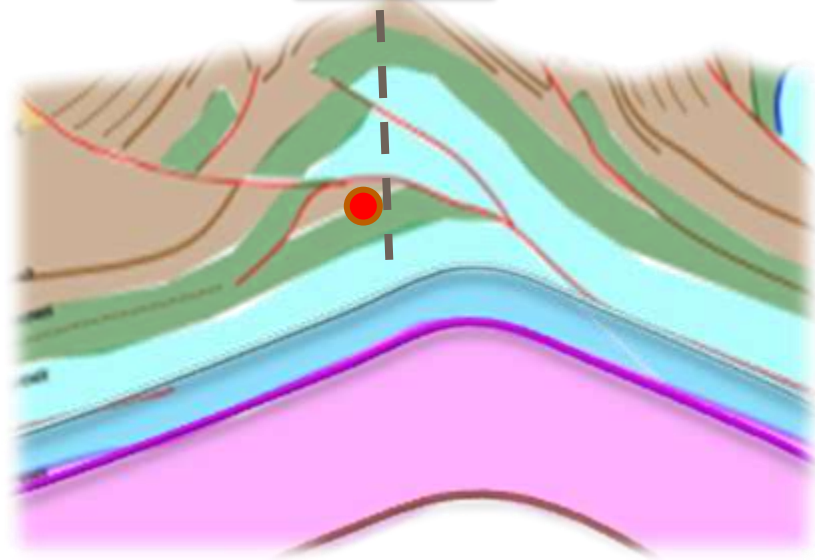
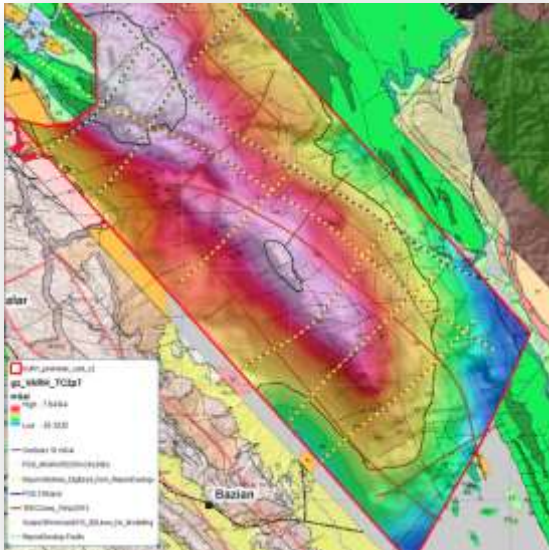
Zewe 1



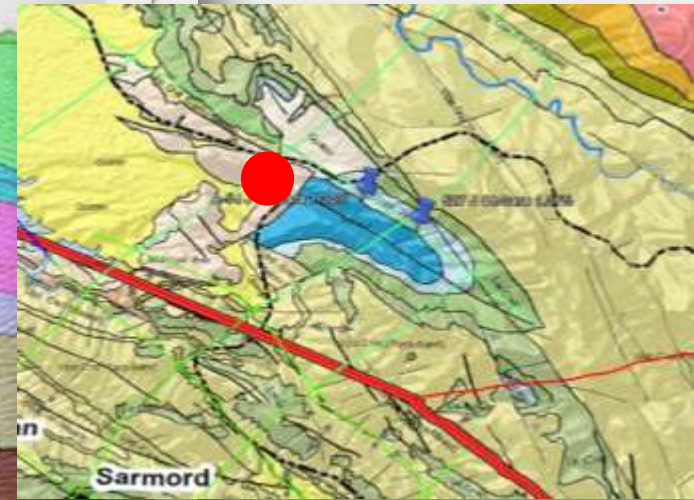
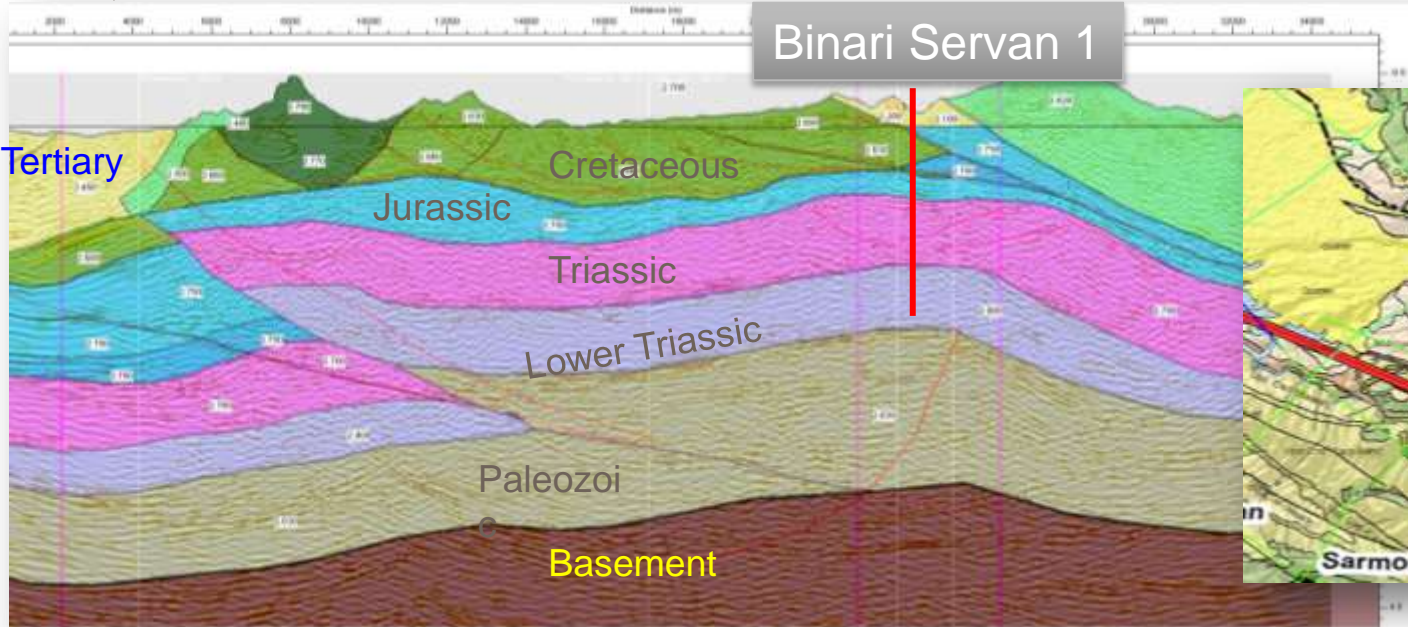
Zewe 1 Well

- Trend and adjacent with BBOE discoveries
- 2 BBOE in place resources
- Jurassic and Triassic Objectives
- Complex large 4 way dip closure
- 200 sq km closure
- Near new pipeline to Turkey
- Drilling at depth 2300 m TVD

Zewe 1



Qala Dze Block: Binari Servan Prospect



Binari Servan 1 Well

- Trend and adjacent with BBOE discoveries
- 3.5 BBOE in place resources
- Jurassic and Triassic Objectives
- Complex large 4 way dip closure
- 320 sq km closure
- Near new pipeline to Turkey
- Spud date 28th Jan 2014



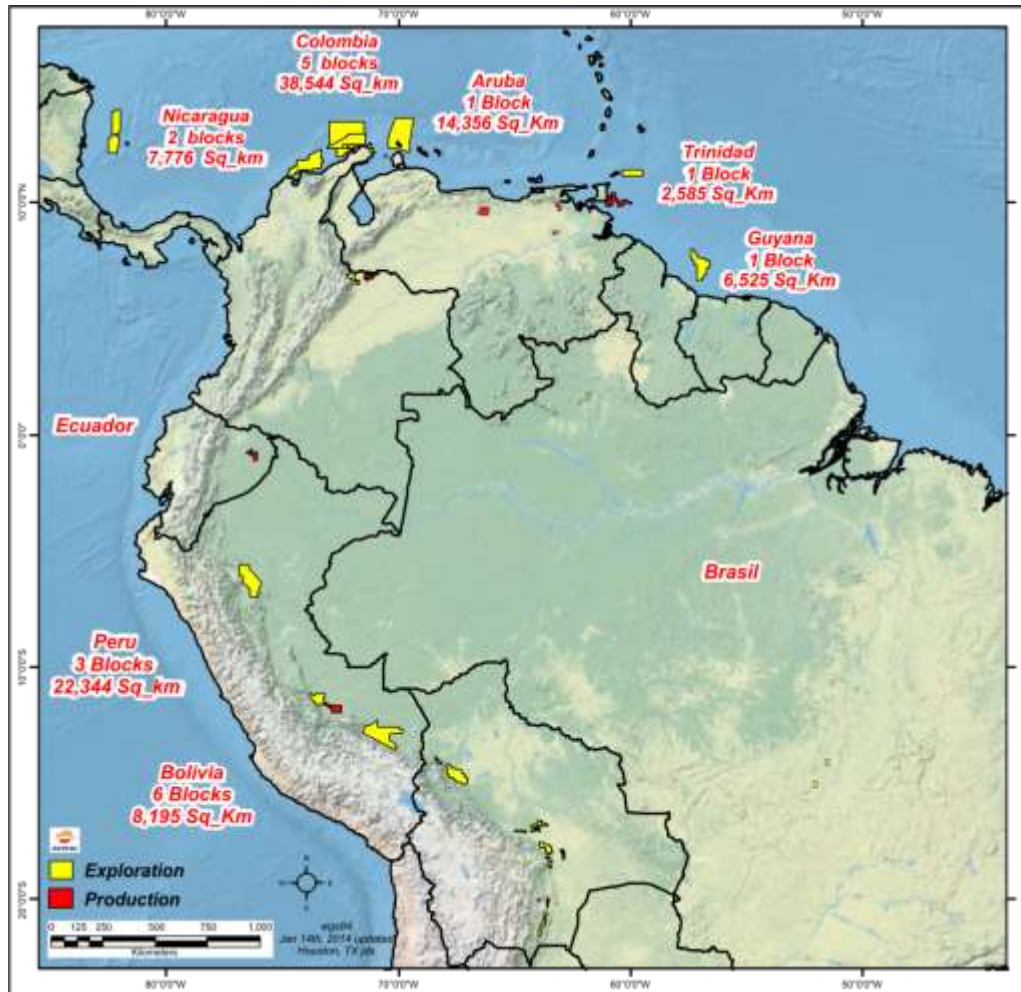
Latin America Region

José Ángel Murillas

3

Latin America Region

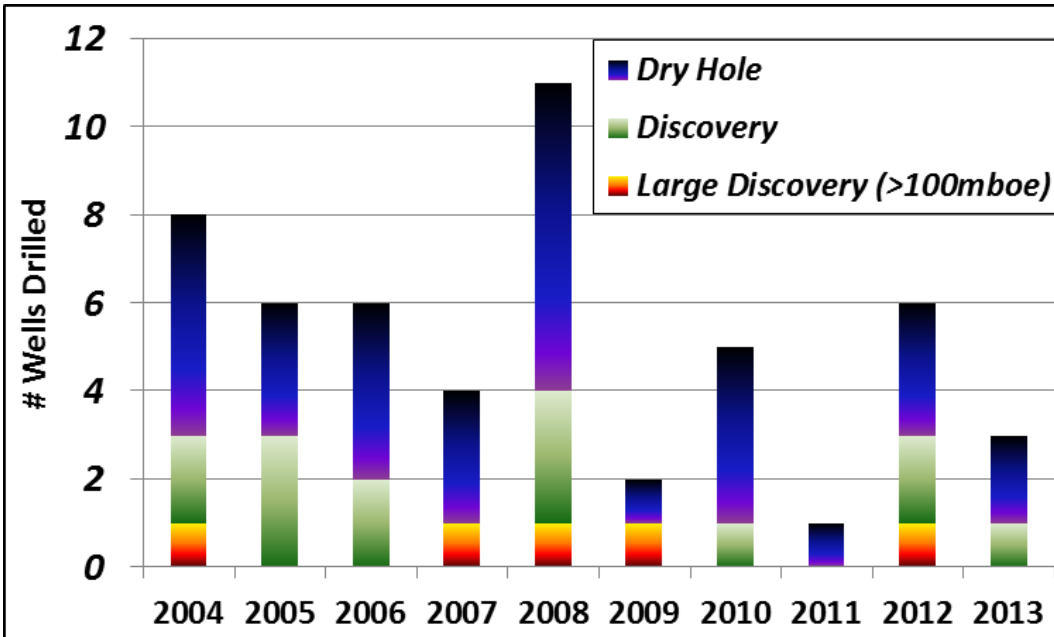
Repsol Acreage Position



- Repsol's Latin America Regional Exploration Unit covers 19 exploration blocks.
- In terms of acreage, Repsol is the leading private operator in the region with access to ~120K km²
- Repsol operated portfolio is diverse, expanding from Caribbean Deep Water to Andean foothills settings.
- In addition to the exploratory acreage, Repsol participates 40 production blocks.
- Repsol acreage in the region expands through 9 countries.

Exploration: Latin America Region

Last Decade Wells and Discoveries(1)



- 52 wells were drilled in the last decade.
- 19 Discoveries (37%)
- 5 Large (>100MBOE) Discoveries (10%)
- 1.4 BBOE net resources addition.
- Leading private company in terms of volumes added in the region.



Chachalaca (TT/04)



Huacaya (BOL/07)



Kinteroni (PER/08)



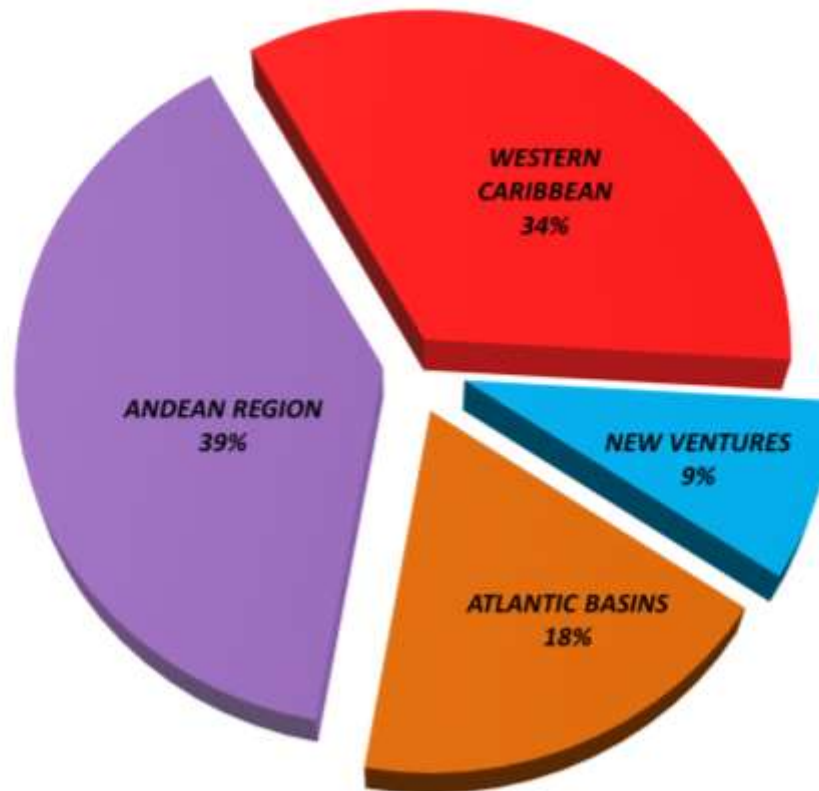
Perla (VEN/09)



Sagari (PER/12)

Latin America Region Exploration Ventures

**% LATIN AMERICA EXPLORATION EXPENDITURES ⁽¹⁾
REPSOL 2012-2016 STRATEGIC PLAN**

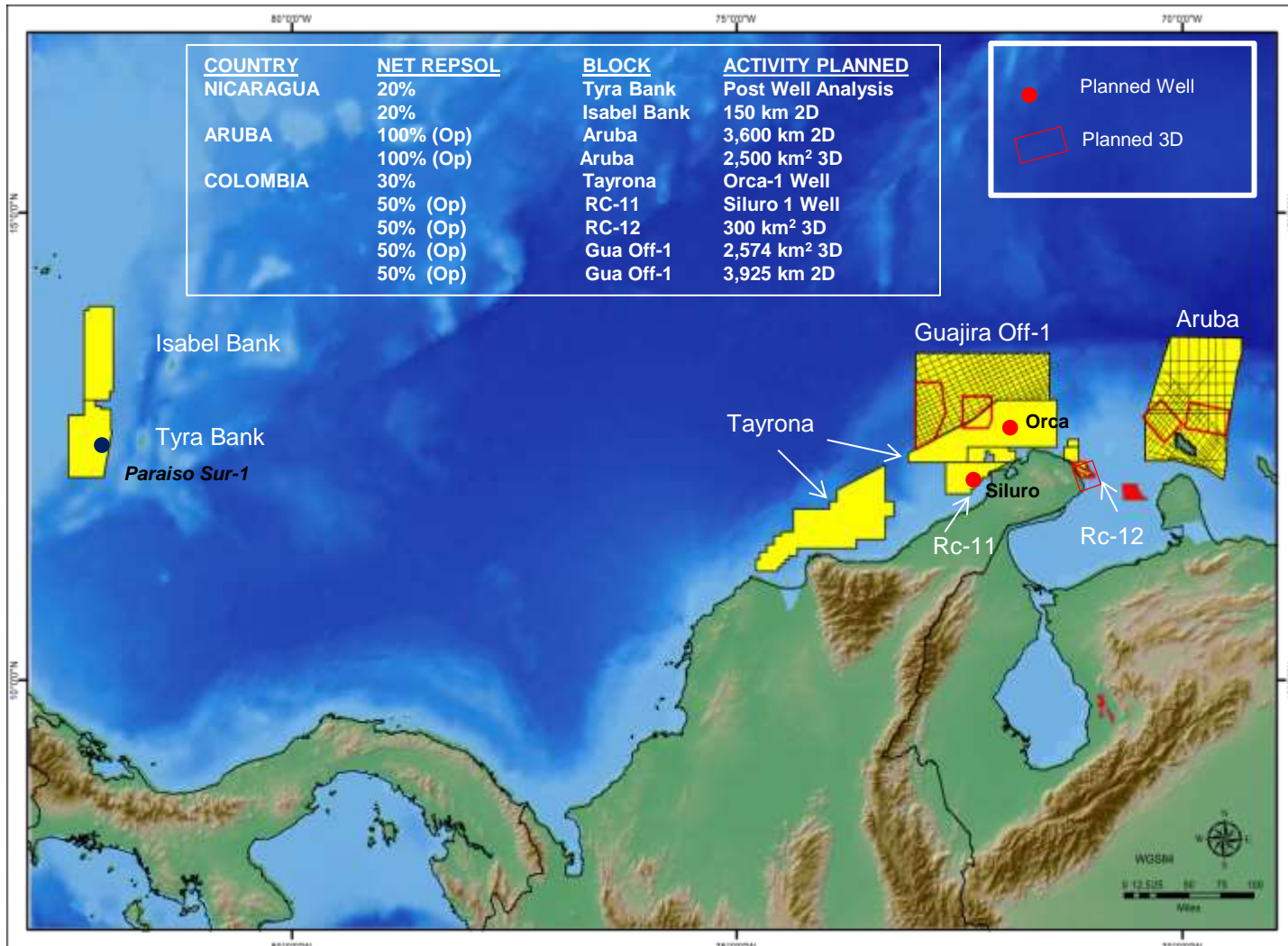


⁽¹⁾Excluding Brazil

Western Caribbean Region

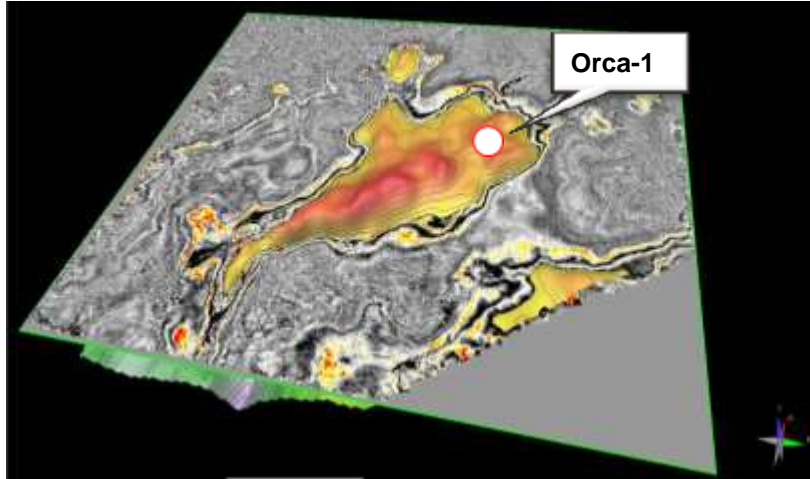


Western Caribbean Acreage and planned activities



Western Caribbean

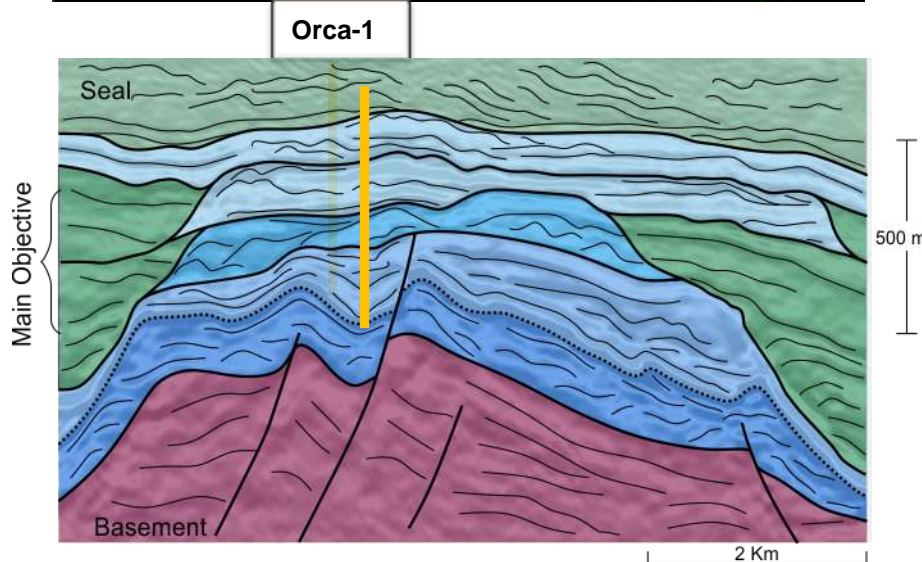
Colombia - Tayrona Block - Orca Well







REP30%, PBR(op.)40%, ECP30%



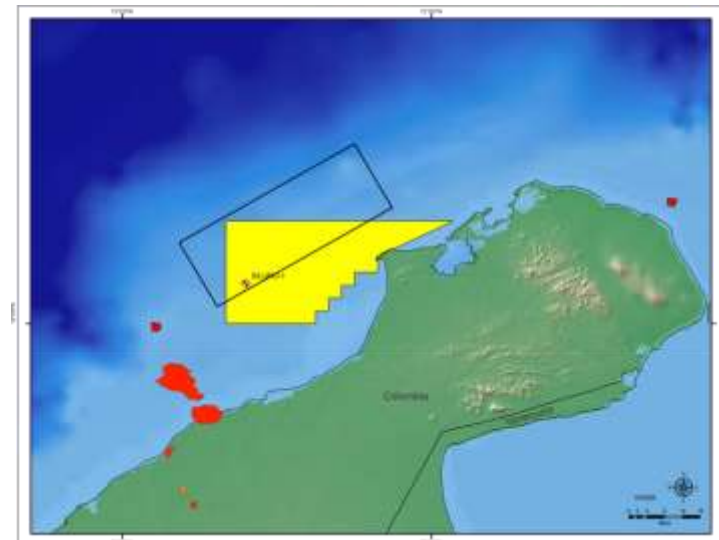
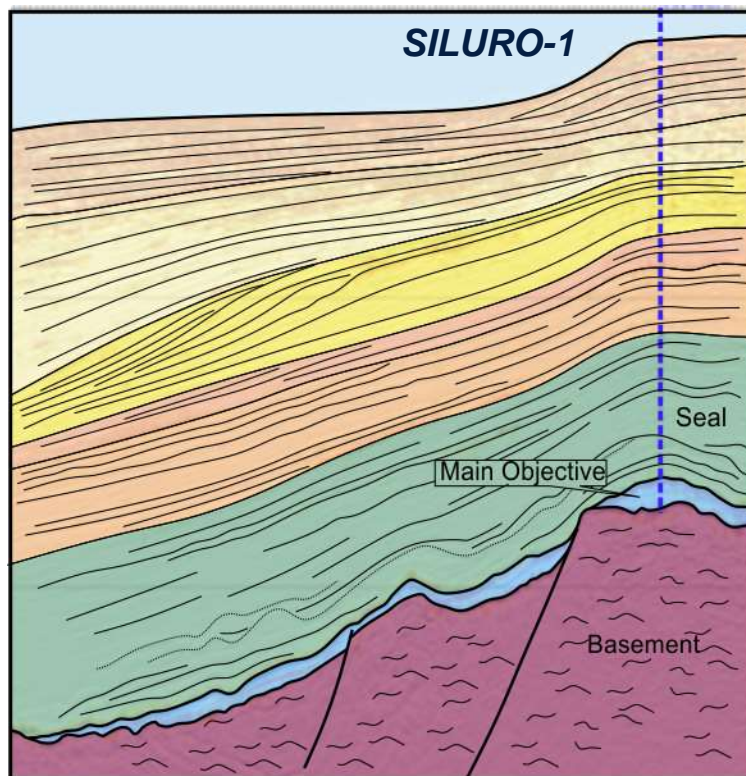
- **Block:** Tayrona Offshore, Repsol 2011 Farm-In.
- **Trap:** Very Large 4-way closure (460km² @L. Miocene)
- **Objectives:** L. Miocene and Oligocene Carbonates.
- **Water Depth:** 674 m
- **TD:** 4,775 m
- **Chance of geolog. success:** 26%.
- **Estimated Resources:** 4 TCFE

Western Caribbean

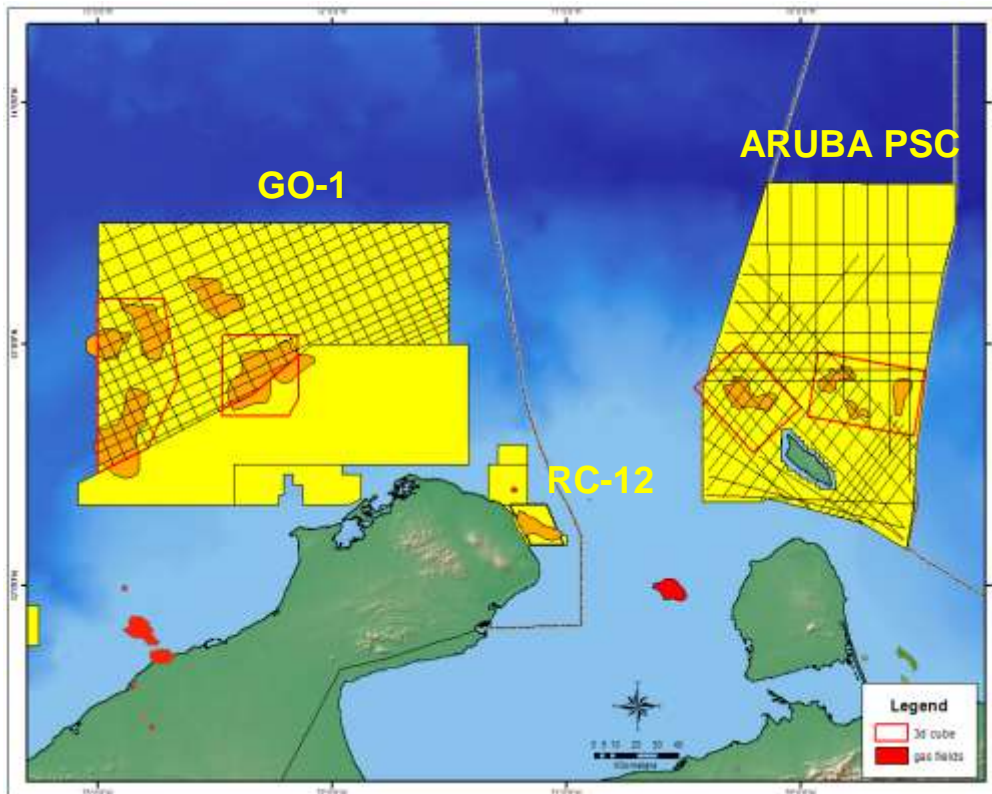
Colombia - RC11 Block - Siluro Well



- **Block:** RC-11, Repsol 2012 Farm-In
- **Main Objective:** L. Miocene Carbonate
- **Water Depth:** 90m
- **TD:** 2,090 m
- **Chance of Geological Success:** 26.5%
- **Estimated Resources:** 1.6 TCFE



Western Caribbean 2014 3D Seismic Programs



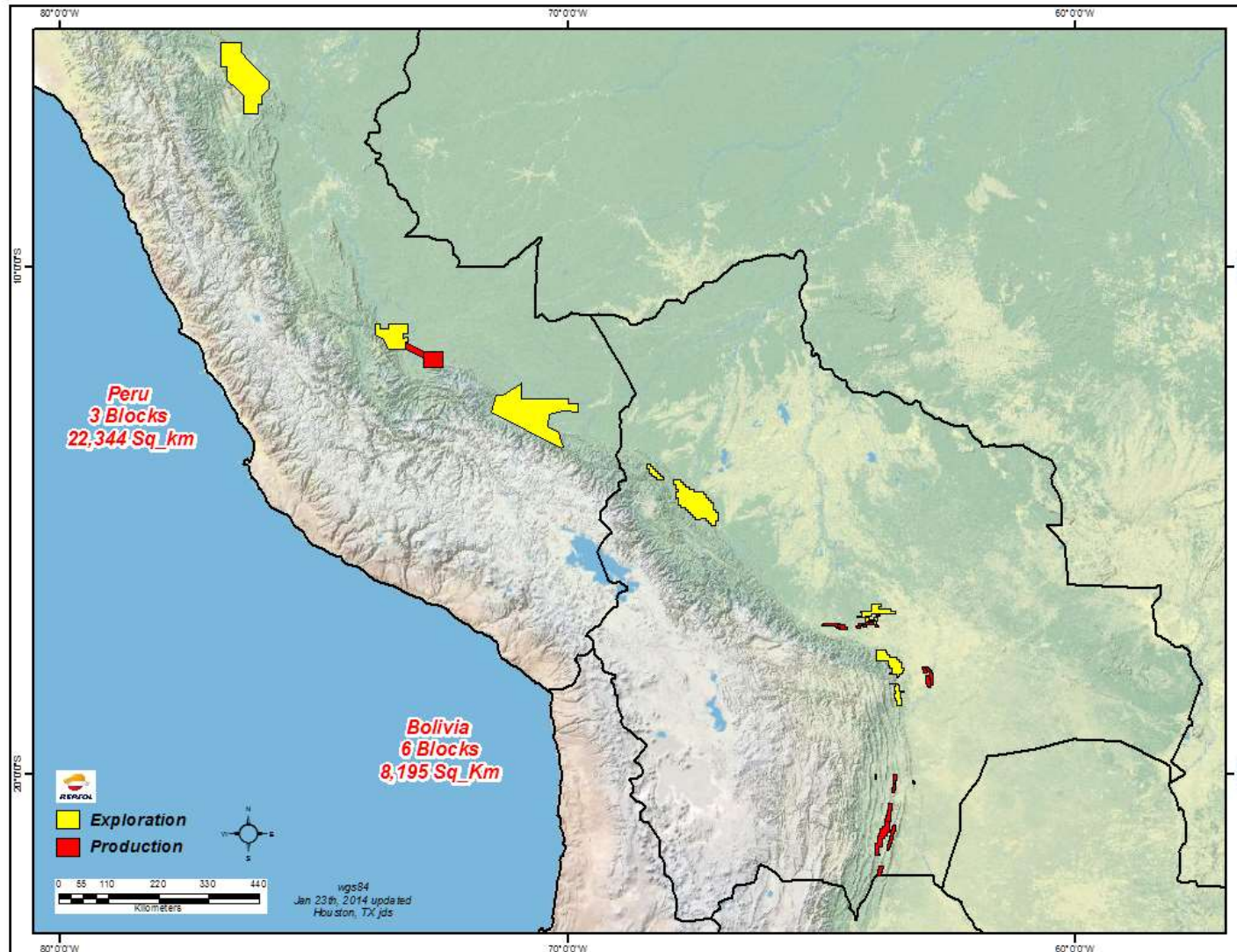
- More than 6,000 km of new 2D will be completed by February 2014.
- More than 5,000 km² of new 3D will be recorded by December 2014.
- A single seismic tender is ongoing to contract all the planned surveys.
- All new volumes will be processed by Repsol Depth Imaging Group in Houston.
- At least 3 to 5 valid prospects are expected from the new volumes, to be drilled during 2015-18.

Andean Region



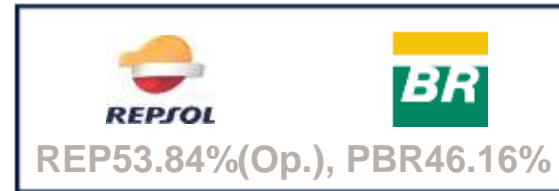
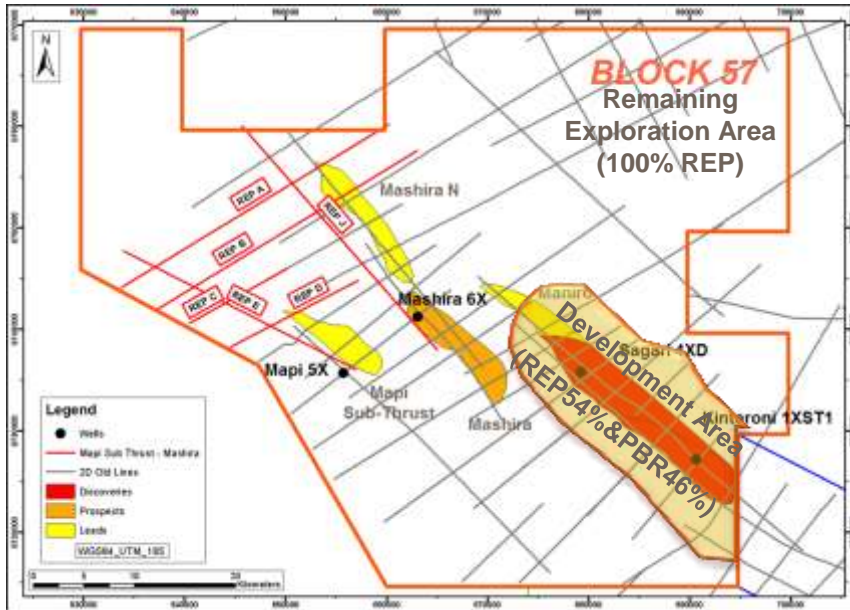
Andean Region

Acreage and planned activities



Andean Region

Peru Block 57 Remaining Prospectivity



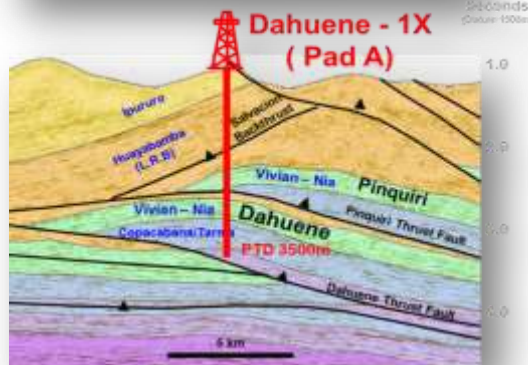
- Awarded to Repsol in 2004.
- 267 km of 2D seismic acquired in 2007.
- 3 exploratory wells were drilled to date:
 - Kinteroni (2008): Discovery 1073 BCFE (2P)
 - Sagari (2012): Discovery 1342 BCFE (Resources)
 - Mapi (2012): dry hole.
- Remaining Exploration portfolio;
 - 3 low to medium risk exploration opportunities with cumulative prospective resources of 1.4 TCFE.
- Contract Status:
 - Repsol has retained 100% of the exploration area to preserve remaining prospectivity.
 - The contract provides 3 periods of 2 years. The first period has a 140km 2D commitment before August 2015.
 - Remaining prospectivity can add significant value to Kinteroni-Sagari Development Plans.
 - Exploratory drilling will resume when a rig returns to the Block to develop Sagari.



Mashira Location

Andean Region

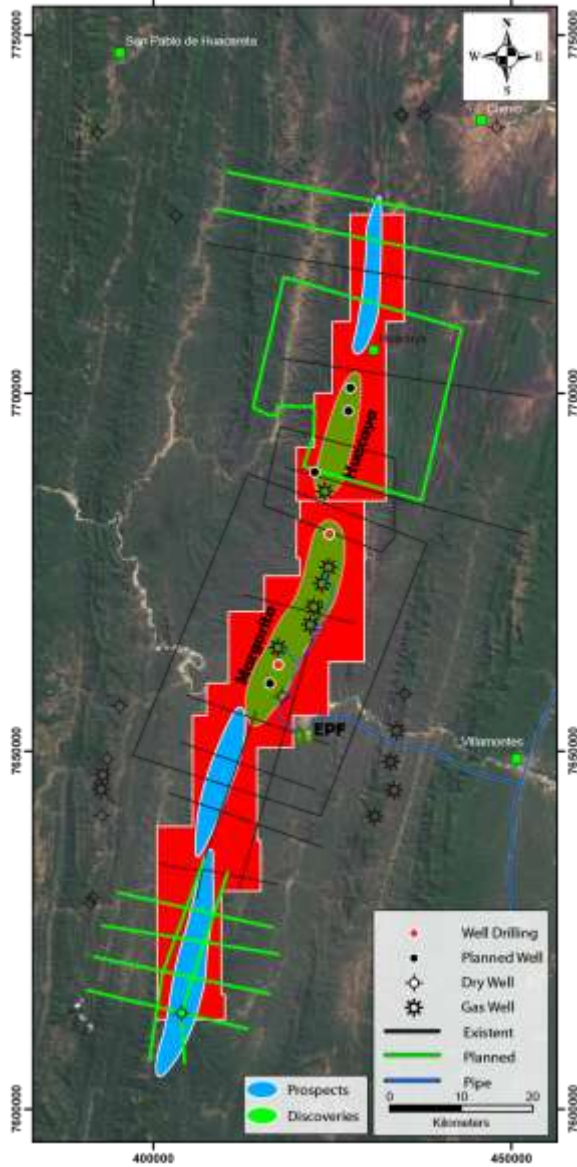
Peru - Block 76 High Impact Portfolio



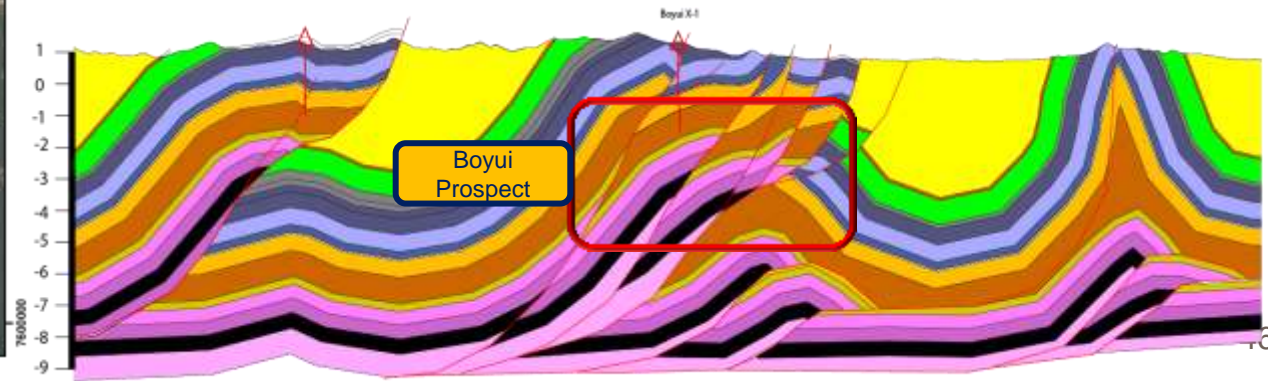
- 2006: Hunt 50% Farm Out to REP
- 2009-10: 460 km of 2D Seismic acquired
- 2012: REP-Hunt joint Farm Out to Pluspetrol
- Full Environmental Impact Study (EIA) approved August-13.
- Very large (14,340 km²) block containing multiple anticline opportunities.
- **High Reward-Medium Risk Portfolio:**
 - 3 prospects identified with an average of 2.3 TCFE each.
 - Multiple additional leads to propagate success.
- **2014 Work program:**
 - Base camp construction in progress.
 - Civil works for two well pads (Pad A and Pad B)
 - Dahuene-1X well spud
- “Back to back” drilling activities are planned pending Dahuene-1x results.

Andean Region

Bolivia Caipipendi Block Remaining Prospectivity



- Margarita field discovered in 1997, early production first gas in 2004, Huacaya discovered in 2007.
- October 2013: Development Phase II completed, producing >14 MMm³/day.
- Development Phase III in progress, based on the Huacaya volumes.
- The contract area contains remaining exploration potential with at least three exploration leads identified along the trend.
- During 2014 Repsol will operate a 3D survey over Huacaya, and two 2D surveys (259 km) to complete seismic coverage of the block.
- Contingent on seismic results, exploratory drilling could resume in 2015-16.
- Caipipendi prospective resources could be significant (multi TCF) and add value to current and future development phases








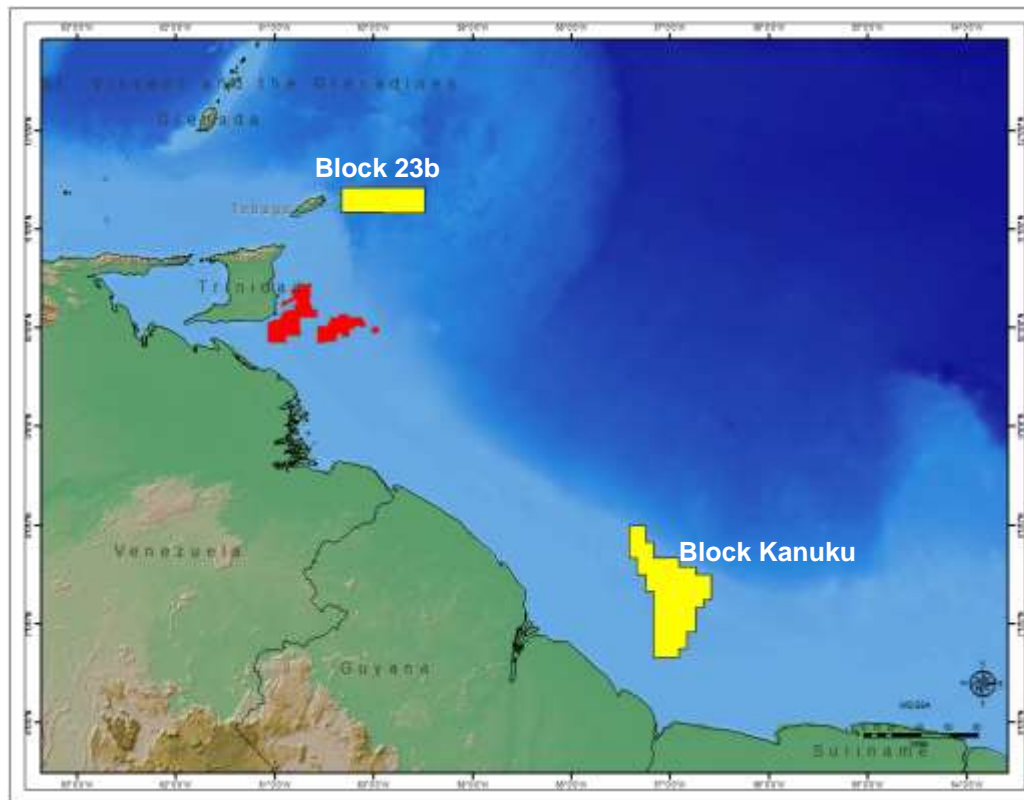
Atlantic Basins



Atlantic Basins

New Exploration Acreage

2013	2013
TRINIDAD & TOBAGO	GUYANA
Block 23b	Kanuku Block
BHP 60% (Op.) - REP 40%	REP40%(Op.)-TUL30%-RWE30%(1)
 	  

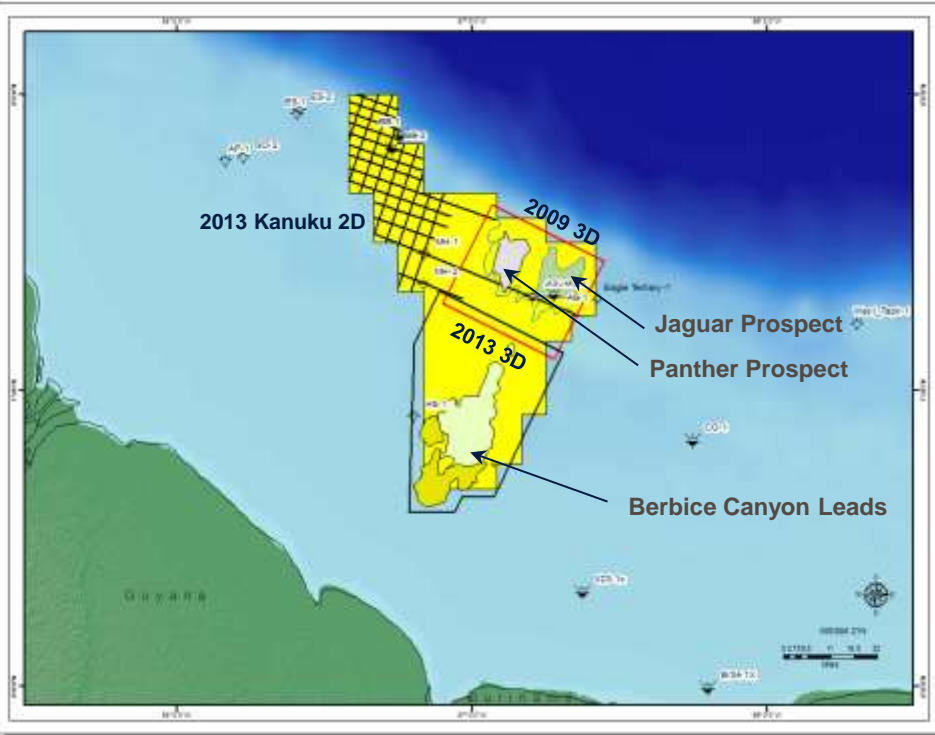


(1) FOA executed Dec/2013, pending Guyana Government request for approval

Atlantic Basins

Guyana - Kanuku Block

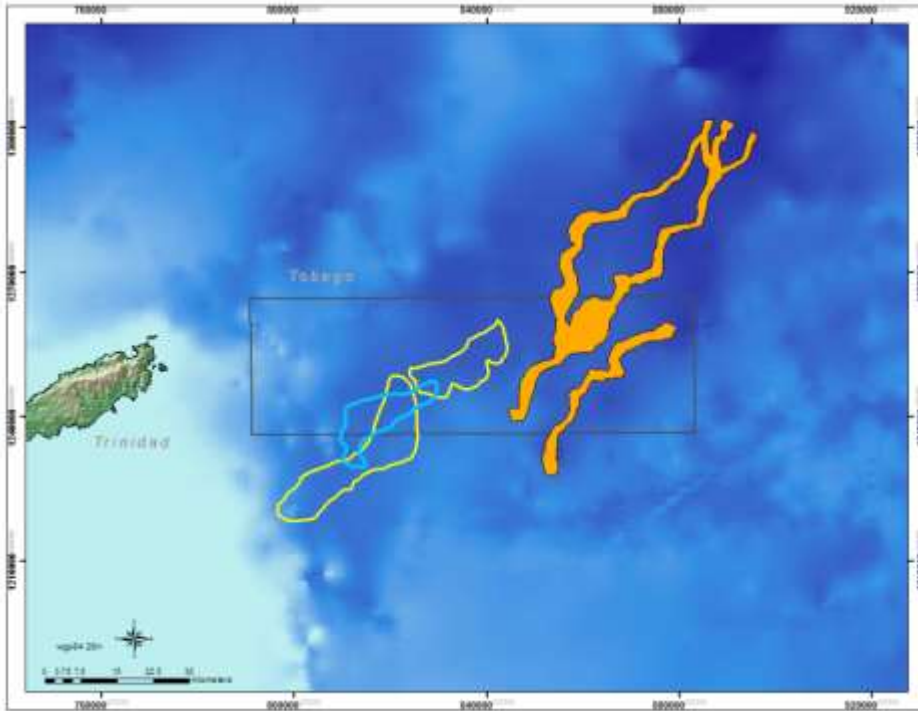
- Repsol is an established player in the Guyana-Suriname basin, having drilled two frontier wells to date (Jaguar and W Tapir) .
- Repsol signed the 6,525 km² Kanuku Block contract in May 2013. The Block is located 50 miles offshore Guyana, in shallow waters.
- During H2-2013 Repsol acquired regional 2D and a 3D seismic program covering the Berbice Canyon.
- During 2013 Repsol farmed out 30% of the Block to Tullow. A FOA for an additional 30% was executed with RWE in Dec-2013.



Kanuku Block, Guyana - Timeline	2013	2014	2015	2016	2017
PA/PPL Signature May 2013	█				
3D/2D Seismic Survey / Tender / Award / Acquisition	█				
3D/2D Processing		█			
3D/2D Interpretation		█	█		
2 nd Phase / 1 st Period (contingent drilling commitment)				█	
	1 st Phase			2 nd Phase	

Atlantic Basins

Trinidad & Tobago - Block 23b



- Block 23b covers a deep water area of 2,585 km² located to the East of Tobago.
- The Block contains multiple Tertiary clastic and carbonate plays with oil and gas potential.
- REP 40% and BHP (op.) 60% signed the contract on November 2013.
- A 3D seismic program covering most of the block will be conducted during 2014.
- Drilling during the 2nd Phase is contingent on seismic results.

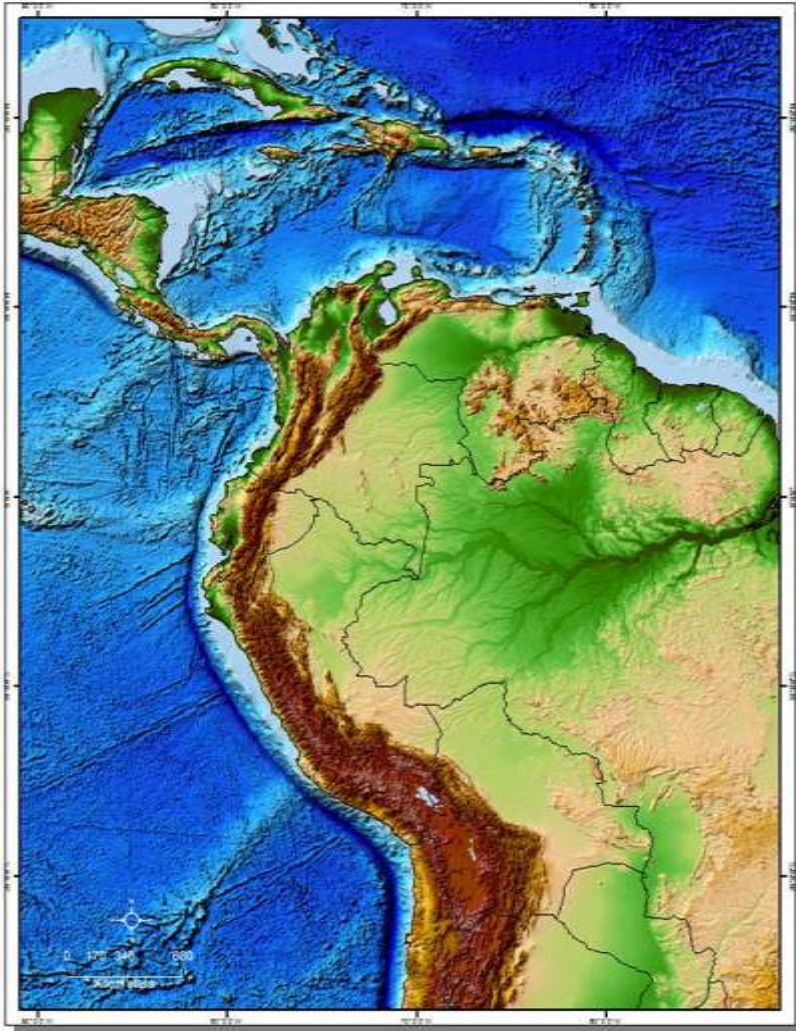
Block 23b, Trinidad & Tobago - Timeline	2013	2014	2015	2016	2017	2018	2019
PSC Signature Nov 2013	█						
3D Seismic Survey Acquisition		█					
3D Processing			█				
3D Interpretation				█	█		
2 nd Phase (contingent drilling commitment)					█	█	█
		<i>1st Phase</i>			<i>2nd Phase</i>		

Latin America New Ventures



Latin America New Ventures

Remaining Prospectivity



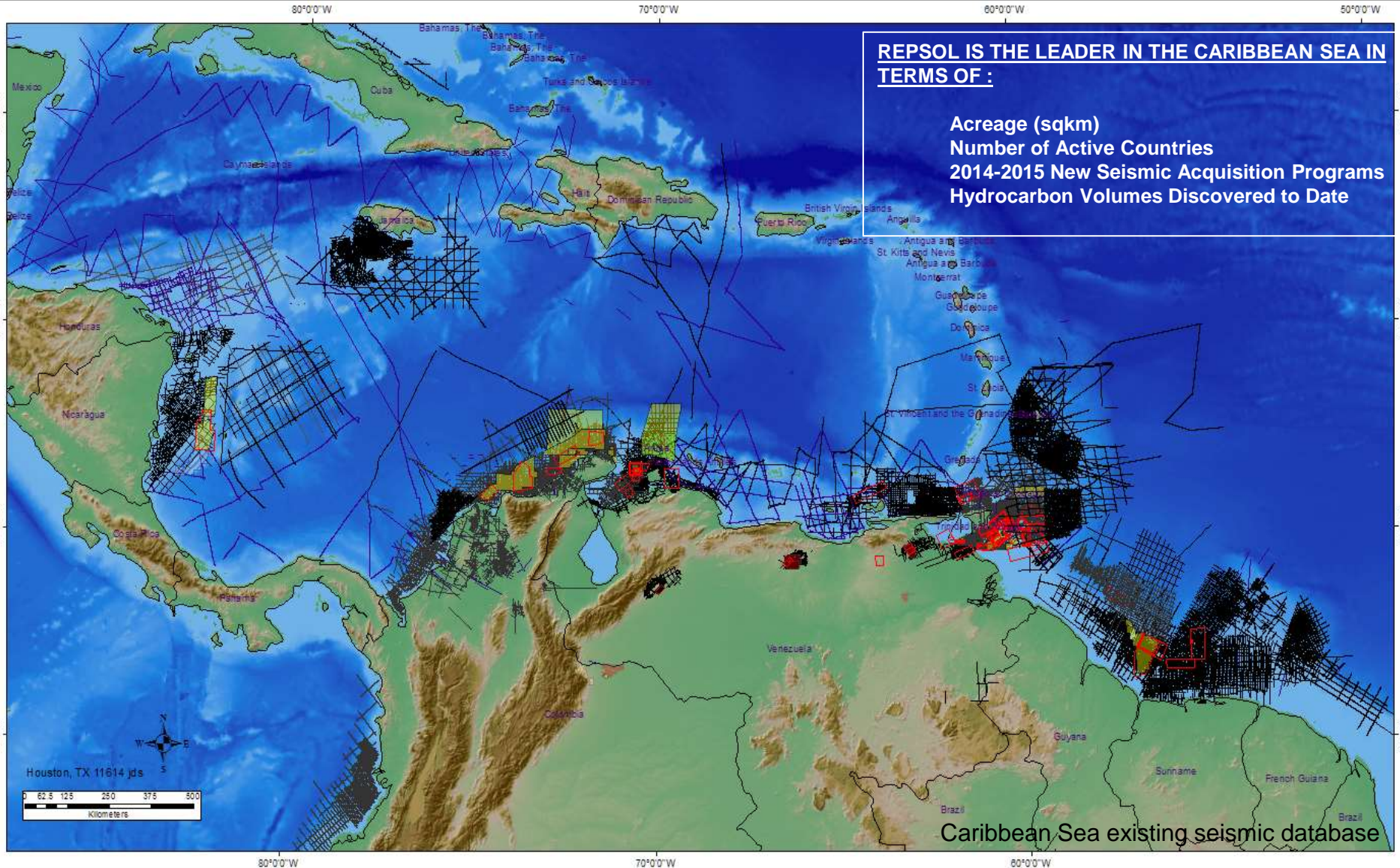
- The largest conventional oil and gas fields in South America have been discovered recently (Tupi/Lula 2007, Perla 2009).
- The region keeps delivering very significant volumes, despite restricted access to acreage in several high potential countries.
- Intensity of exploration investment has historically been low, especially offshore and in the complex Andean settings.
- Unconventional exploration is just starting.
- Repsol assigns significant resources to new geological concepts, monitors all LATAM activities and opportunities above 100MBOE

Latin America New Ventures

Continuing to expand into the Caribbean Sea

REPSOL IS THE LEADER IN THE CARIBBEAN SEA IN TERMS OF :

- Acreage (sqkm)**
- Number of Active Countries**
- 2014-2015 New Seismic Acquisition Programs**
- Hydrocarbon Volumes Discovered to Date**

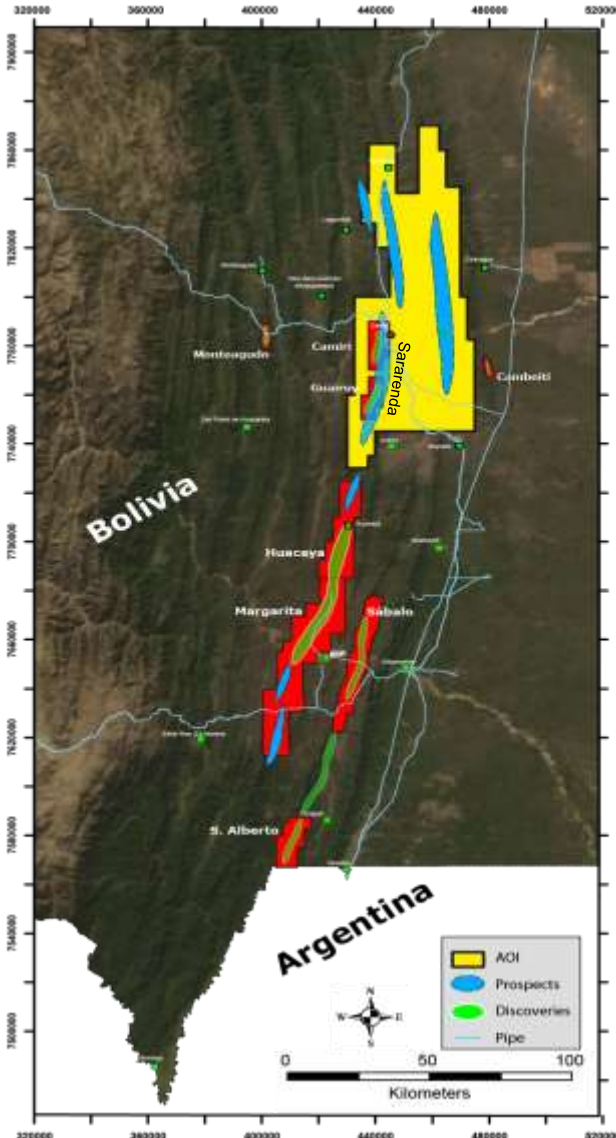


Caribbean Sea existing seismic database

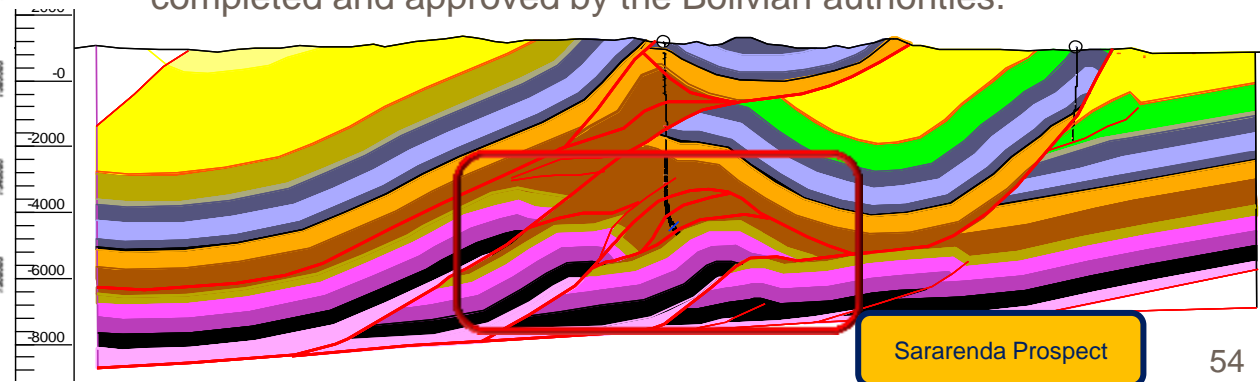


Latin America New Ventures

New SubAndean Exploration in Bolivia



- Repsol holds a 49% participation in YPFB Andina, the leading producing company in Bolivia, controlled by YPFB.
- YPFB Andina drilled in 2012 the Sararenda deep exploration well, abandoned for operational reasons at 6000m, without reaching its primary target.
- Repsol and YPFB Andina have agreed to continue exploring the Sararenda prospect trend, north of Margarita-Huacaya.
- YPFB has already pre-assigned several areas to YPFB Andina to carry out exploration activities.
- Seismic acquisition will start once the Petroleum Contracts are completed and approved by the Bolivian authorities.



Africa

Didier Vincent Luch

4

Repsol in Africa

2013 Main Activities

2014 Main Activities



Repsol present in 9 countries, 7 of them operated

★ well
 3D seismic

Libya

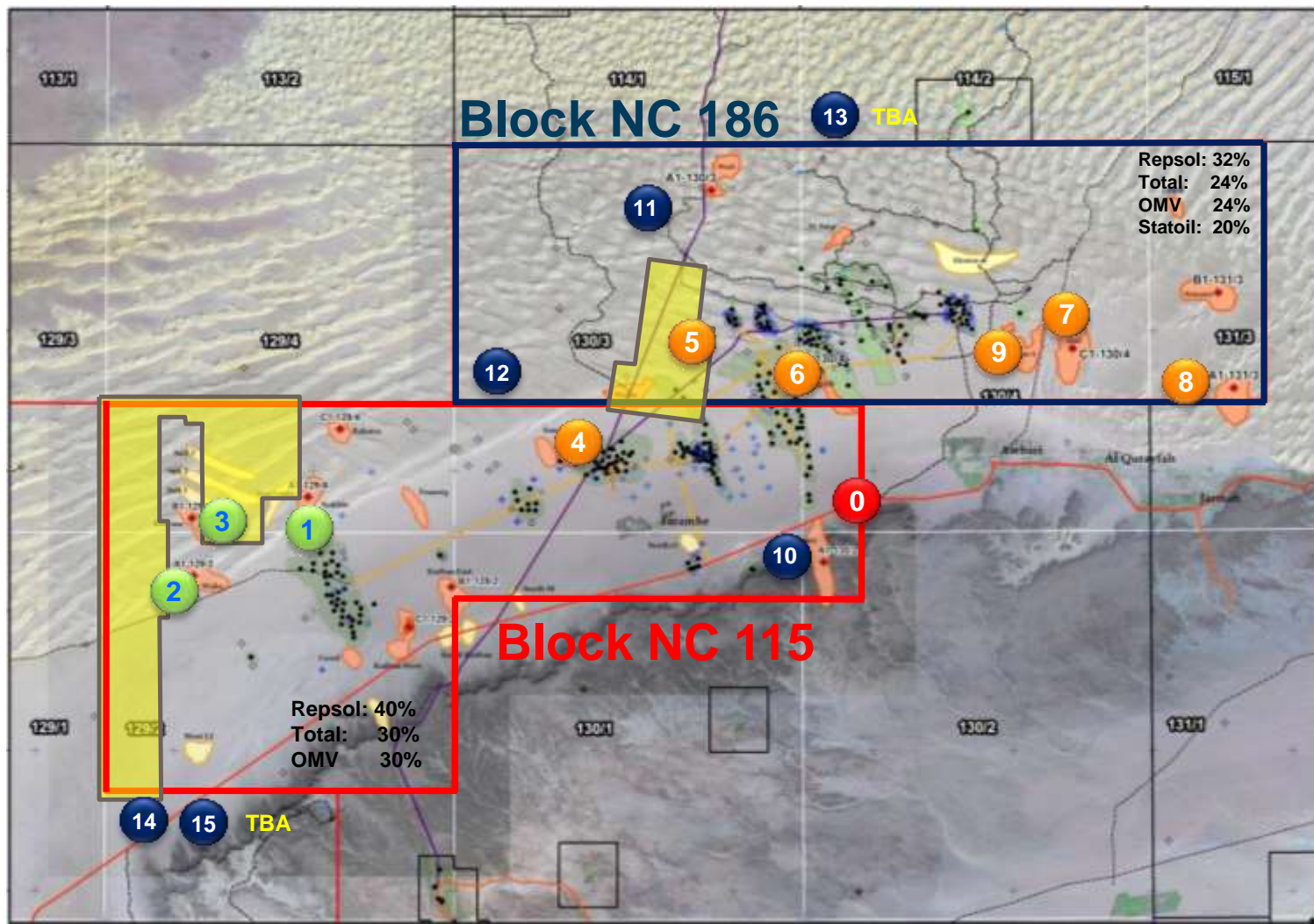
Exploration Campaign Update

- Exploration deadline for CA129/130 (NC115) /CA130/131 (NC186): October 25th 2015.
- Commitment to drill 16 wells and acquiring 5,600 Km² of 3D seismic.
- 1 well drilled and 3,997 Km² of seismic acquired previous to the 2011 unrest.
- Drilling Campaign started again in May 2012: back to back basis.
- Three wells drilled since the operational resumption in May 2012:
 - 1 Officially announced discovery.
 - 1 Completed but with tight reservoir indications.
 - 1 Dry hole.
- The next well in the sequence (well number 4) spudded-in on January 24th 2014.
- Seismic Campaign not started yet.
- Ongoing Country Screening for potential Bid Round in Q4 2014.



Libya

Exploration Campaign Update



Drilled in 2011	
0	T1 Prospect A1-130/4
Drilled in 2013	
1	Nakhla Prospect A1-129/4
2	Waha Prospect A1-129/2
3	Khaima Prospect B1-129/4
Drillable in 2014	
4	Sanam Prospect A1-130/3
5	Wedan Prospect B1-130/3
6	Agrub Prospect B1-130/4
7	Ural Prospect C1-130/4
8	Taban Prospect A1-131/3
9	Khatem-S Prospect TBA
Drillable in 2015	
10	Nesser Prospect
11	Wadi Prospect
12	El Hasheem Prospect
13	TBA Prospect
14	TBA Prospect
15	TBA Prospect

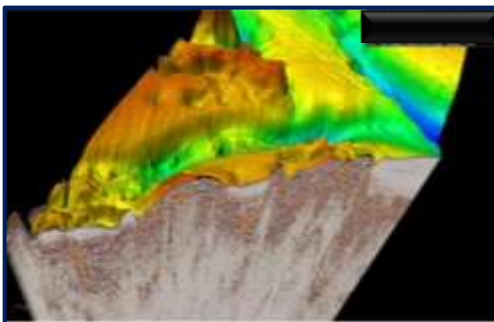
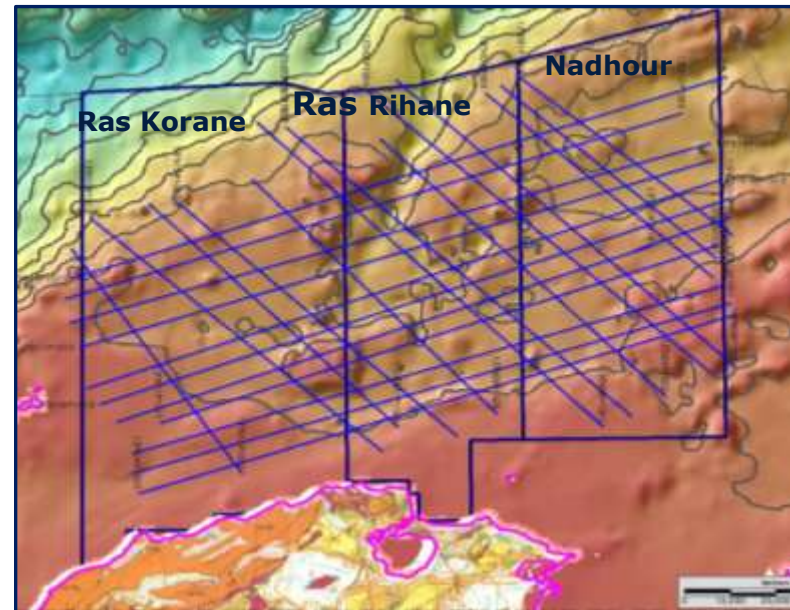


Prospecting Blocks Northern Tunisia Offshore

Ras Korane, Ras Rihane and Nadhour Permit

Background

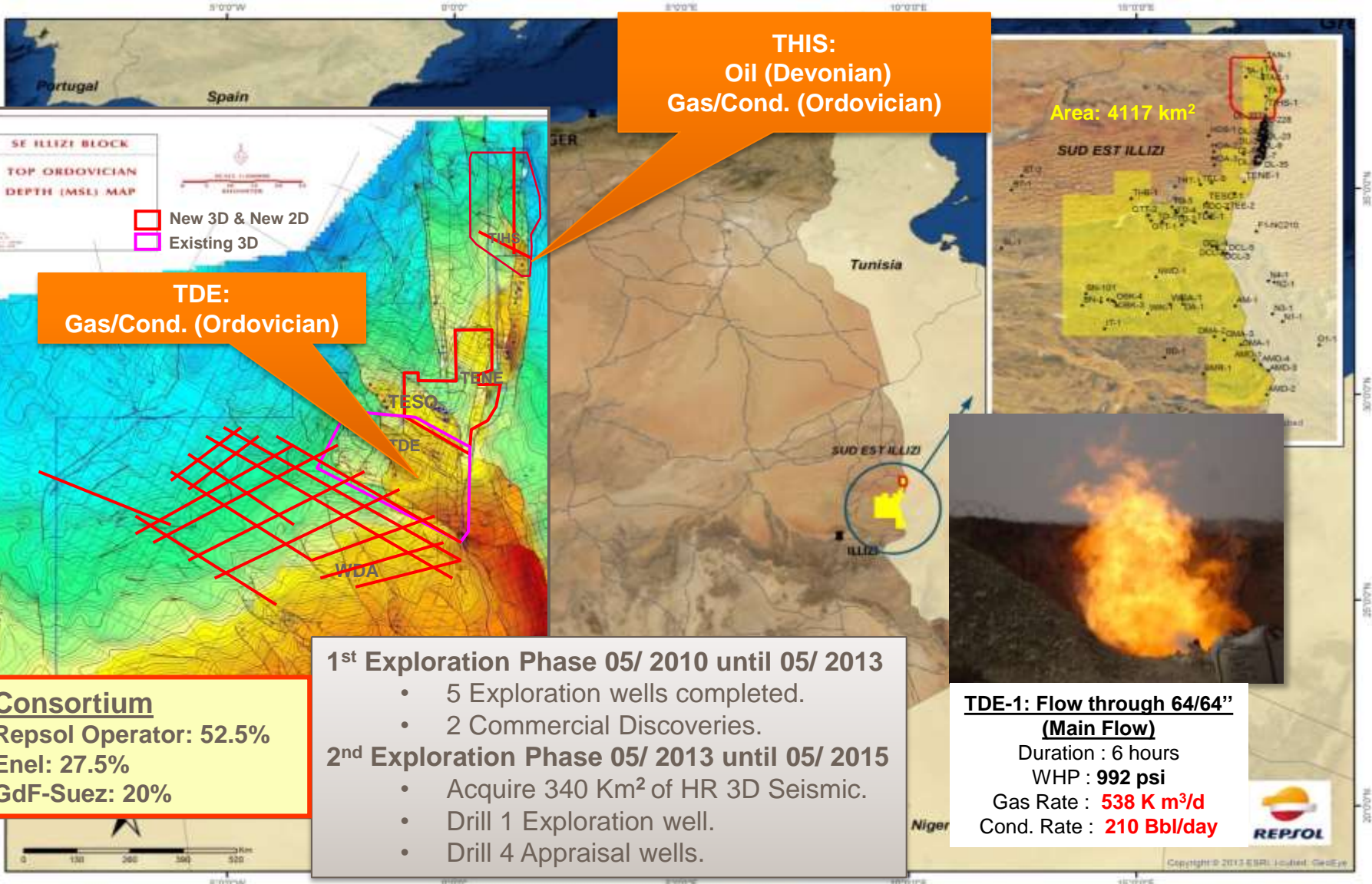
2 Years Period + 1Year extension (Oct.18th, 2012-Oct.18th, 2014)



Activities 2013:

- 2D non-conventional seismic acquisition aprox. 2500 km acquired in the 1st Q 2013.
- Reprocessing of the old 2D seismic lines aprox. 7455 km completed in the 2nd Q 2013
- Seafloor Topography and multibeam bathymetry operation achieved in the 2nd Q 2013.
- Airborne Gravimetric and Magnetic acquisition completed in the 2rd Q 2013
- Operation over shallow coring campaign finalized in 3rd Q 2013.

Algeria, SE-Illizi 232 & 241a Blocks Near Field Exploration



THIS:
Oil (Devonian)
Gas/Cond. (Ordovician)

TDE:
Gas/Cond. (Ordovician)

Consortium
Repsol Operator: 52.5%
Enel: 27.5%
GdF-Suez: 20%

1st Exploration Phase 05/ 2010 until 05/ 2013

- 5 Exploration wells completed.
- 2 Commercial Discoveries.

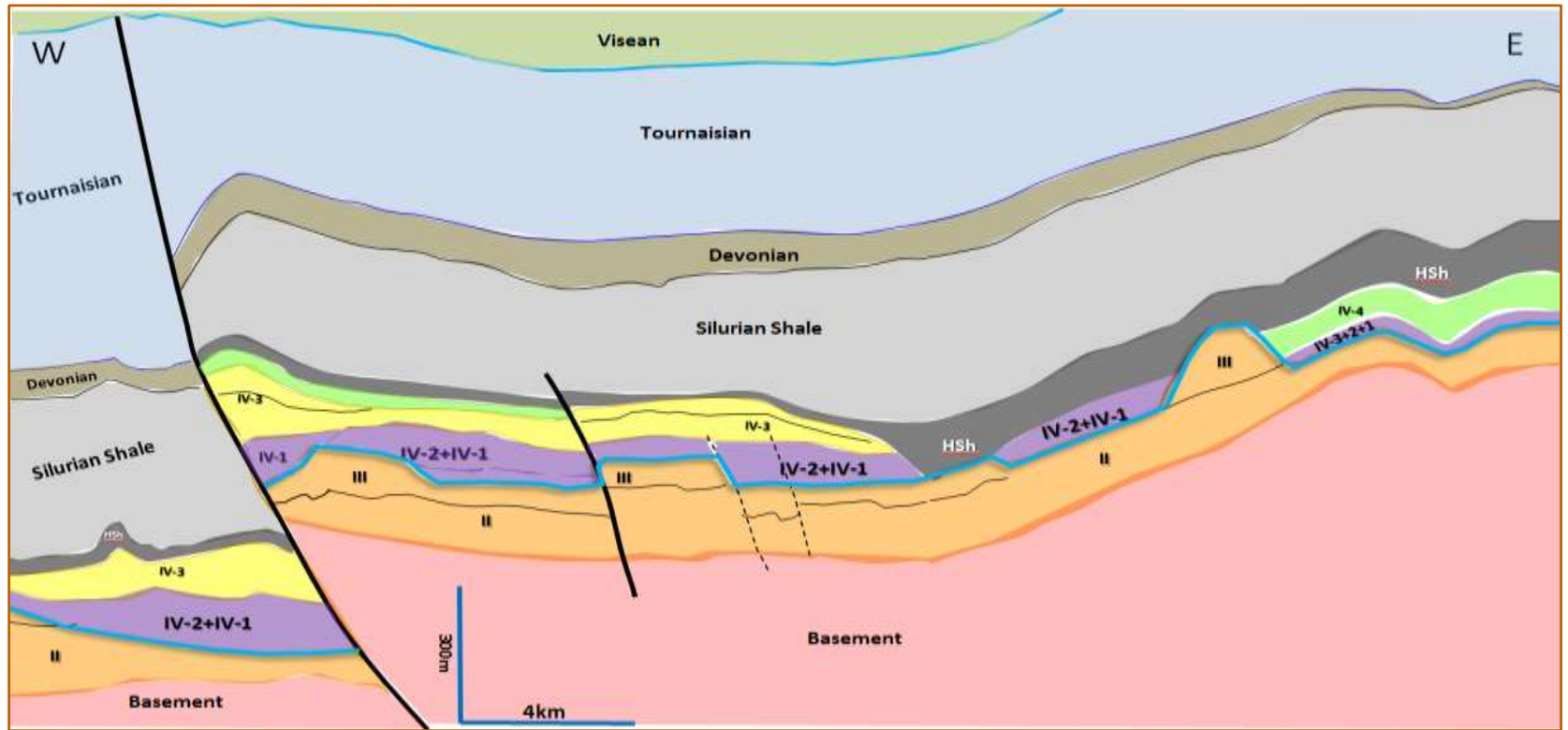
2nd Exploration Phase 05/ 2013 until 05/ 2015

- Acquire 340 Km² of HR 3D Seismic.
- Drill 1 Exploration well.
- Drill 4 Appraisal wells.



TDE-1: Flow through 64/64''
(Main Flow)
Duration : 6 hours
WHP : **992 psi**
Gas Rate : **538 K m³/d**
Cond. Rate : **210 Bbl/day**

Algeria, SE-Illizi 232 & 241a Blocks Near Field Exploration and Appraisal



Morocco

Why?

- Very attractive contractual and fiscal terms
- Domestic energy deficiency
- 5th largest economy and 2nd largest energy importer in Africa
- Proximity to Spanish market
- Underexplored Atlantic margin (3000km shoreline) Repsol in Morocco

→ Long time presence when only very recently the rest of the Industry has shown high interest for the country. As a consequence Repsol has been able to build a very large and diversified portfolio

→ **Offshore:** Conventional

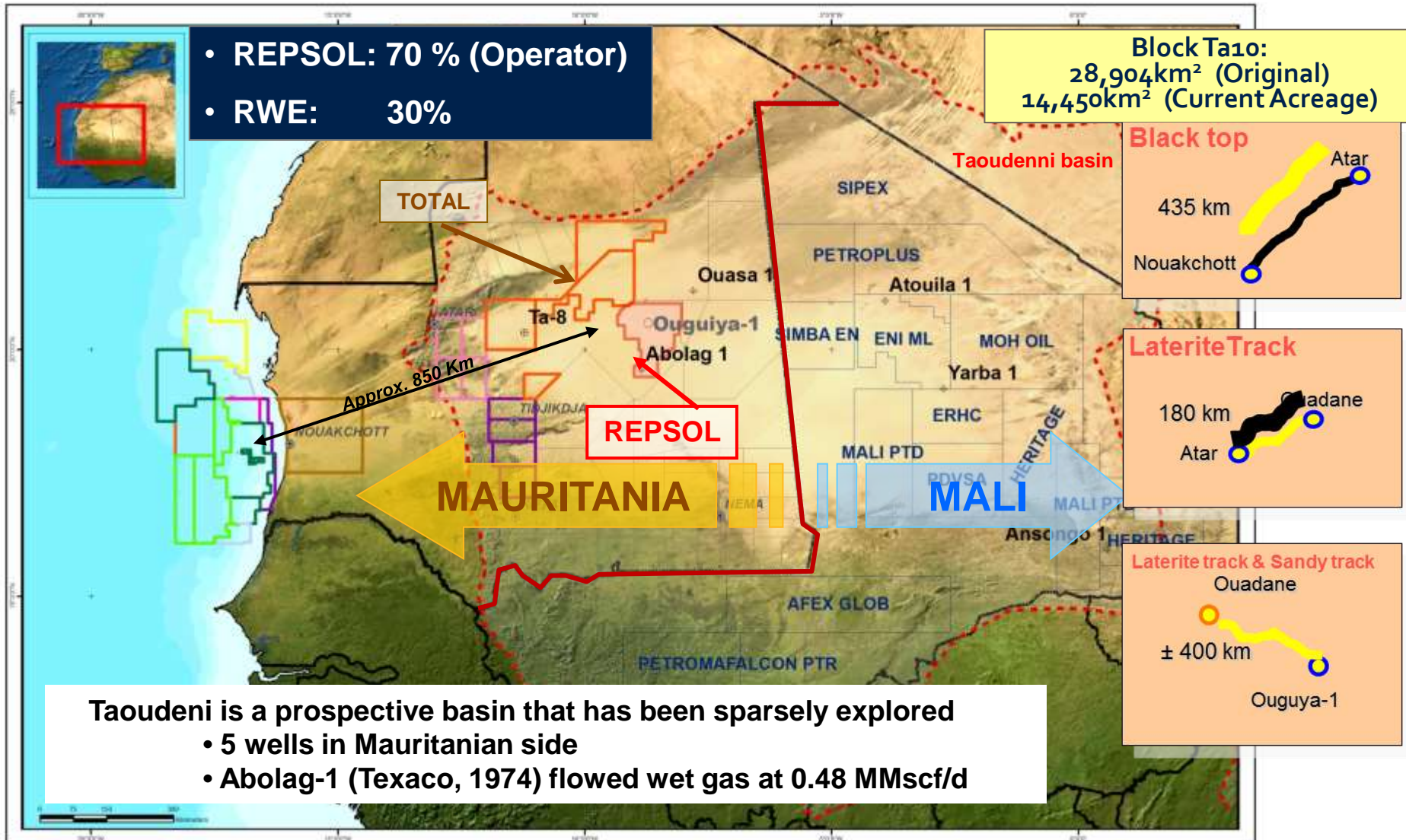
- Tanger-Larache License: Shallow gas play
- Gharb Licence: similarity with Nova Scotia, Jurassic and Cretaceous oil play
- Next activity: G & G studies and 3D seismic acquisition

→ **Onshore:** Unconventional-Shale Gas

- Next activities: G & G studies and 3D seismic acquisition
- Boudenib License: Objective Silurian “Hot Shale”: after two (2) years of “License de Reconnaissance (G&G studies, 5 shallow core-drills), request for exploration permits in four (4) blocks (2000 km²) each



TA-10 Block Location Map & Current License



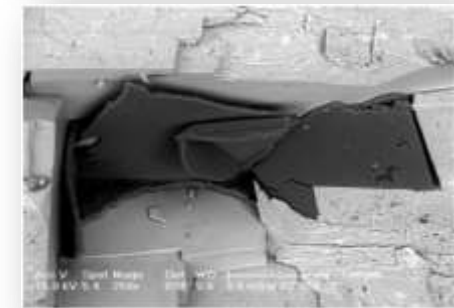
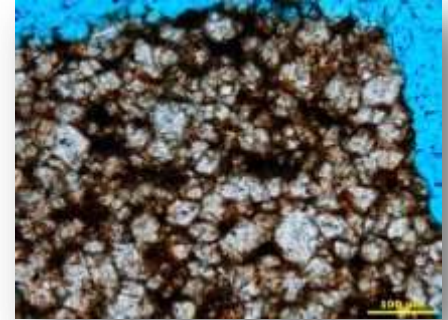
Mauritania

One of the largest unexplored basin in the world. Analogy with large discoveries in Russia and China. Possible follow-up in other large unexplored basins in Africa.

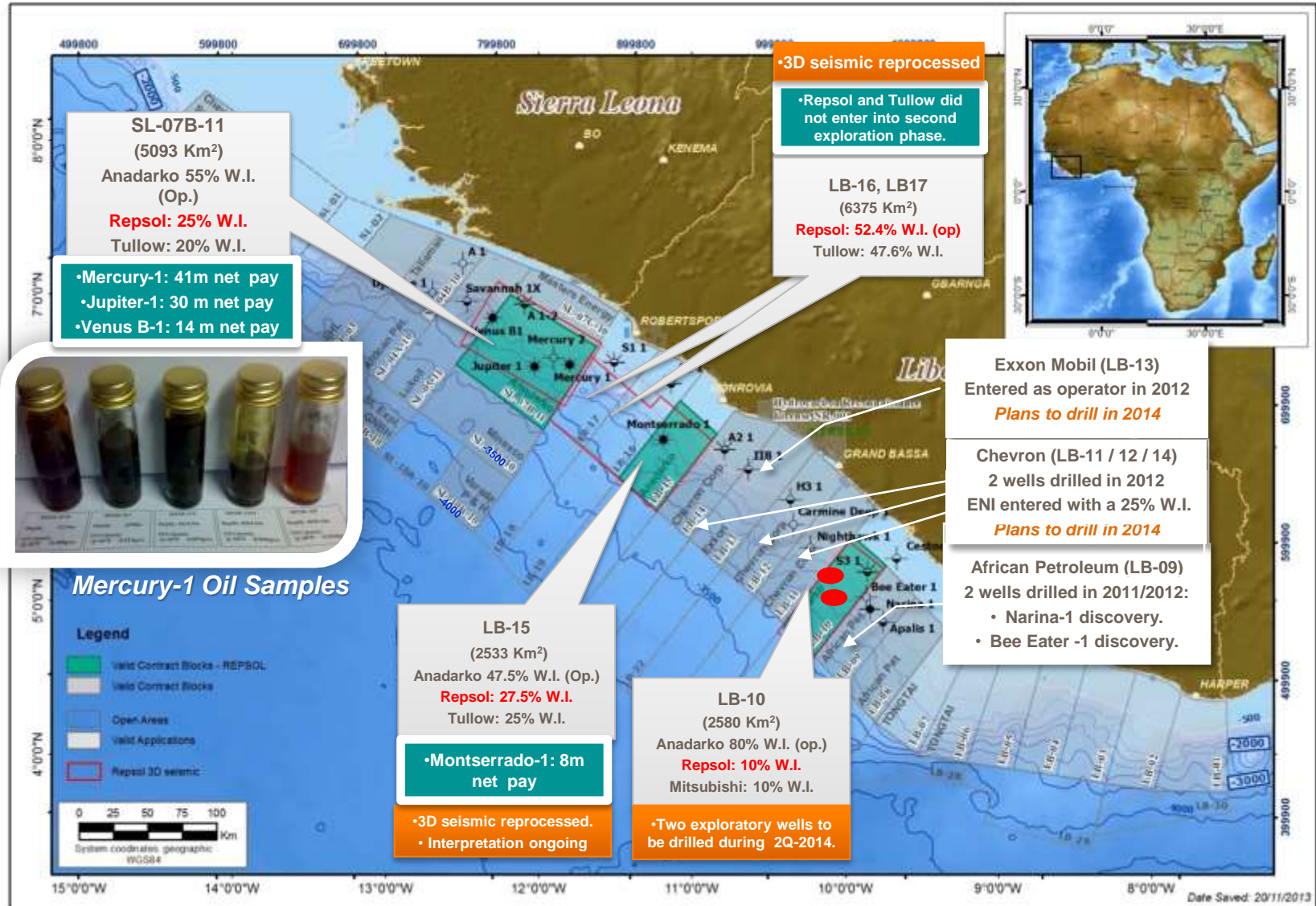
- Repsol was pioneer in Taoudeni Basin: entry in 2005
- Early entry allowed us to elect preferred block from regional studies:
 - ✓ Existing Gas and condensate discovery in TA-10 block: Abolag-1 (Texaco, 1973)
 - ✓ Regional high within the basin, focus on migration from surrounding kitchens
 - ✓ Numerous evidences of oil generation (subsurface and outcrops) within the block whereas the rest of the basin is more gas prone.
 - ✓ Prospects with large upside and significant follow-up portfolio in the block due to its considerable size.

Large Cooperation Agreement (rig, services and logistics) with Total, the other active Operator in the area.

- First Repsol well being drilled - Spud mid November 2013: Main targets Neo Proterozoic carbonates Current depth = 2000 m (TD = 3500m, planned for end of March 2014)



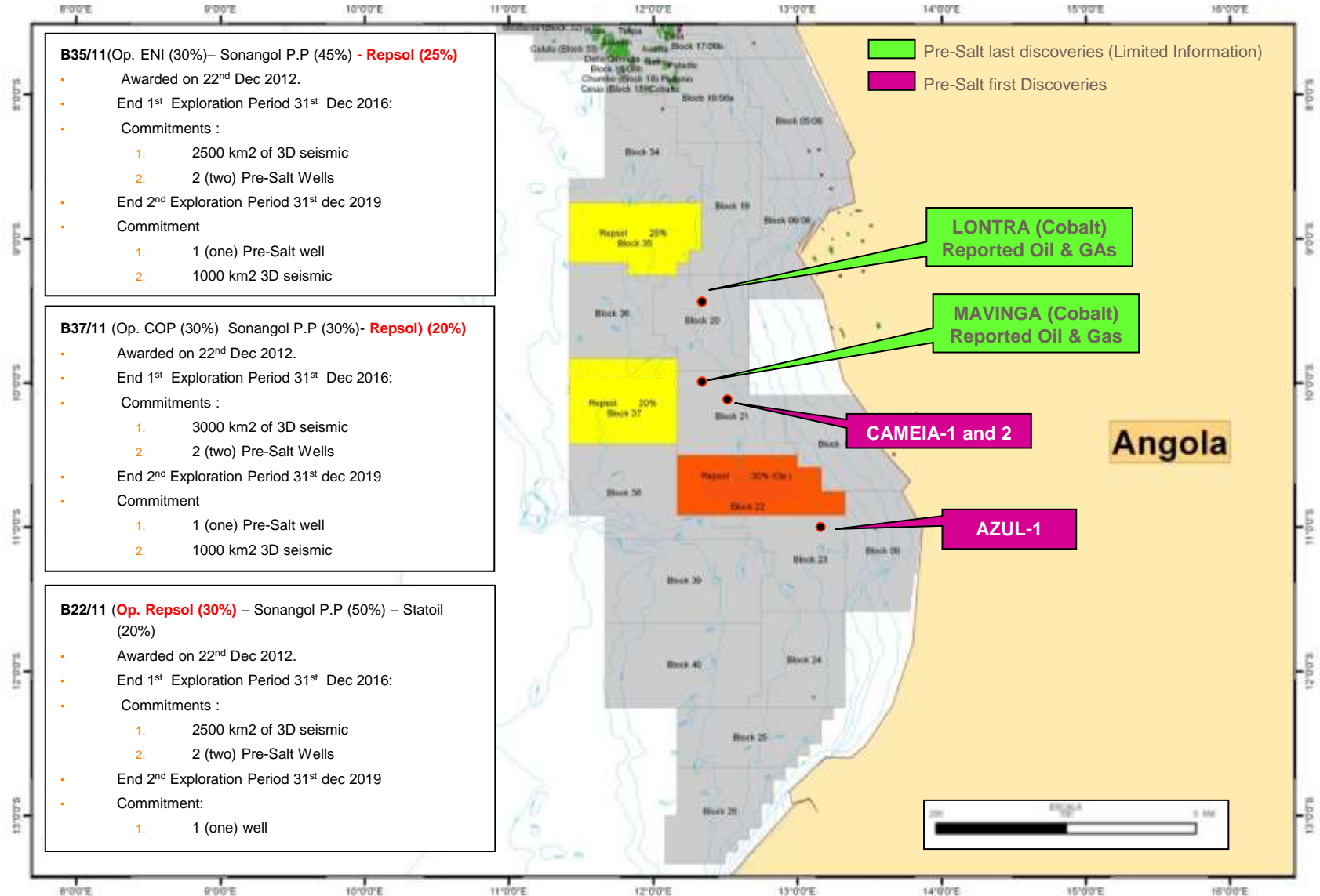
Repsol in Sierra Leone and Liberia



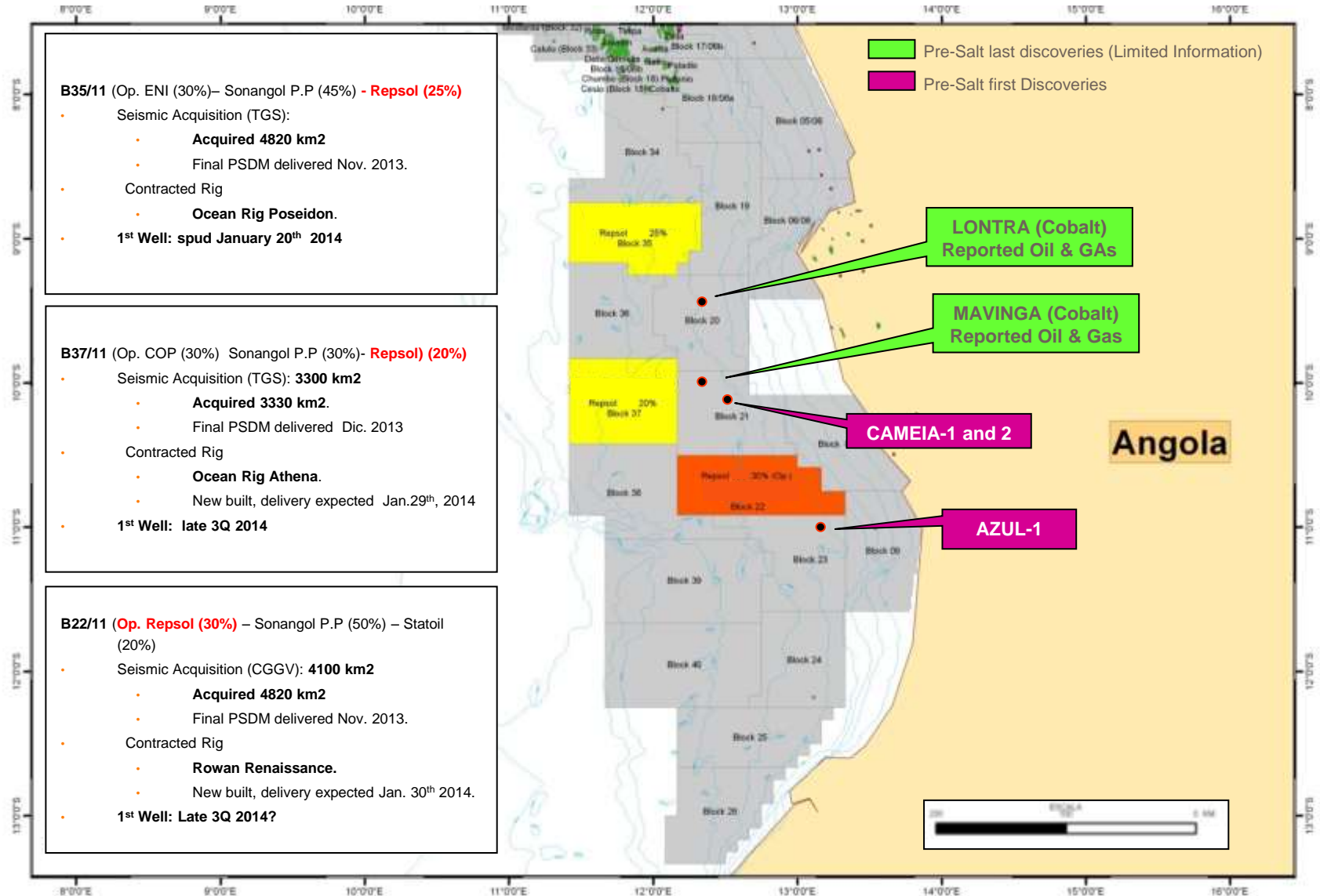
Repsol in Sierra Leona and Liberia

- Repsol **pioneered** the deep water exploration in SL/LB since 2003. Only twelve exploratory deep water wells drilled in the SL/LB margin up-to-date; the first one in 2009.
- Exploratory well results confirm the presence of **liquid hydrocarbons** (condensate and oil).
- Big players such as ExxonMobil, Chevron and ENI are present in the SL/LB deep water margin since 2010, showing the interest in this area.
- Repsol blocks are located in the northern and central portions of the SL/LB margin accounting for variations in geologic setting through the basin ensuring a thorough evaluation of its potential.
- Main ongoing exploratory activities are:
 - **Liberia LB-10:** Will drill two exploratory deep-water wells during 2Q 2014.
 - **Liberia LB-15, LB-16 and LB-17:** After performing in-house depth reprocessing of 6140 km² 3D seismic data and reinterpreting it in a very tight time frame successfully, Repsol decided not to renew the exploration license for blocks LB-16 and LB-17.
 - **Sierra Leona:** No remaining exploratory commitments. License expires in august 2014.

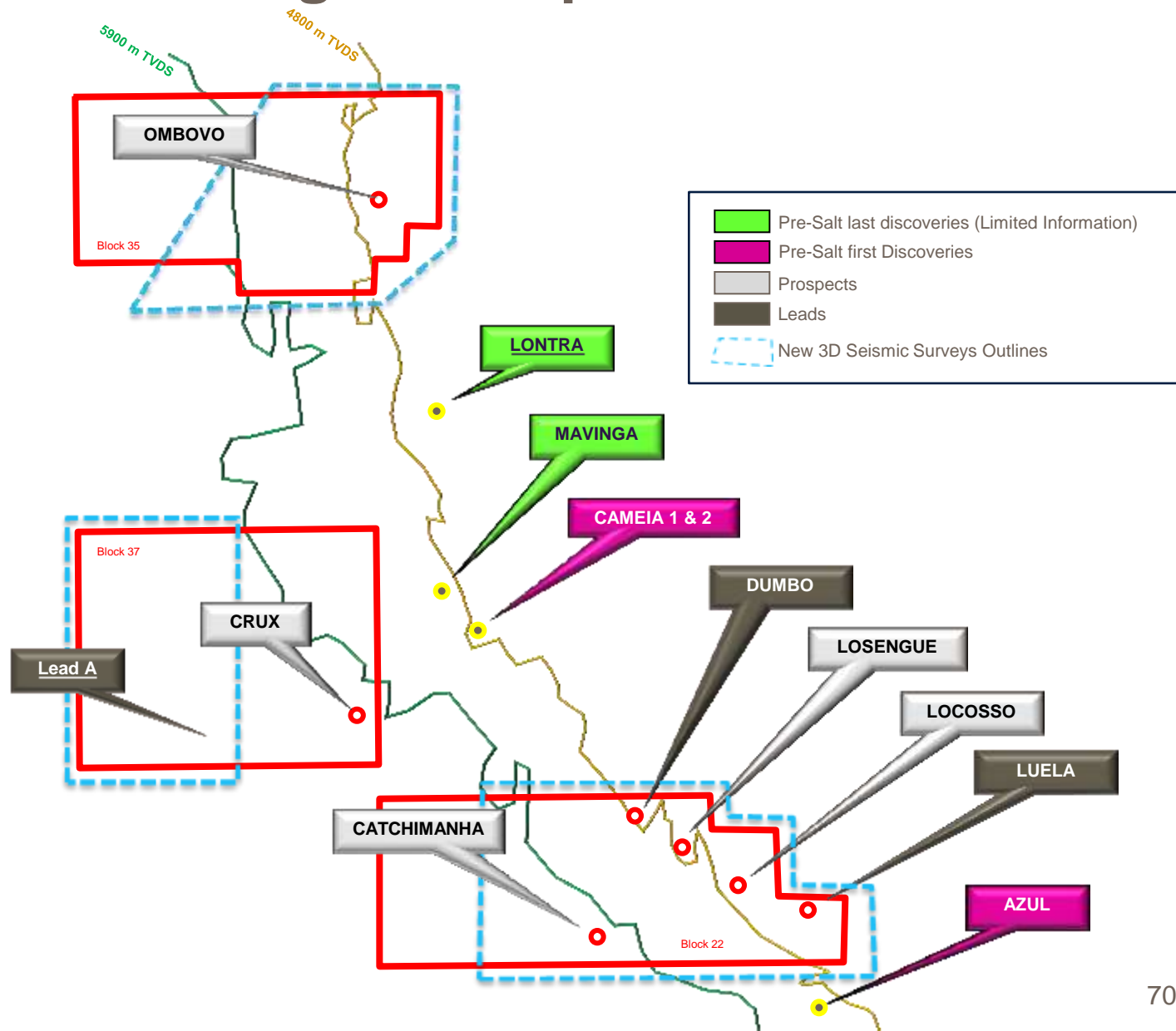
Angola: Blocks and Commitments



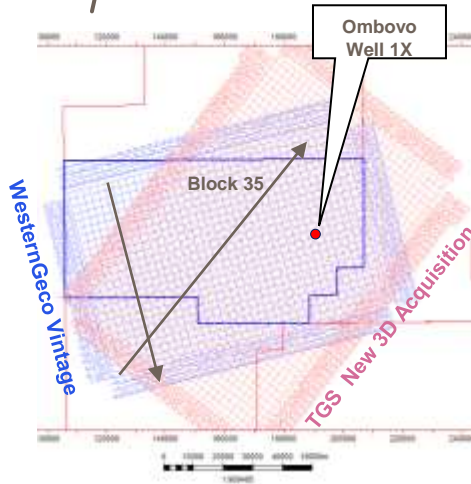
Angola: Blocks Status



Angola: Pre-Salt Regional Map (merge 2D & 3D seismic)

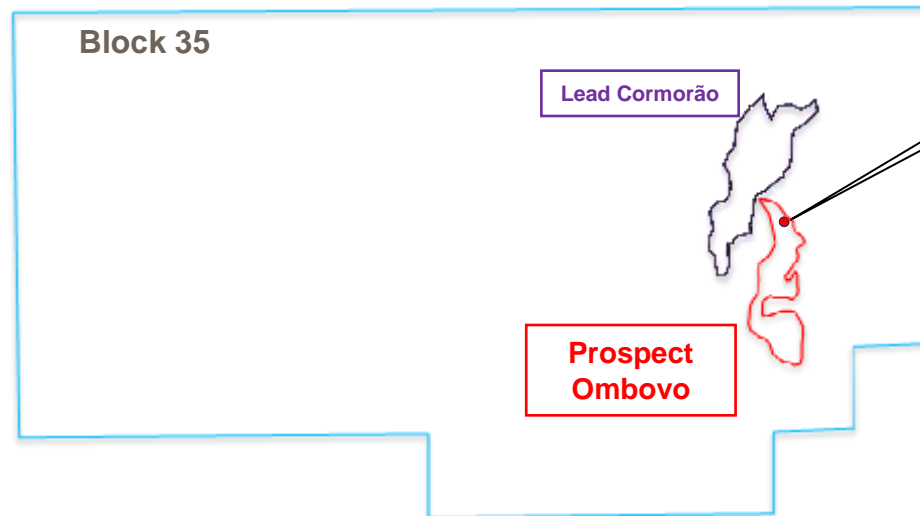
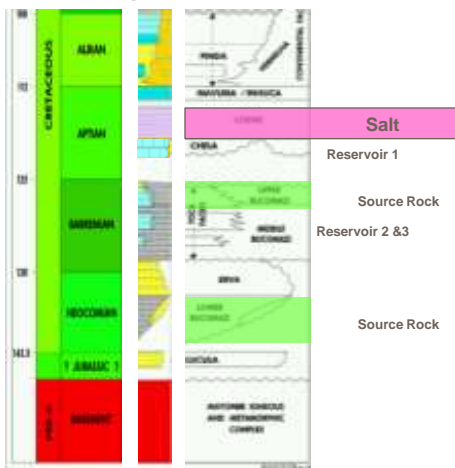


Angola: Block 35 - OMBOVO Prospect

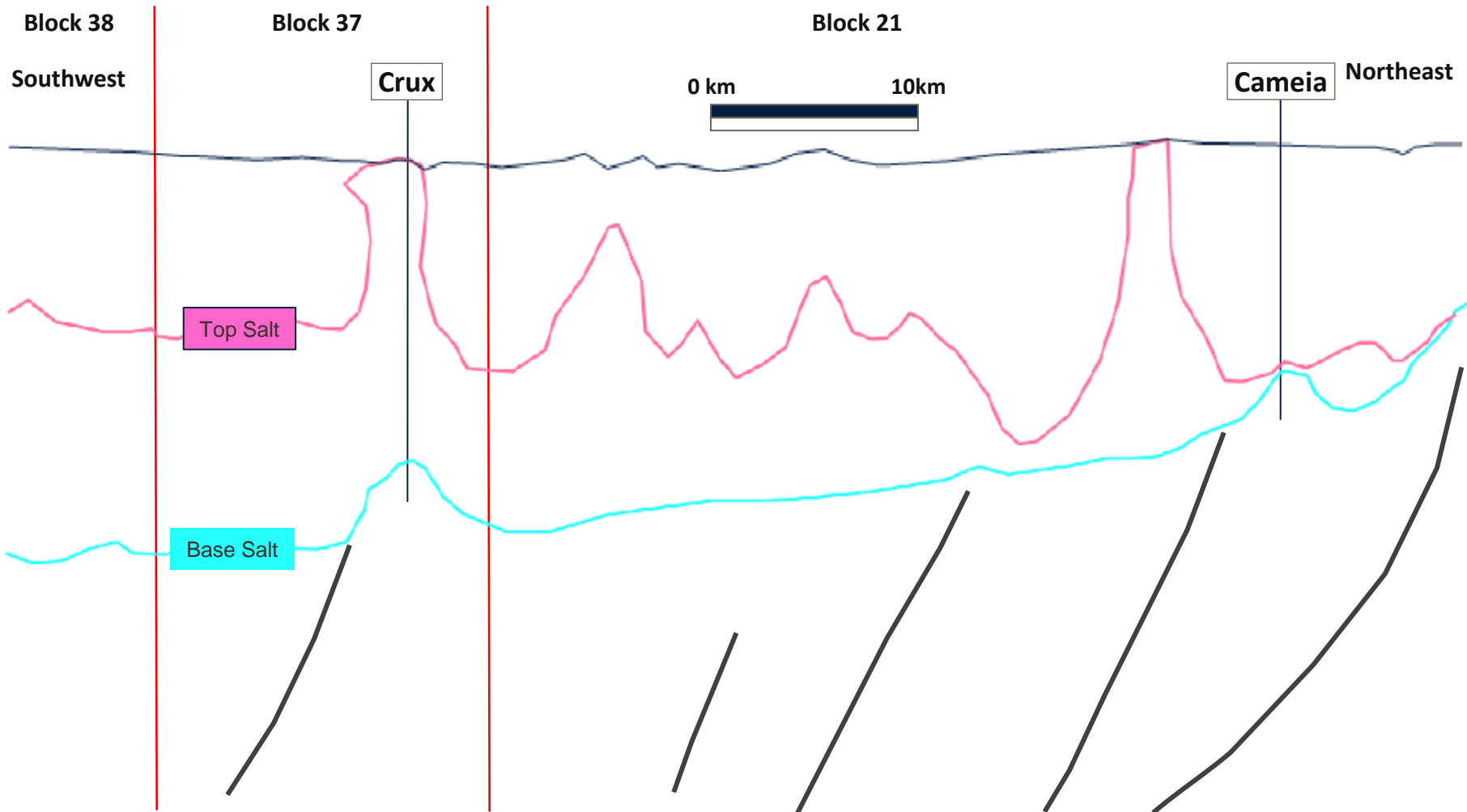


- Prospect Maturation mainly carried out using the WesterGeco Vintage 3D Seismic
- Prospect Refinement performed using the Intermediate products of the TGS new 3D seismic acquisition. Final products delivered in Late October 2013.
- WG and TGS seismic are currently being used for a Bi-Azimuthal Seismic reprocessing taking advantage of the different shooting directions (→).

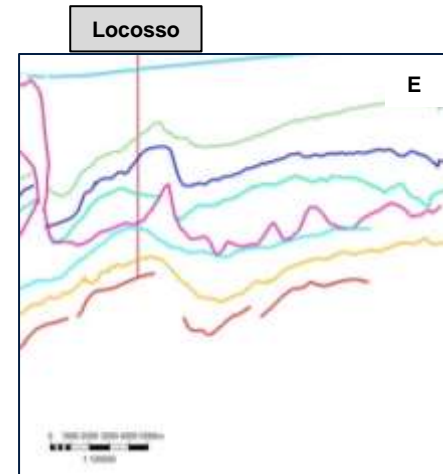
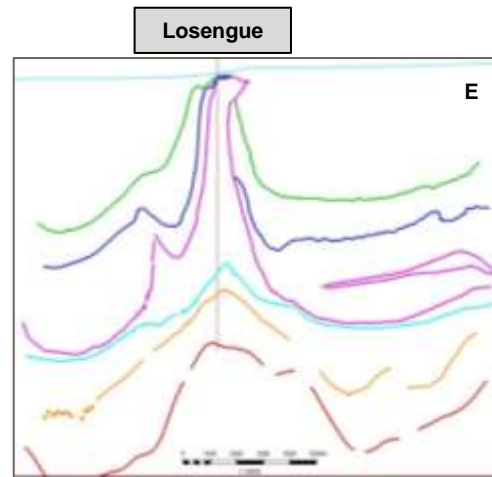
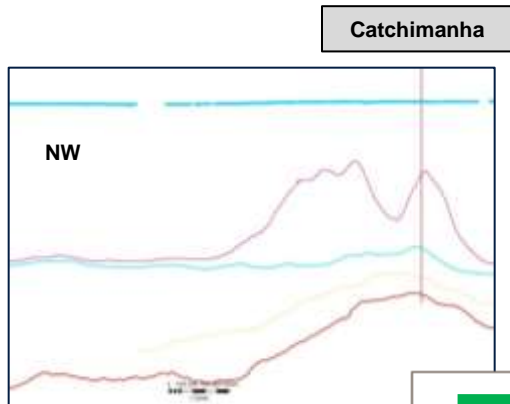
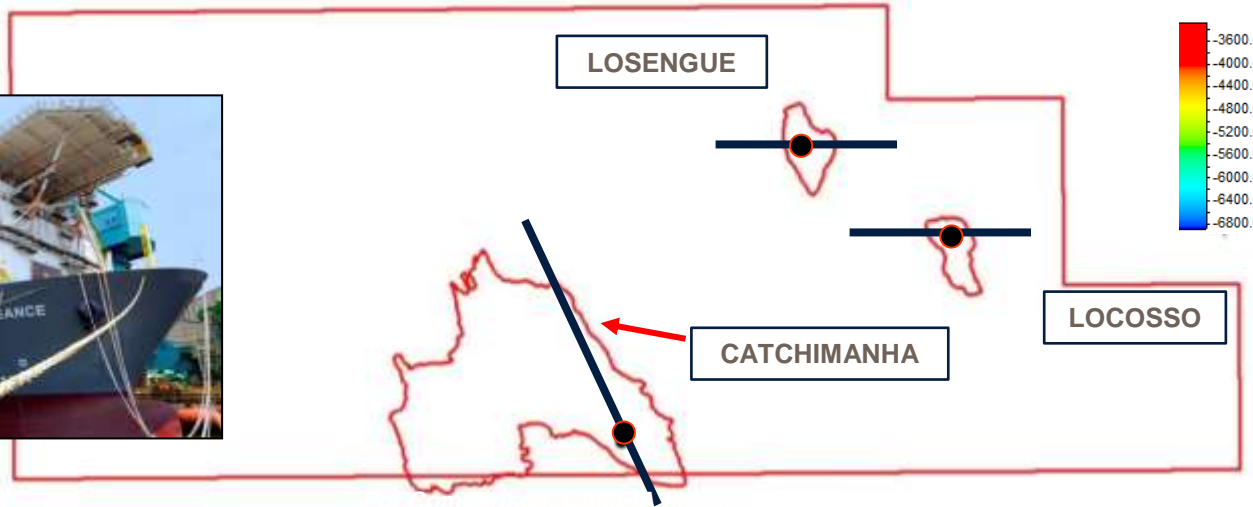
Stratigraphic Chart



Angola: Block 37 - Crux Prospect



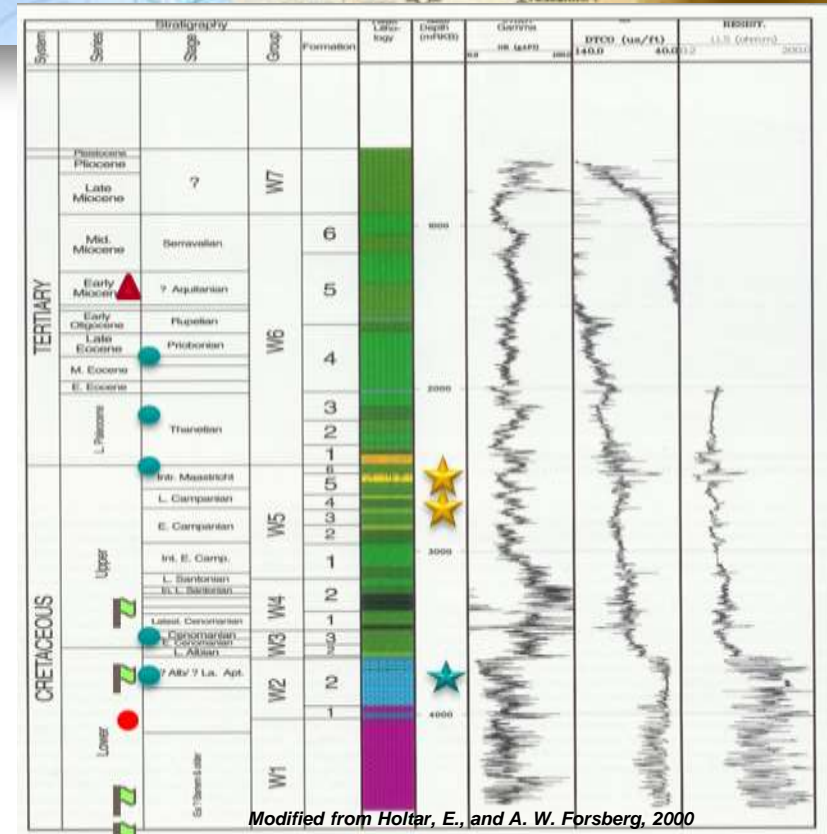
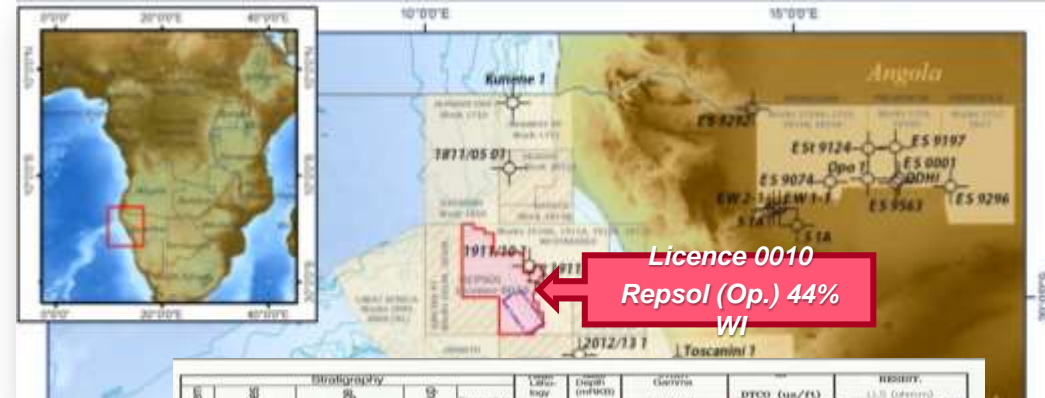
Angola: Block 22



- █ Top Eocene
- █ Top Albian
- █ Top Salt
- █ Base Salt
- █ Base Sag

Repsol in Namibia

- Fairly underexplored margin
- Recently Namibia and South Africa have seen entry of big players.
- Repsol: License 0010 (11,637 km²)
- Located offshore northern Namibia (Walvis Basin).
- Repsol started in Dec. 2012 as operator.
- First exploratory (deep water) well planned for 2Q-2014: Welwitschia-1 on Delta prospect.



North Namibia Petroleum System

- Source Rock Interval
- Regional Seal
- Kudu Gas Field
- Potential Reservoir

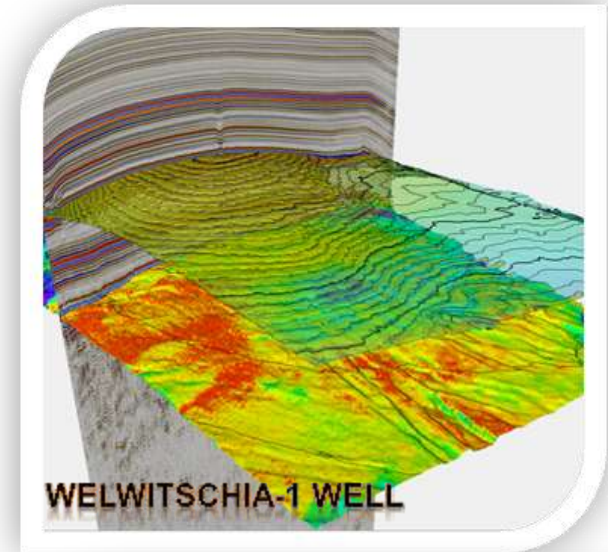
Delta Structure Targets

- Late Cretaceous turbidites (Main target)
- Albian Carbonates (Contingent target)

Modified from Holtar, E., and A. W. Forsberg, 2000

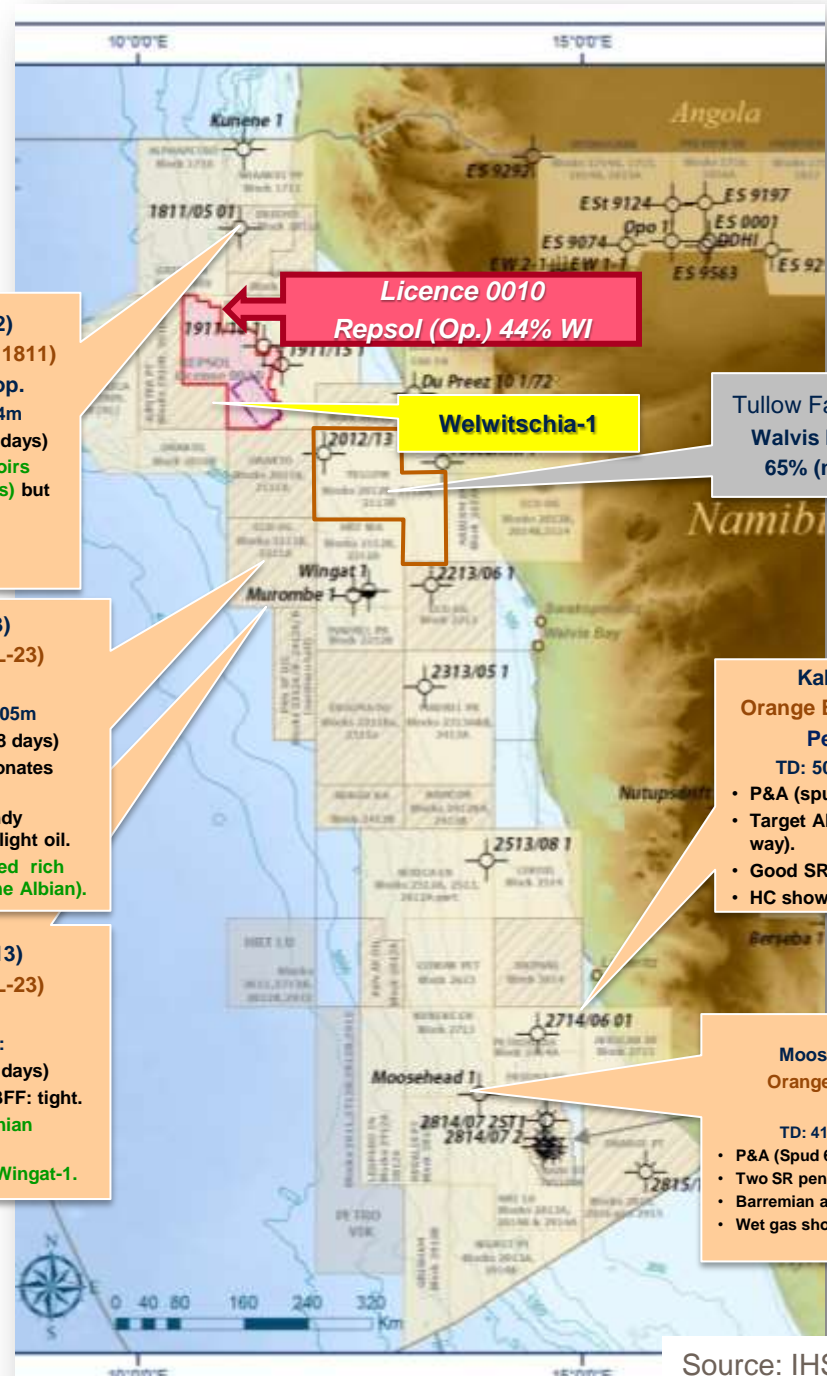
Repsol in Namibia

- License 0010: marks the entry of Repsol in Namibia as part of an effort of increase the Atlantic margin hydrocarbon exploration in high potential areas.
- Carefully selected based on regional and detailed G&G studies that incorporate extensive in-house knowledge related to Atlantic margin in both African and America´s sides: high reward license with SR in oil generation window and very large structural traps.
- Ready-to-drill: ongoing preparations to drill in 2Q-2014 with a secured last generation newbuilt UDW rig.
- Substantial exploratory follow-up within the license (at least three additional large opportunities).
- Considered as an unexplored play: Tapir South-1 well (Chariot, 2012) is not an analog: different hydrocarbon sourcing and trap style. Recently drilled wells by HRT in Walvis basin confirm presence of rich SR in the oil window.



Recent Exploratory Activity in Namibia

- ✓ None of the exploratory wells drilled in the Walvis Basin have investigated the Welwitschia-1 play (Cretaceous turbidites within a four-way closure). Nevertheless:
- ✓ They confirm a rich SR within the oil window.
- ✓ They confirm the presence of Cretaceous turbidites with very good reservoir quality.



Tapir South (2012)
 Namibe Basin (Block 1811)
 Chariot (Enigma) op.
 TD: 4879m / WD: 2134m

- P&A (spud 5 April - 46 days)
- Found excellent reservoirs (Cretaceous sandstones) but water wet. Presumably stratigraphic trap.
- No SR information.

Wingat-1 (2013)
 Walvis Basin (PEL-23)
 HRT op.
 TD: 5000m / WD: 1005m

- P&A (spud March 25 - 68 days)
- Main target Albian carbonates tight.
- Thin bedded deeper sandy reservoirs saturated by light oil.
- Found two well developed rich SR in the oil window (one Albian).

Murombe-1 (2013)
 Walvis Basin (PEL-23)
 HRT op.
 TD: 5729m / WD:

- P&A (spud: 1 June - 62 days)
- Main target Barremian BFF: tight.
- Secondary target (Santonian turbidites): water wet
- Encounter same SR as Wingat-1.

Tullow Farmed-In (2013)
 Walvis Basin (PEL-23)
 65% (new operator)

Kabeljou (2012)
 Orange Basin (Block 2714)
 Petrobras op.
 TD: 5000m / WD: 377m

- P&A (spud 27 July- 44 days).
- Target Albian deltaic ss (4-way).
- Good SR penetrated.
- HC shows.

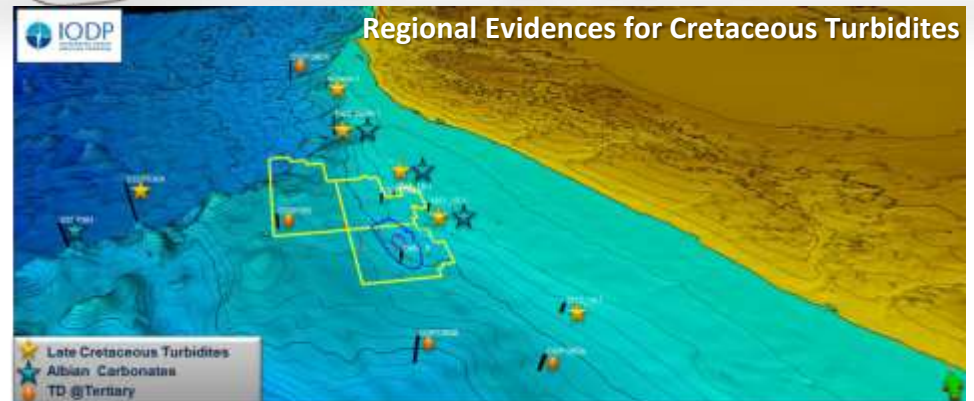
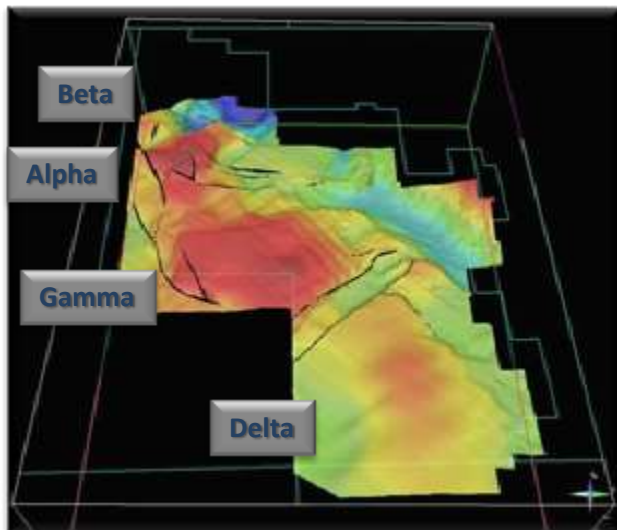
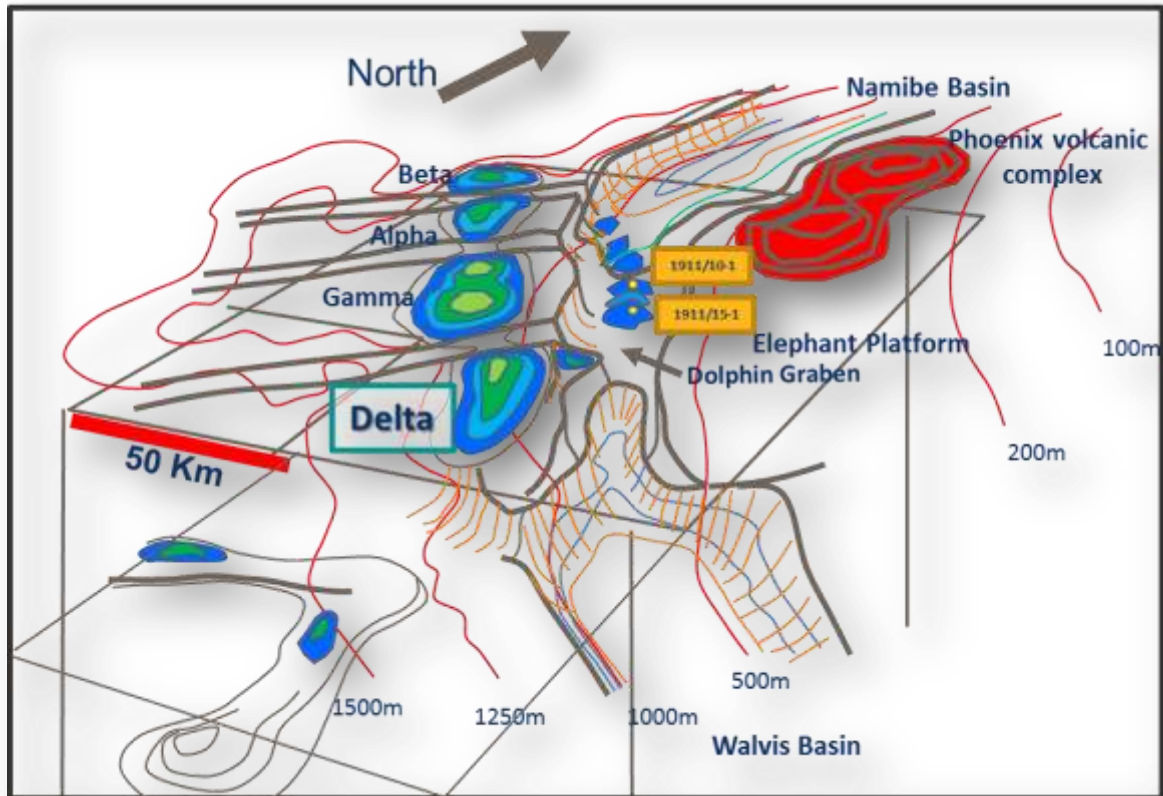
Moosehead-1 (2013)
 Orange Basin (PEL-24)
 HRT op.
 TD: 4170m / WD: 1716m

- P&A (Spud 6 Aug. - 47 days)
- Two SR penetrated: One Aptian.
- Barremian age carbonates (tight)
- Wet gas shows.

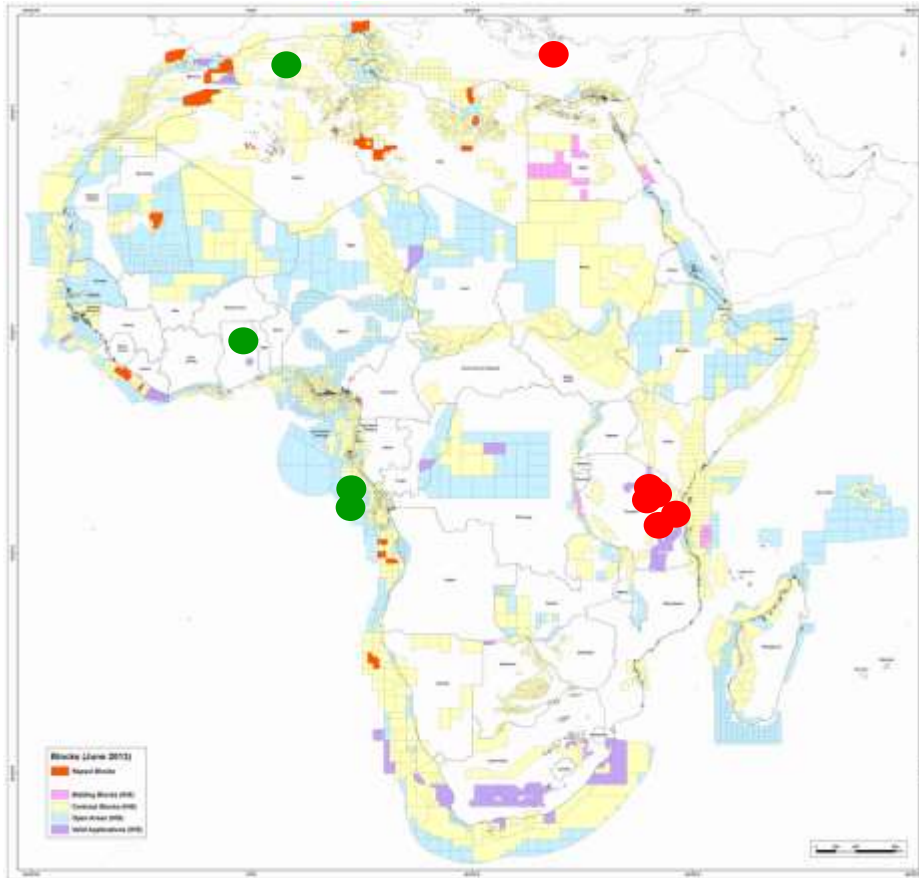
North Namibia Recent Wells	South Tapir	Wingat	Murombe
SR	No info.	Good News	Good news
Reservoir	Good news	Not Relevant	Good news
Trap	No news (Strat. Trap)	Not Relevant	No news (Strat. Trap)
HC shows	No info.	Good News	No info.

Licence 0010 Namibia - Additional Potential

- ✓ Delta Structure area exceeds 1000 Km² at maximum closure.
- ✓ At least three additional large 4-way closures, in-trend with the Delta structure, present in licence 0010.
- ✓ Carbonate Albian play underneath Maastrichtian Turbidite play.
- ✓ Additional stratigraphic Late Cretaceous play (turbidites onlapping highs).



2013 Top discoveries



Source: IHS

TOP TEN OIL DISCOVERIES IN 2013

Country	Discovery Name	HC Type	Current Operator
United States	Coronado	Oil	UNION OIL
Canada	Bay du Nord	Oil	STATOIL
United States	Gila	Oil	BP E&P
Iraq	Taza 1ST1	Oil,gas	OIL SEARCH
Algeria	Hassi Touimet Sud 1	Oil,gas	SONATRACH
United States	Phobos	Oil	ANADARKO
Nigeria	Ogo 1	Oil,gas,cond	OPTIMUM
Kazakhstan	Zhambyl	Oil	ZHAMBYL
Angola	Lontra 1	Gas,condensate,oil	COBALT
Angola	Mavinga 1	Oil,gas	COBALT

Source:IHS

TOP TEN GAS DISCOVERIES IN 2013

Country	Discovery Name	HC Type	Current Operators
Mozambique	Agulha 1	Gas	ENI EA
Tanzania	Tangawizi 1	Gas	STATOIL TZ
Angola	Lontra 1	Gas,condensate,oil	COBALT
Mozambique	Orca 1	Gas	ANADARKO
Tanzania	Mronge 1	Gas	STATOIL TZ
Israel	Karish 1	Gas	NOBLE MD
Malaysia	B14 1	Gas	NEWFIELD S
Tanzania	Ngisi 1	Gas	BG
Indonesia	Merah 1XST2	Gas	GENTING KS
Egypt	Salamat 1	Gas,condensate	BP OIL

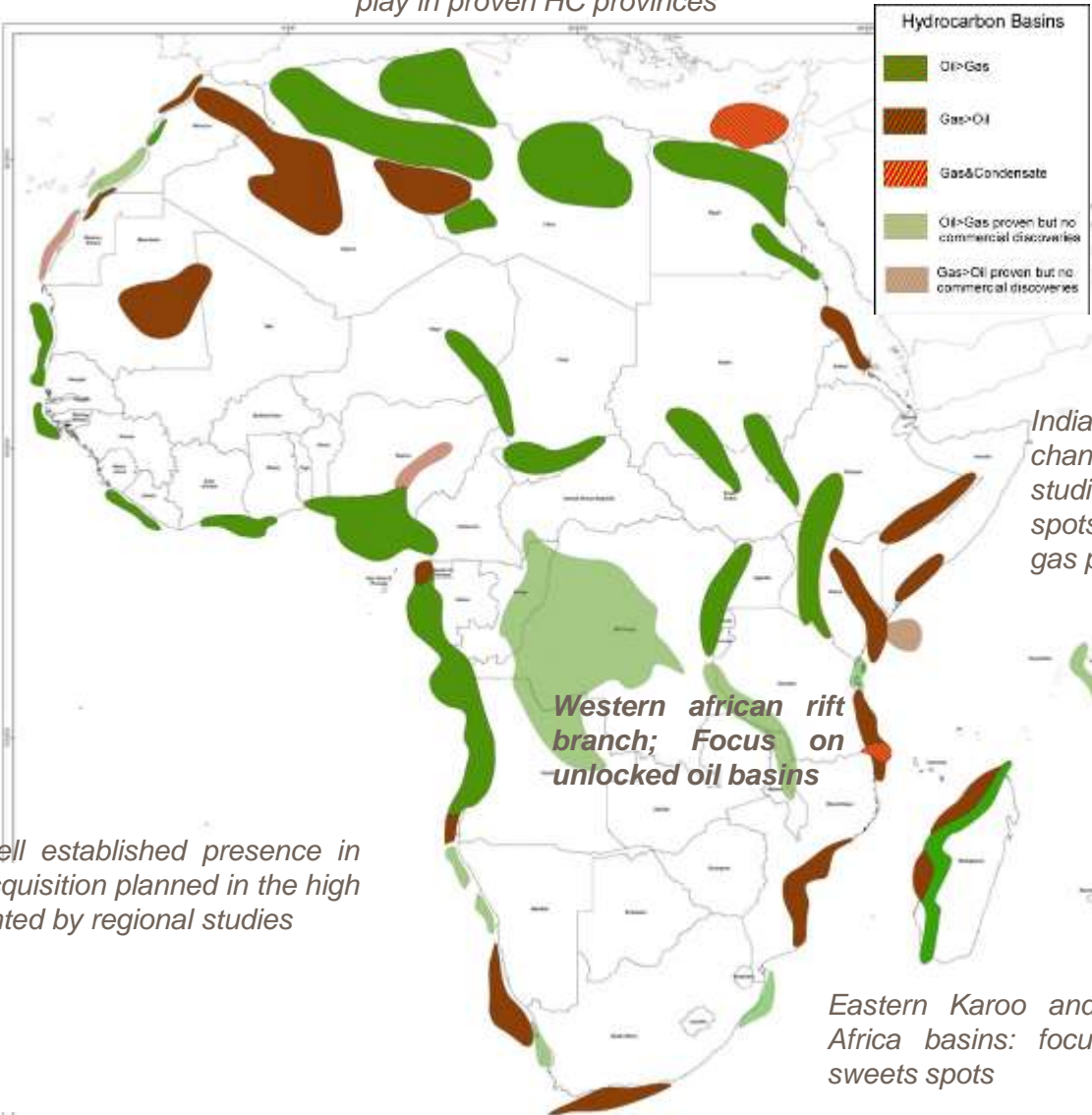
Source:IHS

11 of the 2013 top twenty oil & gas discoveries in the world have been made in Africa. Several of these discoveries in sedimentary basins already considered as mature

2014 New Ventures Focus strategy

Mediterranean basins: looking for new play in proven HC provinces

Northern segment: focus on oil sweet spots and low risk/high reward gas play



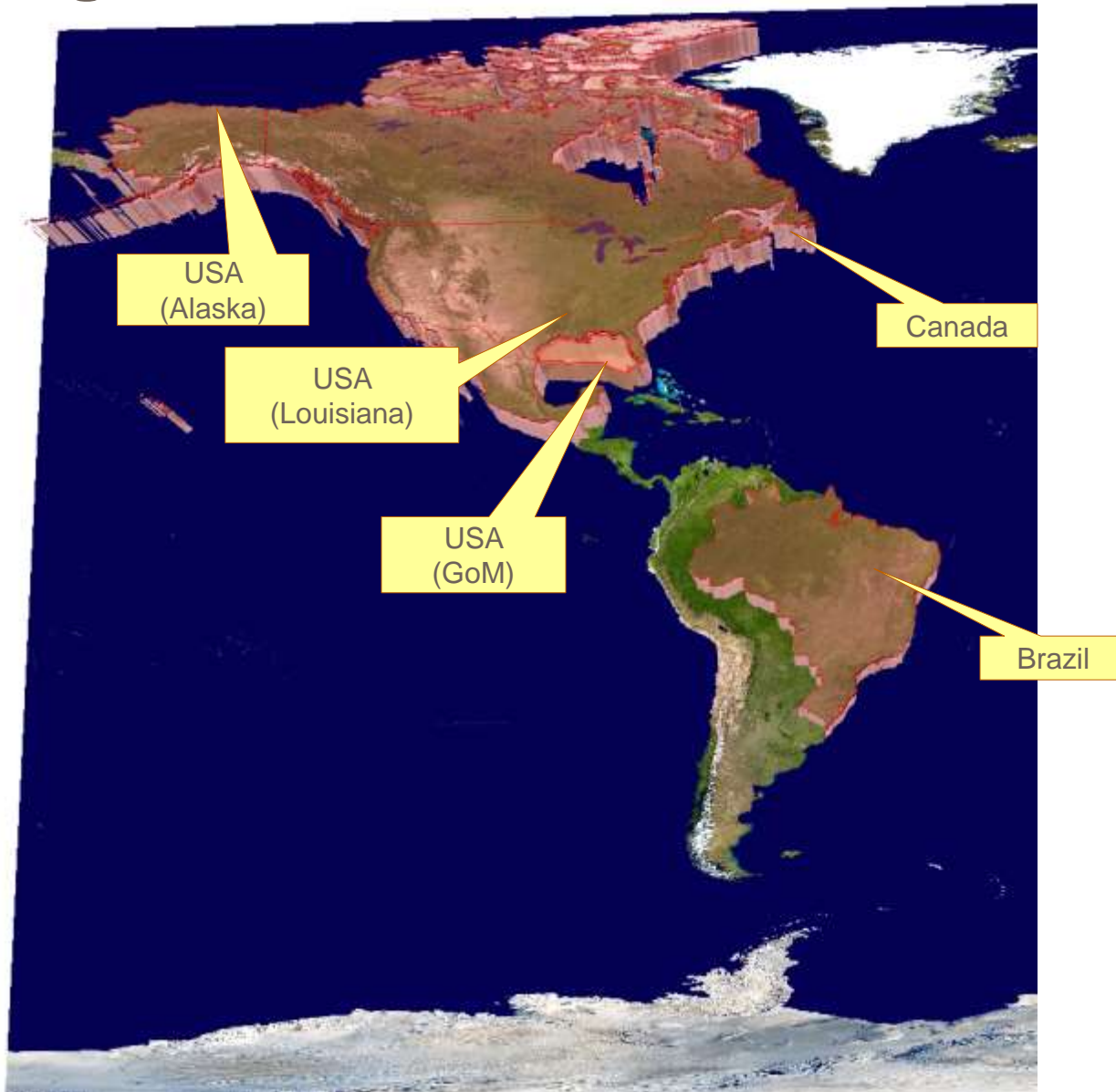
Southern segment: well established presence in key basins and new acquisition planned in the high potential areas highlighted by regional studies

North America & Brazil

Roberta Camuffo

5

The Region



Repsol Alaska Portfolio

North Slope: 247 Blocks, WI 70%, Operator
Chukchi Sea: 93 Blocks, WI 100%, Operator
Beaufort Sea: 67 Blocks, WI 20%, Non-Operator



Chukchi Sea

Beaufort Sea

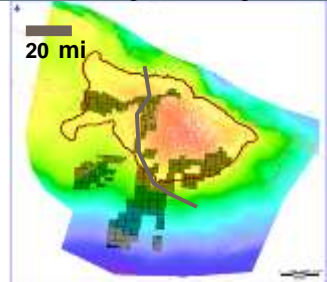
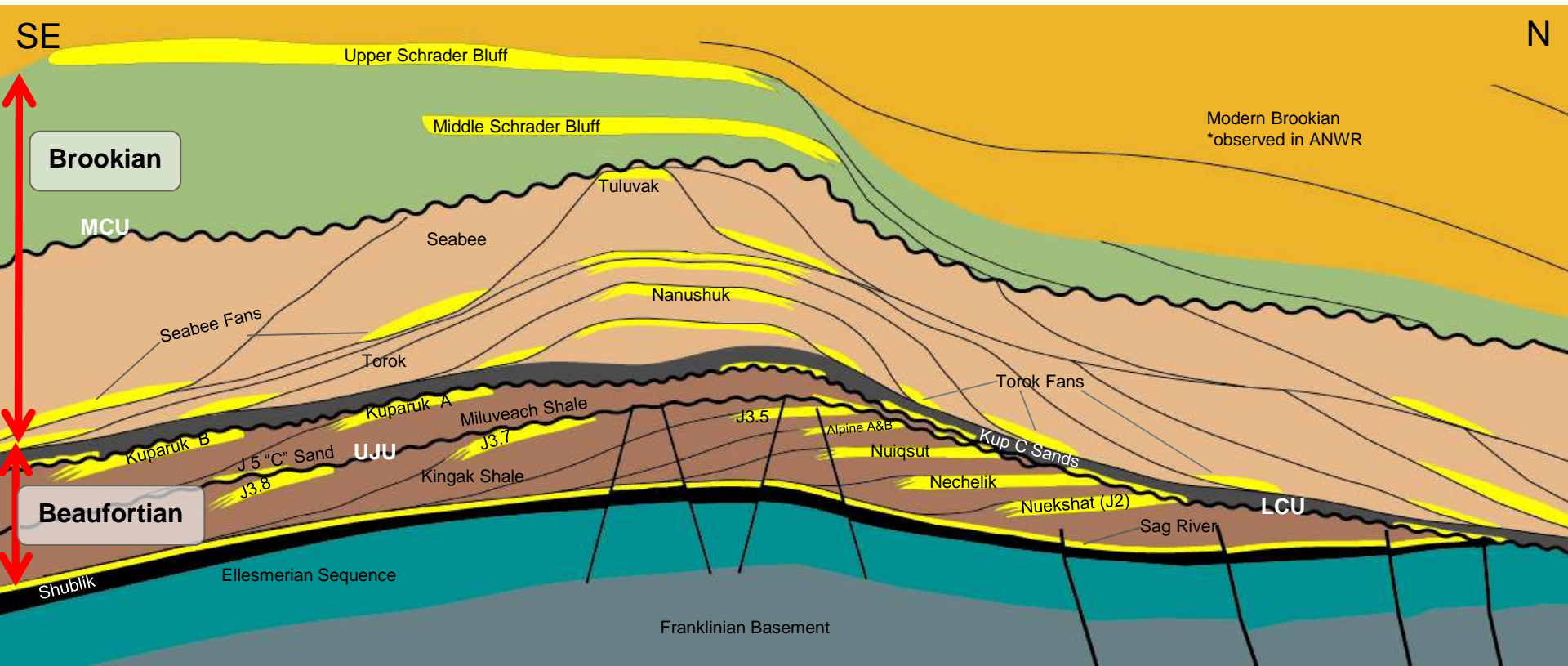
NPRA

TAPS

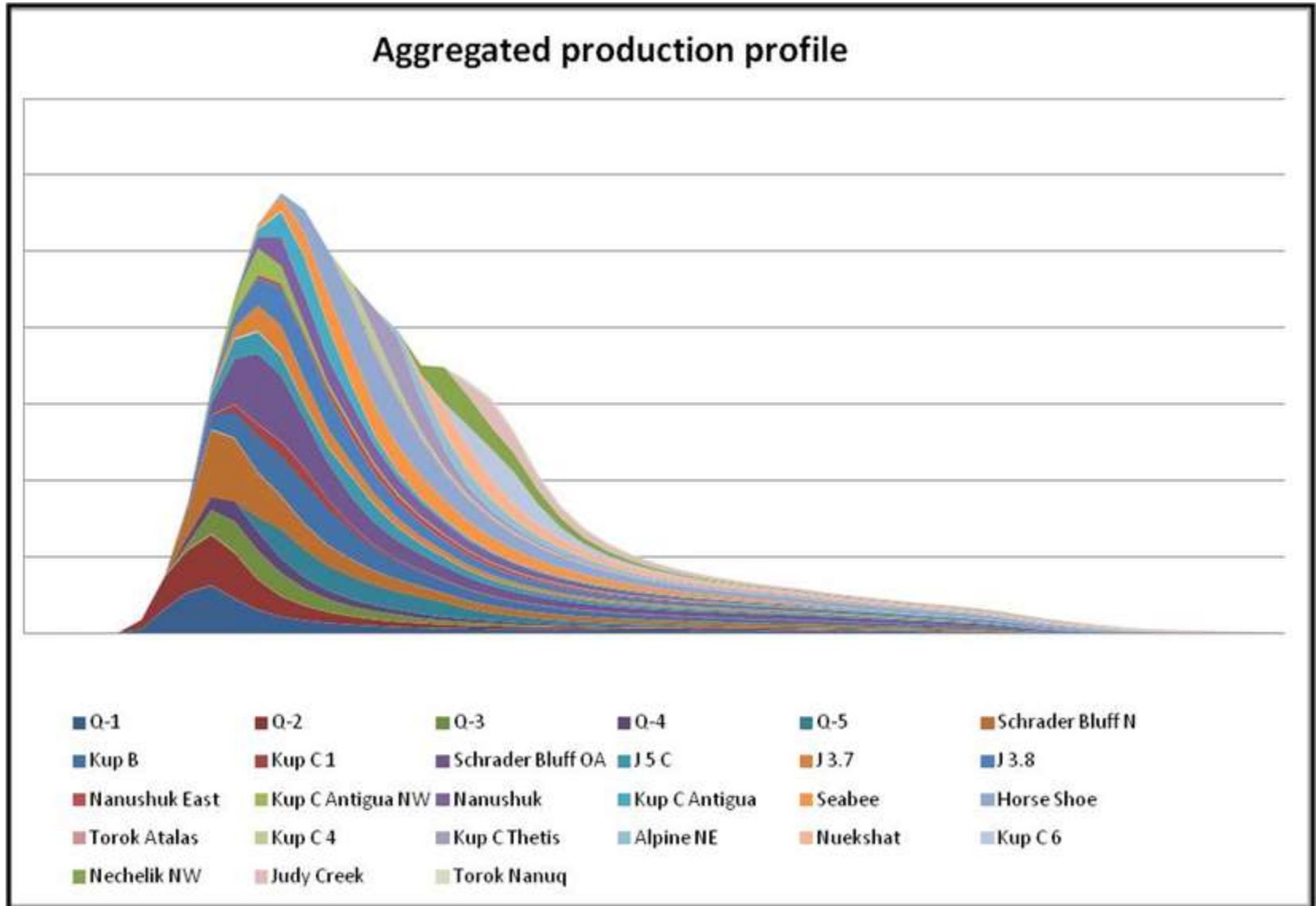
- Legend**
- North Slope Fields
 - Repsol Operated
 - Repsol Operated Chukchi Sea
 - Repsol Non-operated Beaufort Sea



North Slope Alaska Multi-Target Project

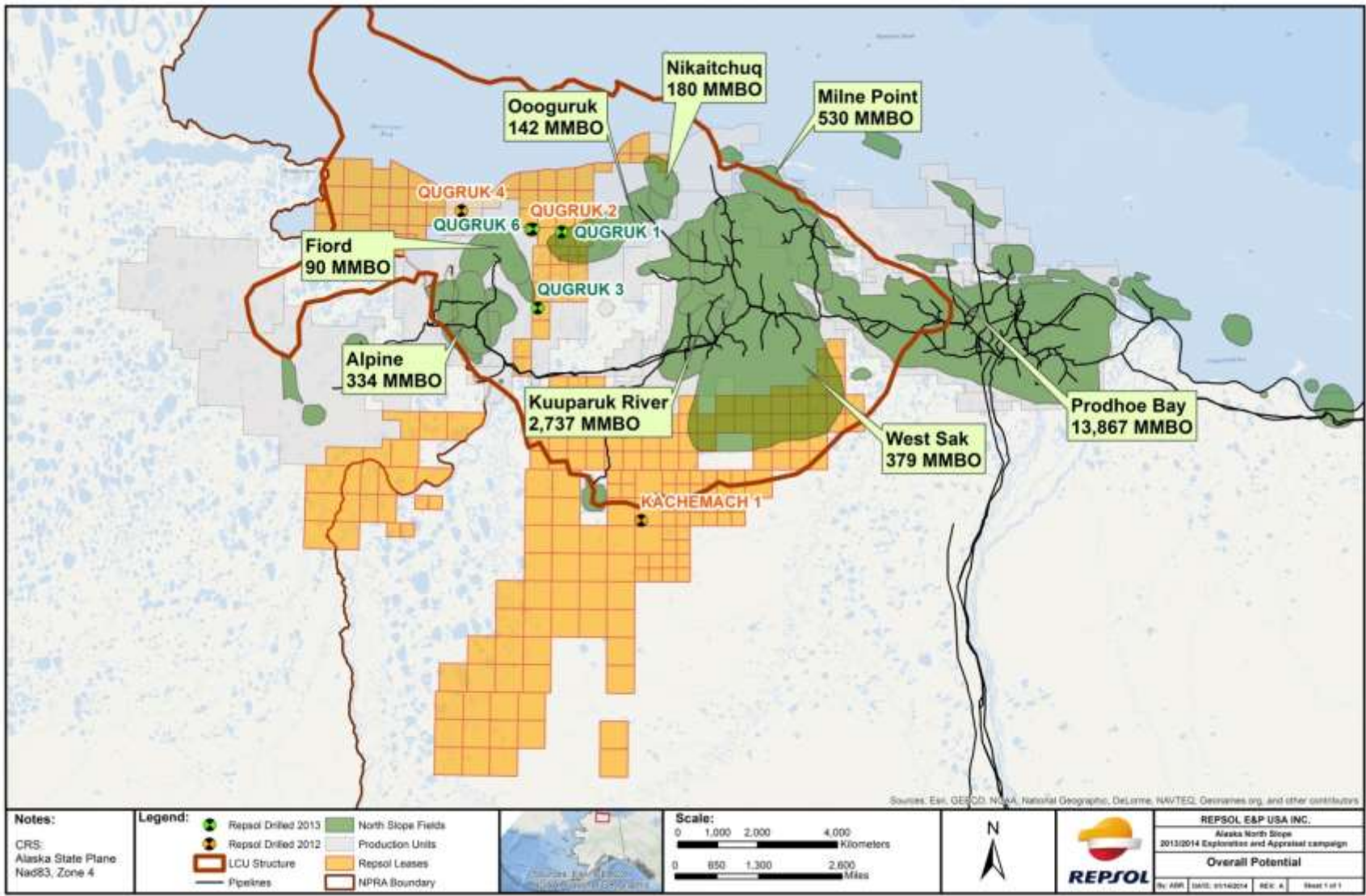


Risked Production profile



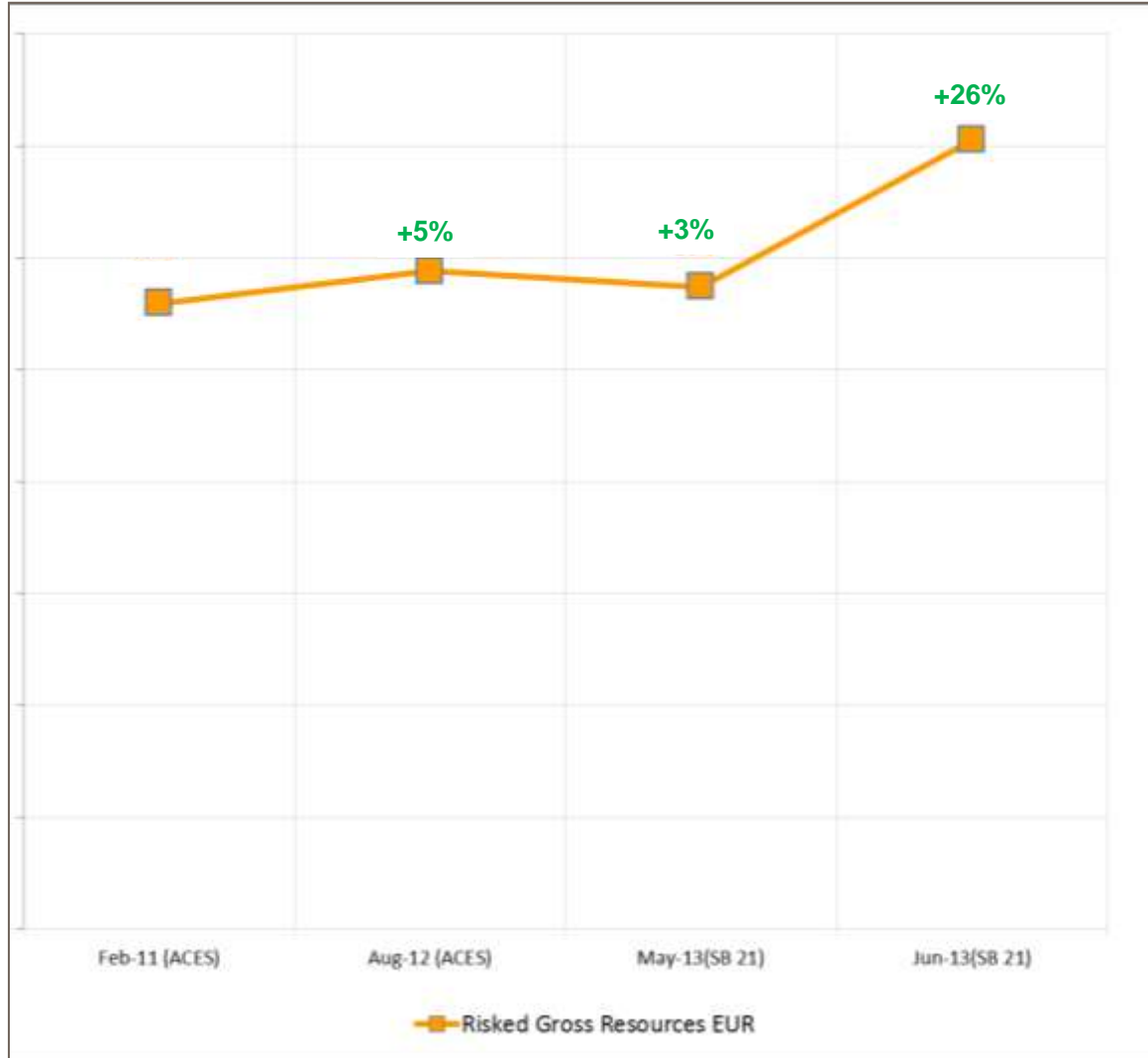
Repsol North Slope Acreage, Location Mapwells drilled

Source: Repsol & Woodmac



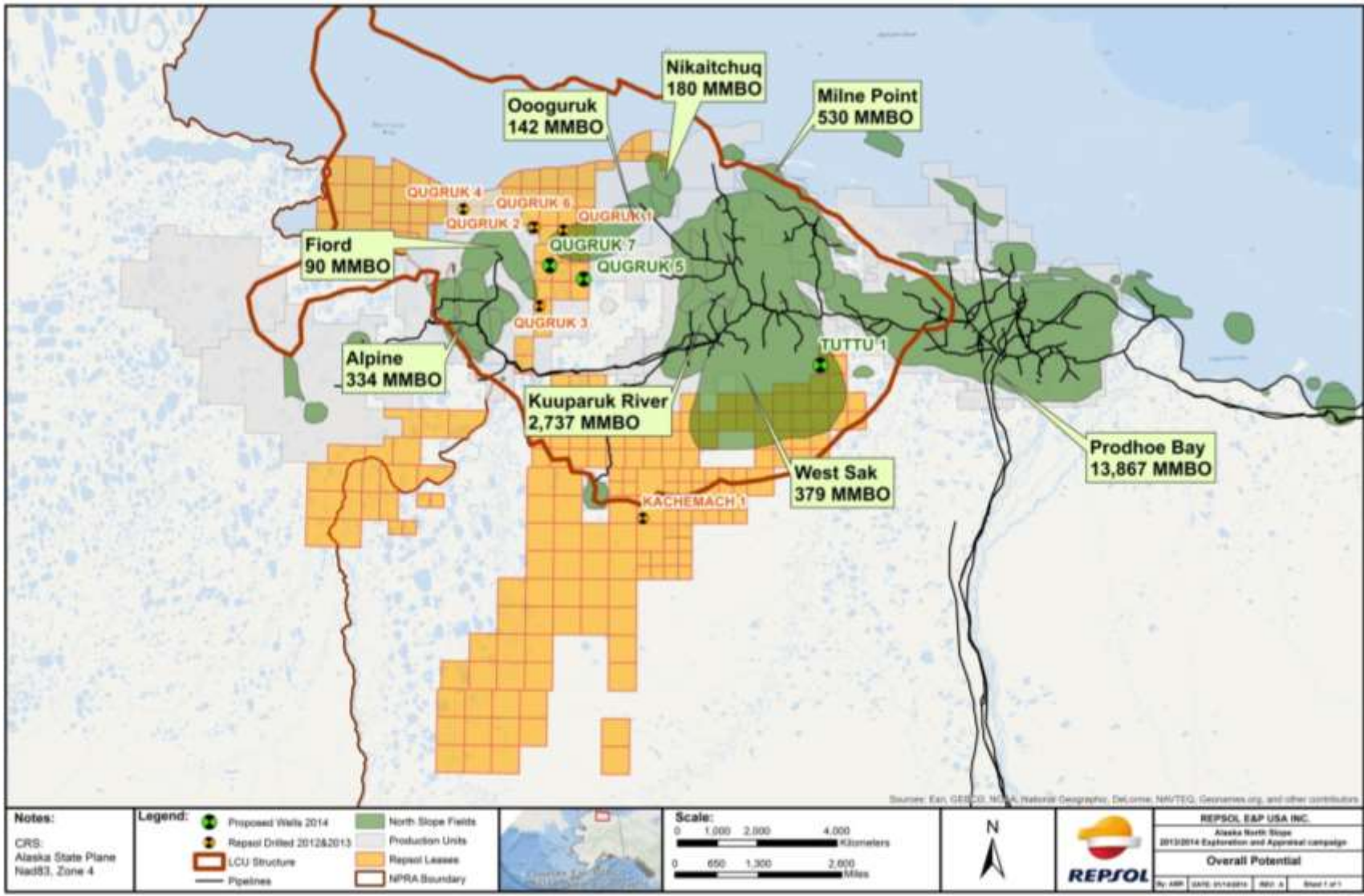
Alaska North Slope

Resources Evolution considered in the economics exercise



Repsol North Slope Acreage, Location Map 2013-2014 drilling campaign

Source: Repsol & Woodmac



2014 Alaska North Slope Planned Activities



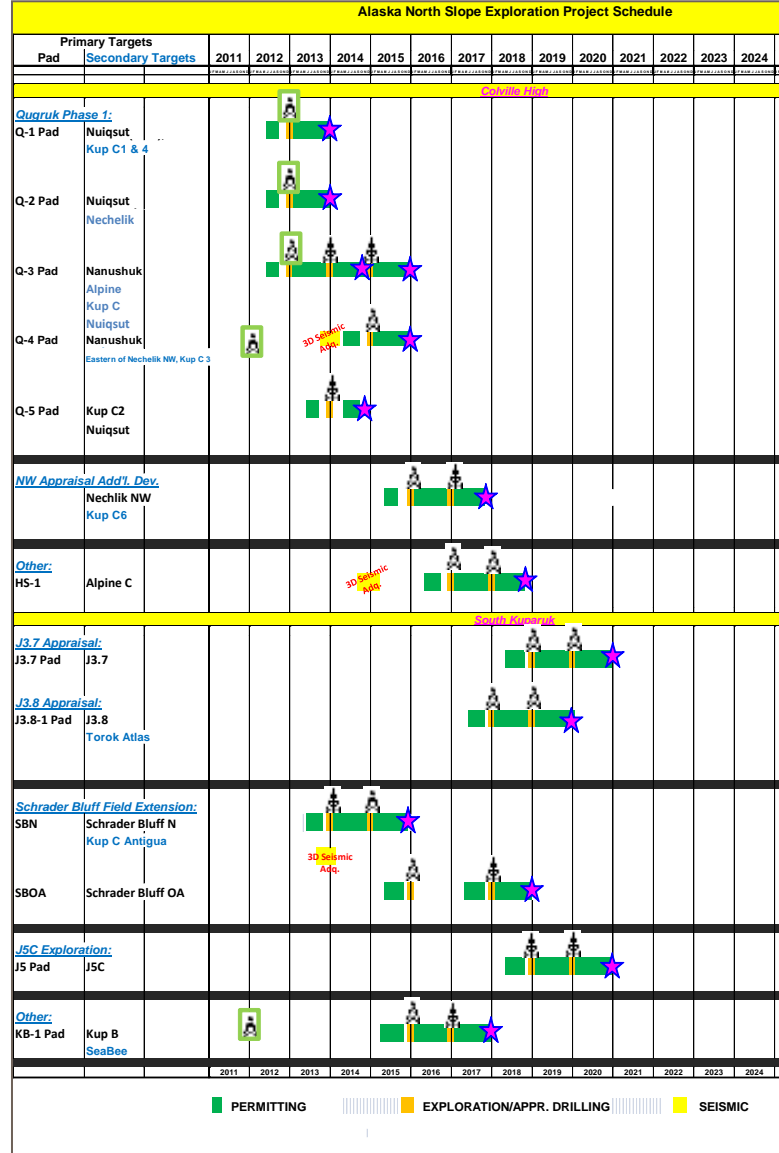
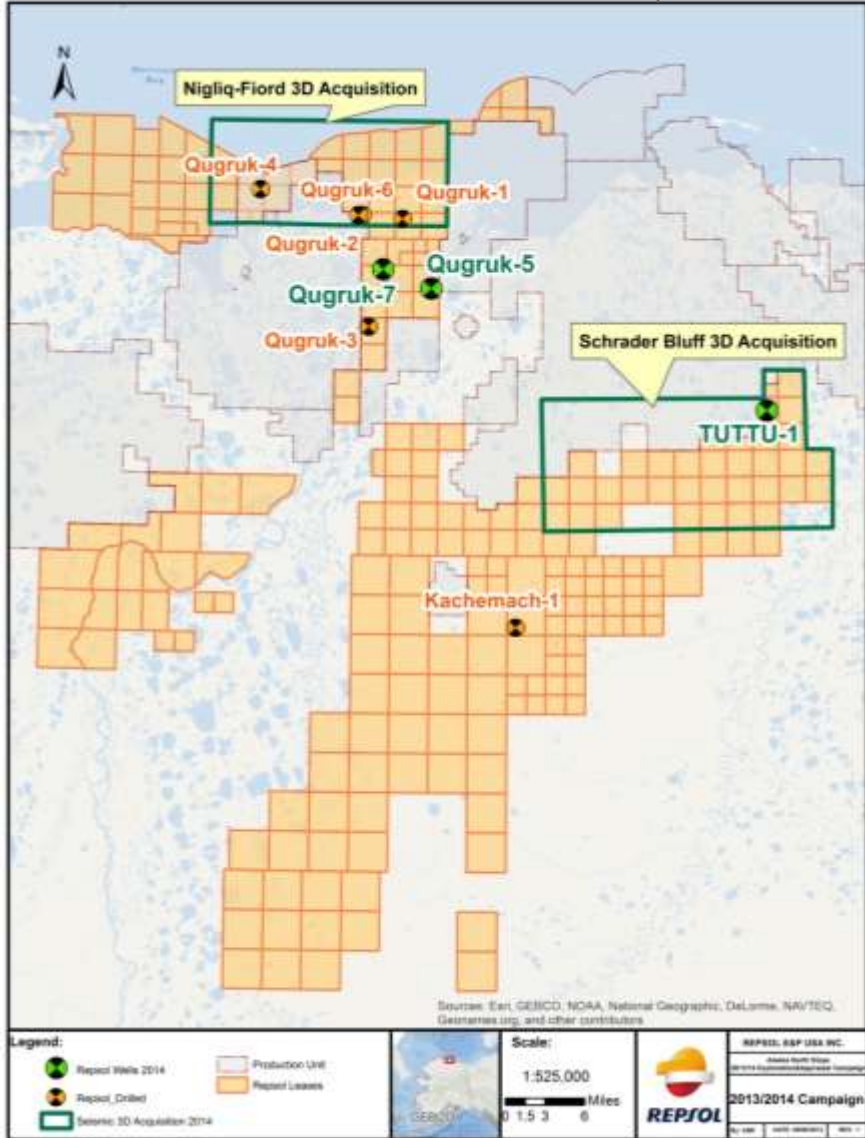
- Qugruk -5, Qugruk-7 & Tuttu -1
- 3D seismic acquisition

Project	Area	2014	Jan	Feb	Mar	Apr	May	Jun
Q-5	Alaska N. Slope	Ice Road & Ice Pad	█					
Q-5	Alaska N. Slope	Drilling	↪ █	█				
Q-5	Alaska N. Slope	DST			↪ █			
Q-7	Alaska N. Slope	Ice Road & Ice Pad	█					
Q-7	Alaska N. Slope	Drilling		↪ █	█			
Q-7	Alaska N. Slope	DST			↪ █			
Tuttu-1	Alaska N. Slope	Ice Road & Ice Pad	█					
Tuttu-1	Alaska N. Slope	Drilling		↪ █	█			
Seismic	Alaska N. Slope	3D Seismic Acquisition		█	█	█	█	

2013/2014 Campaign



Source: Repsol & Woodmac



Q-3



2012/2013 Campaign



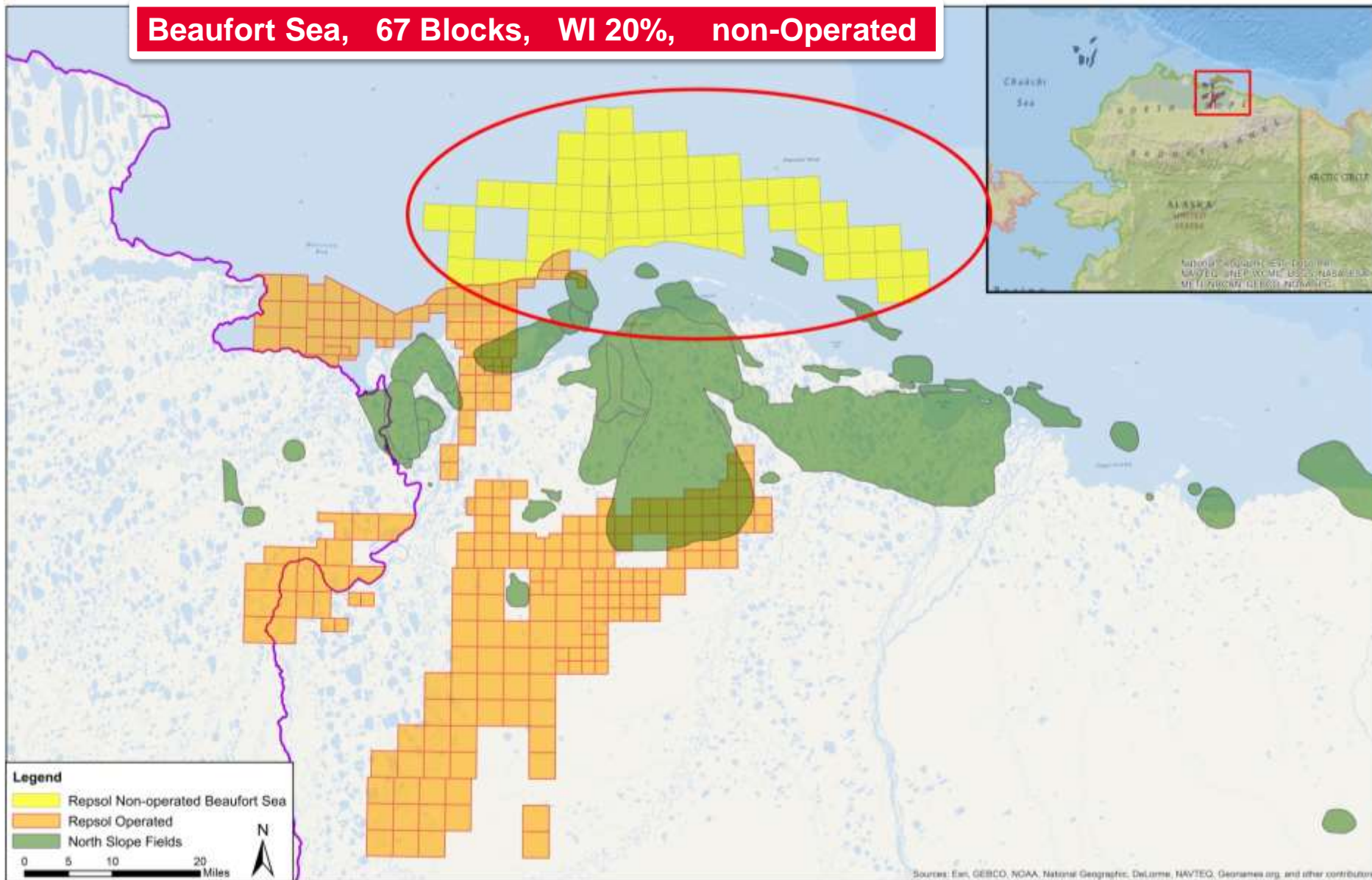
Q-6 DST



Beaufort Sea

Source: Repsol & Woodmac

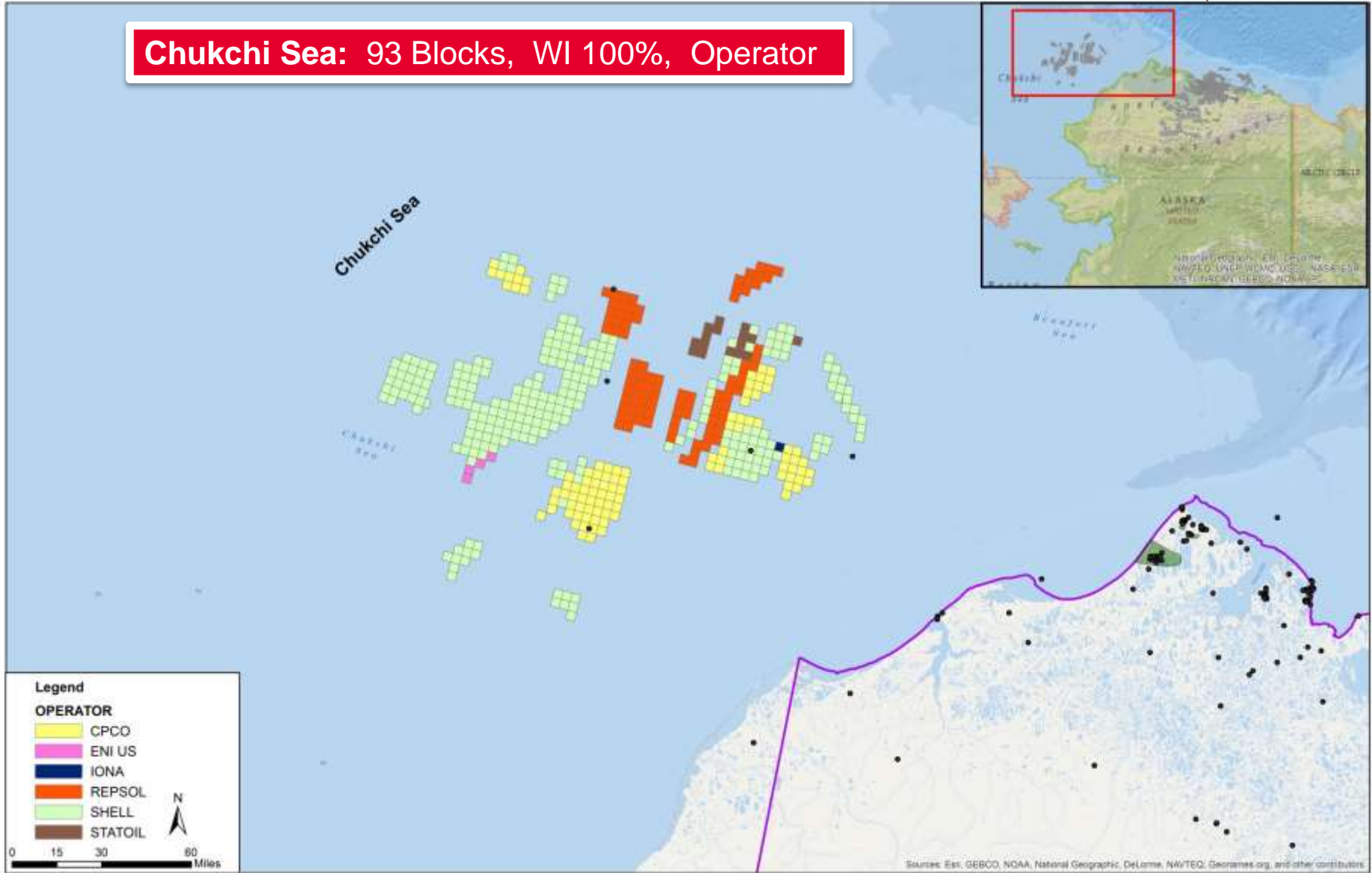
Beaufort Sea, 67 Blocks, WI 20%, non-Operated



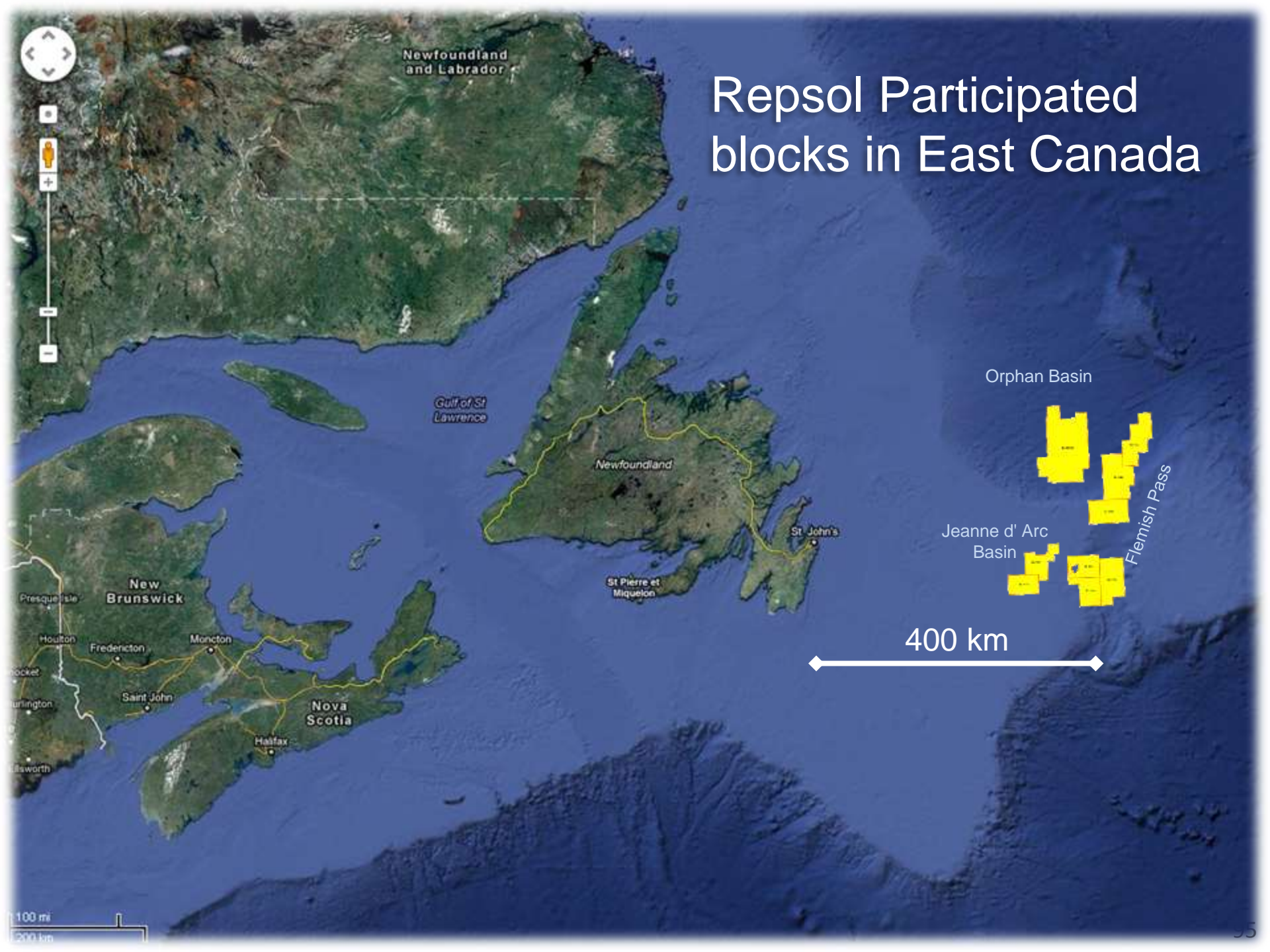
Chukchi Sea

Source: Repsol & Woodmac

Chukchi Sea: 93 Blocks, WI 100%, Operator



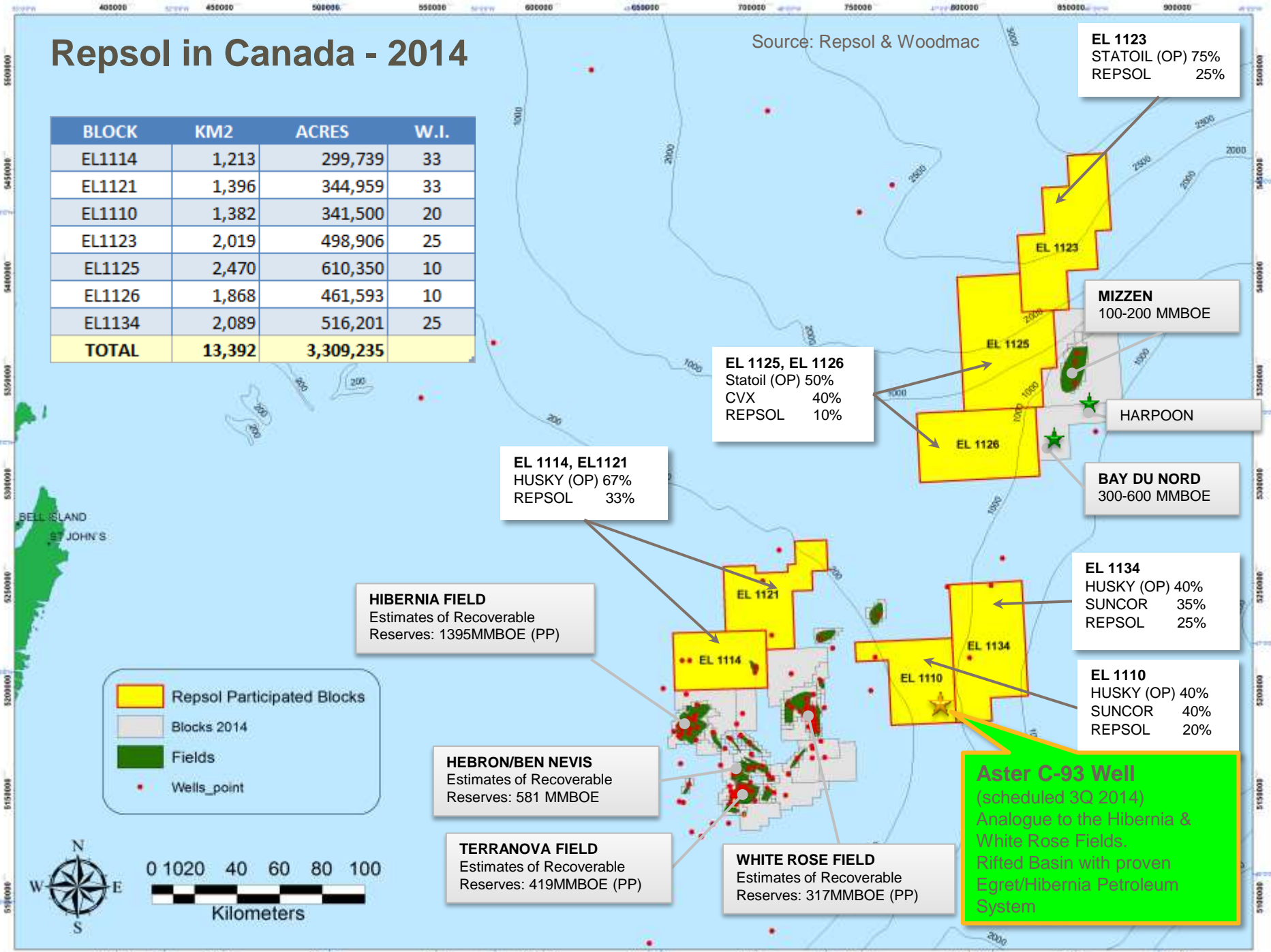
Repsol Participated blocks in East Canada



Repsol in Canada - 2014

Source: Repsol & Woodmac

BLOCK	KM2	ACRES	W.I.
EL1114	1,213	299,739	33
EL1121	1,396	344,959	33
EL1110	1,382	341,500	20
EL1123	2,019	498,906	25
EL1125	2,470	610,350	10
EL1126	1,868	461,593	10
EL1134	2,089	516,201	25
TOTAL	13,392	3,309,235	



EL 1123
 STATOIL (OP) 75%
 REPSOL 25%

MIZZEN
 100-200 MMBOE

HARPOON

BAY DU NORD
 300-600 MMBOE

EL 1134
 HUSKY (OP) 40%
 SUNCOR 35%
 REPSOL 25%

EL 1110
 HUSKY (OP) 40%
 SUNCOR 40%
 REPSOL 20%

EL 1125, EL 1126
 Statoil (OP) 50%
 CVX 40%
 REPSOL 10%

EL 1114, EL1121
 HUSKY (OP) 67%
 REPSOL 33%

HIBERNIA FIELD
 Estimates of Recoverable
 Reserves: 1395MMBOE (PP)

HEBRON/BEN NEVIS
 Estimates of Recoverable
 Reserves: 581 MMBOE

TERRANOVA FIELD
 Estimates of Recoverable
 Reserves: 419MMBOE (PP)

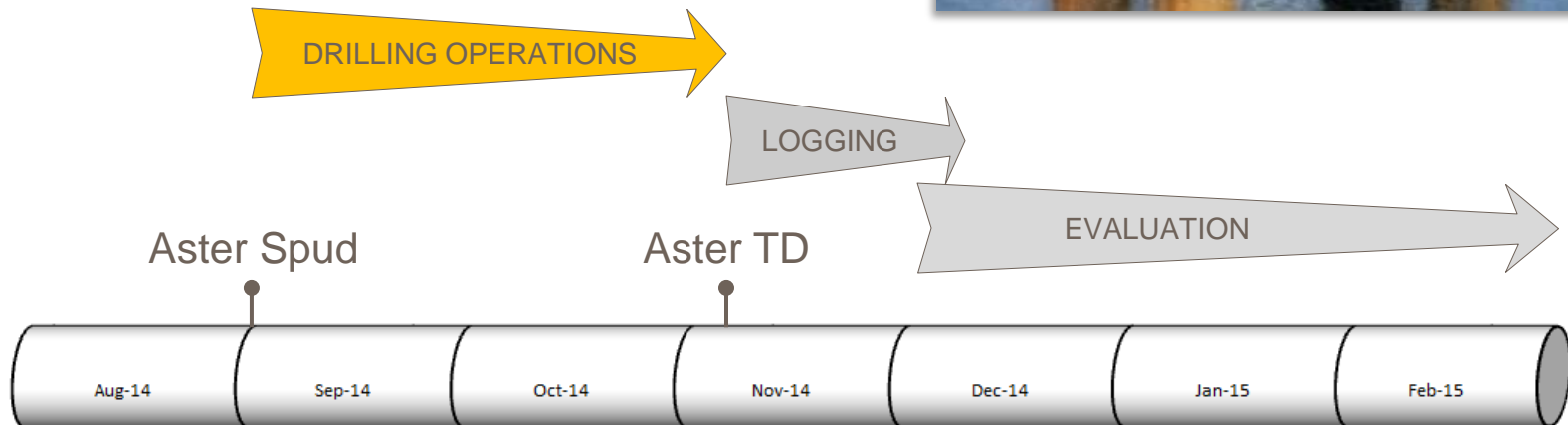
WHITE ROSE FIELD
 Estimates of Recoverable
 Reserves: 317MMBOE (PP)

Aster C-93 Well
 (scheduled 3Q 2014)
 Analogue to the Hibernia &
 White Rose Fields
 Rifted Basin with proven
 Egret/Hibernia Petroleum
 System

Repsol Participated Blocks
 Blocks 2014
 Fields
 Wells_point

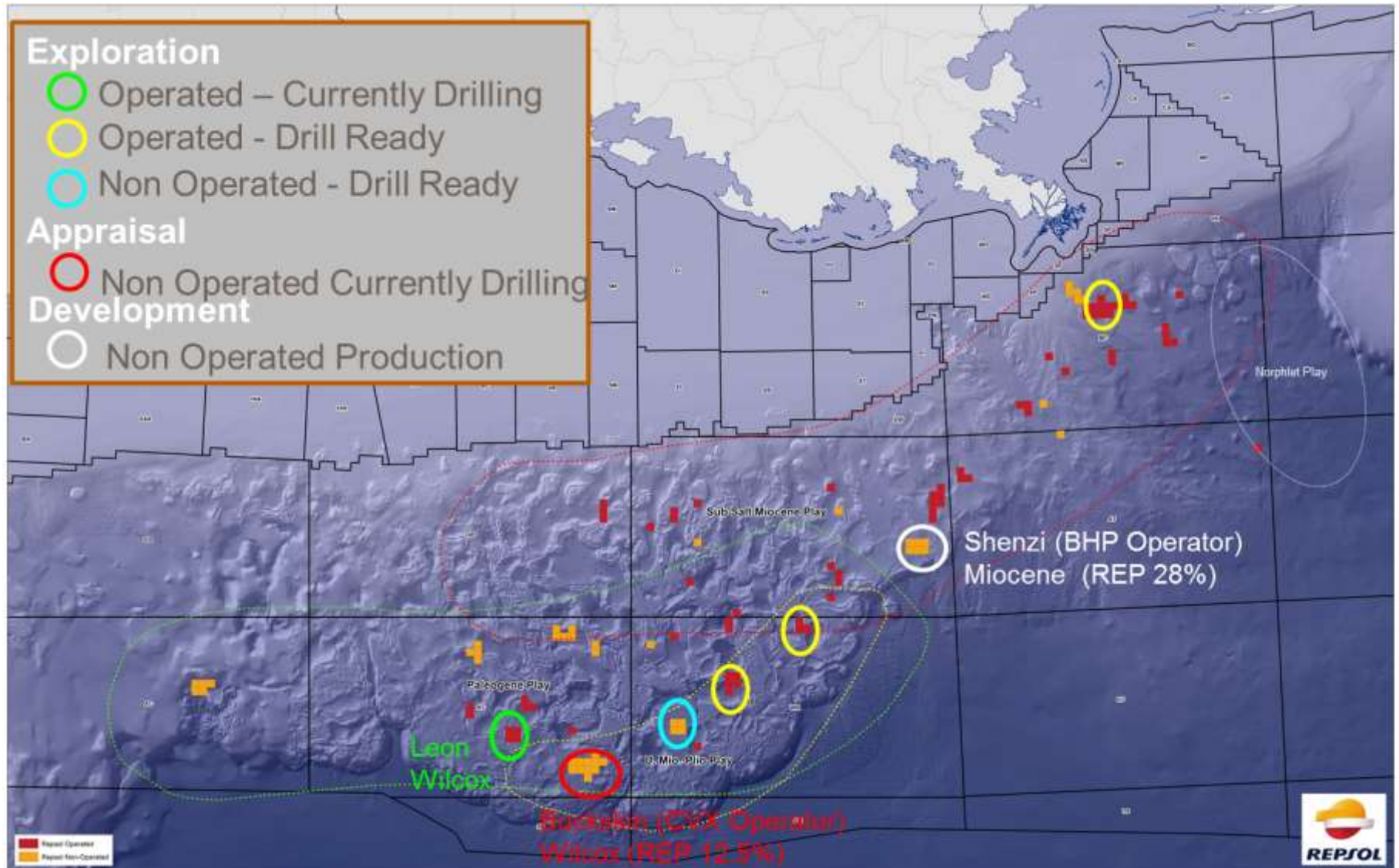
Aster C-93 Exploration Well Schedule

Spud Date: Estimated 3Q 2014
 Rig: Henry Goodrich Semi-sub Rig
 Drilling slot: 98 days (Drilling, Logging and P&A)
 WD: 560 meters
 MD (TVD): 4450 (4450) meters



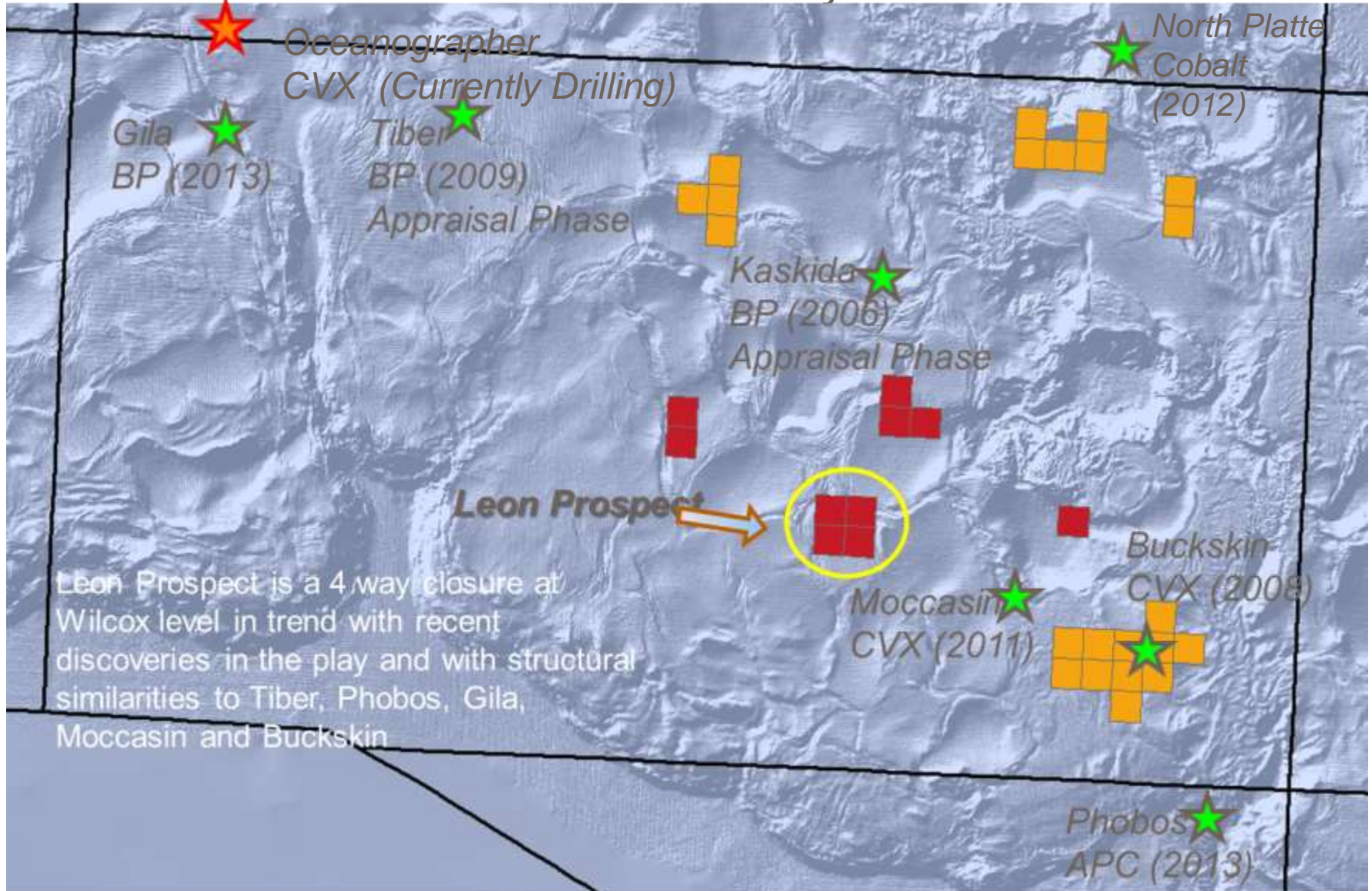
GOM Location Map

Repsol's Position



Keathley Canyon – Wilcox Trend

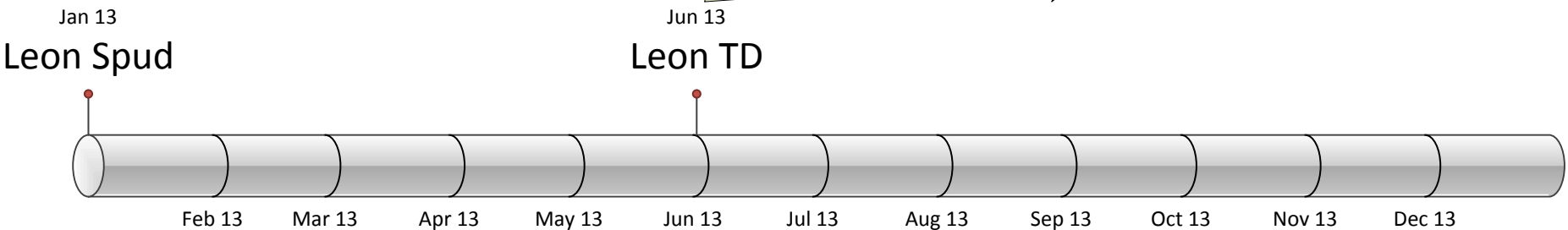
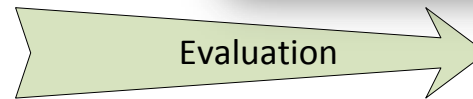
Recent Discoveries and Activity



Leon Prospect

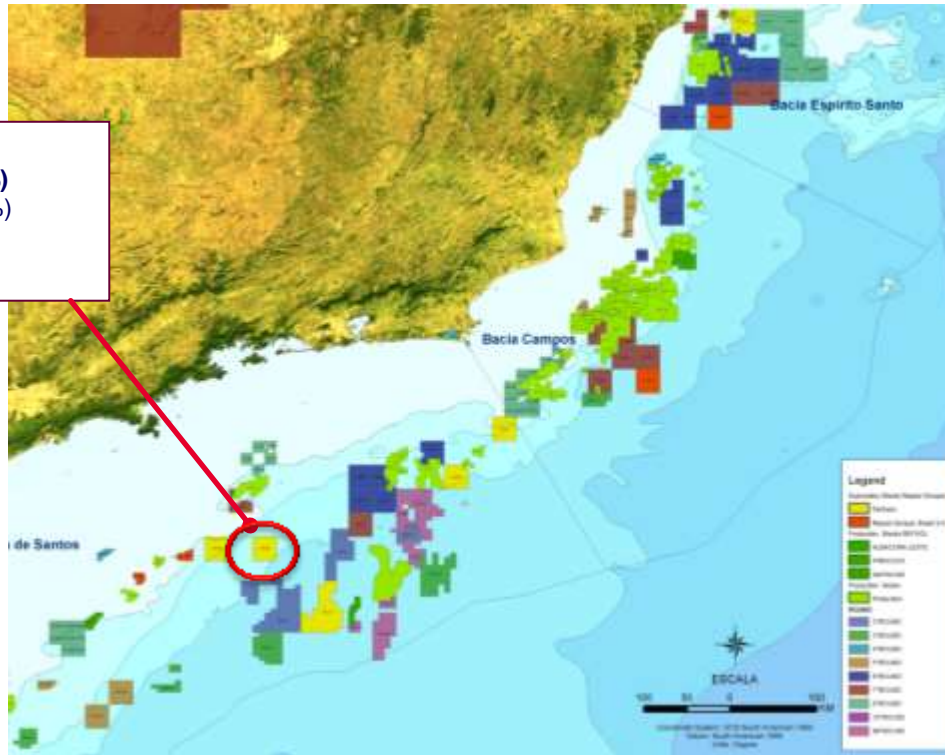
Current Activities and Timeline

Well being drilled with Ensco DS-5
 Well spudded Jan 1st, 2014
 Currently setting 22" casing in Salt



Brazil: Sagitario Discovery

Posted on Feb 26th, 2013



BM-S-50
Petrobras (op. 60%)
 RepsolSinopec (20%)
 BG (20%)

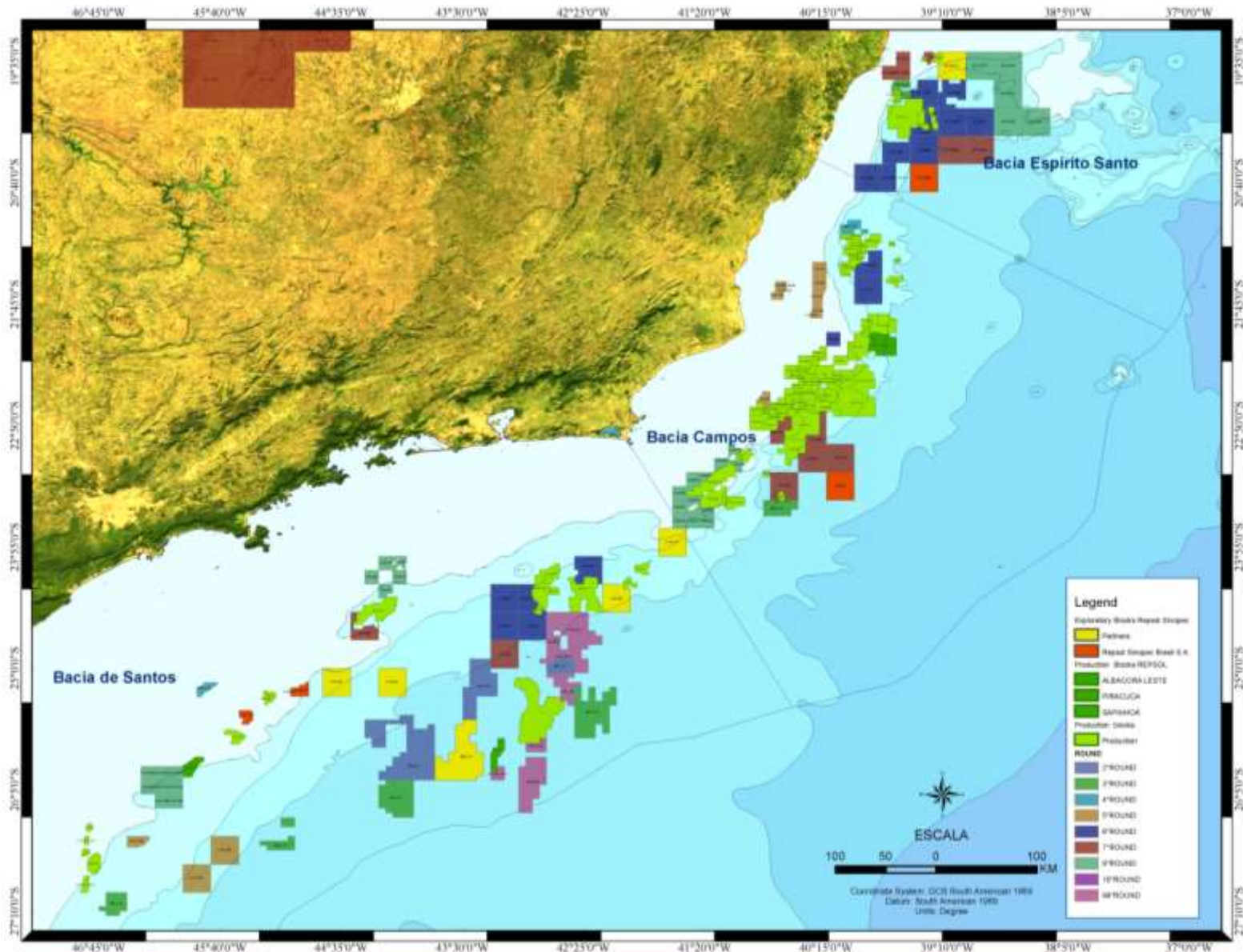
Brazil's state-run oil company Petrobras has confirmed the presence of good quality oil (31 ° API) in ultra deep waters in the Santos Basin pre-salt while drilling well 1-SPS-98 (1-BRSA-1063-SPS), informally known as Sagitário. This is the first well to be drilled in the BM-S-50 block and is located 194 km off the coast of the state of São Paulo in 1,871 meters of water.

The concession where this well is being drilled is located west of the main discovery in the Santos Basin pre-salt (cluster blocks). The importance of this discovery lies in the fact that this is an exploration frontier.

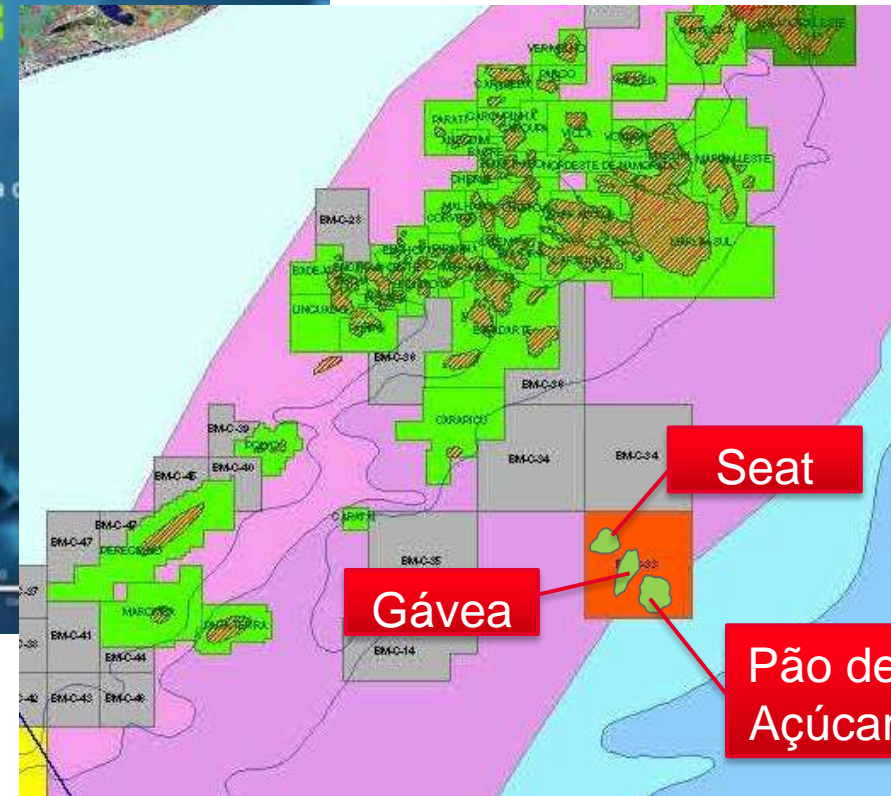
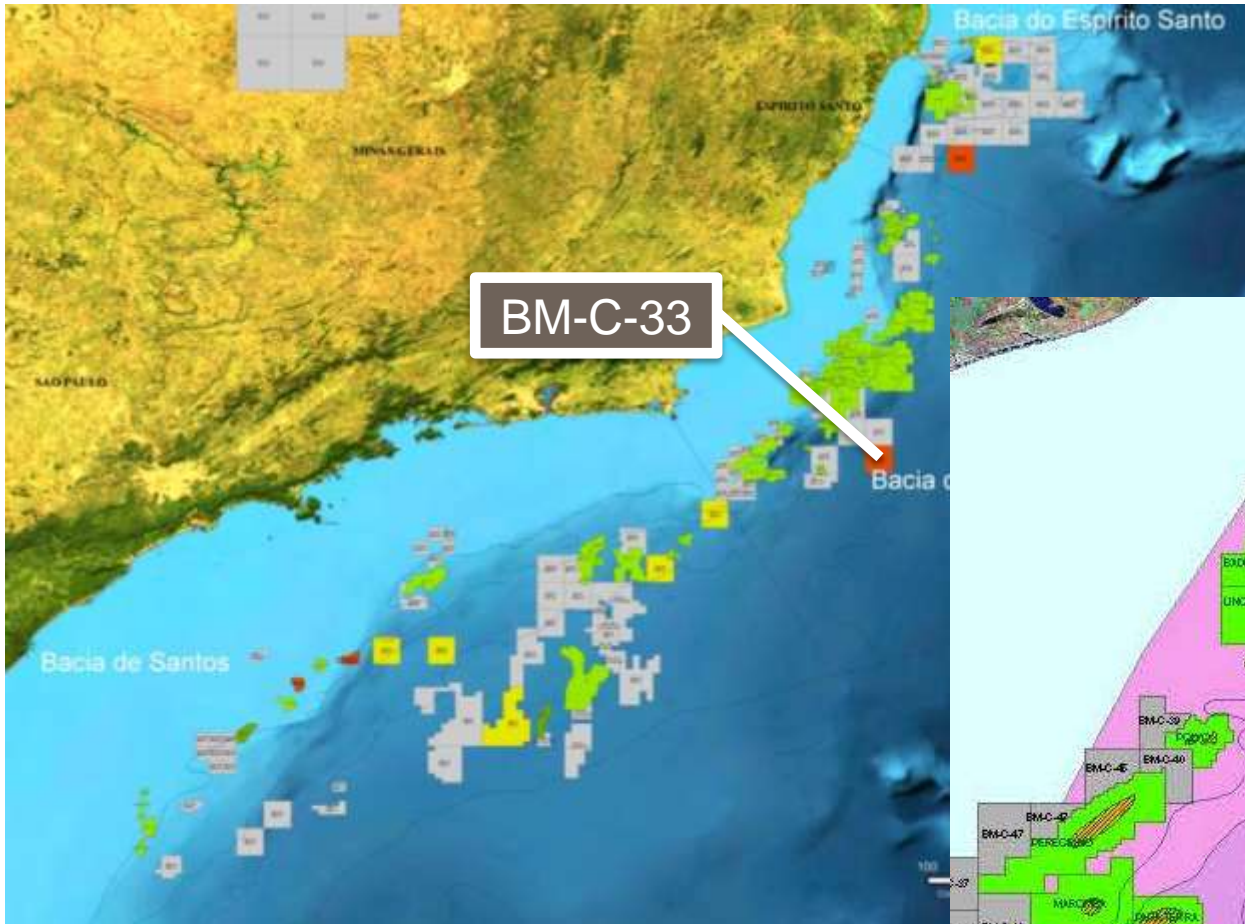
The oil was found in carbonate reservoirs 6,150 meters below the salt layer.

Petrobras is the consortium operator (60%) in partnership with BG E&P Brasil (20%) and **Repsol Sinopec Brasil (20%)**.

Repsol in Brazil main activity in 2014

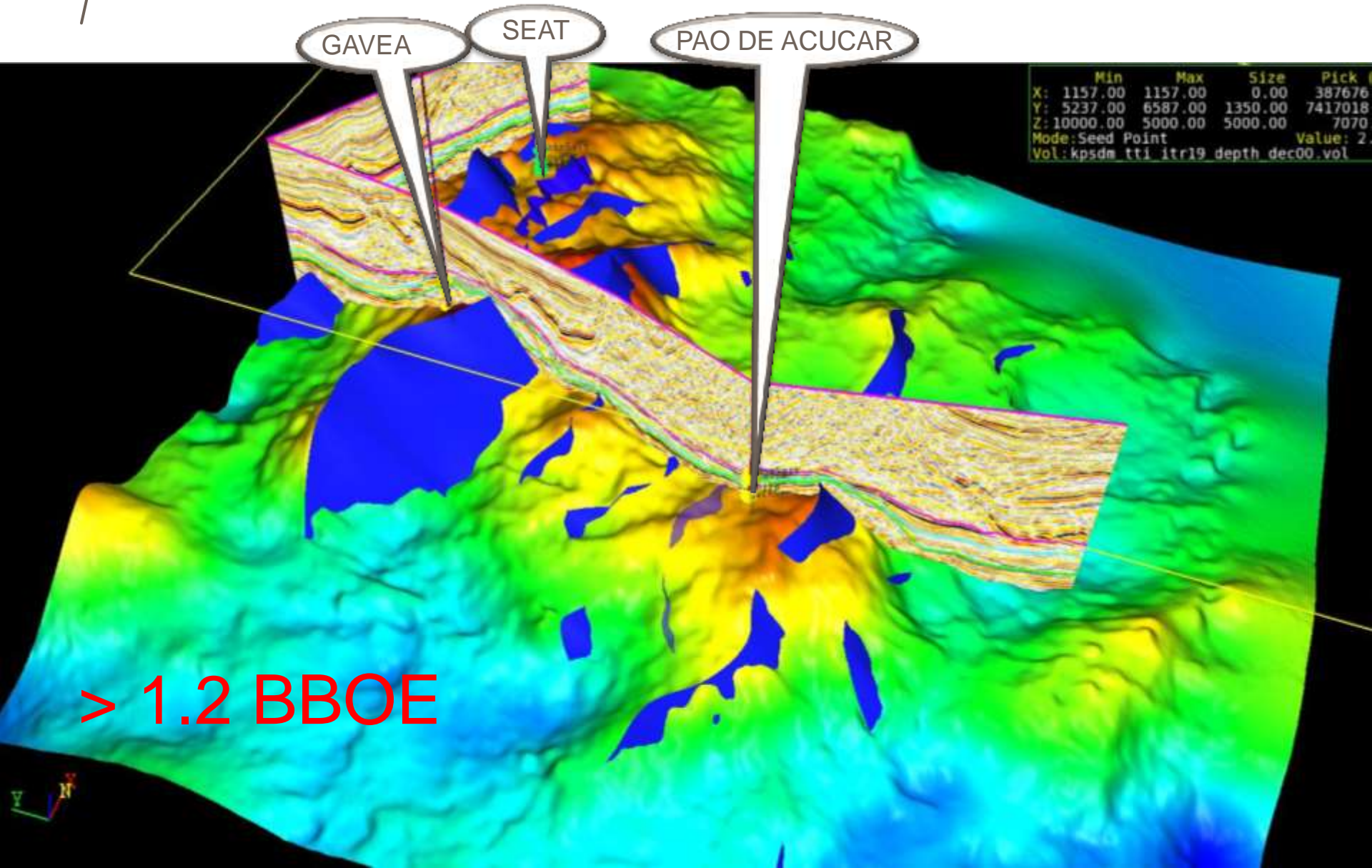


Deep offshore Campos pre-salt discovery



Repsol Sinopec , Op.	35%
Statoil	35%
Petrobras	30%

Seat, Gavea and Pao de Acucar discoveries



Asia & Pacific

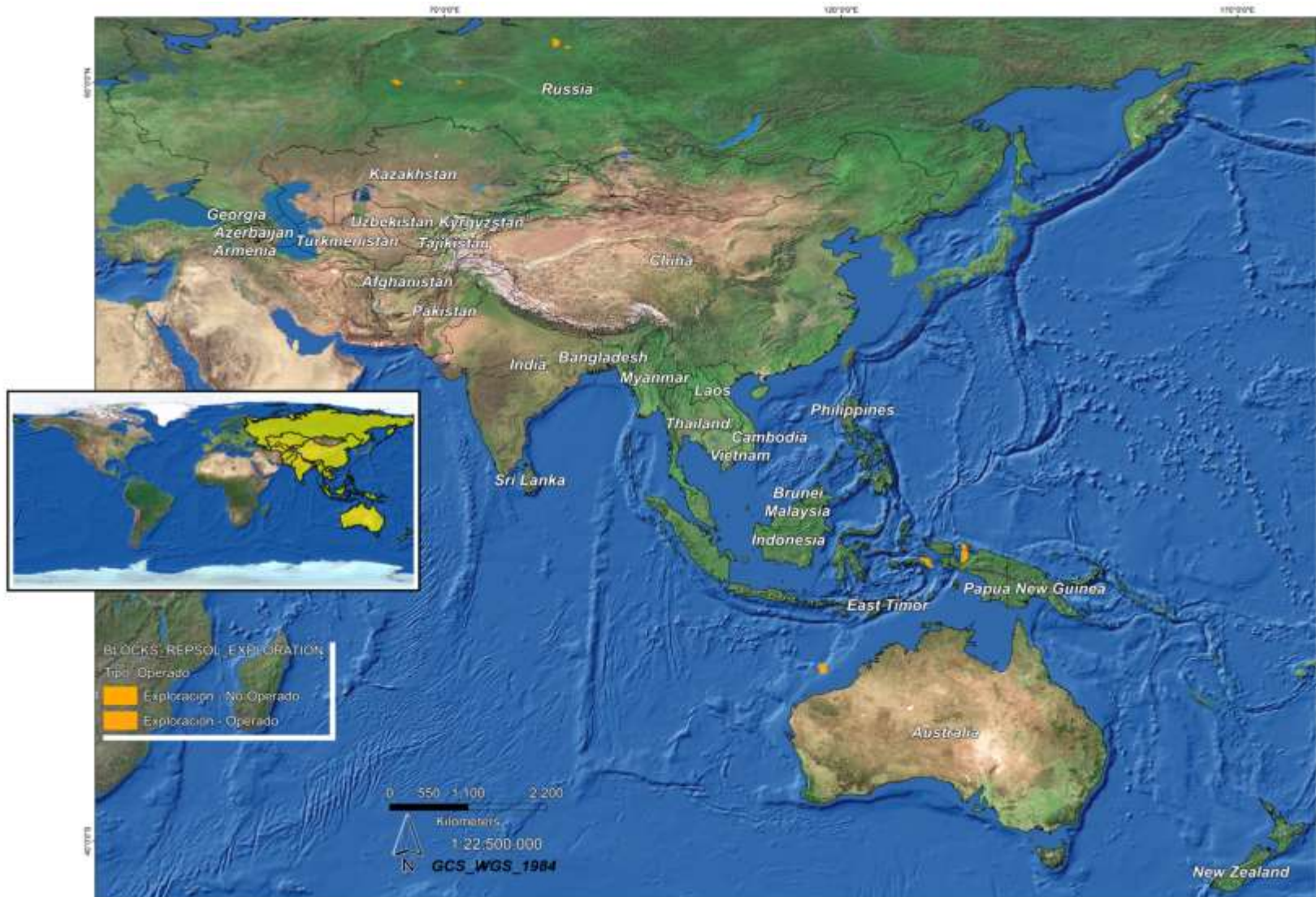
Elvira Álvarez de Buergo

6

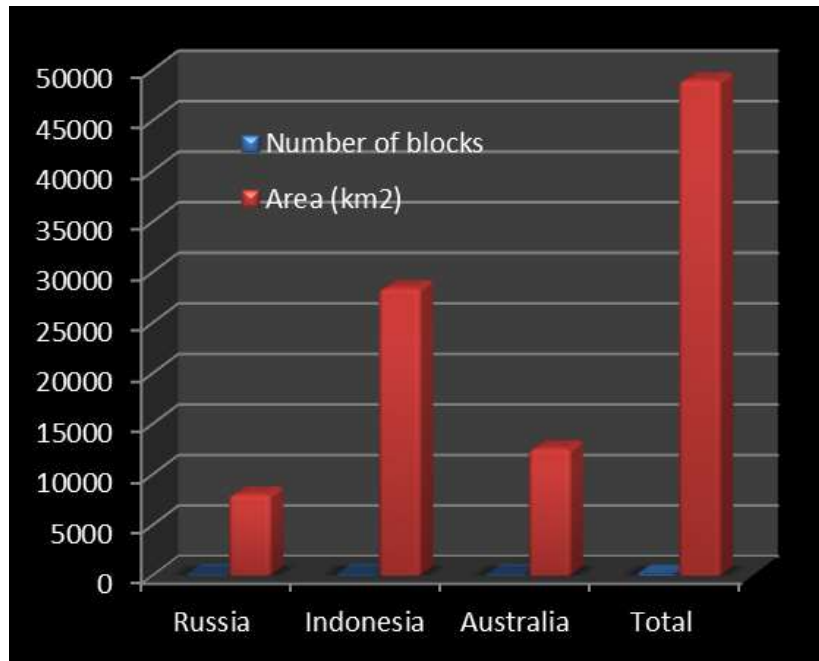
INDEX

- 1. Russia**
- 2. SE Asia: Indonesia**
- 3. Pacific: Australia**
- 4. New Ventures**

Asia-Pacific: Region location map:

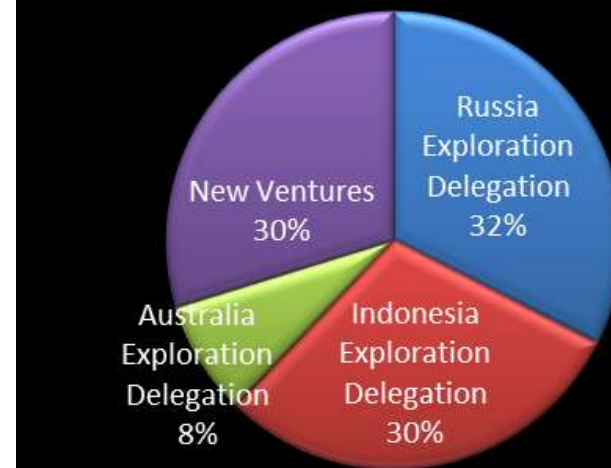


Asia Pacific: Some numbers



	Number of Blocks	Area (km ²)
Russia	13	8,005
Indonesia	6	28,408
Australia	1	12,548
Total	20	48,961

Main Exploration Delegations



2013

- 3 exploration well drilled
- 1000 km 2D+ 2100 km² 3D
- 3 new blocks

2014

- 4 wells planned+production testing
- >4300 km 2D+piston coring

Location map and 2014 work program



Karabashky 7 Blocks: Activity in 1, 2, 3, 9

- Seismic acquisition (1420 km 2D)
- 4 wells: 2 verticals & 2 horizontals

REPSOL LICENSES IN WEST SIBERIA (Total acreage: 8005 km²)

Karabashky Group

1. KARABASHKY-1 (388 km²)
2. KARABASHKY-2 (303 km²)
3. KARABASHKY-78 (333 km²)
4. KARABASHKY-79 (323 km²)
5. KILEYSKY (627 km²)
6. KARABASHKY-3 (839.4 km²)
7. KARABASHKY-9 (272 km²)

Salimsky Group

1. SALYMSKY-7 (289 km²)
2. SALYMSKY-6 (516.4 km²)

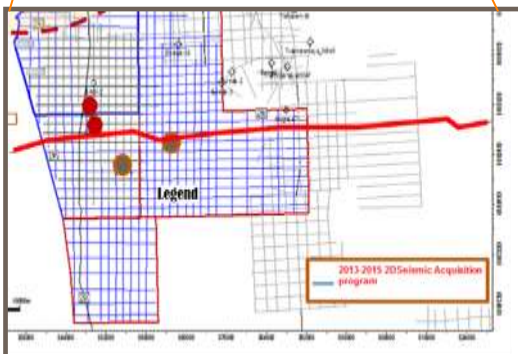
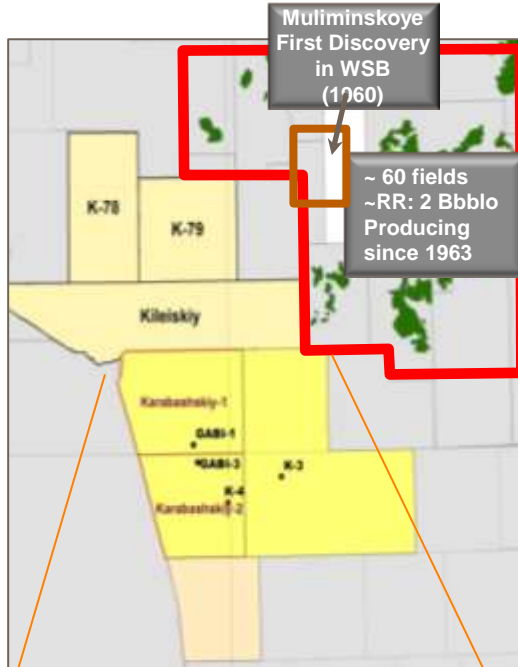
Kumolsky Group

1. KUMOLSKY (1052 km²)
2. VOSTOCHNO PILIALKINSKY (1471 km²)
3. SOUTH PILIALKINSKY (1217 km²)
4. VERKHNEEULKINSKY (984 km²)



Salimsky 6&7
Seismic acquisition (500 km 2D)

Karabashky Blocks Area: By choice not by chance



Technical merits

- Prove viability of a new play in the westernmost area of the basin

2013 Summary of work done:

- 2 new blocks, Karabashkiy 3 & Karabashkiy 9
- Approval of exploration license extension for Karabashkiy 1 & Karabashkiy 2 up to April 2015 (w. 1 well per block commitment)
- 2 exploration wells drilled during the winter season 2012-2013
 - ❖ Result: oil and gas found, 1 well tested

2014 Work Program:

- Detailed studies of more than 200 m of core & first approach to contingent resource calculation
- Drilling/testing 4 wells
- 1420 km 2D seismic acquisition

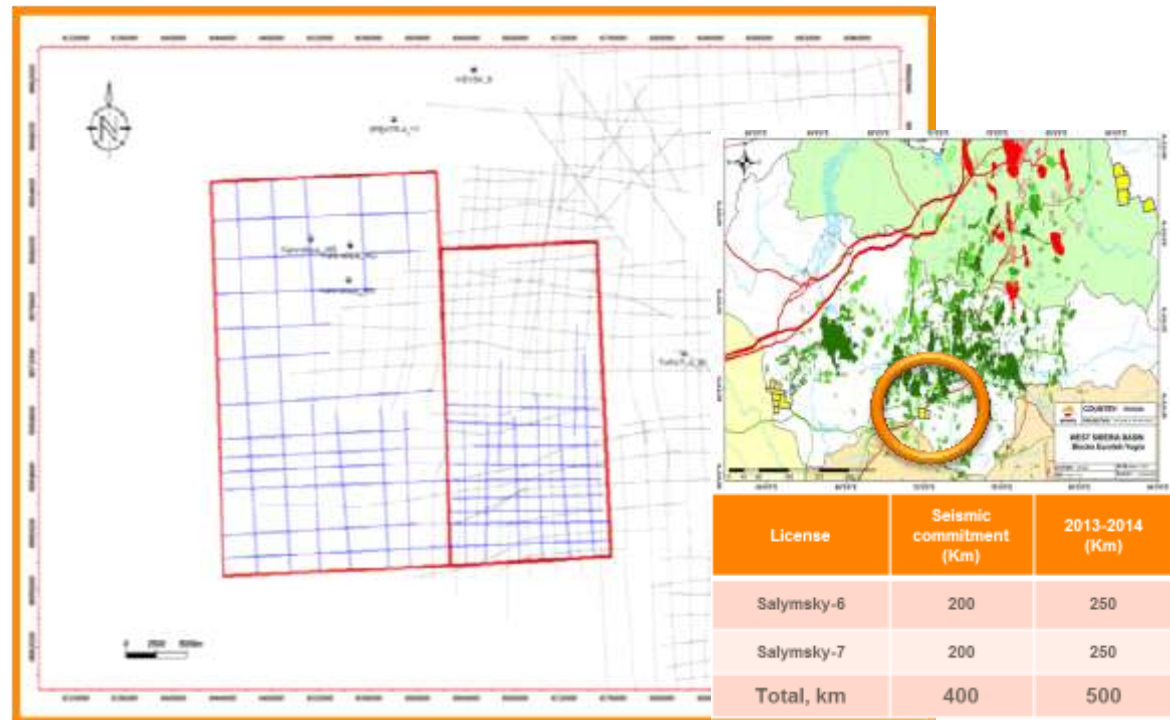
Salymskiy 6 & 7 Geological Study Licenses: Central South West Siberia

Technical merits

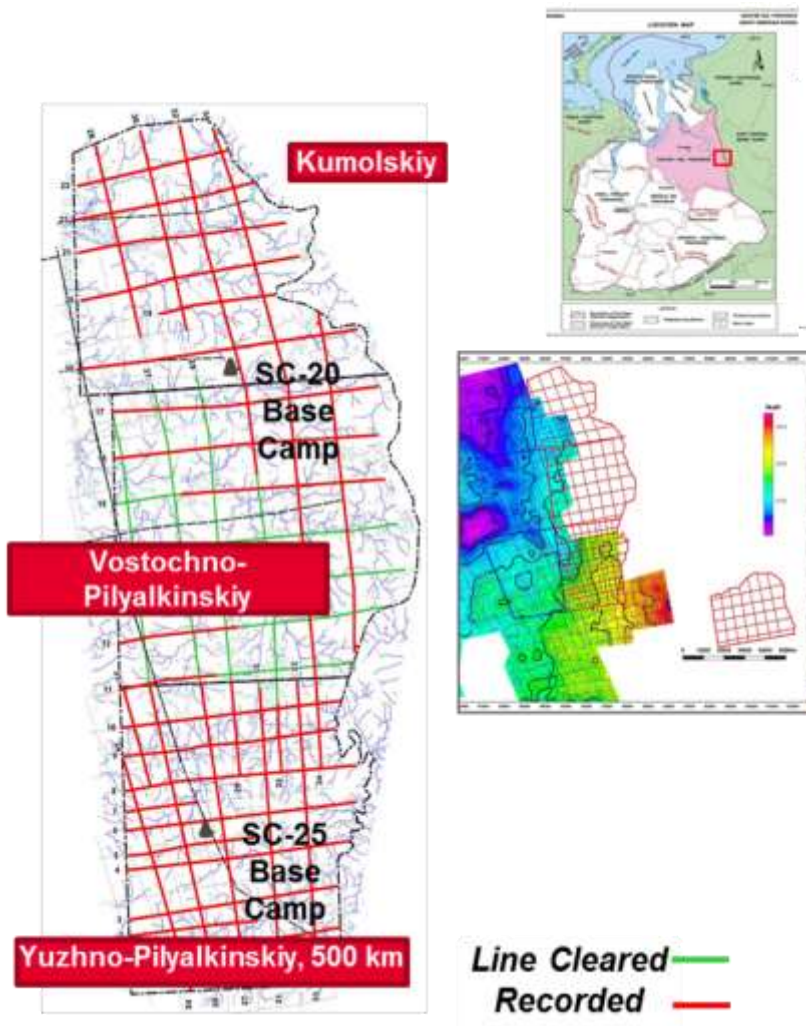
- Blocks located in the center of the basin: low-medium risk; proven Jurassic-Neocomian play
- Promising features identified in (scarce) seismic and large areas with no seismic data
- Well developed infrastructure

2014 Work Program:

- 2D Seismic acquisition
- Processing
- Interpretation & Evaluation



Kumolsky +3 Geological Study Licenses: Eastern West Siberia



Technical merits

- Blocks located around 50 km East of a large gas & condensate discovery
- Similar features recognized in seismic, although large zones with no seismic data

2013 Summary of work done:

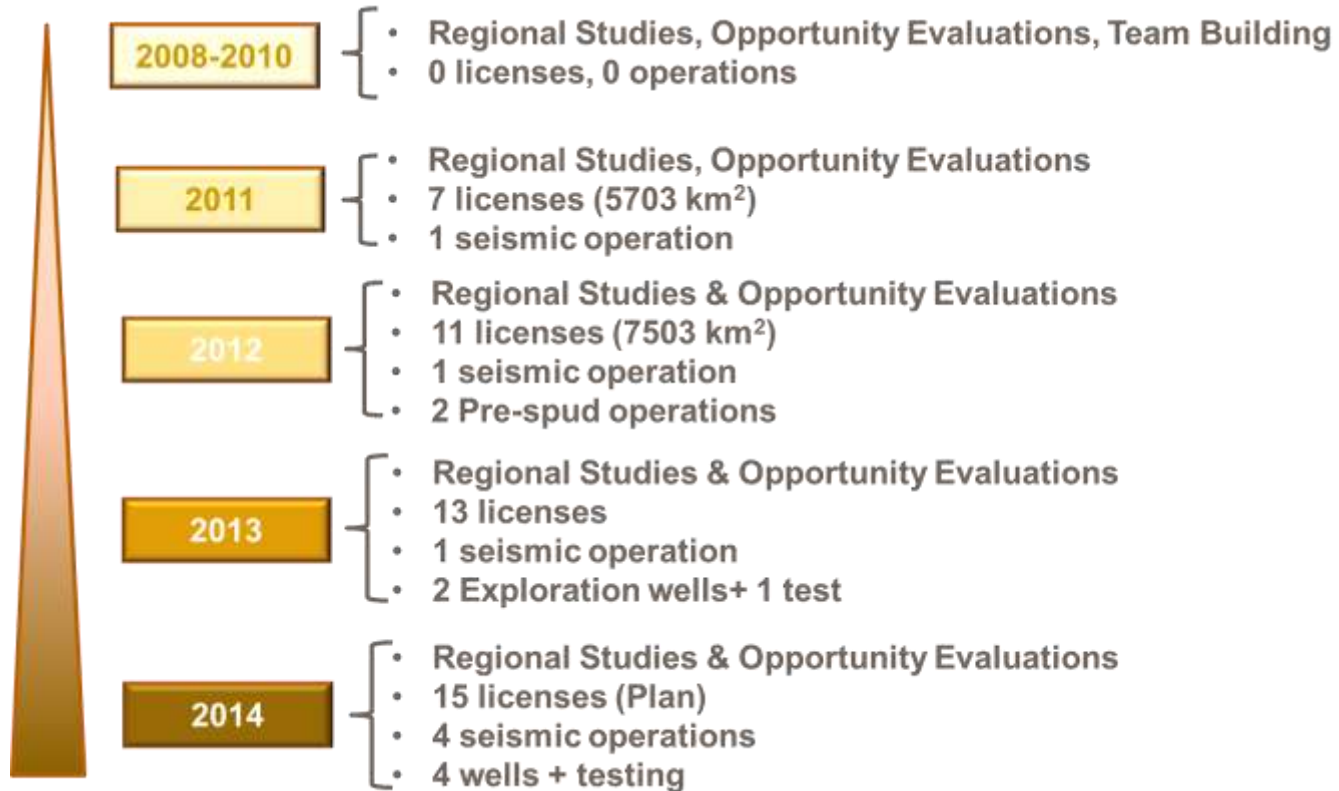
- Approximately 1000 km 2D

2014 Work Program:

- Complete seismic work program (600 km)

Block	Length, km	Length left, km
Kumolsky	292.15	0.74
Vostochno-Pilyalkinsky	228.75	255.25
Yuzhn-Pilyalkinsky	480.97	16.28
Verkhnelylulkiy	0	326.6

New Ventures: A growth history



Regional studies to continue at different stages, helped by good associations and cooperation agreements with local companies and institutes for data access:

- ✓ General WSB+Eastern border of WSB (regional Kumolsky)+Western border of WSB (regional Karabashkiy)+Salimsky area
- ✓ Timan Pechora...

Present & Future



Building of a crossing over the river.



First aid training



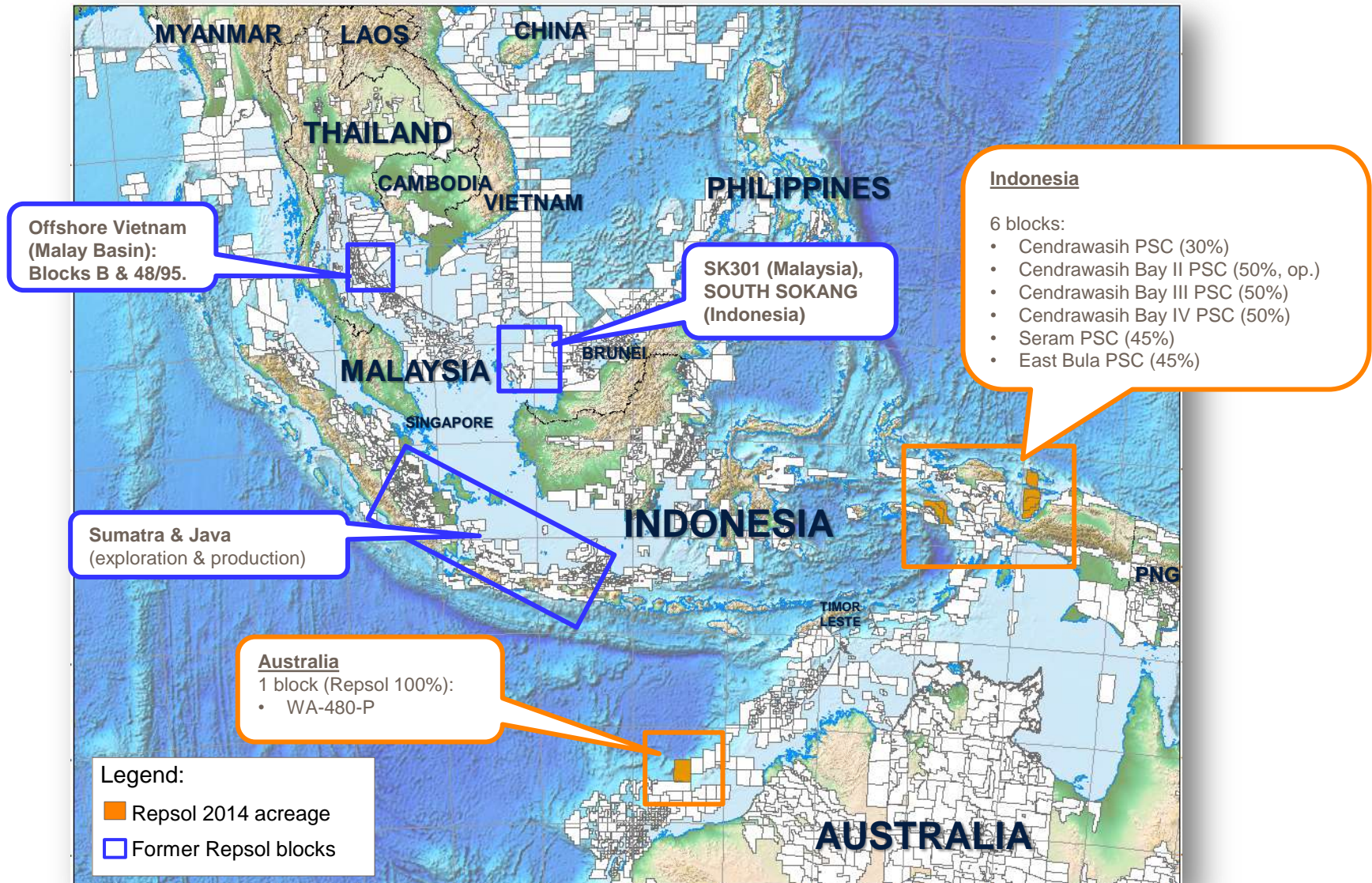
HSE Audit of the Vehicles



RED Asia-Pacific, January 2014

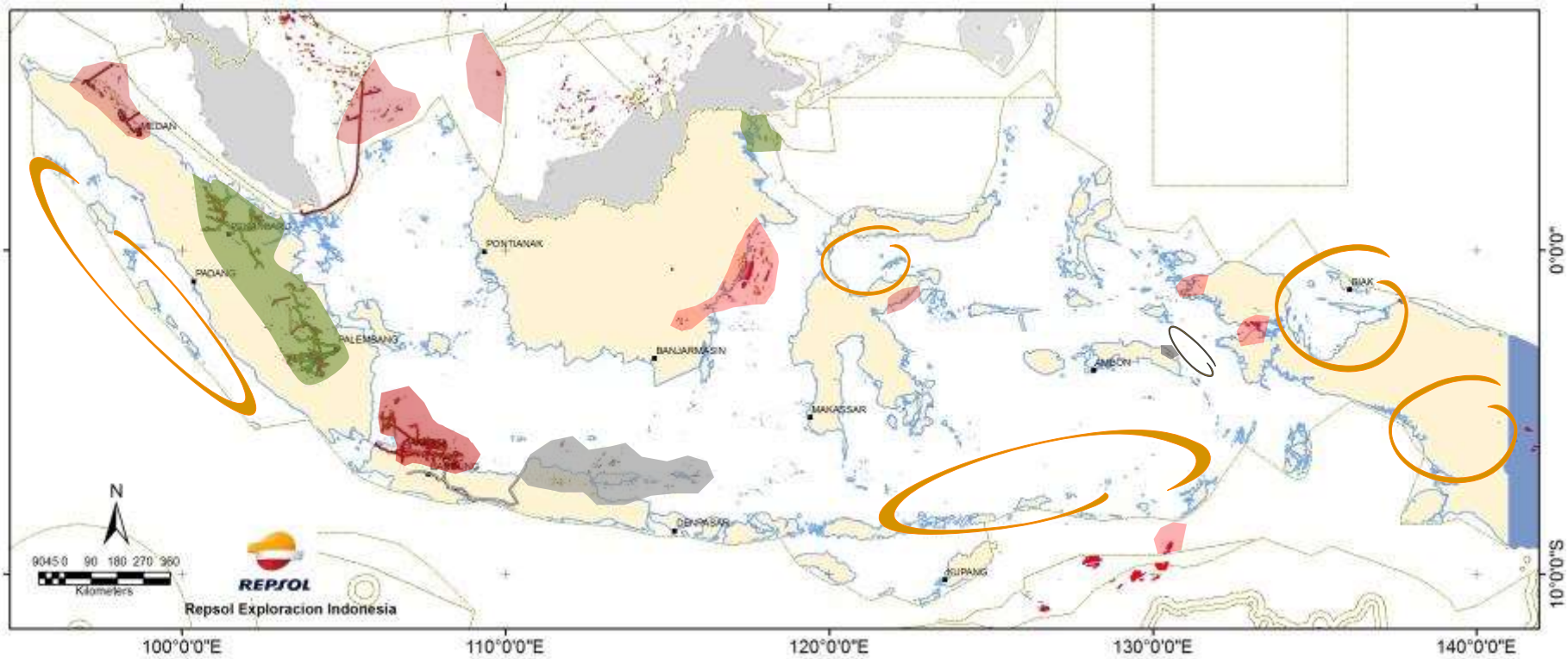


Repsol in SE Asia: past & present



SE Asia: Indonesia

Main productive and frontier exploration areas in Indonesia



Productive areas

Exploration frontier areas



Oil



Gas



Declining production in mature basins but with high remaining potential in underexplored frontier areas

SE Asia today

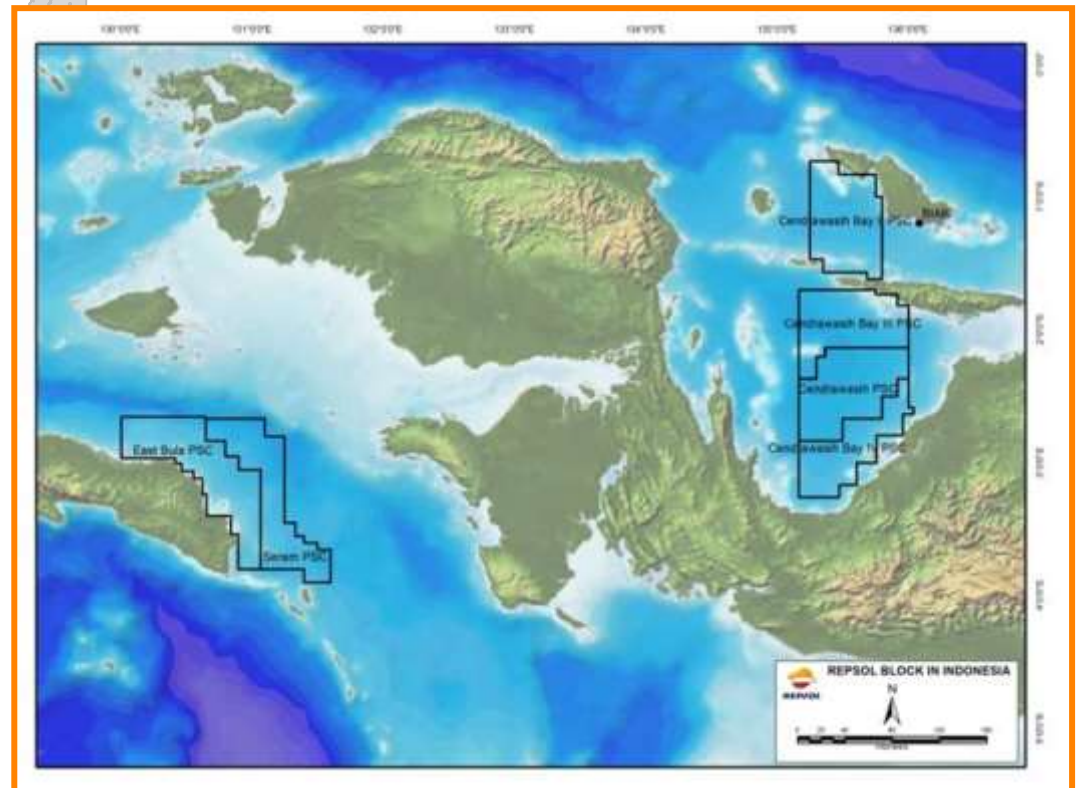
Repsol exploration blocks in Indonesia



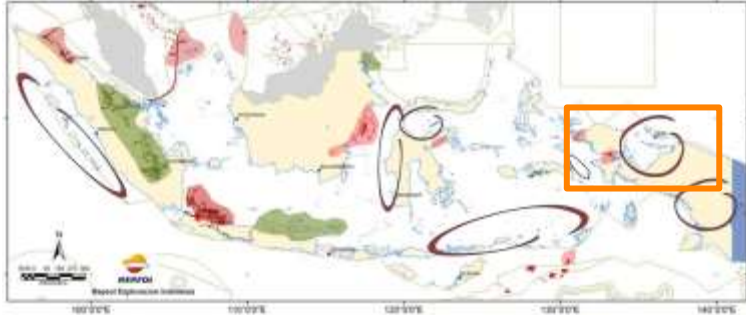
Indonesia: focus for expansion into SE Asia

Initial targets are mainly in frontier deep water areas, although close to existing discoveries:

- Complex fold belt offshore (Seram & East Bula), with Australian Plate type geology, and
- Unexplored carbonates & clastic plays (Cendrawasih Bay, 3 blocks and Biak Basin, 1 block)

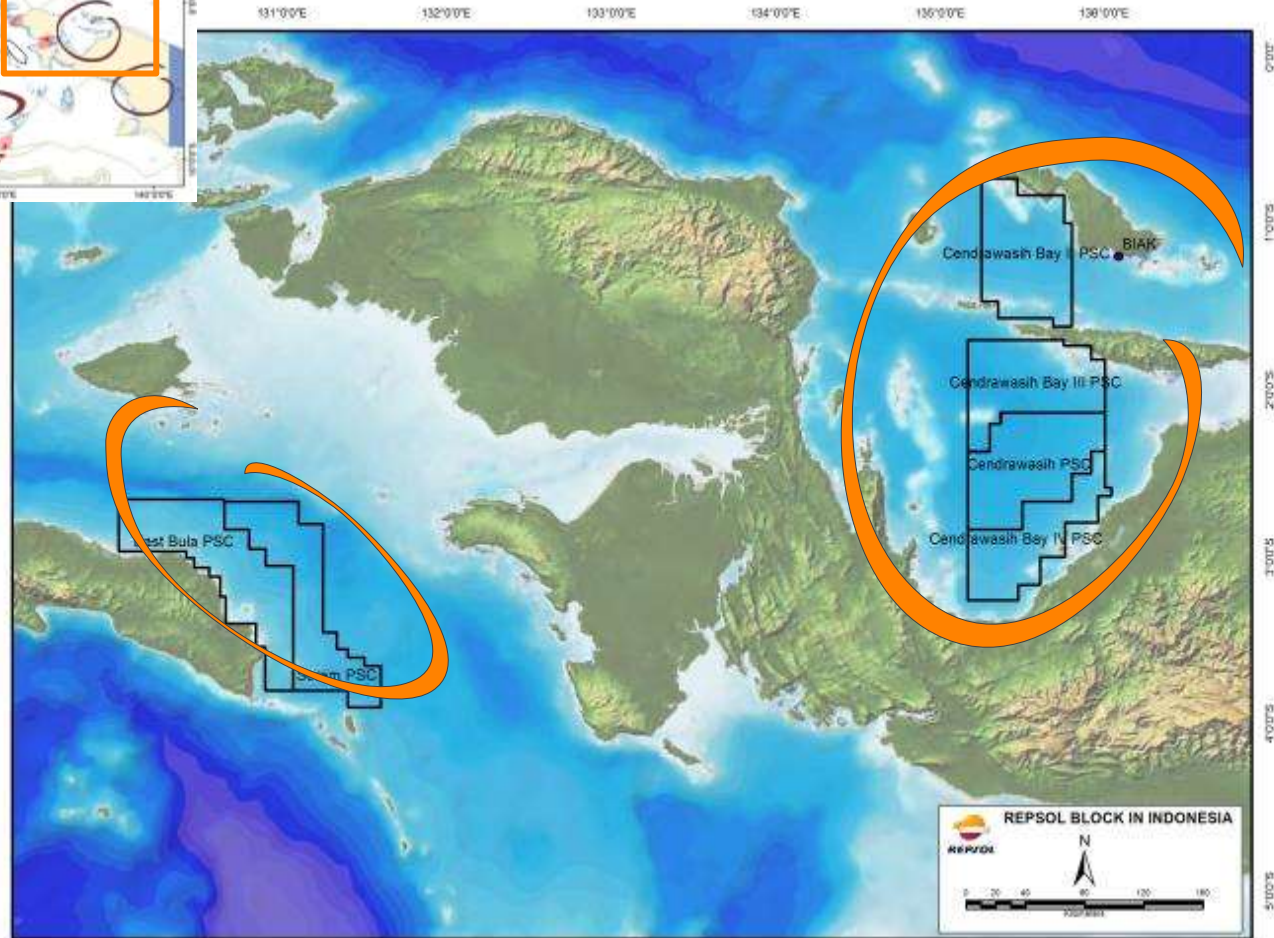


Indonesia exploration blocks: Creating Value



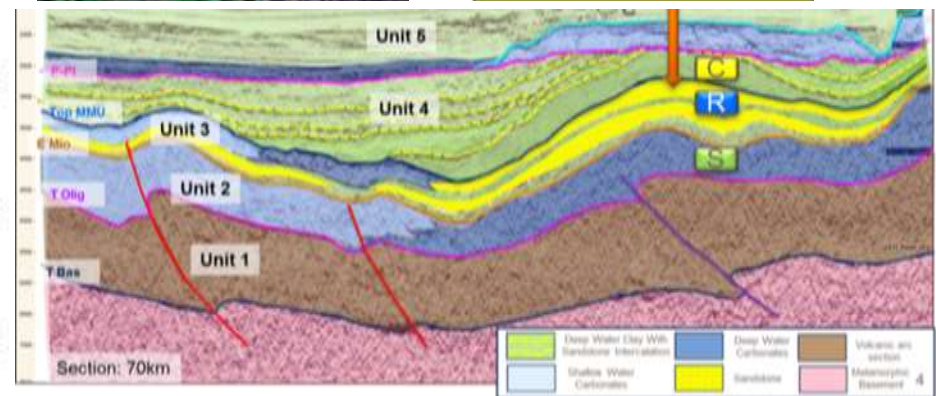
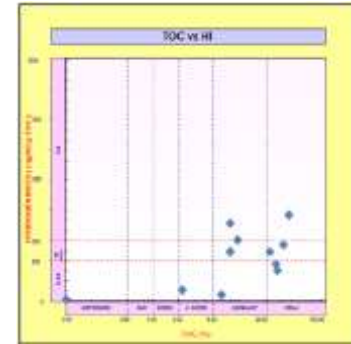
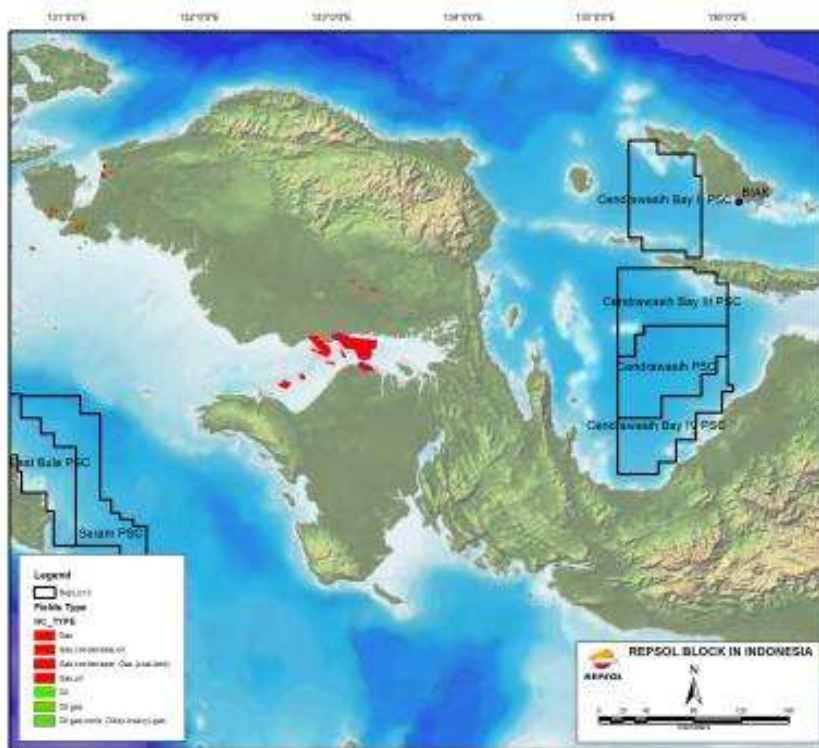
6 exploration blocks offshore East Indonesia (Cendrawasih Bay II operated by Repsol)

- More than 3 years of exploration activities and acquisition of new data
- With more than 26000 km of 2D and 2200 Km2 3D seismic
- More than 2500 km traverses of geological field work with more than 1260 samples taken (field work, piston coring, etc.), analyzed or under analysis



 Exploration frontier areas

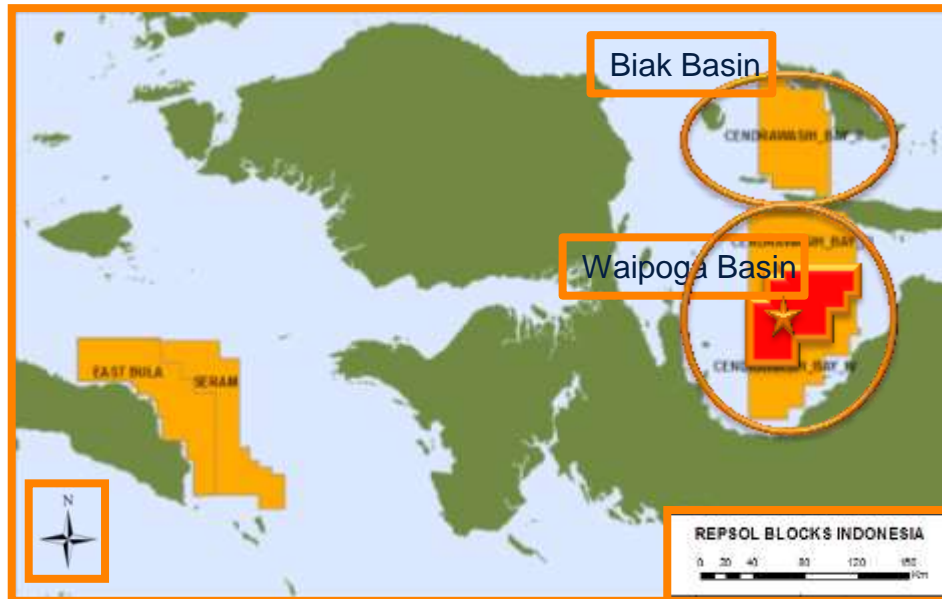
Indonesia exploration blocks: Cendrawasih blocks (Waipoga & Biak Basins)



- Attractive prospects defined in Operated PSC
- Encouraging results from geological field work in nearby islands (potential source rock)
- Results of first well drilled in Cendrawasih Bay under review

Operated block facing the second exploration period with a prospect identified and potential drilling plans for 2015/2016

Indonesia lessons learned: Studies continue



Elang well Cendrawasih PSC Play concept:

Miocene clastics carbonate reservoir sealed by Pliocene shales and sourced by Miocene/Oligocene argillaceous rocks in a four-way dip closure anticline.

Pre-drill assessment considered reservoir (carbonate) presence and source rock quality as main risk factors.

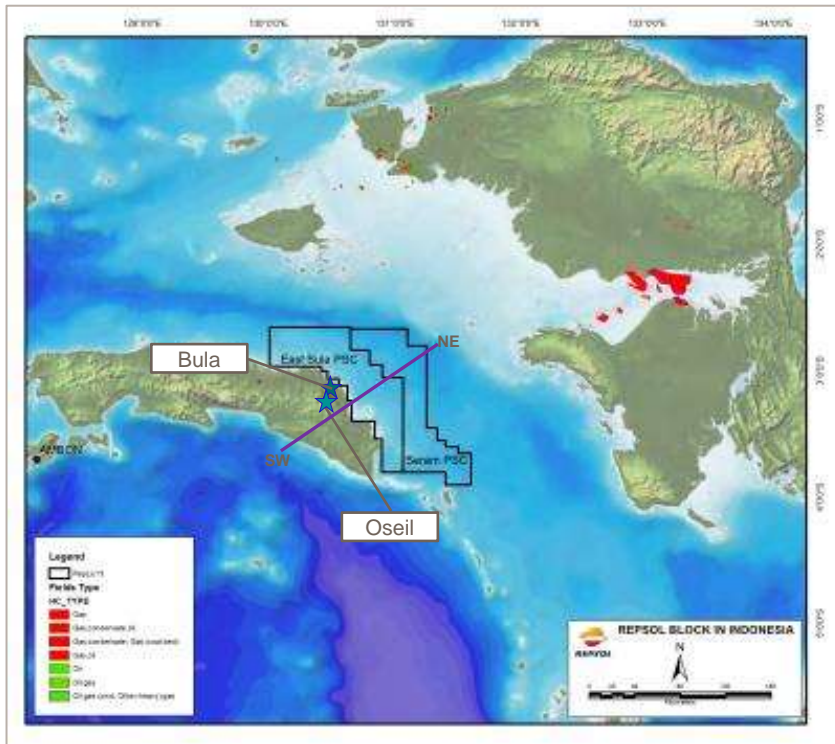
The well encountered several hundred feet of good porosity carbonate facies + more than 1000 ft of volcanoclastic (perivolcanic), with some potentially reservoir facies in some intervals.

Drilling below budget and with no HSE incidents in a highly sensitive area (environmentally and socially).

Indonesia exploration blocks

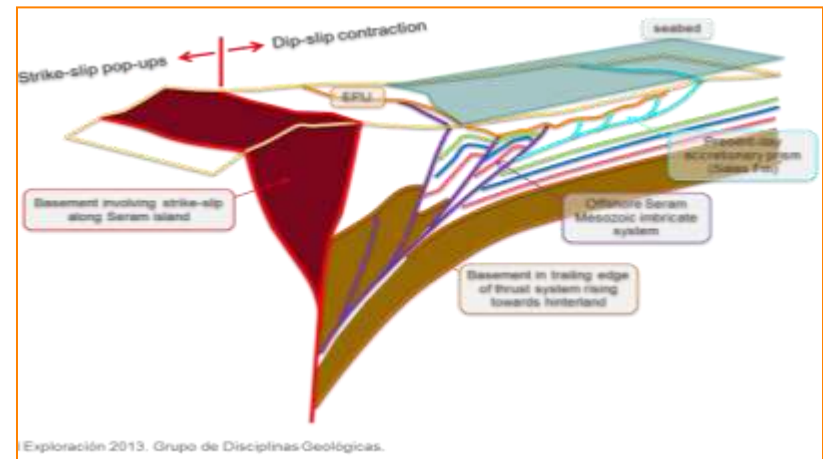
Seram & East Bula

Exploration blocks Repsol Indonesia Mesozoic Carbonates in fold Belts setting offshore Seram Island



★ Discovery

Schematic E-W regional geological cross section through block area showing collision-subduction



- Geological and geographical frontier area
- With oil discoveries onshore in the same play
- Prospects and leads identified offshore, but poor seismic imaging

Complex Thrustfold Belts in Seram and East Bula

Indonesia value creation



RED Asia-Pacific, January 2014

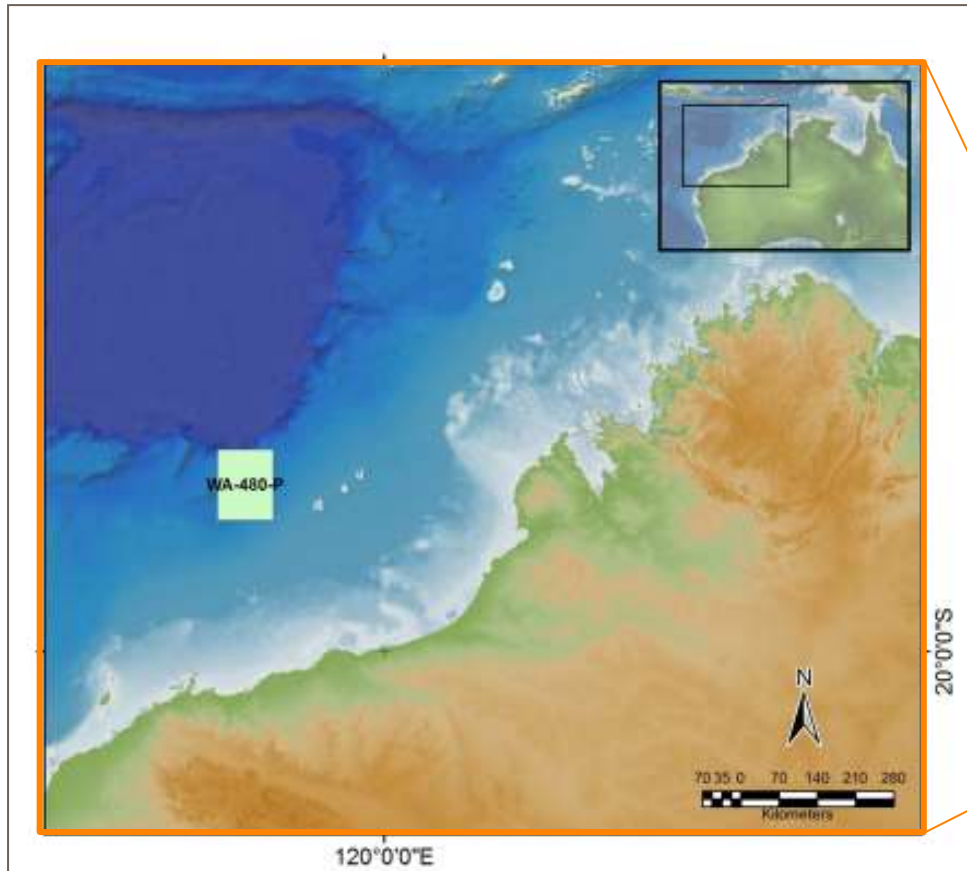


We opened our office in central Jakarta, Indonesia's capital, in 2010.



Pacific today

Repsol exploration block in Australia



Large Deep Water Frontier Area.

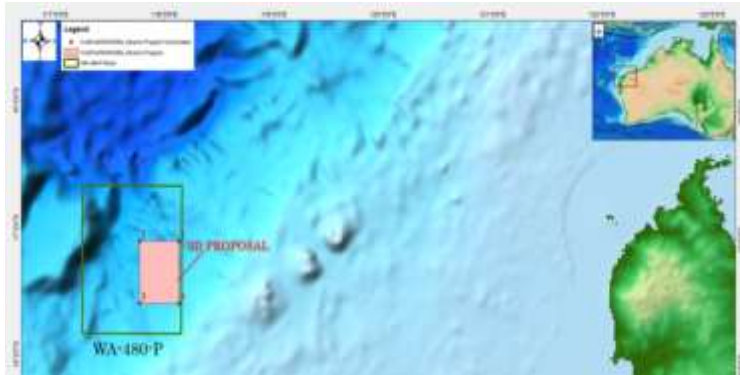
- Robust closure defined at Early Jurassic to Late Triassic levels
- Multi-hundred million barrels and multi-tcf resource potential, having direct access to the kitchen



Australia: an opportunity to grow in the Pacific area

Australia Exploration Block

Block WA-480-P, North Carnarvon Basin



2013 Summary of work done:

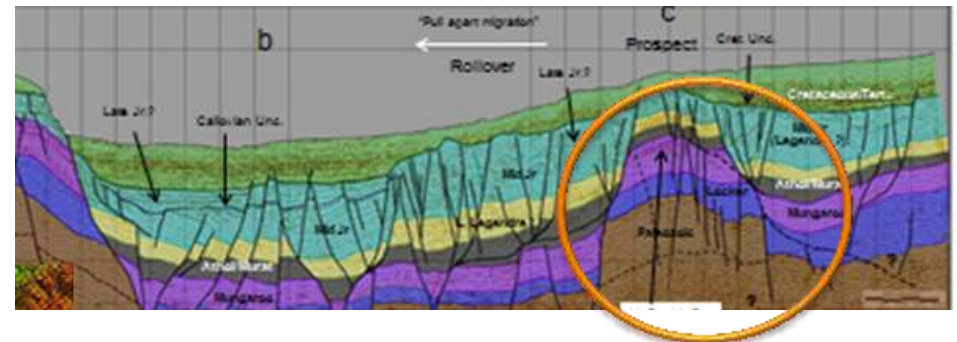
- Environmental Plan
- 2085 Km² seismic survey over Naranco prospect.
- Full prospectivity reassessment, recognizing additional potential within the block.

2014 Work Programa:

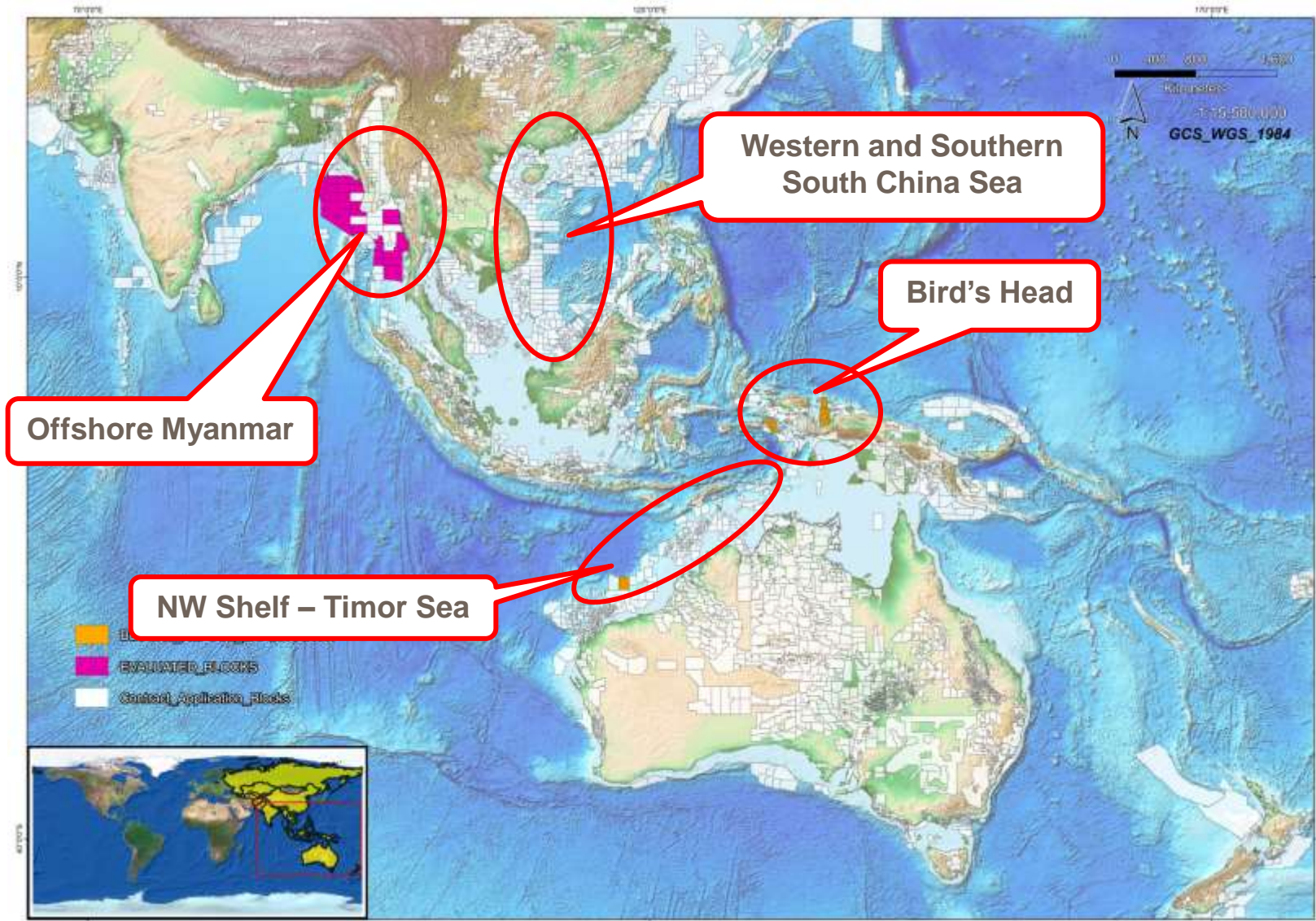
- 2D seismic infill survey of 1800 km
- Complete processing of 3D and 2D surveys
- Source rock quality and presence to be de-risked by a seabed coring survey and geochemical analyses
- Dilution

License

- Awarded on August 20th, 2012
- Repsol 100% WI
- Area: 12,548 km²

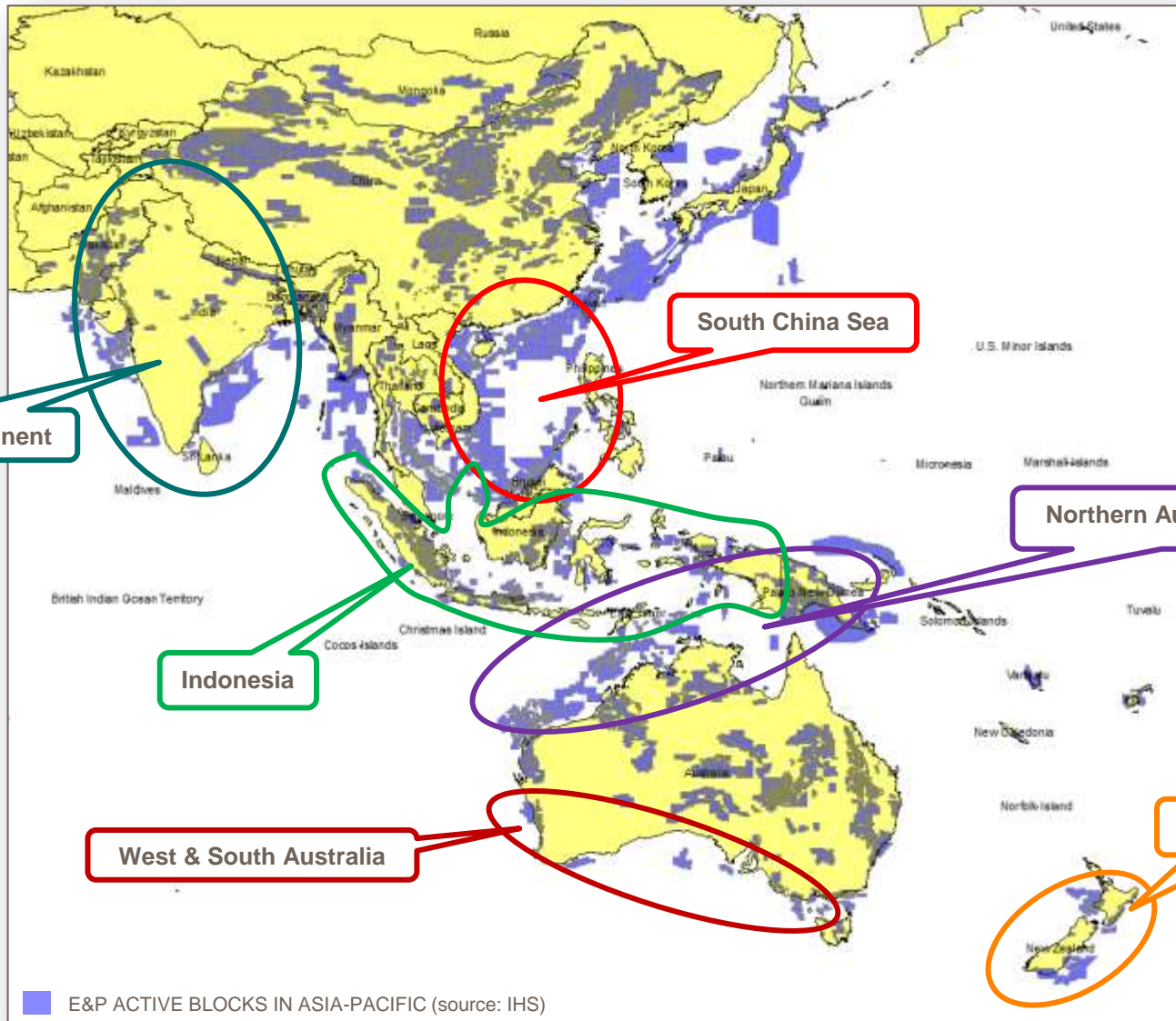


N.V. Asia-Pacific: Focus 2013



(contracts and applications after IHS)

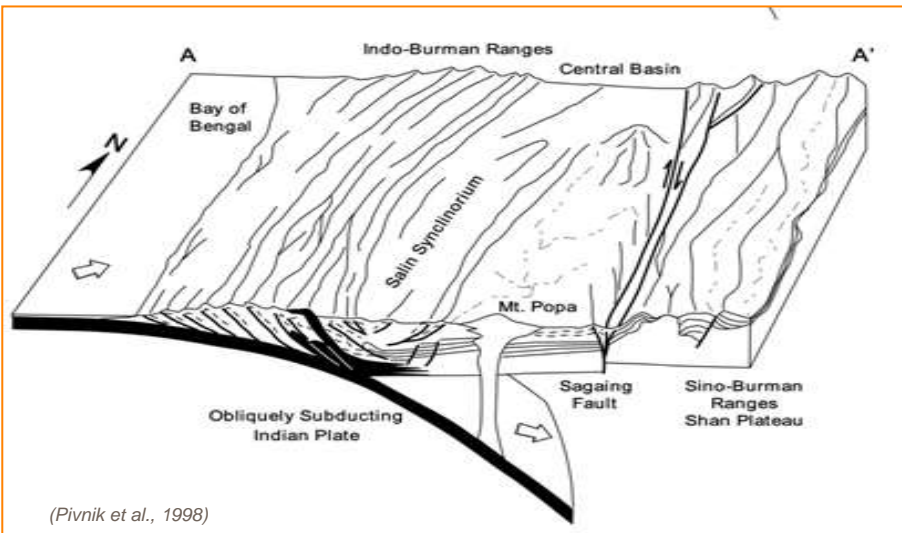
N.V. Asia-Pacific: Focus 2014



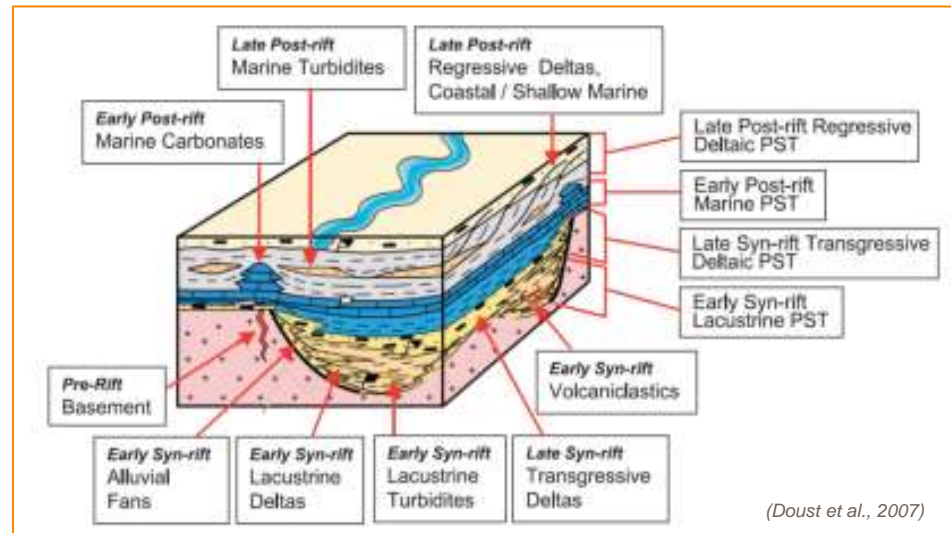
Plays in Asia-Pacific

Accretionary Prisms (i.e Myanmar)

Rift basins (i.e., South China Sea)



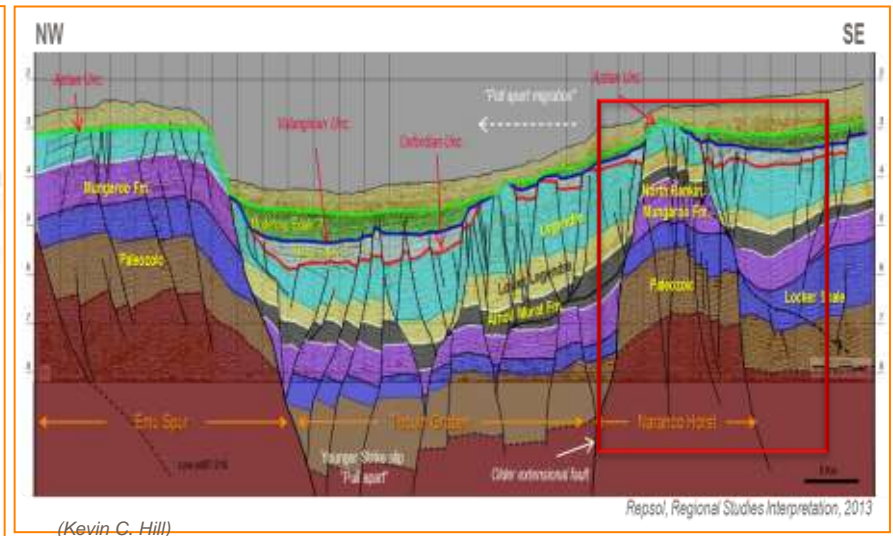
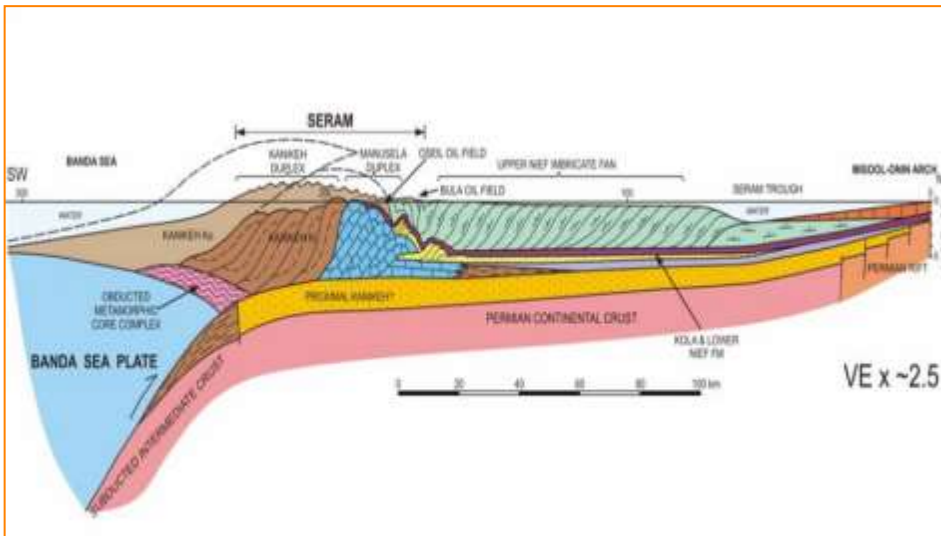
(Pivnik et al., 1998)



(Doust et al., 2007)

Complex Fold Belts, Indonesia

Paleozoic/Mesozoic Plays (clastics & Carbonates), W Australia



(Kevin C. Hill)

Repsol, Regional Studies Interpretation, 2013

EXPLORATION DAY 2014



London, January 29th 2014

