

exploration & production



PERFURASAUN ESPLORASAUN TIMOR-LESTE

Konsulta Maksoin-lisuk (stakeholder)

24 Agostu 2010

eni

introduction/introdusaun

- Exploration drilling in permit area S06-03, Timor Leste Exclusive Area
 - One well: Cova
 - Drilling ship: *Saipem 10000*
 - Drilling starts early October 2010
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- Perfurasaun esplorasaun iha área lisensa S06-03, Área Ekluzivu Timor-Leste
- Posu ida: Cova
- Ró perfurasaun: *Saipem 10000*
- Perfurasaun sei hahú iha inísiu Outubru 2010



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introduction/introdusaun



Production Sharing Contract

- Between Timor Leste Government and Eni
 - Signed 3 November 2006, under the **Petroleum Act**
 - Commitment to drill at least two wells in the S06-03 permit area, during “second period” (2010-2011)
 - Expires 2013
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Kontratu Fahe Produsaun

- Entre Governu Timor-Leste no Eni
- Asinadu 3 Novemburu 2006, iha **Ata Petróleo** nia okos
- Kompromisu atu fura pelumentus posu rua iha área lisensa S06-03, durante “períodu daruak” (2010-2011)
- Hotu iha 2013

introduction/introdusaun

Environmental assessment:

- 21 December 2009—Terms of reference accepted by DNMA
 - 23 February 2010—Environmental screening workshop
 - 12 April 2010—Environmental Impact Statement (EIS) and Environmental Management Plan and Monitoring Program (EMP) submitted to DNMA.
 - 7 July 2010—EIS and EMP distributed to stakeholders
 - 24 August 2010—Stakeholder review meeting
-

Avaliasaun ambientál

- 21 Dezembru 2009 – **Termu referénsia ne’ebé aseita hosi DNMA**
- 23 Fevereiru 2010 – Kolókiu ezaminasaun ambientál
- 12 Abríl 2010 – Deklarasaun Impkatu Ambientál (EIS) no Planu **Jestaun no Programa Monitorizasaun Ambientál (EMP) ne’ebé** submete ba DNMA
- 7 Jullu 2010 – **EIS no EIS ne’e distribui ba maksoin-lisuk** (stakeholder) sira
- 24 Agostu 2010 – Soru-mutu revizaun maksoin-lisuk (stakeholder)



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introduction/introdusaun

Purpose of today's meeting is to present:

- An update of the drilling program
 - The environmental impact assessment completed in the EIS
 - **Eni's management controls for environmental risks**
 - An opportunity for stakeholders to ask questions
-

Objetivu hosi soru-mutu ohin-loron nian mak atu apresenta:

- Atualizaun ida hosi programa perfurasaun nian
- **Avaliasaun impaktu ambientál ne'e kompleta tiha iha EIS**
- Eni nia kontrolu jestaun ba risku ambientál
- Oportunidade ba maksoin-lisuk (stakeholder) sira atu husu pergunta



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Agenda:

1. Description of the drilling program
 2. Environmental studies completed by Eni
(Lunch 12.30)
 3. Environmental risks and management
 4. Finalising the EIS
 5. Questions
-

Ajenda

1. Deskrisaun programa perfurasaun nian
2. Estudu ambientál ne'ebé kompleta hosi Eni
(Han-meiudia 12.30)
3. Risku no jestaun ambientál
4. Finalizasaun EIS
5. Pergunta sira



PART ONE:

- Description of the drilling program
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PARTE IDA:

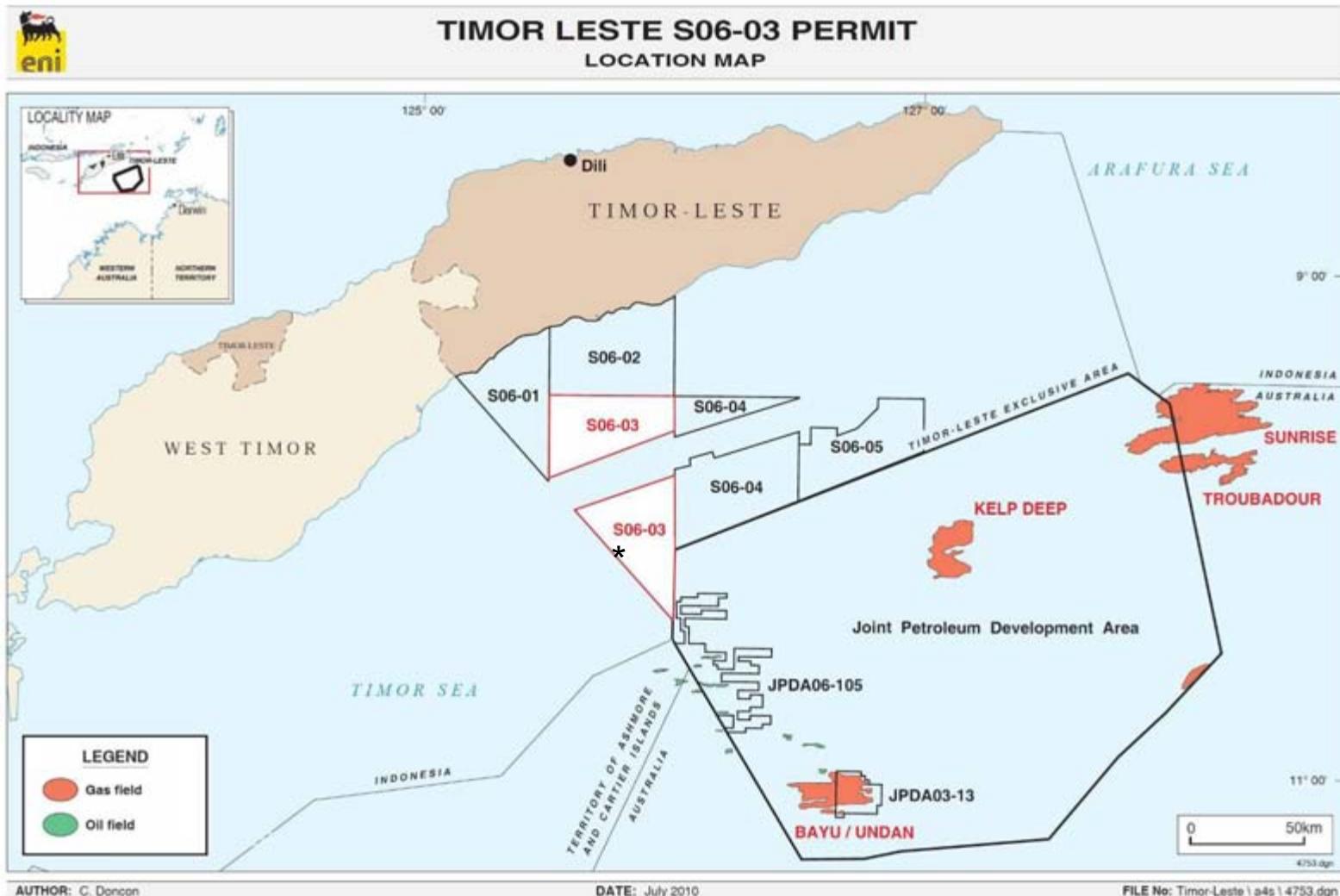
- Deskrisaun programa perfurasaun nian



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drilling/perfurasau



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- Cova was identified as a potential “prospect” for oil and gas during seismic surveys in 2007-08
 - To learn more about the prospect, the next step is to drill an exploration well
 - Drilling will provide information on the reservoir geology, and whether there are commercial quantities of oil and gas.
-
- Cova ne'e identifika nu'udar “prospetu” potensiál ba petróleu no gás durante levantamentu sízmiku iha 2007-08
 - Atu aprende liután kona-ba prospetu, pasu tuirmai mak atu fura posu esplorasaun ida
 - Perfurasau sei fornese informasaun kona-ba jeolojia rezervatóriu, no se iha kuantidade petróleu no gás komersiál

drilling/perfurasau

- Duration of drilling campaign: 45 days
 - Water depth: 1930 m
 - Depth of the well: 4200 m
 - Vertical well
-

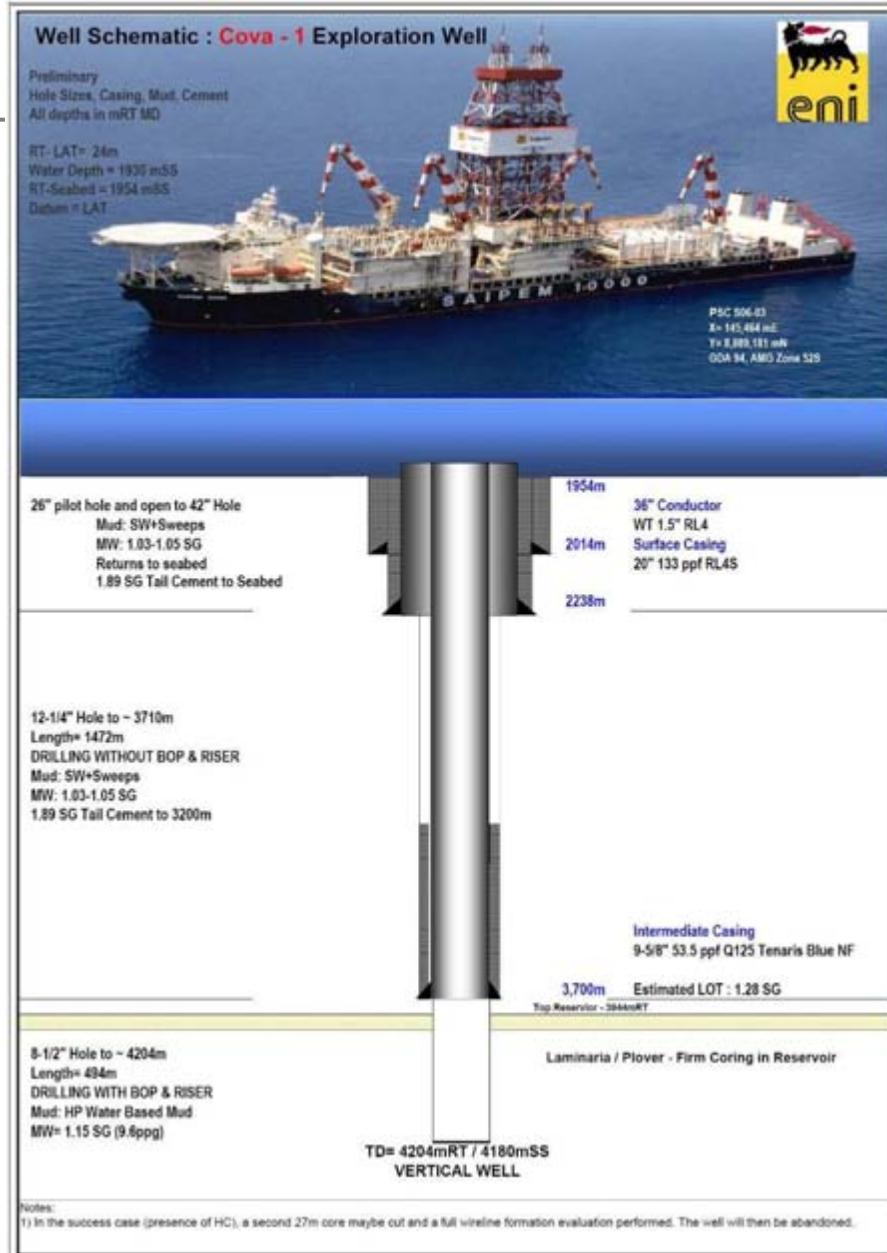
- Durasaun kampaña perfurasau: Ioron 45
- Bee nia lale'an: 1930m
- Posu nia lale'an: 4200m
- Posu vertikál



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drilling/perfurasau

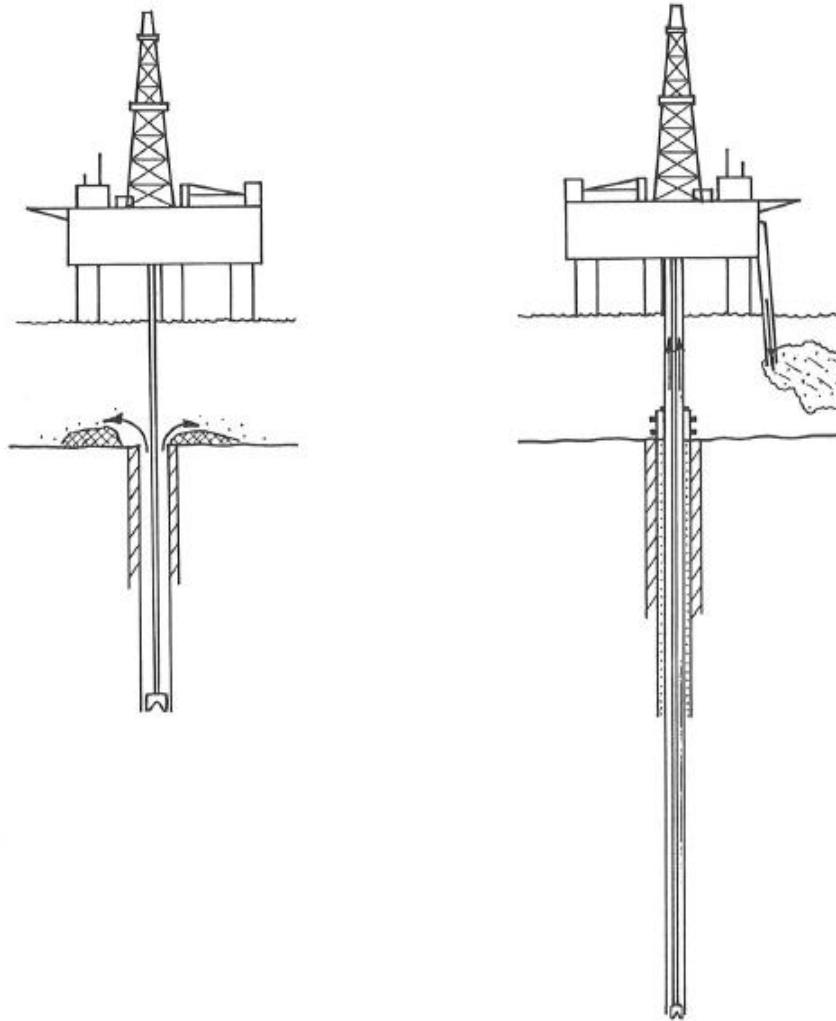
- Top part of well hole drilled without riser (pipe)
 - Riser added after drilling 1750 m, drill cuttings brought to surface on *Saipem 10000* for treatment
 - Drilling mud removed from cuttings in processing equipment
 - Clean cuttings discharged from *Saipem 10000* near the ocean surface.
-
- Kuak posu parte leten nian ne'e fura lahó kanu
 - Kanu ne'e sei aumenta liutiha perfurasau 1750, perfurasau nia eskavasaun ne'e sei lori ba *Saipem 10000* nia leten hodi halo tratamentu
 - Tahu perfurasau ne'e hasai hosi eskavasaun ba iha ekipamentu prosesamentu nian
 - Eskavasaun ne'ebé moos ne'e hasai hosi *Saipem 10000* besik ba superfísie tasi nian



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Exploration well

- No oil or gas to be brought to surface (no well testing)
 - Well hole closed by filling with cement at end of drilling
 - If oil or gas is found, production drilling would be done at a later time, either at the same location or a different location.
-

Posu esplorasaun

- Sei la lori petróleu ka gás ba superfísie (la iha ezaminasaun ba posu)
- **Kuak posu nian ne'e taka hodi enxe ho simente iha fín perfurasau nian**
- Se hetan petróleu no gás karik, produsaun perfurasau mak sei halo iha tempu tuirmai, tantu iha fatin hanesan ka iha fatin diferente



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drilling/perfurasaun

■ *Saipem 10000:*

- Designed to drill in very deep water
- Built in 2000
- 220 m long, 40 m wide, 20 m tall
- Accommodation for 142 people
- Two drilling rigs
- Uses propellers (thrusters) for stability

■ Saipem 10000:

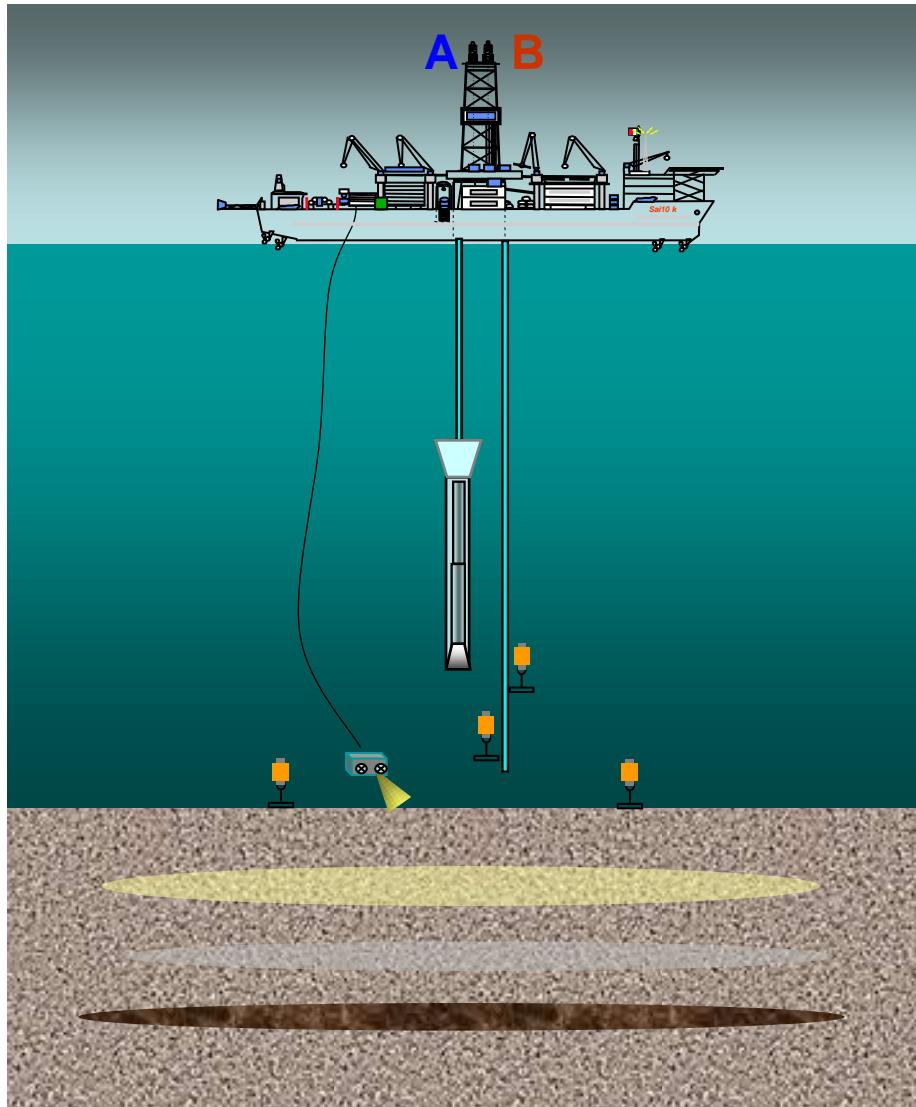
- **Dezena atu fura iha bee ne'ebé kle'an tebes**
- Harii iha 2000
- Ninja naruk 220m, luan 40m, aas 20m
- Alojamentu ba ema 142
- Torre-perfurasaun iha rua
- Uza propulsór sira (thrusters) ba estabilidade nian



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drilling/perfurasau



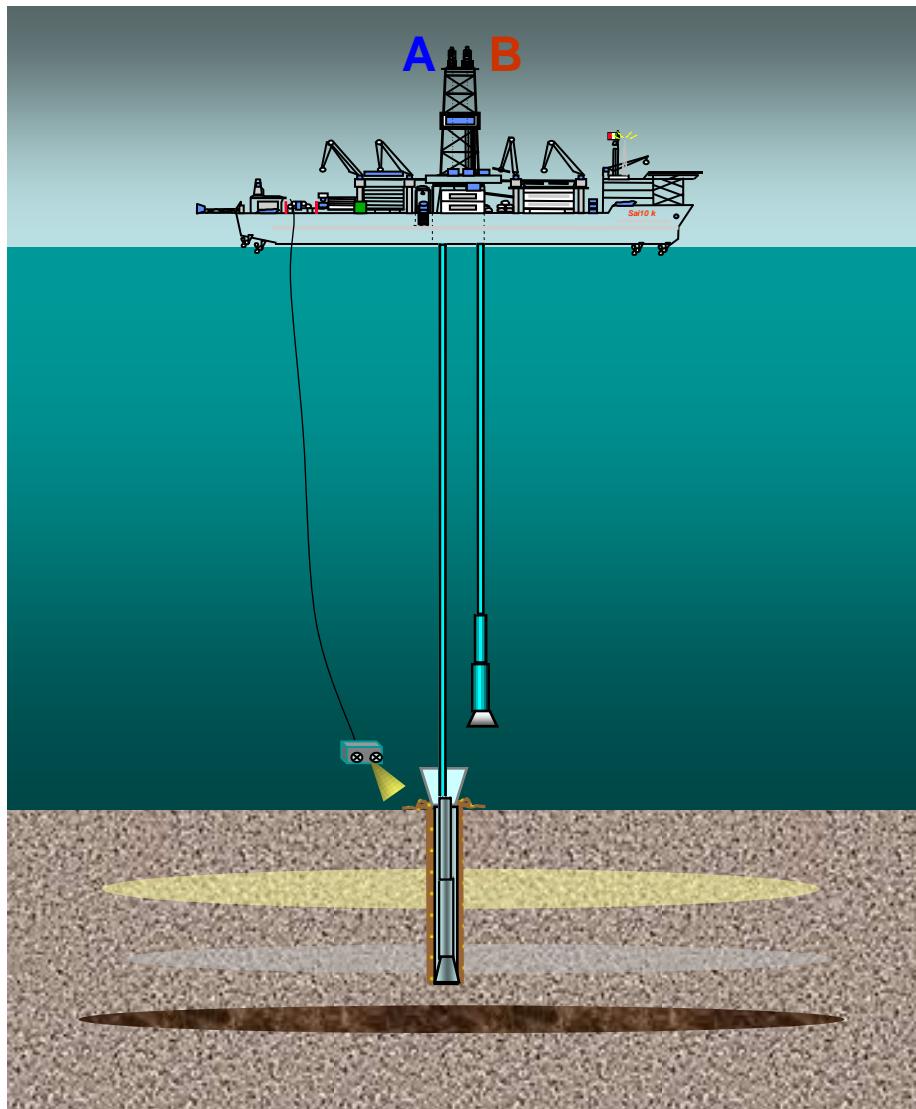
Beginning of drilling

- Rig A: Starts to drill hole
- Rig B: Places beacons on seabed, to help keep vessel in place
- Remote operated vehicle (ROV) with video camera

Hahú perfurasau

- Torre-perfurasau A: hahú fura kuak
- Torre-perfurasau B: hatuur Ahi-sinál iha tasi-okos, hodi ajuda hatudu ró iha fatin
- Veíkulu ne'ebé opera hosi dook de'it ho kámara-vídeo

drilling/perfurasau



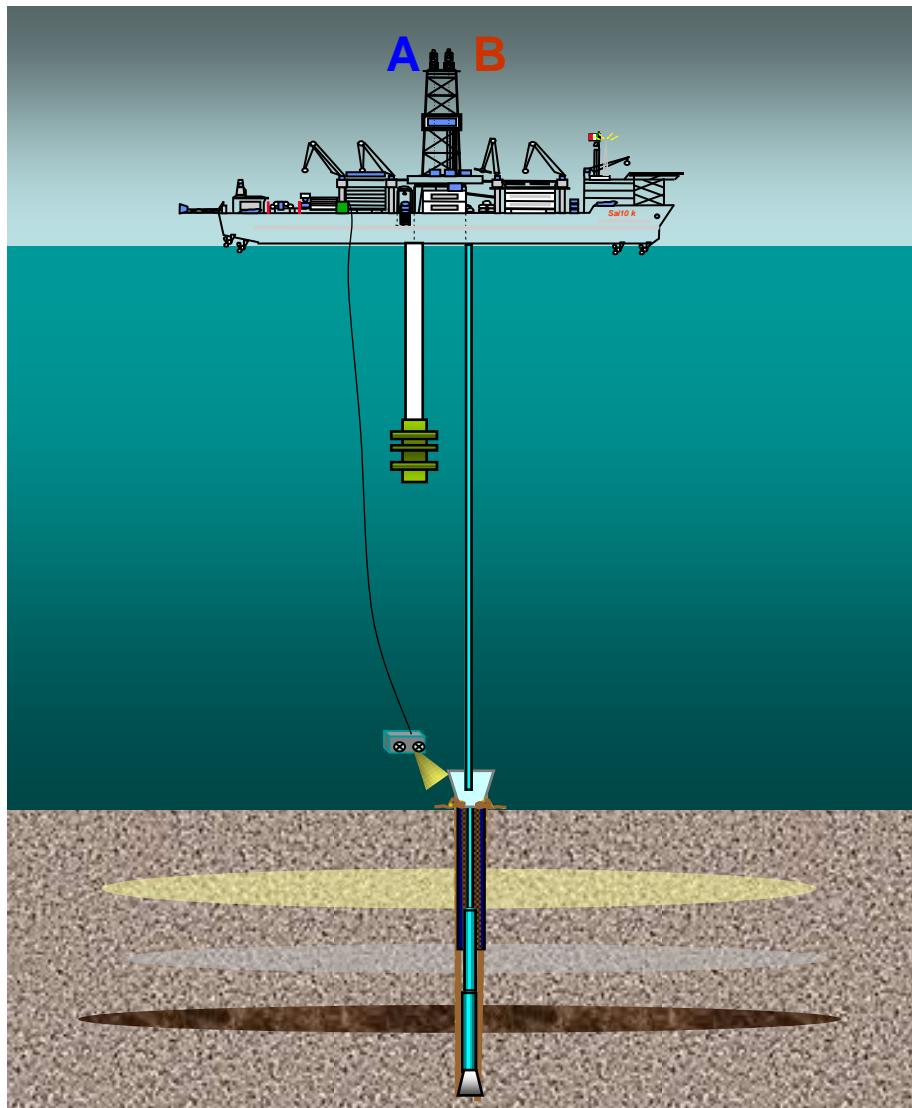
Top of well hole

- Rig A: Placing cement in sides of well hole
- Rig B: Bringing down bottom-hole-assembly equipment

Kuak posu nia leten

- Torre-perfurasau: Tau simente iha kuak posu nia sorin
- Torre-perfurasau B: hatún ba okos ekipamentu montajen kuak nian

drilling/perfurasau



Top of well hole

- Rig A: Bringing down blowout-preventer (BOP) equipment
- Rig B: Continuing to drill hole

Kuak posu nia leten

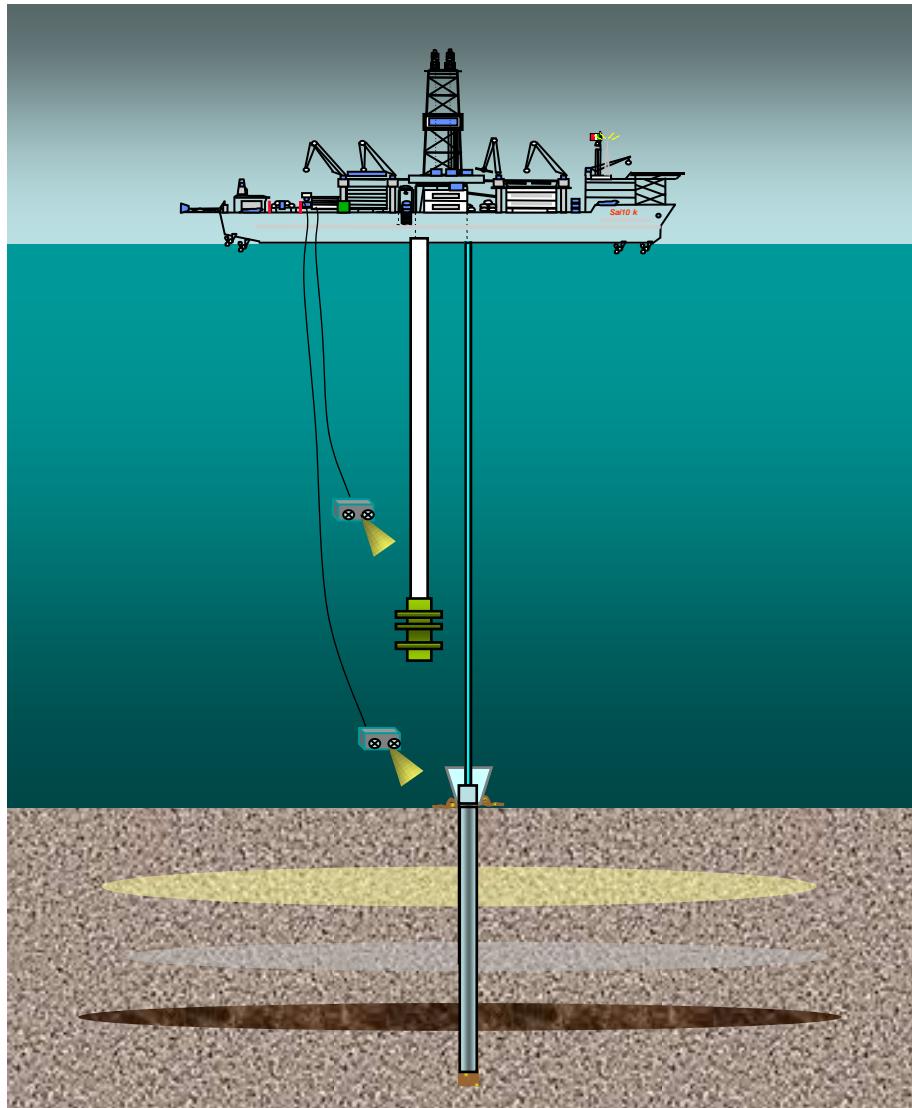
- Torre-perfurasau A: hatún ekipamentu ne'ebé prevene rebenta (BOP)
- Torre-perfurasau B: Kontinua fura kuak



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Top of well hole

- Rig A: Bringing down blowout-preventer (BOP) equipment
- Rig B: Placing cement in sides of well hole

Kuak posu nia leten

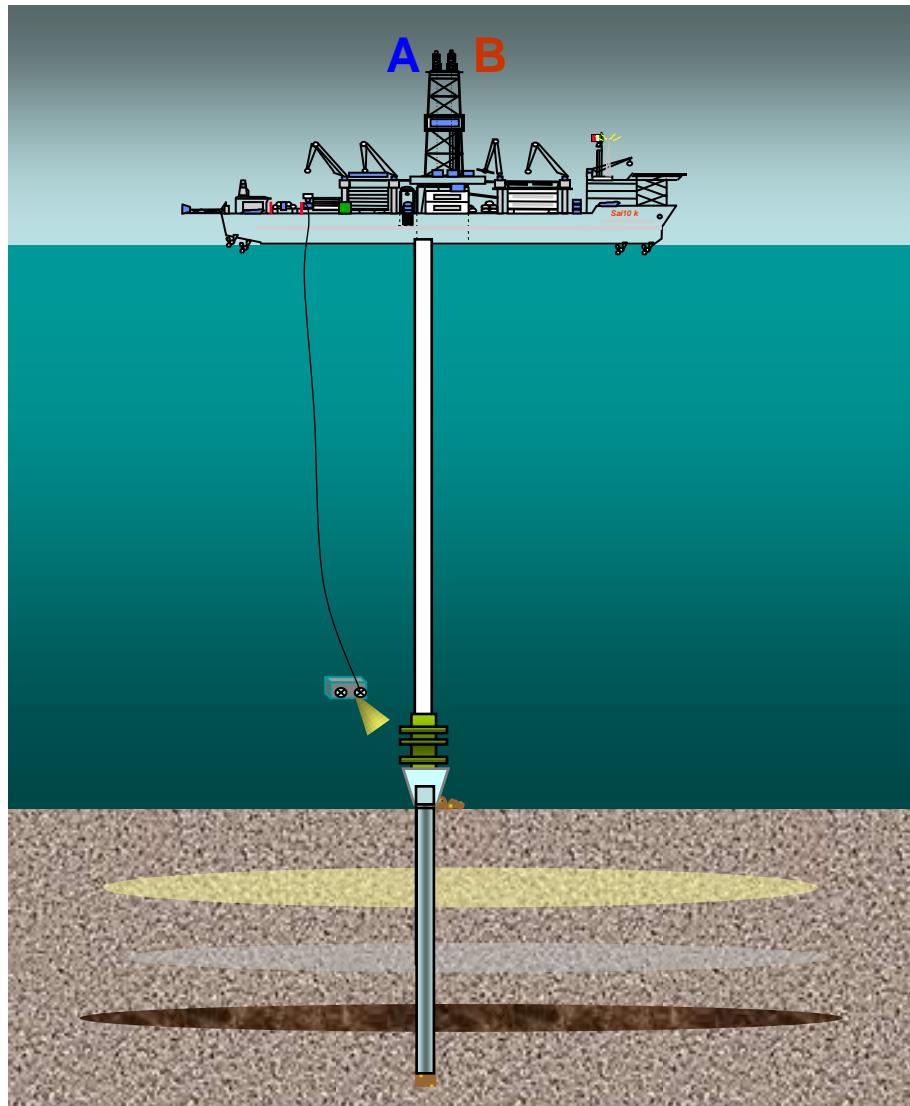
- Torre-perfurasau A: hatún ekipamentu ne'ebé prevene rebenta (BOP)
- Torre-perfurasau B: Tau simente iha kuak posu nia sorin



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Preparing to drill deeper

- Rig A: Attaches BOP to well head
- Rig B: Not required after the BOP is in place. Can be used if Rig A is damaged.

Prepara atu fura kle'an liután

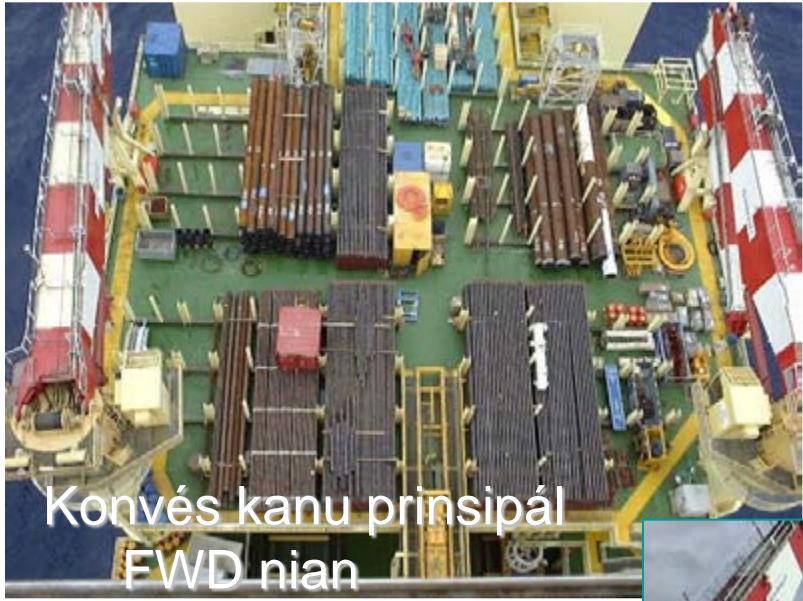
- Torre-perfurasau A: Tau BOP ba posu nia ulun
- Torre-perfurasau B: La presiza liutiha BOP ne'e iha fatin. Bele uza karik Torre-perfurasau A ne'e estraga



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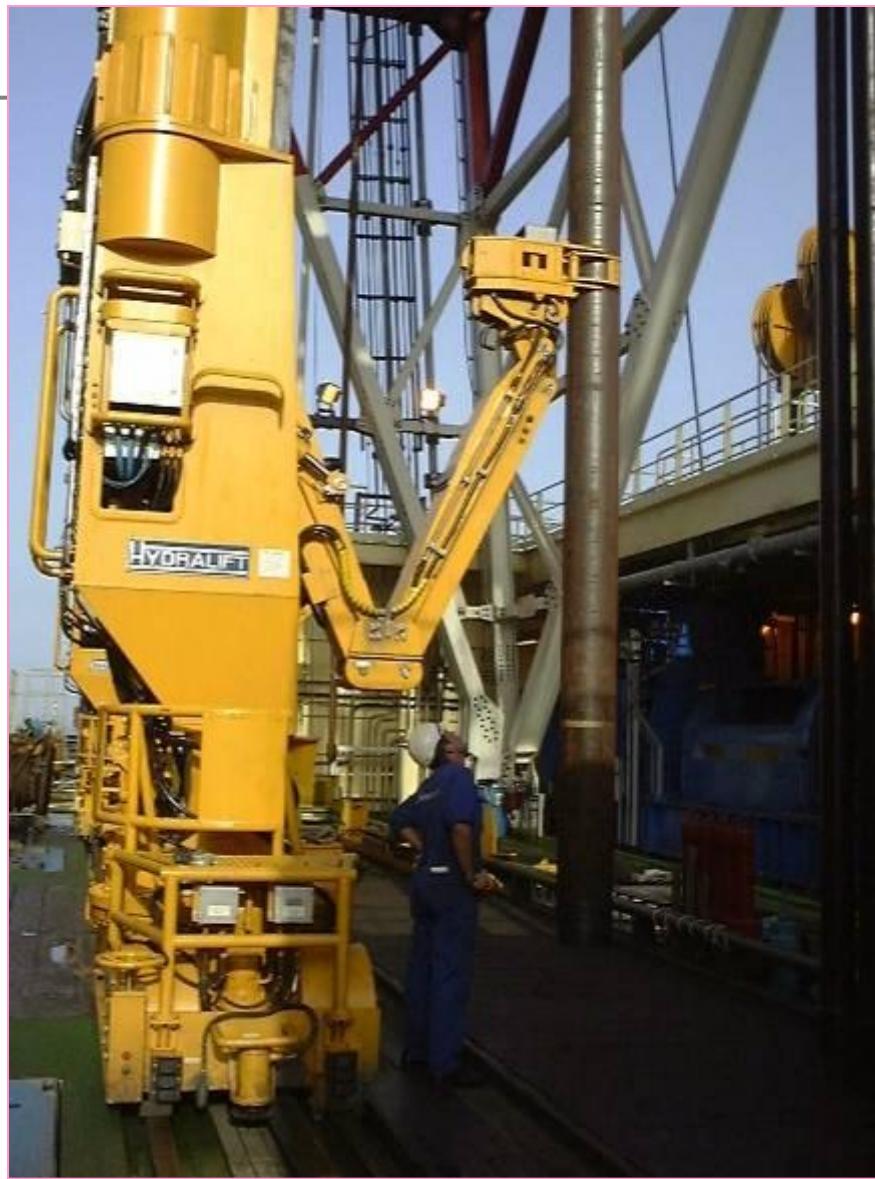
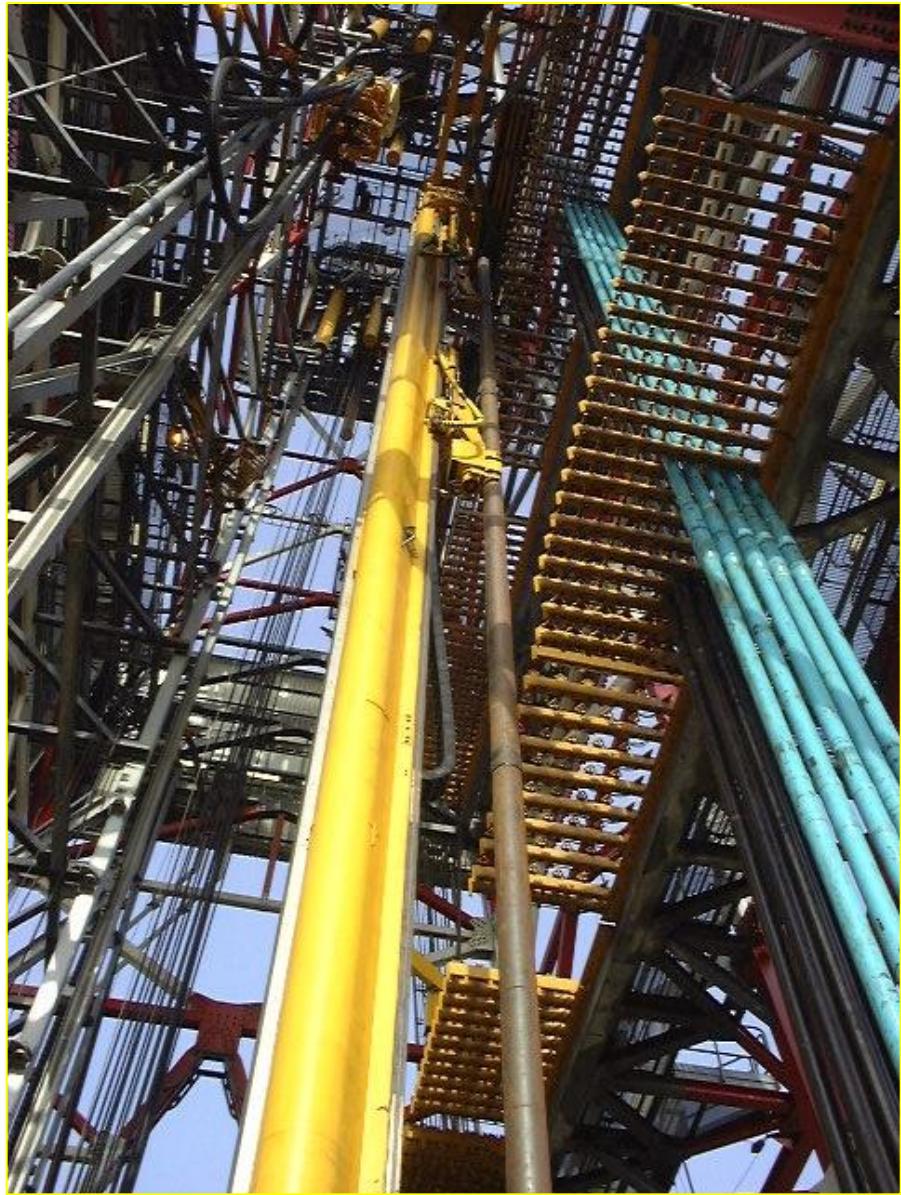


Racks with piping / Prateleira ho
kanalizasaun

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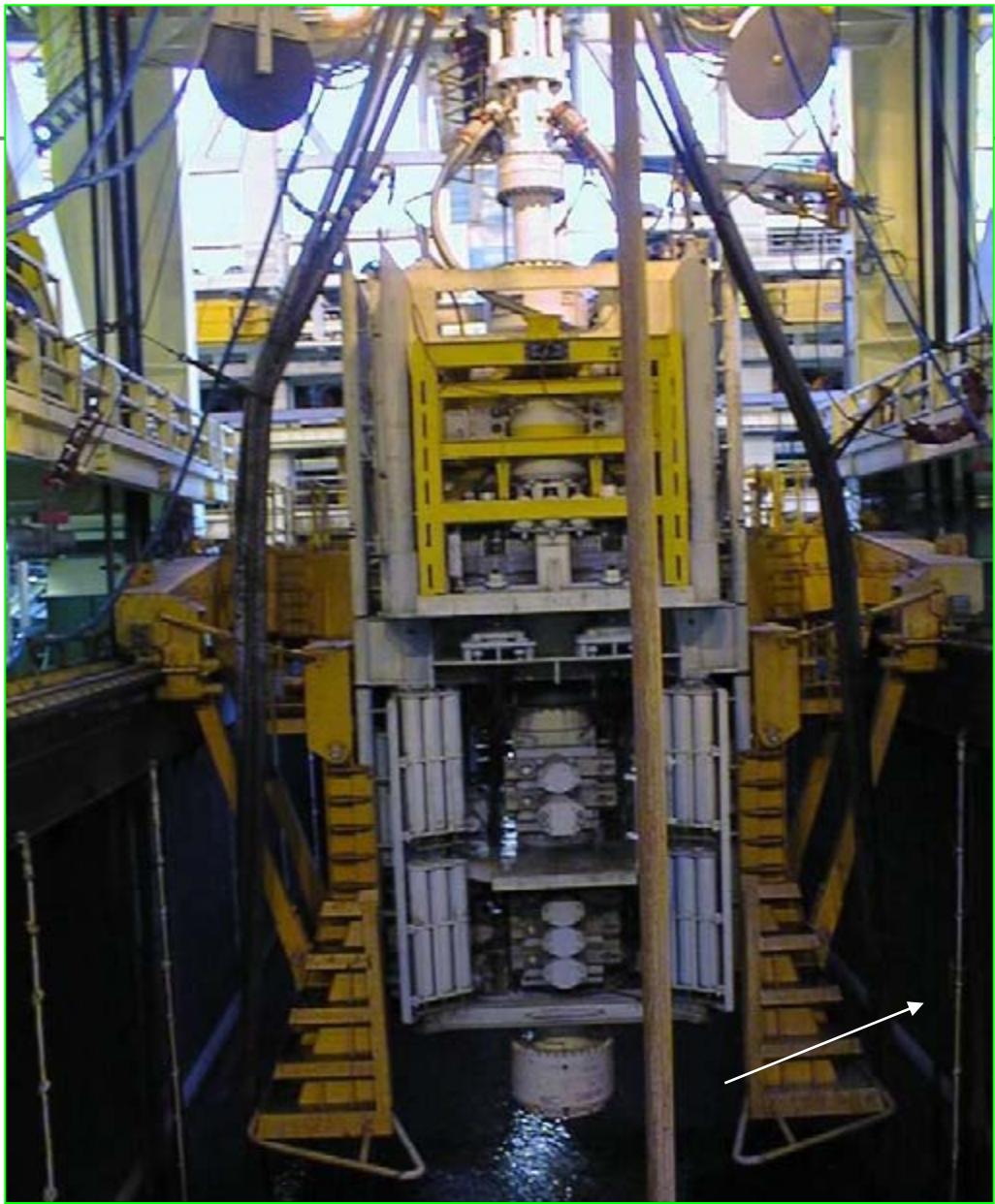


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Blow-out preventer
(BOP)

Ekipamentu ne'ebé
prevene rebenta



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ROV nia estibordu parte kotuk nia



ROV nia portu parte kotu nian



Remote Operated Vehicles (ROV) with cameras, used for viewing activities underwater

Veíkulu ne'ebé Opera hosi Dook de'it (ROV) ho kámara, uza hodi haree atividade bee-okos nian

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A support vessel will be used for:

- Transporting goods, fuel and drilling tools
 - Emergency support if required
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Ró apoio ne'e sei uza ba:

- Transporta sasán, kombustivel no ekipamentu perfurasau nian
- Apoiu emerjénsia karik presiza



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