

O'Grady, John (Shell)

## **LIFE OFFSHORE ON A TYPICAL INTERNATIONAL SHELL DEEPWATER DRILLING RIG**

Life offshore on Shell deepwater drilling rigs involves adventure, hard work, and camaraderie. In this presentation I will discuss the main themes of life offshore including the emphasis on process and occupational safety, diversity and inclusion, the work cycle and associated Covid complications. In Namibia, where we have been most recently drilling Deepwater wells, we have used three rigs so far in the campaign, two drill ships and one semi submersible. Delivering a deep-water drilling campaign requires the talents of many. Onboard, we have engineers, petrophysicists, geologists, welders, electricians, lab technicians, crane operators, drivers, pilots, chefs, and cleaners – all contributing to the teams well delivery endeavours.

Drill crews on Shell's international rigs are multi generational, and multin-ational. Cultural, behavioural and religious norms are diverse. We work shifts, maintaining round-the-clock operations. The rhythm of life revolves around well delivery activities, safety protocols, and maintenance tasks. In Sao Tome, the relentless hum of machinery blended with the sound of crashing waves. Sights of humpback whales and fully armed anti piracy vessels created a unique symphony of oil and gas industry interfacing with the natural world and all its hazards and dilemmas. Crew members spend weeks or months away from their families, relying on satellite communication to stay connected. Normality for our families is generally when we are away from home.

In 23 years of working for Shell, there have been some major shifts in organisational thinking for offshore and onshore well delivery teams. Offshore, I have come to expect the unexpected and in this presentation I will give you a sense of what can look like.



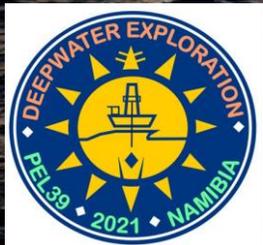


## Life on a typical Shell Deepwater Rig

John O'Grady – Senior Drilling Supervisor

75. BHT - FREIBERGER UNIVERSITÄTSFORUM 2024

6TH JUNE 2024



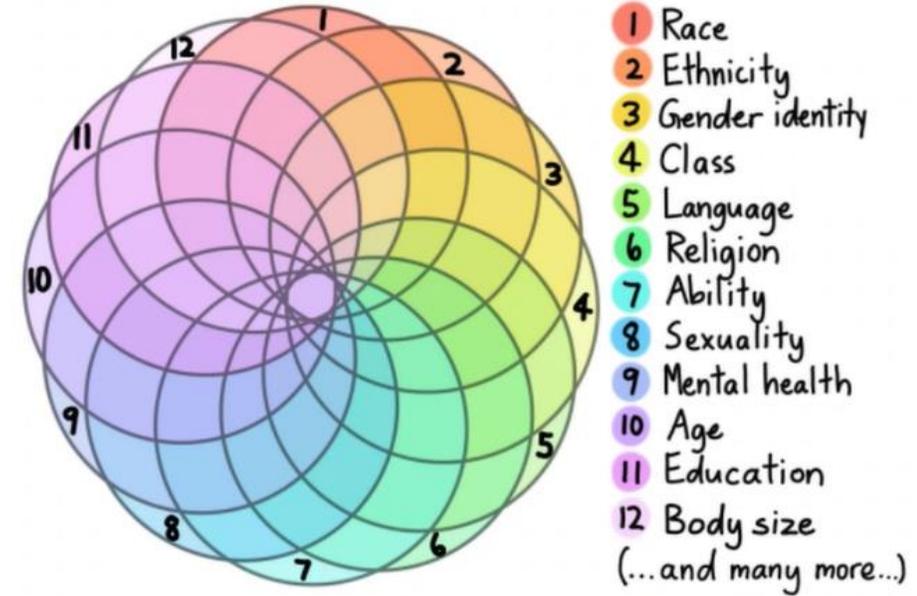
# Driving Diversity, Equity and Inclusion (DE&I) through Goals



**Wael Sawan**  
Chief Executive Officer

“DE&I is a critical enabler for performance, discipline and simplification. I am convinced that we will perform at our best as a company if everyone has a strong sense of belonging at Shell. **Creating this culture relies on all of us moving together. We must remember that DE&I is not a box-ticking exercise.** There are often no clear or easy answers. It can feel messy and take us out of our comfort zones. It takes constant work. No matter where you are in your DE&I journey, we all have more work to do. We know we can always do better.”

# INTERSECTIONALITY



Our ultimate objective is for everyone to feel valued and respected and have a strong sense of belonging, with **a fully inclusive culture** where everyone can thrive.

It's not always easy though! The places we work do not always agree .....



**Wait for the police to investigate — Ekdandjo on LGBTQI+ alleged hate murders**

**Trending Stories**

- 1 Mutilated body of transgender woman discovered
- 2 Plane crashes into Windhoek house
- 3 Namibia sees first green hydrogen fuel trucks
- 4 Three killed in Windhoek plane crash



### International Day for the Elimination of Racial Discrimination

We have a bold ambition - to become one of the most diverse and inclusive organisations in the world.

To mark International Day for the Elimination of Racial Discrimination, our CEO Wael Sawan, shares his experiences and why this drives him to create an inclusive working environment at Shell where everyone feels valued, respected, and with a strong sense of belonging.

Continue to create a safe space for deeper DE&I conversations in your teams, and ensure they occur regularly so we create the most inclusive workplace we can.

Leaders can use prompts from the [DE&I in Action Leader Guide](#) to support these discussions.

To learn more about DE&I at Shell and how you can advance racial equity and DE&I, go to the [DE&I portal](#) and [shell.com/DEI](#).

# Shell Namibia Drilling Campaign 2021-2024

## Marine, Social and Environmental Focus

**8**  
Rig Moves

**252**  
ROV Dives

**7,200**  
Nautical Miles  
Transited

**57,600**  
Tons of Cargo  
Shipped

**+290,000 litres**  
Slops recycled into Fuel Oil

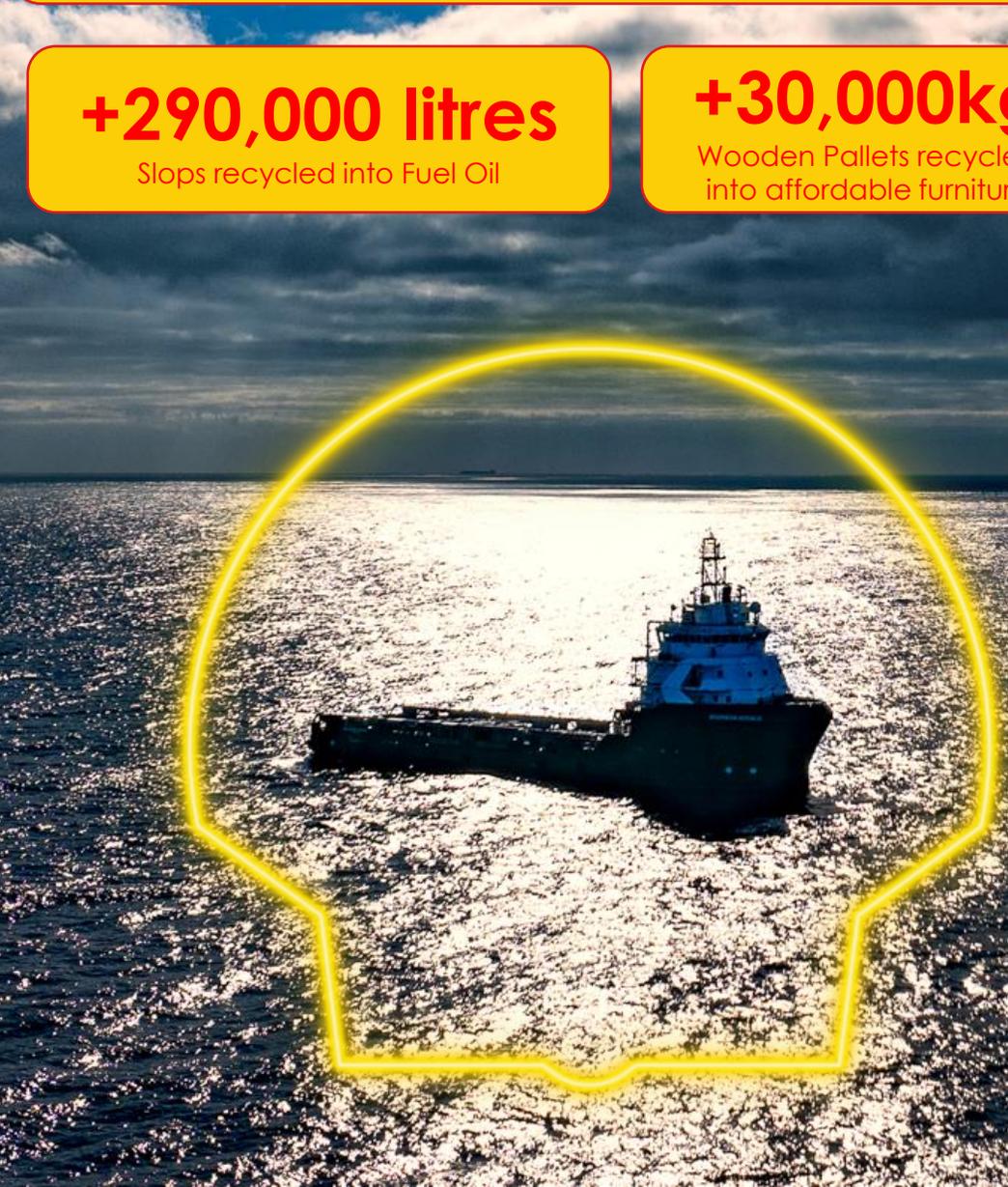
**+30,000kg**  
Wooden Pallets recycled  
into affordable furniture

**2**  
Well tests  
conducted

**31%**  
Reduction in CO2  
Target (OP24)

**2023 CEO Awards**  
Namibia Waste Recycling – receives honourable  
mention in Respecting Nature category

**6 ORA Runs**  
PTA technology to reduce / eliminate  
Well testing



**Diversity, Equity & Inclusion: Gender balance in the Shell Namibia offshore environment.....**



**..... Six offshore female Wells Supervisors and one female WOTL**



# International Women's Day on the DBO



HALLIBURTON



Logistics Support Services



## People

- Great People
- Great Opportunities
- Great Place to Work



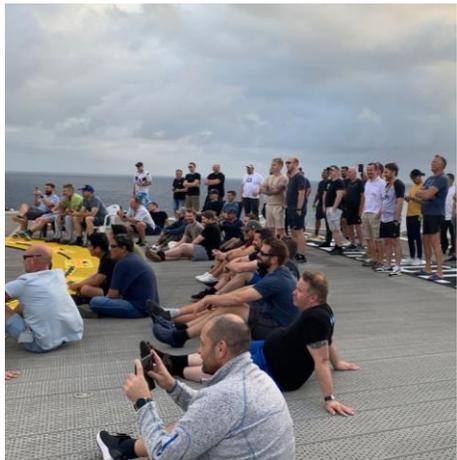
SAFETY & ENVIRONMENT

PEOPLE

PERFORMANCE

# Basics of Offshore Life

- 24 Hours a day – every minute needs to be accounted for
- Schedule: 28 days on / 28 days off
- 12 hours shift and 12 hours off
- Laundry done! Great Food / Healthy Food – all you can eat!
- Room is cleaned – you might have to share
- Gym – be extremely careful on the treadmill floating rigs!
- Barbeques / Party and Helideck concert for Crossing the equator.
- Higher rates of pay! All your costs are covered while offshore.
- Much more time off! Working only 6 months of the year.
- Forced abstinence from alcohol (drug tests carried out)
- High degree of cultural and religious diversity on international rigs
- Payment or extra time off for the travel days
- Helicopters and private jets!
- Sometimes crew change by boat (7 hours sail in Mexico)
- Time is money! Screw ups can be very expensive very quickly!



## Main Disadvantages of Offshore Life

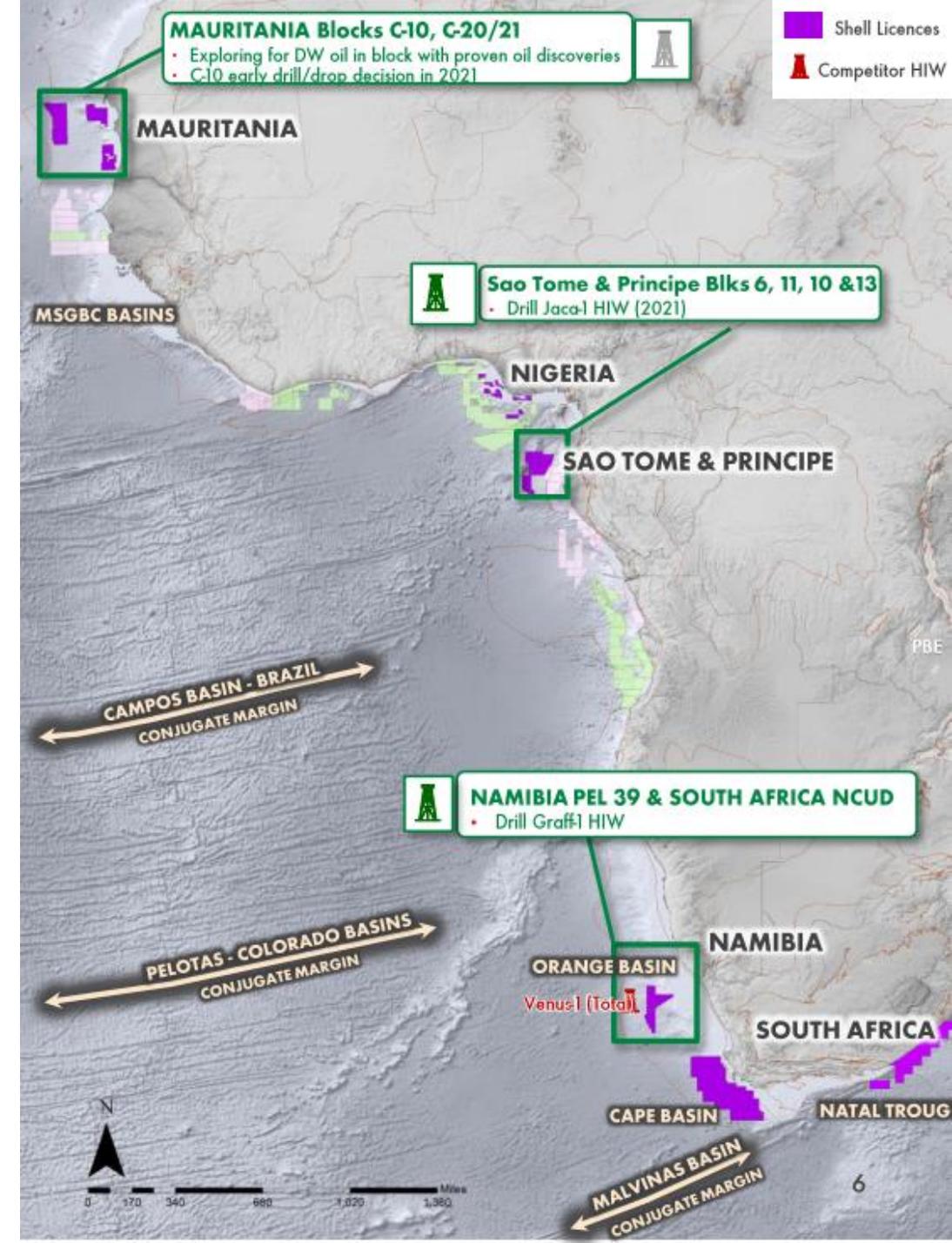
Higher chance of missing major family events – not every company is as well-resourced or as compassionate as Shell

Far away from family in emergency

Normality for our families is when we are away! 2 Days to get there and 2 days back = 32 days on / 24 days off

Covid made everything more complex, less safe and more expensive

Big differences in life outcomes of Team members







# The Macondo Blowout

## Highlight of Events

- Ongoing final well operations, preparing for T&A April 20, 2010
  - 50-miles offshore Louisiana
  - 5,067-ft. water depth, 18,360-ft. well depth
  - Completed flawed negative pressure test
  - Displacing to seawater
  - Transferring mud to PSV
  - Riser unloading with subsequent explosion
  - Fire fighting with fire monitors while well kept feeding
  - Unprecedented response and industry support
- Insufficient volume control during simultaneous displacement of riser and mud transfer to PSV



## Impact

- Human Impact
  - 11 people killed, 17 injured
- Environmental Impact
  - 86-days of flow, appr. 40K-70K BOPD, 3.5-6M bbls spilled\*
  - 2100km of shoreline affected
  - Wildlife impacts on birds, fish and crustaceans were widespread
- Financial Impact
  - \$65 billion in cleanup costs, charges and penalties
  - Ultimate cost \$145.93 billion
  - Loss of Macondo licence
  - \$260 billion loss in industry market cap of key players\*\*
  - Wide scale impact on fishing, tourism and offshore drilling

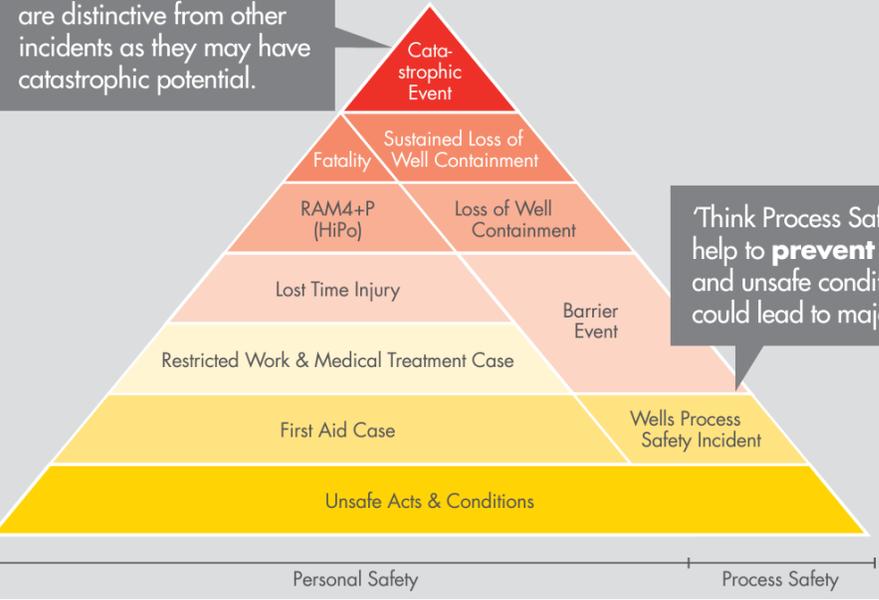
\*Macondo reports and investigations provide a range of rates and volumes

\*\*Market cap Apr. 6 to June 29, 2010 - BP, Anadarko, Exxon, Cameron, Chevron, ConocoPhillips, Halliburton, Schlumberger, Shell, Total, TOI

The Macondo blowout should never have happened

# Process Safety

Process safety incidents are distinctive from other incidents as they may have catastrophic potential.

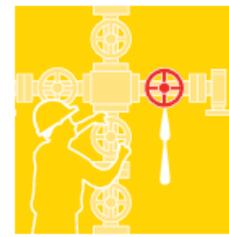


'Think Process Safety' will help to **prevent** the incidents and unsafe conditions that could lead to major events



## BARRIERS

Know your physical well barriers and confirm they are tested.



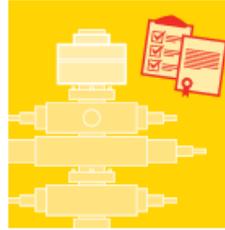
## LOST BARRIER

If a barrier is lost, immediately stop and fix it.



## SUBSURFACE UNCERTAINTIES

Know and communicate subsurface uncertainties.



## WELL CONTROL EQUIPMENT

Know your well control equipment and confirm it's certified and tested.



## STANDARDS & PROCEDURES

Follow standards and procedures or get approval to deviate.



## WALK THE LINE

'Walk the line' on temporary rig-ups and confirm set-up = layout drawing.



## EMERGENCY RESPONSE

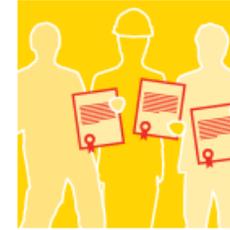
Test your emergency responses and conduct regular drills.



## REPORT/LEARN

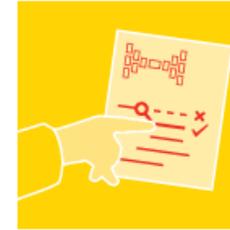
Report Wells Process Safety incidents – investigate, share, learn.

THESE TEN COVER REQUIREMENTS CRITICAL TO WELLS PROCESS SAFETY



## TRAINED PEOPLE

Confirm all people are trained and competent for the task.



## RISK ASSESS

Perform risk assessments during planning and for changes.



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**Toolbox Talks  
with Covid  
face masks**

**Valaris DS-10  
Namibia  
January 2022**



# Picking up Rubbish on the Deepsea Bollsta – Namibia 2023



Deepsea Bollsta  
Pre shift meeting  
Namibia -March 2023



# The Valaris DS-10 Drill Ship quayside in Walvis Bay, Namibia April 2022



Valaris Rig of the Year 2021

# Maersk Voyager Drillship – Walvis Bay Anchorage - Namibia April 2022



# Dual Derrick – way to go for maximizing well delivery performance

**Graff-1**  
Concurrent Operations  
Riserless Phase

Jet 36in conductor and 36" LPWHH into position. Concurrently rig up to run 22" Casing on AUX

Drill 26in section on Main rig while concurrently running 22" casing from AUX

Run 22" Casing and 18-3/4" HPWHH to +/- 100m from Seabed on 6-5/8" Landing String

**Graff-1**  
Concurrent Operations  
Riserless Phase

Pull 26" Drilling BHA +/- 400m above the seabed. Hold BHA in this position ready for Wiper Trip if 22" Casing cannot be landed.

Sail 22" Casing Over Well center and stab casing into 36" LPWHH casing.

Run 22" Casing to depth

**Graff-1**  
Concurrent Operations  
Riserless Phase

Land 22" Casing with 50klbs down. POOW with 26" Drilling BHA Lay out 26" BHA.

Rig up BOP Riser Running equipment. Concurrently cement 22" Casing.

WOC: Rig up of Riser Running Equipment will likely be complete before end of WOC.

Fully land 22" Casing weight. POOH and rack back Landing and Inner Strings.

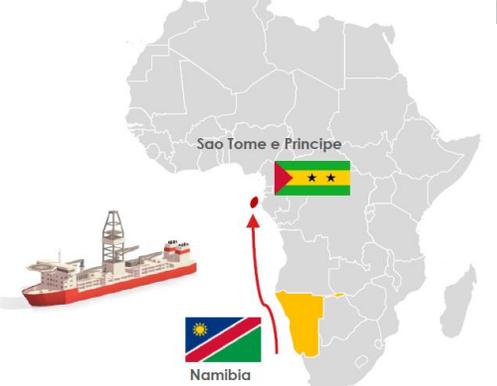
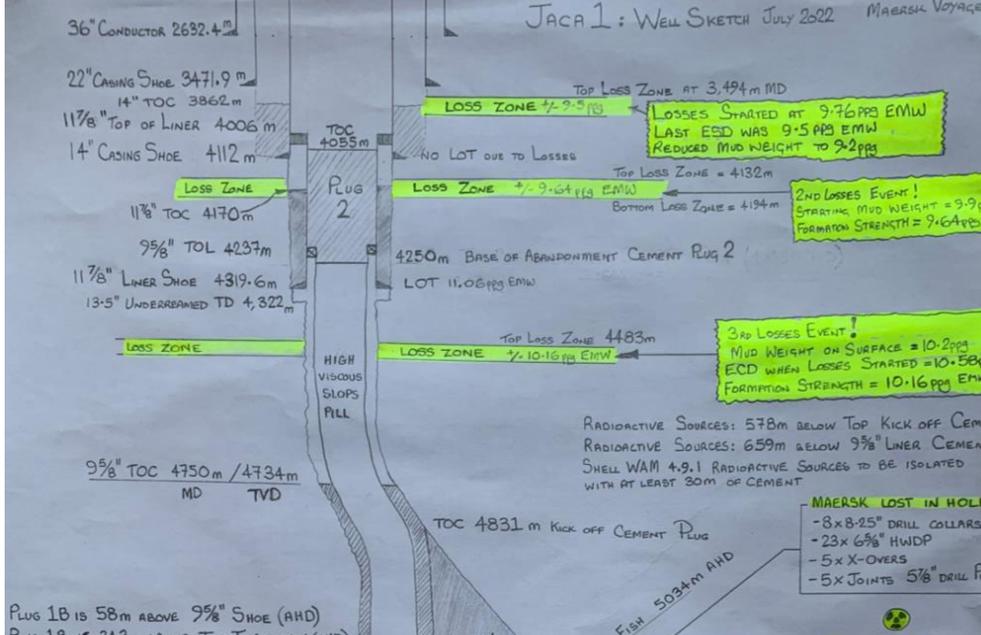
**Graff-1**  
Concurrent Operations  
Riserless Phase

Main Operation:  
Run BOP  
Pressure test 22" casing to 1,200psi once landed.

Concurrent Operation  
Aux rig off limits during Riser running due to risk of 75ft Riser Joints falling across drill floor.  
Pressure test C&K manifold, FOSVs, Grey Valves.  
Move 14" Casing Running equipment to Drill floor.  
Move 14" Centralizers & Stop Collars and Thread Lock to Drill Floor  
Rig up for 14" Casing during flat time. Commence picking up stands of 14" Casing during flat time.

BOP Deployment Video  
Running 20" Casing

# JACA-1: Sao Tome & Principe



Humpback Whale



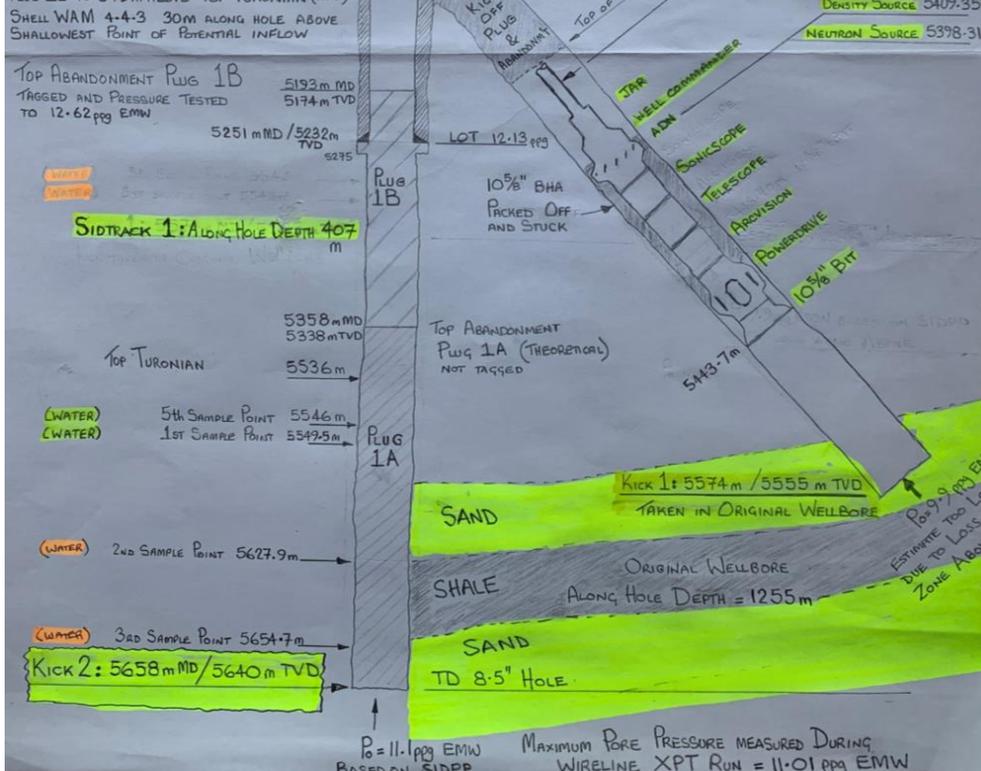
Humpback Whales & Dolphins



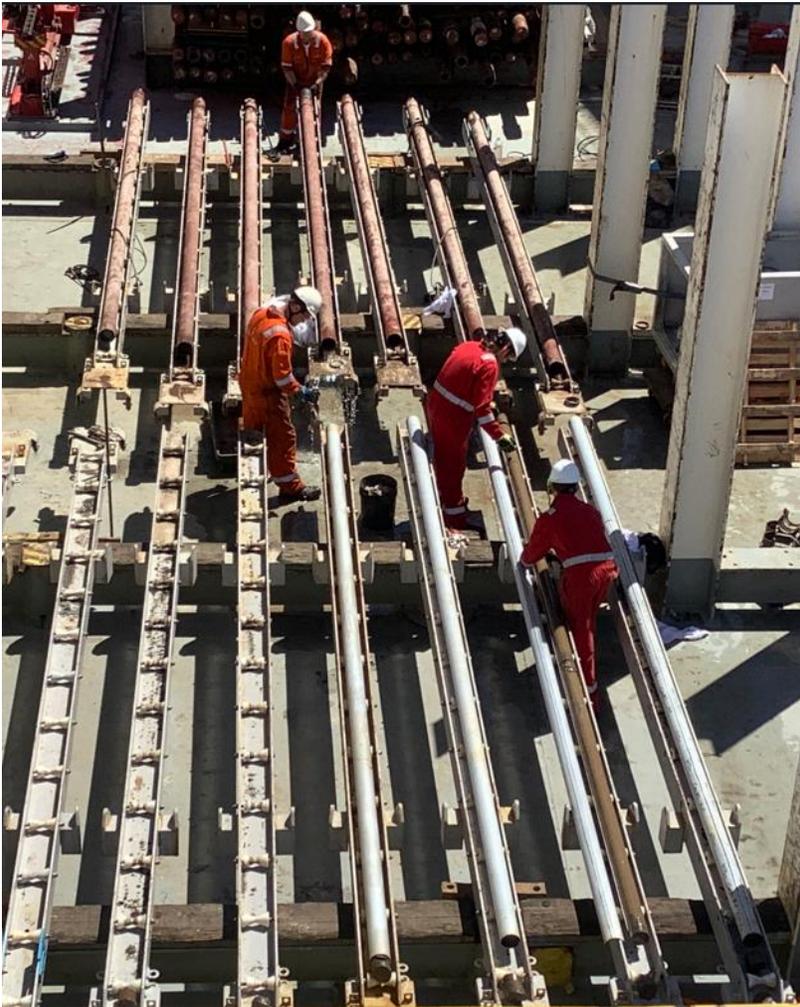
False Killer Whale



Rough Toothed Dolphin

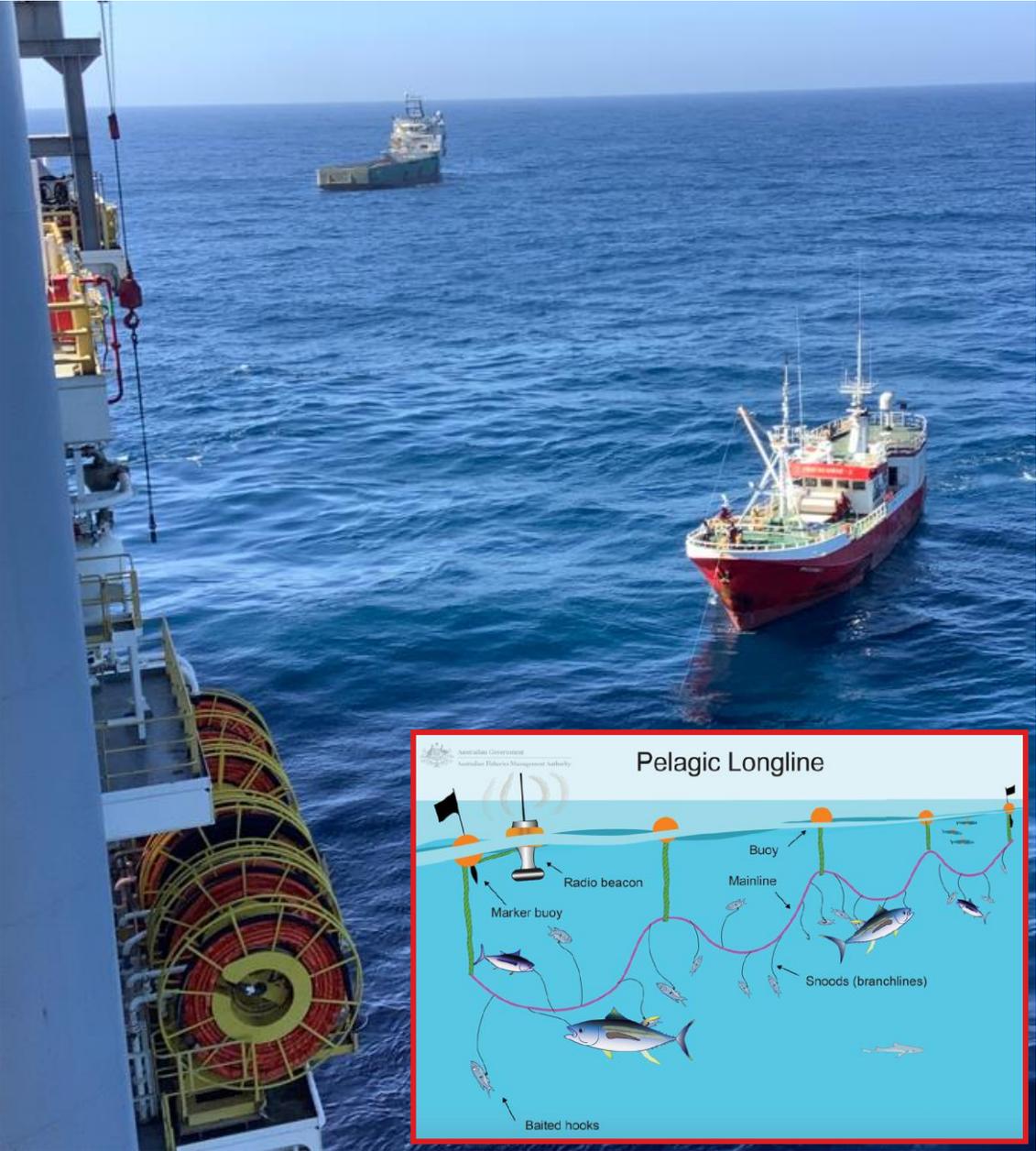


# Continuous Coring



Arrival of a fishing boat in Namibia – Q1 2022

Arrival of a small boat in Mauritania



# The sacrificial sheep – Egypt 2020

## MATERIAL CARGO MANIFEST

FROM : ABU-QIR BASE  
TO : TRANSOCEAN DISCOVERER

RB : 011 / 2020

DATE : 23 / 1 / 2020

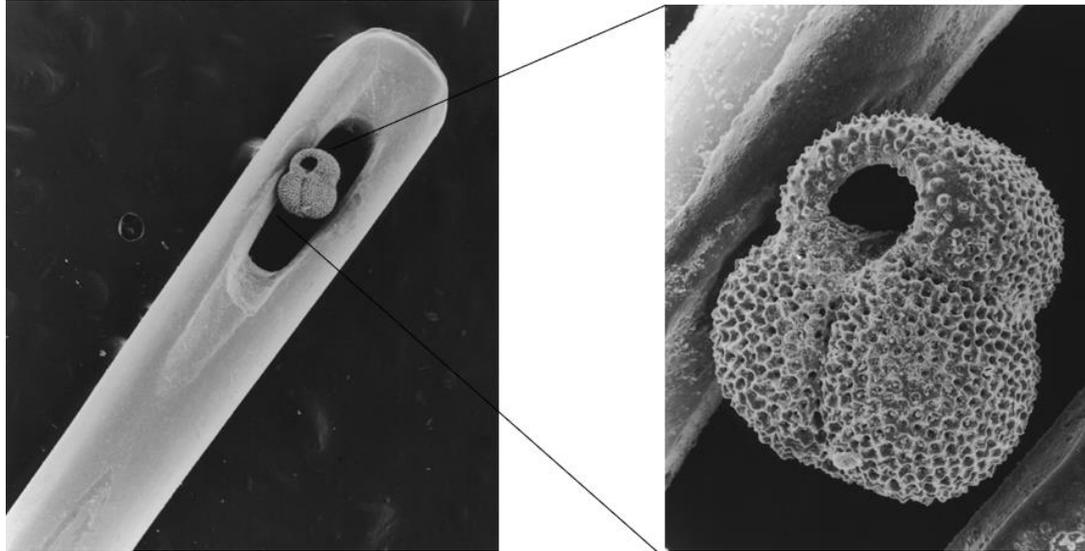


DISPATCHED BY: AHMED

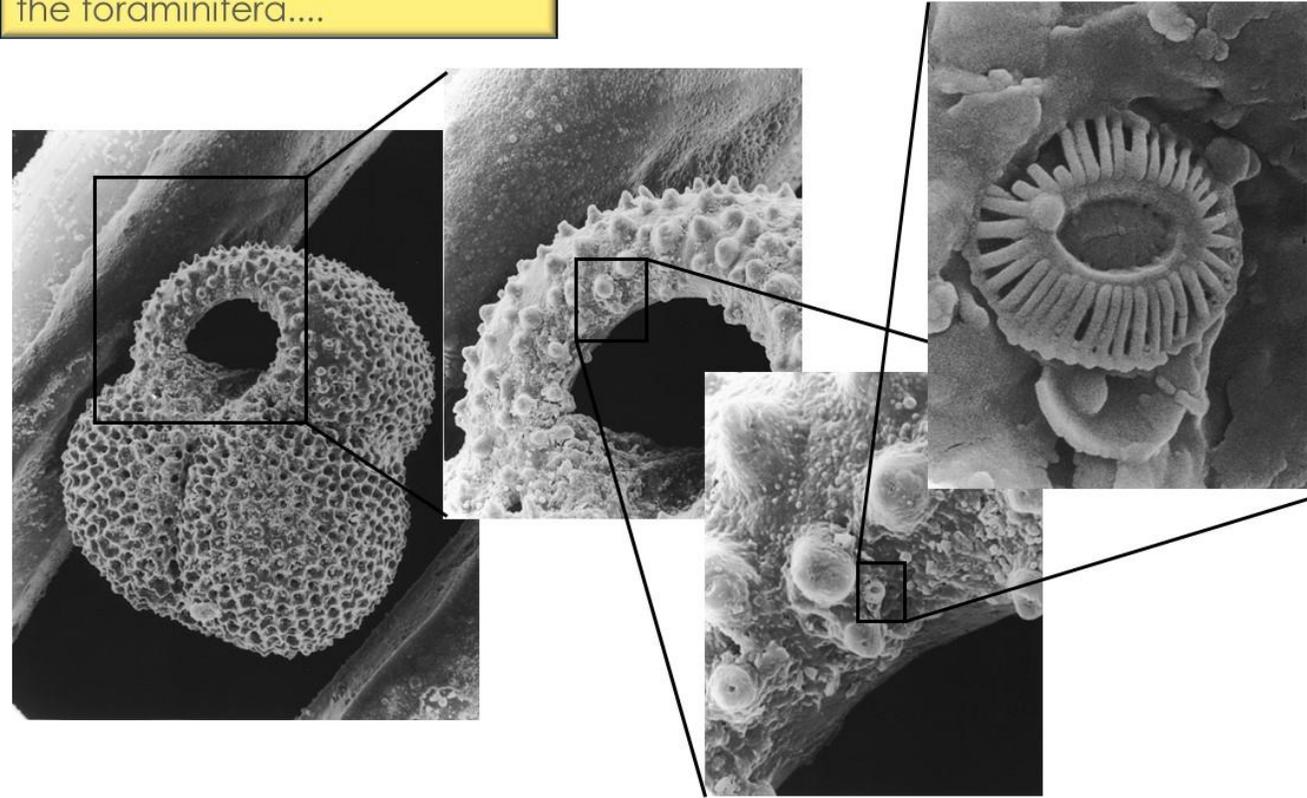
VESSEL: BOURBON DIAMOND

ITEM	Qty	UNIT	WEIGHT	Description	CCU ID.	MSDS-DG	COMPANY
1	1	EA		14-3/4" BIT TYPE GTX-CM61 7-5/8" SHANK S/N: 5281811 ( INSIDE BAKER CARGO BASKET S/N: TA-4116 )		N/A	BAKER
	1	EA		GJ NOZZLE FK16 ( INSTALLED )			BAKER
	3	EA		NOZZLES FL18 ( INSTALLED )			BAKER
	3	EA		NOZZLES FL14 ( BACK UP )			BAKER
	3	EA		NOZZLES FL15 ( BACK UP )			BAKER
	3	EA		NOZZLES FL16 ( BACK UP )			BAKER
	1	EA		GJ NOZZLE FK14 ( BACK UP )			BAKER
	1	EA		GJ NOZZLE FK15 ( BACK UP )			BAKER
	1	EA		GJ NOZZLE FK16 ( BACK UP )			BAKER
2	1	EA	4500KG	CARGO BASKET C/W 13-7/8" BLUE WHALE EQUIPMENT	TA-4116	N/A	BAKER
3	1	EA	6550 KG	20FT OPEN TOP CONTAINER ( SEE ATTACHED )	DNVOT20X80070	N/A	TRANSOCEAN
4	1	EA	1800 KG	EMPTY CUTTING BOX	556016	N/A	TRANSOCEAN
5	1	EA	1400 KG	RUBBISH SKIP C/W SHEEP INSIDE	TSTB-005	N/A	RASHPETCO

# Biostratigraphy



..and within the aperture of the foraminifera....



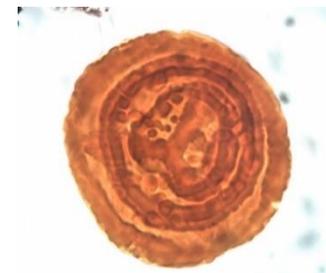
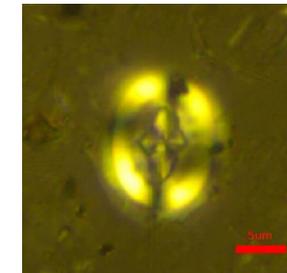
Shell subsurface colleagues report encounters with young earth creationists and colleagues from evangelical Christian backgrounds who cannot reconcile religious faith with scientific understanding of the Earth.

Offshore, under the geologist's microscope, decades of data gathered by stratigraphers, paleontologists, geologists, and geochemists from many cultures and faiths provide compelling evidence of the Earth's evolution, age and history.

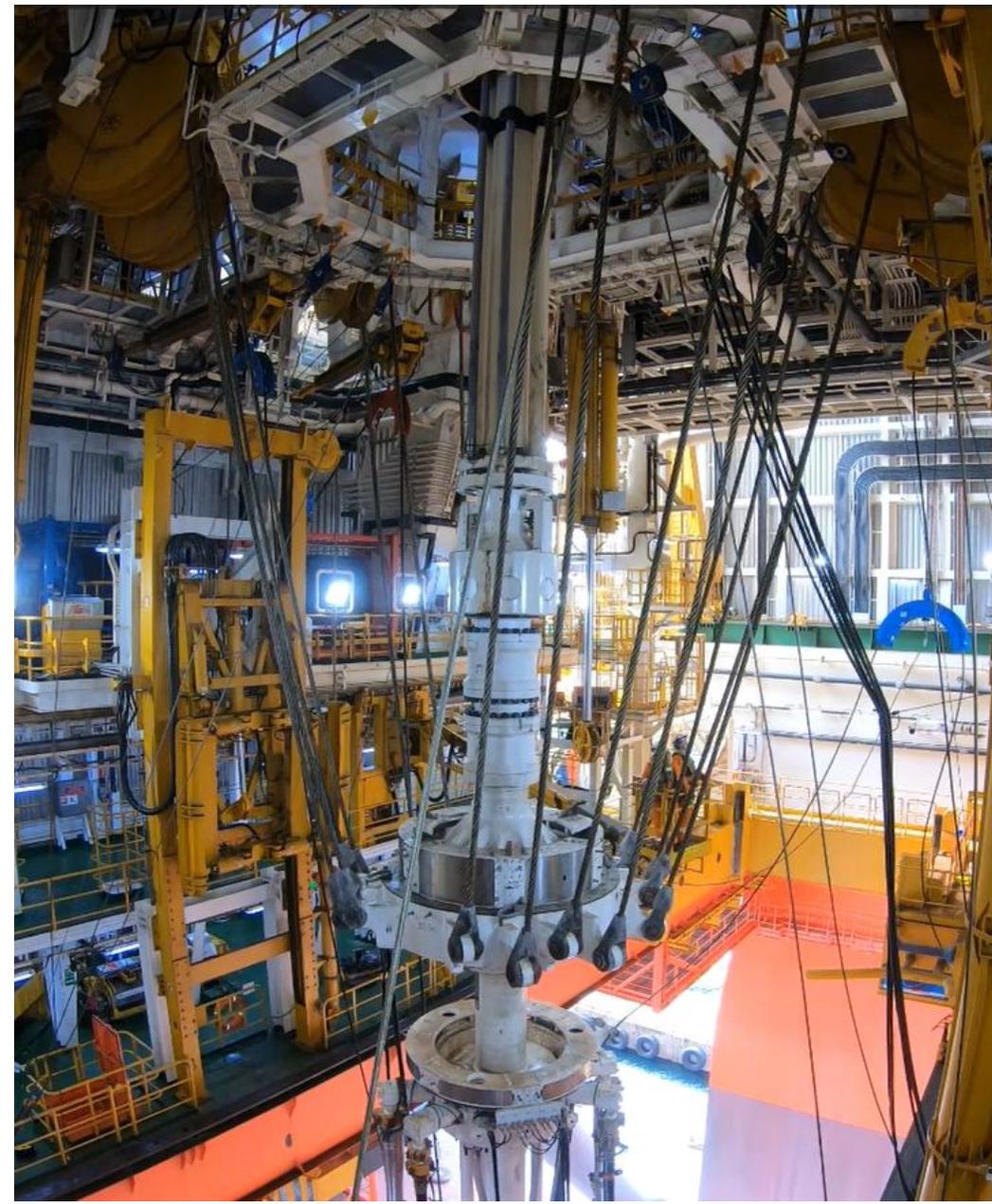
Biostratigraphy provides insights into Earth's history by using fossils as time markers.

Tool for understanding age of rock layers and major global events like mass extinctions!

During the 5th extinction event, certain index fossils disappeared from the fossil record, helping geologists pinpoint the timing of this and other significant events.



# The Offshore Environment



OCEANEERING

Dive: 49  
MAG#134

SE

165

S



Jonker - 1  
Transponders Recovery

11:04:02  
04.03.23

----- Forwarded message -----  
From: **Douglas Lipka** <[dlipka@wmcarey.edu](mailto:dlipka@wmcarey.edu)>  
Date: Tue, Mar 14, 2023 at 10:33 AM  
Subject: Re: Fwd:  
To: Rebecca Jordan <[rebecca.jordan@iwashco.com](mailto:rebecca.jordan@iwashco.com)>

Ms. Jordan,  
Wow! It appears to be bioluminescent and colonial. I've attached some slides from my lecture on Urochordates. This picture is probably of a pyrosome (a giant tunicate). They are found mostly in tropical waters; some very deep such as this one. I have seen photos and videos of these large colonies, many having different shapes. All seem to be bioluminescent. I'll follow up to seek an expert on tunicates for a possible identification.  
Thanks. You made my day!  
Doug Lipka

**Douglas A. Lipka, Ph.D.**  
Assistant Professor,  
Biological Sciences , William Carey University, Mississippi

# Worldwide Covid Lockdown! Oil and Gas workers still on the move

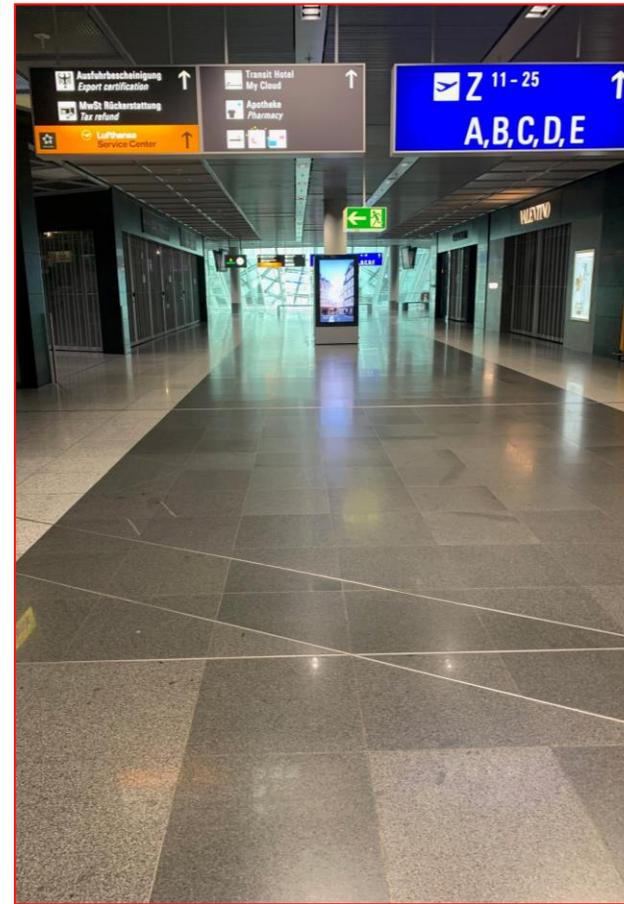
The scramble for the flight out of Cairo



London Underground:  
Crew Change during Covid!



Frankfurt Airport – mid-afternoon! Me and Albert and a few essential workers

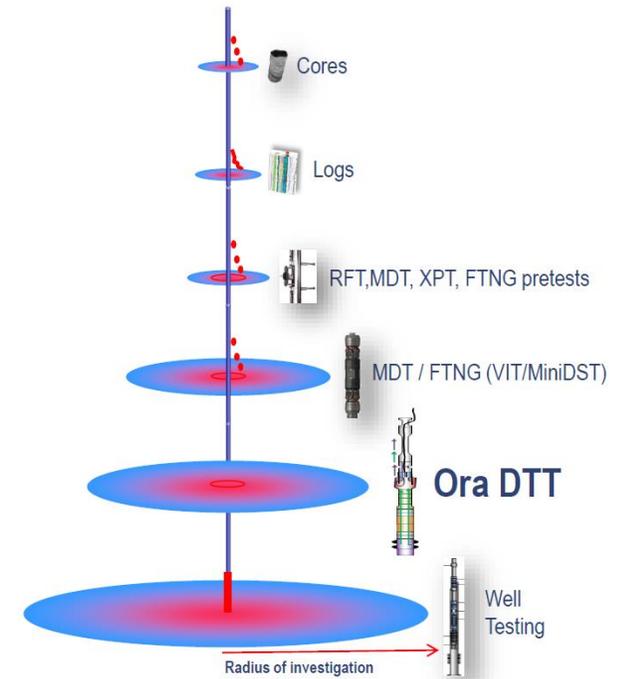
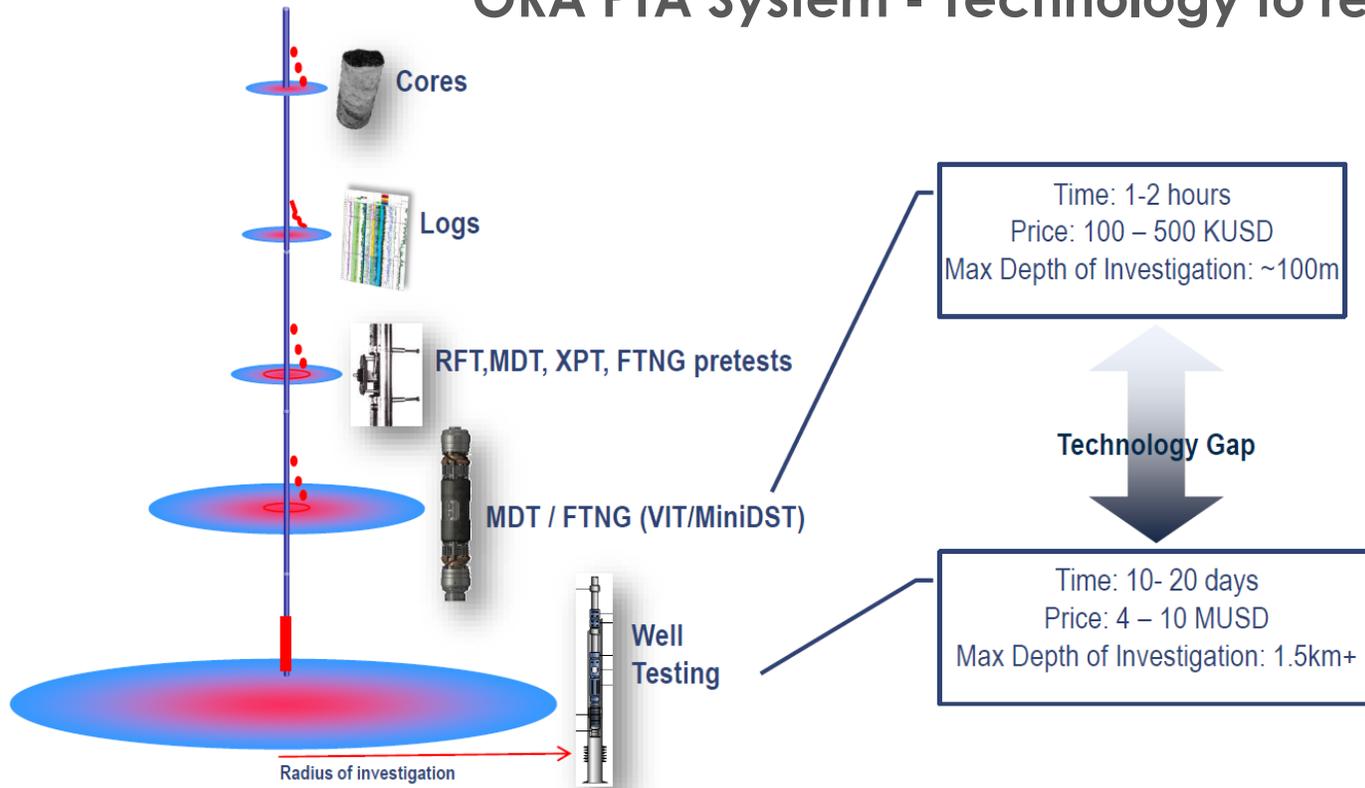


# Going to work on the La Muralla Semi-Submersible – Tampico, Mexico



Full Covid precautions in place

# ORA PTA System - Technology to reduce or eliminate Well testing & emissions



## OVERVIEW



9

Wells



9

Prospects



610

Operational Days



1,634k\*

Man Hours Worked

## HSE & Assist and Assure



0



14\*

LODI's



-31%

GHG Target (OP24)

## HIGHLIGHTS

- Built or used **Franchised content** for 100% of programmes
- **TQ/BIC delivery** – 75% of wells

### Dryhole Days:

- **La Rona** 22.71 days (TQ)
- **Graff-1** 33.25 days (TQ)
- **Jonker-1X** 45.45 days (TQ)
- **Graff-1ST** 5.53 days (N/A)
- **Lesedi** 21.52 days (Q2)
- **Cullinan** 33.85 days (Q2)
- **Jonker 1A** 44.01 days (TQ)
- **Jonker 2A** 25.02 days (BIC)
- **Enigma-1X** 22.74 days (BIC)



## Namibia Drilling Campaign 2021 – 2024

## LOGISTICS & PEOPLE



947

Heli Flights  
(5,969 pax)



57.6k\*

Tons cargo shipped  
(rig/vessel)



34

Vendors

## OPERATIONS



25\*

Bits used



6

BOP Trips



3

BOP Hops

5713\*

Underwater BOP  
hrs between hops



xkm

Wellbore Logged  
& Analysed



25.5km

Drilled length



33.7km

Casing run



7900m<sup>3</sup>

Total volume  
of hole



50

Cement  
Jobs



1815\*

MT  
Cement  
Used



18.3km

Feet of Cement  
Placed



20

Cement Plugs  
Set



252\*

ROV  
Dives



2

Well tests  
conducted



8

Rig Moves



7200\*

Nautical Miles  
Transited  
(Ria)

\* Bollsta Campaign only



**Wells Ambition 2025+ Great People, Great Opportunities, Great Place to work**



**Shell Namibia Drilling Campaign 2021-2024**

