



decisions with confidence

Introduction to Upstream Oil and Gas for the Net Zero World

Welcome and Introduction

Adam Borushek, Principal Advisor

30 November 2023

The Geological Society, London

- If the fire alarm sounds, vacate the building calmly and quickly.
- Please assist any disabled person in your area.
- Do not collect your belongings from the cloakroom.
- If sitting at the front, exit via the door behind the curtains to the left of the stage.
- If sitting at the back, exit through the 3 fire doors at the back of the theatre.
- Please assemble outside in the courtyard outside the Society of Antiquaries.
- Do not re-enter the building until you are instructed by a Geological Society Fire Marshal.

- **The Society of Petroleum Engineers (SPE)** is a not-for-profit professional association of more than 110,000 members in 138 countries, who are engaged in energy resources development and production.
- The **SPE** is a key resource for technical knowledge related to oil and gas exploration and production, and provides services through publications, events, training courses and online resources at www.spe.org
- Income from **SPE** events and services are invested back into SPE to support many other programs.
- **SPE's** membership in the Greater London area includes engineers, geoscientists, economists, managers, educators, consultants, etc.
- Let us know if you would like more information or would like to join the SPE.
- On LinkedIn search for: SPE London or SPE London YP
- <https://www.spe-london.org/>
- Next events: Young Professionals, Net Zero, evening technical lectures, social/networking events.

SPE London Section Sponsors 2023

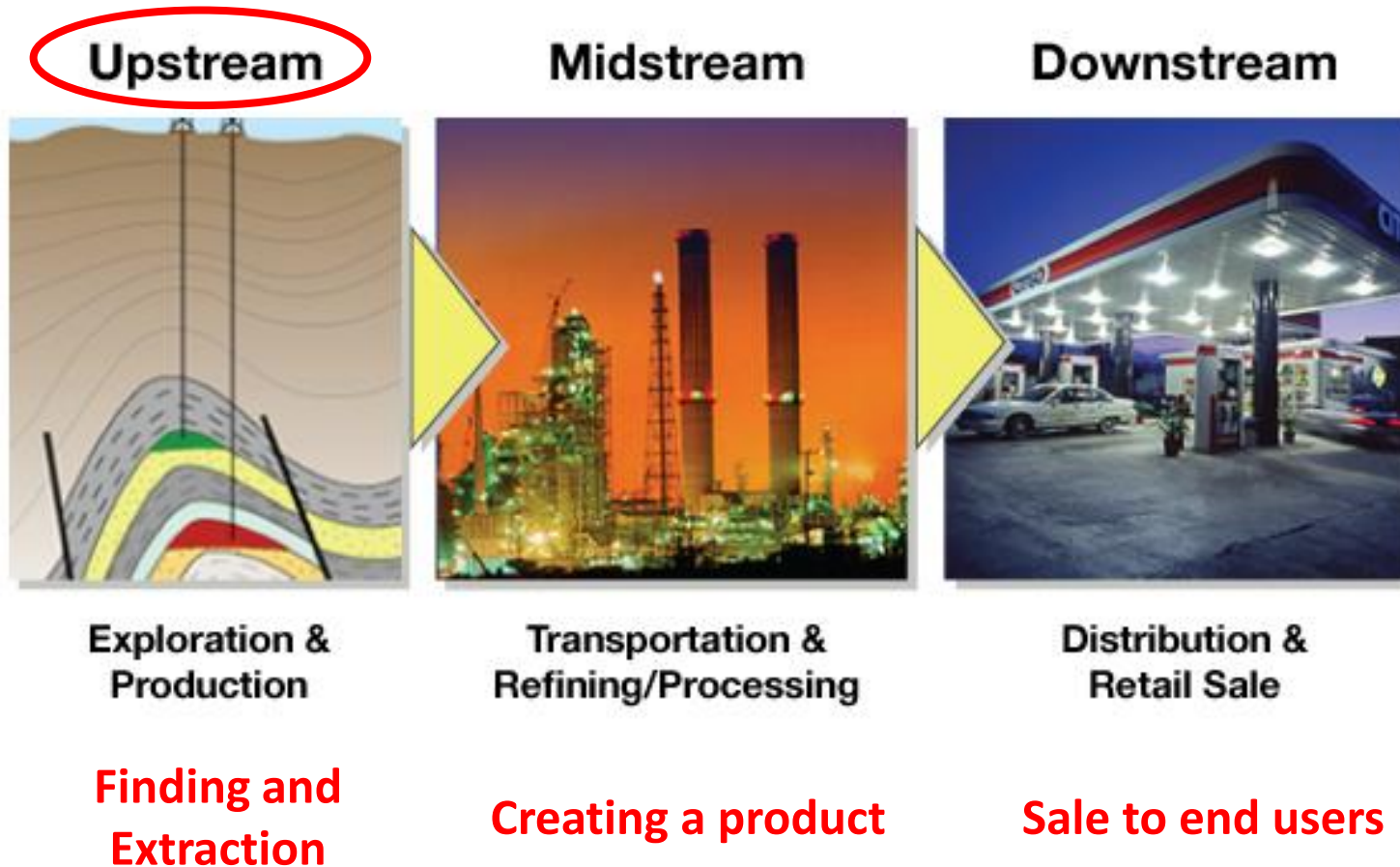


- And sponsor of this seminar's refreshments:



	Topic	Speaker
09:00 - 09:10	Introduction	Adam Borushek, RISC Advisory
09:10 - 09:50	Global Context	Robert Clews, Bechtel
09:50 - 10:30	Geoscience	Paul Wilson, Perenco
10:30 - 10:50	Morning Break	
10:50 - 11:30	Drilling	Iain Hutchison, Merlin ERDC
11:30 - 12:10	Reservoir Engineering and Reserves	Adam Borushek, RISC Advisory
12:10 - 13:00	Lunch	
13:00 - 13:40	Production Facilities	Shwan Dizayee & Francesca Tate, Accenture
13:40 - 14:20	Economics	Natan Battisti, Harbour Energy
14:20 - 15:00	Financing and M&A	Arnaud Mille, Tullow Oil
15:00 - 15:20	Afternoon Break	
15:20 - 16:00	Sustainability and Reporting	Rosalind Griffiths, PricewaterhouseCoopers
16:00 - 16:40	Energy Transition Careers	Alison Isherwood, Storegga

- Exploration and Production does not cover the entire industry
- Today we cover the 'Upstream' section only



Oil and Gas E&P Life Cycle

- The life cycle for an oil or gas field is likely to be decades long
- Each of the following stages must be completed



- E&P requires integrated, highly skilled, multi-disciplinary teams
- The main disciplines involved are represented by the speakers here today.

What is 'Net Zero'?

- Net Zero is balancing the amount of greenhouse gas generated with the amount removed from the atmosphere.
- This can be achieved through a combination of:
 - Emission reduction
 - Emission removal
- Net Zero means we still use oil and gas, but we remove the impact on our atmosphere
- Upstream companies refer to Net Zero with concepts like:
 - Decarbonisation
 - Electrification
 - Carbon Capture and Storage



<https://energy.economictimes.indiatimes.com/news/renewable/norways-future-co2-cemetery-takes-shape/93991592?redirect=1>

- For historical reasons the upstream industry uses a mix of SI, Imperial and Oilfield units.
 - Liquid rates: Barrels per day (bopd, bwpd)
 - Liquid volumes: Million stock tank barrels (MMstb)
 - Gas rates: Million standard cubic feet per day (MMscf/d)
 - Gas Volumes: Billion standard cubic feet (Bscf)

- Depending on the context you can see cm, inches, feet, meters, km and miles.

Let's Clear Up Some Common Misconceptions (1/3)

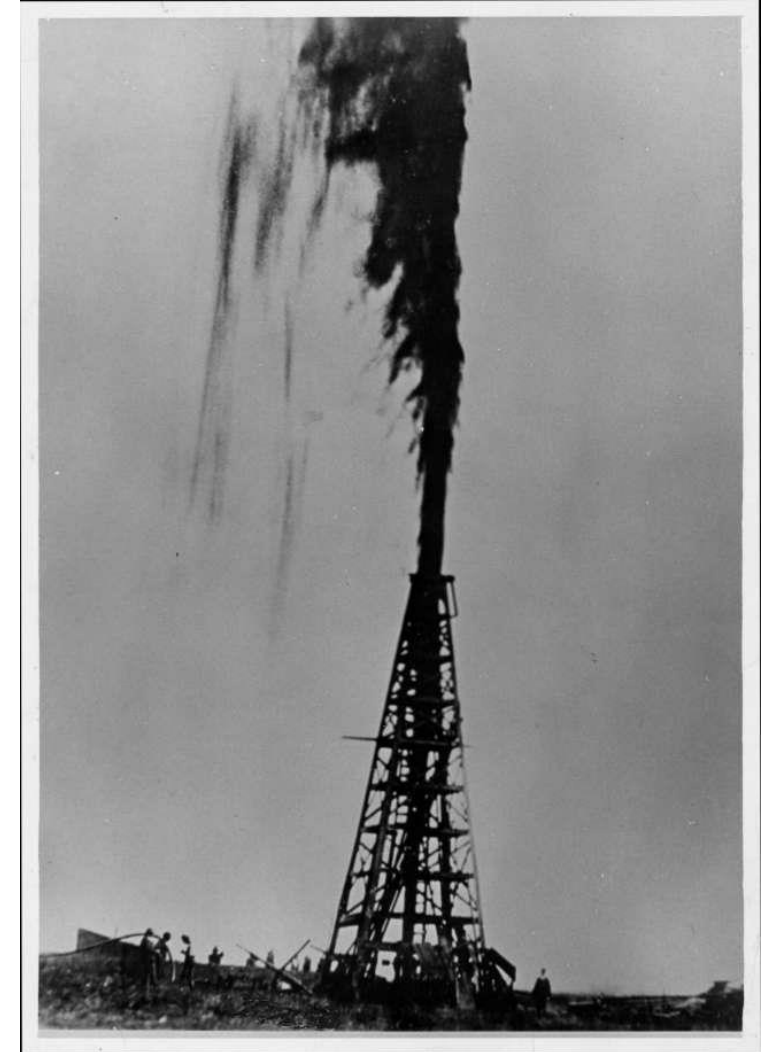
- Oil and gas are not found in large underground caves



Image: <http://www.mysanantonio.com/lifestyle/travel-outdoors/article/Natural-Bridge-Caverns-hosting-tour-of-aquifer-7959402.php>

Let's Clear Up Some Common Misconceptions (2/3)

- Oil gushing from a drilling rig would be an environmental, safety and corporate disaster



Let's Clear Up Some Common Misconceptions (3/3)

- If oil and gas are found under your property, you do not own it - the UK government does
- Unlike in USA



http://www.cotswoldlife.co.uk/out-about/events/remembering_farming_hero_joe_henson_1_4262529



http://www.npr.org/sections/pictureshow/2009/03/american_farmer.html

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- Presentations (pdf) will be available on the SPE London web site <https://www.spe-london.org/>
 - Next week you will be emailed a link to the pdf/ppt files
 - Please fill in the feedback form
 - Business cards for each speaker will be on the front desk
 - LinkedIn: 'SPE London Section'
 - Meet each other, meet the speakers, ask questions.

 - Enjoy the day!