



EMPYREAN
ENERGY PLC

● Sacramento Basin Project
California

● Block 29/11
China

BUILDING A MID-TIER COMPANY METHODICALLY

● Duyung PSC
Indonesia



Forward Looking Statements

This presentation may contain forward-looking statements and information that both represents management's current expectations concerning future events and are subject to known and unknown risks and uncertainties.

A number of factors could cause actual results, performance or events to differ materially from those expressed or implied by these forward-looking statements



Company Overview

- AIM quoted company focused on building a low cost, high value company
- Executive management has widespread experience in Asian region
 - Comprehensive understanding of successful geological play
 - Extensive relationship with upstream players, service providers, governments, national oil companies & regulators
- Experienced management team aligned with shareholders

Management shareholding

| | Shares | Options |
|---------------|------------|---|
| Tom Kelly | 70,881,563 | 15,000,000 exercisable at 2p expiring July 19 |
| Gaz Bisht | 31,250,000 | |
| John Laycock | 1,700,000 | |
| Patrick Cross | 725,000 | |

AIM Quoted LDN: EME

| | |
|------------------|-----------------|
| Shares on Issue | 424,275,110 |
| Options on Issue | 17,500,000 |
| Market Cap | £37.56m @ 8.85p |



Delivering on a Well-defined Strategy

INFRASTRUCTURE-LED SUCCESSFUL EXPLORATION

We aim to create value for our stakeholders by

- Progressing discoveries toward project sanction and into proven reserves, production, and cash flow through efficient appraisal and development; and
- By adding new resources through a consistently active exploration program in proven prolific basins

Indonesia

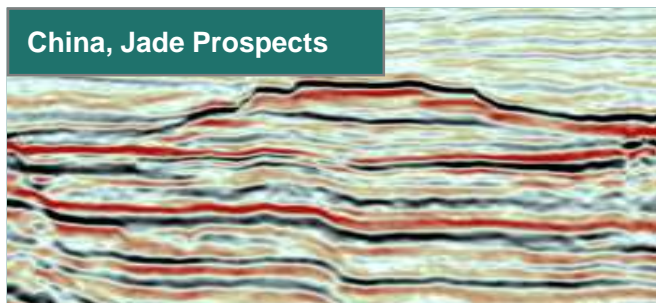


Creating Stable Base

Mako Gas Field, Indonesia

Moving from successful exploration to appraisal and ultimately development

China, Jade Prospects

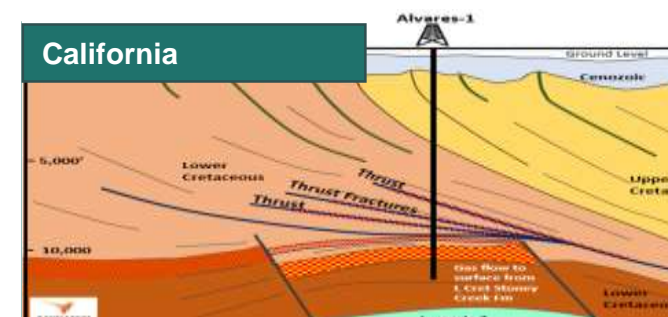


Transformational Potential

Block 29/11, China

Two Drill- Ready Prospects with over a billion barrels of potential oil in-place (unrisked- P10)

California



Maturing opportunity

Sacramento basin, California

Comprehensive subsurface analysis being undertaken



12 MONTHS OF AN ACTIVE EXPLORATION

DRILLING IN INDONESIA AND CHINA





Duyung PSC: Mako Discovery & Tambak Prospect

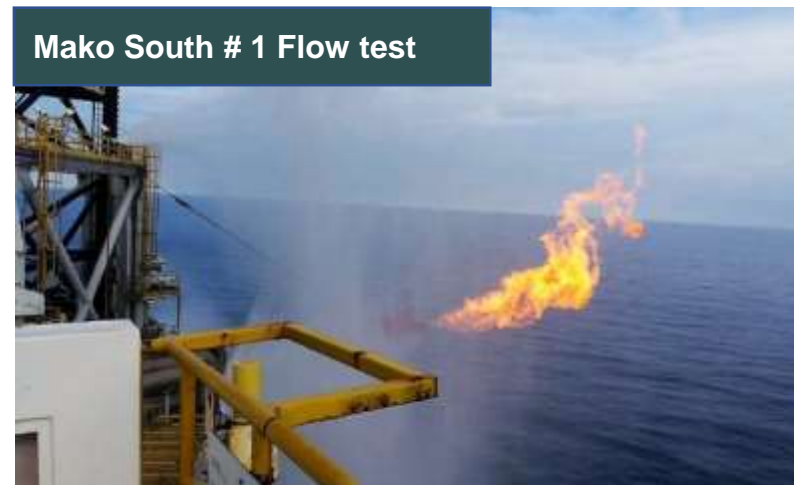
Duyung PSC, Indonesia

MAKO GAS FIELD – A LARGE SHALLOW GAS ACCUMULATION

- Well defined large structural trap c. 350 square km of closure
- Shallow waters ca 92m
- Excellent reservoir confirmed by core data
- Highly successful flow-test

- 276 Bcf of certified gross 2C recoverable dry gas resource
- 97% methane, with 392 Bcf of 3C resource representing field upside
- Plan of Development (POD) approved by Indonesian authorities

Mako South # 1 Flow test



On Path to Commercialisation

MAKO GAS FIELD – Independent resource audit by Gaffney Cline & Associates ("GCA") Heads Of Agreement with gas buyers signed

- Biogenic gas accumulation
 - Dry gas, no H₂S, minimal CO₂, over 97% methane
- Shallow sandstone reservoir, with well defined gas water contact
 - Four wells have penetrated the gas accumulation
- Cored and log data confirm excellent Reservoir
 - 20%+ porosities, multi-Darcy permeability
 - Flowed 10.8 MMscf/d on test
- Prospective reserves independently certified by Gaffney Cline and Associates

| | 1C | 2C | 3C |
|-------|-----|-----|-----|
| (BFC) | 184 | 276 | 392 |



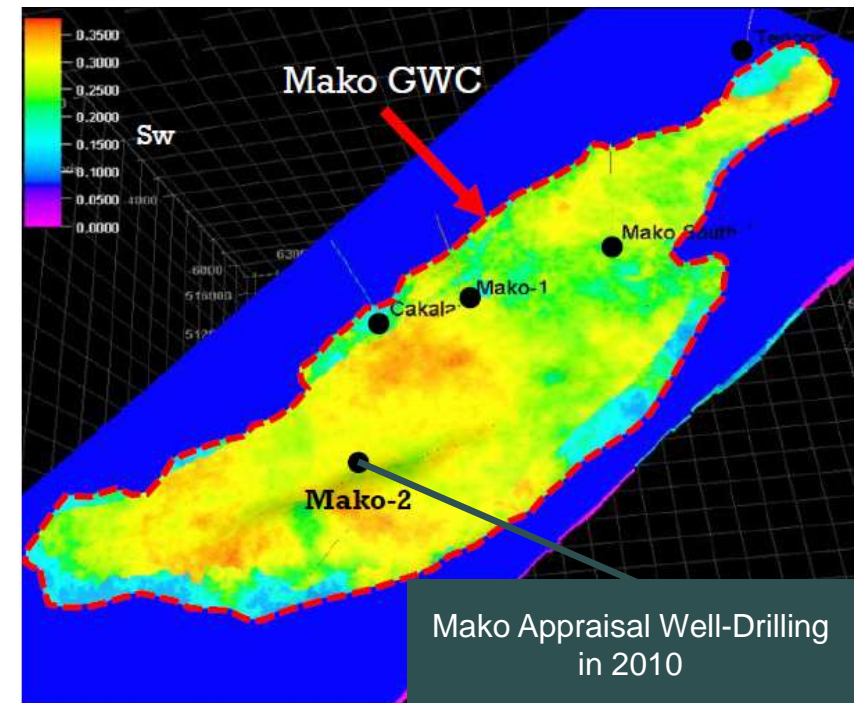
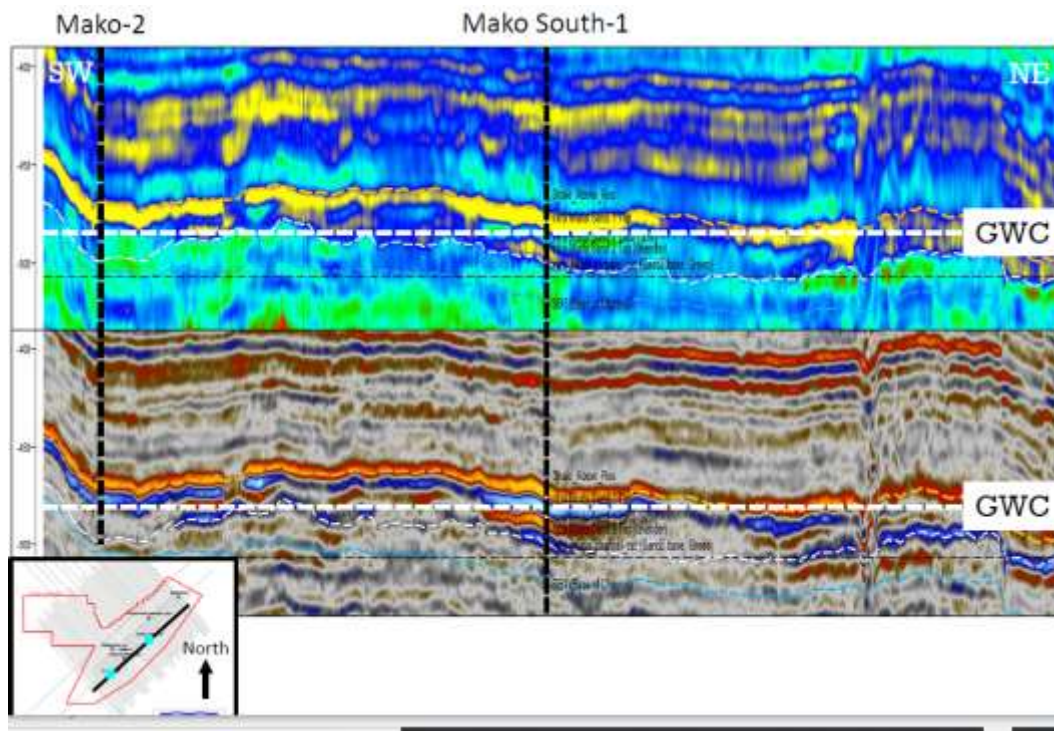
- 16 km from nearest tie-in to the open-access WNTS pipeline
- Main route for West Natuna gas to get to market, capacity for additional volumes
- Heads Of Agreement with Gas Buyer in Singapore signed



Mako-2 Appraisal Well

SCHEDULED TO BE DRILLED IN Q4 2019

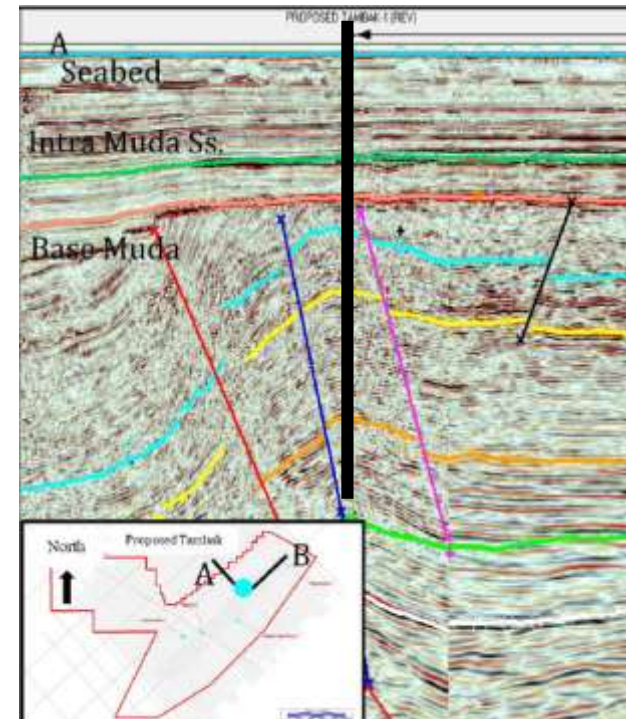
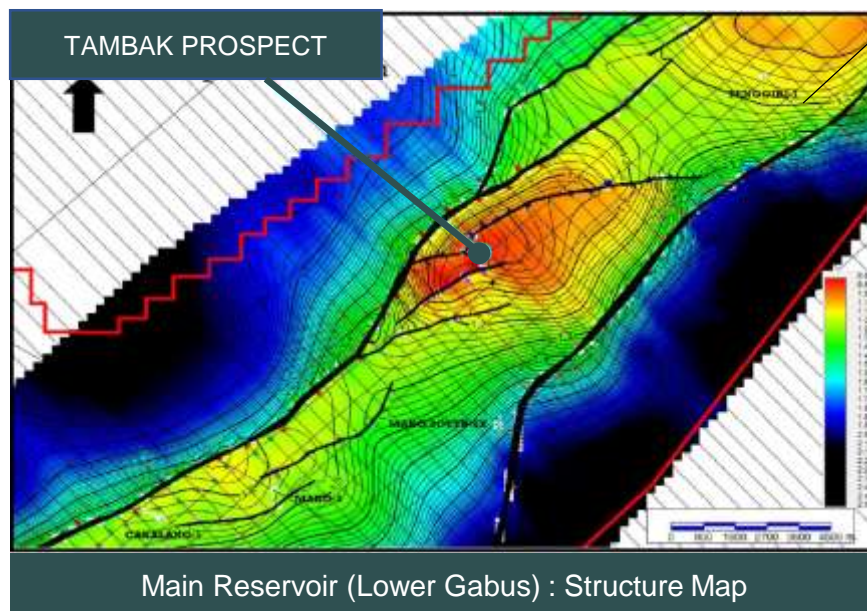
- Mako gas field will be appraised by Mako-2 well
 - Approximately 12.5 SW of Mako South -1
 - Designed to target gas bearing reservoir
 - Well design includes a comprehensive testing program



Tambak Prospect - Low Risk Exploration Target

POTENTIAL TO MORE THAN DOUBLE RECOVERABLE RESOURCES

- Tambak prospect is located beneath Mako gas accumulation
 - Large trap with approximately 15 square kilometre closure mapped at Lower Gabus reservoir
 - Lower Gabus clastics are the main reservoir is in the West Natuna basin
- Prospective resources are in the 200 – 300 Bcf range (mid-case 250 Bcf)
- Geological chance of success has been estimated to be 45%
- On success, low cost tie-back to Mako Gas Field development





Block 29/11, China : GCA audited mean STOIP of 884 MMstb

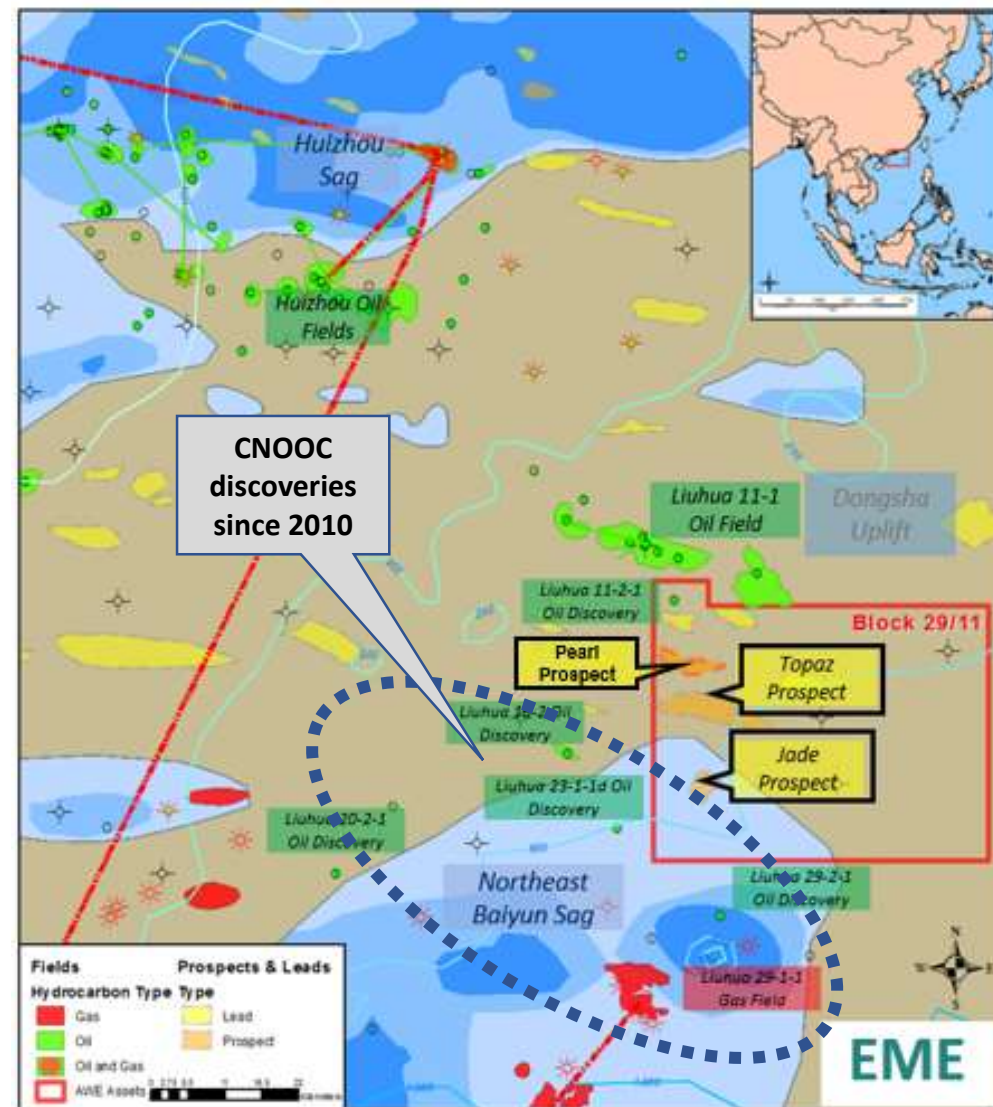
Block 29/11: Overview

Block Location

- **Directly south of the largest oil field in the basin, Lihua 11-1 oil field complex, which contains 1.3 billion barrels originally in-place. (Topaz 15km south of Lihua)**
- **Key Prospects on trend with four CNOOC light oil discoveries** since 2010 immediately west and south of the block

Low Risk/ High Reward Exploration Prospects

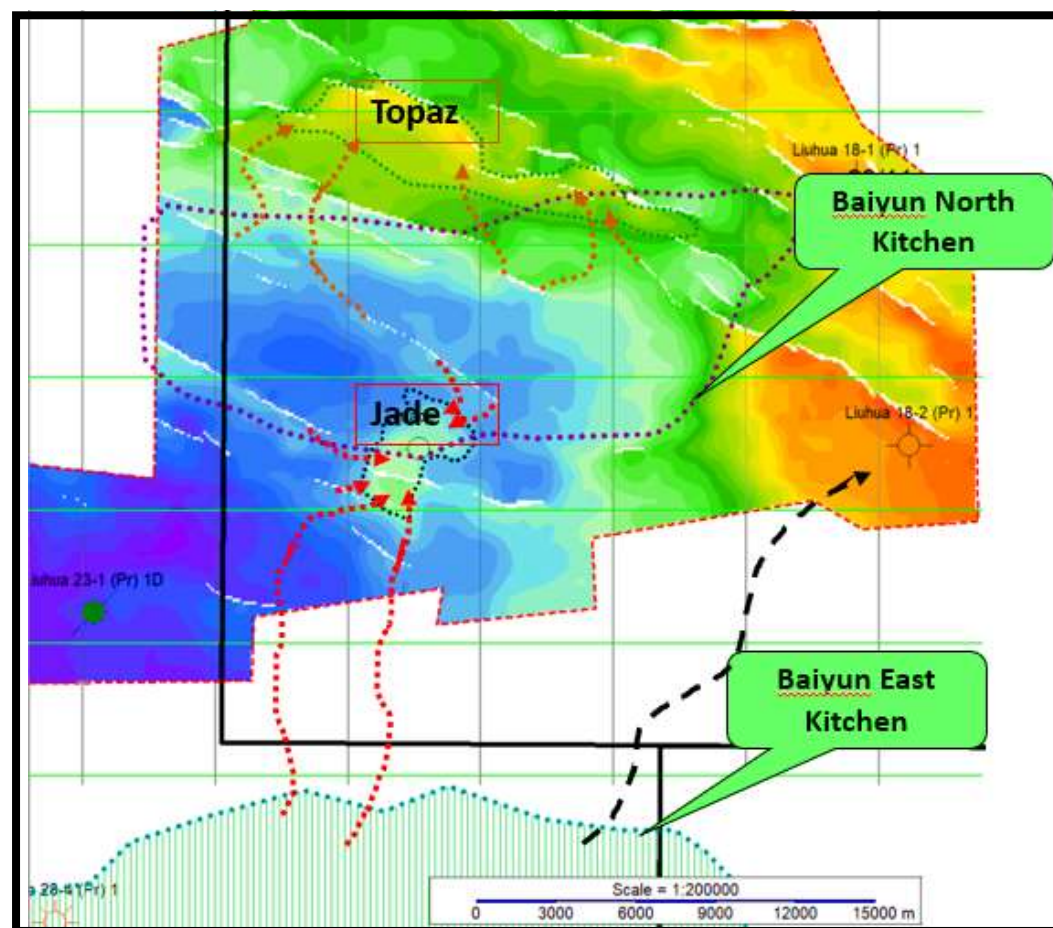
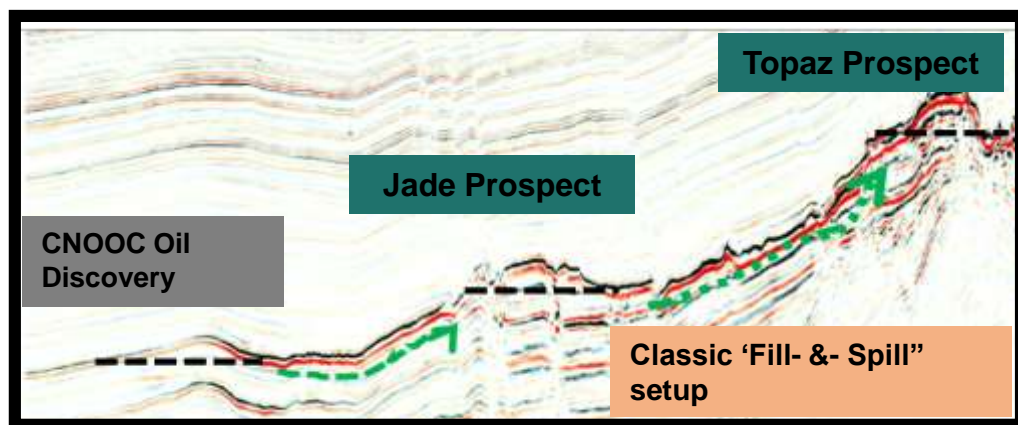
- Prospects delineated by 2017 **excellent quality 3D seismic data** and comprehensive oil migration study
- Matured three material size prospects with **Gaffney, Cline & Associates (GCA) audited mean STOIP of 884 MMstb**
- Based on additional work since GCA report on charge, we assign a Geological Chance of success of ~ 40%.



Jade and Topaz Prospect- Transformational Potential

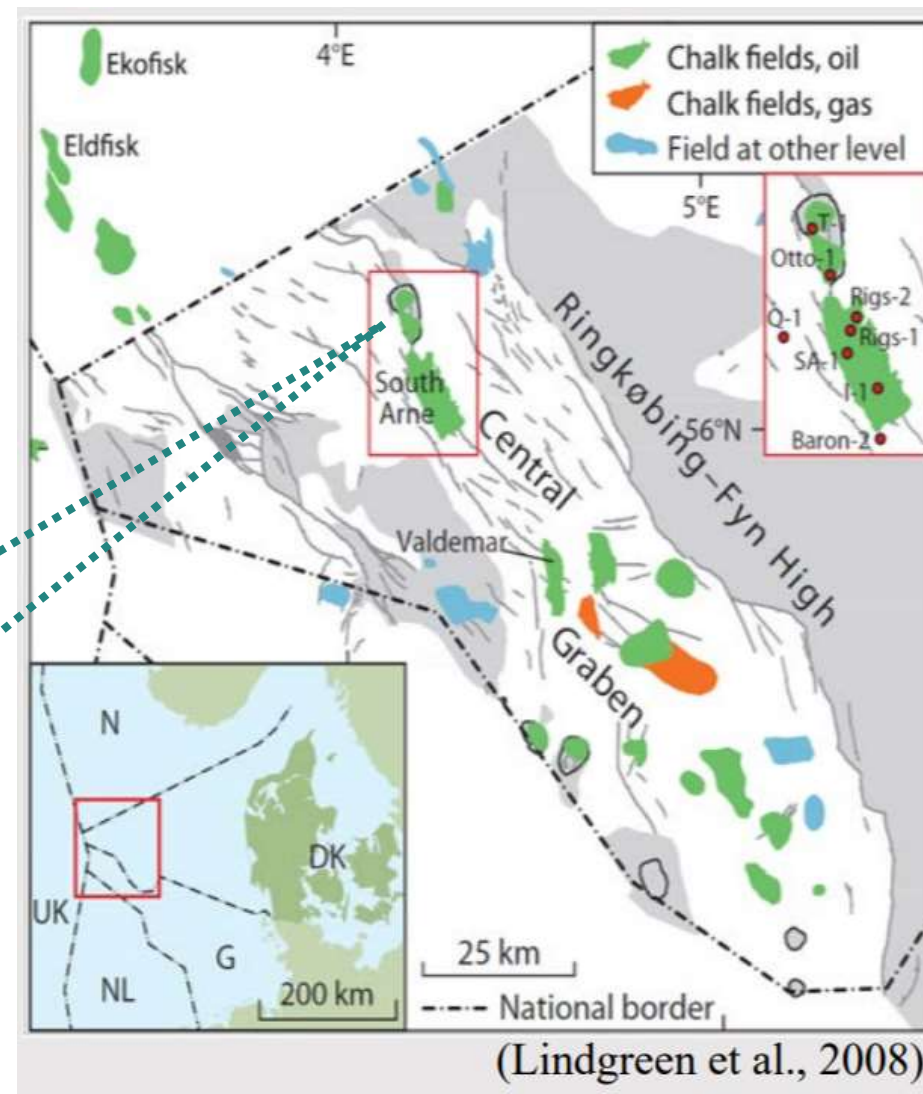
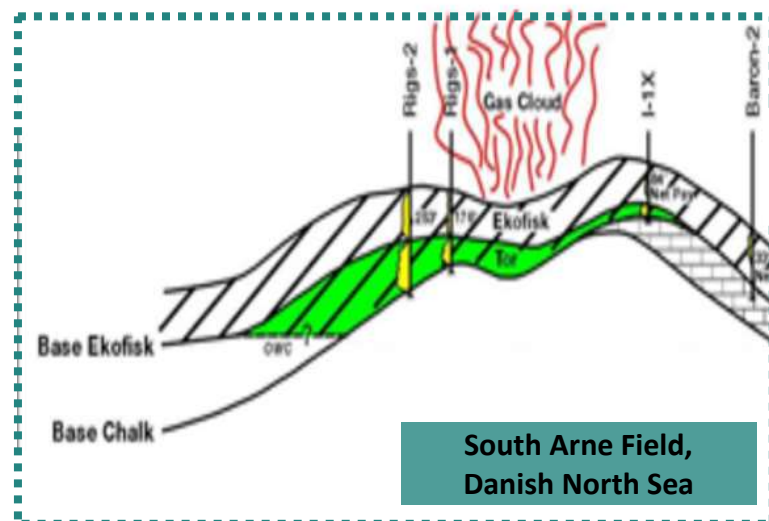
KEY ELEMENTS: 3D SEISMIC, PROVEN OIL KITCHEN, WORLD CLASS CARBONATE RESERVOIR

- Several oil discoveries around Block 29/11 have demonstrated a proven presence of **world class oil source rock** in the basin
- EME's basin modelling indicates that a kitchen located between Jade and Topaz prospects has mature oil source and the existence of well defined migration pathways
- 3D seismic data from the successful well, drilled by CNOOC, demonstrates the presence of gas clouds in the overburden, whereas the dry wells lack such clouds
- Jade and Topaz prospects demonstrate presence of gas clouds, similar to CNOOC oil discoveries



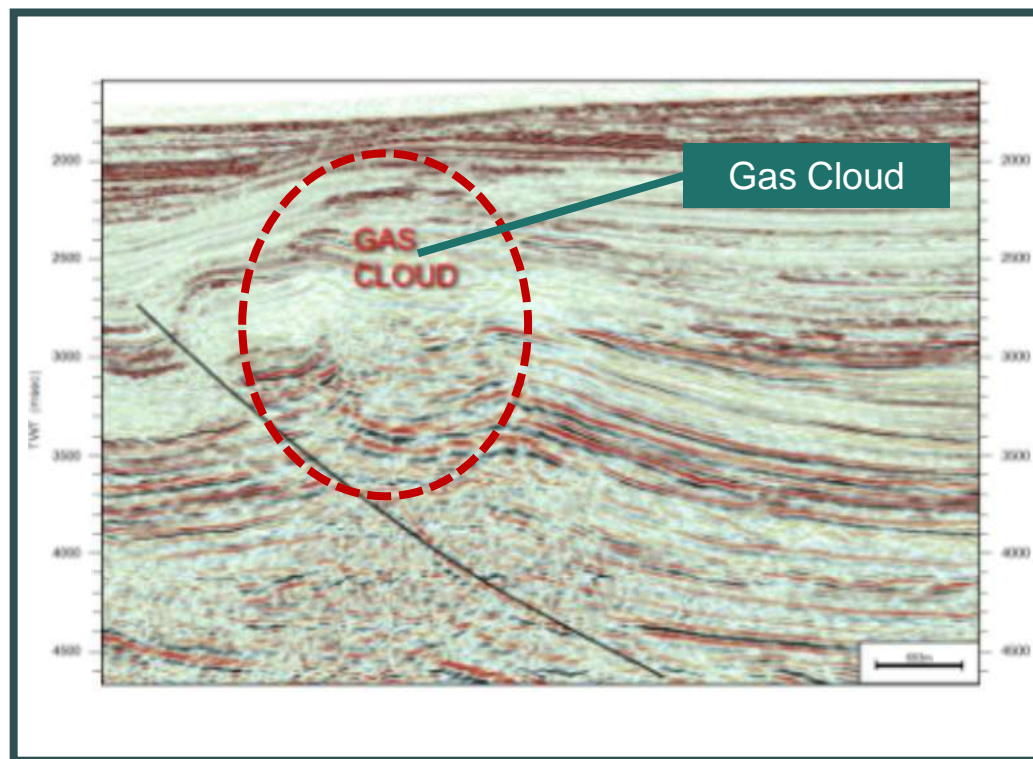
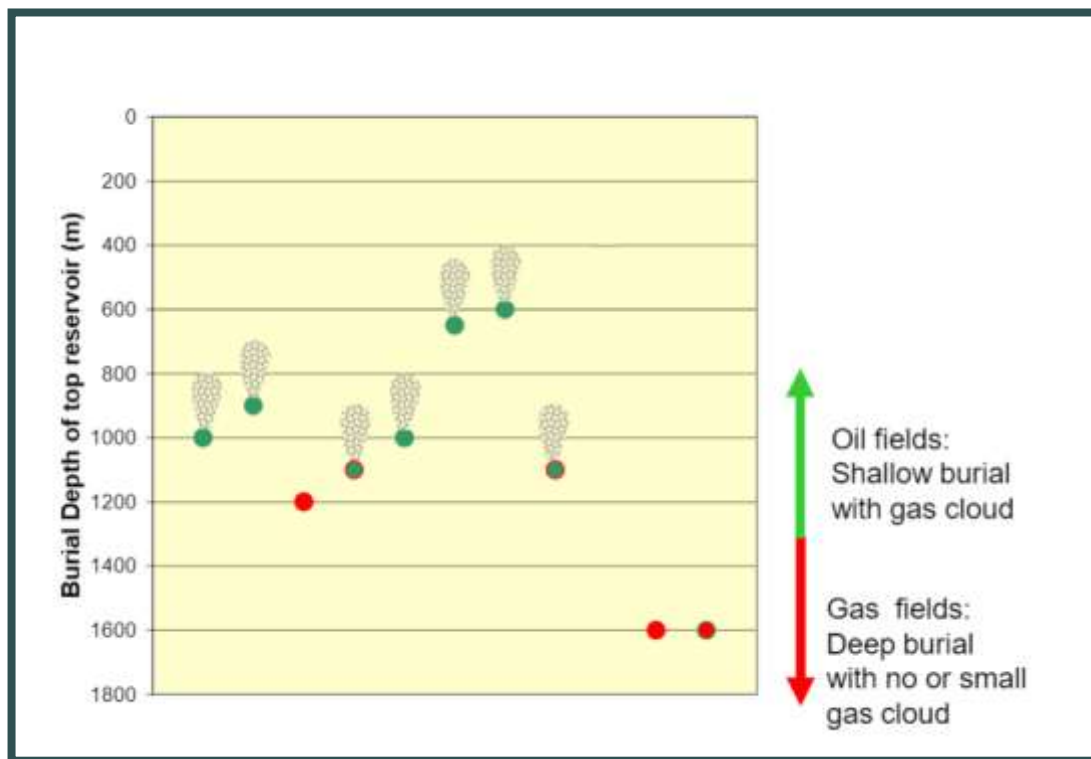
Gas Clouds - Mitigating Exploration Risk

- On good quality seismic data, gas clouds are seen as low reflectivity zones in the overburden
- These have been effectively used as an exploration tool in the North Sea, Gulf of Mexico and other basins worldwide for discovering significant amounts of oil
- For example, South Arne Oil Field in the Danish North Sea was discovered by Hess Corporation by using the presence of gas clouds as an indication of a large oil field



Presence of Gas Cloud - A proven technique Deepwater Offshore Sabah, Malaysia

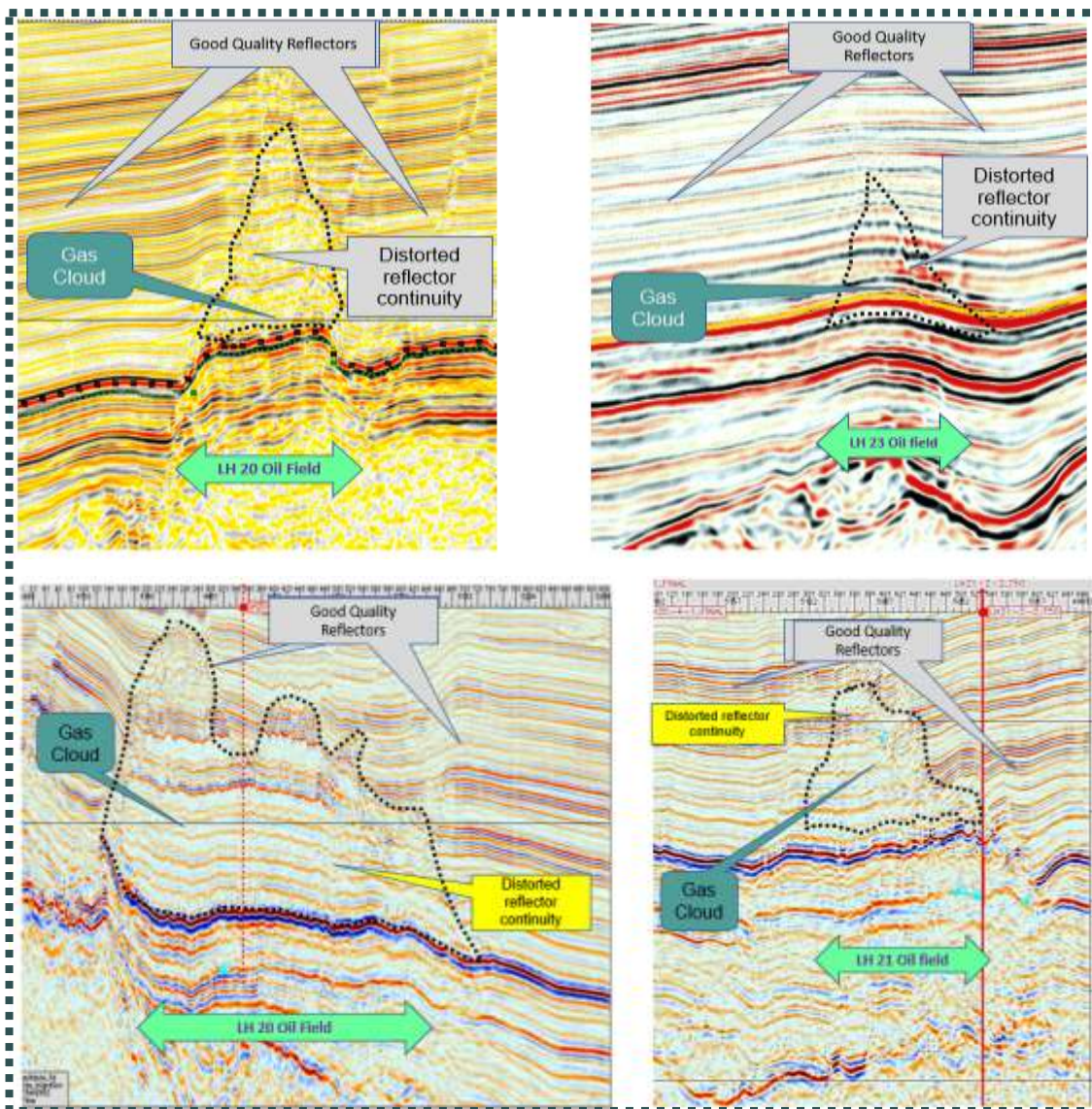
- 31 oil discovery with 57% success rate in the basin
- Most oil field have associated gas cloud in the overburden sediments



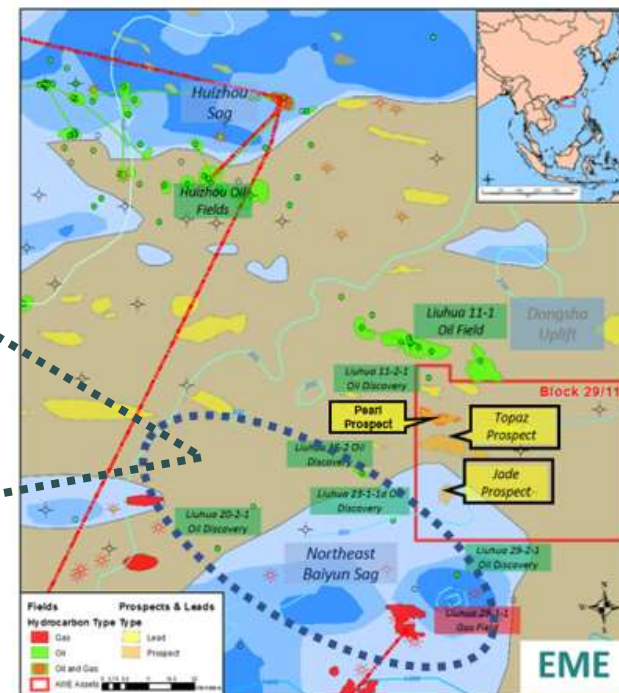
Kikeh Oil Field- Deepwater Offshore Sabah, Malaysia



Presence of Gas Cloud in all CNOOC Oil Discoveries

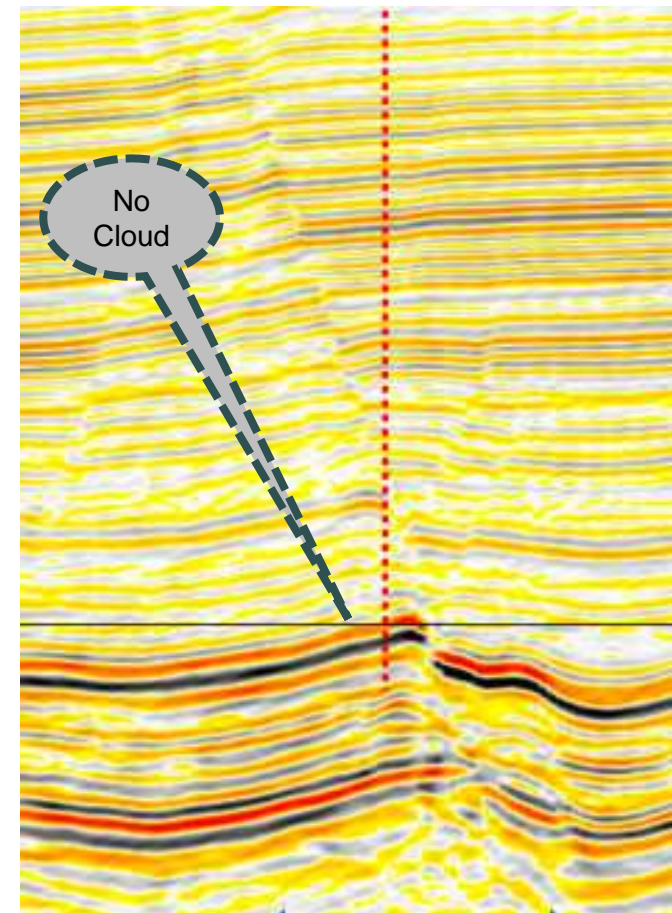
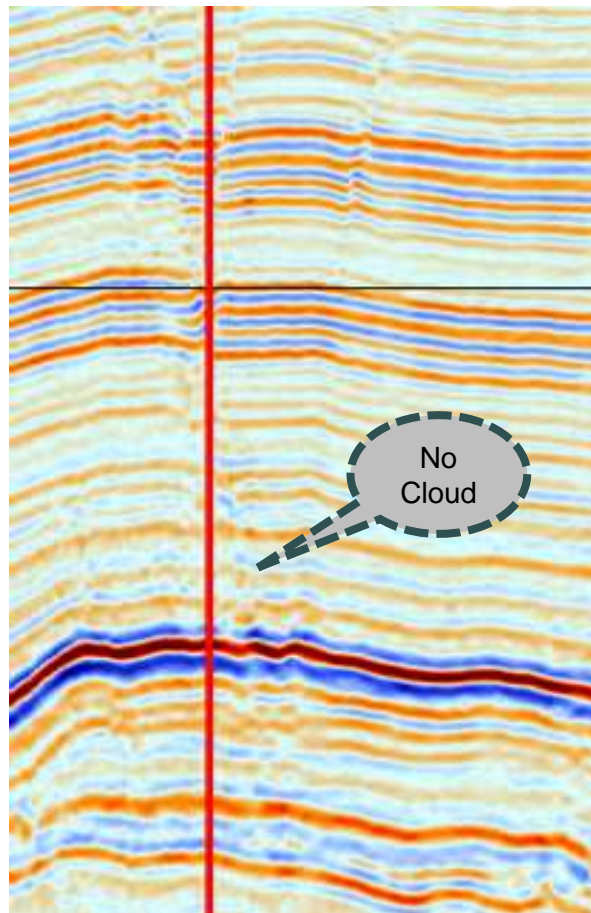
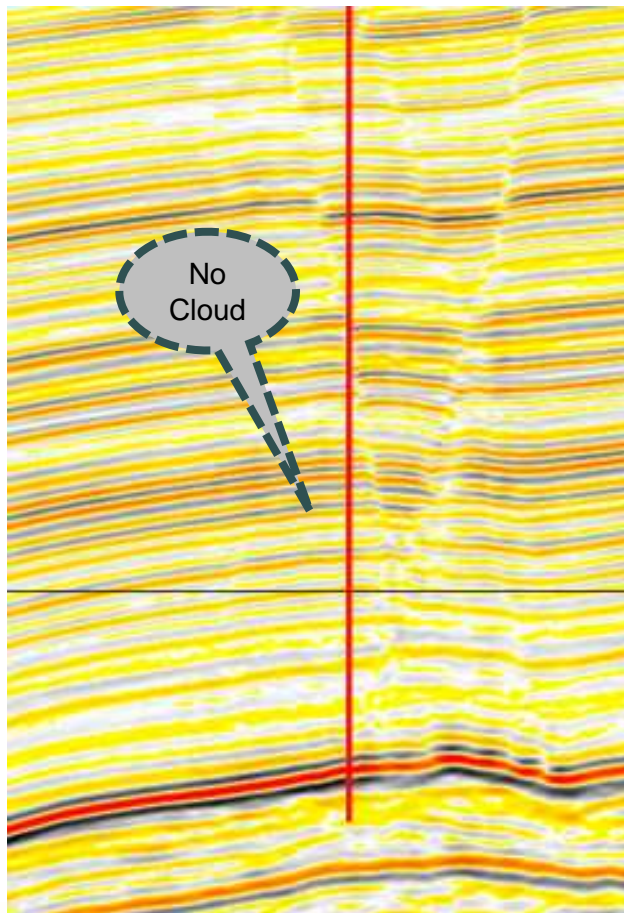


- CNOOC has made 4 large oil discoveries located around Block 29/11
- 3D seismic data over these discoveries was analysed
- All discoveries are associated with gas cloud in the overburden



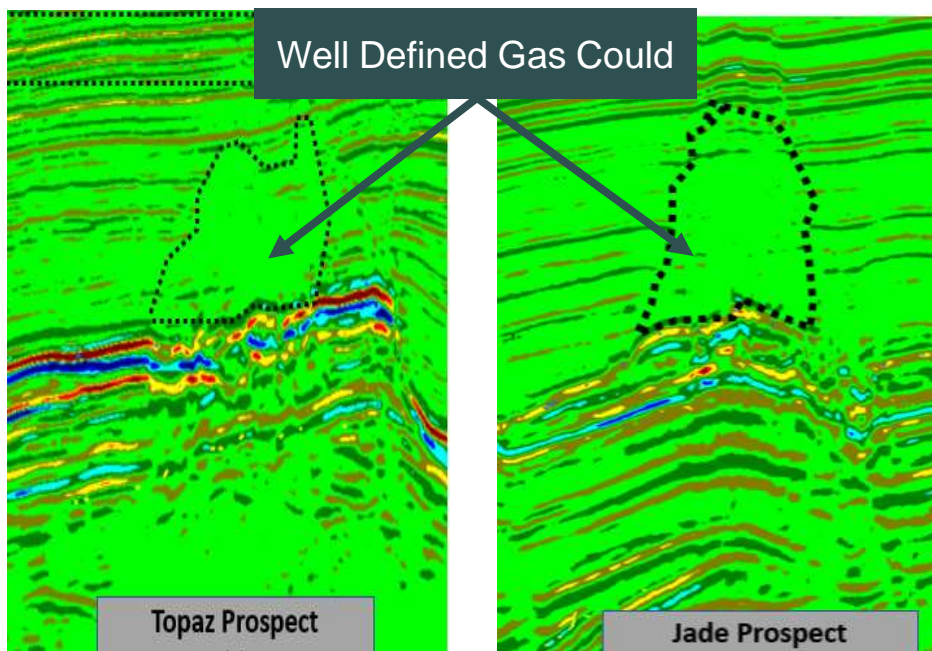
CNOOC Dry Wells don't have Gas Cloud in the Overburden

CNOOC drilled 3 additional wells around the oil discoveries, and 3D seismic data over these wells confirms lack of any gas clouds

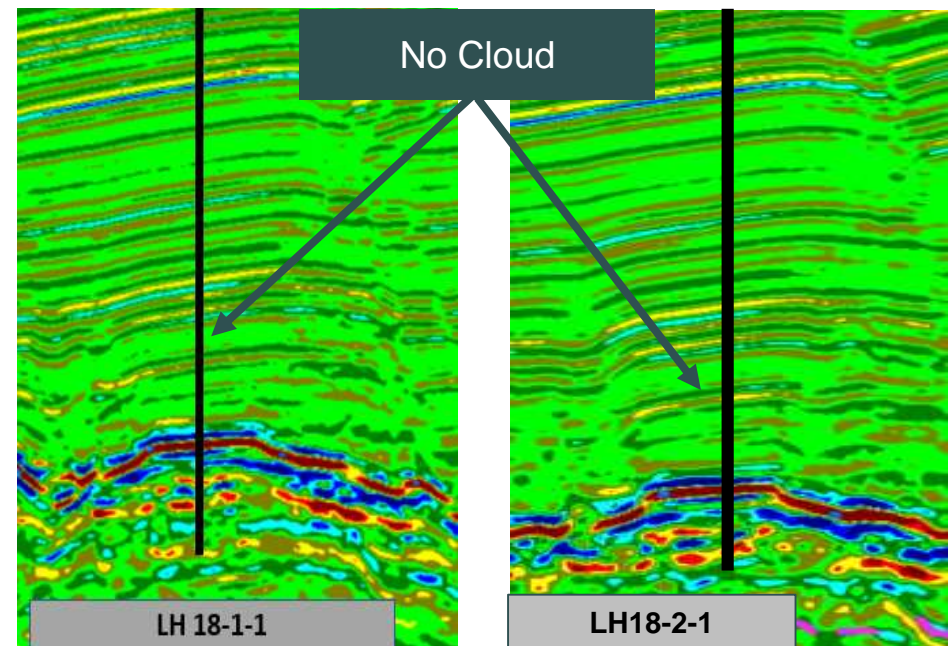


Jade and Topaz Prospects - Well Defined Gas Clouds

Exploration risk has been mitigated significantly



Jade and Topaz Prospects in Block 29/11
Covered by 3D seismic data
Well defined gas cloud in overburden mitigate
exploration risk significantly



Two dry wells in Block 29/11
Covered by 3D seismic data
No gas cloud in overburden



Block 29/11 - Gaffney, Cline & Associates Audit

- GCA was engaged to undertake the STOIP Audit and an assessment of the geological chance of success (“GCoS”) of the three prospects identified on Block 29/11
- GCA has estimated total Mean Oil in-place of 884 MMbbl on an un-risked basis for the three prospects
- GCA P10 estimates is 1588 MMbbl on an un-risked basis
- GCA’s estimates of Geological Chance of Success of Jade and Topaz prospects is 32% and 30% respectively

Block 29/11 China: Oil in Place MMbbl

| Prospect | P90 | P50 | P10 | Mean | GCoS |
|----------|-----|-----|-----|------|------|
| Jade | 93 | 187 | 395 | 225 | 32% |
| Topaz | 211 | 434 | 891 | 506 | 30% |
| Pearl | 38 | 121 | 302 | 153 | 15% |



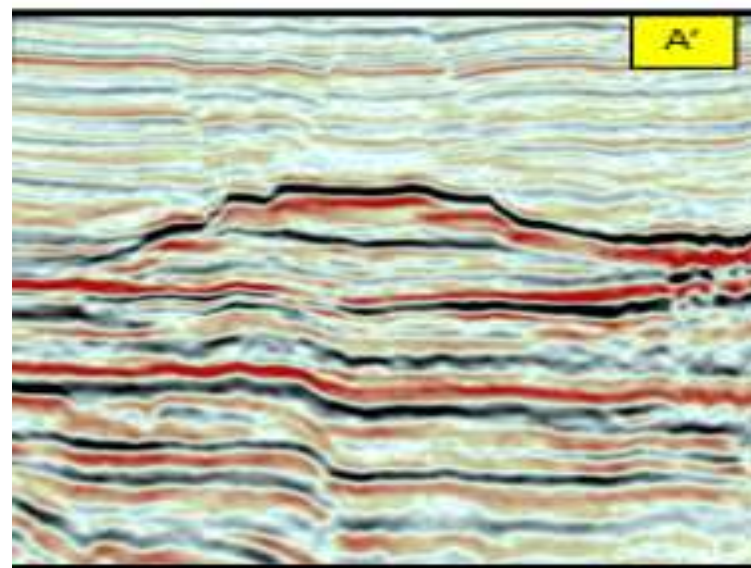
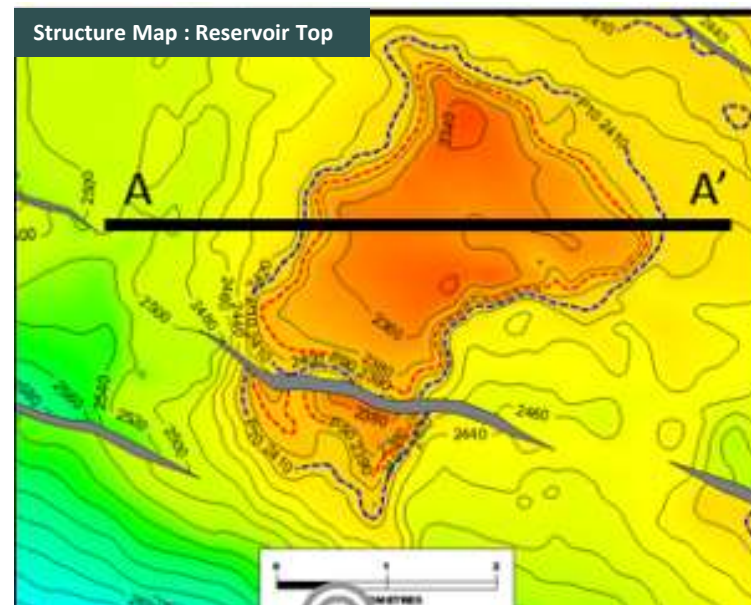
Jade Prospect - Low Risk Step Out Exploration Target

- 4-way dip closed structure
- Carbonate build-up encased in marine shale
- Step out exploration opportunity from nearby discovery well LH23-1-1d
- Located updip from CNOOC oil discoveries – favourable migration pathways

- Gross mean OOIP 225 mmboe*, P10 OOIP 395 mmboe *
- Geological Chance of Success 32%**
- Gas cloud presence in overburden

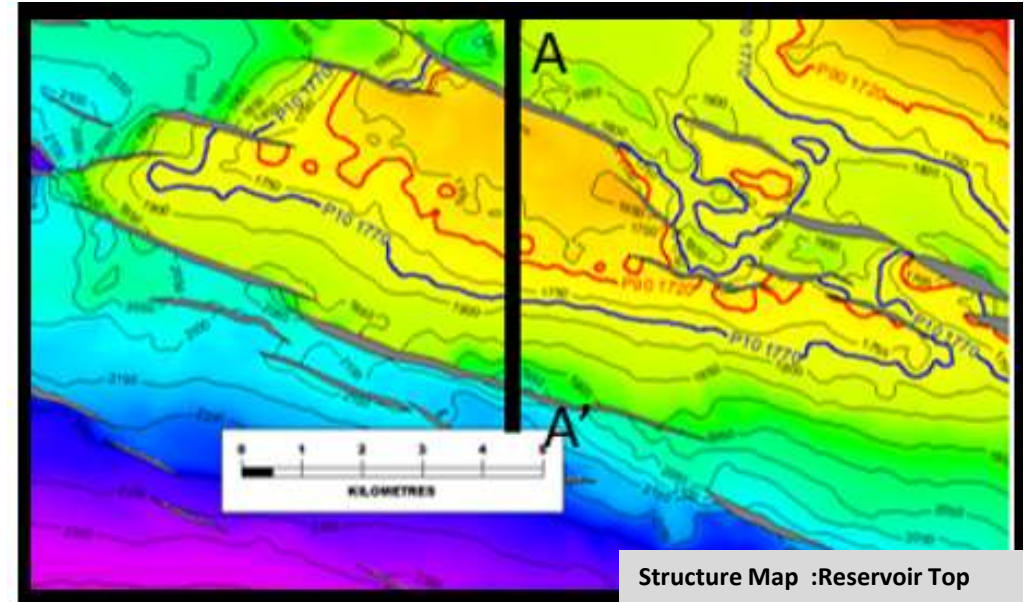
*Million Barrels of Oil Equivalent

** GCA estimate

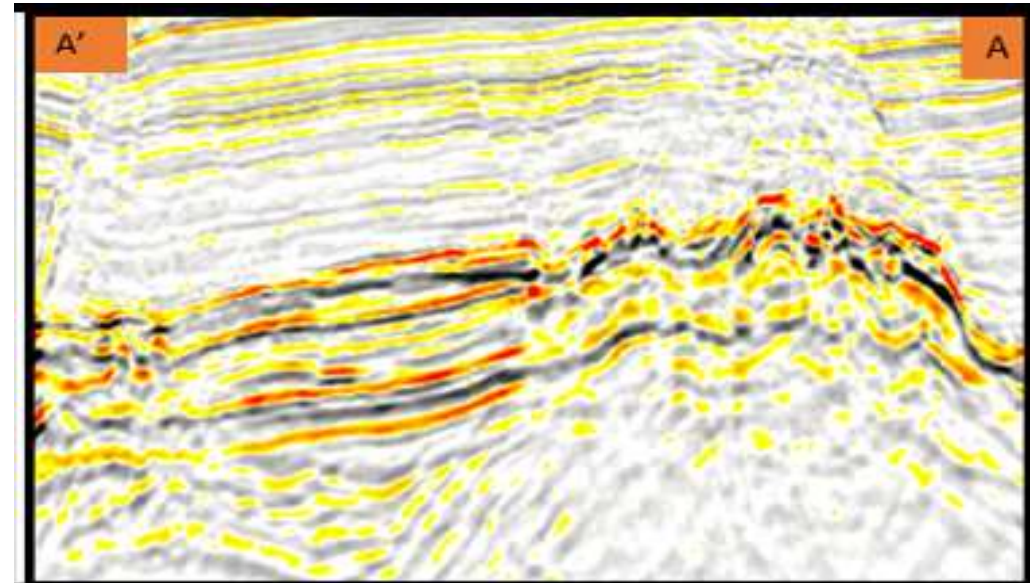


Topaz Prospect - Large Exploration Target

- Large 3W Dip Closed Trap - close analogue for nearby LH16-2 oil discovery
- Carbonate build-up encased in marine shale
- Prospect is interpreted as a focal point for oil migration



- Gross mean OOIP 508 mmboe*, P10 OOIP 891 mmboe *
- Geological Chance of Success 30%**
- Gas cloud presence in overburden



*Million Barrels of Oil Equivalent

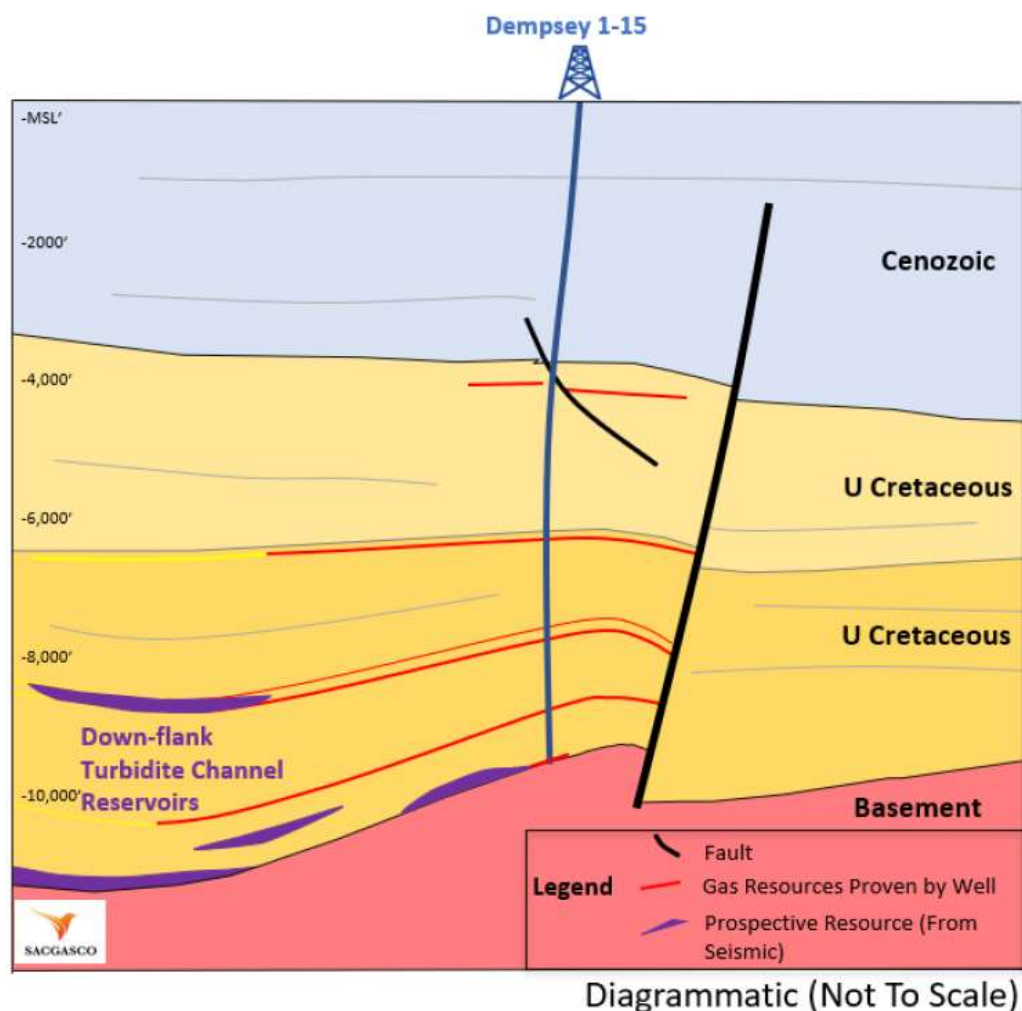
** GCA estimate





Sacramento Basin, California: Dempsey and Alvares Projects

Dempsey 1-15 - Post-Drill Analysis



- Extensive gas saturated intervals on large structure with indications of improving reservoir potential of the structural peak
- Extensive subsurface data collected
- Additional crucial data is expected from the production performance of several zones in the Dempsey 1-15 well

Dempsey 1-15 Report Card

✓ Source

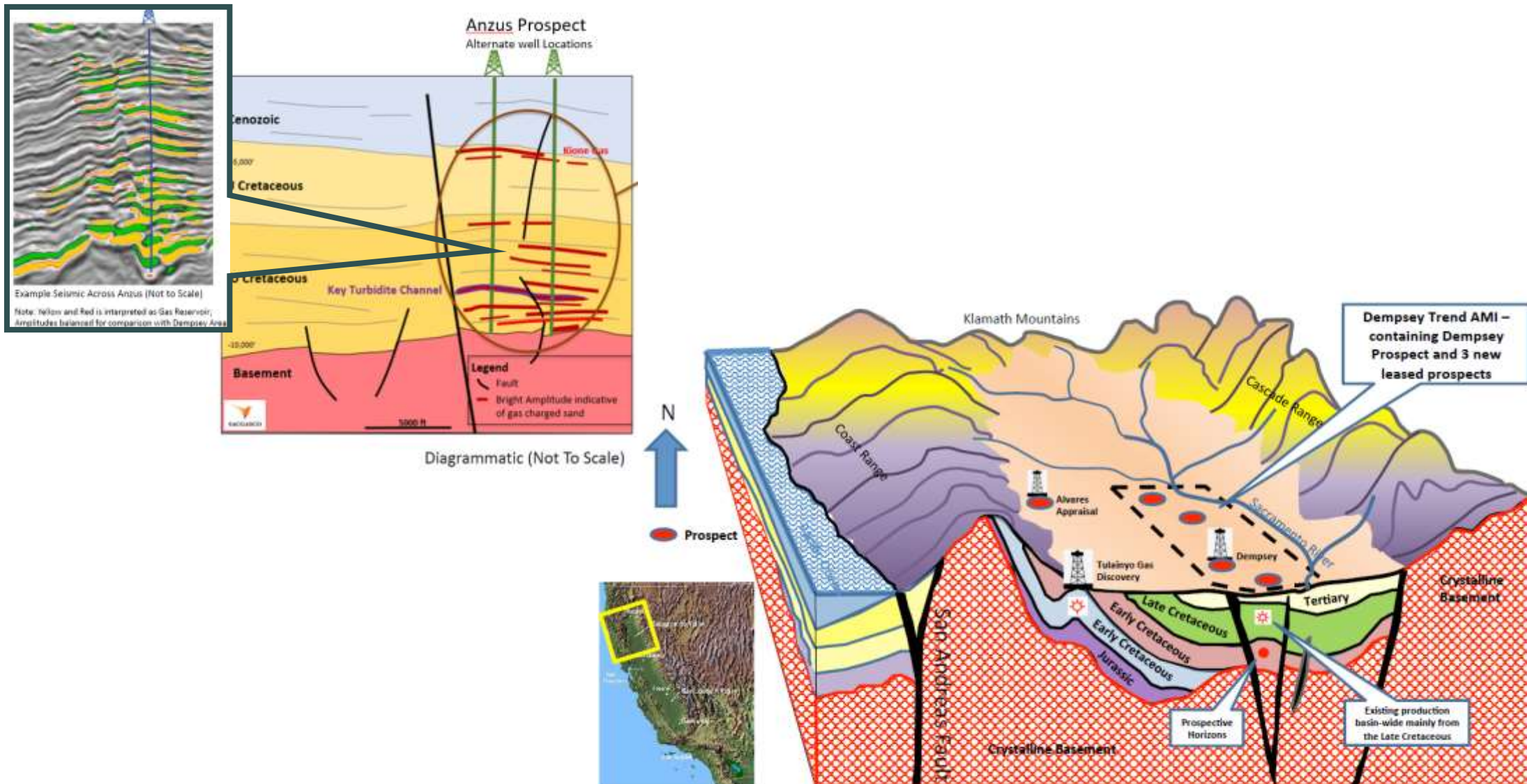
✓ Seal

✓ Trap

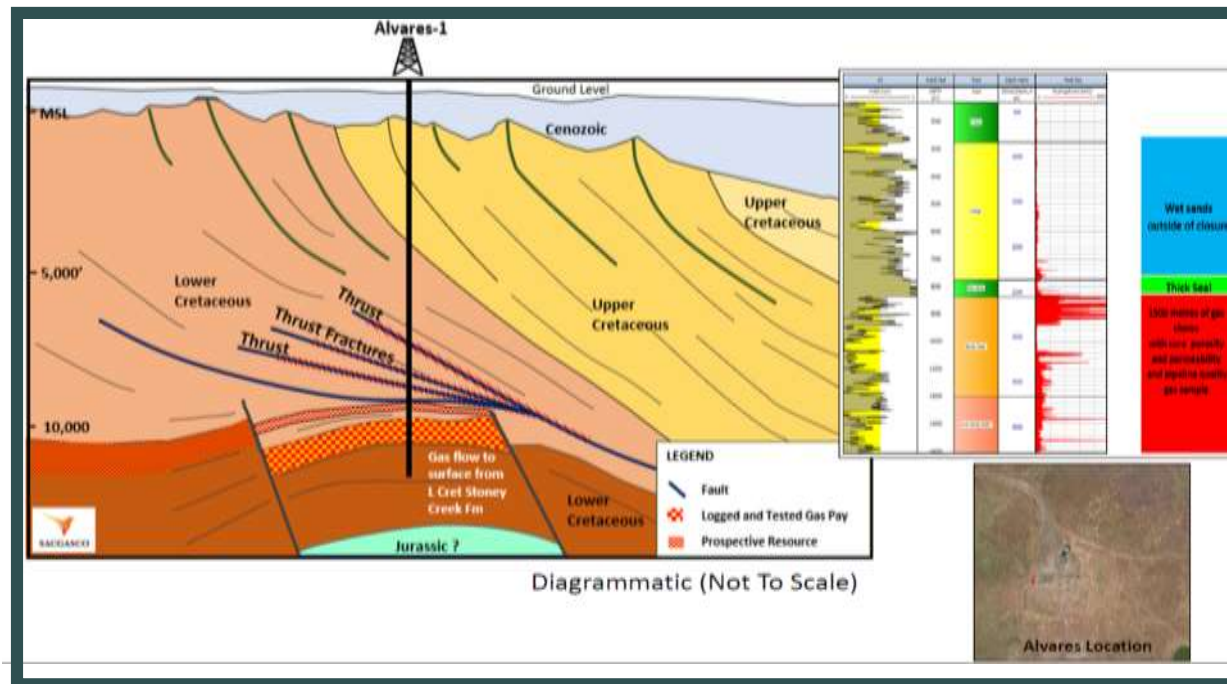
Reservoir needs improvement



Anzus Prospect- Initial Interpretation Promising



Alvares 1 - Appraisal Opportunity



- Further evaluation of all subsurface, production and seismic data will be used to assess the locations of better and thicker reservoir units and pursue attractive drilling locations
- Complete re-entry and testing in Alvares' #1 well



Strategy Execution is on Track

All assets have been de-risked



China; huge upside, Indonesia; discovery made & appraisal offers exploration style upside



Excellent relationship with host governments and JV partners



Focus on creation of shareholder value



Key Contacts

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