

Practical Elements of Oil & Gas Exploration and Production

A workshop designed for E&P financial specialists



Bridport Sands, the secondary reservoir at Wytch Farm

Saturday 18th and Sunday 19th May 2019
(arrive early Friday evening)

Organised jointly by
ATenergy and Greensand Associates

Preamble

ATenergy and Greensand Associates propose to hold a workshop designed specifically for investors and financial professionals in the upstream oil and gas industry. The workshop comprises two days of informal talks integrated with field examples of hydrocarbon source and reservoir rocks with the aim of demonstrating the factors involved in assessing exploration plays and hydrocarbon discoveries.

In no more than 1 hour informal modules, we will cover the following topics:

- ◆ Origin of hydrocarbons, hydrocarbon migration and reservoirs
- ◆ Calculation of oil and gas volumes
 - Rock volume, porosity, water saturation
 - Oil and gas expansion coefficients
 - Oil/gas in-place and recoverable reserves (including Monte Carlo analysis)
- ◆ Industry classification of resources and reserves
- ◆ Valuation and risk assessment

The workshop will be held in the Weymouth/Dorchester area of Dorset with excursions to visit classic hydrocarbon locations along the Jurassic Coast (World Heritage Site). For example, at Charmouth we can see the Wytch Farm oil source rock and at Osmington Mills you can actually touch and smell the oil contained within the high porosity sandstones.

We will also visit Kimmeridge Bay for the Kimmeridge Clay shales and the Kimmeridge oilfield and Lulworth Cove to demonstrate aspects of reservoir structure and fracturing.

The Workshop in Detail

Friday 17th May

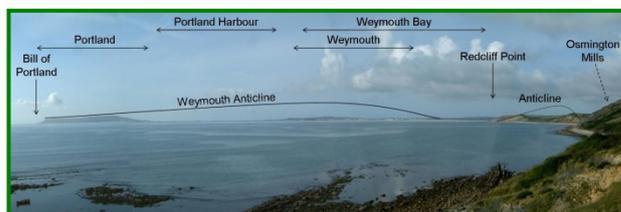
Evening dinner at the hotel followed by an informal meeting to discuss the weekend events.

Saturday 18th May

Informal discussion modules in the morning and late afternoon covering the origin of hydrocarbons, reservoirs and reservoir parameters. We conclude with the calculation of hydrocarbons in-place and recoverable resources/reserves including a demonstration of the use and misuse of Monte Carlo analysis.

During the day we visit Charmouth to look at the oil source rock for the Wytch Farm oilfield, and Bridport and Osmington Mills to see reservoir quality sandstones. At Osmington Mills the sandstones are exposed in an exhumed anticlinal structure and contain residual oil which on a calm day can be seen shimmering on the sea water. The Bridport Sands form the secondary reservoir at Wytch Farm and have an interesting bedded nature highlighting poor and good porosity reservoir sands.

The panorama of Weymouth Bay (below) provides an excellent illustration of geological structure and helps us discuss the formation of hydrocarbon traps.



Sunday 19th May

We start the day with a discussion covering the standard industry classification of resources, the evaluation of hydrocarbons and risk analysis, demonstrating the quirks of calculating prospect risk.

RESOURCE CLASSIFICATION SCHEME				
RESOURCE STATUS		RESOURCE CLASSIFICATION*	PROJECT STATUS** Category Description	
TOTAL HYDROCARBON	DISCOVERED HYDROCARBON	PRODUCTION	0 Sold	
		1P 2P 3P	1 On Production	
		RESERVES	2 Under Development	
	UNDISCOVERED HYDROCARBON	UNDEVELOPED	P50 P50 P10	3 Development Committed
			CONTINGENT RESOURCES	4 Resource in Planning
		PROSPECTIVE RESOURCES	5 Development Likely	
			6 Development Unlikely	
	UNDISCOVERED HYDROCARBON	PROSPECTIVE RESOURCES	7 Being Evaluated	
			8 Prospect	
9 Lead and Play				
			INCREASING MATURITY	

Resource classification explained

In the field, we will visit Kimmeridge Bay to see the world famous Kimmeridge Clay source rock (plus some fossil hunting) and the surface facilities of the Kimmeridge oilfield.

After lunch in Kimmeridge we will visit the Steve Etches collection of Jurassic fossils. Finally to Lulworth Cove to discuss reservoir structure, fractured reservoirs and limestones.

From Lulworth Cove and if time permits, we will stop off near Nine Barrow Down, a view point over Poole Harbour, to see the area of the Wytch Farm oilfield facilities.

Practicalities

Dates

The workshop is of two days duration, arriving at the hotel in Dorset late afternoon or early evening Friday 17th May and returning to London late afternoon of Sunday 19th May.

Travel

Participants will make their own way to Dorset on the Friday (either Dorchester or Weymouth; direct trains from London Waterloo take around 2hours 30mins) and we will transport you to Wareham for return London trains late afternoon on Sunday. We will provide travel to and from the field locations.

Hotel

A suitable hotel located centrally in the Dorchester-Weymouth area will be reserved for the group and will include the informal discussion modules and dinners. Hotel accommodation and evening meals are included in the workshop fee.

Cost

The workshop fee is GBP1,000 per person plus your own travel to and from the area. VAT will be charged at the prevailing rate. Participants are required to pay a 25% deposit to secure a place and to settle invoices in full 28 days prior to the workshop being held. Refunds will be made only if cancellation is notified to us within 28 days of the workshop start date. Substitution of participants may be made at any time.

Health and Safety

All locations to be visited are generally safe and open to the general public without restrictions. However, we take health and safety very seriously and because at some locations we will be examining rocks at the base of cliffs we will provide participants with hard hats to protect from any falling debris.

The field locations require a reasonable amount of walking to reach rock outcrops. The weather of course cannot be guaranteed. Participants therefore need to have waterproof clothing and good comfortable footwear (light walking boots are ideal).

Legalities

A short form contract will be required for each participant or company to cover financial matters and liabilities.

The Leaders

The workshop is led by Alan Taylor and Nick Wright, both with well over 30 years E&P experience with major operators and more recently as consultants. In addition, both Alan and Nick have worked extensively on both exploration and oil and gas field project evaluations and currently advise on investment opportunities.

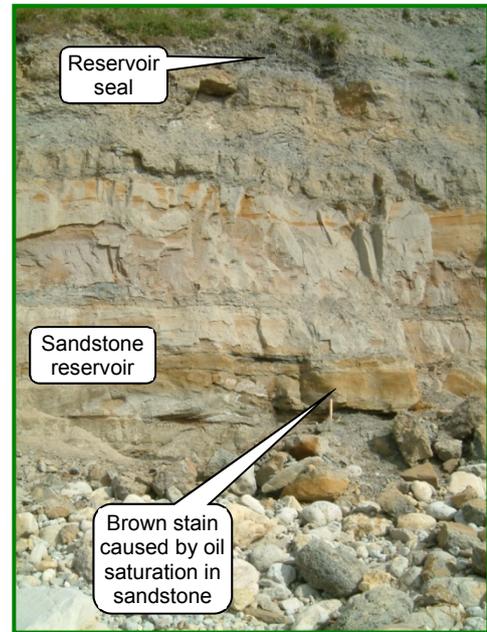
Enquiries and booking please contact

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Osmington Mills oil bearing sands



Map of workshop area and localities to be visited

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