



Amsas Consulting



**EAST AFRICA AND AUSTRALIA OIL AND GAS
CONFERENCE**

28-29 AUGUST 2014, PERTH AUSTRALIA

**WHAT ROLE CAN AUSTRALIAN INSTITUTIONS PLAY IN
EAST AFRICA AND SOMALIA
BY DR.ALI ABDULLAHI**



- Why East Africa
- More than 150 TCF of gas was discovered on the eastern shores of Eastern Africa from Mozambique to Kenya in the last 10 years.
- Somalia is also one area that has not had real exploration done for the last 23 years except for in Puntland
- In Kenya close to a Billion Barrels have been booked by Tullow Oil recently(2012-14)
- In Tanzania close to 50TCF of gas reserves has been discovered(2004-2014)
- In Mozambique close to 100 TCF of reserves is what major oil companies are finding(2004-2014)
- In Uganda close to 500Million Barrels of oil reserves has been discovered(since 2005) say last 10 years



- **Public sector Institutions**
 - Australian Federal Government(Liberal or Labour)
 - State Governments
 - AusAid
 - Austrade
 - Industry Associations



- **Private Institutions**
 - Banks
 - Investment Funds
 - Oil and Mining Companies
 - University and Research Institutions
 - Pension Funds
 - Sovereign Wealth Management Funds



- Australia was a founding member of the United Nations and is the 12th-largest contributor to the UN regular and peacekeeping budgets. It is strongly committed to the building of a justice-based international order which advances and protects the interests of all nations and peoples.

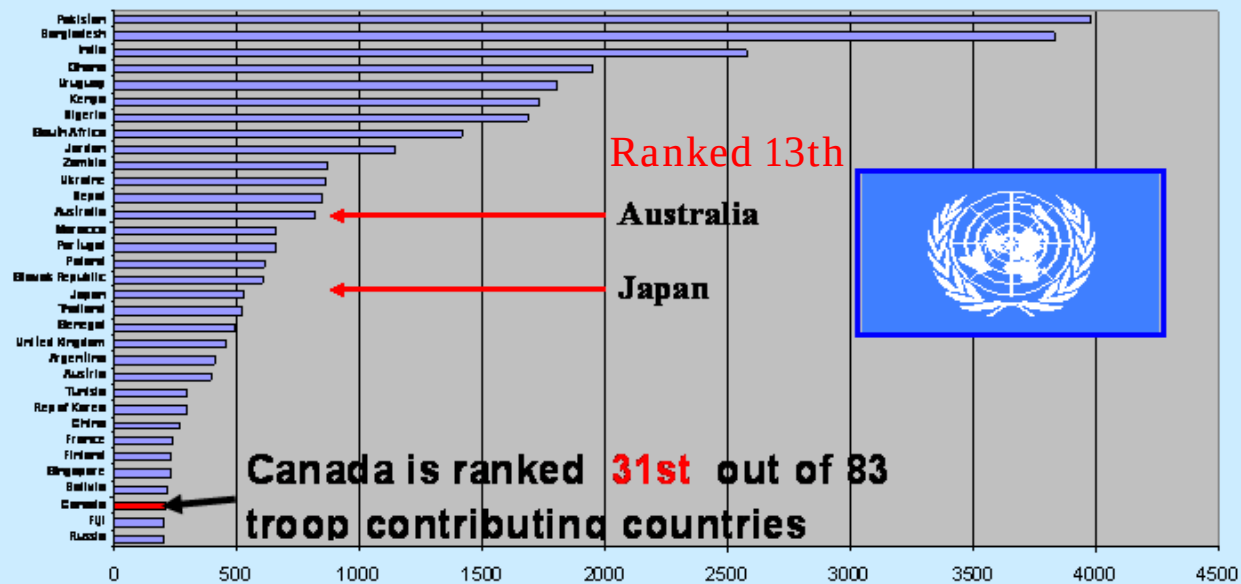
International Role



- Australia plays an active role in a wide array of global and regional institutions, including the:
- United Nations (UN)
- G20 (Group of 20 major economies)
- World Trade Organization (WTO)
- East Asia Summit (EAS)
- Asia–Pacific Economic Cooperation (APEC)
- Commonwealth
- Organisation for Economic Co-operation and Development (OECD)
- Indian Ocean Rim Association for Regional Cooperation
- Pacific Islands Forum (PIF)
- Forum for East Asia – Latin America Cooperation (FEALAC)
- Asia–Europe Meeting
- ??? African Union
- ??? East Africa



UN Peacekeeping



Source: United Nations as of 31 Aug 03



Founding
Member
Evatt first
President of
General
Assembly

Member of the
General Assembly
since 1945

Financial
Contributor^{13T}
H largest with
1.7% of total

Role in the UN

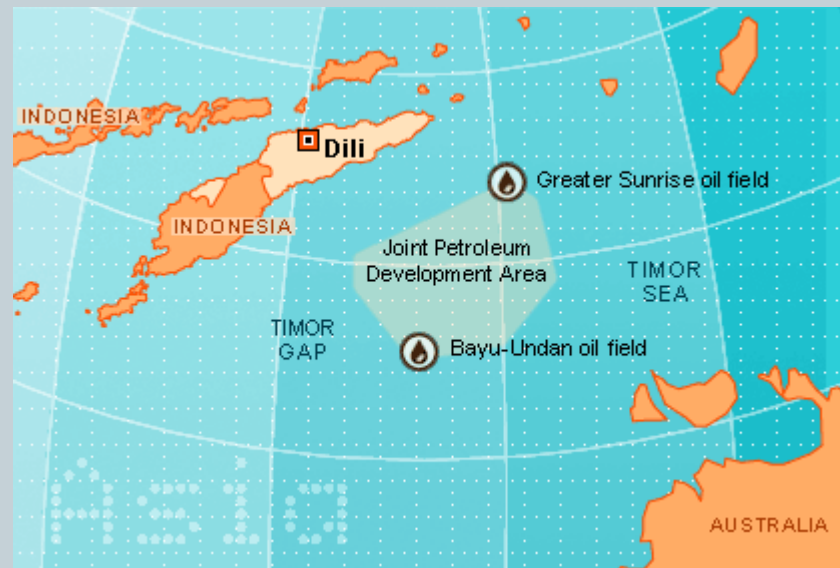
Military
Contributor
to
Peacekeeping
force eg
INTERFET

Representation
on UN bodies
Permanent
Missions in New
York and
Geneva

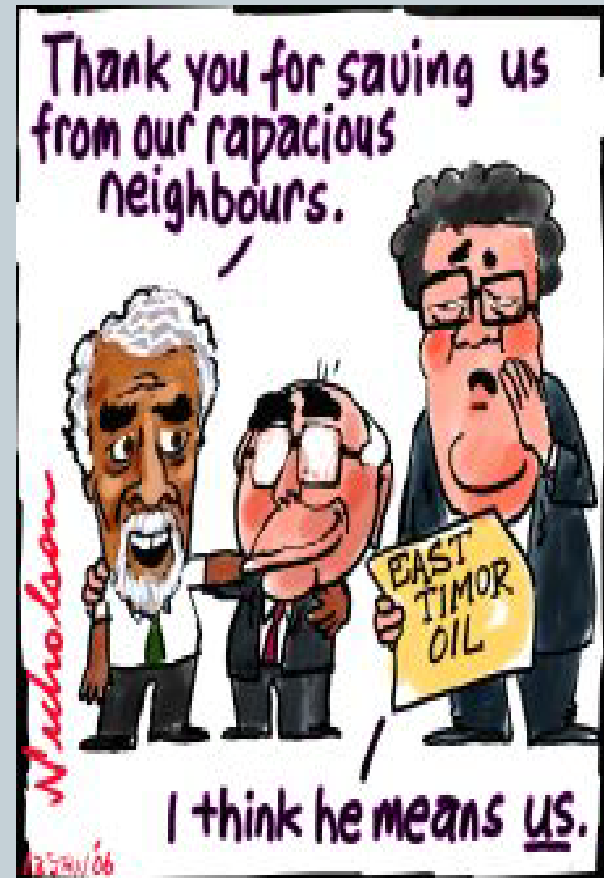
Participation in
UNESCO
ILO
FAO
WHO

The Mission pursues
Australia's interests in
the UN through advocacy
of our views and
promotion of our
interests by negotiating
with other member states
to advance Australia's
foreign policy objectives

Vested Interests



Meaning???



Recently: International Commitments



- **Australian navy seizes heroin worth \$268 Million from dhow off Kenya**
- By George Obulutsa
- NAIROBI, April 25 Fri Apr 25, 2014 4:20pm IST (Reuters) - An Australian warship patrolling the Indian Ocean has seized more than a tonne of heroin worth A\$289 million (\$268 million) from a dhow in Kenyan waters, Australia's Defence Department said on Friday.
- The frigate, HMAS Darwin, intercepted the vessel on Wednesday night 27 nautical miles east off Kenya's port city of Mombasa and confiscated 1,023 kg (2,255 pounds) of heroin in 46 sacks hidden in bags of cement, the department's website said.
- Piracy offshore Somalia is another area Australian Government has contributed though not equalling EUNAVFOR
- Security is a challenge globally and cooperation is vital if any success is to be achieved

Kevin Rudd



- *"We should not fulfill our citizenship of the world by sending just arms to fight, but rather sending aid to foster growth and development, and extend the hand of friendship. **We should be a more proactive supporter of debt relief and coupling aid funds with social, economic and institutional reforms. We should also be looking at the underlying causes of poverty.**"*



- **Africa's Needs**
 - Knowledge Transfer(Oil and Gas)
 - Capacity Building on Governance and legal reforms and modernization
 - Investments in Infrastructure



- **Australia's Benefits in Investing in Africa**
 - Low Entry Barrier to Resources Assets
 - High rates of returns on Investments
 - Low competition for Resources(Compare E&P Asset acquisitions in West Africa Vs East Africa - \$10Million for East Africa while in West Africa that might be almost 10 times more meaning north of \$100Million)

Trade and investment



- Australian investment in Africa is thriving, particularly in the resources sector. There are over 200 Australian mining companies with more than 700 projects operating in Africa.
- Bilateral merchandise trade with Africa grew to almost \$12 billion in 2013, more than double the value in 2009.
- While China had Bilateral merchandise trade with Africa in 2013 of about \$128 Billion and expected to double by 2017 through China-Africa Partnership

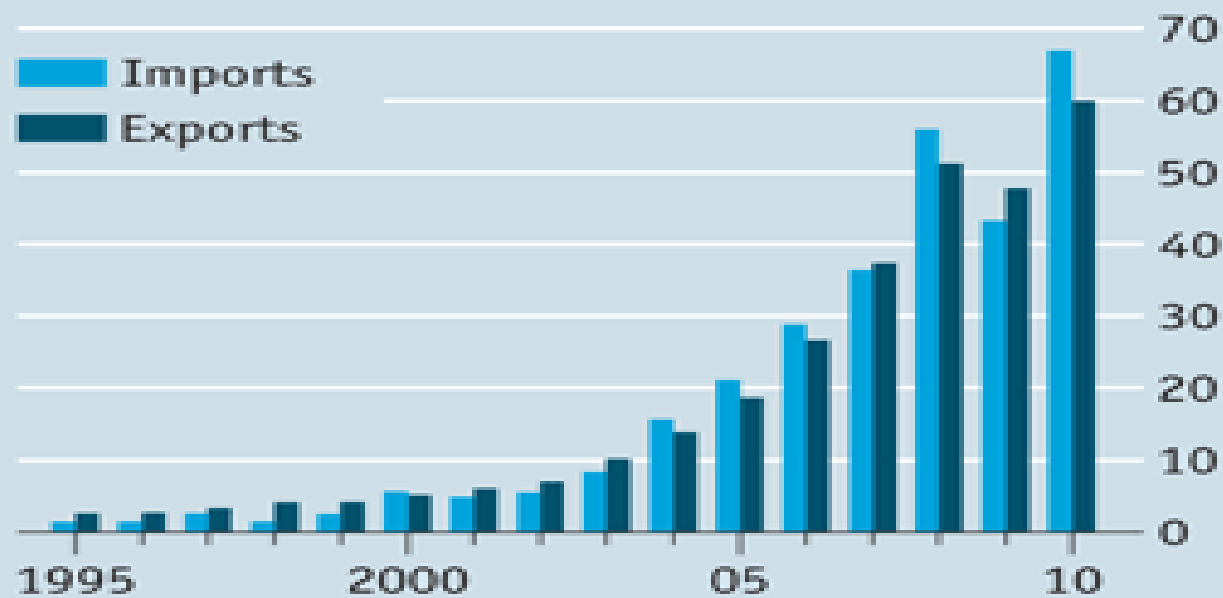
Comparing China's Trade with Africa



Partners

1

China's trade with Africa, \$bn



Source: National statistics

Kenya Case Study



- **THE 5000 + MW Project Overview**
- It is anticipated that electricity demand will rise sharply as new county Governments take shape and
- numerous economic activities spring up in the counties. In particular, energy intensive activities such
- as mining, production of iron and steel products from local iron ore deposits, irrigation of large tracts
- of land for food security and agro-based industry, operation of petroleum pipelines for both crude
- and refined fuel oils, petrochemicals production including urea and steel production will require a lot
- of power.



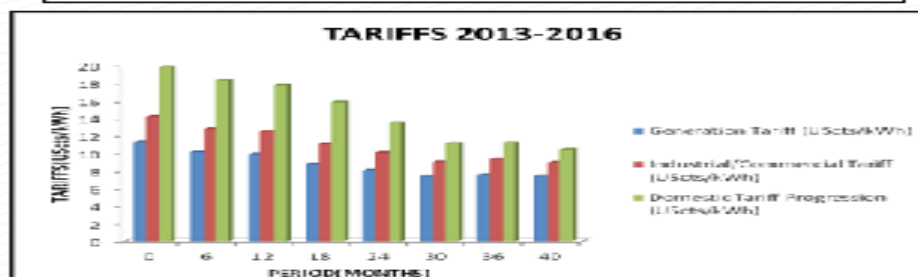
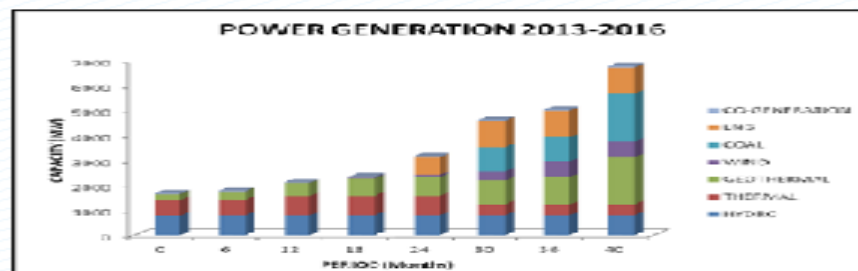
- Further, electrification of designated rail lines, installation of escalators at shopping malls and airports, and new economic zones will also require a lot of power. In order to provide affordable electricity for these activities which are expected to sharply transform the economy, the following roadmap to raise the generation capacity by 5000 MW from the current 1664.1 MW to slightly over 6,700 MW by 2016 is proposed.
- Through this road map the generation cost in US\$ cents is projected to reduce from 11.30 to 7.41, commercial/industrial tariff from 14.14 to 9.00 and domestic tariff from cents 19.78 to 10.45.



- This capacity will mainly be developed from Geothermal 1,646 MW,
- Natural Gas 1,050 MW,
- Wind 630 MW and
- Coal 1,920 MW,
- through government power utilities and IPPs under the PPP framework. The required transmission will be developed by GOK. Below is a schedule of capacities and tariff progression as these projects are developed:

NEW CAPACITY ADDITIONS (MW)								
TIME IN MONTHS	6	12	18	24	30	36	40	TOTAL
HYDRO	24	0	0	0	0	0	0	24
THERMAL	87	163	0	0	0	0	0	250
GEO THERMAL	90	176	190	50	205	150	785	1646
WIND	0	0	20	60	300	250	0	630
COAL	0	0	0	0	960	0	960	1920
LNG	0	0	0	700	350	0	0	1050
CO-GENERATION	0	0	18	0	0	0	0	18
TOTAL	201	339	228	810	1815	400	1745	5538

CUMULATIVE CAPACITY (MW)								
TIME IN MONTHS	0	6	12	18	24	30	36	40
HYDRO	770	794	794	794	794	794	794	794
THERMAL	622	709	782	782	782	432	432	432
GEO THERMAL	241	331	507	697	747	952	1102	1887
WIND	5	5	5	25	85	385	635	635
COAL	0	0	0	0	0	960	960	1920
LNG	0	0	0	0	700	1050	1050	1050
CO-GENERATION	26	26	26	44	44	44	44	44
RETIREMENTS		90				350		
CUMMULATIVE TOTAL	1664	1775	2114	2342	3152	4617	5017	6762
Generation Tariff (US\$cts/kWh)	11.3	10.14	9.93	8.74	8.07	7.38	7.58	7.41
Industrial/Commercial Tariff (US\$cts/kWh)	14.14	12.77	12.49	11.03	10.08	9.03	9.32	9
Domestic Tariff Progression (US\$cts/kWh)	19.78	18.3	17.73	15.85	13.46	11.14	11.19	10.43



Kenya Case Study

Power Production



- As power generation is largely a profitable venture the bulk of the 5000 MW will be developed by Independent Power Producers (IPPs) through the P-P-P law enacted in January 2013. This law will allow letters of support to be issued to those requiring them.
- These letters provide for financial integrity of both lenders
- and equity owners. However, inability by the off-taker (KPLC) to pay monthly payments for power sales on time is not covered by letters of support and IPPs consider non-provision of payment security for this as a deal breaker.
- To give payment security comfort to IPPs for this perceived inability by the off-taker to meet monthly obligations.
- GoK has in the recent past obtained Partial Risk Guarantees (PRG) from the World Bank for four IPPs.

Kenya Case Study



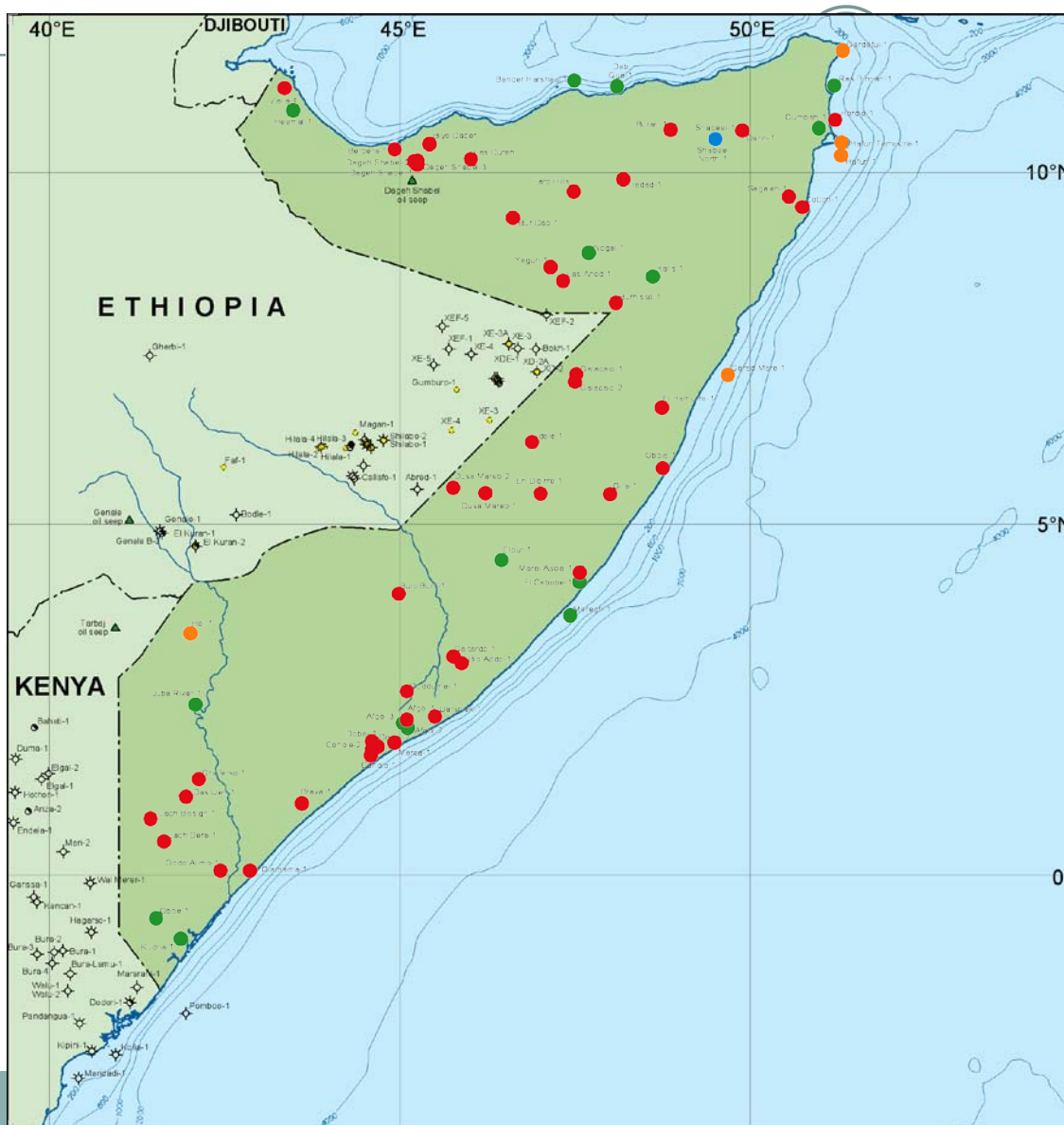
- This facility is also available to private sector investors in other infrastructure projects
- such as road development. To ensure timely implementation of the 5,000+ MW power generation projects,
- it is proposed that GoK engages International Development Agency (IDA) and Africa Development Bank
- (ADB) for PRG support. This engagement should also be extended to bilateral development partners like Australia whose companies have shown keen interest in investing in power generation as IPPs.
- LAPPSET Eastern Africa(Kenya,Uganda, South Sudan, Ethiopia) project is a good example of regional cooperation
- Railway Project by China-East Africa valued at Ksh327Billion

Somalia



- Upstream Oil and Gas
- History of oil exploration in Somalia
- Exploration for Oil and Gas started around 1925 by Rogers and Sinclair, Miner and Amerada Hess.
- Somalia had more than 15 international companies that owned acreage – most declared ‘force Majeure’
- Currently there is no Federal Petroleum law and nothing has been agreed between the Federal Government and existing States(Puntland, Somaliland, etc)

Exploration History - Drilling



1956 - 1969 **46 wells**

1970 - 1977 **5 wells**

1978 - 1991 **15 wells**

1991 - 2012 **hiatus**

2012 – P.D. **2 wells**

TOTAL **68 wells**

•Underexplored

•Clean slate

TABLE 6.1
OIL AND GAS OCCURRENCES IN SOMALIA AND BORDERING AREAS

	AGE/FORMATION	DEPTH (FT)	COMMENTS
<u>SOMALIA</u>			
Coriole-1	Eocene ls	6,500	2 Bbls Oil Recovered on Test
	U.K. (?) Volcanics	11,500	2 MMCF/D + Condensate
Afgoi-1	Paleocene-U.K. ss	12,700	4 MMCF/D + Condensate
Dagah Shabel	U.K. ss & J frac ls	Shallow	Oil Recovered on Test; Seep
<u>NE KENYA</u>			
Tarbaej	Karoo ss	Shallow	Asphalt
<u>ETHIOPIA</u>			
Kuran-1	Hamanlei ls	9,500	Oil Recovered on Test
Hilala-1	Hamanlei ls	5,300	Oil Recovered on Test
Shillabo-1	Hamanlei ls	6,900	1 MMCF/D
Calub-1	Adigrat ss	9,000	17 MMCF/D + Condensate
	Calub ss	12,000	24 MMCF/D + Condensate
<u>S. YEMEN</u>			
Sharmah-1X	Middle Eocene ls	7,300	2600 Bbls Oil Recovered on Test
<u>N. YEMEN</u>			
Alif Field	U.J. ss	5-6,000	200,000 BOPD

Table 6.1 Hydrocarbon shows in Somalia

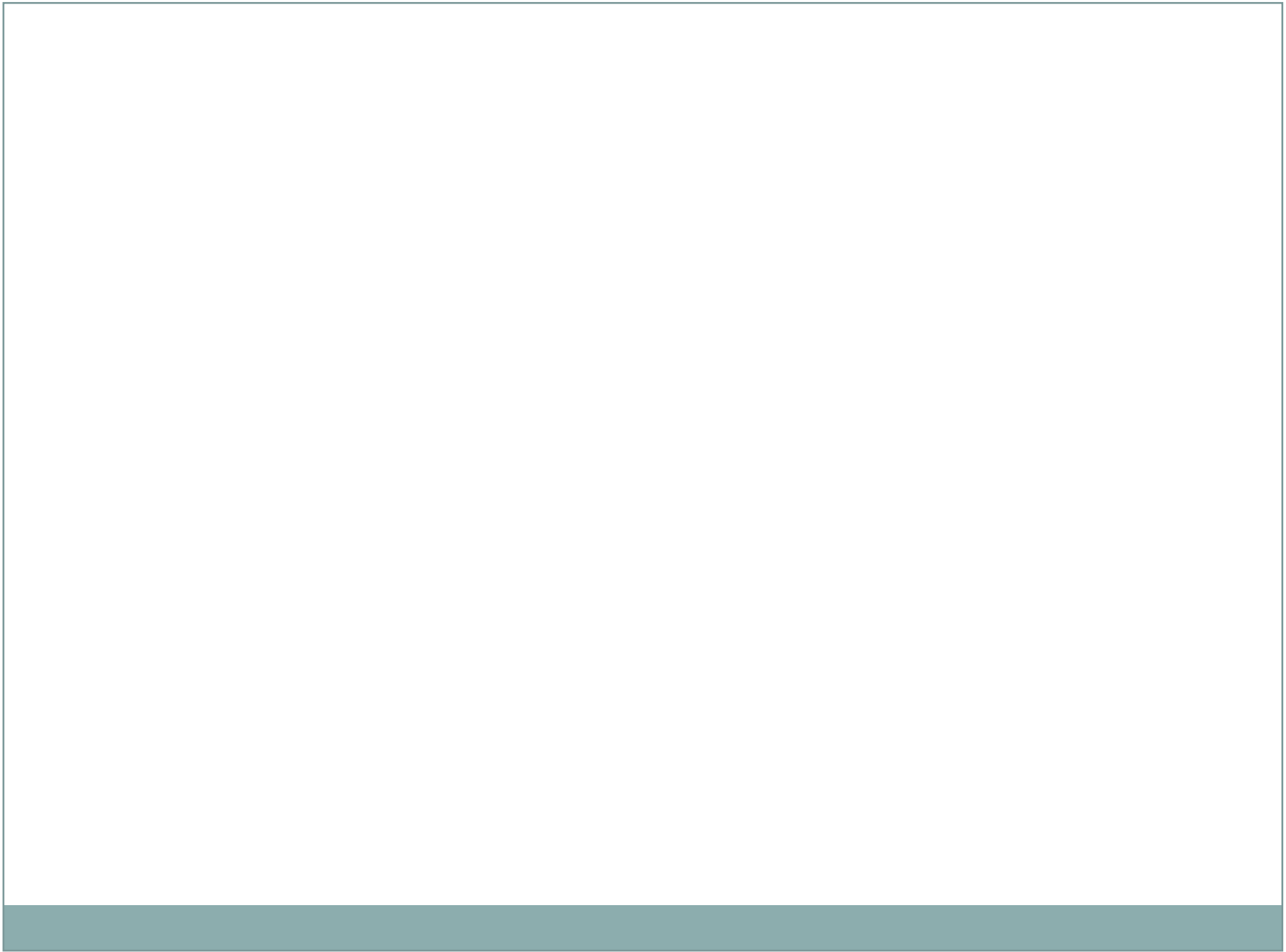


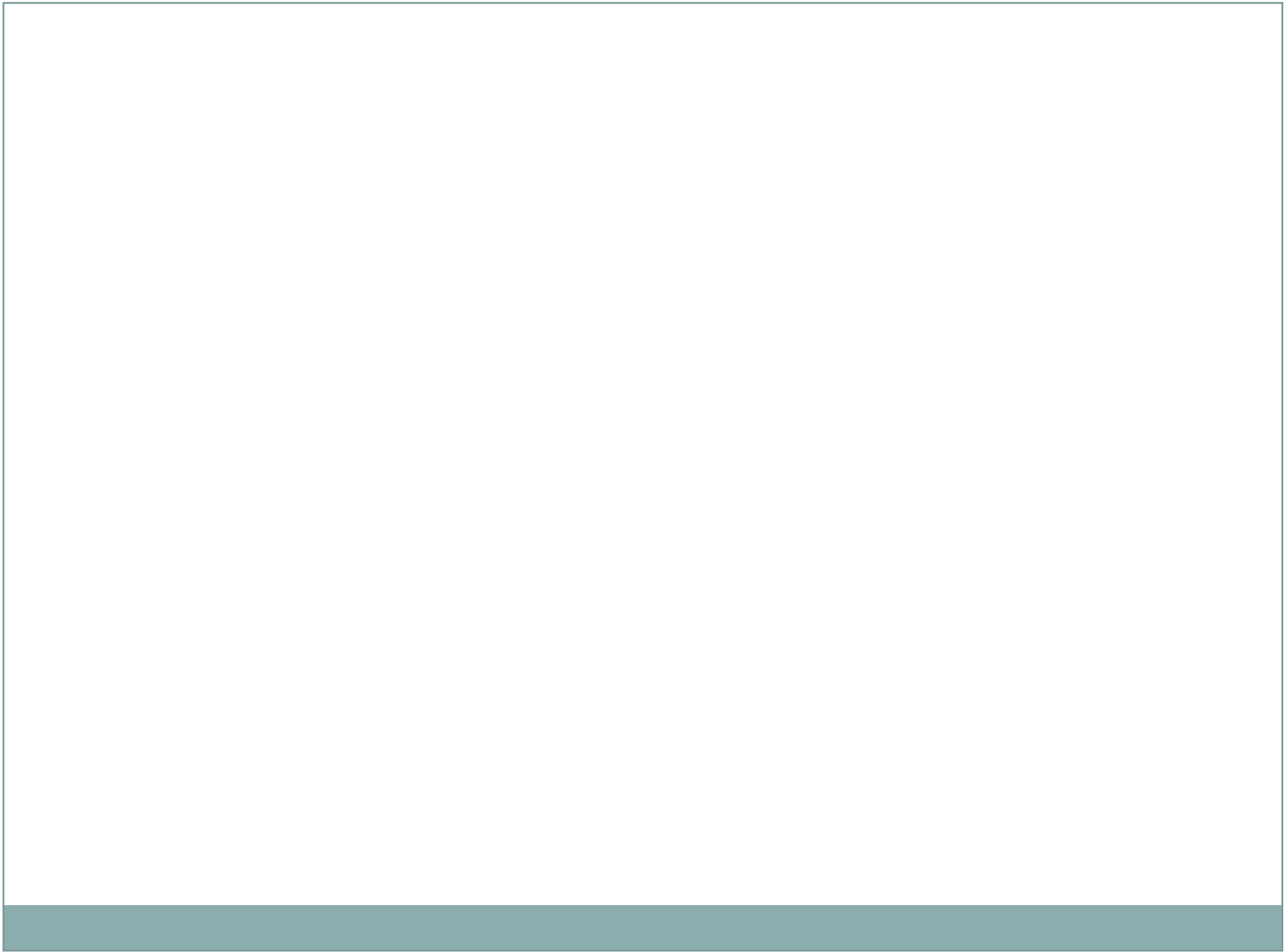
- Data and reports(Harms & Brady Report) on Somalia is available from Robertson-CGG of North Wales, UK or from Amsas Consulting(Africa)Ltd.
- Somalia has recently been estimated to have more than 100 Billion Barrels of Oil by some analysts even putting it ahead of Kuwait (source:africareview.com)

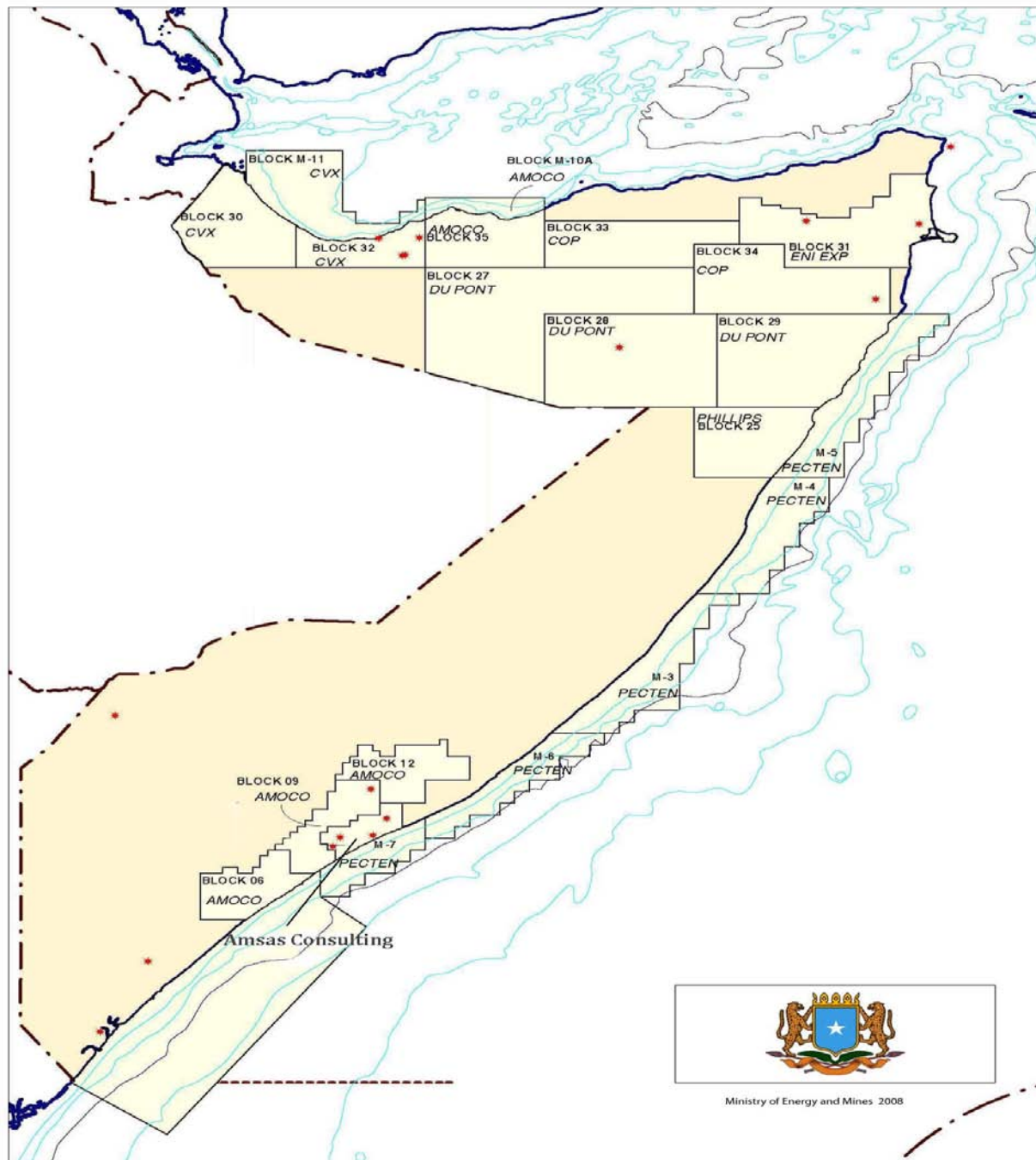
Somalia Opportunity Case Study ; Amsas-Coriole-Afgoye(ACA) Block



- Block is operated by Amsas Consulting/Amsas Energy Somalia Ltd.
- Block has 8 wells drilled 1 oil discovery, 1 gas discovery and the rest had oil and gas shows except 2 wells that were dry (wrongly drilled in 1985 by Somali Government)
- Chapman Petroleum Engineers of Canada recently valued the ACA Block at around \$3.75 Billion with Prospect Reserves of 51 Million Barrels of Oil and 268 BCF of Gas
- Amsas Consulting estimates a mean resources of 2 Billion Barrels of oil and 6 TCF of gas
- ACA block is surrounded by Amoco(9,6 and 12 now BP) Blocks and offshore by Pecten(Shell) Blocks – Future Strong partners when it comes to development.







Ministry of Energy and Mines 2008

Somalia Hydrocarbons - Potential

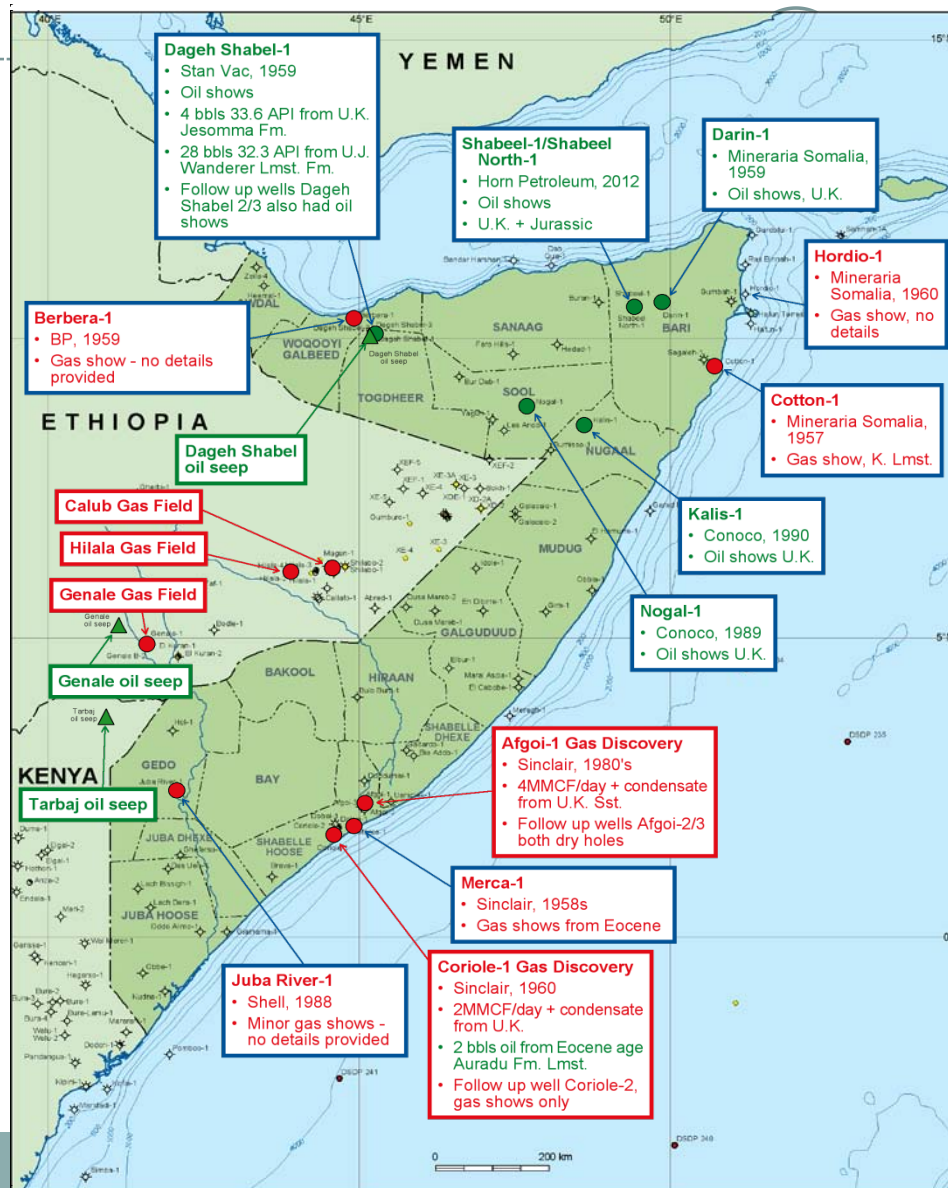


**coastline 3333 km; area >646,000
sq.km
EEZ = 3333* 350km =1,166,550 km²**

Somalia Concession Holders August, 2014

3.	AMOCO-2	*Amoco Somalia Petroleum Company	50%	26,318.00
		Agip (Africa) Ltd.	50%	
4.	CHEVRON	*Chevron Corporation	100%	40,500.00
5.	CONOCO-1	*Continental Oil Company	30%	98,700.00
		Phillips Petroleum Corporation Somalia	25%	
		BG Somalia SA	20%	
		Japan Energy Corporation	15%	
		Du Pont E&P No.1 B.V	10%	
6.	CONOCO-2	*Continental Oil Company	60%	38,728.00
		BG Somalia SA	25%	
		Japan Energy Corporation	15%	
7.	Amsas Consulting/ Somalia Federal Government(FG)	*Amsas Consulting Pty.Ltd.(Option of gaining 100%)	49%	4700.00
			51%	
8.	PECTEN-1	*Pecten Somalia	50%	60,344.00
		Mobil Somalia	50%	
9.	PHILLIPS	*Phillips Petroleum Corporation Somalia	100%	14,263.00
			LAND	239,562.00
			SHELF	33,437.00
			DEEP	46,971.00
			TOTAL	319,970.00

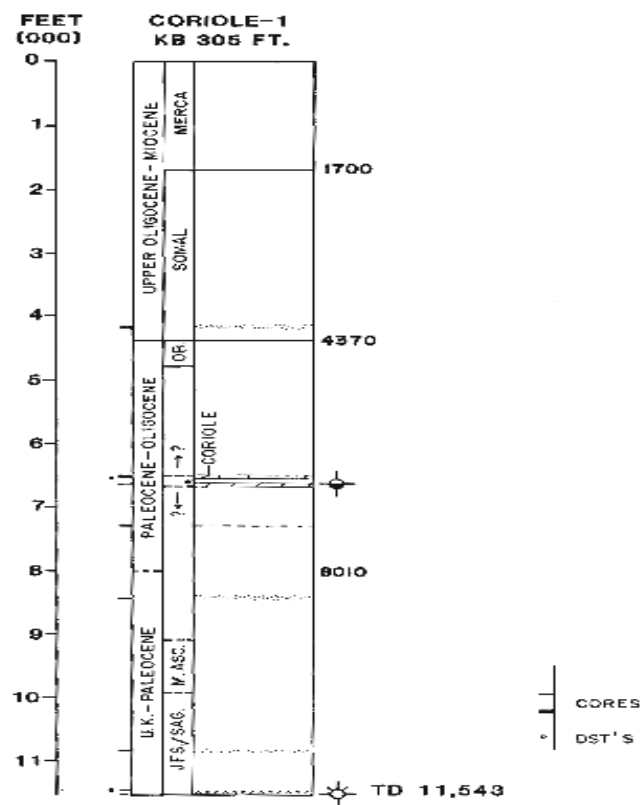
Hydrocarbon Occurrences



- Surface oil seepages
- Shows in wells
- Hydrocarbons recovered

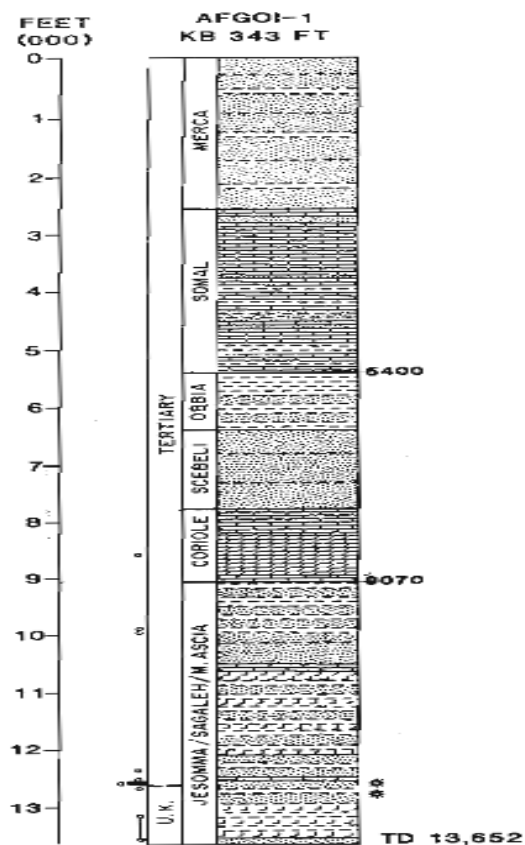


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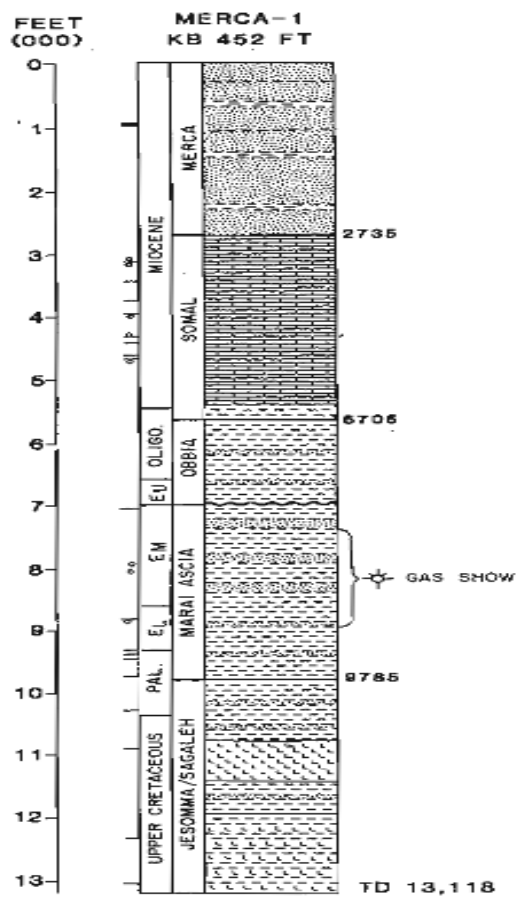
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* GAS RECOVERED

CORES

DST'S



#10

CORES
DST'S

Conclusion



- Australian Institutions can do much progress and development in east Africa
- Cooperation and early entry in key strategic industries is vital
- Managing Risk is also critical by major corporation investing heavily in the oil, gas and Energy sector
- Knowledge transfer and capacity building by Australian institutions is important and much needed by East Africa
- R&D cooperation between East African Universities and Australia is also a key point to note
- Australian Institutions should focus more on East Africa considering that barely 10% of Africa's resources have been discovered with a high upside potential.
- East Africa Oil and gas acreage acquisition is way much cheaper than West Africa(\$10Million Vs over \$100Million on Average)
- East Africa is the New Oil and Gas Province and even some analyst estimate Mozambique might over take Qatar as the world's Gas Centre in the next 20 years.
- On Amsas-Corirole-Afgoye(ACA) Block Data room is available from Robertson-CGG via webex or by visiting Robertson-CGG at North Wales(UK) Headquarters or sending by email Simon.Cheesley@cgg.com or ceo@amsasconsulting.com



Thank You