

Saharawi Arab Democratic Republic “SADR”

Oil & Gas Licence Offering
2008

HOUSTON
5 February, 2008



SADR Licence Offering

- 17 May 2005 Announcement of 2005 Licensing Round
- At end of 2005, several companies had entered into negotiations
- On 16 March, 2006, the SADR signed license agreements with eight companies for a total of nine blocks
- Of these blocks, six are offshore and three are onshore
- A total of nine blocks are still available



SADR – GEOGRAPHIC DETAILS

- **TOTAL COUNTRY AREA: 266,000 SQ. KMS**
- **AAIUN BASIN LAND AREA: 200,000 SQ. KMS**
- **OFFSHORE AREA (TO FOOT OF SLOPE): 120,000 SQ.KMS**
- **POPULATION: 500,000 (estimated)**
- **RELIGION: MUSLIM (SUNNI)**
- **CLIMATE: HOT, DRY DESERT**
- **PRIME ECONOMIC ACTIVITY: FISHING, PHOSPHATE MINING**
- **MOST FOOD NOT LOCALLY PRODUCED**
- **THREE PORTS**
- **THREE PAVED AIRPORTS**

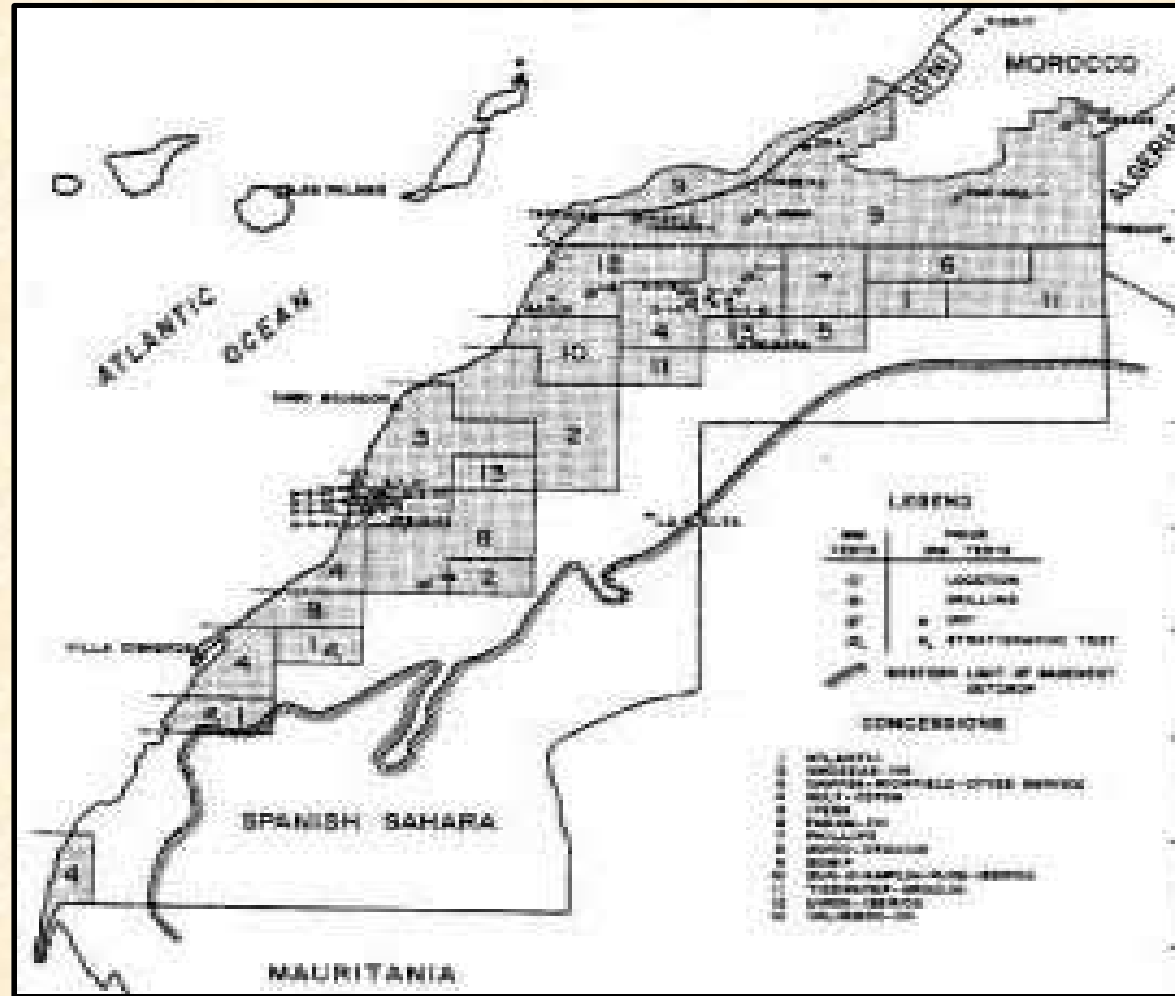


SADR – Historical timeline

- Before 1975, Spain rules Sahara as a colony
- In 1975, Spain relinquishes its colony; soon thereafter Morocco illegally annexes territory, against wishes of its indigenous population
- Three decades of independence struggle by Polisario against Morocco, attempts by United Nations at mediation between the two parties, followed
- SADR government based in Refugee Camps in southwestern Algeria (Tindouf)
- SADR awards Study Agreement to Fusion Oil and Gas in 2000
- 17 May 2005 Announcement by SADR of 2005 Licensing Round
- On 16 March, 2006, the SADR signs 8 Assurance Agreements for Production Sharing Agreements with 9 companies
- Data collection and ongoing petroleum prospectivity studies being carried out



SADR – ONSHORE LICENSES 1960 - 1962



SADR – PREVIOUS LICENSEES

Previous license holder

Present surviving company

Amospain (Chevron/Texaco joint venture)		Chevron
Atlantic	became Arco	BP
Pan American	became Amoco	BP
Richfield	taken over by Arco	BP
Tidewater	taken over by Arco	BP
Continental	became Conoco	ConocoPhillips
Phillips		ConocoPhillips
Gulf	merged with Chevron	Chevron
Union	became Unocal	Chevron
Champlin	became Fina	Total
Valdebro	old Spanish company	??
Esso		ExxonMobil



SADR – EXISTING DATASETS

- Remote sensing: air photographs, Landsat
- Remote sensing: SEASAT oil-seep study (NPA Group)
- Field geology: > 200 party months
- Other geophysical data sets:
 - gravity (80 party months), magnetics
- Onshore seismic data set:
 - 1960-1963: 240 party months (24,000 plus line kms?)
 - 2000 kms 1988 ONAREP data
- Offshore seismic data sets (several including latest shot by TGS-Nopec)
- Well and core sample materials
- Deep sea drilling data set (2 wells)
- **LYNX DATA SET (VARIETY OF DATA)**
- **FUSION OIL REGIONAL REPORT**



SADR – EXPLORATORY WELL SUMMARY

TOTAL WELLS DRILLED IN AAIUN BASIN: 74

TOTAL OFFSHORE WELLS: 15

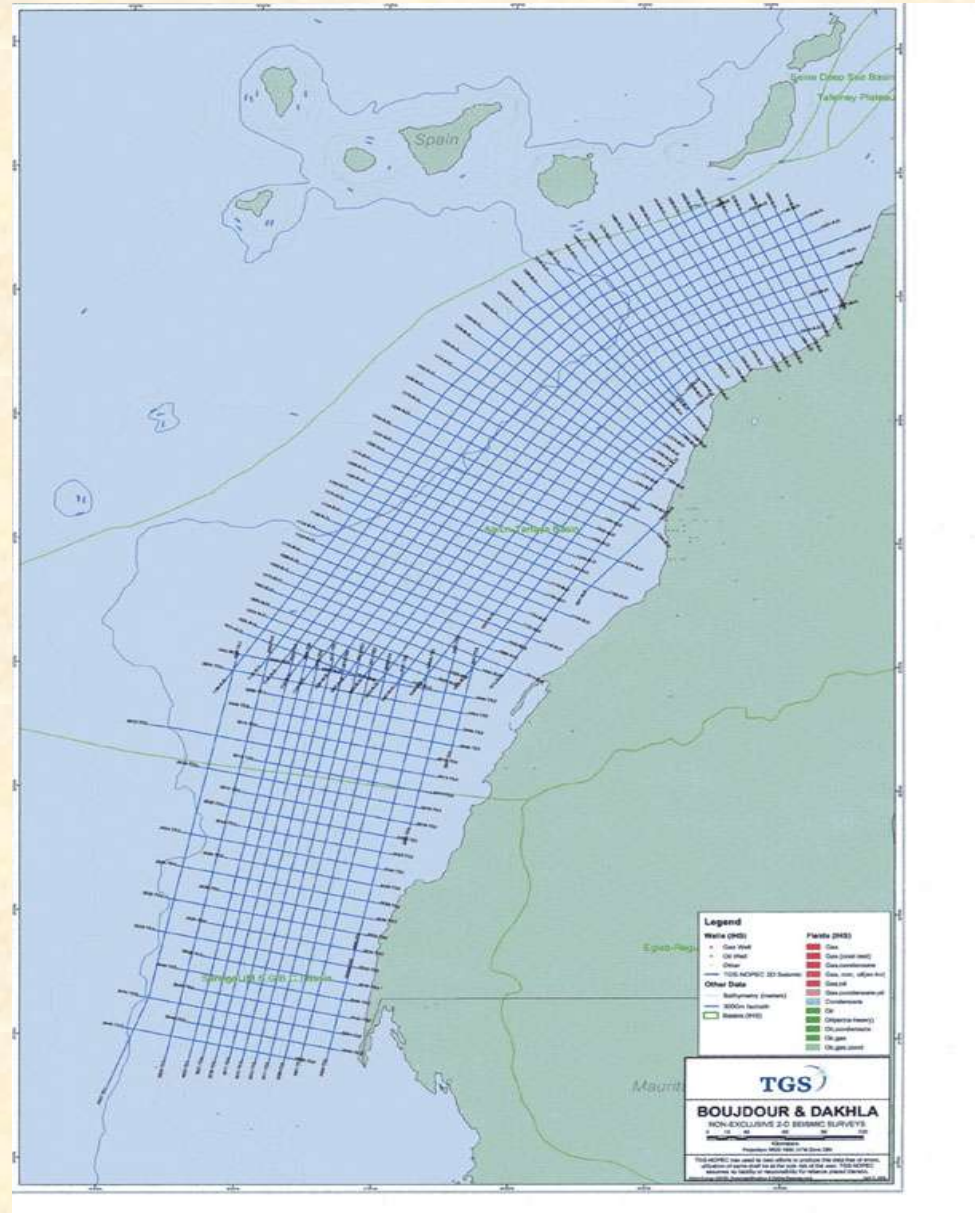
**DEEP WATER WELLS: ZERO
(DOES NOT INCLUDE TWO DSDP WELLS)**

**BASIN-WIDE WELL DENSITY: 1 WELL PER 4,000
SQ. KMS**

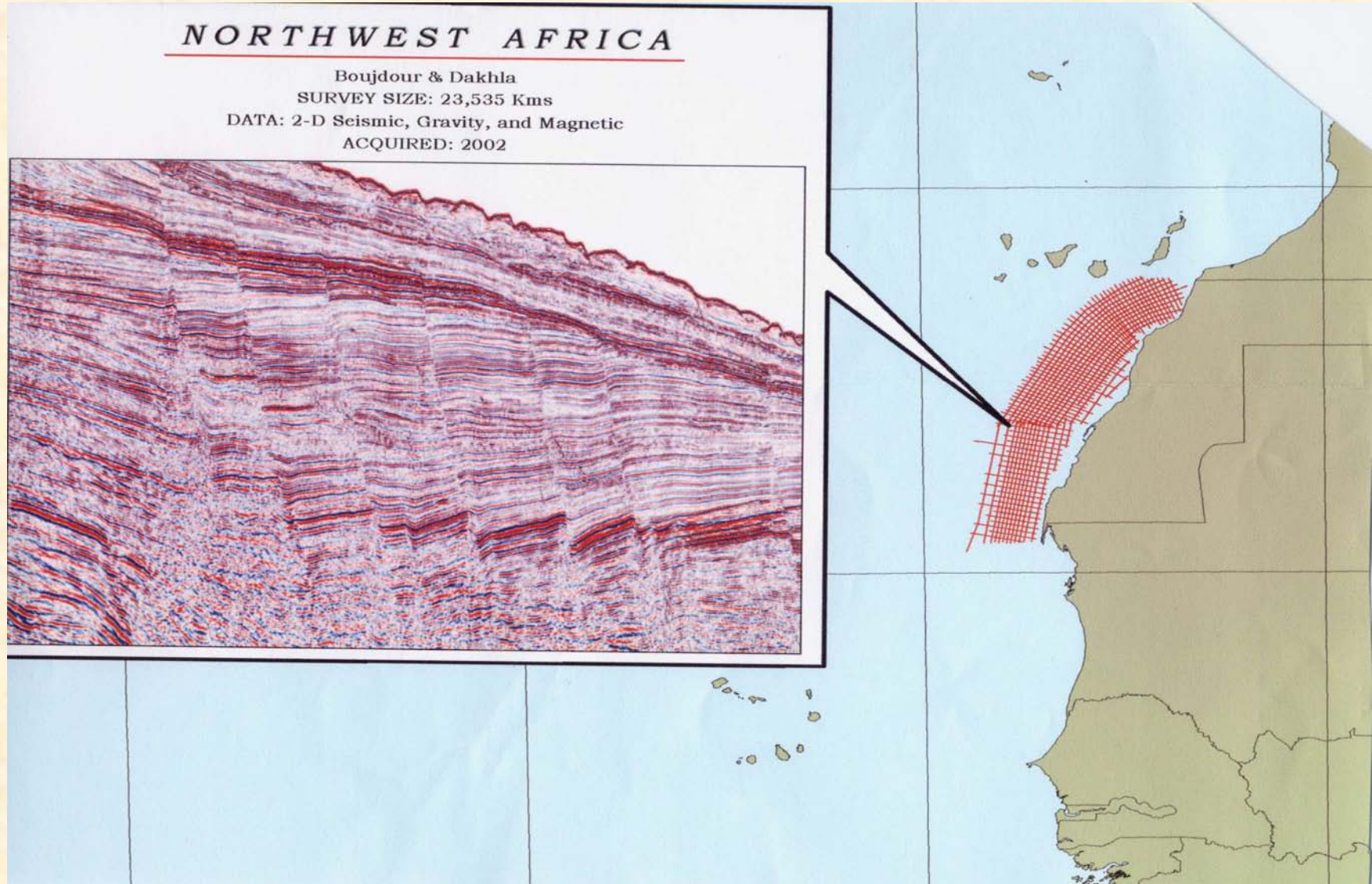
**OFFSHORE WELL DENSITY: 1 WELL PER 23,000
SQ. KMS**



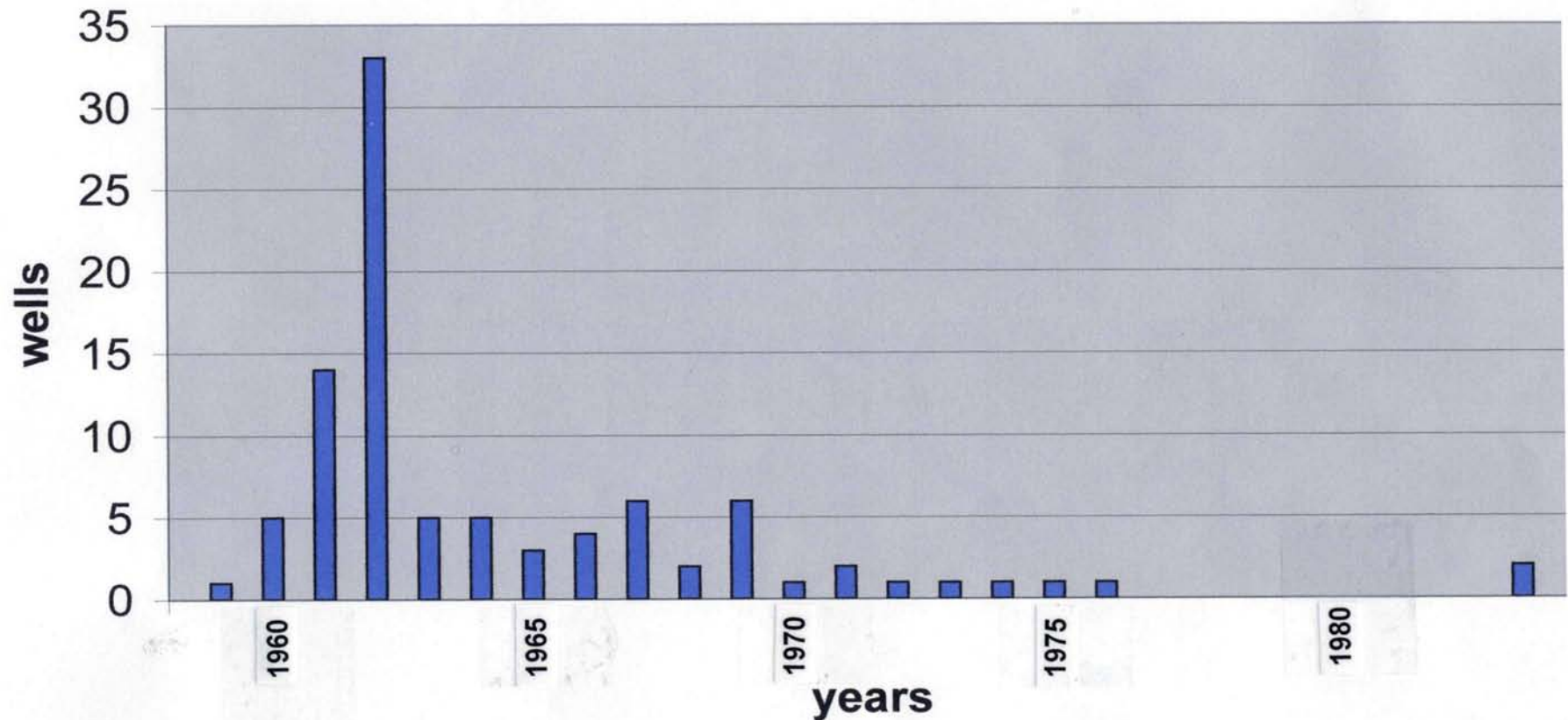
SADR – Latest offshore seismic (TGS-Nopec)



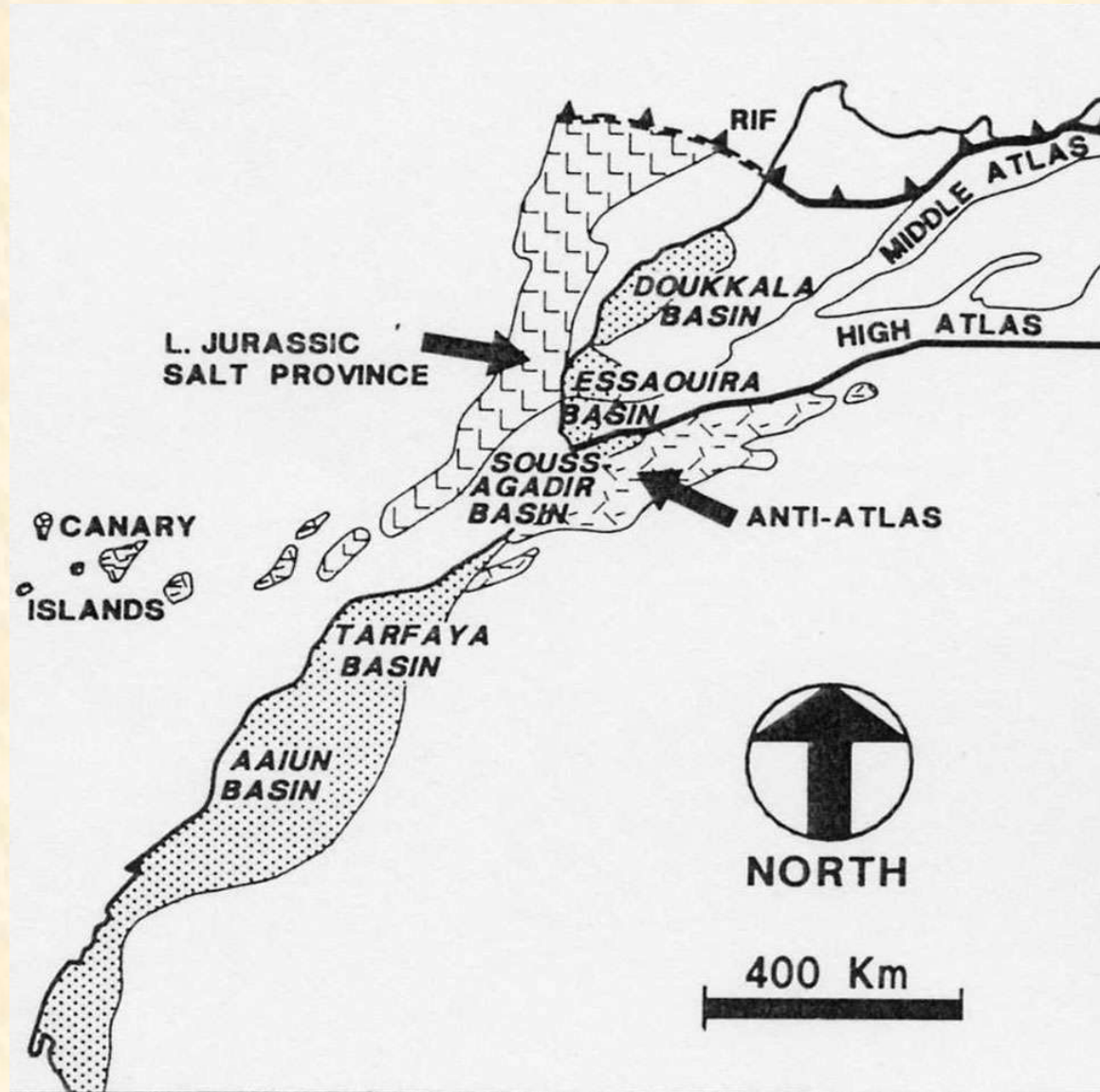
SADR – Example TGS-NOPEC Seismic Line



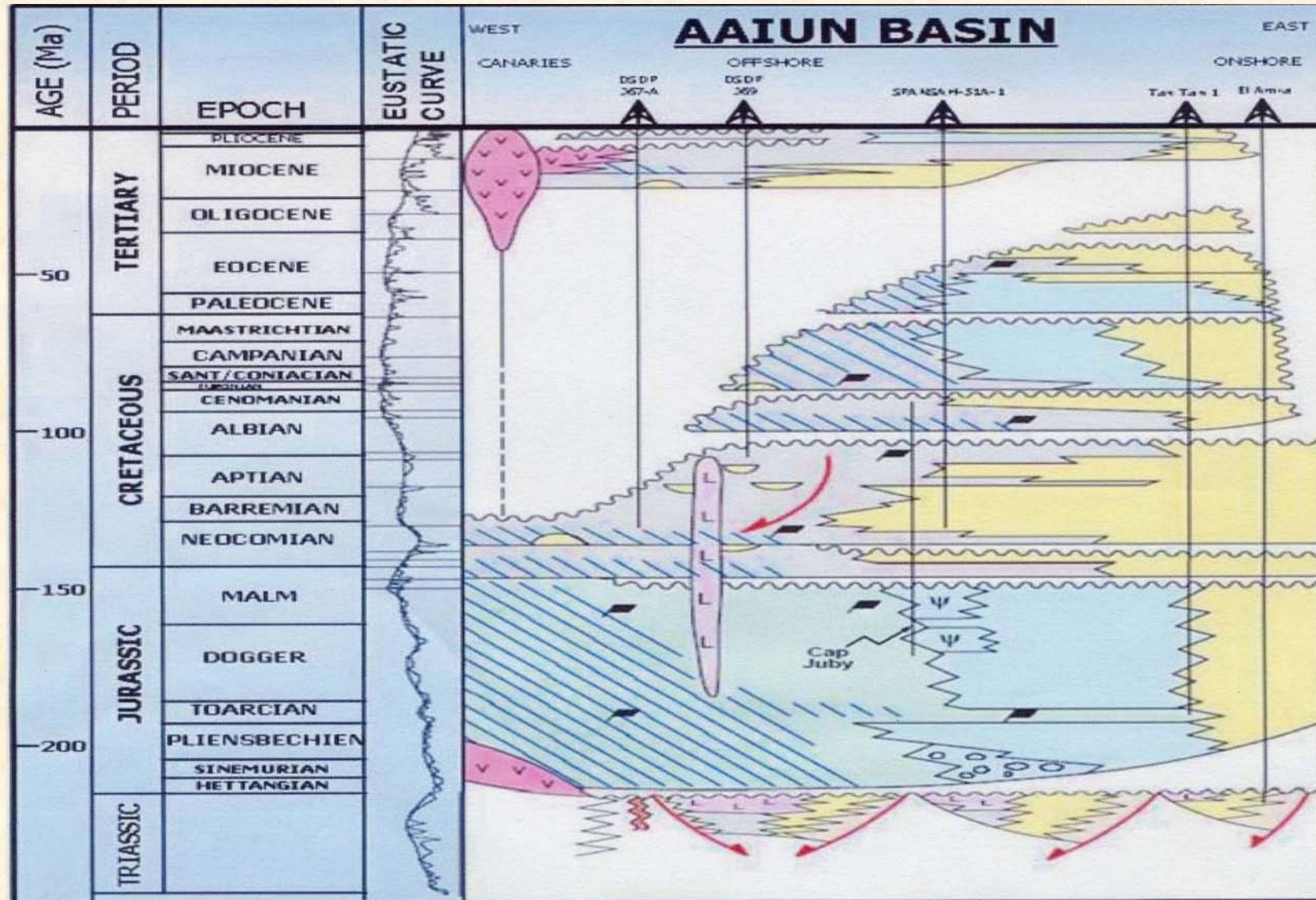
SADR – EXPLORATORY WELL HISTORY



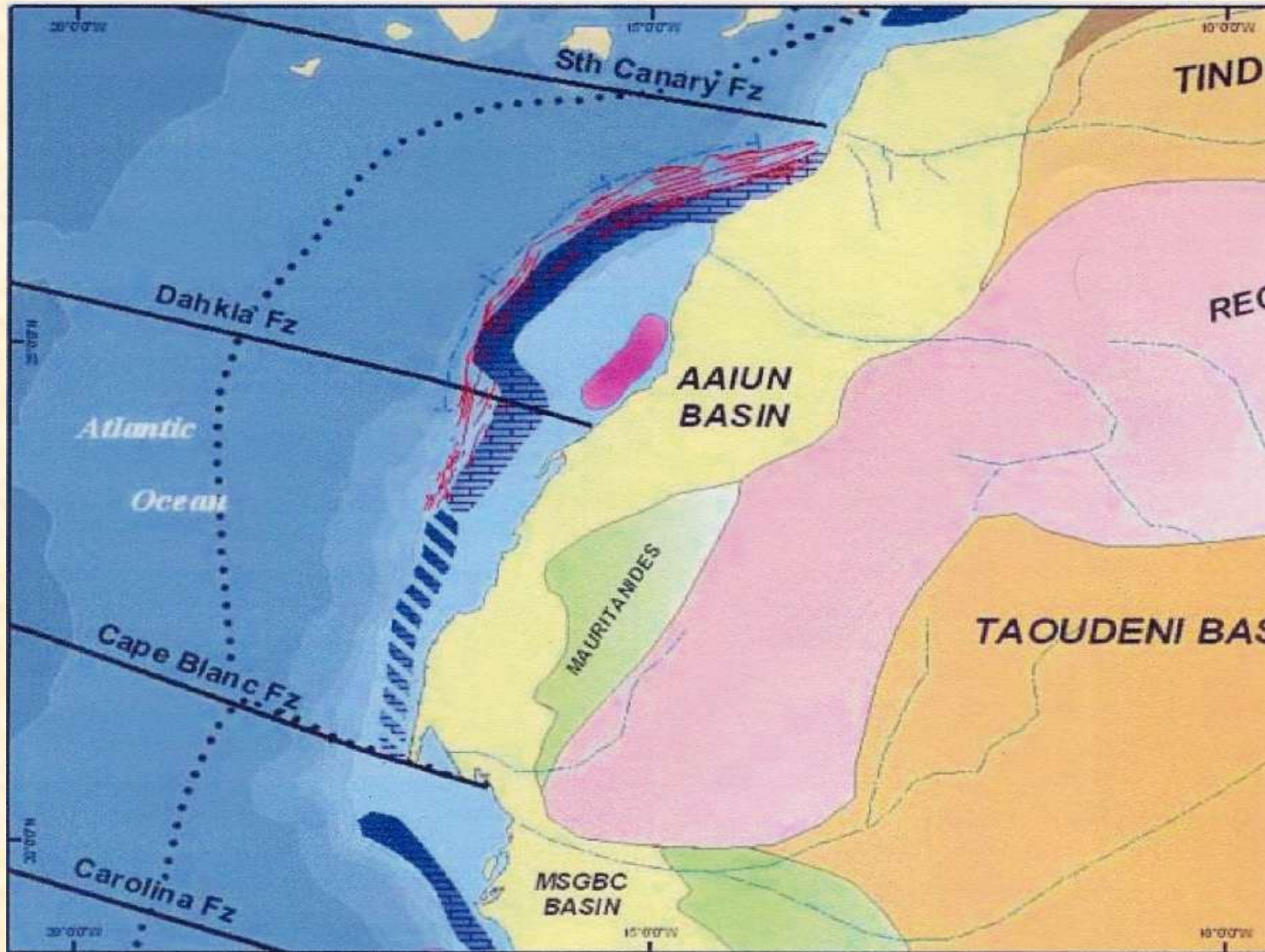
SADR – SEDIMENTARY BASINS AND EXTENT OF SALT



AAIUN BASIN: STRATIGRAPHIC CHART

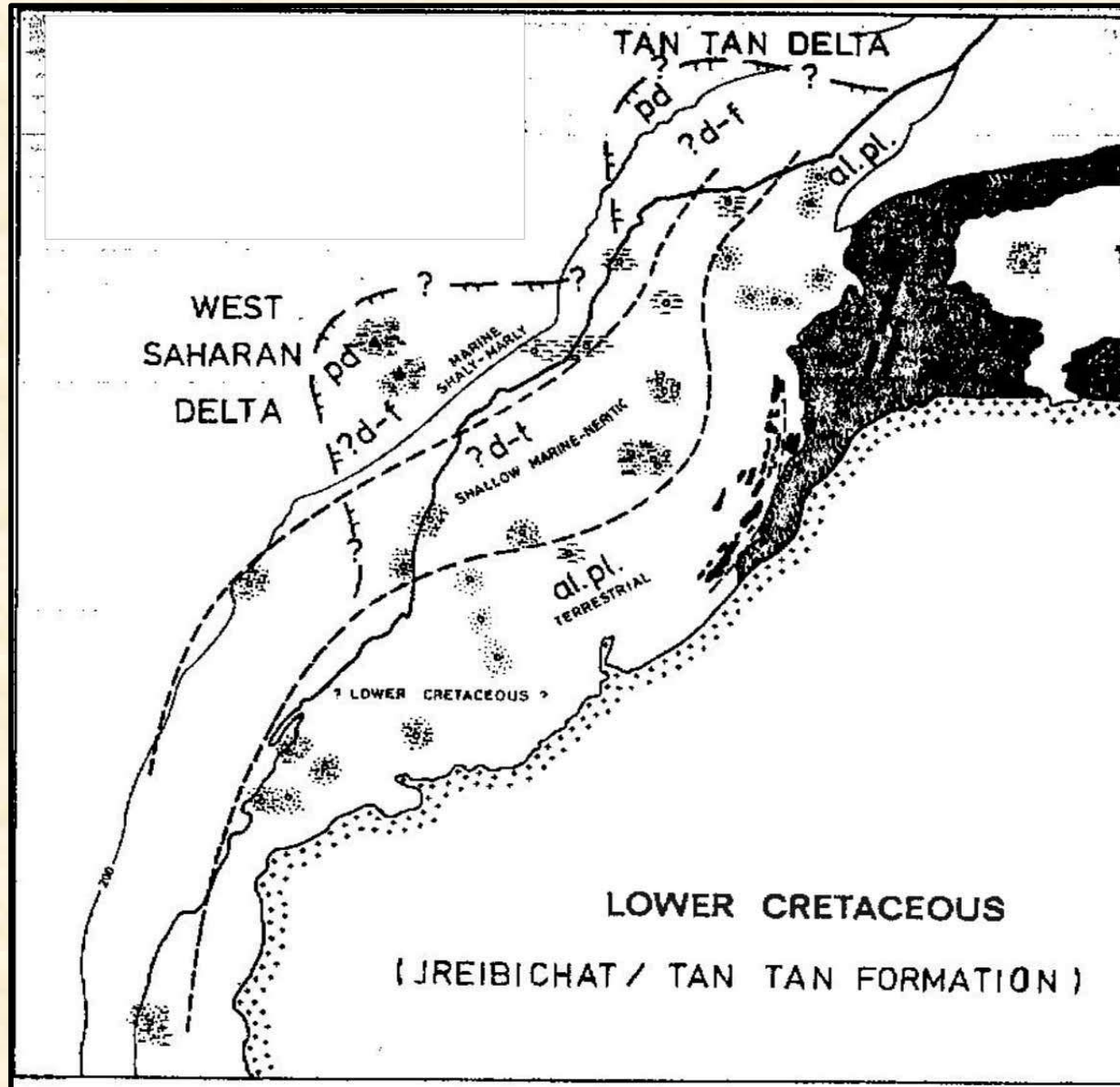


SADR – REGIONAL BASIN SETTING

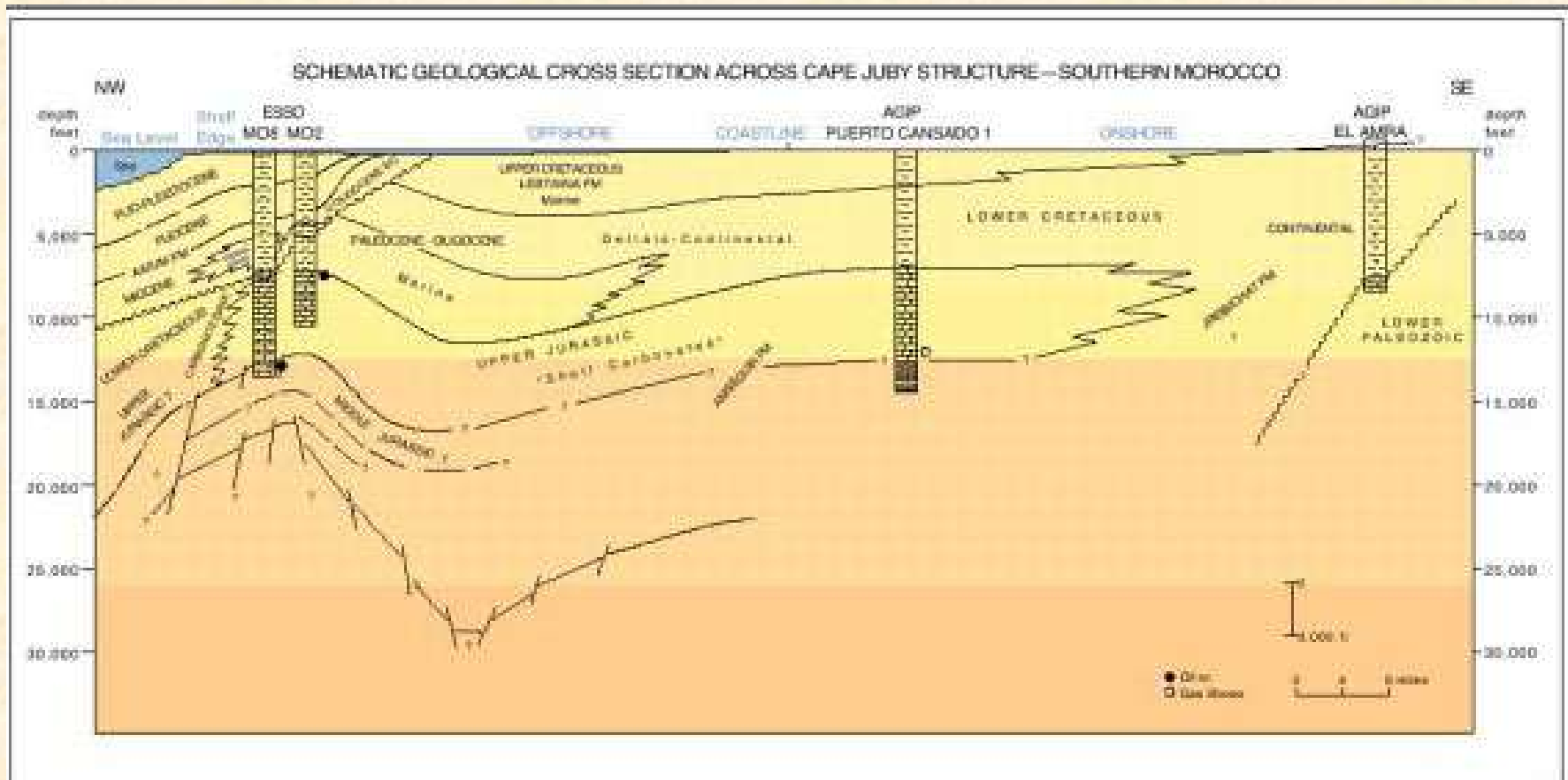


AAIUN BASIN: LOWER CRETACEOUS FACIES MAP

AFTER RANKE, ET AL., (1979)



REGIONAL CROSS SECTION THROUGH CAPE JUBY STRUCTURE



SADR – SUMMARY OF HYDROCARBON SHOWS

- **GULF A1- 47: 1610-1626m “Very strong crude odor and some oil staining” near total depth; not tested; two shallower negative DST’s**
- **ENMINSA Morcba 1: 300 mcfpd from Silurian (western Tindouf Basin)**
- **CAP JUBY STRUCTURE : “Significant amount of heavy oil” (13 deg. API) in Upper Jurassic reef feature, non-commercial 38 deg. API in Middle Jurassic**
- **Very little geochemical work done on any well samples**



SADR – AAIUN BASIN: SUMMARY CONCLUSIONS

- **THICK MARINE AND NON-MARINE SEDIMENTARY (CLASTIC AND CARBONATE) SECTION (> 5000 meters)**
- **SPARSE EXPLORATORY WELL COVERAGE**
- **VERY SPARSE EXPLORATION OFFSHORE**
- **NO DEEP WATER EXPLORATORY WELLS**
- **SOURCE, RESERVOIR AND SEALING ROCKS PRESENT**
- **POTENTIAL SLUMP STRUCTURES ON CONTINENTAL SLOPE; LYSTRIC FAULTING AND TILTED FAULT BLOCKS WITH COUNTER-REGIONAL DIP ON SHELF**

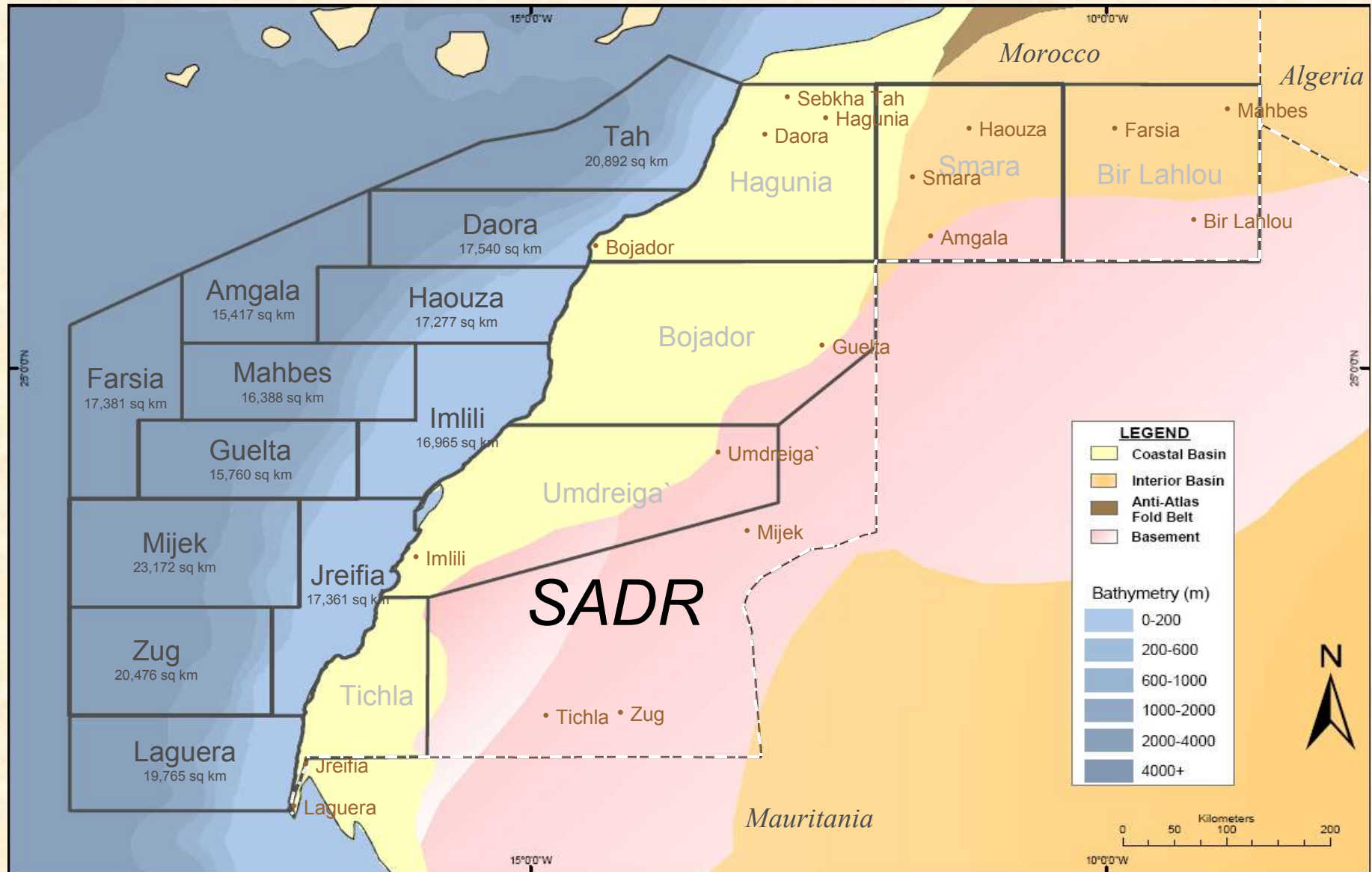
NO PROVEN PETROLEUM SYSTEM BUT ALL THE INGREDIENTS ARE PRESENT



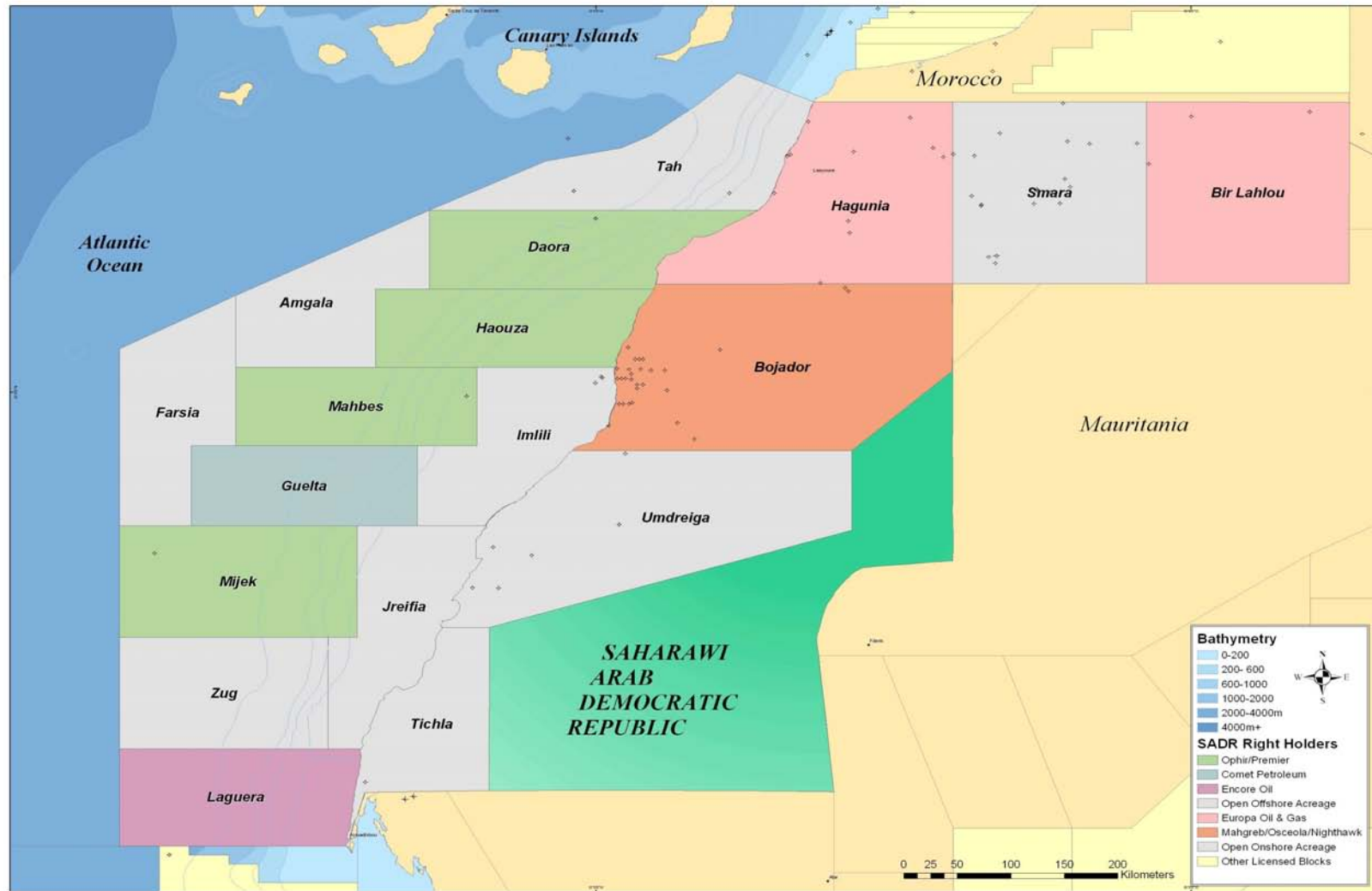
BLOCKS OFFERED AND LICENSE TERMS



SADR – Block Designations



SADR – Blocks Awarded in 2006

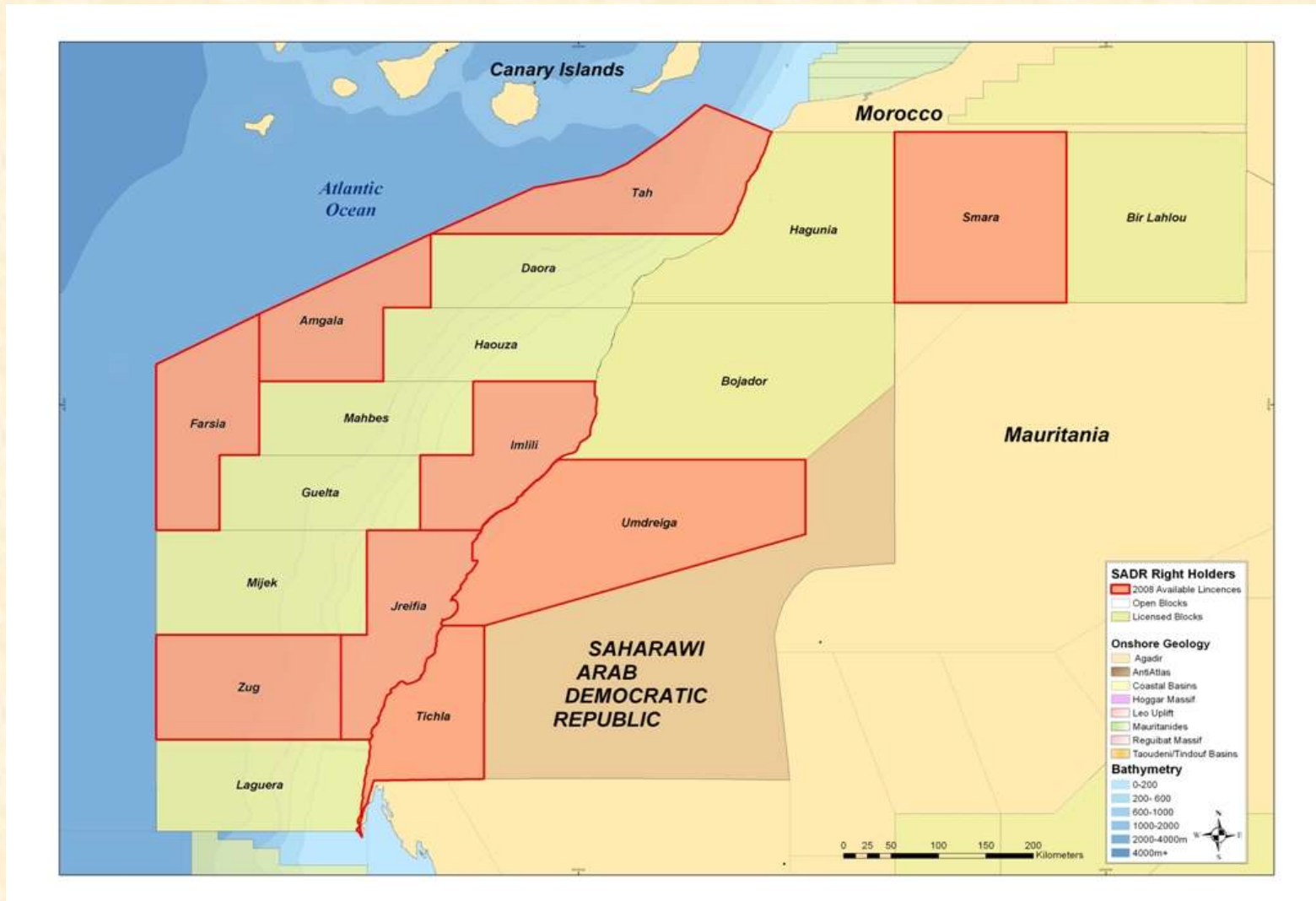


SADR - Block awards

<u>Block</u>	<u>Area (sq. kms)</u>	<u>Licensees</u>
Daora	17,540	Premier/Ophir
Haouza	17,277	Premier/Ophir
Mahbes	16,338	Premier/Ophir
Mijek	23,172	Premier/Ophir
Laguera	19,765	EnCore
Guelta	15,760	Comet
Hagunia	31,504	Europa
Bir Lahlou	31,452	Europa
Bojador	44,298	Maghreb/Osceola



SADR – Blocks available in present license round



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<u>Block name</u>	<u>Area (sq. kms)</u>	<u>Water depth (m)</u>
Tah	20,892	0 – 3500
Amgala	15,417	2700-3500
Farsia	17,381	2700-3300
Imlili	16,965	0 – 150
Jreifia	17,361	0 – 700
Zug	20,476	100-3400
Smara	29,895	Onshore
Umdreiga	39,603	Onshore
Tichla	14,579	Onshore



SADR - Licensing Process

- Process is by open tender.
- Petroleum Agreement is a Production Sharing Contract (PSC).
- An Assurance Agreement is signed between the State and the Licensee, as well as a PSC.
- Assurance Agreement bridges between signing the PSC and the SADR's formal recognition by the UN General Assembly.
- The Assurance Agreement provides details to the licensee on controlling legislation whilst SADR specific legislation is being formulated.



SADR – ASSURANCE AGREEMENT TERMS

- TERM: UP TO 10 YEARS
- PSC TERMS BID AND AGREED
- SADR TO MEET TWO CONDITIONS FOR PSC TO BECOME EFFECTIVE:
 - RECOGNITION OF SADR SOVEREIGNTY BY UNITED NATIONS AND ADMISSION TO UN GENERAL ASSEMBLY
 - FORMULATION OF A COMPREHENSIVE SADR TAX LAW
- ADMINISTRATIVE FEE: US\$20,000 PER ANNUM
- SOCIAL CONTRIBUTION: US\$10,000 PER ANNUM
- GOVERNING LAW: ENGLAND



SADR – PSC TERMS 1

- EXPLORATION PERIOD OF THREE TERMS OF THREE YEARS EACH
- WORK PROGRAM AND BUDGET FOR EACH PERIOD: BIDDABLE
- FULL LICENSE TERM: 25 YEARS
- STATE PARTICIPATION: BIDDABLE
- PLAN FOR UTILIZATION OF NATURAL GAS



SADR – PSC TERMS 2

- COST RECOVERY: 80%
- ROYALTY: 5%
- PROFIT SPLIT: BIDDABLE BY PRODUCTION RATES
- SIGNATURE AND PRODUCTION BONUSES: BIDDABLE
- TRAINING PROGRAM: BIDDABLE
- SOCIAL WORKS CONTRIBUTION: BIDDABLE



SADR – 2nd LICENSING ROUND TIME TABLE

- **25 OCTOBER, 2007 : INITIAL ANNOUNCEMENT**
- **22 JANUARY, 2008 : SECOND ANNOUNCEMENT**
- **5 FEBRUARY, 2008 : HOUSTON PRESENTATION**
- **30 OCTOBER, 2008: CLOSING DATE FOR 2ND ROUND**
- **NOVEMBER, 2008 : DISCUSSIONS WITH APPLICANTS**
- **1 DECEMBER, 2008 : AWARD OF LICENSES**



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**Saharawi Arab Democratic Republic
Oil and Gas Exploration
2005 Licensing Round**



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