

Licensing Rounds

“from before seismic first shot to extraction of the last oil drop”

Working with Governments

Exploration Reservoir Consultants

A getech Group Company

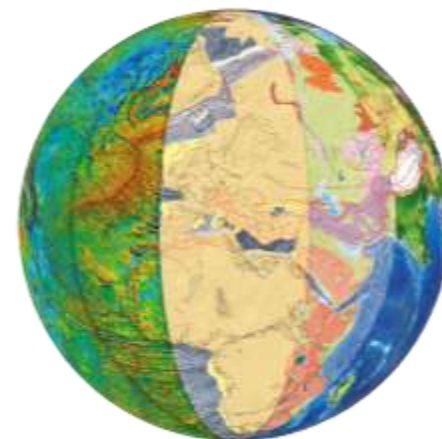


ERCL – Exploration Reservoir Consultants



A Specialized International Upstream Oil and Gas Consultancy

- Governments
- National Oil Companies
- Oil Companies
- Service Companies
- Universities
- License Rounds
- Advisory / Training
- Exploration / Appraisal
- Multi Client
- R&D / Technology



Globe



getech

Hydrocarbon Potential Evaluation

- Gravity and magnetic data
- Global and regional plate modelling
- Palaeogeographies
- Geological Structures
- Earth Systems modelling
- Research and Development library

Globe provides a digital, global foundation for building an evaluation of the hydrocarbon potential of any area of the world



ERCL (now part of the getech Group of Companies) has established itself as one of the leading integrated consultancy businesses within the industry



Government and NOC Support



Institute of National Petroleum (INP) in Mozambique.

- Advisory services, projects, technical support and training



Empresa Nacional de Hidrocarbonetos (ENH) de Mocambique

- Advisory services, projects, technical support and training



Ministry of Energy and Water - Lebanon

- Advisory services and technical support



Petroleum Administration - Lebanon

- Advisory services and technical support

Government and NOC Support



Honduras

- Advisory services



Equatorial Guinea

- Advisory services and technical support



Namibia

- Advisory services / Database / technical support



Palestine

صندوق الاستثمار الفلسطيني
PALESTINE INVESTMENT FUND

- Advisory services / Database / technical support



Agência Nacional do Petróleo (ANP) - São Tomé e Príncipe

- Advisory services, technical support and training

Licensing Rounds – Working with Governments

Licensing Rounds assisting Governments and NOC's to deliver !

- The Timeline
- Preparation & Building the Team
- Key License Round Steps (Legal – Financial - Technical – QHSE)
- Bid Evaluation
- Reporting & Transparency

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The Timelines

Several different timelines that need to be considered:

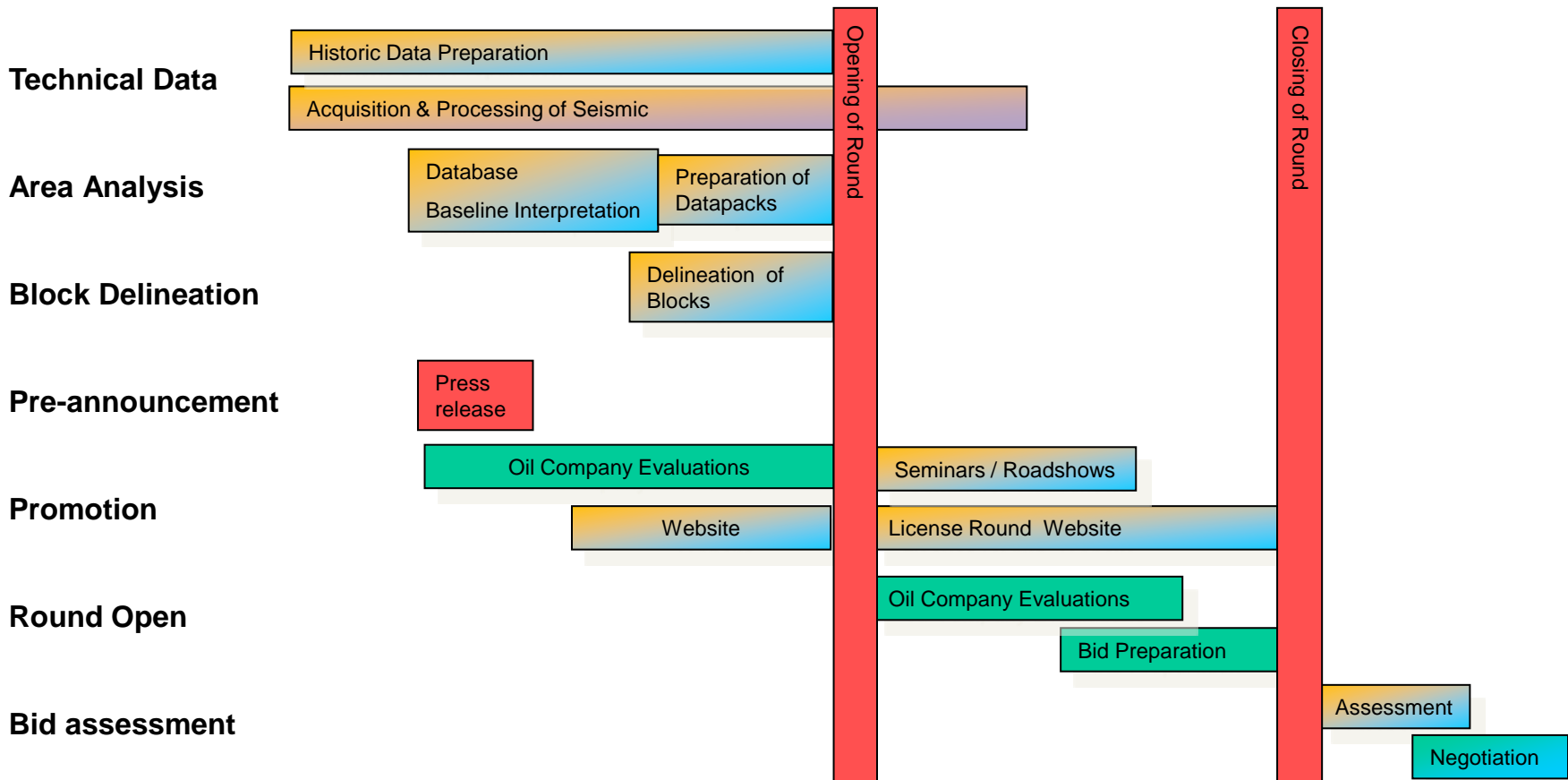
- The Government ~ 5 Years +
- Ministry / National Oil Company > 5 Years +
- License Round ~ 1.8 Years
- The Multi-Client Data Provider > 5 Years +
- The Oil Company (License Round) ~ 1 – 8 – 30 Years
- The Press > 1 Day (but every day)

Note: Example Timelines

Licence Round Schedule

Work by Gov	Work by ERCL	Work by Oil Co	Multi Client Co.
-------------	--------------	----------------	------------------

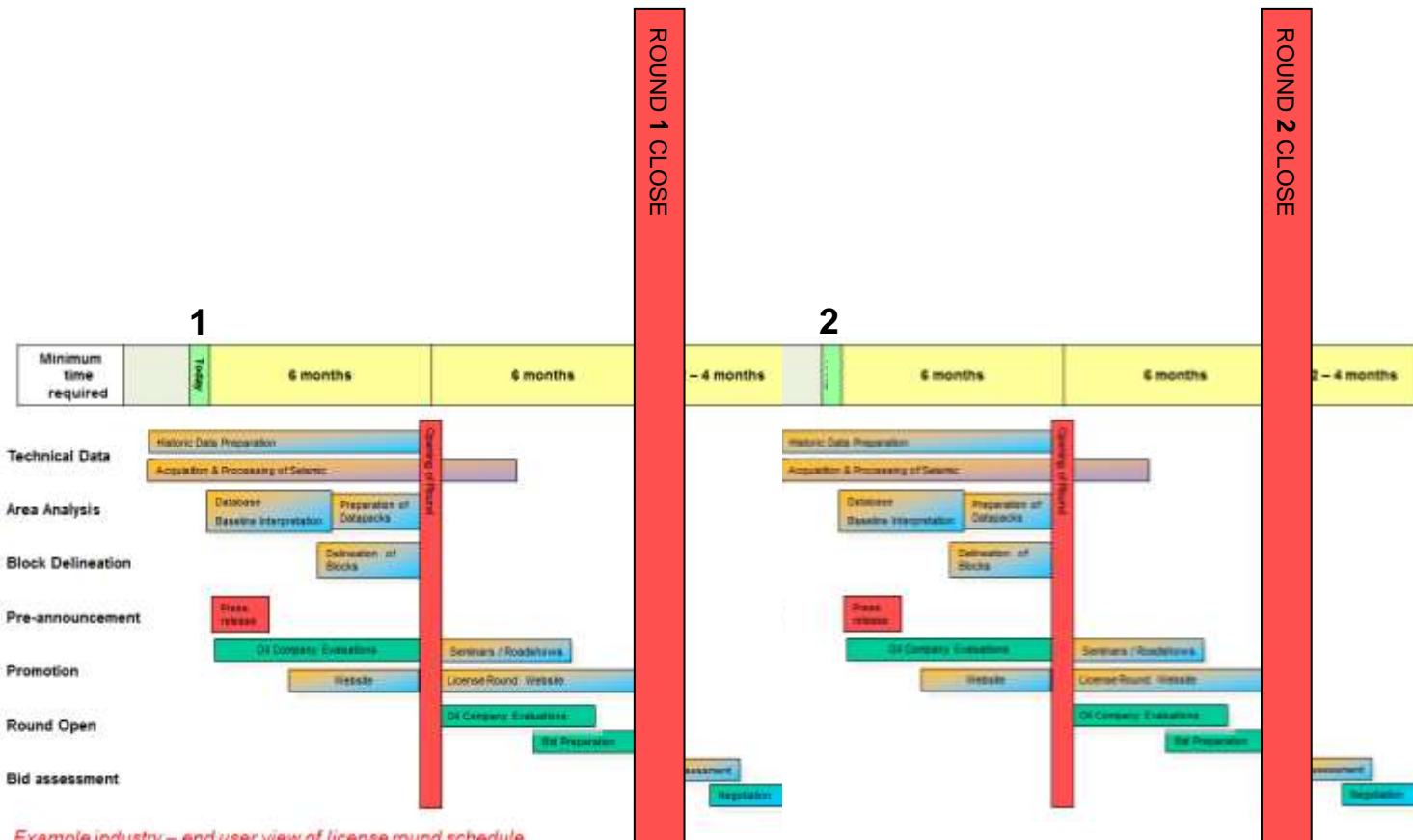
Minimum time required	Today	Typically 9 to 18 Months		
		6 months	6 months	2 – 4 months



Example industry – end user view of license round schedule

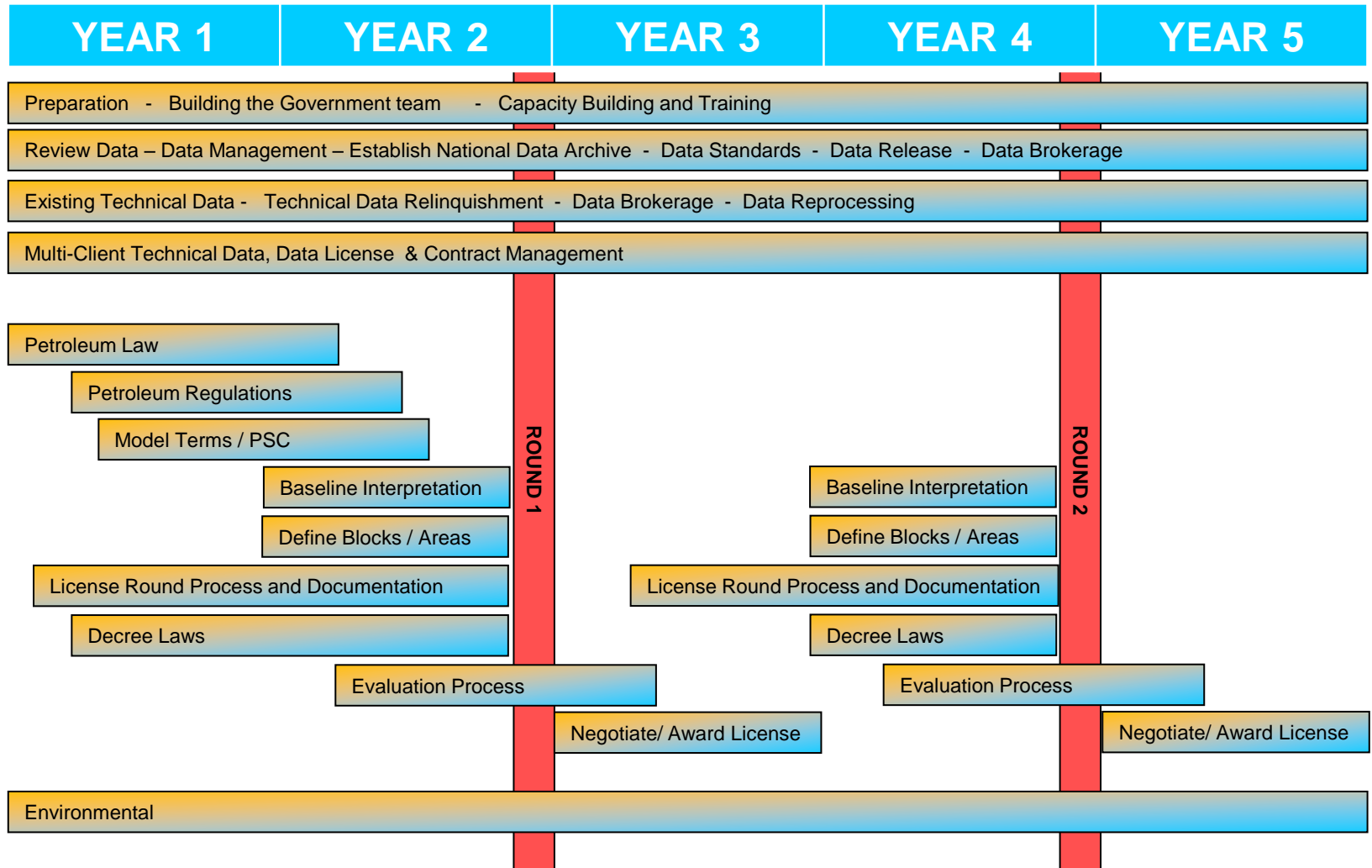


Government Process Highlights – 5 Year Cycle



Example industry – end user view of license round schedule

Government Process Highlights – 5 Year Cycle

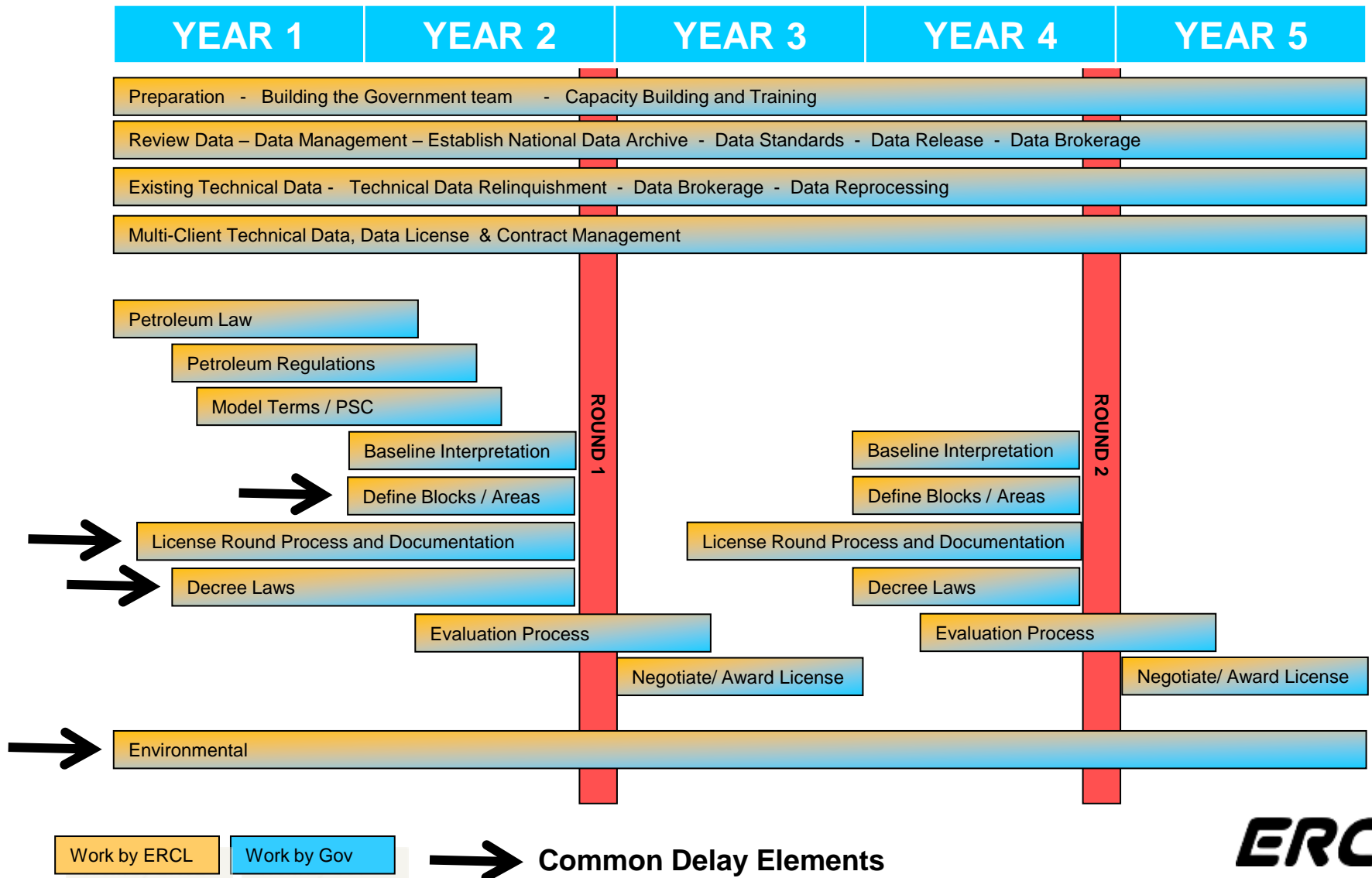


Work by ERCL

Work by Gov



Government Process Highlights – 5 Year Cycle



Common Delaying Elements

- **Block / Area Definition**
 - Size
 - Geology / Prospectivity
 - Politics
- **License Round Process and Documentation**
 - Timing
 - Bidding Requirements
 - Bonuses (Signature, Production)
 - Economic Model
- **Law / Decree Laws**
 - Approval Process (length of time)
- **Environmental**
 - Under estimated the importance and emerging requirements

Licensing Rounds – Working with Governments

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- Key License Round Steps (Legal – Financial - Technical – QHSE)
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- Reporting & Transparency

The Government Team(s)

- **Core Team** - typically 4/5 people, plus lead advisor (ERCL?)

- **Wider Team** – typically greater than 20 people

Ministries / Departments

- **Petroleum / Geoscience / Energy**

- Legal
- Technical

- **Geologic Survey / Mining**

- **Finance**

- Economics

- **Environmental**

- **Ministerial Advisory**

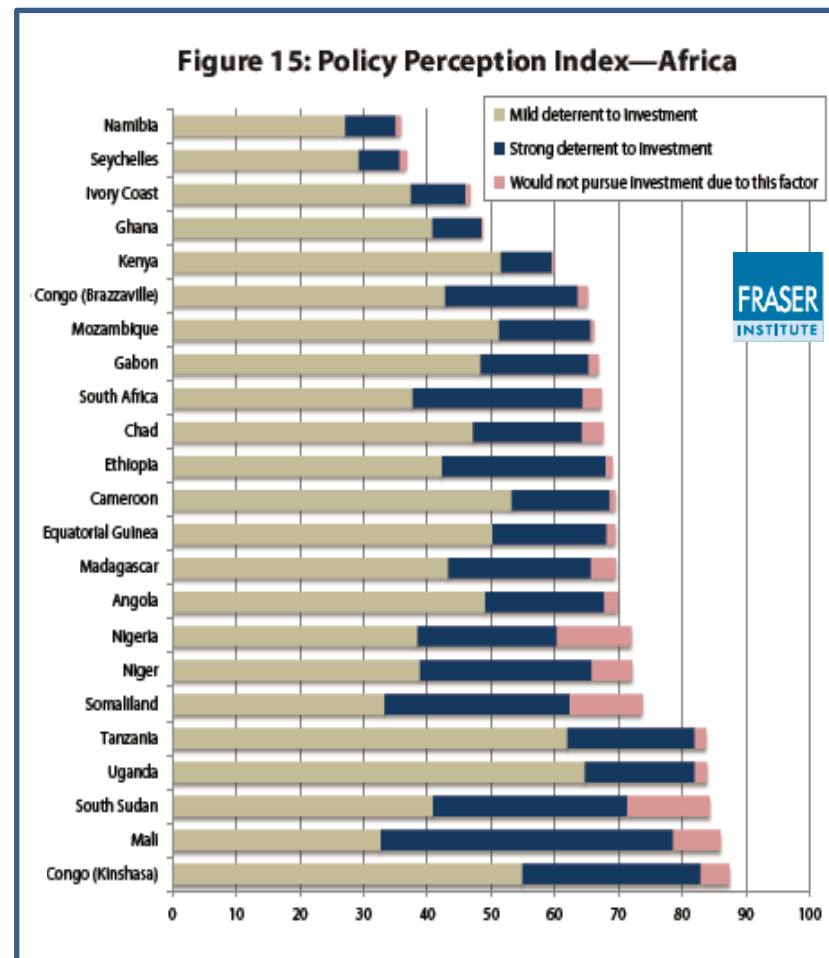
- **Transparency and Compliance**

- **Consultants**

- often externally funded – NORAD, US Aid, ADB, EEC, World bank etc.

Example Licence Round Objectives

- Early production
- Which Areas Onshore v Offshore?
- Amount of acreage to be licensed?
- How many Areas / Blocks?
- Maximise work programmes?
- Credible Operators?
- Signature Bonuses v Work Program?
- Compete with other License Rounds
- Competitive Terms



Competitive Bidding

Increase both Work Programmes bid and Financials offered

Example Licence Round Objectives

- **Companies**
 - Gain at least 3 large operators with substantial & appropriate work programmes
 - Gain 2 medium / smaller operators with appropriate work programmes
- **Areas**
 - Review previous
 - Size of blocks / areas
 - Need to encourage bids and promote maximum exploration of whole area
 - Need to attract credible Operators
 - Should all available areas or only certain areas to be licenced
 - Offer a range of plays to attract a variety of companies
 - Need to encourage competition and meet demand

Building the team

- Recruitment
- Capacity Building
- Training
- Role & Responsibilities
- Team Building



Need to think long term!

Time span 3 year – 5 year – 7 year plan

Capacity Building Recruitment & Training

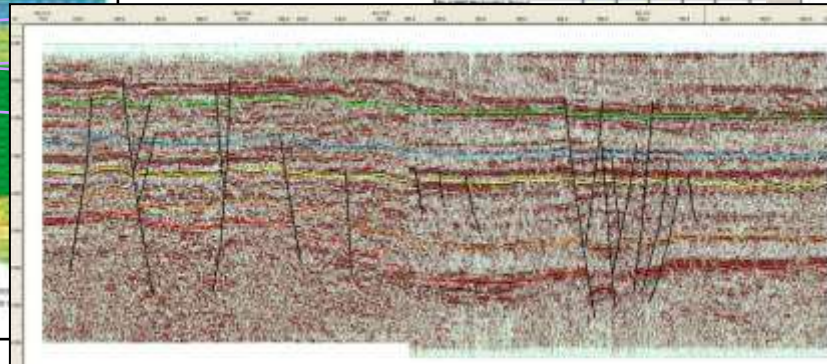
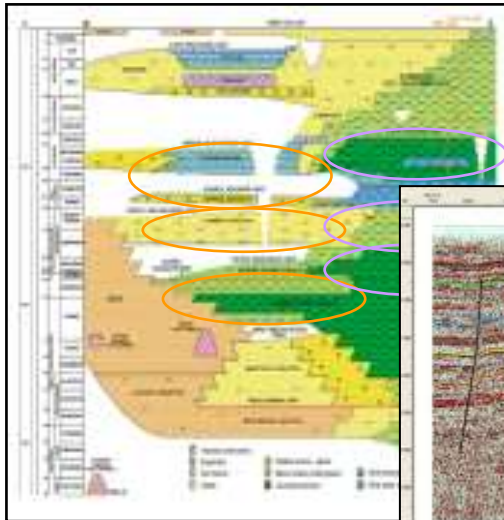
- 2009 10 Geology Graduates Recruited
- 2009 6 Placed in Brazilian University for 1 year
- 2010 7 work on 10 month project with ERCL
- 2011 1 attends MSc in London (Imperial College)
- 1 year, graduates with merit
 - ERCL Support Application – Commonwealth Grant
- 2012 Industry Placements
- 4 on placement with Anadarko in Houston
 - 4 on placement with ENI in Milan
 - 1 Died (Malaria)
- 2012 6 New Graduates Recruited
- 2013 2 New Graduates Recruited
- 2014 4 New Graduates Recruited



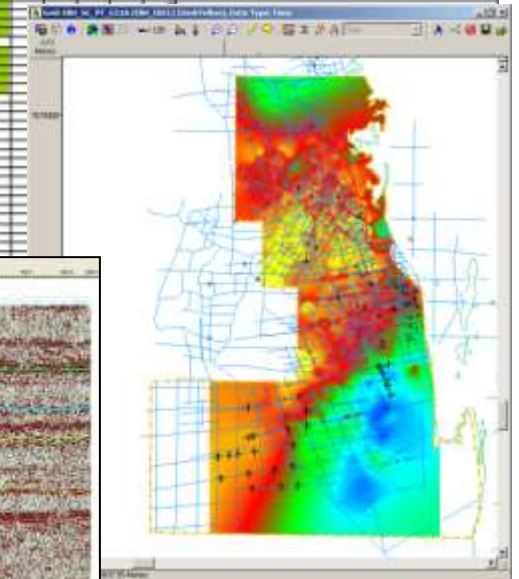
Capacity Building Project

Work Objectives

To develop internal capacity to improve Geological and Geophysical analysis, processing and interpretation of seismic and well data to best assess the commerciality of wells, project prioritization, and develop operator expertise



A detailed well log spreadsheet with multiple columns and rows. It includes a header with the ENH and ERCL logos. The data is color-coded, with green being the most prominent color, and other colors like blue, yellow, and red used for different layers or data points.



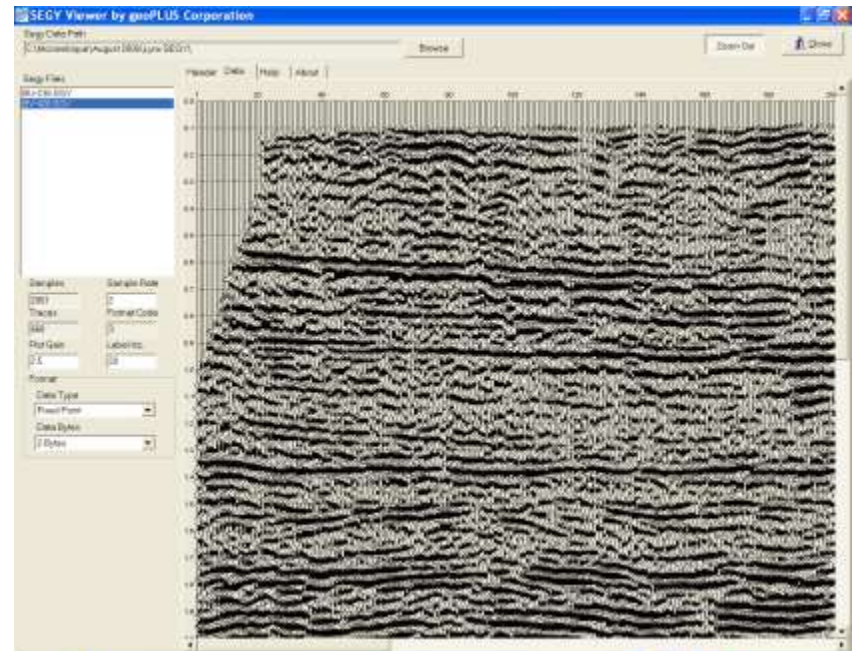
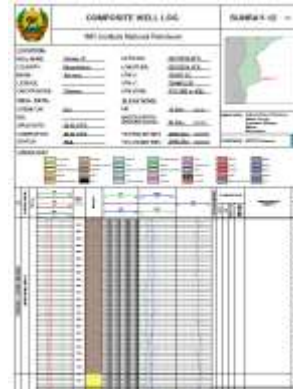
Building the Department / Ministry

- Resources
 - People
 - Financial
 - Legal
 - Technical
- Policy & Procedures
- Technology
 - Hardware
 - Software
- Standards
 - Data Licensing
 - Data Release
- Data
 - Reports
 - Seismic Data
 - Field Data, Processed Data
 - Well Data
 - Digital, Core etc.
 - Workstation Projects
 - Interpretation, Kingdom, Petrel,

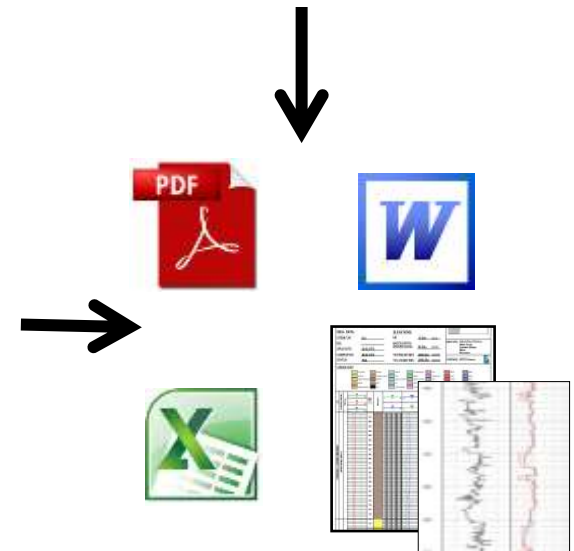


From Paper to Digital

- Wells
 - Digitise Old Well Logs
 - LAS Data Tapes
 - New Well Composites
- Seismic
 - Digital Navigation
 - SEG Y online database
 - Processing enhancement
 - Scan Paper Seismic
- Workstation Projects
 - Petrel Projects
 - Kingdom Projects
 - IP Projects
 - GIS Projects



Reality - getting the data ready can be challenging!

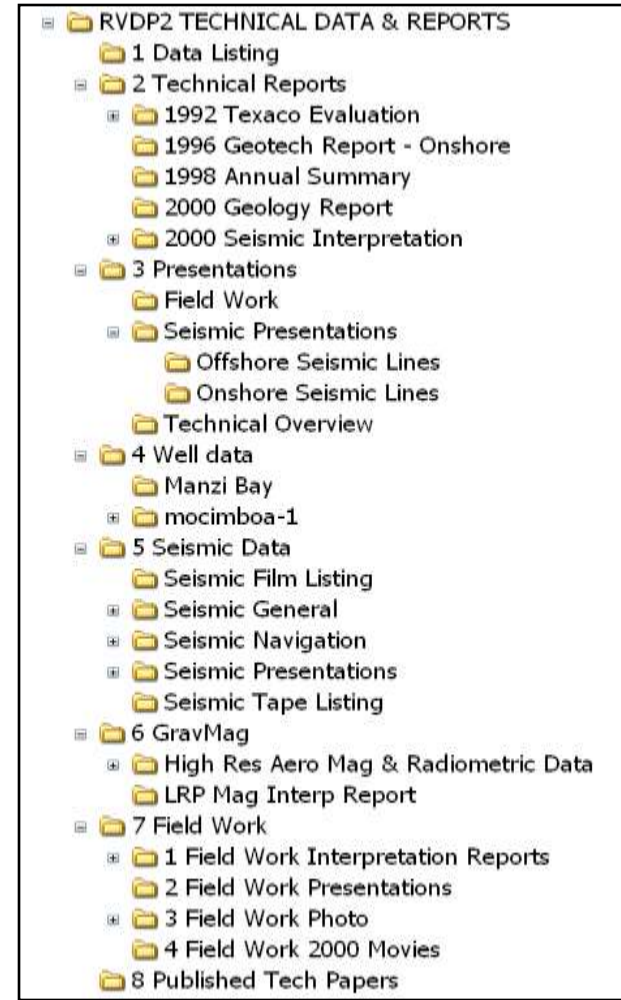


Building the “Data-room”


Data Packages

- Index
- Technical Reports (new digital library)
- Presentations
- GIS (Geographic Information System)
- Well Data
- Seismic Data
- Potential Field Data (Grav - Mag)
- Satellite Data
- Field Work

- Workstation Projects



Added Value Products- GIS Enabled Reports

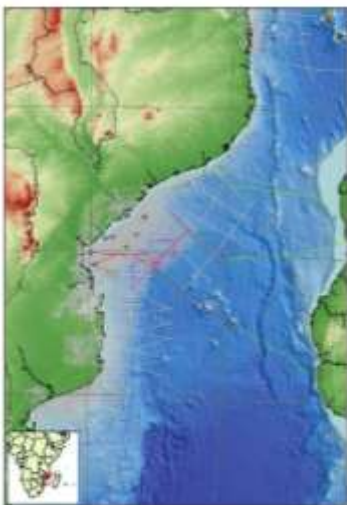


MOZAMBIQUE GIS Enabled Reports

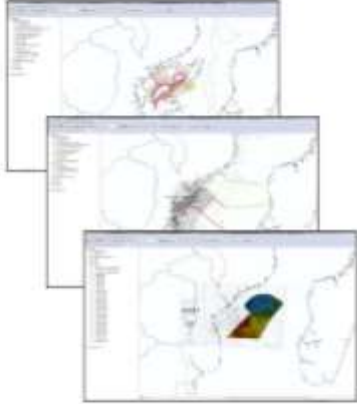
GIS Enabled Elf Zambezi '2000' Report

Elf Zambezi Report, available in hardcopy or PDF, is a geophysical interpretation and petroleum evaluation report of previously held acreage in the Zambezi delta. It is primarily based on 2D seismic data that was shot in 2000 by Elf but it also encompasses other 2D surveys.

GIS Project is based on the original report and includes up-to-date culture data from ERCL's internal database. Figures and enclosures from the report have been georeferenced and key information such as regional geoseismic profiles and structural elements have all been digitized. The project also includes hyperlinks for key wells in the delta and also geoseismic profiles all of which have been abstracted from the original report.





Deliverables include an ArcReader project which does not require a license of ArcGIS and runs off ERCL's free ArcReader software. This project allows you to view and print maps which you can custom build to your needs. It will include all the shapefiles and raster data which can also be imported into interpretation softwares. If required, ERCL can also produce A0 posters for display or presentation purposes based on your requests.



Data must be licensed from INP prior to purchase

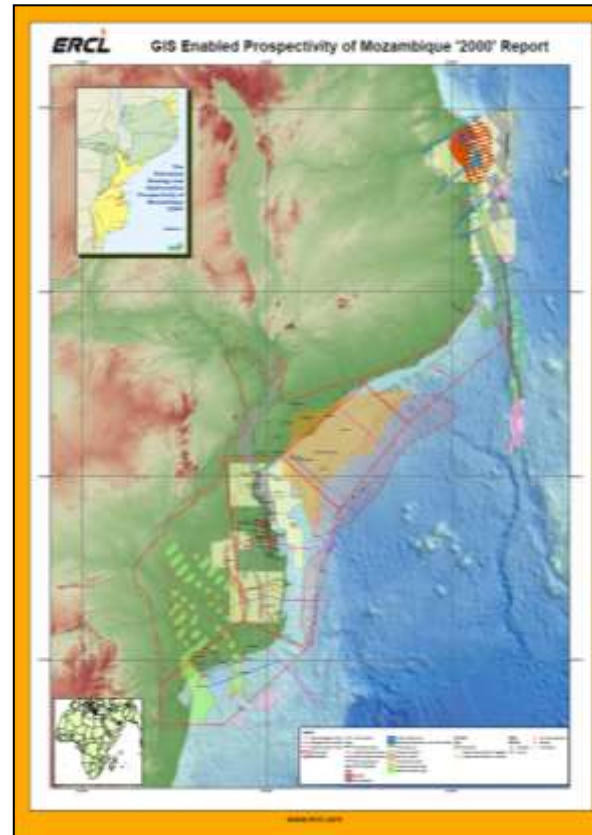
For more information about pricing and availability of the Mozambique Multiclient Projects please contact Hsu Edwards on:
email: info@ercl.com
tel: +44 1481 578117



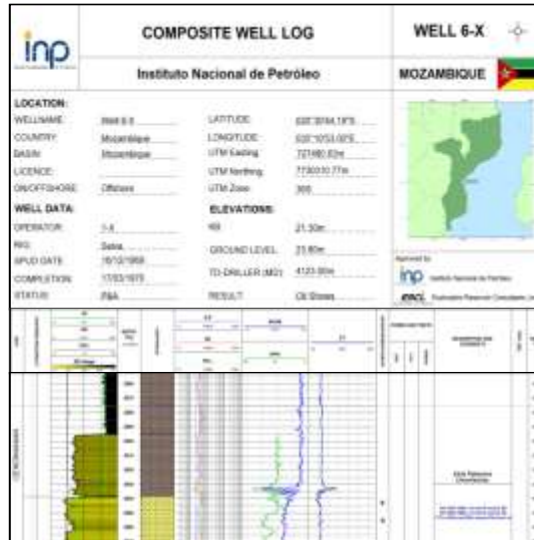
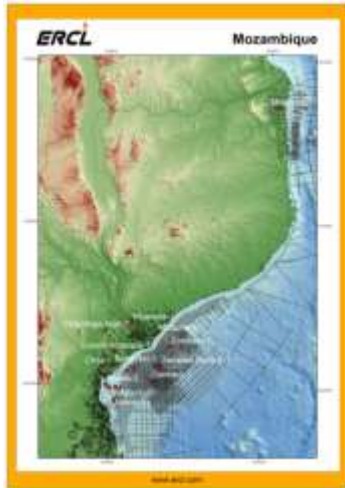
Exploration Resources Consultants Ltd.
Dragon Court, 27 Dutton Road
Middlesbrough, Cleveland, TS6 1AT, UK
www.ercl.com | info@ercl.com

GIS projects

- ECL/ ENH 2000 Report
- Elf TEA Report



Added Value Products- Well project



- Well composites
- Petrophysics
- Qc'd LAS/LIS
- Petrophysical reports for Key wells ZDE-1 and Nemo- 1x

ERCL MOZAMBIQUE Well Project - IP Project

Mozambique Well Project

Well Project is a database containing 10 well logs for evaluation Mozambique basin coverage. The Well Project is built from the logs available using the IP Project. The available products are:

- Interactive Petrophysics (IP) Project
- 1D petrophysics
- 1D petrophysics including Petrophysical properties
- IP Project data
- Core average properties reports of Project activities

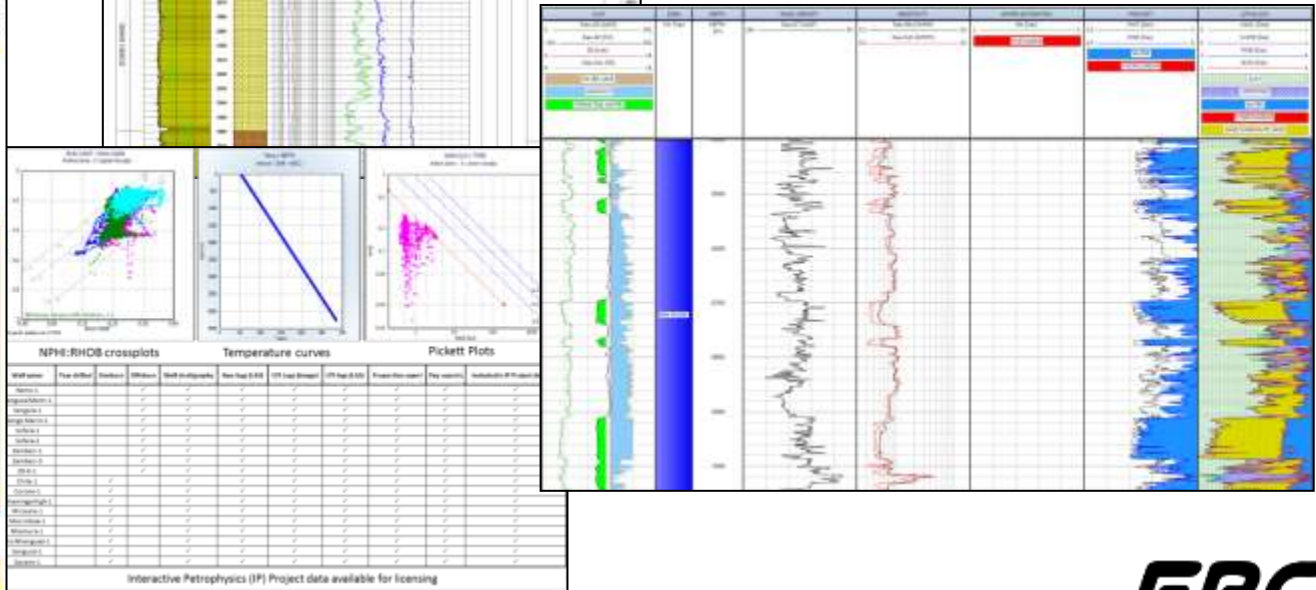
The Well Project is available over the well logs in the format from 6X.

Mozambique Well Project

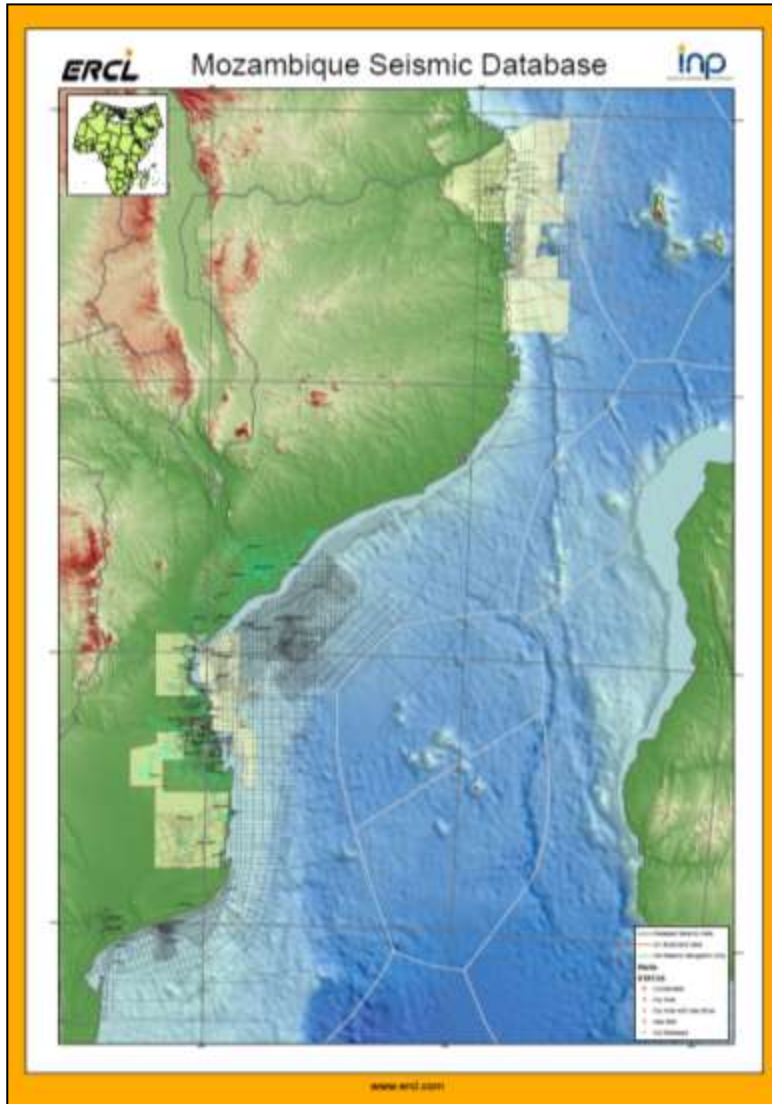
- IP Project
- Well Log Project

Table of formation resistivity logs

Sample Well Database



Added Value Products- Seismic Project



- Qc'd seismic SEGY in WGS 84 36/37S
- Workstation ready projects for Kingdom, Petrel, Geographix, DUG
- Well Synthetic ties and new time depth charts

ERCL MOZAMBIQUE Seismic Projects

Mozambique Multi-Client Products

Seismic Projects will provide a collection of quality controlled 3D Seismic Data (in 3D/300) delivered in WGS 84 36/37S, Additional 3000 gain controlled and filtered data for 3D/300 and along with workstation projects in Kingdom, Petrel, DUG, Geographix and 3D/300 format (that can be 3D/300 converted).

3D/300 Seismic Data Packages

Seismic Data

- Comprehensive quality controlled suite of 3D/300/3000 Data From Reserve Basin Seismic Survey delivered in WGS 84 36/37S 3000 gain
- 3D/300/3000 gain
- 3D/300/3000 gain controlled and filtered 3D/300/3000 Data From Reserve Basin Seismic Survey
- 3D/300/3000 gain
- Work station projects of Reserve 3000 package available in Petrel, Kingdom, DUG and Geographix

Seismic Data

- Comprehensive quality controlled suite of 3D/300/3000 Data From Reserve Basin Seismic Survey delivered in WGS 84 36/37S 3000 gain
- 3D/300/3000 gain
- 3D/300/3000 gain controlled and filtered 3D/300/3000 Data From Reserve Basin Seismic Survey
- 3D/300/3000 gain
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Mozambique/300 Projects

- 3D/300/3000
- 3D/300/3000 (Open Order Seismic)
- Petrel
- Geographix/3000



For more information about pricing and availability of the Mozambique/3000 Projects please contact New Zealand office:

email: info@ercl.com
tel: +64 274 675517

inp **ERCL**

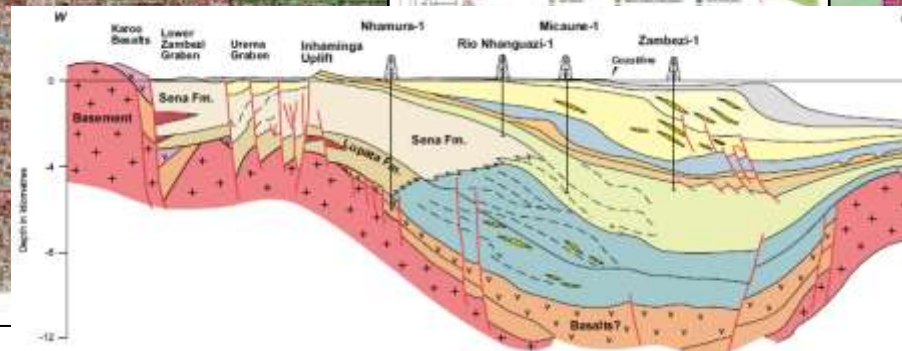
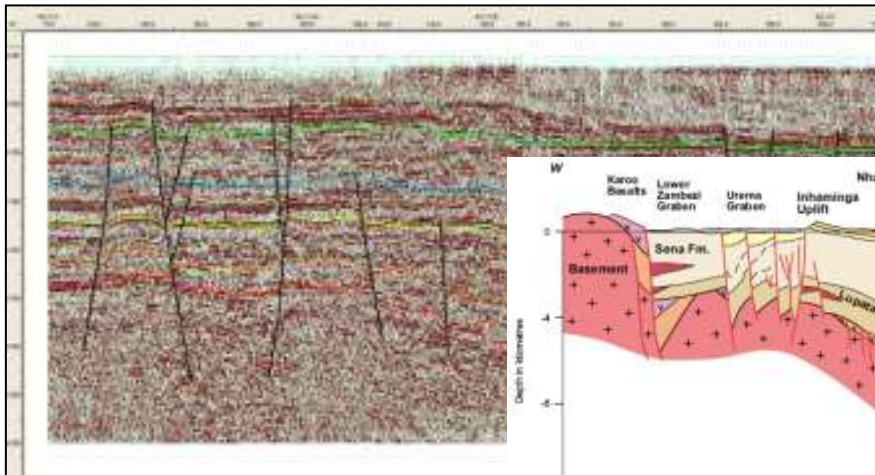
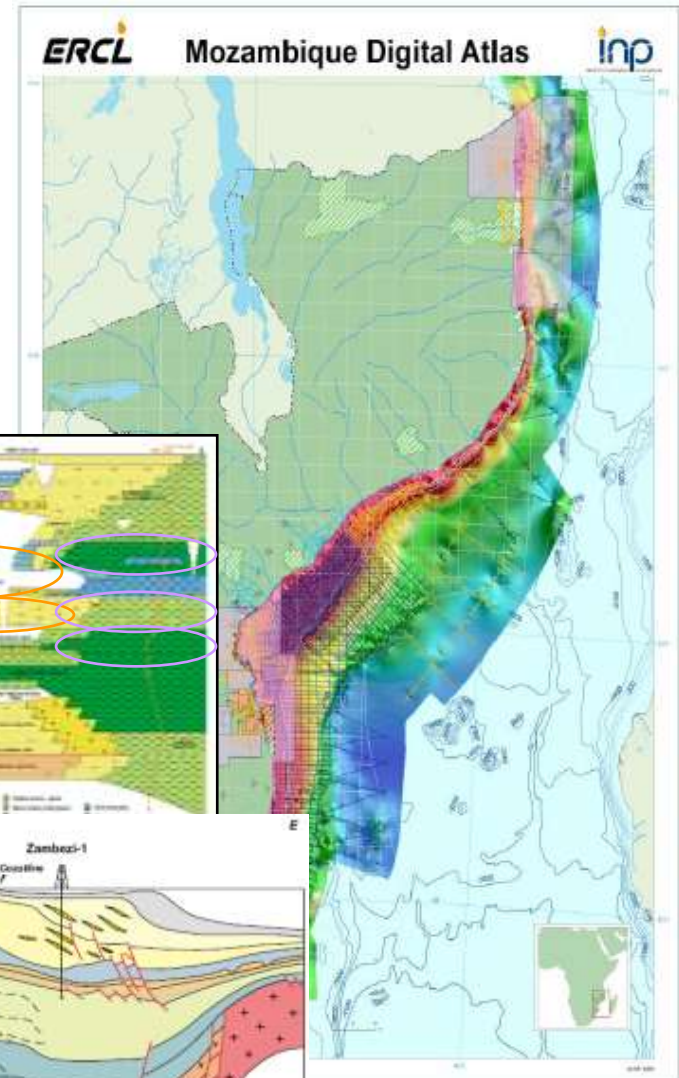
Exploration Services International Ltd
1000 Wellington Road, Wellington, New Zealand
Tel: +64 274 675517



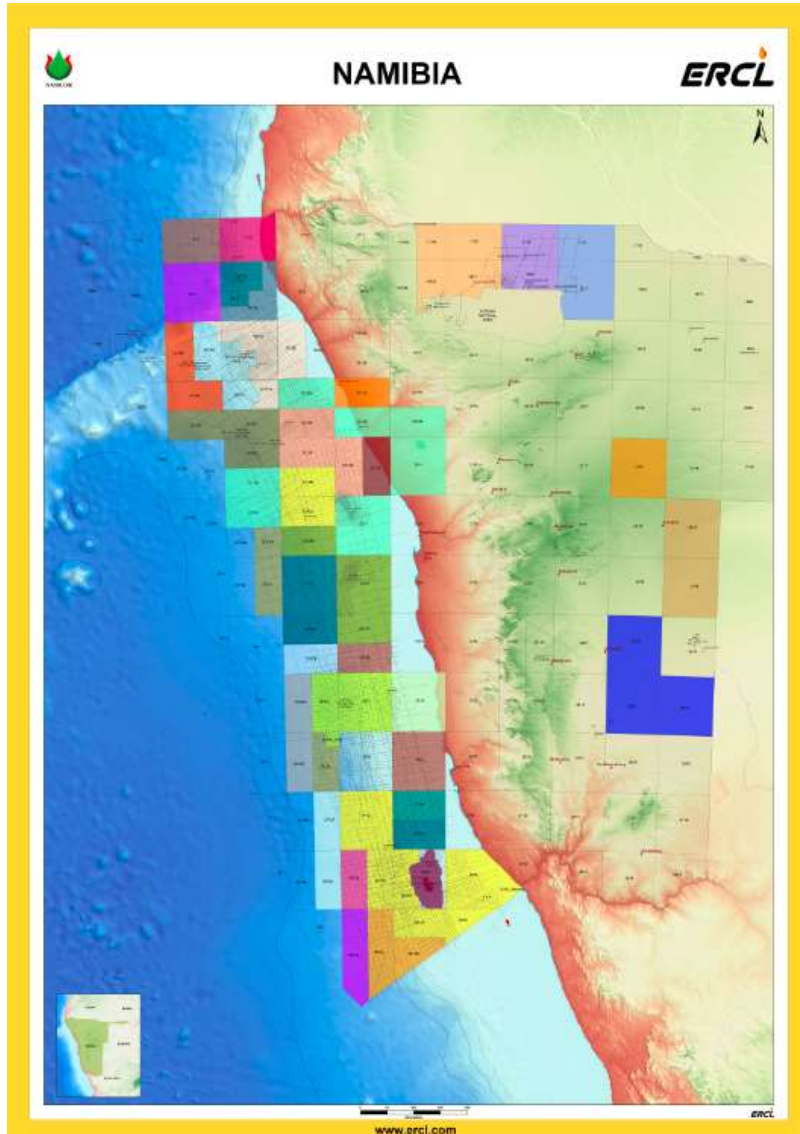
Multi Client Project

Mozambique Digital Atlas

- A regional framework of Mozambique
 - Wells, Headers, Formation Tops,
 - Seismic Stratigraphic Framework
 - Key Horizons
- Industry standard formats
 - GIS
 - SMT, Petrel, Landmark
- In collaboration with INP



Multi-Client Seismic



Coordination and Management

Reprocessing and New Data

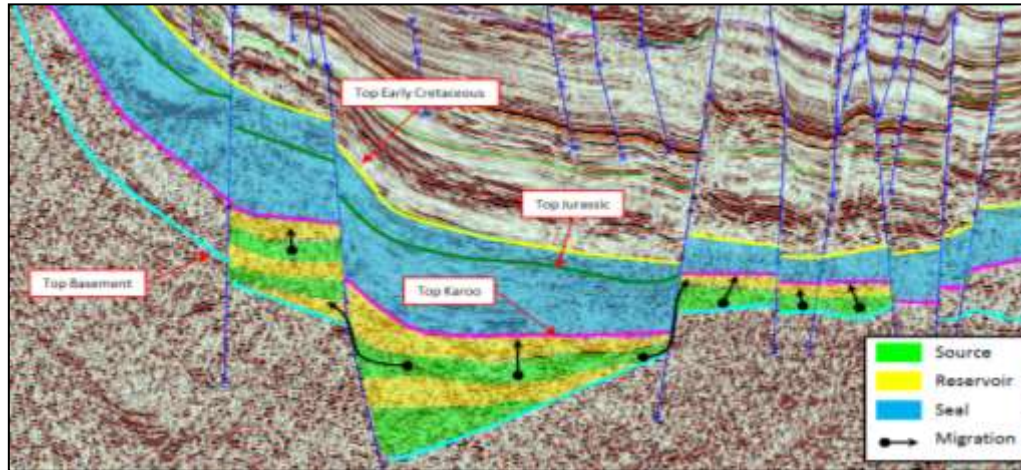
- 2D Seismic programs
- 3D Seismic programs

Interpretation Training

Delivery of Data to Government

Input to National Data Archive

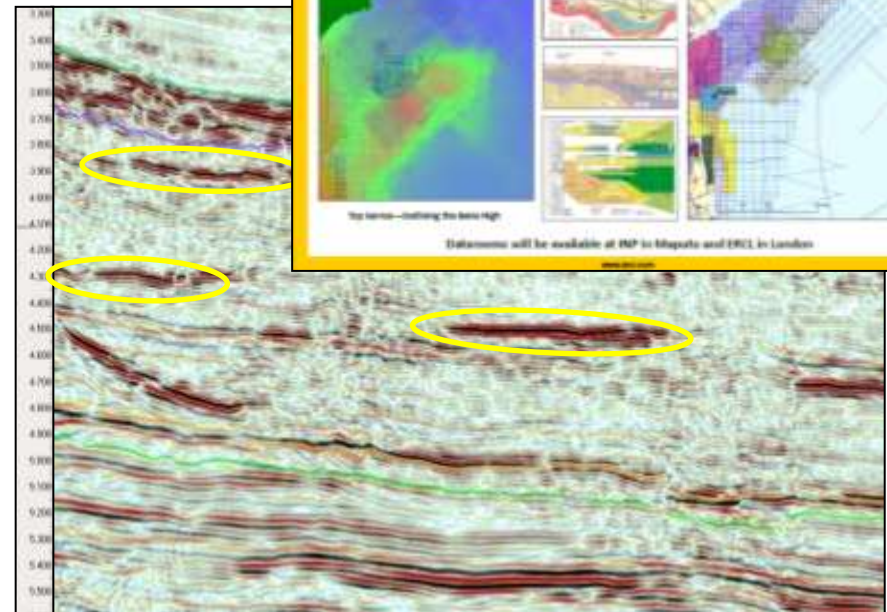
Baseline Interpretation



Definition of potential play concepts:

- Interpretation of petroleum elements (Source, Reservoir, Seal);
- Structural and stratigraphic traps;
- Possible migration pathways.

The baseline interpretation helps determine the prospectivity and the minimum work program parameters





Mozambique
Rovuma and Zambezi



Deep Water Rovuma – 2,400 km of new “East Africa BasinSpan Seismic”



Zambezi Basin (including Beira High)



Statements will be available at INP in Maputo and ERCL in London

Field Trips and Promotion



ONSHORE

Seven wells have been drilled onshore between 1947 and 1967. Bitumen and gas shows had been observed. Further geophysical surveys will be performed by Spectrum and Neos Geosolutions in the near future in order to assess the hydrocarbon prospectivity onshore. Spectrum will conduct a 2D seismic acquisition program up to 500 linear km with the objective of linking the offshore to the onshore and to better understand the geology in the vicinity of the drilled wells onshore. Neos Geosolutions typically works with multi-measurement interpretation (MMI) involving the integration of geological, geophysical, geochemical and petrophysical datasets. Typical geophysical measurements that will be performed using airborne acquisition surveying of large areas include magnetic, gravitational, radiometric and hyperspectral surveying. By the end of the year (Q4), a full comprehensive geophysical package will be available.



License Round Website – Ease of Operation

The screenshot shows a web browser window displaying the website for the Instituto Nacional de Petróleo (INP) of Mozambique. The browser's address bar shows the URL <http://www.inp-mz.com/>. The website header features the INP logo on the left and the text "The Instituto Nacional de Petróleo (INP) MOZAMBIQUE" on the right, accompanied by the Mozambican flag. A navigation menu on the left includes links for Home, Press Releases, Application Documents, and Contact Us. The main content area is titled "Mozambique 5th Licensing Round" and features a sub-heading "New closing Date 30th July 2015". The text below the heading states: "The Institute of National Petroleum (INP), on behalf of the Government of the Republic of Mozambique, is pleased to advise that a competitive bidding round to explore for hydrocarbons in the offshore Rovuma, offshore Zambezi and Angoche and onshore around the Pande-Temane concession and Palmeira areas which was announced in London on 23rd October 2014." A second paragraph follows: "A total of fifteen blocks will be included in the 5th License Round, comprising some 76.800 sq kms of acreage will be included in the round. The 5th Licensing Round is now scheduled to close on Thursday 30th July 2015 (see Press release)." To the right of the text is a map of Mozambique with several colored blocks (red, orange, green, blue) indicating the areas for the licensing round. Below the map is a link to "The License Round Presentation – Updated". At the bottom of the page, there is contact information for the National Petroleum Institute, including the email info@inp-mz.com and info@inp.gov.mz, and the telephone number +258 21 320 933. The footer also includes the copyright notice "© ERCL 2015".

Home

Press Releases

Application Documents

Contact Us

Latest Press Release

MOZAMBIQUE FIFTH LICENSING ROUND APPLICATION DEADLINE EXTENSION TO 30th JULY 2015. [Read more](#)

Please also visit www.inp.gov.mz

Mozambique 5th Licensing Round

New closing Date 30th July 2015

The Institute of National Petroleum (INP), on behalf of the Government of the Republic of Mozambique, is pleased to advise that a competitive bidding round to explore for hydrocarbons in the offshore Rovuma, offshore Zambezi and Angoche and onshore around the Pande-Temane concession and Palmeira areas which was announced in London on 23rd October 2014.

A total of fifteen blocks will be included in the 5th License Round, comprising some 76.800 sq kms of acreage will be included in the round. The 5th Licensing Round is now scheduled to close on Thursday 30th July 2015 (see Press release).

Further details of the 5th License Round, including Application Guidelines, the Model Contract, the Petroleum Law, Petroleum Regulations, Bidding Parameters, Technical Data and Data Packages and Data Room access, will be posted on the following websites following the Announcement: www.inp-mz.com and www.inp.gov.mz.

NATIONAL PETROLEUM INSTITUTE
Email: info@inp-mz.com
Email: info@inp.gov.mz

The License Round Presentation – Updated

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info@inp-mz.com
Tel: +258 21 320 933

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- **Key License Round Steps**
(Generic Structure for Legal – Financial - Technical – QHSE)
- Bid Evaluation
- Reporting & Transparency

Key License Round Steps

Application Guidelines

Produce a guideline of how the license process is intended to work

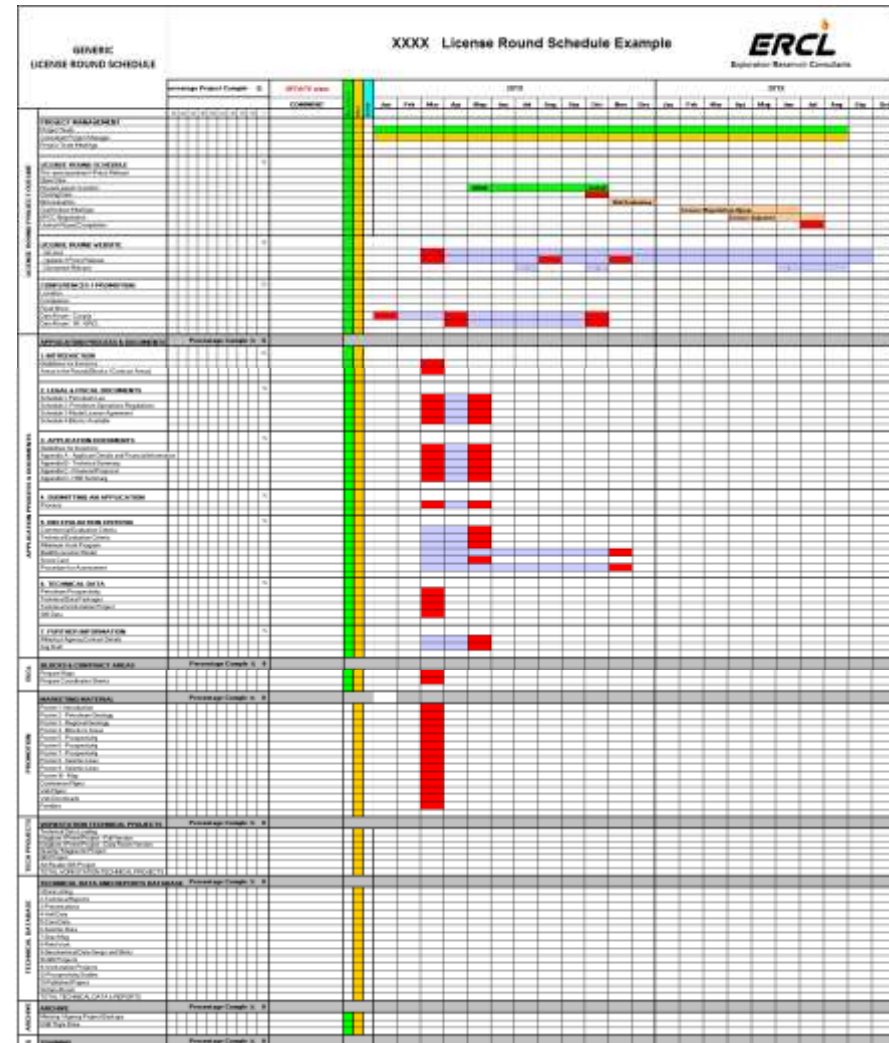
Application Guidelines

CONTENTS

1. INTRODUCTION
2. THE COMPETENT AUTHORITIES
3. LEGAL & FISCAL DOCUMENTS
4. APPLICATION REQUIREMENTS & FEES
5. APPLICATION DOCUMENT
6. SUBMITTING AN APPLICATION
7. BID EVALUATION CRITERIA
8. PROCEDURE FOR ASSESSMENT
9. TECHNICAL DATA AVAILABILITY & ACCESS
10. FURTHER INFORMATION

Key License Round Steps - The Schedule / Project Plan

- Guideline
- Baseline Interpretation
- Blocks / Contract Areas
- Legal & Fiscal
 - Comparison
 - Review / update economic model
- Application Documents
- Bid Evaluation
 - Commercial
 - Technical
 - QHSE
- Technical data
- Promotion
- Training / Capacity Building



Legal and Fiscal

- Complete the Legal and Fiscal documentation as early as possible.
- Keep the Petroleum Law as generic as possible.
- Use Decree Law or License Round documentation to define
 - Relinquishment
 - Bonus
 - Blocks / Areas
 - Need to be in place before the License Round is announced
- Provide English Documentation / Official/Unofficial Translation

Example Decree Laws

1. Block Delineation
2. State Participation
3. Strategic Environmental Assessment
4. Documentation & Participation for Licensing
5. Petroleum Administration Assignment
6. Reconnaissance Licensing
7. Application Contents & Fees
8. Exploration & Production Phase
9. Relinquishment
10. Environmental Impact Assessment (EIA)
11. Area Fees
12. Royalty
13. Petroleum Profit distribution & Sharing
14. Mortgaging
15. Petroleum Register
16. Risk Assessment and Safety
17. Management & Company Headquarters

GENERIC APPLICATION DOCUMENTS STRUCTURE

Appendix A - Applicant Details and Financial/Legal Information

Appendix B - Technical Application Summary

Appendix C - Financial Proposal

Appendix D - Health Safety Environment



Applicant Details and Financial / Legal Information

APPENDIX A

Appendix A contains financial information about the applicant and is required to support the license

Where there are two or more companies submitting a combined or joint application, the Government require the Appendix A completed by each applicant separately.

Companies are required to confirm that they are not in default of any obligations to the State.

Technical Application Summary

APPENDIX B

The technical submission shall contain the information requested on the following pages for each of the areas applied for.

Attached to the technical submission the applicant is requested to present brief and relevant documentation for each area of G&G studies and analyses focusing on aspects that are considered critical for an evaluation of the prospectivity of the area, such as:

- a brief and focused petroleum geological analysis, describing the prospectivity in the area applied for, critical factors, etc.
- a brief description of the seismic interpretation, well ties, etc., including attached interpreted seismic sections
- time and depth structure maps for prospective horizons, showing all identified prospects and leads
- brief description of the prospect evaluation
- description of the proposed obligatory work program and exploration strategy

The technical submission should also be provided on a separate USB or CDROM which should have adequate resolution of all the figures in order to show relevant details.

Technical Application Summary Sheets

INP Instituto Nacional de Petróleo

B2. INDIVIDUAL PROSPECT / LEAD EVALUATION SHEETS
 As much information as possible should be filled in (leads are not expected to have a complete volume and parameter data set). The map with prospect/lead outline must have coordinates.

Project Lead name		Reference to original lead/business coverage				
Project / Lead	Structural element	Reported by (company or report reference / date)	Well depth (m)			
Flag	Area # Block(s)		Ground level (m) (a.s.l.)			
CALCULATED HYDROCARBON VOLUMES						
Oil / Oil eqs	GEOLOGICALLY IN PLACE			RECOVERABLE		
	Low	Base	High	Low	Base	High
Oil Bar						
Condensate / Oil Equivalent						
Gas						
Comments:	Calculated Volumes					
PROSPECT RISK ASSESSMENT						
Trap		Reservoir		Seal		Result
Probability of structure	Probability of seal	Porosity of Trap/Rock	Probability of Reservoir Quality	Probability of Seals	Probability of stability storage	Final probability of success
Comments:						
Project Risk Assessment						
TRAP TYPE, RESERVOIR ROCK, SOURCE ROCK, CAP ROCK (SEAL)						
Type of trap (structural, stratigraphic, etc)		Reservoir level (Chronostrat. Age)		Seal level (Lithostrat. Age)		
Source Rock (Chronostrat. /	Source Rock (Lithostrat. Age)	Seal (Chronostratigraphy Age)	Seal (Lithostratigraphy / Facies)			
Comments:						
PARAMETERS USED IN VOLUME CALCULATIONS						
	Low	Base case (most likely value)			High	
Depth to top of prospect (m) (within ground level / sea level)						
Depth to base of prospect (m) (within contour)						
SB thickness to top of prospect (m)						
SB thickness to base of prospect (m)						
Area of prospect (km ²)						
Block rock volume (10 ⁶ m ³)						
Height above volume to prospect (m)						
Reservoir thickness (m)						
Net / Gross (NTG)						
Porosity (%)						
Water Saturation (Sw)						
Formation Volume Factor (FVF)	Oil					
	Gas					
	Do					
Recovery factor						
Oil O/G Ratio (O/G), Sw gas (Sw) / (Sw ^g)						
DNK oil (DNK) / (Sw ^g)						

APPENDIX B – Technical Submissions

Page 4 of 10

INP Instituto Nacional de Petróleo

Summary of proposed work program:
 (Please complete the appropriate items and provide a general cost)

First Exploration Period:	Other:	2D Seismic Acquisition:	3D Seismic Acquisition:	Drill Expl. Well:
	Size: _____	Size: _____	Size: _____	Depth: _____
Years	USD: _____	USD: _____	USD: _____	USD: _____
	Target: _____			
Second Extension Period:	Other:	2D Seismic Acquisition:	3D Seismic Acquisition:	Drill Expl. Well:
	Size: _____	Size: _____	Size: _____	Depth: _____
Years	USD: _____	USD: _____	USD: _____	USD: _____
	Target: _____			
Third Extension Period:	Other:	2D Seismic Acquisition:	3D Seismic Acquisition:	Drill Expl. Well:
	Size: _____	Size: _____	Size: _____	Depth: _____
Years	USD: _____	USD: _____	USD: _____	USD: _____
	Target: _____			

Re-processing and re-interpretation of existing geotechnical data (seismic / well)

	Line Km Within the area applied for	Line Km Within Region
Reprocessing		
New Interpretation		
Other (special studies)		

APPENDIX B – Technical Submissions

Page 9 of 10

Financial Proposal

APPENDIX C

The proposal of the applicant for the obligatory work commitment and minimum expenditure amounts to be incorporated in the standard Bank Guarantee in respect of the Exploration Area (s) specified in the application must be stated.

Definite proposal with respect to all negotiable items as contained in the Model Exploration and Production Concession Contract must be stated, including bonus payments, training, institutional support that may be applicable.



Financial Proposal





APPENDIX C

Appendix C must contain the proposal of the applicant for the exploration work commitment and minimum expenditure in respect of each block(s) applied for as specified in the application.

Definite proposal with respect to all those items that are negotiable items as contained in the PSC must be stated, including, training and local content. Only those items indicated as blanks in the PSC are negotiable.

Tax and Royalty are as stipulated by applicable law and therefore non-negotiable.

 				
PSC COMMERCIAL PROPOSAL SUMMARY				
Applicant Name:				
Block Number Applying for:				
Items	mmboe	US \$ (Million)	%	
Signature Bonus (Ref PSC Clause 2.1)				
Production Bonus (Ref PSC Clause 2.2)				
	Cumulative Production			
	Cumulative Production			
	Cumulative Production			
State Carried Interest (minimum 10%) (Ref PSC Clause 8.1)				
State Carried interest share of Profit Oil (Ref PSC Clause 8.4)				
State Working Interest share of Profit oil (Ref PSC Clause 8.5)				
Training (Ref PSC Clause 14.7)				
	Minimum per year			
	Maximum per year			
Social Projects (Ref PSC Clause 2.5)				
	Confirmed Social Projects			
	Additional Social Projects - Cumulative Production			
	Additional Social Projects - Cumulative Production			
Total Expenditure commitment (ref PSC Clause 7.3)				
	First Phase Exploration Period			
	Second Phase Exploration Period			
	Third Phase Exploration Period			
	TOTAL EXPENDITURE			

C. FINANCIAL PROPOSAL

Key Points

- Training
- Institutional Support
- Social Support
- Carried Interest
- R Factor
- Production Bonus
- Expenditure Commitments

EPCC FINANCIAL PROPOSAL SUMMARY			
Mozambique Third Licensing Round			
Applicant Name:			
		US \$	%
Training			
Institutional Support			
Social Support			
Carried Interest (minimum 10%)			
Cost Petroleum			
Production Share	R <		
R-Factor:	< R <		
Contractor Share	< R <		
	< R <		
Production Bonus payable in US Dollar	At the commence of initial commercial production:		
	When Production from EPCC Area first reach _____ BOE/day average for a month:		
	When Production from EPCC Area first reaches each further tranche of _____ BOE/day average for a month:		
Total Expenditure commitment (US \$ million)	First Exploration Period		
	Second Exploration Period		
	Third Exploration Period		
	Total Expenditure		

Health Safety Environment

APPENDIX D

An applicant should submit details of the Health, Safety and Environment protection company policy and record of the same for the last 3 years.

Note:

Legal requirement and Government objectives are to ensure the success of the systematic effort needed to prevent faults and dangerous situations, incidents and accident or undesired conditions arising or developing, and to limit pollution and injury to persons and damage to equipment, Facilities or property, that will support and maintain a favourable health, environment and safety culture that [must] pervade all levels of the company and its contractors organization as well as every individual activity or establishment.

The Government also recognizes that a favourable health, environment and safety culture is [also] needed to ensure consistent and continuous[al] development and improvement of health, environment and safety.

Appendix D

HSE

Often a Pass or Fail category

Operator

- a. QHSE Policy Statement(s)
- b. Evidence of established and implemented QHSE Management System(s)
- c. QHSE certification(s) according to best international industry practice (e.g., ISO certification 9001, ISO 14001 and/or OHSAS 18001), with copies of certificates approved by the awarding official entities.
- d. A copy of the Quality, Health, Safety and Environment Management System(s) (QHSEMS), or equivalent.
- e. A copy of Corporate Social Responsibility reports or initiatives for the past three (3) years.
- f. Experience as operator in environmentally sensitive areas.
- g. QHSE record of material events for the previous three (3) years including oil spills, site fatalities and injuries, major fires and explosions, mechanical/structural failures, emissions and waste, and main remedial efforts.

Partner / Non-Operator

- a. QHSE Policy Statement(s)
- b. Evidence of established and implemented QHSE Management System(s)
- c. QHSE certification(s) according to best international industry practice (e.g., ISO certification 9001, ISO 14001 and/or OHSAS 18001), with copies of certificates approved by the awarding official entities.

Licensing Rounds – Working with Governments

Licensing Rounds assisting Governments and NOC's to deliver !

- The Timeline
- Preparation & Building the Team
- Key License Round Steps (Legal – Financial - Technical – QHSE)
- **Bid Evaluation**
- Reporting & Transparency

Example Evaluation Process

1. Applications opened and basic information is entered in Master Evaluation Sheet
2. Sequence of the applications for Evaluation (by Area)
3. Evaluation Sheets (Excel) given to each team
4. Initial review - are Applications valid (Fee Payment, meet minimum work program)
5. Initial summary – Review Meeting
6. Commence detailed evaluation of Application – Appendix A – then B & C
7. Provide copy of completed evaluation sheet back to Evaluation Coordinator
8. Evaluation Coordinator sum scores
9. Evaluation Normalisation Review Meeting by AREA
10. Clarification Questions Outlined
11. HSE Evaluation Review Meeting
12. HSE that are unclear or require specialist review – refer to HSE specialist
13. HSE Clarification Questions
14. Clarification Meetings / Bid Presentation or Written Questions
15. Finalisation of Evaluation Team Scores
16. Recommendations for Approval

First Steps

1. Check the Applications are valid

- Have they paid the application Fee ?
- Have they submitted all documents ?
- Do the documents look to be complete / any sections missing ?

Pre-Qualification Option ?

2. Evaluation Appendix A

- Do they meet the defined Company legal / financial requirement criteria ?

3. Evaluation Appendix D

- Do they meet the defined QHSE criteria?

SCORE CARD

Example Pre-Qualification



Lebanon – First License Round

4.0 ANNEX 4 TECHNICAL CRITERIA AND REQUIRED DOCUMENTS AND DISCLOSURES		COMPANY NAME	New Company Name			
		APPLICATION NUMBER	1000			
		RESULT				
An Applicant may seek pre-qualification as a Right Holder – Operator and/or a Right Holder - Non-Operator by satisfying the criteria and presenting the documents and disclosures set forth below.						
4.1	Eligibility Criteria	An Applicant is eligible for such pre-qualification if it is able to demonstrate, to the reasonable satisfaction of the Petroleum Administration:				
		(Yes / No)	Clarification	Notes	Further Action / Audit	Pass / Fail / Pending
		1	Operator: Operatorship of at least one petroleum development in water depths in excess of five hundred (500) meters			
2	Non-Operator: Having established petroleum					
4.2	Technical Information	Value or (Yes / No)	Clarification	Notes	Further Action / Audit	Traffic Light
1	A good faith estimate of the total capital expenditure in activities falling within the definition of "Petroleum Activities" in the Offshore Petroleum Resources Law in each of the last three (3) years.					
2	Number of offshore exploration wells drilled (as operator) in each of the last three (3) years.					
3	Number of offshore wells drilled (as non-operator) in each of the last three (3) years.					
4 A	Number of offshore wells drilled (as operator) in a sub-salt environment (with water depths greater than five hundred (500) meters and less than one thousand (1,000) meters in each of the last three (3) years					
4 B	Number of offshore wells drilled (as operator) in a sub-salt environment (with water depths greater than one thousand (1,000) meters) in each of the last three (3) years.					

Bid Evaluation Criteria Example



6. BID EVALUATION CRITERIA



Technical Evaluation Criteria

- The technical competence and financial strength of the applicant to be able to carry out exploration and production of hydrocarbons within the legal requirements and industry standards.
- The technical database used in making the application.
- The technical evaluation and obligatory work program. Preference will be given to bids which demonstrate an active and cost-effective exploration approach, with satisfying progress.
- HSE. Detailed environmental policies of the company should be stated with particular reference to environmental impact analysis and HSE Management. C
- Level of local support and training. Local content in terms of commitment to training and growth of indigenous capability, indigenous manpower, and the use of services of the local industry should be indicated.
- Only bids that meet the minimum work program criteria and achieve a pass in HSE will be taken to the final stage where the commercial evaluation will take place.



6. BID EVALUATION CRITERIA



Commercial Evaluation Criteria

The commercial evaluation criteria will be based on the following:

- Signature bonus;
- Economic terms offered by the Applicant;
- Production Bonus for specific production thresholds;
- Projects to be undertaken in São Tomé and Príncipe.

- All bonuses offered shall be non-tax deductible and non-cost recoverable.

- Signature bonuses shall be payable in one tranche no later than 30 days after the date of signing the PSC.

- The final evaluation of the commercial offer will be based on a direct computation of all the commercial components of the offer.

5. BID EVALUATION CRITERIA

The Ministry of Minerals Resources and the National Petroleum Institute will take the following aspects into consideration:

- The technical competence and financial strength of the applicant to be able to carry out exploration and production of hydrocarbons within legal requirements and industry standards.
- The technical database used in making the application.
- The technical evaluation and obligatory work program. Preference will be given to bids which demonstrate an active and cost-effective exploration approach, with satisfying progress.
- Economic terms offered by the Applicant
- Strength of the proposed systems, standards and management for health, safety and environmental protection.
- Level of institutional support and training.

Important Note:

INP encourages companies to present a technical proposal that will maximize the knowledge of the petroleum potential of the Area(s) applied for. The Score Card will be included in the Application Guidelines document to made available shortly.

Bid Evaluation Score Card

BID EVALUATION SCORE CARD		
EPCC 5th License Round		
Appendix A	Applicant Details and Financial Information	5
	Total Investment in E&P Exploration	1.0
	Value (Market Cap) - Small to Large	2.0
	Production of Oil and Gas	1.0
	Affordability of work Program Bid	1.0
	Applicant Technical Expertise	8
	Number of E&P wells drilled	2.0
Technology - relevant to Area	4.0	
Number of discoveries	2.0	
Appendix B	TECHNICAL WORK PROGRAM	50
	Technical Database	8.0
	G&G evaluation already completed	10.0
	License Prospectivity	4.0
	First Exploration Period	22.0
	Second Exploration Period	5.5
Third exploration Period	0.5	
Appendix C	FINANCIAL PROPOSAL	37
	Training	2.0
	Institutional Support	5.0
	Social Support	2.0
	State Participation (ENH)	5.0
	Production Bonus	4.0
	Other Terms	19.0
App D	APPENDIX D - HSE	
	Pass or Fail	
	Health Safety Environment	
TOTAL		100

- **Appendix A** 13 Marks
Company Expertise
 - **Appendix B** 50 Marks
Technical Work Program
 - **Appendix C** 37Marks
Financial Proposal
 - **Appendix D** Pass / Fail
HSE
- TOTAL 100 Marks**

Mozambique 5th License Round

Economic Model - Example

Asset Valuation Model

Index (Please Follow the Hyperlinks Below)

[View Asset Summary and Change Assumptions](#)

Click the above hyperlink to view the summary of the asset and change the valuation assumptions. The model allows to change fiscal and economical parameters ranging from discount rate to royalties and commodity prices and also allows to apply sensitivities. NPV changes automatically as inputs changed or sensitivity applied.

[View/Change Production Profiles](#)

Click the above hyperlink to view the production profiles of various liquids and gas from the asset. Production can be changed/modified in this sheet as per the requirement, otherwise sensitivity can be applied on the production from the Asset Summary Sheet.

[View Revenues and Commodity Prices](#)

Click the above hyperlink to view the Gross Revenues from both liquids and gas from commodity prices. Commodity prices can be changed in this sheet as per the requirement to the commodity prices can be applied from the Asset Brief Sheet. In addition, various forms of revenues can also be viewed.

[View Summary Cash Flows](#)

Click the above hyperlink to view the summary cash flows for the asset. This sheet shows fiscal parameters, synergies, costs, revenues, production and post tax cash flows overall idea of the economic position of the asset with respect to a given fiscal regime.

[View Front End Loaded Terms](#)

Click the above hyperlink to view the cash flows related to the front end loaded terms in force. This includes a range of terms like Ad-Valorem, First Tranche Split, Royalty Bonuses, Contributions, Surface Taxes etc. To change any of these assumptions, refer to the Asset Brief Sheet.

[View Cost Recovery, Depreciation, Economic Rent and Tax](#)

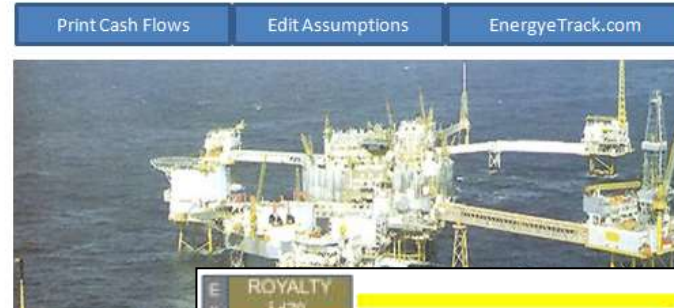
Click the above hyperlink to view the cost recovery assumptions and calculations for depreciation and amortization. View taxable income for each of the taxes, losses, royalties and gas separately. All types of taxes are calculated in the sheet.

[View Cost Data](#)

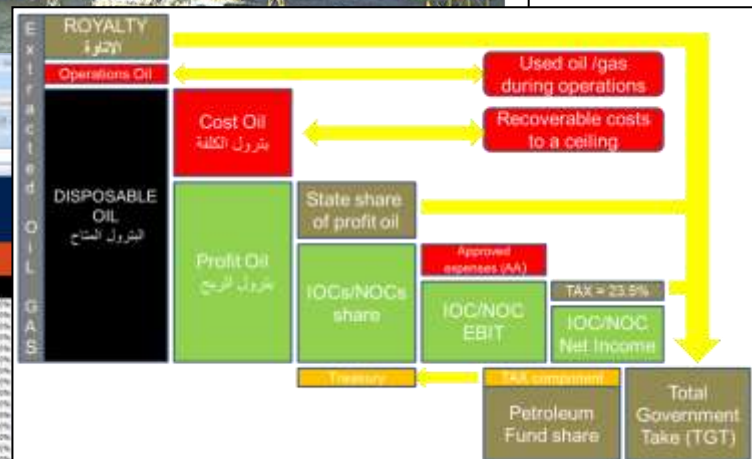
Click the above hyperlink to view the details and split of capital and operating expenditures and uplifts can be changed in this sheet.

Model Cover | Asset Brief | Ranges | Production Profile | Revenues

Ready Calculate



Year	Oil (MMbbl)	Gas (MMscf)	Oil Price (\$/bbl)	Gas Price (\$/Mscf)	Oil Revenue (\$MM)	Gas Revenue (\$MM)	Total Revenue (\$MM)
1980	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1981	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1982	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1983	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1984	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1985	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1986	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1988	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1990	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1991	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1992	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1993	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1994	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1995	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1996	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1997	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1999	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2001	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2002	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00





STP - National Content



1. In order to promote Satomean business community, the government shall adopt measures to guarantee, promote and encourage investment in the Petroleum sector by citizens of STP and create conditions necessary for such purpose.

2. In this perspective Authorized person and their associates shall cooperate with local authorities in developing public action to promote sócio economic development of the country there by:
 - local companies shall have the right of preference regarding the award of participating interest as well as contracts for provision of goods and services.
 - authorized persons and their associates shall train and employ citizen of STP at all levels of their organizations
 - preferentially contract with local services providers and acquire material, machinery, equipment and consumable goods, produced, manufactured on quality and which are available for sale and delivery in due time at prices which are no more than 10% higher than the imported items.

Licensing Rounds – Working with Governments

Licensing Rounds assisting Governments and NOC's to deliver !

- The Timeline
- Preparation & Building the Team
- Key License Round Steps (Legal – Financial - Technical – QHSE)
- Bid Evaluation
- **Reporting & Transparency**

Reporting & Transparency

INTERNAL

- MINISTRY PANEL / BOARD
- REGULATOR / NOC


EXTERNAL

- PETRAD / NORAD
- US AID
- WORLD BANK
- ADB
- EEC




- LOCAL ADMINISTRATION
- NGO (Non Government Organisation)
- LOCAL PRESS
- INTERNATIONAL PRESS
- INDUSTRY CONSULTANTS


Reporting & Transparency



Lebanon 1st License Round




GIS Project

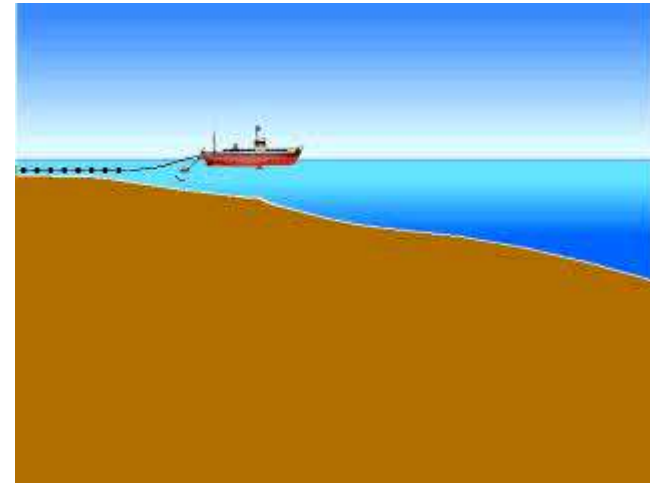


The GIS Project integrates the older legacy paper data with the modern digital technical data and provides a dynamic digital data base

The GIS contains all the available onshore data including international borders, geological maps, digital terrain, gravity and details of the six onshore exploration wells



www.lebanon-exploration.com info@lebanon-exploration.com



Summary – Working with Governments

- You need lots of patience and understanding
- Confidentiality and Trust
- Very rewarding

Bid Evaluation

- It's a privilege to be able to assist in the marking and bid evaluation and see first hand the tremendous creativity there is within our industry.

Thank you for your attention

Huw Edwards
Managing Director
Exploration Reservoir Consultants
www.ercl.com



License Round Management

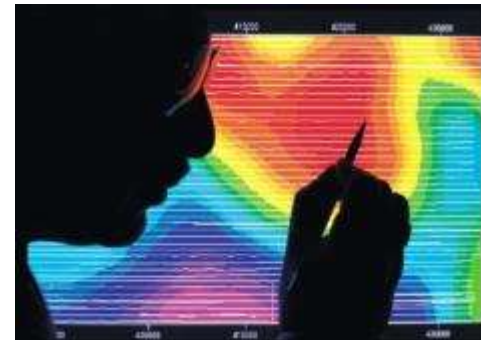
ERCL ADVISORY (wide ranging advice & support including) :

- Advice
- Base line interpretation
- Minimum work programs / bid expectation
- Government Data
- Multi Client Data
- Application Documentation
- License Round Management
- Economic Model
- Presentations
- Application Scoring
- Minister briefing documents
- Technical Support / Training

ERCL – Exploration Reservoir Consultants Ltd.

Exploration – Production – Engineering – Economics

Exploration – Production – Engineering – Economics



Independent Technical and Commercial experts
from exploration to rehabilitation



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