



Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA
REPUBLIEK VAN SUID AFRIKA

Vol. 689

18

November
November 2022

No. 47530



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ISSN 1682-5845



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GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS

DEPARTMENT OF MINERAL RESOURCES AND ENERGY**NO. 2755****18 November 2022****INVITATION FOR PROPOSALS TO CONDUCT SEISMIC ACQUISITION, SEISMIC REPROCESSING AND/OR ACQUISITION OF ANY OTHER GEOPHYSICAL, GEOLOGICAL OR GEOCHEMICAL DATA OFFSHORE SOUTH AFRICA**

I, **SAMSON GWEDE MANTASHE, MP**, Minister of Mineral Resources and Energy, hereby invite proposals to conduct seismic acquisition, seismic reprocessing and/or acquisition of any other geophysical, geological or geochemical data offshore South Africa.

Interested parties are hereby invited to register by sending an email to the email address provided below and submit proposals in line with the attached Invitation for Proposals. The aforesaid proposals can also be sent for the attention of Dr. Phindile Masangane, and hand delivered, sent by post or emailed on or before the 30 JANUARY 2023 to the following addresses:

7 Mispel street
Bellville
7530

or

PO Box 5111
Tygervalley
7536

Email address: Offshoresurvey@petroleumagency.co.za

A copy of the Invitation Notice is attached hereto.



Mr Samson Gwede Mantashe, MP
Department of Mineral Resources and Energy

Date: 27/10/2022

Invitation for Proposals

Seismic acquisition, seismic reprocessing and/or acquisition of any other geophysical, geological, or geochemical data, offshore South Africa

1. Introduction

South Africa is currently preparing for the release of open acreage, both on and offshore, under license rounds to be scheduled following the enactment of the Upstream Petroleum Resources Development ("UPRD") Bill, 2021, currently before Parliament. While committed to achieve carbon neutrality by 2050, and recognizing the sensitivities associated with marine seismic acquisitions in the country, it remains the Government of South Africa's stated policy and desire to develop the country's indigenous natural gas and oil resources to ensure national energy security, stability, and economic development. South Africa is thus on a clear path to respond to national developmental imperatives by exploring, discovering, quantifying, and developing its indigenous petroleum resources in an environmentally sustainable and responsible manner.

The Department of Mineral Resources and Energy hereby calls for proposals from seismic acquisition, seismic reprocessing or any other companies involved in exploration data acquisition or enhancement, to enter into an agreement with the Petroleum Agency South Africa ("PASA" or "the Agency") for data acquisition and/or enhancement over all or any of the areas shown below. The new datasets are planned to be released as part of a licensing round program and will be made a mandatory purchase for prospective bidders as part of the bid package, timing and terms are to be negotiated.

Open acreage areas for release under license rounds to be held in terms of the new Act have been identified. Some of these areas are mature in terms of data coverage and are considered ready for immediate release. Other areas may benefit from reprocessing of old data or the acquisition of further data before release. Seismic acquisition and/or seismic reprocessing programs shown below are indicative only and alternative proposals that will benefit the imaging of the areas to be covered will be considered. Other data acquisition surveys such as gravity and magnetic surveys, geochemical surveys, Controlled Source

Electromagnetic (CSEM) studies, and satellite slick studies will also be considered. The Agency may elect to award different data type acquisitions to multiple contractors within an area.

Proposed activities relating to the acquisition of new data or reprocessing of existing data in response to this invitation for proposals shall be undertaken solely at the risk of the Company proposing such activities. Successful Companies bidding on the acquisition and processing of new data will be required to apply for, and be granted a reconnaissance permit before commencing any operations. While the State, through the Petroleum Agency of South Africa will remain the rightful owner of the newly acquired or processed data, the Company will be granted sole marketing rights for a period of ten years, renewable by agreement. Terms and conditions relating to profit sharing and skills transfer will be discussed with the Companies that submit proposals and shall form part of an agreement to be entered into between the selected Company and PASA. In areas where no new data acquisition is required and the work program only requires reprocessing of existing data, work can start as soon as an agreement with PASA, as outlined above has been executed.

PASA shall host a non-compulsory briefing session for this invitation for proposals. Interested parties are therefore requested to register to receive communication regarding this invitation for proposals by sending an email to offshoresurveys@petroleumagencyrsa.com.

Proposals to acquire and/or process and reprocess seismic data will be evaluated in line with the scoring schedules included below. Proposals for any other type of data acquisition will be evaluated on their respective merits.

2. Proposals for Data Acquisition and Reprocessing

Proposals will be accepted at the discretion of the Petroleum Agency SA.

There are three license areas for which Companies may send proposals for data acquisition and/or data processing. Companies may submit proposals for one, two

or all three of the planned license areas. These areas are described in Paragraph 3 below.

Companies submitting successful data acquisition proposals will be required to apply for a reconnaissance permit and Environmental Authorisation in terms of the Mineral and Petroleum Resources Development Act, 28 of 2002 read together with the National Environmental Management Act, 107 of 1998.

Companies submitting successful proposals for data reprocessing or enhancement will have to enter into a contractual agreement with the Petroleum Agency SA before commencing work and the work can start immediately upon execution of the contract.

The areas/blocks for the preparation of proposals are described below, two of the areas are for new data acquisition, and the third area is where reprocessing of existing data may be more optimal:

3. Offshore planned license areas

3.1 West coast

The work program in this area requires the acquisition and processing of new seismic data. As field operations offshore are required, Company will have to apply for, and be granted a Reconnaissance Permit prior to commencing work. The effort and risk to successfully apply for and be granted this reconnaissance permit lies solely with the bidding Company.

3.1.1 License Area

The identified License area is situated in the deep water off the south-western Orange Basin and covers an area of approximately 113 000km². Water depths range from 3 500m along the eastern boundary of the block up to 5 000m to the west and south.

3.1.2 Seismic Data

The current seismic database of the area consists of approximately 1 794 line km's of migrated and stacked 2D data in Seg-Y format that

range in vintage from 2003 to 2012. Data quality ranges from fair to very good and reaches two-way time depths up to 10s for good quality surveys.

Images of three dip and one strike line in the neighbouring ER224 can be downloaded from the Agency website.

The main geological well control with respect to source rocks is inferred from two wells, O-A1 and DSDP 361. Both these wells recorded oil-prone Aptian source rock with average TOC values exceeding 4%. The source rock in DSDP 361 is a good quality Aptian source rock, recorded as immature. The source rock in O-A1 has been partially eroded but seismic data indicates significant thickening distally. C-B1, to the east, did not intersect any source rocks.

3.1.3 Prospectivity

Several high amplitude anomalies have been identified in the license area adjacent to the deep-water West Coast open block. The anomalies have been interpreted as basin floor fan and channel fan complexes. They all occur in water depths between 3 500 and 4 500 metres below sea level (mbsl). Within the DSDP361 borehole, a thick and rich Aptian source rock was intersected. Although it was classified as immature at the borehole location, the overburden towards the north and east becomes thicker which could improve the maturity. Reservoirs are expected to be sand-rich within the license area sourced from detached canyon systems along the shelf break.

3.1.4 Infrastructure

There are currently crude oil storage facilities in Saldanha Bay (OTMS Tank Farm). The storage facilities are located roughly ~210km from the West Coast Open Acreage and have a capacity to store 13.2 million barrels of crude oil. This could create a potential direct entry point for the transport of crude oil to the State owned and PetroSA operated Gas to Liquids Refinery (GTL) in Mossel Bay or other future refineries. The PetroSA GTL Refinery in Mossel Bay, South Africa is the third largest in

the world and is directly located some 500km from the eastern-most identified lead.

3.1.5 Suggested Seismic Acquisition

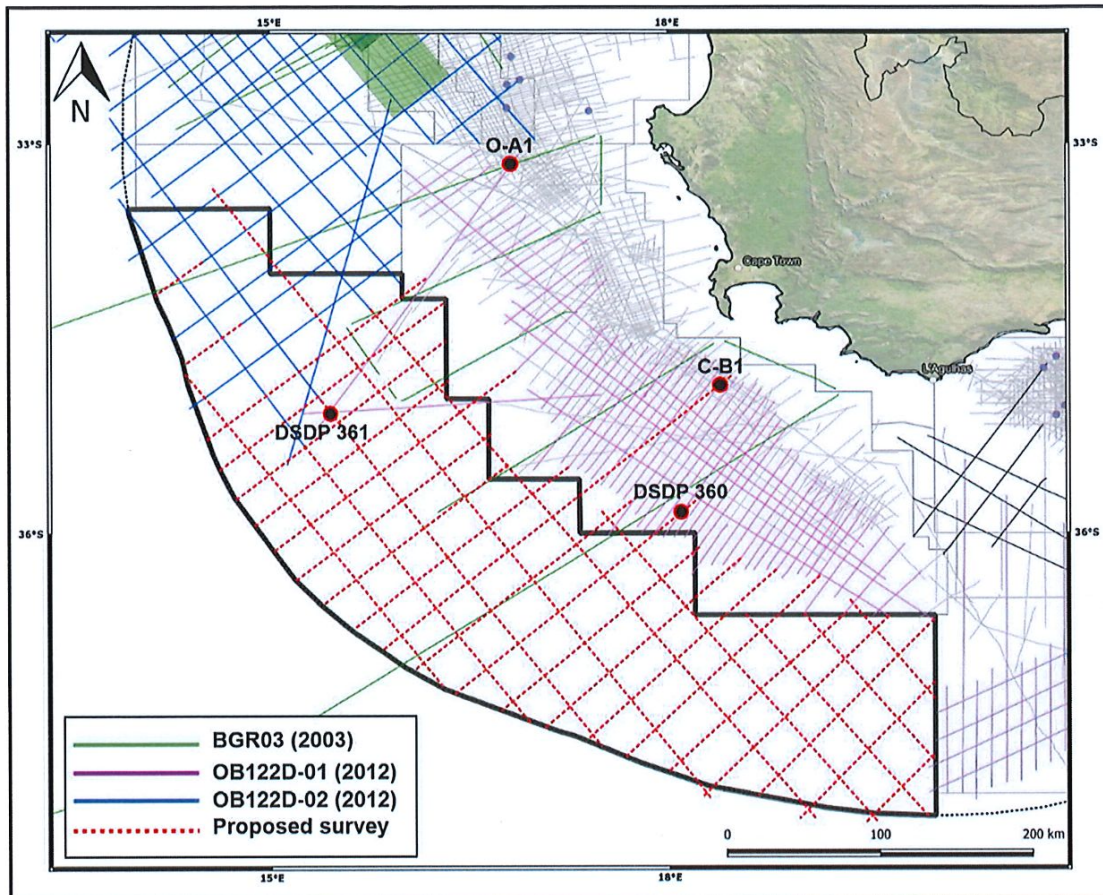


Figure 2: Suggested new seismic data acquisition grid for the West Coast area. High resolution maps are available on the Agency website.

3.1.6 Seismic Data

The current seismic database of the adjacent area consists of approximately 1 800 line km's of migrated and stacked 2D data archived in Seg-Y format that range in vintage from 2003 to 2012. Data quality ranges from fair to very good and reaches two-way time depths up to 10s for good quality surveys.

It is suggested that at least 6 900km total 2D lines be acquired, with grid spacing of 25 to 35km, tied to existing seismic lines and well locations. Bidding companies can propose alternative acquisition plans to improve

efficiency of the proposed survey(s) whilst meeting the primary objective of imaging and being able to extend the regional interpretation to the edge of South Africa's exclusive economic zone (EEZ).

3.2 Western Bredasdorp Basin and Infanta Embayment

The work program in this area is focused on data enhancement of existing data as opposed to acquiring new data. As no field work will be done, no environmental impact assessment is required for this block. This work program can be initiated as soon as a contract with the Petroleum Agency of South Africa (PASA) has been executed.

3.2.1 License Area

The license area is situated in the Western Bredasdorp Basin (WB) and covers an area of approximately 10 000km². Water depths range from 50m along the northwest, gradually deepening to 116m to the southwest. The Infanta Embayment (IE) license area covers under 6 900km², with water depths ranging between 50m in the northwest to 200m in the southeast.

3.2.2 Seismic Data

The current seismic data in the WB and IE areas totals approximately 7 000 line km, of migrated and stacked 2D data in archived Seg-Y format that range in vintage from 1969 to 2016. Data quality ranges from fair to very good quality surveys.

A table of vintage and seismic line length earmarked for reprocessing is included below.

Survey year	Line length (km)	# of Lines	Quality Ranking
1974	44.0	2	Very Poor to Poor
1976	351.2	10	Very Poor to Fair
1978	673.0	14	Very Poor to Fair
1979	693.2	17	Very Poor to Fair
1980	1,141.3	17	Very Poor to Fair
1981	476.8	16	Very Poor to Fair
1982	261.6	6	Very Poor to Fair
1983	884.9	19	Very Poor to Fair

1984	199.9	4	Poor to Fair
1985	303.4	12	Very Poor to Fair
1986	641.0	22	Very Poor to Good
1987	124.3	5	Poor to Good
1989	434.6	17	Very Poor to Fair
1990	258.5	6	Very Poor to Fair
1991	482.3	12	Very Poor to Fair
1992	91.5	4	Very Poor to Poor
1993	230.9	5	Very Poor to Fair

The surveys acquired before 2012 were acquired with 3 000m streamers, and the very early ones with only 2 400m of cable. AVO processing of the deeper data on these lines is therefore compromised by a lack of fold in angle gathers.

3.2.3 Well Data

Four wells were drilled in the Western Bredasdorp Basin (WB) between 1973 and 1987. These wells intersected fair to good quality oil to wet-gas prone source sequences. Two wells in the Southern Sub-basin had oil shows. Seven wells were drilled in the Infanta Embayment (IE) between 1970 and 1986. Three wells intersected dry to wet-gas prone source sequences above the late Cenomanian unconformity, while F-K1 also intersected dry gas prone source rock of the Aptian succession.

All these wells have recommendation to drill reports and well completion reports. Sets of wireline logs are available in digital format. Composite logs, lithologs, petrography, geochemistry and micro-palaeontology data sets are available for most wells and a full catalogue of the data and reports is available.

3.2.4 Prospectivity

Several high amplitude anomalies have been identified in the Western Bredasdorp license areas. The P50 recoverable volume for the WB prospects is estimated at 1 800 MMbbl, while the in-place volume is

6 000 MMbbl. This excludes prospect P6 as it constitutes the north-western up dip portion of the Rinkhals prospect, which straddles Block 9. The Agency has delineated six prospects in the Infanta Embayment, of which four comprise stratigraphic traps, while F-D1 and the Anomaly comprise a structural and combination trap, respectively. Further details of these prospects are available on the Agency website.

3.2.5 Infrastructure

Both license areas are adjacent to the existing gas and condensate pipeline connecting Block 9 to shore. This could create a potential direct entry point for the transport of crude oil to the GTL facility in Mossel Bay or other future refinery facilities.

3.2.6 Suggested seismic reprocessing proposal

Seismic lines suggested for reprocessing relevant to the western Bredasdorp Basin and Infanta Embayment are shown in the figures below, ranked from 1 to 5, according to image quality. Rank 1 lines in red, are poorest quality, followed by rank 2 in orange, rank 3 in yellow, rank 4 in cyan and the best quality lines, rank 5, are shown in indigo.

Furthermore, regional inversion studies can also be carried out, where lines intersect boreholes that have the required acoustic logs.

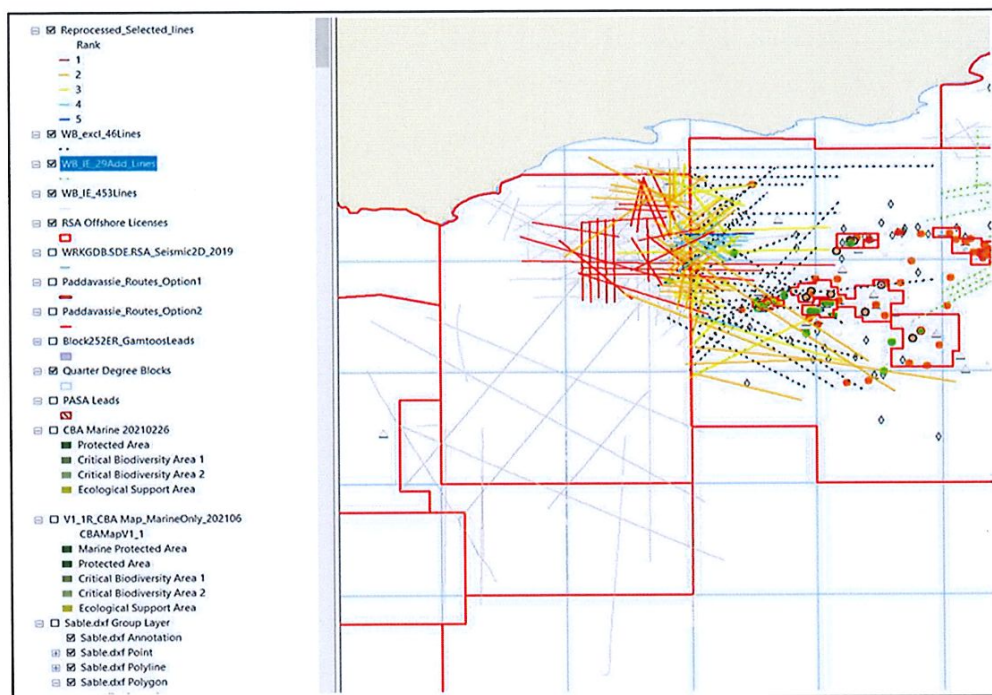


Figure 3: Reprocessing suggestions for the western Bredasdorp area, ranked from 1 to 5. A high-resolution map can be accessed on the Agency website.

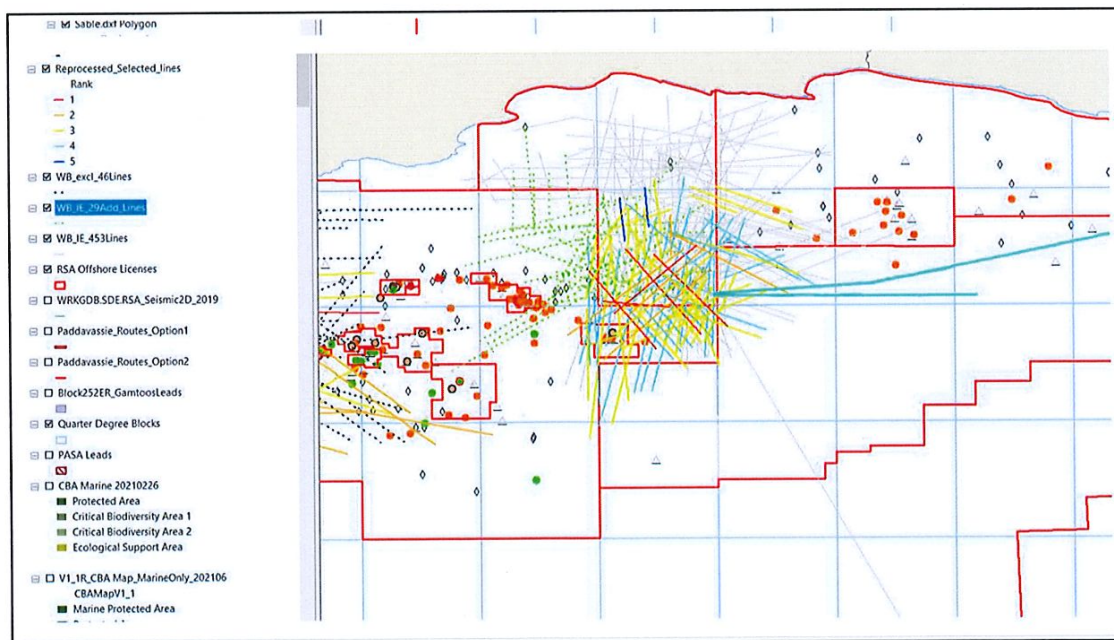


Figure 4: Reprocessing suggestions for the Infanta Embayment area, ranked from 1 to 5. A high-resolution map can be accessed on the Agency website.

3.3 East Coast

3.3.1 License Area

The License block forms part of the southern extent of the Durban basin, northern Transkei swell and the deep-water Natal Valley. The area covers approximately 50 000km² with water depths ranging between 4 200 to 5 500m.

3.3.2 Seismic Data

The east coast offshore area has seen an increase in seismic acquisition activity during the last decade. More than 40 000km of 2D and 5 000km² of 3D seismic data was acquired since 2010; with drilling activity expected soon to add to the existing offshore wells. The 3 500km of 2D seismic data was acquired between 2013 and 2018 through License holders and a series of non-exclusive permits between seismic contractors and the Agency.

3.3.3 Borehole Data

The four wells that were drilled offshore the Durban basin although regarded as dry, provide primary evidence of an active petroleum system. The wells have sets of digital logs, cuttings, and reports that are readily available from the Agency. The evidence supporting the presence of source rocks and active petroleum systems is found in DSDP330 and DSP511, located on the Maurice Ewing Bank, that intersected thick oil prone source rocks of Kimmeridgian to Aptian age.

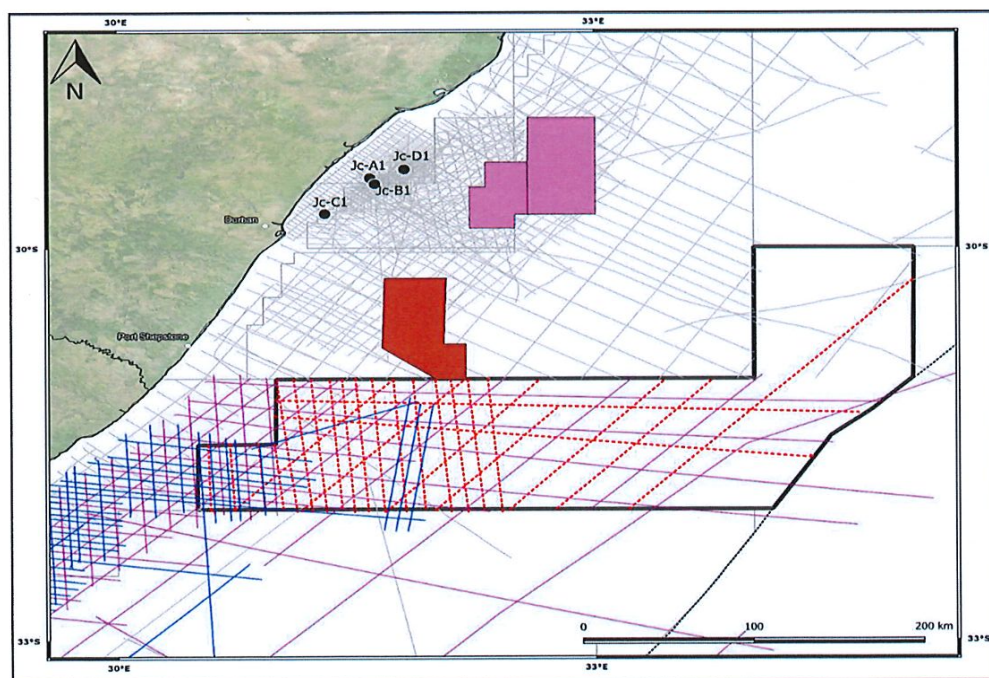
Similar age source rocks are postulated to occur within the Durban Basin in the rift and early drift succession that underlies the Tugela Cone. Jc-B1 exhibited minor gas shows and the associated shale has total organic carbon values, ranging from 2.75% to 5%. Jc-D1 mud gas values indicate a trend of increasing wetness with depth. In addition, fluid inclusion studies of Jc-D1 samples provide evidence for seeping light hydrocarbons and an extract sample yielded slightly biodegraded oil. Fluorescence was also observed in this interval and in the basal section

of the well in association with bitumen staining. An extract from the latter yielded evidence for a light oil derived from marine claystone of Cretaceous to Jurassic age.

3.3.4 Prospectivity

The major play in the area consists of high amplitude Mid Cretaceous fans and turbidites. During this time, the movement along the Agulhas Falkland Zone, created space for the distribution of offshore sediments on the new oceanic crust offshore South Africa. Furthermore, there conditions for the formation of basin floor fans and turbidites were optimal. These features extend for more than 10km offshore within the deep water.

3.3.5 Suggested acquisition proposal



Existing seismic data

- Northern Durban basin 2x 3D seismic data sets
- Existing and reprocessed seismic datasets
 - PGS Non-exclusive 2D seismic data (2013 & 2018)

Proposed 2D seismic datasets

- Minimum Total Line km's: 3500km
- Grid spacing approx. 5-10km

Existing 2D (1974 – 2013)

SA132D-01 (2013)

MC2D-SA-2018 (2018)

DB163D-01 (2016)

DB183D-01 (2018)

Proposed 2D survey

Fig 5: Suggested new seismic data acquisition grid for the East Coast area. A high-resolution map can be accessed on the Agency website.

4. Proposals

Companies wishing to submit proposals may do so for one, two or all three of the areas described above.

Proposals must clearly demonstrate a good understanding on the part of the proposer of what is required including the permitting process and nature of agreement to be entered into with Petroleum Agency SA, as well as the timeline involved for a return on the investment to be made.

The new data acquired under these proposals is to be released as part of the licence round package for these areas. This will only be possible once the UPRD Bill is enacted. In addition, the successful proposing Company(ies) for the acquisition and processing of new data in the west coast and east coast areas will be required to apply for a reconnaissance permit following all the normal requirements, including environmental authorisation for seismic or other new data acquisition at the sole risk of the successful Company. Company being awarded the reprocessing work program in the Western Bredasdorp, Infanta Embayment areas need not apply for a reconnaissance permit and work can start as soon as a contract with the Agency has been executed.

Proposals will be evaluated in accordance with the scoring and weighting schedules shown below. Besides demonstrating a good understanding of what is required as described above for both new data acquisition and reprocessing proposals, the following criteria will be considered during evaluation.

4.1 New Seismic Data Acquisition Proposals

New seismic data acquisition proposals must address, and will be evaluated on the following factors:

- a. Quality of proposal including the company's understanding of what is required including the permitting process to be followed.
- b. Profit sharing proposal.
- c. Skills transfer/training proposal.
- d. Speculative survey acquisition experience.
- e. Acquisition technology offered including mitigation measures for local conditions.
- f. Processing technology offered including understanding of local imaging challenges.
- g. Acquisition experience within the last 5 years.
- h. References and track record.
- i. SHEQ certification.

4.2 Proposals for reprocessing of existing seismic data

Proposals for reprocessing of existing seismic data must address and will be evaluated on the following factors:

- a. Quality of proposal including a good understanding of what is required including the permitting process as described above.
- b. Profit sharing proposal.
- c. Skills transfer/training opportunities proposed.
- d. Speculative project experience.
- e. Processing technology offered including understanding of local imaging challenges.
- f. References and track record
- g. SHEQ/ISO certification.

4.3 Proposals for any other type of data acquisition

Proposals for any other type of data acquisition are expected to be limited and unique, will be evaluated on their respective merits.

5. Evaluation schedules and weightings

5.1 New seismic data acquisition and processing (West Coast; East Coast acreage)

	Evaluation Criteria	Contribution
1	Quality of proposal (<i>Overall understanding and meeting scope of requirements</i>)	25%
2	Profit sharing mechanism proposed.	20%
3	Skills transfer / training opportunities proposed.	15%
4	Non-proprietary / speculative surveys experience	8%
5	Acquisition Technology offered in 2D fleet; Mitigations offered demonstrates understanding of local metocean conditions	8%
6	Processing Technology offered; Proposed processing treatment demonstrates understanding of local imaging challenges	8%
7	2D surveys > 5 000km <u>acquired and processed</u> in last 5 years	6%
8	(average) Client feedback from references provided	5%
9	Company SHEQ / ISO certification	5%

5.1.1 Quality of Proposal

25%	Quality of proposal
	<ul style="list-style-type: none"> Overall understanding and meeting scope of requirements
Score	Evaluation targets
5	<ul style="list-style-type: none"> Excellent proposal - The important issues are approached in an innovative and efficient way, indicating that the bidder has the required knowledge of state-of-the-art approaches to successful acquisition and processing projects. Proposed project execution plan is tailored to address the project objectives, and sufficiently flexible to accommodate changes that may occur during execution. The quality and risk management plans plan are tailored to the critical characteristics of the project. The primary objectives and key success factors are identified, and the proposal is clear how this will be pursued in an innovative and efficient way using state-of-the-art methodologies and technologies to meet the objectives. The proposed approach details ways to improve the project outcomes and quality of the outputs.
4	<ul style="list-style-type: none"> Very good proposal Proposed project execution plan is tailored to address specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk etc. are tailored to the critical characteristics of the project.
3	<ul style="list-style-type: none"> Good proposal Proposed project execution plan is satisfactory and partially tailored to address the project objectives. The approach proposed minimally deals with the critical characteristics of the project.

	<ul style="list-style-type: none"> The quality plan, and approach to managing risk etc. are compliant with project specifications.
2	<ul style="list-style-type: none"> Average Proposal Proposed project execution plan is of a generic nature and not necessarily tailored to address the project objectives. The quality plan, and approach to managing risk etc. are too generic.
1	<ul style="list-style-type: none"> The proposed project execution plan is poor and unlikely to satisfy project objectives and requirements. The company has misunderstood certain aspects of the scope of work and therefore does not deal with the critical aspects of the project.
Eliminated	No technical proposal submitted by the company

5.1.2 Profit-sharing

20%	Ranked profit sharing mechanism proposed.
	<ul style="list-style-type: none"> <i>The profit-sharing mechanisms proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive.</i> <i>Different bidders' profit-sharing proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score.</i> <i>The profit-sharing scheme will be a subject for further negotiation upon identifying preferred bidders.</i>
Score	Evaluation targets
5	Most attractive initial profit-sharing proposal
:	
:	Ranking fitted
1	Least attractive initial profit-sharing proposal

0	Ignored requirement
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5.1.3 Skills transfer

15%	Ranked training opportunities proposed.
	<ul style="list-style-type: none"> • The training and experience opportunities proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive. • Different bidders' skills transfer proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score. • The training and experience opportunities during work program execution will be a subject for further negotiation during contract negotiations.
Score	Evaluation targets
5	Most attractive training and experience exposure proposal
:	Ranking fitted
1	Least attractive training and experience exposure proposal
0	Ignored requirement

5.1.4 Non-proprietary / speculative surveys experience

8%	Non-proprietary / speculative surveys experience
Score	Evaluation targets
5	<ul style="list-style-type: none"> • Bidder has demonstrated track record of successfully acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data during the last 5 years. • Bidder has track record of partnering with PASA to acquire and process data

	<ul style="list-style-type: none"> • Bidder has track record of partnering with African NOCs and regulators to acquire data, process and license data to companies wishing to bid on a license round auction • Company offers regional level interpretation of new data to add value and assist in promoting new multi-client data
4	<ul style="list-style-type: none"> • Bidder has demonstrated track record of acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years. • Bidder has track record of partnering with African NOCs and regulators to acquire data, process and license data to companies wishing to bid on a license round auction • Company offers regional level interpretation of new data to add value and assist in promoting new multi-client data
3	<ul style="list-style-type: none"> • Bidder has demonstrated track record of acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years. • Bidder has track record of partnering with African NOCs and regulators to acquire data, process and license data to companies wishing to bid on a license round auction
2	<ul style="list-style-type: none"> • Bidder has demonstrated track record of acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years.
0	<ul style="list-style-type: none"> • Less than 5 years track record of successfully acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data.

5.1.5 Acquisition Technology

8%	Acquisition Technology offered in 2D fleet
	<ul style="list-style-type: none"> Technical submission demonstrates appreciation for, mitigation and/or treatment of offshore South African metocean conditions – such as (but not limited to) water depths in east and west coast areas under this RFP, long period persistent swells, fast flowing currents and swirling eddies, barnacle growth on in-water equipment, shark and seal bite damage to streamers, interaction with long-line and trawling fishing fleets, maritime traffic, environmental compliance requirements, etc...
Scores of 2 or 4 not provided for in this criterion	
Score	Evaluation targets
5	<ul style="list-style-type: none"> Demonstrate that local conditions have been investigated and are well understood. Bidding document provides comprehensive proposals to mitigate and/or deal with local/metocean conditions.
3	<ul style="list-style-type: none"> Bidding document's treatment references and proposals to mitigate local metocean, seafloor geometry, etc. are generic in nature.
1	<ul style="list-style-type: none"> Cursory references to local conditions and challenges without firm proposals how to mitigate
0	<ul style="list-style-type: none"> Processing challenges not addressed

5.1.6 Processing Technology

8%	Processing Technology
	<ul style="list-style-type: none"> Proposed processing treatment demonstrates understanding of local imaging challenges

Scores of 2 or 4 not provided for in this criterion	
Score	Evaluation targets
5	<ul style="list-style-type: none"> • Demonstrate that local imaging challenges and nature of deep-water seismic processing are well understood • Bidding document provides comprehensive proposals to mitigate local imaging challenges. • Flexibility offered in parameter testing and refinement of processing parameters
3	<ul style="list-style-type: none"> • Bidding document's treatment references and proposals to mitigate local imaging problems are generic in nature.
1	<ul style="list-style-type: none"> • cursory references to local conditions and challenges without firm proposals how to mitigate
0	<ul style="list-style-type: none"> • Processing challenges not addressed

5.1.7 2D seismic Experience

6%	2D surveys > 5 000km acquired, processed last 5 years
	<ul style="list-style-type: none"> • 2D survey experience can be proprietary or speculative. • List survey size, operator, region, high level acquisition parameters- cable length, record length, project plan efficiency (actual vs planned)
Score	Evaluation targets
5	>=8 surveys with contactable references for 3 surveys
4	>=5 surveys with contactable references for 3 surveys
3	>=8 surveys but less than 3 references provided
2	>=5 surveys but less than 3 references provided
1	<5 surveys

0	No surveys listed
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5.1.8 Client Feedback

5%	Averaged Client feedback from references provided
	<ul style="list-style-type: none"> Averaged qualitative rating feedback sourced from references provided
	<i>Scores of 3 not provided for in this criterion</i>
Score	Evaluation targets
5	Exceeded expectations, will use again, will recommend
4	Met Expectations, will use again, will recommend
2	Will use again but with stricter operator oversight
1	Will not use again
0	Scored ≤ 3 for criterion asking for 3 references

5.1.9 SHEQ Certification

5%	Up to date SHEQ Certification
	<ul style="list-style-type: none"> The company must have a good track record and provide relevant certification. (e.g., ISO 45001, ISO14001, ISO 9001)
	<i>Scores of 1, 2 or 4 not provided for in this criterion</i>
Score	Evaluation targets
5	Demonstrated valid certification
3	Lapsed certification; In process to renew
0	No certification

5.2 Re- processing proposal (Bredasdorp and Infanta Embayment acreage)

	Evaluation Criteria	Contribution
1	Quality of proposal (<i>Overall understanding and meeting scope of requirements</i>)	25%
2	Profit sharing mechanism proposed.	20%
3	Skills transfer / training opportunities proposed.	15%
4	Non-proprietary / speculative project experience	10%
5	Processing Technology offered; Proposed processing treatment demonstrates understanding of local imaging challenges	15%
6	2D surveys > 5 000km <u>processed</u> in last 5 years	5%
7	(average) Client feedback from references provided	5%
8	Company SHEQ / ISO certification	5%

5.2.1 Quality of Proposal

25%	Quality of proposal
<ul style="list-style-type: none"> Overall understanding and meeting scope of requirements 	
Score	Evaluation targets
5	<ul style="list-style-type: none"> Excellent proposal - The important issues are approached in an innovative and efficient way, indicating that the bidder has the required knowledge of state-of-the-art approaches to successful acquisition and processing projects. Proposed project execution plan is tailored to address the project objectives, and sufficiently flexible to accommodate changes that may occur during execution. The quality and risk management plans are tailored to the critical characteristics of the project. The primary objectives and key success factors are identified, and the proposal is clear how this will be pursued in an innovative and efficient way using state-of-the-art methodologies and technologies to meet the objectives. The proposed approach details ways to improve the project outcomes and quality of the outputs.
4	<ul style="list-style-type: none"> Very good proposal Proposed project execution plan is tailored to address specific project objectives and methodology and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk etc. are tailored to the critical characteristics of the project.
3	<ul style="list-style-type: none"> Good proposal Proposed project execution plan is satisfactory and partially tailored to address the project objectives. The approach proposed minimally deals with the critical characteristics of the project. The quality plan, and approach to managing risk etc. are compliant with project specifications.
2	<ul style="list-style-type: none"> Average Proposal Proposed project execution plan is of a generic nature and not necessarily tailored to address the project objectives. The quality plan, and approach to managing risk etc. are too generic.
1	<ul style="list-style-type: none"> The proposed project execution plan is poor and unlikely to satisfy project objectives and requirements. The company has misunderstood certain aspects of the scope of work and therefore does not deal with the critical aspects of the project.
Eliminated	No technical proposal submitted by the company

5.2.2 Profit-sharing

20%	Ranked profit sharing mechanism proposed.
	<ul style="list-style-type: none"> <i>The profit-sharing mechanisms proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive.</i> <i>Different bidders' profit-sharing proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score.</i> <i>The profit-sharing scheme will be a subject for further negotiation upon identifying preferred bidders.</i>
Score	Evaluation targets
5	Most attractive initial profit-sharing proposal
:	Ranking fitted
1	Least attractive initial profit-sharing proposal
0	Ignored requirement

5.2.3 Skills Transfer and Training

15%	Ranked training opportunities proposed.
	<ul style="list-style-type: none"> <i>The training and experience opportunities proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive.</i> <i>Different bidders' skills transfer proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score.</i> <i>The training and experience opportunities during work program execution will be a subject for further negotiation during contract negotiations.</i>
Score	Evaluation targets
5	Most attractive training and experience exposure proposal
:	Ranking fitted
1	Least attractive training and experience exposure proposal
0	Ignored requirement

5.2.4 Non-proprietary / Speculative processing experience

10%	Non-proprietary / speculative processing experience
Score	Evaluation targets
5	<ul style="list-style-type: none"> • Bidder has demonstrated track record of successfully processing, promoting and licensing non-proprietary, multi-client seismic data during the last 5 years. • Bidder has track record of partnering with PASA to process data • Company offers regional level interpretation of new data to add value and assist in promoting new multi-client data
4	<ul style="list-style-type: none"> • Bidder has demonstrated track record of processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years. • Bidder has track record of partnering with African NOCs and regulators to process data • Company offers regional level interpretation of new data to add value and assist in promoting new multi-client data
3	<ul style="list-style-type: none"> • Bidder has demonstrated track record of processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years. • Bidder has track record of partnering with African NOCs and regulators to process data
2	<ul style="list-style-type: none"> • Bidder has demonstrated track record of processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years.
0	<ul style="list-style-type: none"> • Less than 5 years track record of successfully processing, promoting and licensing non-proprietary, multi-client seismic data.

5.2.5 Processing Technology

15%	Processing Technology
<ul style="list-style-type: none"> <i>Proposed processing treatment demonstrates understanding of local imaging challenges</i> 	
<i>Scores of 2 or 4 not provided for in this criterion</i>	
Score	Evaluation targets
5	<ul style="list-style-type: none"> Demonstrate that local imaging challenges and nature of deep-water seismic processing are well understood Bidding document provides comprehensive proposals to mitigate local imaging challenges. Flexibility offered in parameter testing and refinement of processing parameters
3	<ul style="list-style-type: none"> Bidding document's treatment references and proposals to mitigate local imaging problems are generic in nature.
1	<ul style="list-style-type: none"> Cursory references to local conditions and challenges without firm proposals how to mitigate
0	<ul style="list-style-type: none"> Processing challenges not addressed

5.2.6 2D Seismic Experience

5%	2D surveys > 5 000km processed last 5 years
<ul style="list-style-type: none"> <i>2D survey experience can be proprietary or speculative.</i> <i>List survey size, operator, region, imaging challenges, technology used, project plan efficiency (actual vs planned)</i> 	
Score	Evaluation targets
5	>=8 surveys with contactable references for 3 surveys
4	>=5 surveys with contactable references for 3 surveys
3	>=8 surveys but less than 3 references provided
2	>=5 surveys but less than 3 references provided
1	<5 surveys
0	No surveys listed

5.2.7 Client Feedback

5%	Averaged Client feedback from references provided
<ul style="list-style-type: none"> <i>Averaged qualitative rating feedback sourced from references provided</i> 	
<i>Scores of 3 not provided for in this criterion</i>	
Score	Evaluation targets
5	Exceeded expectations, will use again, will recommend
4	Met Expectations, will use again, will recommend
2	Will use again but with stricter operator oversight
1	Will not use again
0	Scored <=3 for criterion asking for 3 references

5.2.8 SHEQ

5%	Up to date SHEQ Certification
<ul style="list-style-type: none"> <i>The company must have a good track record and provide relevant certification. (e.g. ISO 45001, ISO14001, ISO 9001)</i> 	
<i>Scores of 1, 2 or 4 not provided for in this criterion</i>	
Score	Evaluation targets
5	Demonstrated valid certification
3	Lapsed certification; In process to renew
0	No certification

DEPARTMENT OF MINERAL RESOURCES AND ENERGY

NO. 2756

18 November 2022

INVITATION FOR PROPOSALS TO CONDUCT SEISMIC ACQUISITION, SEISMIC PROCESSING AND/OR ACQUISITION AND PROCESSING OF ANY OTHER GEOPHYSICAL, GEOLOGICAL OR GEOCHEMICAL DATA ONSHORE SOUTH AFRICA

I, **SAMSON GWEDE MANTASHE, MP**, Minister of Mineral Resources and Energy, hereby invite proposals to conduct seismic acquisition, seismic reprocessing and/or acquisition of any other geophysical, geological or geochemical data onshore South Africa.

Interested parties are hereby invited to register by sending an email to the email address provided below and submit proposals in line with the attached Invitation for Proposals. The aforesaid proposals must be sent by email to the same email address, hand delivered or sent by post marked for the attention of Dr. Phindile Masangane on or before 12 noon on the 30th day of JANUARY 2023, to the following addresses:

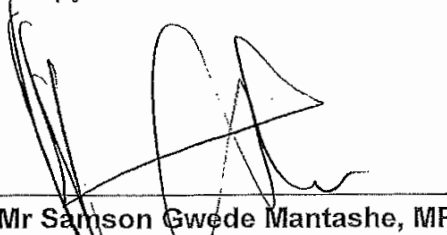
7 Mispel Street
Bellville
7530

or

PO Box 5111
Tygervalley
7536

Email address: Onshoresurvey@petroleumagency.co.za

A copy of the Invitation Notice is attached hereto.



Mr Samson Gwede Mantashe, MP
Department of Mineral Resources and Energy

Date: 27/10/2022

Invitation for Proposals

Seismic acquisition and/or acquisition of any other geophysical, geological, or geochemical data, onshore South Africa

1 Introduction

South Africa is currently preparing for the release of open acreage onshore under license rounds to be scheduled following the enactment of the Upstream Petroleum Resources Development Bill (UPRDB), 2021, currently before Parliament. While committed to achieve carbon neutrality by 2050, it remains the Government of South Africa's stated policy and desire to develop the country's indigenous natural gas and oil resources to ensure national energy security, stability, and economic development. South Africa is on a clear path to respond to national developmental imperatives by exploring, discovering, quantifying and developing its indigenous petroleum resources in an environmentally sustainable and responsible manner.

In pursuance of sustainable development of South Africa's onshore petroleum resources that is likely to require hydraulic fracturing of the gas bearing zones, the Department of Forestry, Fisheries, and the Environment recently published regulations for hydraulic fracturing for public consultation in terms of the National Environmental Management Act.

The Department of Mineral Resources and Energy hereby invites proposals from seismic acquisition, seismic processing or any other companies involved in exploration data acquisition or enhancement, to enter into an agreement with the Petroleum Agency South Africa ("PASA" or "the Agency") for data acquisition and/or enhancement over all or any of the areas shown below. The new datasets will be released as part of a licensing round program and be a mandatory purchase for prospective bidders as part of the bid package, timing and terms are to be negotiated.

Open areas for release under license round to be held in terms of the new Act have been identified. The proposals for data acquisition and processing may include one or both areas shown in Figure 1 which forms part of the greater Karoo Basin. Other data acquisition survey proposals such as gravity and magnetic surveys, magneto telluric surveys and/or geochemical surveys will also be considered.

Activities relating to the acquisition of new data shall be undertaken at the risk of the Company proposing such activities in response to this invitation for proposals. Successful Companies bidding on the acquisition and processing of new data will be required to apply for, and be granted a reconnaissance permit to conduct operations in the proposed areas.

The State through the Petroleum Agency SA will consider contributing to the cost of the work program and share in the financial risk exposure of the project. The nature and quantum of this contribution to costs will be the subject of negotiation between the Agency and successful bidding Company(ies). PASA will remain the rightful owner of the newly acquired data, whilst the Company will be granted shared marketing rights for a period of ten years, renewable by agreement. Terms and conditions relating to profit sharing and skills transfer will be discussed with the Companies that submit proposals and shall form part of an agreement to be entered into between the selected Company and PASA.

PASA shall host a non-compulsory briefing session for this invitation for proposals. Interested parties are therefore requested to register to receive communication regarding this invitation for proposals by sending an email to onshoresurvey@petroleumagency.co.za.

Proposals to acquire and/or process seismic data will be evaluated in line with the scoring schedules included below. Proposals for any other type of data acquisition will be evaluated on their respective merits.

2 Project Objectives

The Department of Mineral Resources and Energy (the Department) through PASA is evaluating and promoting South Africa's frontier onshore for petroleum. In this quest, Petroleum Agency SA seeks to engage a competent Company for the following:

- 2.1. Acquire new 2D land seismic data over one or both areas identified to obtain modern high-resolution subsurface seismic images to map and improve understanding of the regional geology of the subterranean south-central Karoo Basin. Imaging objectives include improved delineation of structures, faults, fault

closures, stratigraphic traps, fluid escape features, dolerite sill and dyke complexes within Beaufort and Eccra groups of the Karoo Supergroup compared to the legacy data.

- 2.2. Processing of the newly acquired data and compiling data packages that will be offered for sale to companies interested to evaluate the area(s) using a licensing framework that provides cost recovery mechanisms for the Company inclusive of a profit-sharing arrangement from the data sales with PASA.
- 2.3. Supporting PASA and the Department in brokering and marketing the data prior to and after the licensing and any specialized reprocessing that may be required by the licensees of any block.
- 2.4. An initial regional interpretation of the data to demonstrate the prospectivity of each block and rank their relative value.
- 2.5. Engaging PASA staff in the acquisition, processing, and interpretation of the newly acquired data as an integral part of technology transfer and capacity building.

3 Proposals for Data Acquisition and Processing

Proposals will be accepted at the discretion of the Petroleum Agency SA.

There are two (2) license areas for which Companies may send proposals for data acquisition and processing. Companies may submit proposals for one or both of the planned license blocks.

Companies submitting successful data acquisition proposals will be required to apply for a reconnaissance permit and Environmental Authorisation in terms of the Mineral and Petroleum Resources Development Act, 28 of 2002 read together with the National Environmental Management Act, 107 of 1998.

The areas/blocks for the preparation of proposals are described below.

4 Description of the Onshore Planned License Areas

The area is situated in the southern part of the Karoo Basin and is subdivided into two large regions; a western area, Block A (~162 000km²) and an eastern area, Block B (~57 000km²). The total licence area is ~219 000 km² but may be divided into smaller areas for the purposes of a proposal (*Figure 1*).

The areas are sparsely covered by single fold 2D seismic data acquired in the 1960s and 70's. The seismic data available over the areas is only available in digital analogue format (scans/vectorised versions of the original seismic profiles) and the quality is generally poor.

Aero-magnetic data over the identified areas were collected during the national aeromagnetic survey for South Africa between the years 1958 and 1997. It was flown in two primary sections – the Karoo survey, done between 1976 and 1982 and covering almost half of the country; and the rest, which was surveyed by various Companies over a period of more than 30 years, starting in 1958 and ending in 1997.

In Block A, there are 13 wells/stratigraphic boreholes, drilled between 1965 and 2020, with an average depth >3000m. In Block B there are two deep wells with an average depth ~3500m. All wells intersected the organic-rich shale (likely source rocks) of the Permian Ecca Group.

Results from some of the exploration wells indicate that no oil was observed, but drill stem tests and water analyses indicate the presence of methane, ethane and small amounts of propane. In Block A, high-pressure low-volume gas shows were encountered in the southern Karoo Basin and as an example, the well CR 1/68 had methane gas flowing out of fractured Upper Ecca shales. In Block B, groundwater research performed on the deep stratigraphic research borehole sampled black fluid with a strong petroleum smell. Methane was also identified to be leaking from the borehole.

Further analysis on the organic-rich shales of the Permian Ecca Group indicates that the shales are likely Type I/II source rocks and have TOC values that range from 2 – 16 wt%, but very high maturities (from 1% to > 4% VRO).

The area is broadly regarded as frontier in respect of oil and gas exploration. However, based on historical data and information, internal archives and public data, the area has both oil and gas shows at surface. Gas occurrences in association with dolerite sills have been observed in the Beaufort Group and also in the Ecca Group in water wells and deep exploration wells without the presence of dolerite sills. Also, the area Block B hold the Molteno Coal deposits that could be prospective for CBM.

In terms of infrastructure, the area is serviced by a road network consisting of both highways and main roads that are owned and maintained by the South African National Roads Agency (*Figure 2*). Furthermore, the areas are within 100-400km of air and seaports of Cape Town, George (air), Mossel Bay (sea), East London (air and seaports), Ngqura (seaport), Port Elizabeth (air and seaports) and Durban (air and seaports). The Ngqura (Coega) Industrial Development Zone (IDZ) is one of the selected sites for the development of a 1000MW Gas to Power Station. The land within the license blocks consists of privately owned farmlands, commonage land and communal land managed by tribal authorities.

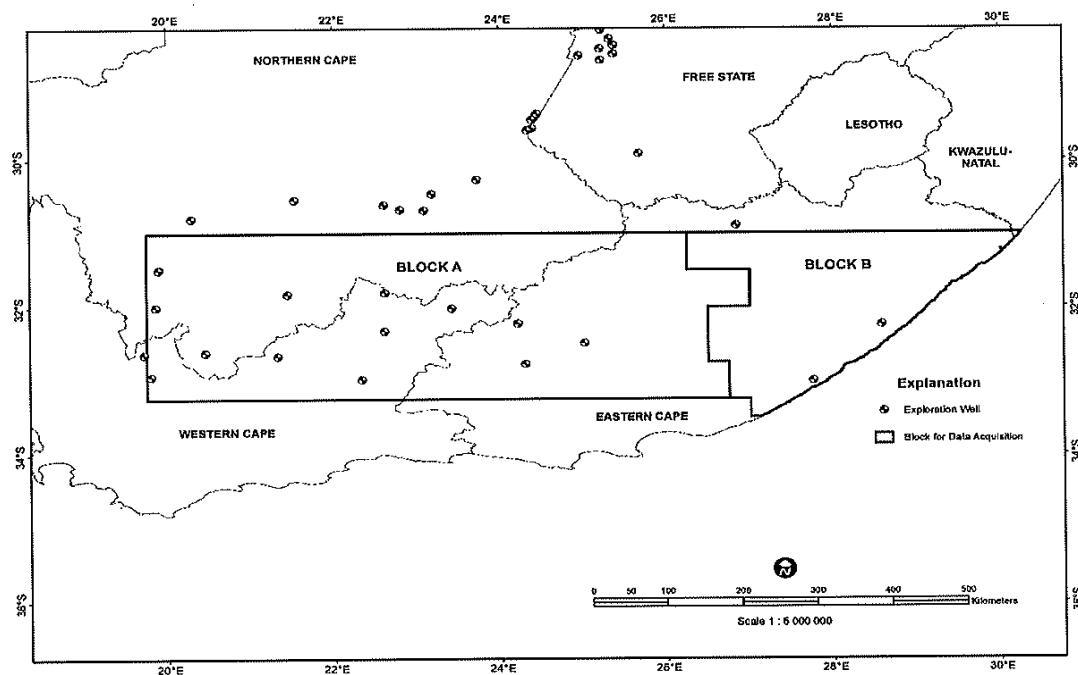


Fig 1: Onshore areas/blocks for new 2D seismic and geophysical data acquisition.

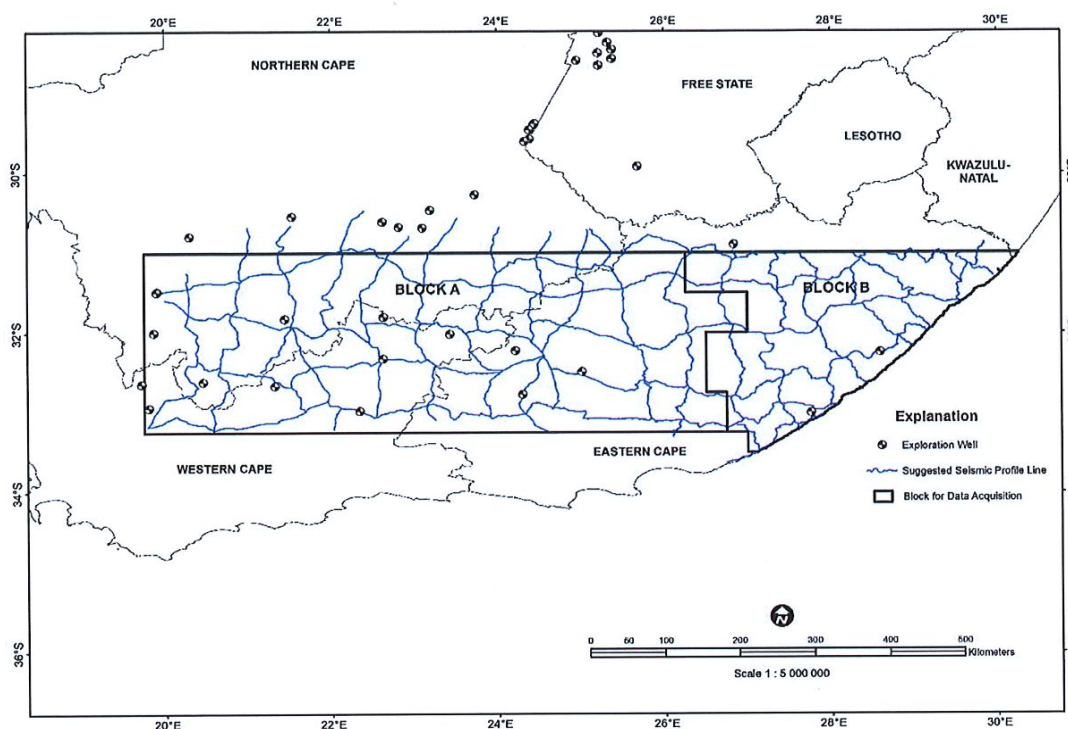


Fig 2: Suggested profile lines for 2D seismic and geophysical data acquisition along existing roads.

5 Submission of Proposals

Companies wishing to submit proposals may do so for one or both of the areas described above.

Proposals must clearly demonstrate a good understanding on the part of the proposing Company of what is required including the permitting process and nature of agreement to be entered into with Petroleum Agency SA, as well as the timeline involved in return on the investment to be made.

The new data acquired under these proposals are to be released as part of the licence round package for these areas. This will only be possible once the UPRD bill is enacted. In addition, the successful proposing Company will be required to apply for a reconnaissance permit following all the normal requirements, including environmental authorisation for seismic or other new data acquisition at the sole risk of the successful Company.

In addition to demonstrating a good understanding of what is required, the following are required.

6 Requirements of Proposals for New Data Acquisition and Processing

6.1 Seismic Acquisition

- 6.1.1 The Company will be required to provide the seismic data acquisition and processing technology it intends to deploy in the survey. A comprehensive overview and description of the field equipment, redundancy (back-ups) of equipment and logistics consideration during acquisition given the large areal extent must be issued as part of the proposal submitted.
- 6.1.2 Companies will be permitted to visit data rooms at PASA to view existing data to enable them to review and propose the total number of line kilometers and develop an initial field operations plan. The production efficiency of the proposed survey design considered with the extent of the coverage as indicated by the planned total number of line kilometers will be important criteria in evaluating the proposals received.
- 6.1.3 Whilst the start date of the project remains unclarified, a conceptual time frame for the acquisition program, including, but not limited to, considerations such as mobilization duration, pre-survey compliance inspections, daily on-line production targets, statics survey production, planned downtime and equipment maintenance, logistics to ensure efficient operations over such a large area, etc. is required and will form a criterion for evaluating proposals.
- 6.1.4 The Company is required to provide an indicative cost of the survey based on (6.1.1, 6.1.2 and 6.1.3) which will also inform initial proposals for cost and revenue share agreements between the Company and PASA.
- 6.1.5 The Company should demonstrate a full understanding of, and compliance to internationally accepted Health, Safety, Environmental and Quality policies, practices and procedures while carrying out seismic/geophysical data operations.

- 6.1.6 Temporary work opportunities that could be provided for locals during field operations must be indicated.

6.2 Processing Requirements

The following information regarding the processing of the data must be specified as a minimum in the proposal:

- 6.2.1 The Company is required to have sufficient personnel, equipment, management and highly effective QA/QC procedures and organizational processes to conduct the works as required.
- 6.2.2 An initial (expected) processing sequence to process the data must be specified.
- 6.2.3 The parameter testing philosophy of the company must be clarified i.e., the extent to which additional parameter trials to improve data fidelity are accommodated in the processing of the data.
- 6.2.4 The company should clarify how PASA personnel would be provided opportunities for skills transfer during the parameterization trials and processing QC.
- 6.2.5 Only Companies complying with these requirements and demonstrating successful track record, listing projects, clients and provide client contacts details for reference should respond to this invitation for proposal.

6.3 Other Requirements

The Company should have proven experience of land 2D Vibroseis multi-client Seismic Data Acquisition and /or processing on schedule within specific timelines.

In addition, Companies are required to submit the following for both acquisition and processing:

- 6.3.1 Conceptually provide the earliest timeframe of 2D seismic crew mobilization availability (for example – from date of contract award).
- 6.3.2 Lists of similar 2D land seismic data acquisition work undertaken successfully in the last five years and projects currently under execution.
- 6.3.3 Details of any previous experience of a similar type in South Africa.
- 6.3.4 Details of key personnel proposed to be involved in the project including their bio-data.
- 6.3.5 Management structure of the company.
- 6.3.6 Operational QA/QC procedures: acquisition and processing.
- 6.3.7 Health, Safety and Environment policies, procedures and statistics covering the last 3 years.
- 6.3.8 Company's financial performance documents (Audited Balance Sheets and Profit and Loss Statements etc.) for last 3 years.
- 6.3.9 Project plan, timeline, and description of project deliverables.
- 6.3.10 Any other relevant information.

7 Evaluation schedules and weightings

7.3 Onshore Evaluation Criteria Summary

	Onshore Evaluation Criteria	Contribution
7.3.1	Quality of proposal (<i>Overall understanding and meeting scope of requirements</i>)	20%
7.3.2	Profit sharing mechanism proposed.	15%
7.3.3	Skills transfer / training opportunities proposed.	15%
7.3.4	Non-proprietary / speculative surveys experience	10%
7.3.5	Acquisition Technology	10%
7.3.6	Processing Technology	10%
7.3.7	2D surveys > 1 000km <u>acquired and processed</u> in last 5 years	5%
7.3.8	Client feedback gathered from references provided	5%
7.3.9	Company SHEQ / ISO certification	5%
7.3.10	Acquisition and processing project plan	5%

7.3.1 Quality of Proposal

20%	Quality of Proposal
	<ul style="list-style-type: none"> Overall commitment, understanding and meeting scope of requirements, being to obtain modern high-resolution imagery that improves on the imaging provided by the legacy data to map and understand regionally the geology of the subterranean south-central Karoo Basin.
Score	Evaluation targets
5	<ul style="list-style-type: none"> Excellent proposal - The important issues are approached in an innovative and efficient way, indicating that the bidder has the required knowledge of state-of-the-art approaches to successful acquisition and processing projects. Proposed project execution plan is tailored to address the project objectives, and sufficiently flexible to accommodate changes that may occur during execution. The quality and risk management plans plan are tailored to the critical characteristics of the project. The primary objectives and key success factors are identified and to be pursued in an efficient way using state-of-the-art methodologies and technologies. The proposed approach details ways to improve the project outcomes and quality of the outputs.
4	<ul style="list-style-type: none"> Very good proposal Proposed project execution plan is tailored to address specific project objectives and methodology, and is sufficiently flexible to accommodate changes that may occur during execution. The quality plan and approach to managing risk etc. are tailored to the critical characteristics of the project.
3	<ul style="list-style-type: none"> Good proposal Proposed project execution plan is satisfactory and partially tailored to address the project objectives. The approach minimally deals with the critical characteristics of the project. The quality plan, and approach to managing risk etc. are compliant with project specifications.

2	<ul style="list-style-type: none"> • Average proposal • Proposed project execution plan is of a generic nature and not necessarily tailored to address the project objectives. • The approach does not meaningfully deal with the critical characteristics of the project. • The quality plan, and approach to managing risk etc. are generic.
1	<ul style="list-style-type: none"> • Poor proposal • The proposed project execution plan is poor and unlikely to satisfy project objectives and requirements. • The company has misunderstood certain aspects of the scope of work and therefore does not deal with the critical aspects of the project.
Eliminated	No technical proposal submitted by the company

7.3.2 Profit-sharing

15%	Profit-sharing mechanism proposed.
	<ul style="list-style-type: none"> • <i>The profit-sharing mechanisms proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive.</i> • <i>Different bidders' profit-sharing proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score.</i> • <i>The profit-sharing scheme will be a subject for further negotiation upon identifying preferred bidders.</i>
Score	Evaluation targets
5	Most attractive initial profit-sharing proposal
:	Ranking fitted
1	Least attractive initial profit-sharing proposal
0	Ignored requirement

7.3.3 Skills Transfer and Training opportunities

15%	Skills transfer and training opportunities.
	<ul style="list-style-type: none"> The training and experience opportunities proposed in bids will be ranked against each other and the rank fitted into the 5-point scale with 5 being the most attractive and 1 the least attractive. Different bidders' skills transfer proposals may be ranked as equally attractive, or not, and be awarded the same evaluation score. The training and experience opportunities during work program execution will be a subject for further negotiation during contract negotiations.
Score	Evaluation targets
5	Most attractive training and experience exposure proposal
:	Ranking fitted
1	Least attractive training and experience exposure proposal
0	Ignored requirement

7.3.4 Non-proprietary survey experience

10%	Non-proprietary / speculative surveys experience
<i>Scores of 1 or 3 not provided for in this criterion</i>	
Score	Evaluation targets
5	<ul style="list-style-type: none"> Bidder <u>has demonstrated track record</u> of successfully acquiring, processing, promoting and licensing non-proprietary, multi-client onshore 2D seismic data during the last 5 years. Bidder has provided contactable references to support track record. Bidder's contactable references include African NOCs and African Oil and Gas sector regulators.
4	<ul style="list-style-type: none"> Bidder <u>has demonstrated track record</u> of acquiring, processing, promoting and licensing non-proprietary, multi-client seismic data successfully during the last 5 years. Bidder has provided contactable references to support track record.
2	<ul style="list-style-type: none"> Bidder <u>has provided a list</u> of acquisition, processing, promoting and licensing of non-proprietary, multi-client seismic data projects during the last 5 years.
0	Bidder has not provided a list of projects

7.3.5 Acquisition Technology, equipment and personnel

10%	Acquisition Technology, Equipment and Personnel
<ul style="list-style-type: none"> • <i>2D acquisition technology offered</i> • <i>Availability of in-field QC processing capabilities</i> • <i>Willingness demonstrated to improve on existing seismic imaging of Karoo basin</i> • <i>Technical support available to field crew</i> • <i>Average experiences of party chiefs in Company</i> 	
<i>Scores of 1 or 3 not provided for in this criterion</i>	
Score	Evaluation targets
5	<ul style="list-style-type: none"> • Proposal demonstrates that local imaging challenges and the acoustic nature of the sedimentary sequences of the Karoo basin is understood • Bidding document provides comprehensive proposals to mitigate expected imaging challenges such as, but not limited to field parametrisation trials for every area (source and receiver array configurations, sweep lengths, sweep frequencies, near surface static determination, etc.) • Comprehensive list of in-field acquisition equipment, including levels of key equipment redundancy, mechanical and electronic maintenance support available in (or near) field operations • Proposal includes case histories of in field seismic QC and QA with examples of quality criteria used in the field. QA procedures also include preliminary/fast-track stacks of newly acquired lines processed in field. • Average experience of current party chiefs > 10 years
4	<ul style="list-style-type: none"> • Proposal demonstrates that local imaging challenges and the acoustic nature of the sedimentary sequences of the Karoo basin is understood • Bidding document provides comprehensive proposals to mitigate expected imaging challenges such as, but not limited to field parametrisation trials for every area (source and receiver array configurations, sweep lengths, sweep frequencies, near surface static determination, etc.) • Comprehensive list of in-field acquisition equipment, including levels of key equipment redundancy, mechanical and electronic maintenance support available in (or near) field operations.
2	<ul style="list-style-type: none"> • cursory references to local conditions and imaging challenges without firm proposals how to mitigate • Bidding document contains generic proposals to field parametrisation (source and receiver array configurations, sweep lengths, sweep frequencies, near surface static determination, etc.) • No clear articulation of technical, mechanical or electronic support available to field crew during acquisition operations.

0	Cursory references to local conditions and challenges without firm proposals how to mitigate Generic list of in-field acquisition equipment, redundancy levels not clarified, mechanical and electronic maintenance support available in (or near) field operations not clarified.
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7.3.6 Processing Technology

10%	Processing Technology
<ul style="list-style-type: none"> <i>Proposed processing treatment demonstrates understanding of local imaging challenges</i> 	
<i>Scores of 2 or 4 not provided for in this criterion</i>	
Score	Evaluation targets
5	<ul style="list-style-type: none"> Demonstrate that local imaging challenges and the acoustic nature of the sedimentary sequences of the Karoo basin is understood Bidding document provides comprehensive proposals with relevant processing technology to mitigate imaging challenges of earlier surveys. Flexibility offered in parameter testing and refinement of processing parameters.
3	<ul style="list-style-type: none"> Bidding document's treatment and proposals to mitigate imaging problems of legacy data are generic in nature.
1	<ul style="list-style-type: none"> Cursory references to local conditions and challenges without firm proposals how to mitigate
0	Processing challenges not addressed

7.3.7 2D surveys > 1 000km acquired, processed last 5 years

5%	2D surveys > 1 000km acquired, processed last 5 years
<ul style="list-style-type: none"> <i>2D survey experience can be proprietary or speculative.</i> <i>List survey size, operator, region, high level acquisition parameters- cable length, record length, project plan efficiency (actual vs planned)</i> 	
Score	Evaluation targets
5	>=5 surveys with contactable references for 3 surveys
4	>=3 surveys with contactable references for 3 surveys
3	>=5 surveys but less than 3 references provided

2	>=3 surveys but less than 3 references provided
1	<3 surveys
0	No surveys listed

7.3.8 Client feedback from references provided

5%	Client feedback from references provided
<ul style="list-style-type: none"> <i>Averaged qualitative rating feedback sourced from references provided</i> 	
<i>Scores of 3 not provided for in this criterion</i>	
Score	Evaluation targets
5	Exceeded expectations, will use again, will recommend
4	Met Expectations, will use again, will recommend
2	Will use again but with stricter operator oversight
1	Will not use again

7.3.9 SHEQ Certification

5%	Up to date SHEQ Certification
<ul style="list-style-type: none"> <i>The company must have a good track record and provide relevant certification. (e.g. ISO 45001, ISO14001, ISO 9001)</i> 	
<i>Scores of 1, 2 or 4 not provided for in this criterion</i>	
Score	Evaluation targets
5	Demonstrated valid certification
3	Lapsed certification; In process to renew
0	No certification

7.3.10 Project Plan

5%	Project Plan
	<ul style="list-style-type: none"> • <i>The Company must demonstrate competency in the planning and solution in delivering the project.</i> • <i>The Company must provide a comprehensive project plan outlining the critical milestones and timelines using the survey assumptions in this proposal.</i> • <i>The project plan must indicate pre-survey activities – mobilisation and compliance and safety inspections; acquisition operations – static surveys, line operations, logistics, camp moves; processing operations – infield QA processing, PSTM processing as well as the regional interpretation of the newly processed data.</i>
Score	Evaluation targets
5	Comprehensive and complete project plan adequately addressing critical aspects of the scope of work - adequate and experienced team, resulting in quickest turn-around and superior product
4	Comprehensive and complete project plan adequately addressing critical aspects of the scope of work i.e. – timelines, resources, outputs
3	Project plan addressing all critical aspects of the scope of work
2	Generic project plan not addressing critical aspects of the scope of work
0	No project plan submitted

Printed by and obtainable from the Government Printer, Bosman Street, Private Bag X85, Pretoria, 0001
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