



Government of Montenegro
MINISTRY OF ECONOMY



FIRST BID ROUND
2013/2014
**HYDROCARBONS
EXPLORATION AND
PRODUCTION
IN MONTENEGRO**





Government of Montenegro
MINISTRY OF ECONOMY





Dear Investor,

The Ministry of Economy of Montenegro has the honour to invite you to participate at the First Tender for Award of the Hydrocarbons Production Concession Contract in Montenegro offshore, published on 7th August 2013 by the Government of Montenegro under the Law on Exploration and Production of Hydrocarbons. The current deadline for submission of applications/bids expires on 28th February 2014 at 15:00 (UTC+01).

The upstream hydrocarbons sector is recognized as one of priorities of the Government of Montenegro and we are pleased to inform you about the achievements done in this area. This is even more the case as we emphasize some of the advantages of Montenegro concerning its good climate in the midst of the Mediterranean and good connectivity with the rest of the world, political stability translated in the EU member state candidate status that Montenegro has, and economic predictability derived from the use of Euro as legal tender.

Objective of Montenegro is to create predictable environment in this sector and thus, in addition to adopting the sector specific law, the Government of Montenegro has also adopted the Hydrocarbon Upstream Industry Fiscal Policy, while the other supporting regulations are to be adopted during the bidding process.

Should you have any questions or queries, please do not hesitate to contact the Ministry of Economy, directly or through the web site www.petroleum.me, where you can also find all details concerning the data room with seismic, geological, geophysical, geochemical and other data.

I hope you will have an opportunity to visit our country and meet with our team to discuss further all the relevant information you may need and that you will find all these sufficiently interesting to participate at the First Bid Round.

Sincerely,

A handwritten signature in blue ink, consisting of a stylized 'V' followed by a long horizontal stroke that curves upwards at the end.

Vladimir Kavarić, PhD
Minister
Ministry of Economy
Government of Montenegro



Meeting oil and gas perspective in Montenegro

Several years ago the Government of Montenegro and the Ministry of Economy started redefining the field exploration and production of oil and gas, with an aim to create legal and institutional framework, which will define valorization of hydrocarbon potential of Montenegro.

As a result, Montenegro adopted the Law on Exploration and Production of Hydrocarbons, which covers only upstream hydrocarbons' activities and is fully harmonized with the EU Directive 94/22/EC. The Law outlines the system that Montenegro will apply, which will include concession based royalty + tax system. Montenegro has announced the first public invitation for the award of the concession contract for exploration and of the concession for production of hydrocarbons in Montenegro offshore area. In the first bid round the Government offered blocks in offshore area for the Production Concession Contract.

Both, this public invitation and exploration and production of oil and gas will contribute to a more extensive development of this sector of industry in Montenegro.

Montenegro is located in the Southeast Europe, on the Adriatic Sea, and covers the area of 13,812km². It consists of three regions: southern, central and northern. The coastline of about 300km is located in the southern region, which is primarily tourism oriented. The central region is the largest. It has the most fertile land and major industrial activities are located in this part. The northern region is a mountainous area with significant coal reserves.





Geological Country profile

GEOLOGICAL PERSPECTIVE

Montenegro falls within the external part of the Dinarides Fold-and-Thrust Belt and comprises southwest facing folds and thrusts developed during the Alpine Orogenesis during the Miocene and Early Pliocene. The Dinarides fold belt is separated from the Italian Apennine fold belt by the Adriatic foredeep basin and the two fold belts are nearly a mirror image of each other, as can be seen on the cross section shown on figure 2. The far side of the Adriatic – Ionian basin is represented by the Apulian carbonate Platform in Italian waters. Giant oil fields were discovered in Mesozoic carbonate traps, and a variety of gas fields in tertiary reservoirs

along the edge of the platform in the Italian Apennine fold belt. In Albania the oil and gas fields are located in both cretaceous carbonate and tertiary clastic reservoirs of the Dinarides fold belt. The Adriatic – Ionian basin is also known as the Ionian Zone. Near the coast this is overlaid by the post-tectonic 'Post Adriatic Depression', formed of Miocene to recent molasse. The Ionian Zone crops out in Southern Albania, where seven oil fields were discovered in the carbonates, demonstrating that basinal carbonates can be effectively charged with commercial volumes of oil.

In the offshore area of Montenegro both within the Dinarides thrust belt and in the adjacent Adriatic-Ionian foreland basin prospects were identified. The stratigraphy offshore Montenegro is dominated by a Mesozoic to Middle Eocene rift to passive margin sequence with up to 3.5 km of platform carbonate, shale and evaporates deposits.

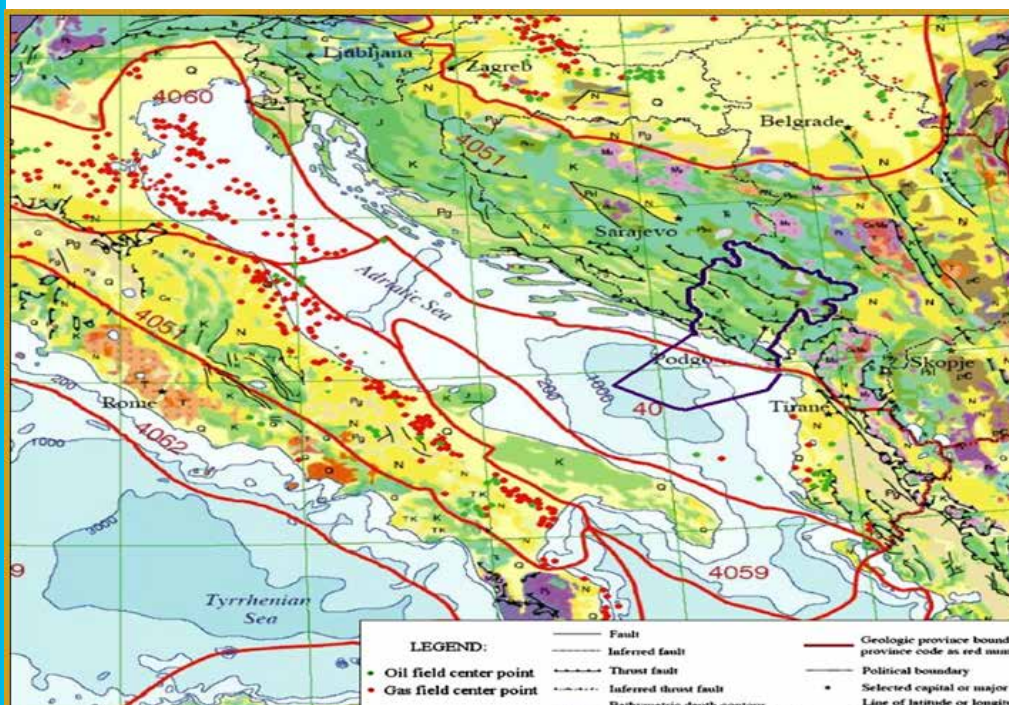


Figure1. Geology, Oil and Gas Fields and Geological Provinces of the South-East

This sequence contains a number of source, reservoir and seal intervals, proven both in wells and from outcrop studies. Beneath the carbonates, the lower to Middle triassic, primarily continental sequence, includes some marine clastic intervals with combined reservoir and seal potential. The carbonates are succeeded by prospective Palaeogene (oligocene, eocene), neogene (Miocene, Pliocene) and Pleistocene sequences with thick developments of turbidite shale and sandstones, deposited in the foredeep in

front of and beneath the carbonate thrust structures. In offshore wells, gas-bearing sandstones and conglomerates have been found, which are thought to be involved in both stratigraphic and combination traps. Direct hydrocarbon indications are interpreted on the marine seismic data in the offshore Montenegro, with bright events, positive AVO effects and gas chimneys in several zones within the oligocene, Pliocene and Pleistocene sequences.

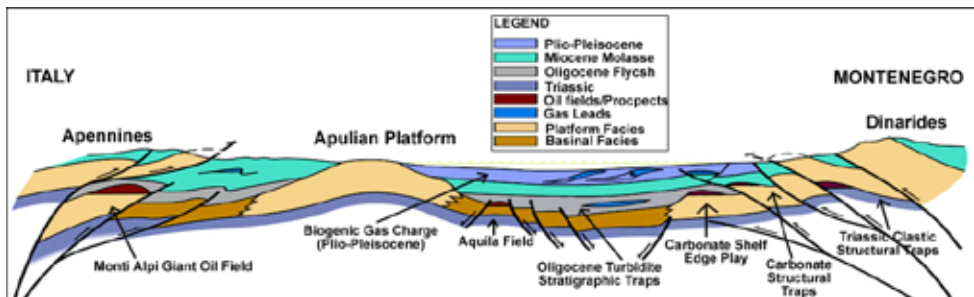


Figure 2. Schematic cross-section Apennines – Apulian Platform –Southern Adriatic Basin-Dinarides

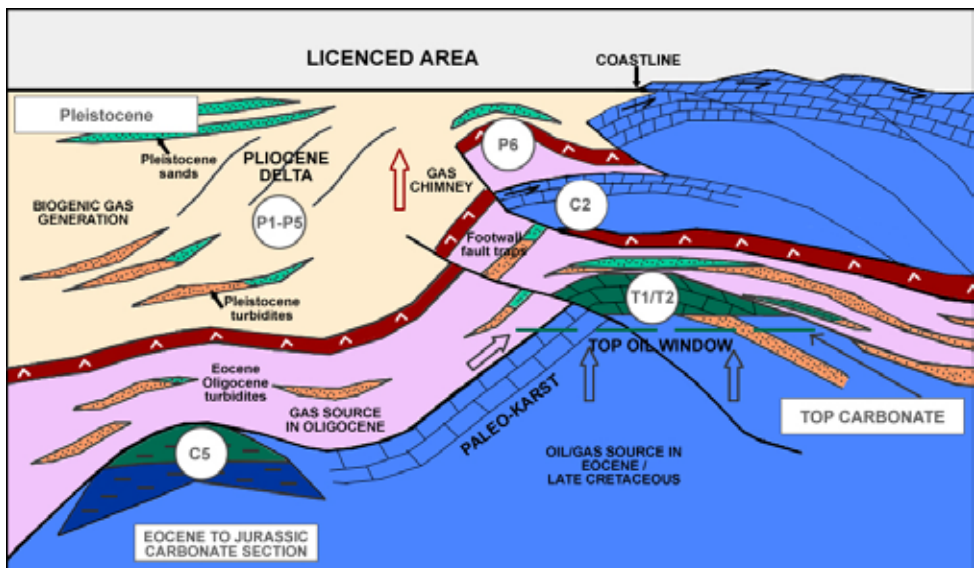


Figure 3. Schematic cross section summarising the hydrocarbon play concepts in Montenegro



ЛИСТ ЗА ПОЛИТИКУ И КЊИЖЕВНОСТ

Управление в авторском издании: Игорь Бондарев

Interesting Trap Styles

Thermogenic oil generation of source rocks took place from the eocene to late triassic carbonates with indigenous oil and gas migrating up dip and up faults into traps at triassic clastic and top carbonate levels. Evidence from the Apulian Platform suggests that there may be significant additional hydrocarbon source potential from within the Triassic sequence offshore. Structural trap types include hanging wall ramp anticlines and footwall anticlines and fault traps. The eocene and Oligocene clastic reservoirs could form both structural and stratigraphic traps with thermogenic oil and gas migration into them, while Pliocene and Pleistocene traps would most likely be charged by biogenic gas in a similar fashion to many of the Italian and Croatian foredeep basin gas fields. Wireline data gives a good indication of Palaeogene and neogene seal potential, with observed reservoir intervals capped and interbedded with marl and silty claystone. Miocene sequences in the wells comprise a massive claystone, thick, slightly silty in places and with Messinian anhydrite at the top providing an excellent seal potential. The carbonates reservoir zones have potential top-seal comprising eocene or oligocene shale.



Plenty of Potential

Offshore Montenegro is an attractive exploration area and identified prospects span a wide range of stratigraphic units. There is no data relating to Pleistocene reservoir quality from any of the Montenegrin wells, but analogies are found in Italy in the Barbara field located in the northern Adriatic for example and in Albania. The field has reserves of around 1.4 tcfg, which is 99.5% methane and most likely of biogenic origin. Production is conducted from Pleistocene turbidite sands between 1,000m and 1,400m depth. The average porosity is 30%, and permeability varies from 5 – 100 mD, to as high as 1 D locally. Gas is produced from comparable Miocene shelfal sand facies in Albania, where the reservoir quality of Miocene shelfal sand may resemble more the Pleistocene in Montenegro. Three oil fields and six gas fields have been developed in the neogene Durres basin, which overlies the Mesozoic Ionian zone in northern Albania. Porosities vary from 10 – 30% with a mean of 23%; the permeability of the Albanian Miocene shelfal sands varies from 2mD to 2 darcys, which should support significant gas production. This leads to conclusion that the reservoir quality of Miocene shelfal sands in Albania is most probably the closest analogy to the Pleistocene reservoir in Montenegro. Data supports the suggestion of a porosity range of 15% – 40% as input to reserves estimates for Pleistocene prospects with target depths of around 1,000 m.

During the early Pliocene times, a prominent delta system prograded from east to West across the Montenegrin offshore. Based on seismic data, bright areas can be identified at the bottom of a prograding delta, which have been interpreted as gas-charged turbidite



sands. The stratigraphy of the Pliocene was evaluated from well summary logs from offshore wells in Montenegro, Croatia and Albania. Several Pliocene prospects have been identified at depths ranging between 700m and 1,300m in waters of 75–120m. The area of these prospects is covered by 3D seismic data and the gas indicative nature allows the exploration risk to be considered as medium to low. An exploration well on one of the features would enable the drilling results to calibrate the seismic response. Given an initial successful result, it would seem likely that most of the prospects identified here would also be successful.

Mesozoic Carbonates

Potential for oil accumulations within Mesozoic carbonates has also been identified. Both Mesozoic and Palaeogene carbonates form a primary reservoir target offshore Montenegro, with the potential to produce substantial quantities of oil and gas. The carbonate reservoir facies with the optimum primary reservoir quality is believed to lie along the shelf break separating the Dalmatian Platform and the Adriatic-Ionian basin.

Seismic data demonstrates that the carbonate reservoir is likely to be developed in shelf edge facies, regarded as a low risk reservoir, in the centre of the offshore area. In Albania there is production from carbonate reservoirs in ten oil fields and one gas field, all in the pelagic Ionian Zone. Reservoir quality in the central Montenegrin offshore is expected to be of better quality than the Albanian fields, and the assumption is that it will resemble reservoirs at the Aquila field on the slope of the Apulia Platform, where production is conducted from carbonate slope and pelagic facies. The field lies close to the base of the Apulian platform palaeoslope, in a location which is essentially a mirror image of the Montenegrin side, and would correspond to down dip of the crest of identified prospects. The reservoirs are a mix of tight pelagic limestone and much coarser detrital, porous limestone, derived from the crest of the shelf.

Montenegro formed a part of Yugoslavia from the end of the WW1 until the country fell apart in 1992. Montenegro then formed a federate republic with Serbia until June 2006, when it declared independence. The economy of Montenegro has experienced progress since then, and it continued to grow despite the global financial crisis of the late 2010s. It is, however, heavily dependent on tourism and refined aluminum, and imports the most of its energy requirements, so development of hydrocarbons reserves through exploration of Montenegrin offshore could be an important addition to Montenegrin economy.



The Licensed offshore of Montenegro has been identified for biogenic gas within Pleistocene and Pliocene sands and for oil within carbonate structural features. Direct hydrocarbon indications are interpreted on the marine seismic data with bright events, positive AVO effects and gas chimneys in several zones within the Oligocene, Pliocene and Pleistocene sequences. The structural trap types include hanging wall ramp anticline, footwall anticlines and fault traps. The Eocene and Oligocene clastic reservoirs could form both structural and stratigraphic traps containing thermogenic oil and/or gas, while Pliocene and Pleistocene traps most likely can be charged with biogenic gas, similarly to foredeep basin gas fields in Italy and Croatia. A wide range of attractive prospects offers significant potential reserves at several stratigraphic levels.

Legal framework

CONCESSION CONTRACT

The Law on Exploration and Production of Hydrocarbons and its enabling regulations govern all the activities in the upstream sector in Montenegro; however, environmental and other issues not specific for the upstream sector are governed by relevant regulations.

<i>Production Concession Contract</i>	<i>Offshore</i>
Exploration phase (together with the reserves verification phase)	7 years + 2 years extension
Production phase	20 years + 10 years extension

Production field is limited to 150 square kilometers, or 300 square kilometers in case of production from several smaller deposits.

Decommissioning fund or some type of financial liability for decommissioning will be mandatory.

In July 2012, the Government of Montenegro adopted the Hydrocarbon upstream industry fiscal policy, Defined for the purpose of creating a sound fiscal system that implies a stable and transparent long-term tax Policy. At the moment Monenegro does not envisage any state participation.





HYDROCARBON UPSTREAM INDUSTRY FISCAL POLICY

<i>Fees</i>	<i>Upstream Industry Tax</i>
Tender application fee	Extra profit tax
Surface fee	Corporate profit tax for upstream companies
Royalty fee	

FEES

Tender application fee is a mandatory non-refundable fee that is paid on the occasion of applying to tender for the award of the Hydrocarbons production concession contract and it amounts to €35,000.

Surface fee (fee for the Production Concession Contract for the acreage used pursuant to the Production Concession Contract) - the amount of this fee will be adjusted every two years with Consumer Price index. It is paid once a year in advance for the following calendar year and its amount is increased by interest in case of untimely payment.

<i>Proposed amounts of the fees for area for hydrocarbon production</i>	
Years	Fee amount per km2 in €
1-7	300
8 and more	3000

Royalty fee (fee for the produced oil and gas for monthly extracted hydrocarbons) can be paid in kind or in monetary assets and there will be two types of royalties – one for oil and one for gas:

<i>Production in barrels</i>	<i>Royalty rate for liquid hydrocarbons, %</i>	<i>Royalty rate for gas, %</i>
≤ 10,000	5%	2%
>10,000 – <20,000	7%	2%
>20,000 – <30,000	10%	2%
>30,000	12%	2%

A special regulation will stipulate details for both surface fee and royalty fee.

UPSTREAM INDUSTRY TAX

Special law will regulate extra profit tax for hydrocarbons industry in Montenegro. The fiscal policy model introducing this type of tax is such that the tax rate will not exceed 50% of the net profit.

Corporate profit tax for upstream companies is submitted by upstream companies' application, through application of the general corporate profit tax. The corporate tax rate of 9% covers taxation of profit that is not generated in respect of upstream activities. Prescribing the rules for recognition of revenues and expenses for tax purposes is necessary. The same Law on taxation of upstream industry and secondary legislation would regulate taxation model for these activities.

DATA ACCESS

Data Room is particular working place, which is officially opened on October of 2011 and comprises specialized hardware and software support for accessing the Montenegrin exploration data. According to the Law on Exploration and Production

¹ Proposed rate for gas is low since there is no developed gas infrastructure in Montenegro and this is why it is proposed that environmental pollution fee should be introduced.

of Hydrocarbons, exploration data are the property of the Montenegro Government, represented by the Ministry of Economy. These data are available to the representatives of a legal person who is registered and approved by the Ministry, as Data Room user.

All available data on oil and gas exploration in Montenegro, including formerly acquired 2D/3D seismic reflective profiles and drilled wells logs, are accessible through specially created Project in oil-industry-standard software PETREL, within professional graphic working station.

The database contains all collected, processed and interpreted information about oil and gas exploration, on offshore and onshore of Montenegro.

The database of seismic, geological, geophysical, geochemical and other data on oil and gas exploration is complex and comprises: 2D processed seismic reflective profiles in SEG Y format and 2D filed data (raw shots) in SEG D format, acquired during previous years - 1979, 1983, 1984, 1985, 1986, 1988, 2000, in total length of 3.500 km, results of 3D seismic acquisition survey covering surface of 311 km², as well as numerous well data with logs available in LAS format.

Also, database contains information on applied parameters of seismic surveys (navigation data, technical information on excitation of seismic waves, the numerical procedure of processing and reprocessing, etc.), situational maps with the position of profiles, digital and analogue maps with identified structural prospects of oil and gas and diagrams of geophysical exploratory boreholes, geochemical and other methods of drilling core samples analysis.

Numerous reports and studies on conducted investigations, with results of data processing and interpretation in analogue and digital

form, are part of the available data.

Data Room includes special depot with physical drilling core samples of deep exploration wells, on offshore and onshore of Montenegro at the extent of about 40 m³.

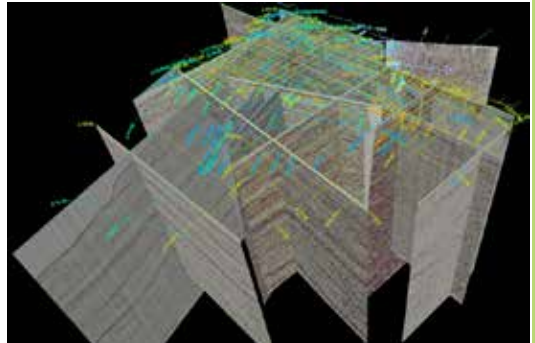


Figure 6: A three-dimensional presentation of 2D seismic reflection profiles. Different colours indicate the year of profiles acquisition.

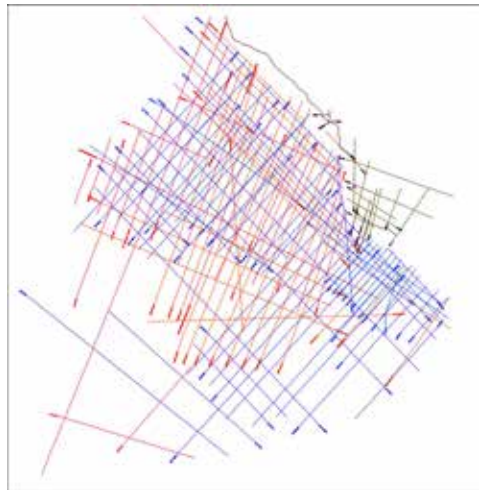


Figure 7: Spatial distribution of the 2D seismic reflective profiles acquired offshore Montenegro.



First Bid Round

HOW TO APPLY

The first bid round was published on 7th August 2013, with final deadline for application being 28th February 2014 until 15:00 UTC+01.

BLOCKS OFFERED FOR EXPLORATION AND PRODUCTION OF HYDROCARBONS

In its first bid round, Montenegro will offer 13 blocks/parts of blocks in the offshore area with sufficient level of available exploration data for the Production Concession Contract. Territory of Montenegro is divided into blocks (grid-based system) of 12x10 arc minutes in size, part of 1x1 arc degrees quadrants. One contractor can have several blocks awarded under a single contract, however the total area cannot exceed 50% of the total territory offered under a specific bid round. Deepest water is up to 600 meters.



General information on the procedure how to apply, applicable laws, available technical data and other relevant information are available on www.petroileum.me.

In addition to the very Public Invitation for submission of bids for award of the Hydrocarbons Production Concession Contract in offshore Montenegro, the following documents are also available free of charge on the website www.petroileum.me:

1. Attachment 1 – Law on Exploration and Production of Hydrocarbons (Hydrocarbons Law);
2. Attachment 2 – enabling regulations for upstream operations under the Hydrocarbons Law;
3. Attachment 3 – Draft Hydrocarbons Production Concession Contract;
4. Attachment 4 – Hydrocarbons Upstream Industry Fiscal Policy;
5. Attachment 5 – Defined areas for the First bid Round offshore Montenegro;
6. Attachment 6 – Environmental, tourism and fishery interests related requirements;
7. Attachment 7 – Application Guidelines, including forms on applicants data and its financial standing, HSE track record, and technical application
8. Attachment 8 – Bid guarantee form;
9. Attachment 9 – Statement on data confidentiality.

To access some of those documents potential applicants may need to register.

All questions and queries may be submitted to the tender@petroileum.me or to some of the contact details listed in the bidding documents. All answers will be provided within ten business days and answers will be distributed to all registered participants (with provided anonymity of the party asking the

question) and posted on the website www.petroleum.me for registered users. Even though there are certain qualification requirements, e.g. minimum equity amount, registration within a jurisdiction accessible to the Montenegrin authorities, relevant experience and HSE track record; the main evaluation will focus on technical application with aim to award the Production Concession Contracts to the applicants that promote sustainable resource management, as well as rapid and efficient Exploration and possibly Production of Hydrocarbons from the territory of Montenegro.

What is crucial for the evaluation of an applicant's submission is the geological understanding of the area in question, and the applicant proposals on how to carry out efficient Exploration of hydrocarbons. The applicants' proposed obligatory work program is important, but the ranking assigned by the authorities will be much more focused on quality than quantity of proposed activities.

GUIDELINE FOR APPLICANTS

A Production Concession Contract may only be awarded to a legal or natural person incorporated, registered and headquartered in a jurisdiction fully transparent to Montenegrin authorities. The same requirement applies also to an Affiliate of the Concessionaire awarded an exclusive Concession Contract.

A Concessionaire that is not resident of Montenegro shall establish and maintain a legal presence in Montenegro for fulfilling Concessionaire's obligations pursuant to applicable law related to the awarded Production Concession Contract.

All applicants should submit contact information to the Ministry of Economy, including an e-mail address, to assure that they will be included in any updates, modifications or other information related to the Invitation.

Once the application is submitted by the applicant and the list of applicants is published according to the Hydrocarbons Law article 23, cf. 16; applicants may not contact the Government or any related agency, body or organization, or their representatives, advisors or agents in regard to the Invitation, except when requesting clarifications, making appropriate enquires as specified herein.

Any attempt on the part of an applicant, or its agents, representatives or associates, with the apparent knowledge and approval of the applicant, to inappropriately influence the Government of Montenegro or inappropriately impact, influence or shape the outcome of the application procedure is a violation of Invitation rules and may lead to annulment of the application and, depending on circumstances may be sanctioned by penal provisions.





History line

1914

King Nikola confirmed the decision of the National Assembly in February 1914, to award Dutch industrial the concession for exploitation of oil in the region of Skadar Lake. The concession covered the area of 500 ha and was issued for the period of 50 years.

1922

After the World War I finished, interest in oil exploration reappeared; and Zuber brothers commenced with the drilling of the first exploration well, also in the region of Skadar Lake. At the depth of 250m, the drilling rig was broken and the discovery attempt failed. The drilling rigs bit never reached the target.

1949-1966

16 exploration wells on the continental part were drilled, which were drilled only based on the surface geology with no seismic data available at such time. The state-owned company "Nafta Crne Gore", which was established for this purpose, carried out the drilling.

1973

The exploration of hydrocarbons on this territory was taken over by the government owned company Jugopetrol Kotor, in cooperation with foreign companies. They were primarily engaged in downstream activities. Jugopetrol Kotor surveyed over

10000 km 2D seismic profiles at the sea, 1250 km 2D onshore, 400 km2 3D seismic explorations, in cooperation with foreign oil companies, on the continental part and offshore of Montenegro. Three wells were drilled on the sea: JJ-1 4750m deep, JJ-2 3700m deep and JJ-3 4606m deep. The well UK-1 5309m deep was drilled near the very shore.

2013

First bid Round under the Hydrocarbons Law announced.

BUSINESS ENVIRONMENT

Montenegro is secure, economically and politically stable country; with potential to continue economic growth, especially since its independence in 2006. Security and prosperity of Montenegro created conditions for future integration in European Union and North – Atlantic Treaty Organization (NATO). Negotiations with the EU began on 26 June 2012. Since January 2008, Montenegro implemented trade regulations, within the Agreement on stabilization and association with EU. Liberalization of trade continued from 2010 until 2012, when the country became an official member of the World Trade Organization.

Regulatory process in Montenegro is open and transparent. In order to improve business ambience, within regulatory reforms, one stop shop for registration of economic entities has been introduced. There are no limits in investing capital. Foreign investors can invest in any industry and freely transfer their financial and other means. Big national and international insurance societies insure investing projects in Montenegro.

MONTENEGRO TODAY

- Montenegro is the safest country in Europe
- Open market, political stability
- Sure path towards the EU and NATO (next member state)
- € as currency – a guarantee of quality
- Investors from more than 100 countries
- FDI inflows - €3.7 billion (2007-2011)
- Contracts for investments in tourism - €2.5 billion
- VAT of 19% at the standard rate and 7% at the reduced rate
- Corporate income tax - 9%
- It takes 4 days to register a company
- Registered capital €1, total costs €10, total procedure 4 days
- Only 3 documents are needed, on-line registration possible
- Privatized banking system
- Excellent telecommunication infrastructure
- Free access to the markets of the EU, Turkey and Russia
- Montenegro attracts everybody (the region, Europe, the world)
- We are bringing the world's best brands - operators, architects, planners, etc.
- Infrastructure issues are among the priorities of the Government
- Power plant investment packages are ready; undersea cable with Italy
- Elaborate plans for road infrastructure; modernization of airports
- We are looking for investors - to create and upgrade quality
- We are looking for investors - to bring the best brands and standards
- Montenegro is too small to put quantity before quality
- Sustainable Development - essentially the only viable option for Montenegro by respecting high standards of sustainability and the quality of context
- Business ambience / According to data from World Bank, Montenegro is ranked to 71st position, from 183 states. In yearly report of Fraser Institute of Montenegro is on 37th place regarding its economic freedom, from 141 countries.
- Montenegro implements agreements on free trade (FTA) with Russia, Turkey, European Union, Ukraine, EFTA and CEFTA signing countries, and has also signed 18 bilateral agreements on economic corporation and 22 bilateral agreements on investment protection and promotion
- Montenegro signed 42 agreements that regulate avoiding of double taxation of income and assets



USEFULL LINKS

Government of Montenegro
www.gov.me

Ministry of Economy
www.mek.gov.me

Ministry of Sustainable Development and Tourism
www.mrt.gov.me

Environmental Protection Agency
www.epa.org.me

Port of Bar
www.lukabar.me

Maritime safety department of Montenegro
www.pomorstvo.me

Adriatic Shipyard Bijela
www.asybijela.com

Geological Survey of Montenegro
www.geozavod.co.me

Montenegro Seismological Observatory
www.seismo.co.me

Hydro meteorological Service of Montenegro
www.meteo.co.me

Official Website of Montenegro
www.montenegro.travel

Airports of Montenegro
www.montenegroairports.com

www.petroleum.me

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PHOTO BY:
Duško Miljanić
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