



Tender Documents

Name of the Commercial Public Tender (hereinafter referred to as "Tender"):

"Providing of the Core Samples Analysis for year 2013"

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A. INSTRUCTIONS FOR BIDDERS

A.1 GENERAL INSTRUCTIONS

A.1.1 Identification of the Tender promulgator:

Name of the organization: NAFTA a.s.
COMPANY ID No.: 36 286 192
VAT ID No.: SK2022146599
Company registered office: Votrubova 1, 821 09 Bratislava
Registered in: Commercial Register of the District Court Bratislava I,
Section Sa, File No. 4837/B
Country: the Slovak Republic

Contact person: Mr. Jaroslav Kuník
Telephone: +421 34 693 4681
Fax: +421 2 4024 2516
E-mail: core.analysis@nafta.sk
Internet site: www.nafta.sk

A.1.2 Subject of the Tender:

Services related to the core sampling during drilling operations and consequently to the core samples analysis in the laboratory with the necessary analytical instrumentation. Air-tight preservation of core rocks directly at the rig site just after core removal, experimental investigation to determine the capillary threshold pressure at reservoir conditions of overburden (caprock), investigation of the prosity and permeability, grain-size distribution, uniaxial and triaxial mechanic tests, investigation of elastic properties of rock material (Young's modulus and Poisson's ratio), relative permeability, capillary pressures and grain-size distribution (reservoir rock).

Services will be applied for the following wells: Gajary 134 and Malacky Z-102.

A.1.3 Type of contract

1. Service contract for Gajary 134 well,
2. Service contract for Malacky Z-102 well.

A.1.4 Place and date of providing of services

The place and the date of providing of the services will be as follows:

Gajary 134, expected delivery term of realization: 05/2013
Malacky Z-102, expected delivery term of realization: 04/2013

A.1.5 Evaluation of proposals

Only proposals from bidders submitted in the manner and by the date pursuant to the tender call shall be evaluated.

The promulgator reserves the right to restrict the number of bidders after proposals are submitted and to invite the bidders determined in this way to individual negotiations about the terms and conditions.

The promulgator reserves the right to negotiate the proposal with the bidder in several consecutive rounds with the possibility to invite bidders to submit the updated quotation after each round of negotiations.

In case of several rounds of negotiations, the promulgator shall notify bidders in advance that the quotation they are going to submit shall be the final quotation.

A.1.6 Explanation and communication

Any communication and provision of information among the promulgator and bidders shall be carried out in writing or electronically. Address for written communication is provided in Point A.1.1 and e-mail address is core.analysis@nafta.sk.

A.2 INSTRUCTIONS FOR THE PREPARATION OF THE PROPOSAL

A.2.1 Content of the proposal

The submitted proposal shall contain the documents in the following order:

1. Name and precise address of the bidder, Company ID and contact data of the person authorized to act on behalf of the bidder in contractual relationships for further negotiation about the terms and conditions.
2. Cover letter with declaration of the aggregate maximum price (filled in form Annex No.3).
3. The declaration of the bidder that it agrees with the Tender conditions determined by the promulgator, signed by a person authorized to act on behalf of the bidder.
4. Declaration of the bidder on veracity and completeness of all papers, documents, and data mentioned in the proposal.
5. Guarantees of economic and specialized skills for the required deliveries and works.
6. References on implemented comparable events for the past 3 years.
7. The draft contract filled in and initialed by the bidder which is an inseparable part of the tender documents, to express consent with its terms and conditions while the contract approval shall be subject to the approval process of the bidder.

A.2.2 Execution of the proposal

The bidder may submit only one proposal.

The proposal shall be executed for the entire subject of the Tender in the Slovak or Czech or English language.

The proposal shall be executed in writing using a typewriter, computer printer, a pen with indelible ink etc.

The proposal shall be bound in one piece without a possibility of arbitrary replacement of individual parts.

The proposal shall be signed by the statutory body of the bidder in compliance with the extract from the Commercial Register or the person authorized for such acting. The original of the document proving authorization of the person to sign the proposal shall be a part of the proposal in such case.

A.2.3 Validity of the proposal

The minimum validity of the proposal shall be **by 30th June, 2013**.

A.2.4 Variant solution

Submission of the variant solution is not allowed.

A.3 SUBMISSION OF PRICE PROPOSALS

A.3.1 Designation of covers with proposals

Bidders submit proposals in the sealed envelope as well as in electronic form (in .pdf format) on the CD. The envelope shall be clearly designated with an inscription **TENDER - PROPOSAL - DO NOT OPEN** and the Tender slogan "**Core Analysis 2013**" while stating the registered office of the bidder (sender) and the registered office of the promulgator mentioned below.

A.3.2 Place and date of the price proposal submission

The proposals shall be delivered to the address:

NAFTA a.s.

Filling room

Mr. Jaroslav Kuník

900 68 Plavecký Štvrtok 900

Slovak Republic

by 01st February, 2013 till 12:00 p.m.

The proposals delivered after this hour shall be returned unopened to the bidder.

B. CONDITIONS OF PARTICIPATION

B.1 ECONOMIC AND FINANCIAL COMPETENCIES

Economic and financial competencies are being proved by the bidder by submission of the following documents and providing the following information:

1. An extract from the Commercial Register (presents a legal entity – enterpriser, natural person – entrepreneur entered in the Commercial Register),
2. Number of employees and professional structure of employees,
3. Financial situation and declaration – positive reference of the bank institution,
4. Declaration of the statutory representative of the bidder that no bankruptcy order was issued as at the date of the Tender calling, that it is not in liquidation and has no tax arrears registered.

B.2 TECHNICAL COMPETENCIES

Technical competencies shall be proved by the bidder:

- a. A list of implemented deliveries of the same or similar character implemented in the past 3 years by the bidder as the contractor is required,
- b. necessary requested instrumentations – affidavit required (see Annex No.1)

C. DESCRIPTION OF THE SUBJECT OF THE TENDER

Required technical specification (see Annex No.2)

D. PRICE PROPOSAL, INVOICING

D.1 METHOD FOR PRICE CALCULATION

1. The price for the subject of the Tender shall be set pursuant to Act of the National Council of the Slovak Republic No.18/1996 Coll. on Prices as amended.

2. The prices provided by the bidder shall be in EUR.
3. The bidder shall propose the price for the subject of the Tender in the following composition:
 - a/ the proposed contractual price VAT excl.,
 - b/ VAT rate and VAT amount,
 - c/ the proposed contractual price VAT incl.,
4. If the bidder is not a VAT payer, it shall provide the total proposed contractual price. It shall notify of the fact it is not a VAT payer (to be provided) in the proposal.
5. The bidder shall include all and any costs incurred in regard to the delivery of the subject of the Tender in the price.
6. The price mentioned in the proposal shall cover all costs related to the subject of the Tender – Annex No. 3 shall contain the total price for the subject of the Tender, i.e. the summary of all items including all other costs of the bidder.
7. The committee for the proposal evaluation may ask the bidder for clarification and justification of appropriateness of the proposed price.

D.2 INVOICING

The promulgator shall not provide advance payments.

The invoice maturity is within 30 days from the date of the invoice delivery to the registered office of the promulgator.

E. SUPPLEMENTARY CONDITIONS AND PROVISIONS

1. The tender documents shall be provided by the promulgator free of charge.
2. The promulgator shall reserve the right to change the Tender conditions or to cancel the Tender anytime. It shall inform the bidders on these facts.
3. The bidder shall not be entitled to compensation of costs related to the participation in the Tender.
4. Within the proposal evaluation the promulgator shall reserve the right to ask the bidders for explanation of the proposal or to verify some data and facts mentioned in the proposal.
5. No contractual relationship shall arise by the Tender closing and announcement of the Tender result.
6. The proposals shall not be returned to the bidders but they remain archived by the promulgator as a part of the tender documentation.
7. All documents and deeds submitted by the bidder to the promulgator shall be signed by the bidder, statutory body of the bidder or a member of the statutory body of the bidder or his/her representative who shall be authorized to act on behalf of the bidder in contractual relations. Authorization of this person shall be in compliance with the submitted documents on authorization to run business or a proxy.
8. The promulgator shall be entitled to select a proposal which is the most suitable while it shall not be obliged to inform on reasons of its decision. It shall also be entitled to refuse all submitted proposals.
9. The tender documents shall be subject to the trade secret without any time restriction.

F. LIST OF ANNEXES

Annex No. 1

Necessary requested instrumentations

Annex No. 2

Required technical specification

Annex No. 3

Cover letter for bidders

Annex No. 4

Draft Service Contract.

Annex No. 1)

Necessary requested instrumentations:

| | |
|---|--|
| <p>Bag-in-box package in a nitrogen ambience for preservation and storage of caprock drill core material.</p> <p>(Caprock preservation is beginning with the take-over of the drill cores directly at the rig site.)</p> | <p>Airtight plastic coated aluminium bags</p> |
| <p>Rock Drilling Machine</p> <p>With flushing and cooling equipment.</p> | <p>Several drill bits</p> <p>Diameter from 18 mm to 2"</p> |
| <p>Rock Cutting and Grinding Machine</p> <p>Semiautomatic high precision machine with specially adapted rock clamping devices and equipped to be used with different cooling liquids (water based, oil based and also for dry cutting).</p> | <p>Frequency controlled feed rate</p> |
| <p>Grinding Machine</p> | <p>Diamond blades</p> |
| <p>High Precision Analytical Balance</p> | <p>Accuracy 0.01 g</p> |
| <p>Drying and Conditioning Cabinet</p> | <p>Up to 300 ± 1 degree C</p> |
| <p>Conditioned Testing Chamber</p> <p>Temperature controlled chamber to guarantee reliable measurements of pressure and volume for tight reservoir rock and caprock.</p> | <p>Up to 60 ± 0.1 degree C</p> |
| <p>High Precision Dual Pump Q52-I</p> <p>Controlled flow and pressure through small volume electromechanical pressure generators.</p> | <p>Up to 53 MPa at a flow rate from 10 nl</p> |
| <p>High Precision Dual Pump Q52-II</p> <p>Controlled flow and pressure through small volume electromechanical pressure generators.</p> | <p>Up to 69 MPa at a flow rate from 10 nl</p> |
| <p>Servo-Hydraulic Testing Machine 1500 kN</p> <p>Very stiff load frame (3000 kN/mm), 2-channel digital controller</p> | <p>Max. load 1500 kN / 300 kN</p> <p>Grade 1</p> |

| | |
|--|--|
| <p>Servo-Hydraulic Testing Machine 600 kN</p> <p>Stiff load frame (1000 kN/mm), 3-channel digital controller</p> | <p>Max. load 600 kN</p> <p>Grade 1</p> |
| <p>Servo-Hydraulic Testing Machine 100 kN</p> <p>Low force load frame, 1-channel digital controller, for determining the unconfined compressive and tensile strength of weak rock and small size specimens</p> | <p>Max. load 100 kN</p> <p>Grade 1</p> |
| <p>Triaxial Pressure Cell DBTA-100-150 For operating pressures up to 100 MPa and axial loads up to 450 MPa. In-Vessel-Sensory for axial and radial deformation and temperature, spherical seated pressure plates, penetrated Pistons for the supply and drainage of fluids, for flowing fluids through specimen, changeable for specimen diameters from 1", 30mm, 1,5" to 2", pistons with ultrasonic transducers</p> | <p>Max. temperature 150 Deg C</p> <p>Max. pressure 100 MPa</p> |
| <p>Triaxial Pressure Cell DBTA-140-150</p> <p>For operating pressures up to 140 MPa and axial loads up to 450 MPa. In-vessel-sensory for axial and radial deformation and temperature, spherical seated pressure plates, penetrated Pistons for the supply and drainage of fluids, for flowing fluids through specimen, changeable for specimen diameters from 1", 30mm, 1,5" to 2", pistons with ultrasonic transducers</p> | <p>Max. temperature 150 Deg C</p> <p>Max. pressure 140 MPa</p> |
| <p>Electro Mechanical Pressure Intensifier EMD I</p> <p>For filling and pressurizing the confinement of triaxial cells</p> | <p>Max. pressure 100 ± 0.01 MPa</p> <p>Stroke 250 ccm</p> |
| <p>Electro Mechanical Pressure Intensifier EMD II</p> <p>For filling and pressurizing the confinement of triaxial cells</p> | <p>Max. pressure 200 ± 0.2 MPa</p> <p>Stroke 1000 ccm</p> |
| <p>Pneumatically Controlled Pressure Generator</p> <p>For filling and pressurizing the confinement of hydrostatic cells</p> | <p>Max. pressure 200 ± 0.2 MPa</p> |
| <p>Pneumatically Controlled Pressure Generator Mobile</p> <p>Mobile system for filling and pressurizing the confinement of hydrostatic cells</p> | <p>Max. pressure 200 ± 0.2 MPa</p> |

| | |
|--|--|
| <p>Permeameter Ambient</p> <p>Stationary or non-stationary gas permeability, Accuracy of pressure measurement ± 0.1 kPa by 1% of measured value, Mass flow rate measured with electronic flow meters.</p> | <p>Ambient Perm range 10^{-12}m^2 to 10^{-18}m^2 Ports to triaxial cells</p> |
| <p>Ultrasonic Device PC-Sonic</p> <p>Pulse transmission technique for compression and transverse waves (P- und S-waves), accuracy of measurement 1% of measured value.</p> | <p>Frequencies 0.5 MHz, 1 MHz</p> |
| <p>Hydrostatic Pressure Vessel DBTS-200</p> <p>Hydrostatic cell for simulating overburden pressure e.g. to determine ultrasonic travel times at simulated reservoir conditions.</p> | <p>Max. pressure 200 MPa Max. temperature 50 Deg C</p> |
| <p>Hydrostatic Pressure Vessel DBH-40-60 Hydrostatic core holder for simulating overburden pressure e.g. to determine permeability or threshold pressure.</p> | <p>Max. pressure 40 MPa Max. temperature 50 Deg C</p> |
| <p>Hydrostatic Pressure Vessels DBH-70-100</p> <p>Three hydrostatic core holders for simulating overburden pressure e.g. to determine permeability, threshold pressure or for flooding.</p> | <p>Max. pressure 70 MPa Max. temperature 100 Deg C</p> |
| <p>Pycnometer</p> <p>Helium gas pycnometer to determine the effective pore volume space in cylindrical or cubic specimens, grain density</p> | <p>Temperature: ambient Max pressure 1 MPa</p> |
| <p>Mobile Liner-Shelf</p> <p>Airtight storage of weak rock types (usually clay stone) by slight overpressure</p> | <p>60 Liners, Length 1m Max pressure 3 bar</p> |
| <p>Ball Mill</p> <p>For preparing powder samples for the determination of grain density</p> | |
| <p>Psychrometer</p> <p>Determination of suction of rock samples</p> | <p>Ambient conditions</p> |

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Annex No. 2)

Required technical specification

| Item | Description | Unit price € | MZ-102 | | Ga 134 | |
|------------------------------------|--|-----------------|-----------|---------|-----------|---------|
| | | | Qty. unit | Value € | Qty. unit | Value € |
| 1a | Receipt of a well core (approx. 18 m of caprock of 8 th panonian) at the drilling site Gajary 134 (Slovakia). Appropriate bag-in-box package in a nitrogen ambience. The required special liners must be provided by the labor. Including transportation to the lab and storage for one year. | | | | 1 | - |
| 1b | Receipt of a well core (approx. M1S=7m of caprocck, 7m reservoir) at the drilling site Malacky Z-102 (Slovakia). Appropriate bag-in-box package of the samples in special air-tight bags. The caprock samples are additionally stored in a nitrogen ambience. The required special liners must be provided by the labor. Including transportation to lab and storage for one year. | | 1 | - | | |
| 2a | Receipt of a well core (approx. 16 m of caprock of 1 st Badenian and 12 m of reservoir rock of 1 st Badenian) at the drilling site Gajary 134 (Slovakia).Appropriate bag-in-box package in a nitrogen ambience. The required special liners must be provided by the labor. Including transportation to the lab and storage for one year. | | | | 1 | - |
| 2b | Receipt of a drill core (M1BH=9m of caprock, 51m of reservoir rock) at the drilling site Malacky Z-102 (Slovakia). Appropriate bag-in-box package of the samples in special air-tight bags. The caprock samples are additionally stored in a nitrogen ambience. The required special liners must be provided by the labor. Including transportation to lab and storage for one year. Approx. pickup time: 25.3.2013-31.3.2013 | | 1 | - | | |
| CAP ROCK | | | | | | |
| 3 | Core pre-processing: removal, marking up, cleaning, etc. (per meter) | | 16 | - | 34 | - |
| 4 | Core gamma spectroscopy (per meter) | | 16 | - | 34 | - |
| 5 | CT -scanning of core barrels prior to unsleeving, planar scan and three transverse sections, incl. digital images (per meter) | | 16 | - | 34 | - |
| 6 | Experimental investigation to determine the capillary threshold pressure at reservoir conditions of up to M1S : 12 MPa overburden pressure and 30 degree C and M1BH : 20 MPa overburden pressure and 45 degree C. The test plant will be booked for about three months, and the test will deliver a number of single results that is dependent on sample quality and permeability. The number of single tests will range between four and eight. Including plug preparation. | | 2 | - | 2 | - |
| Subtotal Cap rock+ Receipts | | | | - | | - |

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RESERVOIR

| | | | | | | |
|---------------------------|---|--|-----|---|-----|---|
| 7 | Core pre-processing: removal, marking up, cleaning, etc. (per meter) | | 58 | - | 12 | - |
| 8 | Core gamma spectroscopy (per meter) | | 58 | - | 12 | - |
| 9 | CT -scanning of core barrels prior to unsleeving, planar scan and three transverse sections, incl. digital images (per meter) | | 58 | - | 12 | - |
| 10 | Plug cutting in kerosene/mineral oil/brine (per sample) | | 182 | - | 120 | - |
| 11 | Sample drying, hot oven (per sample) | | 182 | - | 120 | - |
| 12 | Labelling and bagging of trim ends (per sample) | | 182 | - | 120 | - |
| 13 | Stressed porosity/permeability at M1S : 9.0 MPa; M1BH : 14.0 MPa: Unsteady-state Klinkenberg permeability, helium porosity, slip factor and inertial coefficients (per sample / stress) | | 182 | - | 120 | - |
| 14 | Grain density, in conjunction with helium porosity (per sample) | | 182 | - | 120 | - |
| 15 | Grain-size distribution - centrifuge - Attagberg - sieve analysis | | 22 | - | 30 | - |
| 16 | Synthetic formation brine preparation (per 5L) | | 2 | - | 0 | - |
| 17 | Capillary pressure by automated ultra-centrifuge using digital video camera, drainage only, 6 speeds, air-water, max 48 hours equilibrium per Pc (per sample) at confining stress (max 3,000 psi), elevated temperature. M1S: confining stress up to 9.0 MPa; up to 30°C. M1BH: up to 14.0 MPa and up to 46°C. Price is valid for three plugs in one run; otherwise please add a surcharge of 40% per missing plug. | | 6 | - | 0 | - |
| 18 | Stressed unsteady-state full curve relative permeability, gas-water, volumetric saturation determination, confining pressure up to 10,000 psi (per sample) | | 6 | - | 0 | - |
| | Subtotal Reservoir | | | - | | - |
| Experimental study | | | | | | |
| 19 | Preparation of a cylindrical plug-grinding only | | | | 36 | - |
| 20 | Unconfined test "Compressive Strength" (UCS) including Young's modulus and Poisson 's ratio | | | | 18 | - |
| 21 | Triaxial test "Compressive Strength" (single stage) deformation rate 10 E-05/s including Young's modulus and Poisson 's ratio | | | | 18 | - |
| | Subtotal experimental study | | | | | - |

Total

-

-

Annex No. 3)

COVER LETTER FOR BIDDERS

Title: **Providing of the Core Samples Analysis for year 2013**

A. Bidder:

Title:

Address:

COMPANY ID No.:

Tax ID No.:

Authorized representative of the bidder

Tel.:Fax.

B. After studying the tender documents the delivery of the required range is being proposed:

B1. For Malacky Z-102 well for the summary maximum price amounting to:

VAT excl. EUR.....

VAT 20% EUR.....

Total EUR.....

B2. For Gajary 134 well for the summary maximum price amounting to:

VAT excl. EUR.....

VAT 20% EUR.....

Total EUR.....

The validity of this proposal is set by 30th June, 2013.

We concurrently hereby confirm that the data provided in the remaining annexes to the proposal shall serve as binding documents for evaluation of our proposal.

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Seal and signature of the bidder representative