

## Appendix 16.8: State Historical-Cultural Expert Evaluation

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#### REPORT

#### **State Historical-Cultural Expert Evaluation**

of the research and design documentation, demonstrating the feasibility for the performance of works for the conservation of the objects of cultural heritage:

Section: Protection of the Objects of Cultural Heritage

within the framework of the South Stream project for the construction of the offshore section of the gas pipeline (Russian Sector)

State experts qualified for the performance of the national historical-cultural expert evaluation:

- **M. B. Vlaskin** Deputy Director, Don Heritage National Independent Cultural Establishment of the Rostov Region
- **A. N. Maslovsky** Head of Archaeological Department, Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History, Archaeology and Palaeontology
- **N. M. Fomichev** Senior Research Scientist, Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History, Archaeology and Palaeontology

July - August, 2013

The present Report of the State Historical-Cultural Expert Evaluation has been compiled in compliance with Federal Law of 25.06.2002 No 73-FL Re the Objects of Cultural Heritage (Monuments of History and Culture) of the Russian Federation, the Regulation on the State Historical-Cultural Expert Evaluation, approved by the Executive Order of the Government of the Russian Federation of 15 June 2009 Nor 569, according to the requirements, provided in Para 19 of this provision.

| 1. Expert Evaluation start date:  | 29.07.2013            |
|-----------------------------------|-----------------------|
| 2. Expert Evaluation end date:    | 23.08.2013            |
| 3. Location of Expert Evaluation: | City of Rostov-on-Don |
|                                   |                       |

#### 4. Expert Evaluation Ordering Customer: Peter Gaz LLC

#### 5. Information on the experts:

**Vlaskin Mikhail Vasilievich**, higher education, a historian, years of experience in the field of archaeology - 34, a place of work and a position - Deputy Director of Don Heritage National Independent Cultural Establishment of the Rostov Region, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

**Maslovsky Andrey Nickolaevich**, higher education, a historian, years of experience in the field of archaeology - 22, Head of the Department of Archaeology of Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History Archaeology and Palaeontology, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

**Fomichev Nickolai Mikhailovich**, higher education, historian, years of experience in the field of archaeology - 39, Senior Research Scientist of Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History Archaeology and Palaeontology, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

## 6. The information stating, that in accordance with the Law of the Russian Federation, the experts are responsible for the accuracy of the information contained in their report

This is to certify that state experts Vlaskin M. V., A. N. Maslovsky, N. M. Fomichev, involved in the expert evaluation, are warned on the responsibility for the accuracy of the information, contained in the report of the expert evaluation, in accordance with Article 29 of the Federal Law of 25.06.2002 No 73-FL Re Objects of Cultural Heritage (Historical and Cultural Monuments) of the Peoples of the Russian Federation, the Regulation on the State Historical-Cultural Expert Evaluation, approved by the Executive Order of the Government of the Russian Federation of 15 June 2009 Nor 569.



**7. Purpose of Expert Evaluation:** feasibility evaluation of works on the preservation of the objects of cultural heritage, located in the zone of the planned works on the project: Offshore Section of the South Stream Gas Pipeline (Russian Sector) on the basis of the developed scientific and design documentation.

**8. Object of Expert Evaluation:** scientific and design documentation, demonstrating the feasibility for the performance of works on the preservation of the objects of cultural heritage, located in the zone of the planned works on the project: Offshore Section of the South Stream Gas Pipeline (Russian Sector).

**9.** List of the documents, submitted for the expert evaluation by the applicant: Protection of the Objects of Cultural Heritage section within the framework of the implementation of the construction of the offshore section of the South Stream gas pipeline (Russian sector), composed of:

Volume 16/13/2013-P-SOKN1.1 Offshore Section of the South Stream Gas Pipeline (Russian Sector) Design Documentation Section 10 Other documentation in the cases, stipulated by federal laws. Part 5 Actions for the Preservation of Cultural Heritage Sites. Book 1 The Underwater Section, consisting of:

- 1. Introduction
  - 1.1. Brief Description of the Facility
  - 1.2. Project on the Territory of the Russian Federation
  - 1.3. Specification of the Offshore Pipeline
  - 1.4. Basis for the Development of Documentation
  - 1.5. List of Abbreviations and Symbols
- 2. Regulatory and Procedural Framework
- 3. Information on the Territory (Water Area) of Survey.
  - 3.1. Brief Technical Description of the Facility and Land Allocation. Earthworks Process Specification During Construction
  - 3.2. Boundaries of Surveys
  - 3.3. Brief Geographical Description of the Territory
- 4. Brief Historical Background
  - 4.1. Types of Underwater Objects of Cultural Heritage in the Light of Specific Features of the Region
  - 4.2. Correlation of Marine Transgressions and Regressions with the Archaeological Periods
  - 4.3. History of Human Development of the Region and History of Archaeological Research

- 5. Method of Analysis of Geophysical Data and Scope of Offshore Fieldworks
  - 5.1. Boundaries of Surveys
  - 5.2. Sonar and Magnetometry Studies within the Framework of Engineering Surveys
  - 5.3. Visual Inspection of the Seabed Methods and Analysis
- 6. Results of the Marine Fieldworks on the Visual Inspection of the Seabed
  - 6.1. Results of Sonar Surveys
  - 6.2. Results of the Marine Fieldworks on the Visual Survey of the Seabed
- 7. Laws and Criteria for the Assessment of Safe Distances to the Objects of Cultural Heritage
- 8. Forecast for the Impact of the Planned Facilities on the Objects of Cultural Heritage at the Stages of Construction and Operation
- 9. Recommended Measures for the Preservation of the Objects of Cultural Heritage
- 10. Cost of Measures for the Protection of the Objects of Cultural Heritage
- 11. Conclusion
- 12. List of References
- 13. List of Illustrations
- 14. Annexes
- Annex A: Terms of Reference
- Annex B: Album of Illustrations.
- Annex C: Object of cultural heritage and potential objects of cultural heritage, found on the bottom of the Russian sector of the Black Sea along the route of South Stream gas pipeline

Volume 16/13/2013-P-SOKN1.1 Offshore Section of the South Stream Gas Pipeline (Russian Sector) Design Documentation Section 10 Other documentation in the cases, stipulated by federal laws. Part 5 Actions for the preservation of cultural heritage sites Book 1 Underwater Section, consisting of:

- 1. Introduction
  - 1.1. Brief Description of the Facility
  - 1.2. Project on the Territory of the Russian Federation.
  - 1.3. Specification of the Offshore Pipeline
  - 1.4. Scopes and Objectives on the Preservation of Sites of Cultural Heritage.



- 1.5. Basis for the Development of the Documentation
- 1.6. List of Abbreviations and Symbols
- 2. Legal Support for the Measures on the Protection of the Objects of Cultural Heritage in the Zones of Construction Works
  - 2.1. Referenced Codes and Standards
  - 2.2. Main Provisions of the Current Legislation on the Protection of Cultural Heritage during Design and Construction
- 3. Brief Technical Specification of the Facility Earthworks Process Specification during Construction
- 4. History of Archaeological Surveys in the Anapa Area
- 5. Scope of Works and Survey Procedure
  - 5.1. Procedure of Archaeological Surveys
    - 5.1.1. Preliminary Stage. Preparation Works.
    - 5.1.2. Archaeological Field Works
    - 5.1.3. Processing of Obtained Materials and Field Documentation in the Office, Preparing of Reports
  - 5.2. Composition and Timeframes for the Performance of Works
    - 5.2.1. Preparatory Work Stage
    - 5.2.2. Field Work Stage
    - 5.2.3. Office Work Stage
  - 5.3. Used Instruments, Equipment and Software
- 6. Results of Archival and Bibliographic Studies
- 7. Results of the Full-Scale Archaeological Survey
  - 7.1. Boundaries of the Surveyed Area
  - 7.2. Full-Scale Visual Inspection. Survey Route
  - 7.3. Full-Scale Inspection. Pit Sampling
    - 7.3.1. Pit sampling on the identified un-stratified cultural layer of Varvarovka-1
    - 7.3.2. Pit sampling on the identified un-stratified cultural layer of Varvarovka-2
    - 7.3.3. Pit sampling on the identified un-stratified cultural layer of Varvarovka-3

- 8. List and description of the objects of cultural heritage and the sites of un-stratified cultural layer, located in the territory of the survey
  - 8.1. Mound. State Reg. No 363
  - 8.2. The identified site of the un-stratified (re-deposited) cultural layer in Varvarovka-1;
  - 8.3. The identified site of the un-stratified (re-deposited) cultural layer in Varvarovka-2;
  - 8.4. The identified site of the un-stratified (re-deposited) cultural layer in Varvarovka-3
- 9. Activities for the preservation of the objects of cultural heritage and sites of the unstratified cultural layer.
  - 9.1. Restrictions, established by Law, for the construction activities in the territory with the objects of cultural heritage, their protection zones and sites of the un-stratified cultural layer.
  - 9.2. Options for the preservation of the monuments, provided by Law
  - 9.3. Recommended protection measures
- 10. Cost of measures for the protection of the objects of cultural heritage
- 11. Conclusion
- 12. Bibliography
- 13. List of Illustrations

#### ANNEXES

- Annex A: Terms of Reference
- Annex B: Permit for Archaeological Excavations and Surveys No 1149
- Annex C: Permit No 56 of 16.11.2010 for Scientific-Research Surveys and Protection-Rescue Works
- Annex D: Response from the Office for Conservation, Restoration and Maintenance of Historical and Cultural Relics (Heritage) of the Krasnodar Region on the status of the identified objects in Varvarovka 1, Varvarovka 2 and Varvarovka 3.
- Annex E. List of Annexes to the Resolution of the Krasnodar Region Executive Committee of 29.01.1975 No 63, Volume 1, pages 57, 59.
- Annex F Inventories of the individual finds
- F.1 The inventory of the items, found during the archaeological excavations of the identified site with the un-stratified (re-deposited) cultural layer in Varvarovka 2



- F.2 The inventory of the items, found during the archaeological excavations of the identified site with the un-stratified (re-deposited) cultural layer in Varvarovka 3.
- Annex G The estimates for the activities on the protection of the identified OCH (objects of cultural heritage).
- G.1 Calculation of the cost for the protection and rescue surveys of the pottery kiln in the area of 50 m2 to a depth of 0, 6 m, located on the site with the un-stratified (re-deposited) cultural layer in Varvarovka 2.
- G.2 Calculation of the cost for the archaeological supervision for the area of 1 ha of sites with the un-stratified (re-deposited) cultural layer in Varvarovka 1, Varvarovka 2 and Varvarovka 3.
- G.3 Calculation of the cost for the protection and rescue archaeological surveys (digging) of the archaeological monument, Mound, State Reg. No 363 (H 2.97 m, D 29 m).
- G.4 Calculation of the cost of one man/day for an archaeologist specialist of the day an archaeologist to carry out archaeological supervision of earthworks within the boundaries of the protection zone of the archaeological monument Mound, State Reg. No 363
- Annex I Album of Illustrations. Record of Changes Sheet

### **10.** Information on the circumstances that influenced the process and the results of the expert evaluation

There are no circumstances that influenced the process and the results of the expert evaluation. There is no additional information available that might have influenced the process and the results of the expert evaluation.

### **11.** Information on the completed surveys with the indication of the applied methods, scope and nature of the performed work and the results

The following analysis was performed in the course of the expert evaluation:

- a) current legislation on the protection and preservation of the objects of cultural heritage; and
- scientific and design documentation, provided by the customer, with regard to its compliance with applicable laws for the protection and preservation of the objects of cultural heritage.

The available material is sufficient for the development of the conclusion on the subject of the expert evaluation. The experts evaluated the feasibility and optimality of the adopted decisions. The results of the studies conducted within the framework of the state historical-cultural expert review are presented in the form of the Report.

# 12. List of the documents and the materials, collected and received in the course of the expert evaluation, including the list of used specialised, technical and reference materials

- Federal Law of the Russian Federation re the Objects of Cultural Heritage (Monuments of History and Culture) of the Peoples of the Russian Federation of 25.06.2002 No 73-FL;
- 2. Urban Development Code of the Russian Federation of 29.12.2004 No 190-FL. 3;
- 3. Land Code of the Russian Federation of 25.10.2001 No 136-FL;
- Law of the Krasnodar Region re Sites of Cultural Heritage (Monuments of History and Culture) of the Peoples of the Russian Federation Located in the Krasnodar Region of 06.02.2003 No 558-KZ;
- Law of the Krasnodar Region re the Lands of the Immovable Objects of Cultural Heritage (Monuments of History and Culture) of Regional and Local Importance Located in the Krasnodar Region and Protection Zones of 19.07.2011 No 2316-KZ;
- 6. Resolution of the Government of the Russian Federation of 15 June 2009 No 569 re Approval of the Provision on the State Historical-Cultural Expert Evaluation;
- Regulation on the procedures for the issue of permits (Permit for archaeological excavations and surveys) for the right of identification and studies of the objects of archaeological heritage, approved by Order of the Federal Supervision Authorities monitoring the compliance with the legislation with regard to the protection of the objects of cultural heritage of 03.02.09 No 15;
- Regulation on the procedures for archaeological fieldwork (archaeological excavations and surveys), and development of scientific reporting documentation, approved by the Decision of the Academic Council of the Institute of Archaeology of the Russian Academy of Sciences, March 30, 2007;
- 9. Regulation on the procedures for archaeological fieldwork (archaeological excavations and surveys), and development of scientific reporting documentation, approved by the Resolution of the Department of Historical and Philological Sciences of the Russian Academy of Science of 30 January 2013;
- 10. A set of restoration procedures Recommendations on research, surveying, design and production works aimed at the conservation of the cultural heritage objects (monuments of history and culture) of the peoples of the Russian Federation (SRP-2007), 4th edition, Part 2. Recommendations for the rescue archaeological field work procedures (SRP 2007.2), recommended for use in the Letter of the Ministry of Culture of the Russian Federation of January 11, 2012 No 3-01-39/10-KC; and
- 11. Resolution of the Legislative Assembly of the Krasnodar Region of 24.04.96 No 294-P re the Regulation on the protection and use of the objects of historical and cultural heritage, located underwater in the Krasnodar Region.



#### 13. Facts and data identified and established as a result of the expert evaluation

### **13.1** Facts and data identified and established with regard to the underwater part of the offshore section of the South Stream gas pipeline (Russian sector)

#### **13.1.1** Basis for the Development of the Documentation

- Supplementary Agreement No 1 of 02/11/2012 to the Agreement No 210/12 of 25/07/2012 between Branan Environment LLC and Peter Gaz LLC on the development of sections of design documentation Measures for the Protection of the Environment and Measures for the Protection of Cultural Heritage Sites and services for the assessment of the impact on the environment within the framework of the project for the construction of the offshore section of the South Stream gas pipeline (Russian sector);
- 2. Agreement between INTECSEA BV and Peter Gaz LLC No 16/13 of 14/02/2013 on the development of the design documentation for the South Stream Offshore Gas Pipeline project (Russian sector); and
- 3. Agreement between South Stream Transport BV and INTECSEA BV of 29.02.2012 on the development of FEED documentation for the South Stream Offshore Gas Pipeline project (Russian sector).

## **13.1.3** General specification of the underwater part of the South Stream Offshore Gas Pipeline project (Russian Sector). Earthworks Process Specification during Construction

Export pipeline system consists of four gas pipelines, 32 inches in diameter each. The length of each pipeline of the Russian construction sector is approximately 230 km. Design service life of the project is 50 years. Land for the underwater section of the pipeline is not allocated.

Pipeline sections installed in the relative shallow water, in addition to the corrosion resistant coating, must have a concrete weight coating in order to provide lateral stability of the pipeline under the hydrodynamic loads and protection against shock loads.

The construction works include laying of 4 DN 813 mm pipelines from the coastal point located about 10 km south of Anapa (Krasnodar Region) to the border between the Russian and the Turkish EEZ (Exclusive Economic Zone).

Major construction works in the offshore section of the pipeline include:

- 1. Earthworks:
- development of pits at the micro-tunnel exit points to the water depth of -30, using a cutter dredger or a clamshell dredger;
- soil stripping to avoid free spans using subsea equipment for excavation works; and
- soil dumping using a vessel with a relief pipe to adjust the seabed slopes in order to minimise free spans.

- 2. Installation of offshore pipelines:
- laying in the landfall wet section (from -23 m to -30 m) will be performed by dragging welded pipe stocks into the micro-tunnel using a pulling winch mounted on the PLB (pipelay barge);
- laying of the pipeline at an intermediate depth (from -30 m to -600 m) shall be carried out by S-laying method; laying of the deep-water section (from -600 m and longer) shall be carried out by J-laying method (at the discretion of the Customer, S-laying method may also be used); and
- performance of technological tie-ins.
- 3. Trench backfilling:
- backfilling of trenches at the micro-tunnel exit points using a vessel with a relief pipe;
- rock dumping using a vessel with a relief pipe to eliminate the free spans and protect the pipeline at the intersections with the cables; and
- post-lay trenching of the pipeline using subsea equipment in order to eliminate free spans and stabilise the pipeline.
- 4. Hydraulic testing.

Dredging works shall be carried out prior to the pipeline laying in order to change the surface of the seabed. Uneven seabed sections shall be aligned by cutting underwater ridges to ensure subsequent safe installation of the pipeline.

Pipeline sections, located in shallow waters, must be trenched lower than the actual bottom level so that the upper surface of the pipe is covered with a soil layer. These works shall be carried out with the help of dredging vessels, capable of digging trenches for laying pipes using a cutter dredger or a hopper dredger. In addition, dredging works shall be carried out in those areas, where the condition of the sea floor does not allow for post-lay trenching, for example, because of the presence of boulders or bedrock in the area of works.

Free spans are possible at the break of the shelf and along its slope, which are eliminated by the rock filling method or the hill cutting method. Preparation of the locations for the intersection with the power cables shall be performed by one or a combination of the following methods: installation of mats or supporting bottom decks, installation of pillars and crossbeams using large-diameter HDPE pipes, rock berms, concrete pillars.

According to the project, the pit at the micro-tunnel exit point in shallow water will have the following parameters:

Preliminary trench parameters:

- Approximate width along the bottom 10 metres;
- Maximum development depth 5 metres (+/- 0.5 metres);
- Length of the trench 170 metres;
- Parameters of slopes 1:4; and



• Quantity – -4 pieces (1 per one pipeline).

Development method: cutter dredger with a mechanical agitator, as well as a clamshell or a water jet dredger (depending on the final data on the type and composition of the soil).

#### **13.1.3 Survey Results**

Comprehensive engineering survey, including sonar survey in the corridor of at least 1000 m (500 m on each side) was carried out from 2009 to 2012 by the specialists of Peter Gaz LLC with the involvement of subcontractors.

Visual inspection and video recording of the bottom floor sections to a depth of 750 m were carried out in June 2012 in the corridor of 200 m wide on either sides of the designed pipeline route where, according to the preliminary survey, objects and abnormalities were located, which might belong to the objects of cultural heritage. Additionally, a survey of a target (sunken ship), located at a distance of 203 m from the axis of the pipeline was carried out. The area of works is located entirely within the territorial sea of the Russian Federation.

ROV surveys were also carried out in September-November 2012 at a depth from 90 to 2200 m, which led to the study of the targets of potential cultural heritage, detected by a scan sonar survey. The area of surveys was located within the exclusive economic zones of Russia, Turkey and Bulgaria, as well as the territorial sea of Russia and Bulgaria. This section deals with the targets, located within the Russian sector of the Black Sea.

Given the potential destructive impact during the construction of the gas pipeline and taking into account a possible requirement for rerouting, this section describes the targets, located at a distance of max 200 m to each side from the farthest pipeline.

During the field surveys, a number of objects with the features of an object of a cultural property were identified. Due to the fact that the design solutions provided for the crossing of the shoreline by the pipeline through micro-tunnelling method with the exit of the pipeline to the seabed in the region of 23 m isobathic line, shallow bottom areas will not be subject to the adverse impact during the construction of the pipeline.

An amphora (RS\_Cab\_Ph) - an object of cultural (archaeological) heritage is located 23.9 m from the route of the planned gas pipeline in the area of possible mechanical impact during the construction; there is a requirement for the measures to preserve this OCH.

Objects of cultural heritage, located at a distance of 40 - 150 m from the pipeline route are beyond the zone of possible mechanical impact due to dredging operations, which are forecasted to result in the separation and re-precipitation of suspended solids. These are the following objects: a wing of the plane - a potential object of cultural heritage (target B5\_S0006) is located at a safe distance from the planned route of the gas pipeline (56.8 m), a sunken boat - the object of cultural heritage (target RS\_Cab\_7) is located at a safe distance from the planned route of the gas pipeline (69.9 m), a wing of the plane - a potential object of cultural heritage (target RS\_651) is located at a safe distance from the planned route of the gas pipeline (123.5 m). Other objects detected by sonar survey, which are potential OCH (R\_BI\_0042, R\_B2\_0007, R\_B5\_0006), are located at a distance of 72.4 m, 130.4 m, 62.6 m and 172.3 m, respectively, from the planned route of the gas pipeline.

In addition, at a distance of 12.2 and 12.7 m from the route of the gas pipeline the objects were detected by sonar survey (R\_B5\_0002 and R\_B 1\_0029), which may be expected to be the objects of cultural heritage (sunken ships); the possibility of mechanical damage during the construction of the gas pipeline is quite high, there is a requirement for the measures for the preservation of this OCH or re-routing.

No objects of cultural heritage, which are registered with the authorities for the protection of cultural heritage, were identified within the planned boundaries of the underwater section of the South Stream gas pipeline.

### **13.2** Facts and data identified and established with regard to the underwater part of the offshore section of the South Stream gas pipeline (Russian sector)

#### **13.2.1** Basis for the Development of the Documentation

- 1. Supplementary Agreement No 1 of 02.11.2012 to Agreement No 210/12 of 25.07.2012 between Branan Environment LLC and Peter Gaz LLC on the development of the sections of design documentation Measures for the Protection of the Environment and Measures for the Protection of Cultural Heritage Sites and services for the assessment of the impact on the environment within the framework of the project for the construction of the offshore section of the South Stream gas pipeline (Russian sector);
- 2. Agreement between INTECSEA BV and Peter Gaz LLC No 16/13 of 14.02.2013 on the development of design documentation for the South Stream Offshore Gas Pipeline project (Russian sector); and
- 3. Agreement between South Stream Transport B.V. and INTECSEA BV of 29/02/2012 on the development of FEED documentation for the South Stream Offshore Gas Pipeline project (Russian sector).

# **13.2.2.** General characteristics of the coastal area of the offshore section of the South Stream gas pipeline (Russian sector). Earthworks Process Specification during Construction

The landfall section includes the following permanent and temporary facilities:

- four closely spaced pipelines with diameter of 812.8 mm (32 inch.);
- micro-tunnel construction site with 4 micro-tunnel entry pits;
- onshore section construction site;
- temporary storage site;
- PIG site;
- site of temporary buildings and facilities for PIG;
- stalk preparation site;
- micro-tunnelling section (micro-tunnels for each line in the shoreline intersection area);
- permanent and temporary access roads; and



• gas flare site.

The width of the allocated land strip where earthworks will be carried out during laying of the linear part of the gas pipeline, as well as the traffic of the construction equipment will occur, corresponds to the width of the strip of temporary allotment for the construction period and is 120 m (for all four lines).

The boundaries of allocated land of all sites coincide with the boundaries of sites themselves, earthworks and traffic of construction machinery outside these boundaries is not planned.

Earthworks and traffic of construction equipment will be carried out exclusively within the boundaries of the micro-tunnel construction site during the construction of the micro-tunnel.

For the purposes of organising the access roads the width of the allocated land is 20.3 m, with the exception for the eastern section of access road No 1, where the widening to 61 metres is planned along a 155 m section.

The zone of the potential damage corresponds to the zone of the land allocated for temporary and permanent use associated with the construction of the above facilities.

In accordance with the Rules for the Protection of Main Pipelines approved by the Executive Orders of Gosgortekhnadzor of Russia No 9 of 24.04.1992 and No 61 of 23.11.1994, the protection zone of 25 m from the farthest lines of the pipeline is provided for the period of operation.

4 lines of the pipeline approximately 2 km each are placed in the trench from the PIG site to the micro-tunnel entry pits. Main dimensions of the trench:

- 2.5 m depth, the minimum thickness of the coating layer is 1.5 m; and
- width at the bottom of the trench is 2 m.

Earthworks on this type of soil will be carried out either by using conventional hydraulic excavators (estimated slope angle of 45 - 60 degrees), or trenchers (almost vertical slopes).

The soil, excavated during earthworks, shall be stored along the trench; it is assumed that part of this soil will be used for backfilling and reclamation.

Use of the trenchless technology for the underground construction (micro-tunnelling method) in the areas of intersection of the shoreline is conditioned by the peculiarities of the geological structure of the coastal zone, which represents a ridge steeply breaking towards the sea with hard rock outcrops on the surface, as well as environmental constraints. This technology, in contrast to the traditional open method, does not require surface opening along the entire route.

The construction of the entry pit and the receiving pit at the exit point is carried out during the preliminary period. Load-bearing walls of the entry pit are made of bored or sheet piles. Site planning, removal and transportation of topsoil and its subsequent return by a bulldozer, the development of trenches and pits by an excavator are carried out during construction. The micro-tunnel construction site will be restored to its original state upon completion of

construction in accordance with the requirements and standards on the impact assessment on the environment.

The section of the original trench passage with a concrete surface (about 450 m long) stretches from the tunnel exit (at a depth of 23 m) to the point of connection with the deep water section of the pipeline on the seabed (at a depth of 30 m). "The passage zone" with a trench on the bottom of the sea at the mouth of the tunnel shall be backfilled with the previously removed and stored soil.

Micro-tunnel construction works shall be performed during the main period of construction using forcing through the tunnel method with the operating TBM at the drilling location. The length of the passage is about 1450 m, the outer diameter of the tunnel is approximately 2.5 m, the estimated distance from the ground surface to the axis of the passage is 10 m. The micro-tunnel lies at a minimum depth from the ground surface in 170 meters from the micro-tunnel entry pit towards the sea shore, where it passes under a dry ravine at a depth of about 8.5 m from the bottom mark to the tunnel's casing pipe. The construction technology on this section does not change, since the micro-tunnel is designed at a sufficient depth with the allowance for the soil type - 3 times larger than the outer diameter of the tunnel (2.5 m).

#### 13.2.3. The results of the survey

According to the results of the archival research, there are 2 sites of cultural heritage that are closest to the landfall area of the South Stream main gas pipeline in the area of the resort city of Anapa: 1 archaeological monument and 1 historical monument.

#### Archaeological Monument – Mound, State Reg. No 363

Dating: Not available.

Location: 1.5 km along the course of the river Shingar from Varvarovka village, east of the Varvarovka - Sukko - Utrish highway.

Description (according to records): single mound about 5 m high and in 15-20 m in diameter at the base on the way from Anapa to the Sukko valley. Mound is intact and in good condition, there is no information to determine its exact date. It is protected as a monument of history and archaeology.

Violations: illegal excavations were recorded in 1981.

## Historical Monument – Grave of D. S. D. S. Kalinin, a Hero of the Soviet Union, 1910 - 1943, State Reg. No 383

Dating: 1968

Location: 1.5 km to the south of Varvarovka village

Description (according to records): This is a grave of a Hero of the Soviet Union Captain D. S. Kalinin, who was killed during the landing operation on 1 May 1943. In 1968 a statue of D. S. Kalinin wearing a jacket with a gun behind his back was erected on a stone plinth on the grave. Next to the statue there is a 20 m wall, which has episodes of the war carved in stone and the



inscription: "Here, on the night of May 1, 1943 sailors of the reconnaissance squad under the command of Captain Kalinin engaged in an unequal battle against the fascist invaders. They gave their lives for our Soviet Motherland. Undying glory to the heroes."

The monument is located 750 m east of the designed route of the gas pipeline.

In 2011, Peter Gas LLC in partnership with the Archaeological Heritage Fund and Heritage of Kuban OJSC organized and carried out archaeological surveys in the area of the potential impact of the construction and the operation of the offshore section of the South Stream gas pipeline in the region of the resort city of Anapa, Krasnodar Region, in the landfall section. The completed archaeological surveys included historical and archival, field (exploration) and laboratory works.

In the course of the field archaeological surveys it was established that there is 1 (one) archaeological monument and 3 sites of the un-stratified (re-deposited) cultural layer in the area of the potential impact from the planned facilities:

List and Description of OCH and Sites of Unstratified Cultural Layer Within the Research Territory

#### Burial Mound, State Reg. No 363

Type of Monument: Archaeological monument.

Resolution on Placement Under the State Protection: Resolution of the Krasnodar Region Executive Committee of 29.01.1975 No 63, number on the list of applications: 81.

Dating: Antique Period - Middle Ages.

Location: 1.5 km along the course of the river Shingar from Varvarovka village, east of the Varvarovka - Sukko - Utrish highway.

Survey:

- Information on the date of detection and the archaeologist which identified the object of archaeological heritage is missing;
- In 1981 it was discovered that the mound was subjected to illegal excavations; and
- During the surveying in 2011 along the route of the projected gas pipeline, size, location and date of the previously identified OCH were confirmed.

Description: single round shaped burial mound. In the central part of the mound - 2.5 m deep burglarious pit.

| Burial<br>Mound   | Dimensions |          | Coordinates in WGS-84 |             | Note                                |
|-------------------|------------|----------|-----------------------|-------------|-------------------------------------|
| Tiounu            | Height     | Diameter | N                     | E           |                                     |
| Burial<br>Mound 1 | 2.97 м     | 29 м     | 44°48'07.6"           | 37°22'20.8" | Mound overgrown with trees and bush |

Monument Territory: The list of geographical coordinates of the reference points of the boundaries of the archaeological monument State Burial Mound, State Reg. No 363

| Reference Point | Coordinates in WGS-84 |             |  |
|-----------------|-----------------------|-------------|--|
| No              | N                     | E           |  |
| 1               | 44°48'46.3"           | 37'22'06.8" |  |
| 2               | 44°48'46.4"           | 37°22'07.2" |  |
| 3               | 44°48'45.7"           | 37°22'06.9" |  |
| 4               | 44°48'45.7"           | 37'22'06.2" |  |

The boundaries of the protection zone of the monument are defined on the basis of the Law of Krasnodar Region of 19.07.2011 No 2316-KZ On Lands of Permanent Cultural Heritage Objects (Monuments of History and Culture) of Regional and Local Importance, Situated in Krasnodar Region and the Protection Zones and are 125 m from the base (around the whole of the perimeter) of the burial mound.

The distance from the base of the burial mound to the site of the micro-tunnel pit entry is approximately 162.4 m. The OCH will not be damaged subject to the archaeological supervision during the operation of the pit.

#### Identified Site of the Unstratified (Re-deposited) Cultural Layer Varvarovka-1

Object Type: Identified Site of the Unstratified (Re-deposited) Cultural Layer. Identified in 2011 during the surveying of the South Stream Gas Pipeline at the site of landfall in the resort city of Anapa.

Dating: Antique Period - Middle Ages.

Location: 0.279 km south-west from the southern outskirts of the village Varvarovka of the resort city of Anapa (from highway Varvarovka - Sukko) on the eastern slope leading down to the river Shingar. Azimuth 251.76°.

At the time of the survey the territory of the identified site of the unstratified (re-deposited) cultural layer is used for young vines.



Area of the site is 34,970 sq. m.

Survey:

- Visual inspection was conducted, excavated material was compiled; and
- Test pit works were completed to determine the presence of the cultural layer. According to the results of the test pit works no cultural layer was found. The cultural layer destroyed during deep ploughing in preparation for vine growing. Detection of the remains of household pits and residential huts is possible at bedrock level.

Object Territory: Boundaries of the site are defined by the spread of excavated material (ceramic), the results from test pit works and topogeodesic condition (landscape).

The list of geographical coordinates of the reference points of the identified site boundaries of the unstratified (re-deposited) cultural layer of Varvarovka-1.

| Reference Point | Coordinates in WGS-84 |             |  |
|-----------------|-----------------------|-------------|--|
|                 | N                     | E           |  |
| 1               | 44°49'11.0"           | 37'21'42.2" |  |
| 2               | 44°49'09.3"           | 37°21'47.8" |  |
| 3               | 44°49'05.9"           | 37°21'43.5" |  |
| 4               | 44°49'08.1"           | 37'21'37.0" |  |

Brief Scientific Specification:

The identified site of the unstratified (re-deposited) cultural layer is likely to have been formed as a result of the destruction of the domestic settlement type monument. A more accurate scientific specification of the unstratified (re-deposited) cultural layer, its historical value and attribution can be determined by the results of archaeological excavations.

Degree of Interference in the Surveying Zone: Within the survey territory of the landfall site of the offshore section of the South Stream Gas Pipeline in the resort city of Anapa is a site of unstratified (re-deposited) cultural layer Varvarovka-1, 34,970 sq. m.

The gas pipeline route runs 810 m to the SSE of the south south-eastern boundary of the site of the unstratified (re-deposited) cultural layer Varvarovka-1. The minimum distance between the site border of the unstratified cultural layer and the border of land allocated for the project (the construction site of micro-tunnels) is 800 m.

#### Identified Site of the Unstratified (Re-deposited) Cultural Layer Varvarovka-2

Object Type: Identified Site of the Unstratified (Re-deposited) Cultural Layer. Identified in 2011 during the surveying of the South Stream Gas Pipeline at the site of landfall in the resort city of Anapa.

Dating: Antique Period - Middle Ages.

Location: 0,588 km ENE from the southern outskirts of the village Varvarovka of the resort city of Anapa. At the time of the survey old vines are growing in the western part of the site, the eastern and the southern parts of the site are used for growing young vines, north-eastern part of the site is used for the cemetery of Varvarovka village.

The site area is 59,859.2 sq. m.

Survey:

- Visual inspection was conducted, excavated material was collected; and
- Test pit works completed to determine the presence of the cultural layer. According to the
  results of test pit works no cultural layer is found, however a pit (kiln?) was discovered in
  the NE corner of Test Pit No 6. In case that construction or excavation works shall be
  carried out at the location site of the pottery kiln in the Test Pit 6 region, it is necessary to
  plan for protection and rescue works (excavations) within the area of 50 sq.m. Stratified
  cultural layer of the identified site was destroyed during deep ploughing in preparation for
  vine growing. Detection of the remains of other household pits (holes) and residential huts
  is possible at bedrock level.

Object Territory: Boundaries of the site are defined by the spread of excavated material (ceramic), the results from test pit works and the topogeodesic condition (landscape).

The list of the reference points' geographical coordinates of the territory boundaries of the identified site of the unstratified (re-deposited) cultural layer Varvarovka-2.

| Reference Point | Coordinates in WGS-84 |             |  |
|-----------------|-----------------------|-------------|--|
| NO              | N                     | E           |  |
| 1               | 44°49'21.0"           | 37'22'26.3" |  |
| 2               | 44°49'19.2"           | 37°22'22.6" |  |
| 3               | 44°49'17.1"           | 37°22'20.7" |  |
| 4               | 44°49'13.6"           | 37'22'21.7" |  |
| 5               | 44°49'10.8"           | 37°22'25.6" |  |
|                 |                       |             |  |

Continued...



| Reference Point | Coordinates in WGS-84 |             |  |
|-----------------|-----------------------|-------------|--|
| No              | N                     | E           |  |
| 6               | 44°49'10.8"           | 37°22'30.5" |  |
| 7               | 44°49'11.2"           | 37°22'34.5" |  |
| 8               | 44°49'16.6"           | 37°22'34.1" |  |
| 9               | 44°49'17.4"           | 37°22'30.8" |  |
|                 |                       | Complete    |  |

Brief Scientific Specification:

The identified site of the unstratified (re-deposited) cultural layer is likely to have been formed as a result of the destruction of the domestic settlement type monument. A more accurate scientific specification of the unstratified (re-deposited) cultural layer, its historical value and attribution can be determined by the results of archaeological excavations.

Degree of Interference in the Surveying Zone: Within the survey territory of the landfall site of the offshore section of the South Stream Gas Pipeline in the resort city of Anapa is a site of unstratified (re-deposited) cultural layer Varvarovka-2, area - 59,740 square meters.

The gas pipeline route runs 300 m to the East from the south-eastern border of the site of the unstratified (re-deposited) cultural layer Varvarovka-2. The minimum distance between the site border of the unstratified cultural layer and the border of land allocated for the project (access road) shall be 17.2 m.

#### Identified Site of the Unstratified (Re-deposited) Cultural Layer Varvarovka-3

Object Type: Identified Site of the Unstratified (Re-deposited) Cultural Layer. Identified in 2011 during the surveying of the South Stream Gas Pipeline at the site of landfall in the resort city of Anapa.

Dating: Antique Period - Middle Ages.

Location: 1.352 km north-east from the southern outskirts of the village Varvarovka of the resort city of Anapa (from highway Varvarovka - Sukko) on the top and the eastern slope leading down to Grafova Shchel (Gap). Azimuth 52.82°.

At the time of the survey there is an empty plot in the western part of the site, the eastern part of the territory is used for growing young vines.

Area of the site is 9,251.2 sq. m.

Survey:

• Visual inspection was conducted, excavated material was collected.

Test pit works completed to determine the presence of the cultural layer. According to the results of the test pit works no cultural layer was found. The cultural layer was destroyed during deep ploughing in preparation for vine growing, detection of the remains of household pits (holes) and residential huts is possible at bedrock level.

Object Territory: Boundaries of the site are defined by the spread of excavated material (ceramic), the results from test pit works and topogeodesic condition (landscape).

Coordinates of the reference points of the territory boundaries of the identified site of the unstratified (re-deposited) cultural layer Varvarovka-3.

| Coordinates in WGS-84 |   |  |
|-----------------------|---|--|
| N                     | E   |  |
| 44°49'42.9"           | 37°22'45.8"   |  |
| 44°49'42.3"           | 37°22'48.8"   |  |
| 44°49'38.3"           | 37°22'48.3"   |  |
| 44°49'38.4"           | 37°22'46.1"   |  |
| 44°49'38.6"           | 37°22'43.9"   |  |
| 44°49'40.3"           | 7°22'43.4"  |  |
| 44°49'42.7"           | 37°22'43.6"   |  |
|                       | N           44°49'42.9"           44°49'42.3"           44°49'38.3"           44°49'38.4"           44°49'38.6"           44°49'40.3" |  |

Brief Scientific Specification:

The identified site of the unstratified (re-deposited) cultural layer is likely to have been formed as a result of the destruction of the domestic settlement type monument. A more accurate scientific specification of the unstratified (re-deposited) cultural layer, its historical value and attribution can be determined by the results of archaeological excavations.

Degree of Interference in the Surveying Zone: Within the survey territory of the landfall site of the offshore section of the South Stream Gas Pipeline in the resort city of Anapa is a site of unstratified (re-deposited) cultural layer Varvarovka-3, 9,231 square meters.

The gas pipeline route runs 620 m to the south-east from the southern border of the site of the unstratified (re-deposited) cultural layer Varvarovka-3. The minimum distance between the site border of the unstratified cultural layer and the border of land allocated for the project (access road) shall be 404 m.



#### **14.** Rationale for the conclusion of evaluation.

The experts found that the development of scientific and project documentation complied with the requirements of the Federal Law of the Russian Federation On Objects of Cultural Heritage (Monuments of History and Culture) of Peoples of the Russian Federation of 25/06/2002 No 73-FZ. The work on the archaeological survey of the designed construction area (coastal part of the offshore section of the South Stream Gas Pipeline) was carried out on the basis of the Permit for Archaeological Excavations and Surveys No 1149 issued by Rosokhrankultura to Tischenko Igor Borisovich based on the Order of Rosokhrankultura of 10 November 2010 No 129.

The archaeological survey was conducted in accordance with the Regulation on the Procedures for Archaeological Fieldworks (Archaeological Excavations and Exploration) and Scientific Reporting Documentation approved on 30/03/2007 by the decision of the Academic Council of the Institute of Archaeology, Russian Academy of Sciences.

It should be noted that the survey of the underwater part of the offshore section of the South Stream Gas Pipeline was carried out without a Permit for Archaeological Excavations and Surveys, which is a violation of paragraph 1.7. of the Regulation on the Procedures for Archaeological Fieldworks (Archaeological Excavations and Exploration) and Scientific Reporting Documentation approved on 30/03/2007 by the decision of the Academic Council of the Institute of Archaeology, Russian Academy of Sciences. However, in accordance with paragraph 1.3 of the said Regulation its validity is limited to 31 December 2010, i.e. it was not in force at the time of the underwater exploration. Regulation on the Procedure for Issuing Permits (Permits for Archaeological Excavations and Surveys) for the Right to Carry Out Work on the Identification and Study of Archaeological Heritage approved by the Order of the Federal Service for Supervision of Legislation in the Field of Protection of Cultural Heritage of 03/02/09 No 15 does not provide for the issue of the permits for underwater archaeological research.

The area of the territory subjected to the survey has a sufficient basis for the development of research and design documentation for the preservation of cultural heritage objects and, accordingly, eliminating the danger of their destruction during subsequent construction.

Protection measures proposed by the developers of the research and design documentation are necessary and sufficient for the conservation of cultural heritage objects located in the area of the planned construction.

1. In regards to the measures to ensure the conservation of the cultural heritage objects located in the area of economic activities in connection with the Offshore Section of the South Stream Gas Pipeline (Russian Sector). Underwater section, the following activities for the conservation of cultural heritage are provided in this section.

| Object No | Object<br>Identification   | Distance to<br>the nearest<br>gas pipeline | Depth   | Recommended measures  |
|-----------|----------------------------|--|---------|---|
| RS_Cab Ph | amphora                    | 23.9 m                                     | 73 m    | Lifting to the surface (due to the impossibility of re-routing)   |
| B5_S0006  | Aircraft wing              | 56.8 m                                     | 78 m    | Identification of the object prior to<br>construction. In the case of discovery<br>of the cultural value of the object –<br>observation, lifting to the surface or<br>moving to the side (due to the failure<br>to re-route) with the recording of<br>new coordinates of the object   |
| RS_Cab_7  | Sunken boat                | 69.9 м                                     | 450 m   | Identification of the object prior to<br>construction. In the case of discovery<br>of the cultural value of the objects –<br>observation, ban on the performance<br>of all works involving bottom soil<br>contact (anchoring, etc.) and<br>displacement of the bottom soil in<br>the buffer zone 40 m from the site<br>(due to the impossibility of re-<br>routing) |
| RS_651    | Aircraft wing              | 123.5 m                                    | 1,585 m | Re-routing to comply with the buffer distance of 150 m  |
| R_B5_0006 | Presumably a sunken vessel | 62.6 m                                     | 2,082 m | Re-routing to comply with the buffer distance of 150 m  |
| R_B5_0002 | Presumably a sunken vessel | 12.2 m                                     | 2,105 m | Re-routing to comply with the buffer distance of 150 m  |
| R_B2_0007 | Presumably a sunken vessel | 130.4 m                                    | 2,151 m | Re-routing to comply with the buffer distance of 150 m  |
| R_B1_0042 | Presumably a sunken vessel | 72.4 m                                     | 2,159 m | Re-routing to comply with the buffer distance of 150 m  |
| R_B1_0029 | Presumably a sunken vessel | 12.7 m                                     | 2,169 m | Re-routing to comply with the buffer distance of 150 m  |

Persons and legal entities conducting archaeological field work for three years from the date of commencement of works are required to hand over all the discovered cultural values (such as man-made, anthropological, palaeozoological, palaeobotanic and other objects having historical



and cultural value) for permanent storage to the public part of the Museum Fund of the Russian Federation (para 9, Art. 45 of the Federal Law No 73-FZ).

Furthermore, to avoid the possibility of damage to OCH during the anchoring periods, the locations of OCH must be excluded from the areas of anchorage, and the area of anchorage must be minimised to avoid damage to the objects, which haven't been identified in the process of the surveys.

Excavation, construction, maintenance and other work must be immediately suspended by the Contractor in the event the object with the properties of cultural heritages is detected. The Contractor must notify the local executive authorities of the Russian Federation, responsible for the protection of the objects of cultural heritage (Para 1 Art. 37 of the Federal Law No73-FZ).

- 1. In regards to the measures to ensure the conservation of the cultural heritage objects located in the area of economic activities in connection with the Offshore Section of the South Stream Gas Pipeline (Russian Sector). Coastal Section the following activities for the conservation of cultural heritage are provided in this section:
  - a) Archaeological supervision during earthworks in the buffer zone of the Mound (State Reg. No 363 (on the construction site area during the construction of micro-tunnels). On discovering archaeological artefacts all work on the site must be stopped to carry out an archaeological investigation of the OCH found.

In the event of changes related to the location of permanent and temporary objects relative to OCH (objects of cultural heritage) and the sites of the un-stratified (re-deposited) cultural layer, the requirement for changing the measures for the protection of OCH and other objects of cultural value should be considered subject to their location on the territory of permanent or temporary facilities or their land allocation:

- 1. Perform protective and rescue archaeological excavations of the Mound (State Reg. No 363 (at the stage of the preparation of the territory for the construction);
- 1. Carry out archaeological monitoring at sites with unstratified (re-deposited) cultural layer Varvarovka-1, Varvarovka-2, Varvarovka-3; and
- 2. Perform protective and rescue archaeological excavations of the area of 50 square metres on the site of the un-stratified (re-deposited) cultural layer Varvarovka-2 (pottery kiln in the area of the test pit No 6).

Thus, the research and project documentation was developed on the basis of objective data derived from the full-scale archaeological survey. At the same time, these works were carried out in accordance with the established procedures and in compliance with the rules of the Federal Law of the Russian Federation On Objects of Cultural Heritage (Monuments of History and Culture) of Peoples of the Russian Federation of 25/06/2002 No 73-FZ.

The proposed measures for the conservation of cultural heritage objects located in the area of the designed construction are necessary and sufficient and agreed with the recommendations of the Code of the Restoration Rules, Recommendations for the Research, Survey, Design and Production Works Aimed at the Conservation of Cultural Heritage Sites (Monuments of History and Culture) of the Peoples of the Russian Federation (SRP - 2007, 4th edition), Part 2. Recommendations for the Rescue Archaeological Field Work Procedures (SRP 2007.2),

recommended for use by the Letter of the Ministry of Culture of the Russian Federation of 11 January 2012 No 3-01-39/10-KCh.

#### **15.** Conclusion of the evaluation.

On the basis of the research and design documentation developed by Peter Gaz LLC, which justifies the works on the preservation of cultural heritage objects located in the area of the planned works in regards to the project named the Offshore Section of the South Stream Gas Pipeline (Russian Sector): Protection of the Objects of Cultural Heritage section within the framework of the implementation of the construction of the offshore section of the South Stream gas pipeline (Russian sector), the Commission of Experts considered it reasonable and possible to carry out works on the preservation of cultural heritage sites located in the area of the planned construction (**positive conclusion**).

The Commission of Experts recommends the specified research and design documentation for approval by a state agency for cultural heritage protection.

#### 16. List of annexes to the expert evaluation.

- 1. Minutes of the Organisational Meeting of the Commission of Experts of 29/07/2013 on the question of consideration of the research and design documentation: Protection of the Objects of Cultural Heritage section within the framework of the implementation of the construction of the offshore section of the South Stream gas pipeline (Russian sector); and
- 2. Minutes of the Meeting of the Commission of Experts of 23/08/2013 on the question of the final consideration of the research and design documentation: Protection of the Objects of Cultural Heritage section within the framework of the implementation of the construction of the offshore section of the South Stream gas pipeline (Russian sector).

#### 17. Date of registration of the expert evaluation - 23/08/2013

| Chairman of the Commission of Experts | [Signature] | A. N. Maslovsky |
|---------------------------------------|-------------|-----------------|
| Executive Secretary                   | [Signature] | M. V. Vlaskin   |
| Chairman of the Commission of Experts | [Signature] | N. M. Fomichev  |



#### MINUTES

Of the Organisational Meeting of the Commission of Experts on the Question of Consideration of the Research and Design Documentation: Protection of the Objects of Cultural Heritage Section Within the Framework of the Implementation of the Construction of the Offshore Section of the South Stream Gas Pipeline (Russian Sector).

Rostov-on-Don

29/07/2013

#### Attendees:

**Vlaskin Mikhail Vasilievich**, higher education, a historian, years of experience in the field of archaeology – 34, a place of work and a position – Deputy Director of Don Heritage National Independent Cultural Establishment of the Rostov Region, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

**Maslovsky Andrey Nickolaevich**, higher education, a historian, years of experience in the field of archaeology – 22, Head of the Department of Archaeology of Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History Archaeology and Palaeontology, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

**Fomichev Nickolai Mikhailovich**, higher education, historian, years of experience in the field of archaeology – 39, Senior Research Scientist of Publicly Funded National Institution of the Rostov Region Azov Natural Reserve Museum of History Archaeology and Palaeontology, State Expert of the National Historical-Cultural Expert Evaluation Panel (Order of the Ministry of Culture of the Russian Federation No 625 of 22.06.2012).

#### Agenda:

- 1. Approval of the members of the Commission of Experts.
- 2. Election of the chairman and the executive secretary of the Commission of Experts.
- 3. Determining the working procedure and decision-making of the Commission of Experts.
- 4. Defining a list of additional documents requested by the Customer for the evaluation.

#### The Commission reviewed:

1. Approval of the members of the Commission of Experts.

**The Commission decided:** Approve the following members of the Commission of Experts: Vlaskin M. V., A. N. Maslovsky, N. M. Fomichev

2. Election of the chairman and the executive secretary of the Commission of Experts.

Nominations for positions of Chairman and Executive Secretary of the Commission of Experts were put to the vote. The decision was made unanimously.

**The Commission decided:** Elect A. N. Maslovsky the Chairman and M. V. Vlaskin the Executive Secretary of the Commission of Experts.

3. Determining the working procedure and decision-making of the Commission of Experts.

**The Commission decided:** Determine the following working procedure and decision-making for the Commission of Experts:

The Commission of Experts works on the basis of Articles 29, 31 of the Federal Law of 25/06/2002 No 73-FZ On Objects of Cultural Heritage (Monuments of History and Culture) of Peoples of the Russian Federation, Regulation on the State Historical-Cultural Expert Evaluation approved by the Executive Order of the Government of the Russian Federation of 15 June 2009 No 569, other legal acts of the Russian Federation and the present procedure.

- 1. The work of the Commission of Experts shall be carried out in the form of meetings. Place, date and time of the meeting shall be appointed by the Chairman or the Executive Secretary of the Commission of Experts subject to agreement with the other members. The Chairman of the Commission of Experts shall conduct the meeting of the Commission of Experts and announce its decision. In the absence of the Chairman of the Expert Commission the Executive Secretary of the Commission of Experts shall carry out his responsibilities. In the case the Chairman of the Commission of Experts is unable to fulfil his responsibilities or refuses to participate in the expert evaluation in connection with the circumstances specified in paragraph 8 of the Provision of Experts shall conduct an organisational meeting and elect the new Chairman of the Commission of Experts. Until the new Chairman of the Commission of Experts is elected, the Executive Secretary of the Commission of Experts shall carry out his responsibilities.
- 2. The decision of the Commission of Experts shall be made by a majority vote provided that all the members of the Commission of Experts are present at the meeting. In the case of equality of "for" and "against" votes the vote of the Chairman of the Commission of Experts shall be the decisive vote.
- 3. The Commission of Experts shall maintain the following minutes:
- Minutes of the organisational meeting; and
- Minutes of working meetings.

Minutes of the organisational meeting shall be signed by all members of the Commission of Experts, the remaining minutes shall be signed by the Chairman and the Executive Secretary of the Commission of Experts.

The work of the Commission of Experts shall be organised by the Chairman and the Executive Secretary.



4. Defining a list of documents requested from the Customer for the state historical-cultural expert evaluation.

**The Commission reviewed** the research and design documentation submitted by the Customer which justifies the performance of works for the preservation of cultural heritage objects located in the area of planned works in relation to the Offshore Section of the South Stream Gas Pipeline (Russian Sector): Protection of the Objects of Cultural Heritage Section Within the Framework of the Implementation of the Construction of the Offshore Section of the

South Stream Gas Pipeline (Russian Sector), including:

Volume 16 / 13/2013-P-SOKN I.1. Offshore Section of the South Stream Gas Pipeline (Russian Sector). Design Documentation Section 10 Other documentation in the cases, stipulated by federal laws. Part 5 Actions for the Preservation of Cultural Heritage Sites. Book 1 The Underwater Section, consisting of:

- 1. Introduction.
  - 1.1. Brief Description of the Facility.
  - 1.2. Project on the Territory of the Russian Federation.
  - 1.3. Specification of the Offshore Pipeline.
  - 1.4. Basis for the Development of the Documentation.
  - 1.5. List of Abbreviations and Symbols.
- 2. Regulatory and methodological framework.
- 3. Information on the Territory (Water Area) of Survey.
  - 3.1. Brief Technical Description of the Facility and its Land Allocation. Description of the Technology of Earthworks During the Construction.
  - 3.2. Boundaries of Surveys.
  - 3.3. Brief Geographical Description of the Territory.
- 4. Brief Historical Background.
  - 4.1. TYPES OF UNDERWATER OBJECTS OF CULTURAL HERITAGE IN THE LIGHT OF SPECIFIC FEATURES OF THE REGION
  - 4.2. Correlation of Marine Transgressions and Regressions with the Archaeological Periods.
  - 4.3. History of Human Development of the Region and History of Archaeological Research.
- 5. Method of Analysis of Geophysical Data and Scope of Offshore Fieldworks.
  - 5.1. Boundaries of Surveys.
  - 5.2. Sonar and Magnetometry Studies within the Framework of Engineering Surveys.

- 5.3. Visual Inspection of the Seabed Methods and Analysis.
- 6. The Results of the Marine Fieldworks on the Visual Survey of the Seafloor.
  - 6.1. Results of Sonar Surveys.
  - 6.2. The Results of the Marine Fieldworks on the Visual Survey of the Seafloor.
- 7. Laws and Criteria for the Assessment of Safe Distances to the Objects of Cultural Heritage.
- 8. Forecast for the Impact of the Planned Facilities on the Objects of Cultural Heritage at the Stages of Construction and Operation.
- 9. Recommended Measures for the Preservation of the Objects of Cultural Heritage.
- 10. Cost of measures for the protection of the objects of cultural heritage.
- 11. Conclusion.
- 12. List of References.
- 13. List of Pictures.

#### ANNEXES.

Annex A: Terms of Reference.

Annex B: Album of Illustrations.

Annex C: Object of cultural heritage and potential objects of cultural heritage, found on the bottom of the Russian sector of the Black Sea along the route of South Stream gas pipeline

Volume 16/13/2013-P-SOKN1.2 Offshore Section of the South Stream Gas Pipeline (Russian Sector). Design Documentation Section 10 Other documentation in the cases, stipulated by federal laws. Part 5 Actions for the Preservation of Cultural Heritage Sites. Book 1 Coastal Section, consisting of:

- 1. Introduction.
  - 1.1. Brief Description of the Facility.
  - 1.2. Project on the Territory of the Russian Federation.
  - 1.3. Specification of the Offshore Pipeline
  - 1.4. Purpose and objectives of the preservation of sites of cultural heritage.
  - 1.5. Basis for the Development of the Documentation
  - 1.6. List of Abbreviations and Symbols.
- 2. Legal Support for the Measures on the Protection of the Objects of Cultural Heritage in the Zones of Construction Works.



- 2.1. Referenced Codes and Standards.
- 2.2. Main Provisions of the Current Legislation on the Protection of Cultural Heritage During Design and Construction.
- 3. Brief Technical Specification of the Facility. Earthworks Process Specification During Construction.
- 4. History of Archaeological Surveys in the Anapa Area.
- 5. Scope of Work and Survey Procedure.
  - 5.1. Procedure of Archaeological Surveys.
    - 5.1.1. Preliminary Stage. Preparation Works.
    - 5.1.2. Archaeological Field Works.
    - 5.1.3. Laboratory Processing of Obtained Materials and Field Documentation, and Preparing a Report.
  - 5.2. Composition and Timeframes for the Performance of Works.
    - 5.2.1. Preparatory Work Stage.
    - 5.2.2. Field Work Stage.
    - 5.2.3. Office Work Stage.
  - 5.3. Used Instruments, Equipment and Software.
- 6. The results of archival and bibliographic research.
- 7. Results of the Full-Scale Archaeological Survey.
  - 7.1. Boundaries of the Surveyed Area.
  - 7.2. Full-Scale Visual Inspection. Survey Route.
  - 7.3. Full-Scale Inspection. Pit Sampling.
    - 7.3.1. Test Pit Works on the Site of Un-Stratified Cultural Layer Varvarovka-1.
    - 7.3.2. Test Pit Works on the Site of Un-Stratified Cultural Layer Varvarovka-2.
    - 7.3.3. Test Pit Works on the Site of Un-Stratified Cultural Layer Varvarovka-3.
- 8. List and Description of OCH and Sites of Un-Stratified Cultural Layer Within the Research Territory.
  - 8.1. Mound, State Reg. No 363.
  - 8.2. Identified Site of the Unstratified (Re-Deposited) Cultural Layer Varvarovka-1.
  - 8.3. Identified Site of the Unstratified (Re-Deposited) Cultural Layer Varvarovka-2.
  - 8.4. Identified Site of the Unstratified (Re-Deposited) Cultural Layer Varvarovka-3.

- 9. Activities for the preservation of the objects of cultural heritage and sites of the unstratified cultural layer.
  - 9.1. Restrictions established by Law for the construction activities in the territory with the objects of cultural heritage, their protection zones and sites of the un-stratified cultural layer.
  - 9.2. Options of Monument Conservation Stipulated by Legislation.
  - 9.3. Recommended protection measures.
- 10. Cost of measures for the protection of the objects of cultural heritage.
- 11. Conclusion.
- 12. Bibliography.
- 13. List of Pictures.

#### **SCHEDULES**

- Annex A: Terms of Reference.
- Annex B: Permit for Archaeological Excavations and Surveys No 1149.
- Annex C: Permit No 56 of 16/11/2010 for Scientific Research Surveys and Protection and Rescue Works.
- Annex D: Response from the Office for Conservation, Restoration and Maintenance of Historical and Cultural Relics (Heritage) of the Krasnodar Region on the status of the identified objects in Varvarovka 1, Varvarovka 2 and Varvarovka 3.
- Annex E: List of Annexes to the Resolution of the Krasnodar Region Executive Committee of 29/01/1975 No 63, Volume 1, pages 57, 59.
- Annex F: Inventories of the individual finds.
- F.1 The inventory of the items found during the archaeological excavations of the identified site with the un-stratified (re-deposited) cultural layer in Varvarovka-2.
- F.2 The inventory of the items found during the archaeological excavations of the identified site with the un-stratified (re-deposited) cultural layer in Varvarovka-3.
- Annex G: The estimates for the activities on the protection of the identified OCH (objects of cultural heritage).
- G.1 Estimate of the cost of protection and rescue research of the kiln in the area of 50 square metres at a depth of 0.6 m located on the site with the un-stratified (re-deposited) cultural layer in Varvarovka-2.



- G.2 Estimate of the archaeological monitoring in the area of 1 ha on the site with the un-stratified (re-deposited) cultural layer in Varvarovka-1, Varvarovka-2, Varvarovka-3.
- G.3 Estimate of the cost of the protection and rescue works (excavations) on the archaeological monument (Mound), State Reg. No 363 (H 2.97 m, D 29 m).
- G.4 Estimate of the cost of 1 specialised archaeologist/day for the archaeological supervision of the excavation works within the borderline of the zone of the archaeological Mound monument, State Reg. No 363.
- Annex I. Album of Illustrations

Sheet of Record of Changes

**The Commission decided:** Additional materials at the time of the organisational meeting are not required.

| Chairman of the Commission of Experts | [Signature] | A. N. Maslovsky |
|---------------------------------------|-------------|-----------------|
| Executive Secretary                   | [Signature] | M. V. Vlaskin   |
| Member of the Commission of Experts   | [Signature] | N. M. Fomichev  |

#### MINUTES

Of the Meeting of the Commission of Experts on the Question of the Final Consideration of the Research and Design Documentation: Protection of the Objects of Cultural Heritage Section Within the Framework of the Implementation of the Construction of the Offshore Section of the South Stream Gas Pipeline (Russian Sector).

Rostov-on-Don

23/08/2013

#### Attendees:

Andrey Nikolaevish Maslovsky – Chairman of the Commission of Experts

Mikhail Vasilyevich Vlaskin – Executive Secretary of the Commission of Experts

Nikolay Mikhailovich Fomichev – Member of the Commission of Experts

#### Agenda:

- 1. Coordination of the final conclusions of the expert evaluation and signing of the report of the state historical-cultural expert evaluation.
- 2. Deciding in regards to the submission of the report of the state historical-cultural expert evaluation to the Customer.

#### Regarding the 1st question:

**The Commission reviewed:** Conclusions of each expert regarding the research and design documentation which justifies the performance of works for the preservation of cultural heritage objects located in the area of planned works in relation to the Offshore Section of the South Stream Gas Pipeline (Russian Sector): Protection of the Objects of Cultural Heritage section within the framework of the implementation of the construction of the offshore section of the South Stream gas pipeline (Russian sector) developed by Peter Gaz LLC. This documentation corresponds to the requirements of the Federal Law of 25/06/2002 No 73-FZ On Objects of Cultural Heritage (Monuments of History and Culture) of Peoples of the Russian Federation and the Code of Restoration Procedures Recommendations on Research, Surveying, Design and Production Works Aimed at the Conservation of the Cultural Heritage Objects (Monuments of History and Culture) of the Peoples of the Russian Federation (SRP-2007, 4th edition).

There were no disagreements between the members of the Commission of Experts in regards to the final conclusions of the expert evaluation.



#### **Regarding the 2nd question:**

**The Commission decided:** Sign the Report of the State Historical-Cultural Expert Evaluation regarding the above research and design documentation justifying the performance of works on the preservation of cultural heritage objects located in the area of planned works in relation to the Offshore Section of the South Stream Gas Pipeline (Russian Sector).

Executive Secretary of the Commission of Experts shall forward three copies to the Customer, including all the annexes, documents and materials within 2 calendar days from the date of the issue of the Report of the Expert Evaluation.

| Chairman of the Commission of Experts | [Signature] | A. N. Maslovsky |
|---------------------------------------|-------------|-----------------|
| Executive Secretary                   | [Signature] | M. V. Vlaskin   |
| Member of the Commission of Experts   | [Signature] | N.M. Fomichev   |