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SHEBERGHAN GAS GENERATION ACTIVITY (SGGA)

Contract No. EPP-I-00-03-00004-00, Task Order No. AID-306-TO-12-00002

Supplemental Deliverable, Gas Reserves Report, Core Sample Library Summary

June 27, 2016

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This Special Report, Core Sample Library Summary is made possible by support from the American People jointly sponsored by United States Agency for International Development (USAID) and the Government of the Islamic Republic of Afghanistan. The contents of this Special Report, Core Sample Library Summary was prepared by Advanced Engineering Associates International, Inc. and are the sole responsibility of Advanced Engineering Associates International, Inc. and do not necessarily reflect the views of USAID or the United States Government.

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SHEBERGHAN GAS GENERATION ACTIVITY (SGGA)

Special Report, Core Sample Library Summary Sheberghan and Mazar-e-Sharif

Figure 1: Sheberghan Core Library – BEFORE



Figure 2: Sheberghan Core Library – AFTER



Figure 3: Mazar-e-Sharif Core Library – BEFORE



Figure 4: Mazar-e-Sharif Core Library – AFTER



History

The Afghanistan National Oil and Gas Organization today, known as Oil and Gas Survey Directorate was established in 1960 in Mazar-e-Sharif-e-Sharif. During that time, the drilling operations of all oil and gas fields were managed and directed from Mazar-e-Sharif. As part of oil and gas industry practices, the cores were tested, analyzed and used for technical purposes in Sheberghan and Mazar-e-Sharif-e-Sharif. This Organization had several warehouses for different purposes including a warehouse for gas well cores. After the analysis and test of the cores in various fields, the cores were brought to the core library in Mazar-e-Sharif. During the Afghan civil war and years of chaos, the oil and gas industry and all other infrastructure was fully or partially destroyed, and the cores are no exception. There are conflicting stories about what really happened to the original boxes which contained the core samples. Some recall that employees of the residents of Oil and Gas Directorate in Mazar-e-Sharif used the core boxes as fire wood to heat and cook in their homes. Others recall that the core library in Mazar-e-Sharif (warehouse) was used by a private confectionary company which burned due to an unknown reason. In either case, the very valuable core samples were in total disarray and their location could not be described as a library.

In 1986, the Oil and Gas Survey Directorate was shifted to Sheberghan, but the cores remained within the Mazar-e-Sharif core sample library. The existing cores in Sheberghan are from the fields that have been more recently (after 1986) drilled and tested. A list of the current existing core samples both in Sheberghan and Mazar-e-Sharif core libraries are identified in tables within this document.

Summary

On 30 January 2016, SGGA proposed the construction of core libraries for Sheberghan and Mazar-e-Sharif OGS branches to Jules "Mike" Jordy, USAID's SGDP COR. Pursuant to COR approval on 1 February 2016, SGGA proceeded with plans to create two libraries for well core samples obtained from numerous wells drilled in the Sheberghan area. The cores can be of significant value in analysis of the geological characteristics in connection with oil and gas exploration and production. This project was performed in connection with the seven gas field data evaluation and contingent resources study performed by McDaniel Associates for SGGA. The importance of having an organized core library was discussed with MoMP senior management and SGGA requested MoMP provide assistance to SGGA employees in making this valuable service happen. The primary work (locating the cores and permission from MoMP) was accomplished by SGGA engineers in Sheberghan in a period of two months in summer 2016.

Sheberghan Core Library

On 7 April 2016, Naihmatullah, SGGA on-budget task manager, was assigned to lead the Sheberghan and Mazar-e-Sharif core libraries mission. The specific work on the Sheberghan core library began on 10 April 2016. The Sheberghan core library was in a complete mess, consisting of old, broken boxes and left in a locked room where dust, water and the open windows in the room had combined to take their toll on the condition of the core samples. The first stage consisted of removal of the old, broken core boxes. Subsequently, SGGA subcontracted with local carpentry, metal work, calligrapher and day laborers to clean and repair the core library. They built new core boxes to hold and identify core samples, along with the requisite metal shelves to hold and protect 53 core sample boxes. The core samples were shifted from old boxes to new boxes and labelled by the calligrapher on the back and edge to include the name of the oil and gas field, intervals.

SGGA also took the initiative to prepare a soft and hard core catalog for OGS. The core library catalog can be used as a guide for the core specifications. The Sheberghan core library work has been successfully finished on 20 April, 2016. Photos of the Sheberghan core library are attached in Annex 1.

Sheberghan Core Sample Library Catalog Template

Box No.	Box Shelf No.	Gas Field Name	Well No.	Interval		Year	Remarks
				From (Meter)	To (Meter)		
1	1	Khoja Gogerdak	43	2300	2307		
2	1	Khoja Gogerdak	43	2363	2366		
3	1	Khoja Gogerdak	43	2300	2307		
4	5	Khoja Gogerdak	43	2294	2300		
5	5	Khoja Gogerdak	43	2231	2241		
6	5	Khoja Gogerdak	43	2288	2294		
7	9	Khoja Gogerdak	43	2237	2241		
8	9	Khoja Gogerdak	43	2187	2190		

List of Oil & Gas Field Core Samples Maintained in the Sheberghan Core Library

- ✓ Khoja Gogerdak
- ✓ Chekh Che
- ✓ Bashikurd
- ✓ Turkchin
- ✓ Gulda
- ✓ Tarnaw

Mazar-e-Sharif Core Library

After completion of the Sheberghan core sample library, the SGGA team moved to Mazar-e-Sharif where the majority of the core samples were stored. The OGS branch in Mazar-e-Sharif keeps their core samples in an Old Russian warehouse which is in disrepair. This warehouse is also stores various Soviet-era spare parts. The initial condition of the warehouse and the core samples were a total mess and scattered all over the place. The first step required an extensive cleaning and process took an astonishing six days just to provide a usable place for the SGGA/OGS team to count and review the old core boxes. There were 1,266 core boxes available with broken boxes and some with empty cores. After the cleanup process, the SGGA teams did a market research and locate another qualified carpenter to build the new core boxes similar to the Sheberghan portion of the work. Since the Mazar-e-Sharif work involved over one thousand core sample boxes and some of the boxes were in usable

condition, the option of building new lids and repairing the old boxes were coordinated with OGS authorities and SGGA senior management.

After going through the SGGA subcontracting process and award of a contract to the carpenter, the practical work in Mazar-e-Sharif core library began on 8 May 2016 (additional photos of the work progress are attached as Annex 2 to this document). Besides construction of the lids and repair of the old core boxes, the warehouse windows had been broken for years, exposing the storage area fully to the elements. SGGA determined that it would be necessary to repair the windows to ensure that the new core sample boxes would not be damaged by the elements after SGGA's departure.

The carpenter accomplished the work within nine working days, including new lids and full replacement or repair of 1,266 core sample boxes. After the carpenter completed his work the core samples were identified with the name of the oil and gas fields labelled by a calligrapher on the back of the new lids and core boxes.

SGGA also took the initiative to prepare a soft and hard core catalog for the OGS branch in Mazar-e-Sharif. The core library catalog can be used as a guide to review existing core specifications. The mission in Mazar-e-Sharif core library was successfully completed on 8 June 2016. Photos of the Mazar-e-Sharif core library are attached as Annex 2.

Mazar-e-Sharif Core Sample Library Catalog Template

No.	Field Name Oil/Gas	Box Shelf No.		Box Quantity	Total Box	Remarks
		From	To			
1	Gerquduq	1	20	125	160	
		34,37,38,39,49		20		
		41,22,43,44		15		
2	Yatimtaq	28	35	23	58	
		35	36	6		
		117	118	8		
		144,146,147,148,149,150		21		
3	Jangli Kalan	75	77	8	8	
4	Khoja Bolan	24		8	8	
5	Shakarak	163	165	11	36	
		228,229,270,271,272,273		25		
6	Balkh	138	141	13	13	
7	Sanduqli	312	317	16	16	
8	Blanghur	143		4	25	
		157	162	21		
9	Barbolaq	230	233	13	13	

List of Oil & Gas Field Core Samples Contained Within the Mazar-e-Sharif Core Library

✓ Yatimtaq	✓ Zemradsai	✓ Aqsai
✓ Gerquduq	✓ Kaldar	✓ Krelo
✓ Jangal-e- Kalan	✓ Bashikurd	✓ Gultapa
✓ Khoja Bolan	✓ Khoja Seplan	✓ Arab Bai
✓ Shakarak	✓ Qezal Shiram	✓ Saripul
✓ Balkh	✓ Dehmalik	✓ Kunduz
✓ Sanduqli	✓ Ask	✓ Sozma Qalha
✓ Blanghur	✓ Aqcha	✓ Qarawol Tapa
✓ Barbolaq	✓ Sancharak	✓ Lati
✓ Abdan	✓ Bazar Kami	✓ Faizabad
✓ Kortamash	✓ Ali Gul	✓ Dosti
✓ Angut	✓ Jayran Khana	✓ Baghlan
✓ Kashkari	✓ Jegdalik	✓ Shorab
✓ Juma	✓ Aqdaria	

Challenges

- Short government employee working hours in Sheberghan and Mazar-e-Sharif OGS.
- Slow administrative processes in all Sheberghan and Mazar-e-Sharif OGS offices.
- Periodic lack of cooperation or passive resistance to SGGA's project goals.
- Attempts to obtain additional SGGA services unrelated to the core sample project.

Recommendations

SGGA highly recommends MoMP maintain the core libraries constructed and organized by SGGA and funded through USAID in a good condition. SGGA recommends that OGS assign a team to cross check the available data in these offices and if possible develop a list of contents containing the data in such a way that the data can be cataloged in a professional manner to support the library in the future.

Sheberghan and Mazar-e-Sharif Core Libraries Expenses

The breakdown of the costs incurred in Sheberghan and Mazar-e-Sharif core sample libraries are listed below:

Sheberghan Core Library Expenses		
No.	Description	Amount
1	Clean up, daily labor charges	\$53
2	Metal shelves for core boxes	\$353
3	New core boxes (53 boxes)	\$934
4	Calligraphy, core specification on the edge and lid of the boxes	\$187.50
5	Sign board for core library	\$15
Total:		\$1,542
Mazar-e-Sharif Core Library Expenses		
No.	Description	Amount
1	Clean up, daily labor charges and tools for cleanup	\$519
2	New wooden lid and repair of 1,266 core boxes	\$11,394
3	Calligraphy, core specification on the lid of the boxes	\$1,489
4	Glass and net for warehouse windows	\$175
Total:		\$13,577

Annex 1: Sheberghan Core Library Photos

Sheberghan Core Library – Before



Sheberghan Core Library – After



Annex 2: Mazar-e-Sharif Core Library Photos

Mazar-e-Sharif Core Library –Before



Mazar-e-Sharif Core Library – After

