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## **Drilling methods and Main Steps of Well completion training course Report in North regional**

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## 1. INTRODUCTION

In the WASH sector the drilling of water wells, well design, construction and development are poor and without any technical consideration. This is a big gap in the WASH sector in Afghanistan, specially in the North region. Therefore, the well drilling methods and main steps for well drilling completion training course were organized in the North region to enhance technical capacity of WASH sector that implement WASH project. The training course started on 14 December 2013 and ended on 19 December 2013. The course was held in DACAAR's NRO and 17 participants from FRRD, SORA, SCI, ASAARO, CoAR , NPO , BRRD, and DACAAR attended the training. The participants came from Faryab, Jawzjan and Balkh province and most of them were Hydro geologist, Geologist and Engineers.

During the training course were provided a good environment for participatory learning throughout the training sessions and team works in the field. The participants were encouraged to share their ideas, knowledge and experiences. The trainers used several different participatory methods that proved successful. The application of the training module was useful to the participants, which maintained their interest. The participants were also extremely appreciative of the training materials, sessions, teamwork in the field and in the training hall and thankful for the work done to run the courses. The participants were all extremely attentive, cooperative, positive and appreciative of the course and this was seen as partly an indication of the years of lack of professional development. The participants will be able to use the skill and knowledge to improve their work performance on their job.

## 2. INFORMATION ABOUT TRAINING COURSE

The information about training course summarized in the Table 1.

**Table 1. Information about training course**

Name of course:	Drilling methods and Main Steps of Well completion training course.
Number of participants:	17 trainees from FRRD, SORA, SCI, ASAARO, CoAR , NPO , BRRD, and DACAAR
Location for training:	DACAAR north regional management office
Date of implementation	15 – 19 December, 2013
Course organiser	M. Hassan Saffi
Trainer	M. Hassan Saffi and Ahmad Jawid, Program/Technical Unit, DACAAR

### 3. COURSE OBJECTIVES

The main objective of this training course was to train and enhance the capacity building of North region WASH staffs regarding drilling methods and main steps of water well completion for efficient and cost effective implementation of water supply project.

### 4. TRAINING FOCUS GROUP

In North region is lack of WASH professional staffs regarding drilling methods, selection of drilling Rig according to the geological condition, selection of well site, planning and management of drilling Rig, equipments, tools and material for drilling, drilling procedure, sampling, well logging geophysics, well design, safe well construction and development and well drilling and construction report. This is a big gap for safe completion water well and provision of appropriate and efficient report. Therefore, there is needed to enhance technical

Table 2.The focus group/participant of the training course

No	Name	Position	Organization	Province
1	Mohammad Asif "Samim"	Field Eng	DACAAR / NSP	Faryab
2	Shah Mohammad	Assistant Eng	DACAAR	Faryab
3	Hasibullah	Field Eng	DACAAR / NSP	Faryab
4	Mohammad Salim "Arian"	Site Eng	SORA	Mazar -e- Sharif
5	Asifullah "Rahimi"	Field Eng	DACAAR / NSP	Faryab
6	Ahmad Zubair "Frotan"	Site Eng	SORA	Mazar -e Sharif
7	Eng - Jamila	Senior Officer	SCI	Jawzjan
8	Mirwais	Geologist	FRRD	Faryab
9	Ahmad Fahim "Ahady"	Geologist	FRRD	Faryab
10	Najibullah "Nessari"	Senior Eng	SCI	Mazar- e Sharif
11	Mohammad Asif "Safi"	Site Eng	ASAARO	Jawzjan
12	Assad "Darvish"	Site Eng	CoAR	Faryab
13	Mirwais "Guzar"	Prog / Officer	NPO	Faryab
14	Baryalay "Shakib"	Officer	BRRD	Mazar-e Sharif
15	Abdul Rashid	Officer	BRRD	Mazar-e Sharif
16	Mohammad Ashraf "Amiri"	Water Eng	ZOA	Jawzjan
17	Mohammad Hadi	Geologist	DACAAR	Faryab

### 5. SUPPORT, EQUIPMENT, LOGISTICS AND FACILITIES

#### 5.1 Training Hall

The training took place in DACAAR North Regional management office training Hall in Mazar-i-Sharif centre of Balkh province. The training room was furnished with chairs, tables, and training equipments and tools.

## **5.2 Training Timeline**

The theoretical part of training course started on 15-18 December, 2013 at 9:00 AM and it ended at 15:30 PM with 1 hour break for lunch and prayers and 15 minutes for tea break. The practical part of training course started on 19 December, 2013 at 9:00 AM and it ended at 14:30 PM. The participants visited the process of drilling wells on sites and DACAAR water supply projects in Khulm and Dehdadi districts of Balkh province

## **5.3 Training Equipment and Stationary**

Laptop computer, projector, projector screen, flip chart, markers, stationary, tables, charts graphs and photos provided by DACAAR. The hard and soft copy of training materials, camera and video were used and provided by DACAAR and NORPLAN. DACAAR North Region Management Office facilitated field visit regarding well drilling for participants in Khulm and Dehdadi districts of Balkh province.

## **5.4 Training Methodology**

The methodology in the training included presentation, charts, graphs, tables, photos, group works, brainstorming, group works, group discussions and visiting on site. During training course were also demonstrated DACAAR's field experience and lesson learning regarding well drilling, sampling, design, construction, cleaning and development.

## **5.5 Transport and Food**

The participants attended in the training course from Mazar-i-Sharif without providing any transportation for pick and drop but NORPLAN compensated the transportation cost by paying \$10 per day per person, but the participants attended in the training course from Jawzjan and Faryab province, the transportation cost, DSA and hotel cost were paid by NORPLAN. Tea breaks and lunch also were provided by NORPLAN and facilitated by DACAAR during the training course.

# **6. COURSE EVALUATION**

## **6.1 Primary and final evaluation of participant**

We evaluated the training course participants before starting and end of training course by taken test regarding drilling methods and main steps of water well completion. The results of

evaluation were very poor and not satisfactory and the results of final evaluation were relatively good. The participants pre and final evaluation results is shown in the table

**Table 3.The pre and final evaluation results.**

No	Name	Position	Pre evaluation Points(from 100)	Final Pre evaluation Points (from 100).
1	Mohammad Asif "Samim"	Field Eng	2	65
2	Shah Mohammad	Assistant Eng	2	40
3	Hasibullah	Field Eng	6	65
4	Mohammad Salim "Arian"	Site Eng	4	37
5	Asifullah "Rahimi"	Field Eng	16	55
6	Ahmad Zubair "Frotan"	Site Eng	5	50
7	Eng - Jamila	Senior Officer	2	55
8	Mirwais	Geologist	5	57
9	Ahmad Fahim "Ahady"	Geologist	8	64
10	Najibullah "Nessari"	Senior Eng	8	55
11	Mohammad Asif "Safi"	Site Eng	3	60
12	Assad "Darvish"	Site Eng	8	60
13	Mirwais "Guzar"	Prog / Officer	5	65
14	Baryalay "Shakib"	Officer	8	48
15	Abdul Rashid	Officer	1	52

16	Mohammad Ashraf "Amiri"	Water Eng	4	55
17	Mohammad Hadi	Geologist	30	65

## 6.2 Comments from participants

The training course was evaluated by the participants. The summary of evaluation is as following:

**Question 1:** Did the training course meet your expectations? 1. Completely, 2. Partially, 3. Not at all.

**Response:** Completely : 55%, Partially 45%, Not at all 0%

**Question 2:** What do you think about the duration of training course? 1. Too Long, 2. Just right, 3. Too short.

**Response:** Too Long 0 .Just right 82%, Too short 18%.

**Question 3:** How was the training course relevant to your organization or project's need? 1. Very relevant, 2. Somewhat relevant, 3. Not relevant

**Response:** Very relevant 98%, Just right 82%, Too short 0.

**Question 4:** How do you evaluate the theoretical part of training course? 1. Very excellent, 2. excellent, 3. poor

**Response:** Very excellent 88%, excellent 12%, Poor 0%.

**Question 5:** How do you evaluate the practical part of training course? 1. Very excellent, 2. excellent, 3. poor.

**Response:** Very excellent 94%, excellent 4%, Poor 2%.

**Question 6.1:** How do you evaluate allocation of time for group discussions? 1. Very Long 2. Long 82%, 3. Sufficient 18%, 4. Short, 5. Very short

**Response:** 1. Very Long 3%, 2. Long 3%, 3. Just right 94%, 4, Short 0, 5. Very short 0

**Question 6.2:** How do you evaluate allocation of time for group works? 1. Very Long 2. Long 82%, 3. Sufficient , 4. Short, 5. Very short

**Response:** 1. Very Long 2%, 2. Long 48%, 3. Just right 50%, 4, Short 0, 5. Very short 0

**Question 7:** How do you evaluate the methods of training course? 1. Participatory, 2. Not participatory, 3. Completely participatory

**Response:** 1. Participatory 94%, 2. Not participatory 0, 3. completely participatory 6%

**Question 8:** How do you evaluate food and training hall of training course? 1. Very good, 2. good, 3. Just right, 4. Poor

**Response:** 1. Very good 80%, 2. good 18% 3. Just right 2%, 4. Poor 0

**Question 10:** How do you evaluate the behaviour of facilitators during training course?

1. Very good , 2. good, 3. Poor

**Response:** 1. Very good 97%, 2. good 3%, 3. Poor 0

**Question 9:** What was the organization of training course?

1. Very good , 2. good, 3. Poor

**Response:** 1. Very good 97%, 2. good 3%, 3. Poor 0

## **7. RECOMMENDATIONS**

- A follow-up course should be conducted for each topic to further develop the concepts (well drilling methods and main steps of water well completion).
- We shared the training time table to the participant within a week, which is a very short time, therefore, it is needed to share the email with the participants a month before the training starting.
- The participants from Faryab, Jawzjan and Balkh provinces were attended in this training course, it is suggested to share training course with Samangan, Baghlan, Kunduz and Sir-i-Pul province for participation.
- The course duration of 5 days seems to be fine, but some of participants wanted more time and longer period.



