

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 7 Conduct Drilling Operations

This module encompasses major drilling tasks such as rig operation, maintaining hole direction, cementing and grouting and diagnosis of equipment faults associated with the drilling operation.

Employee Name/ID Number: _____

Assessor: _____

Element of Competence	Performance Criteria	Assessment Criteria
7.1 Undertake site safety induction procedures.	a. Wear correct PPE for tasks performed.	1. Wear correct PPE for tasks performed.
	b. Conduct camp, site and equipment safety inspections using relevant checklists for guidance.	2. Conduct camp, site and equipment safety inspections using relevant checklists for guidance.
	c. Identify any inadequacies for risk control measures and report to designated personnel.	3. Identify any inadequacies for risk control measures and report to designated personnel.
	d. Implement site procedures for dealing with hazardous events.	4. Implement site procedures for dealing with hazardous events.
Assessment (circle one):	Competent Partial	Needs Training Date:
7.2 Operate drill rig.	a. Controls operated in accordance with manufacturer's instructions and/or site specific requirements.	1. Operated control in accordance with manufacturer's instructions and/or site specific requirements.
	b. Work is performed in accordance with agreed plan and outcomes and within the operating capacities of equipment.	2. Perform work is in accordance with agreed plan and outcomes and within the operating capacities of equipment.
	c. Correct combination of drill rotational speed and pressure is applied to suit ground conditions.	3. Apply correct combination of drill rotational speed and pressure to suit ground conditions.
	d. Calculations performed to determine drill and/or casing string lengths and hole depth.	4. Perform calculations to determine drill and/or casing string lengths and hole depth.
	e. Correct fluid(s) for drilling conditions selected and used.	5. Select and use correct fluid(s) for drilling conditions.
	f. Equipment operated at correct fluid and air pressures.	6. Operate equipment at correct fluid and air pressures.

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 7 Conduct Drilling Operations (cont'd)

7.2 Operate drill rig (cont'd).	g. Safe working conditions are constantly maintained.	7. Constantly maintain safe working conditions.
	h. Gauges monitored and information interpreted.	8. Monitor gauges and interpret information correctly.
	i. Ability to convert between metric and imperial demonstrated.	9. Demonstrate ability to convert between metric and imperial.
	j. Range of hazardous situations recognized through continued monitoring and appropriate corrective actions taken.	10. Recognize range of hazardous situations through continued monitoring and take appropriate corrective actions.
	k. Good housekeeping maintained.	11. Maintain good housekeeping.
Assessment (circle one): Competent Partial Needs Training Date:		
7.3 Maintain planned direction of hole.	a. Maintain hole alignment taking in to account straightness or planned deflections.	1. Maintain hole alignment taking in to account straightness or planned deflections.
	b. Reading of depth, direction and azimuth is recorded accurately and legibly.	2. Reading of depth, direction and azimuth is recorded accurately and legibly.
	c. Corrective action taken when hole alignment deviates from plan.	3. Take corrective action when hole alignment deviates from plan.
Assessment (circle one): Competent Partial Needs Training Date:		
7.4 Conduct cementing/grouting operations.	a. Calculate total volume of slurry needed for job.	1. Calculate total volume of slurry needed for job.
	b. Determine and mix required quantities of cement, water and additives.	2. Determine and mix required quantities of cement, water and additives.
	c. Select the most appropriate method of placing cement.	3. Select the most appropriate method of placing cement.
	d. Place cement using most appropriate method.	4. Place cement using most appropriate method.
	e. Select special pump for placing cement, if available.	5. Select special pump for placing cement, if available.
	f. Carry out calculations of collapse strength to ensure cement weight won't collapse casing.	6. Carry out calculations of collapse strength to ensure cement weight won't collapse casing.
Assessment (circle one): Competent Partial Needs Training Date:		

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 7 Conduct Drilling Operations (cont'd)

7.5 Secure and maintain hole collar.	a. Excavated soil around hole collar is cleared.	1. Clear excavated soil around hole collar.
	b. Top of casing or hole is covered.	2. Cover top of casing or hole.
Assessment (circle one):	Competent Partial	Needs Training Date:
7.6 Diagnose equipment faults.	a. Reading strategies such as skimming are demonstrated to extract necessary information from equipment manual.	1. Demonstrate reading strategies such as skimming to extract necessary information from equipment manual.
	b. Symptom(s) of problem are recognized.	2. Recognize problem symptom(s).
	c. Causes are identified, isolated and a solution determined.	3. Causes are identified, isolated and a solution determined.
	d. Help is sought if problem is too complex.	4. Seek help if problem is too complex.
Assessment (circle one):	Competent Partial	Needs Training Date:
7.7 Decommission a hole or bore.	a. Demonstrate knowledge of appropriate decommissioning (or abandonment) procedures.	1. Demonstrate knowledge of appropriate decommissioning (or abandonment) procedures.
	b. Cover or backfill holes if necessary, according to site, regulatory or legislative requirements.	2. Cover or backfill holes if necessary, according to site, regulatory or legislative requirements.
	c. Conduct a program of rehabilitation to ensure the site is restored to a reasonable condition.	3. Conduct a program of rehabilitation to ensure the site is restored to a reasonable condition.
Assessment (circle one):	Competent Partial	Needs Training Date:
7.8 Administer First Aid	a. Basic skills in first aid are known and safely used in order to preserve life and minimize further injury prior to arrival of medical help.	1. Know and correctly use basic first aid skills.
	b. Appropriate resuscitation techniques are applied when necessary.	2. Know and correctly use resuscitation techniques.
Assessment (circle one):	Competent Partial	Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 8 Manage On-Site Operations (cont'd)

8.3 Communicate regularly with client, crew and other relevant parties.	a. Crew and other relevant parties regularly receive briefings of up to date scope of activities.	1. Provide crew and other relevant parties with regular briefings of up to date scope of activities.
	b. Good working relationship with landholder/client maintained.	2. Maintain good working relationship with landholder/client.
	c. Contract confidentiality honored.	3. Honor contract confidentiality.
	d. Progress problems encountered and anticipated results are regularly communicated to client and drill supervisor.	4. Regularly communicate progress problems encountered and anticipated results to client and drill supervisor.
	e. Regular communication by radio/telephone maintained to report progress and/or request information or assistance, according to company standards or regulations.	5. Maintain regular communication by radio/telephone to report progress and/or request information or assistance, according to company standards or regulations.

Assessment (circle one): Competent Partial Needs Training Date:

8.4 Diagnose and solve problems.	a. The existence and immediate effects or potential effects of the problem are confirmed by investigation.	1. Confirm the existence and immediate effects or potential effects of the problem by investigation.
	b. A clear and accurate definition of the problem is identified.	2. Provide a clear and accurate definition of the problem.
	c. Preferred options are identified after analysis of available information.	3. Identify preferred options after analysis of available information.
	d. Approval to proceed with preferred solution is gained from appropriate parties, if necessary.	4. Gain approval to proceed with preferred solution is gained from appropriate parties, if necessary.
	e. If problem is too complex, additional equipment or advice is sought.	5. Seek assistance if problem is too complex.

Assessment (circle one): Competent Partial Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 8 Manage On-Site Operations (cont'd)

8.7 Maintain operating records (cont'd).	d. Variations to contract requirements are noted in log.	4. Note variations to contract requirements in log.
	e. Required written reports are completed and submitted.	5. Submit and complete required written reports.
	f. Accurate measurements of length of drill string components are taken and recorded.	6. Take and record accurate measurements of length of drill string components.

Assessment (circle one): Competent Partial Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 11 Construct Production Bores

The design and construction of production bores, decontamination, bore maintenance and abandonment is covered in this module.

Employee Name/ID Number: _____

Assessor: _____

Element of Competence	Performance Criteria	Assessment Criteria
11.1 Liaise with client and/or other relevant parties.	a. Scope of work discussed with client to gain general agreement on drilling plan.	1. Discuss scope of work with client to gain general agreement on drilling plan.
	b. Regular, up to date information on progress and/or problems encountered is regularly communicated to client and/or other relevant parties.	2. Communicate regular up to date information on progress and/or problems encountered to client and/or other relevant parties.

Assessment (circle one): Competent Partial Needs Training Date: _____

11.2 Design production bores.	a. Determine the most appropriate construction methods from reading and interpretation of all available information.	1. Determine the most appropriate construction methods from reading and interpretation of all available information.
	b. Determine appropriate screen design parameters i.e., diameter, length, aperture size, if necessary.	2. Determine appropriate screen design parameters i.e., diameter, length, aperture size.
	c. Calculate appropriate gravel pack design parameters, if necessary.	3. Calculate appropriate gravel pack design parameters.
	d. Demonstrate ability to differentiate between a single aquifer system and a multiple aquifer system.	4. Demonstrate the ability to differentiate between a single aquifer system and a multiple aquifer system.
	e. Ensure all necessary materials for the job are available and on site prior to the commencement of the construction phase.	5. Ensure all necessary materials for the job are available and on site prior to the commencement of the construction phase.

Assessment (circle one): Competent Partial Needs Training Date: _____

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 11 Construct Production Bores (cont'd)

11.4 Develop bore (cont'd).	c. Development undertaken until a continuous, clean supply of water is obtained, in accordance with site, contractual or regulatory requirements.	3. Conduct development until a continuous, clean supply of water is obtained, in accordance with site, contractual or regulatory requirements.		
Assessment (circle one):	Competent	Partial	Needs Training	Date:
11.5 Disinfect/decontaminate bore and drilling equipment.	a. Disinfection/decontamination, if required, complies with relevant standards or regulatory requirements.	1. Disinfection/decontamination, if required, complies with relevant standards or regulatory requirements.		
	b. Chemicals are handled in accordance with proper OHS concerns and manufacturer's instructions.	2. Chemicals are handled in accordance with proper OHS concerns and manufacturer's instructions.		
Assessment (circle one):	Competent	Partial	Needs Training	Date:
11.6 Carry out bore maintenance and rehabilitation.	a. Undertake a process of diagnosis to determine likely causes of bore deterioration.	1. Undertake a process of diagnosis to determine likely causes of bore deterioration.		
	b. Devise a rehabilitation program to ensure the site is restored to a reasonable condition.	2. Devise a rehabilitation program to ensure the site is restored to a reasonable condition.		
	c. PPE worn when handling hazardous chemicals and manufacturer's instructions are followed.	3. Wear PPE when handling hazardous chemicals and follow manufacturer's instructions.		
Assessment (circle one):	Competent	Partial	Needs Training	Date:
11.7 Abandon test/bore holes.	a. Conduct correct procedures for the abandonment of test or bore holes in any given type of geological formation.	1. Conduct correct procedures for the abandonment of test or bore holes in any given type of geological formation.		
	b. Verify properly sealed hole for future reference.	2. Verify properly sealed hole for future reference.		
	c. Ensure safe disposal of drill and other fluids.	3. Ensure safe disposal of drill and other fluids.		
Assessment (circle one):	Competent	Partial	Needs Training	Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 12 Operational Maintenance

This module encompasses all components of maintenance including mechanical, hydraulic and electrical skills.

Employee Name/ID Number: _____

Assessor: _____

Element of Competence	Performance Criteria	Assessment Criteria
12.1 Perform routine checks.	a. Observe relevant legislation, safety rules and site specific instructions.	1. Observe relevant legislation, safety rules and site specific instructions.
	b. Carry out timed and regular equipment inspections in accordance with manufacturer's instructions.	2. Carry out timed and regular equipment inspections in accordance with manufacturer's instructions.
	c. Identify faults and report them immediately to relevant personnel.	3. Identify faults and report them immediately to relevant personnel.
	d. Observe appropriate isolation/tag-out procedures.	4. Observe appropriate isolation/tag-out procedures.
	e. Requirement for repair or maintenance is identified, recorded and/or reported.	5. Requirement for repair or maintenance is identified, recorded and/or reported.
	f. Machine checks are performed regularly and efficiently, as prescribed in the operator's manual.	6. Machine checks are performed regularly and efficiently, as prescribed in the operator's manual.
Assessment (circle one):	Competent Partial	Needs Training Date:
12.2 Maintain all downhole tools and other drilling consumables.	a. Procedures for component maintenance are followed and carried out safely and according to instruction.	1. Follow procedures for component maintenance and carried out safely and according to instruction.
	b. Site procedures for maintaining and storing tools and consumables are followed.	2. Follow procedures for maintaining and storing tools and consumables.
Assessment (circle one):	Competent Partial	Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 12 Operational Maintenance (cont'd)

12.4 Preform field repairs.	f. System faults are recognized and appropriate responses are formulated within agreed timelines.	5. Recognize system faults and formulate appropriate responses within agreed timelines.
	g. Records of action taken are maintained in accordance with site requirements.	6. Maintain records of action taken in accordance with site requirements.
	h. Ability to dismantle, assess, service, repair, reassemble and test of given drill component is demonstrated in a safe manner.	7. Demonstrate ability to dismantle, assess, service, repair, reassemble and test of given drill component in a safe manner.

Assessment (circle one): Competent Partial Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 13 Conduct Downhole Tests

This module covers downhole tests used in specific jobs.

Employee Name/ID Number: _____

Assessor: _____

Element of Competence	Performance Criteria	Assessment Criteria
13.1 Develop schedule of downhole tests.	a. Situation is assessed to determine appropriate test program.	1. Assess situation to determine appropriate test program.
	b. Schedule of tests is prepared.	2. Prepare schedule of tests.
	c. Members of crew are assigned to carry out tests.	3. Assign crew members tasks.
	d. Instructions from client are interpreted and implemented, if appropriate.	4. Interpret and implement instructions from client ,if appropriate.
Assessment (circle one):	Competent Partial	Needs Training Date:
13.2 Conduct downhole tests.	a. Tests are carried out in accordance with company operational procedures and or accepted Standards.	1. Carry out tests in accordance with company operational procedures and or accepted Standards.
	b. Oral reports and/or written records according to Standards may be required.	2. Provide oral and/or reports according to Standards, if necessary.
	c. Relevant safety procedures are followed.	3. Follow relevant safety procedures
Assessment (circle one):	Competent Partial	Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 14 Conduct on the Job Training and Assessing

This module encompasses in formal structured training in workplace routines.

Employee Name/ID Number: _____

Assessor: _____

Element of Competence	Performance Criteria	Assessment Criteria
14.1 Identify need for training.	a. Define relevant training requirements.	1. Define relevant training requirements.
	b. Ascertain previous knowledge of the task by questioning.	2. Ascertain previous knowledge of the task by questioning.
	c. Identify competencies required for specific training.	3. Identify competencies required for specific training.
	d. Inform trainee(s) of training opportunity.	4. Inform crews of training opportunity.
	e. Plan and schedule training.	5. Plan and schedule training.
Assessment (circle one):	Competent Partial	Needs Training Date:
14.2 Prepare trainees for instruction.	a. Provide information on proposed training to prospective students.	1. Provide information on proposed training to prospective students.
Assessment (circle one):	Competent Partial	Needs Training Date:
14.3 Carry out in formal on the job training.	a. The task is separated into sequential steps.	1. Separate the task into sequential steps.
	b. An overview of the process is given verbally and task is demonstrated.	2. Give a verbal overview of the process and demonstrate task.
	c. Instructions are given clearly and logically so that a particular task can be followed.	3. Give clear instruction in logical steps so the particular task can be followed.
	d. A range of strategies are used to check that the trainee understands what is expected.	4. Use a range of strategies to check that the trainee understands what is expected.
	e. Questions are asked to elicit specific information.	5. Ask questions to elicit responses.
	f. Specific positive/negative feedback on aspects of trainee's performance is regularly given.	6. Give positive/negative feedback on aspects of trainee's performance.

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 14 Conduct on the Job Training and Assessing (cont'd)

14.3 Carry out in formal on the job training (cont'd).	f. Specific positive/negative feedback on aspects of trainee's performance is regularly given.	6. Give positive/negative feedback on aspects of trainee's performance.
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Assessment (circle one): Competent Partial Needs Training Date:

14.4 Provide opportunities for practice.	a. Provide opportunities for practice according to specific learning situation and training objective.	1. Provide opportunities for practice according to specific learning situation and training objective.
	b. Provide constructive feedback and reinforcement during practice.	2. Provide constructive feedback and reinforcement during practice.
	c. Monitor trainee's readiness for assessment.	3. Monitor trainee's readiness for assessment.

Assessment (circle one): Competent Partial Needs Training Date:

14.5 Evaluate training.	a. Encourage trainee to raise problems or difficulties with any aspect of the training.	1. Encourage trainee to raise problems or difficulties with any aspect of the training.
	b. Seek trainee's reactions.	2. Seek trainee's reactions.
	c. Review own performance against training objectives and in response to trainee's comments.	3. Review own performance against training objectives and in response to trainee's comments.
	d. Utilize the results of the evaluation to guide further training.	4. Utilize the results of the evaluation to guide further training.

Assessment (circle one): Competent Partial Needs Training Date:

14.6 Record training outcomes.	a. Details of the training are accurately recorded according to Company requirements.	1. Accurately record details of the training according to Company requirements.
	b. Other records are kept, as required by legislation or client.	2. Keep other required records.
	c. Records are released to authorized personnel only.	3. Release records to authorized personnel only.
	d. Records are securely stored and/or transferred to Group office.	4. Securely store and/or transfer records.

Assessment (circle one): Competent Partial Needs Training Date:

DRILLER COMPETENCY EVALUATION/TRAINING PROGRAM

Module 14 Conduct on the Job Training and Assessing (cont'd)

14.7 Provide information on training.	a. Provide information on training proposed, in progress or completed to management, as required.	1. Provide information on training proposed, in progress or completed to management, as required.
	b. Gather and document all evidence as specified in the assessment procedure.	2. Gather and document all evidence as specified in the assessment procedure.
	c. Evidence gathered is evaluated and the assessment is made in accordance with the criteria specified in the assessment procedure.	3. Evidence gathered is evaluated and the assessment is made in accordance with the criteria specified in the assessment procedure.
	d. Record assessment results promptly and accurately.	4. Record assessment results promptly and accurately.
	e. Performance is discussed and confirmed with the person being assessed.	5. Discuss and confirm performance with the person assessed.
	f. Limit access of assessment records to authorized personnel.	6. Limit access of assessment records to authorized personnel.
Assessment (circle one):	Competent	PartialNeeds TrainingDate: