

Occupational Health and Safety Division



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Officer III - Mining
Presented: April 7, 2009

Mandate

- Accident and illness prevention is the primary goal of Occupational Health and Safety Division.
- It is recognized that all workers have a fundamental right to a workplace that neither impairs their health nor imperils their safety.
- This is achieved by working with stakeholders to establish, promote and enforce workplace practices, standards and procedures.

Responsibility of the Division

- Maintain up to date legislation to address health and safety in consultation with stakeholders
- Maintain standards of health and safety for the protection of workers
- Prepare accident and morbidity statistics of workers

Legislation

Administered by the Division

- The Occupational Health and Safety Act and Regulations
 - OHS First Aid Regulations
 - WHMIS Regulations
 - Asbestos Abatement Regulations
- The Radiation Health and Safety Act and Regulations
- The Mines (Safety of Workers) Regulations

Occupational Health and Safety Act

Rights of Workers

- ✓ To know
- ✓ To participate
- ✓ To refuse

Authority/Power of:

- ✓ Minister
- ✓ Officers

Responsibilities

- ✓ Employers
- ✓ Supervisors
- ✓ Workers
- ✓ Principal Contractors
- ✓ Suppliers
- ✓ Committees
- ✓ Division
- ✓ Others

Responsibility of OHS Officer

The OHS Officers are responsible for enforcing standards of safety by assessing workplace health and safety conditions to ensure employers and workers are complying with occupational health and safety legislation



Authority of an Officer

Section 26 of the OH&S Act

- For the purpose of ensuring compliance with the Act or Regulations the ADM or an Officer may:
- **Enter a place of work at any reasonable hour**
- **Require production of documentation and remove them**
- **Conduct tests, take photographs**
- **Inspect and collect samples**
- **Conduct Investigations to determine cause**
- **Compel the attendance of witnesses and take evidence under oath**

Duties of the Employer are Many!

Employers shall ensure, where it is **reasonably practicable**, the health, safety and welfare of their workers, and of others not in their employ, by:

- Providing and maintaining workplaces, and the necessary equipment, systems, and tools that are safe and without risk;
- Providing necessary information, instruction, training, supervision, facilities;
- Conducting their undertakings so that persons **not** in their employ are not exposed to health and safety hazards;
- Making arrangements for the regular inspection of all buildings, structures, machinery, and equipment; and by
- Ensuring that other employers, workers, and/or self-employed persons comply with the OHS Act and regulations (eg. Contractors).
- Etc.

OHS Program (Regs s.4)

- Policy statement
 - Illustration of leadership/commitment is vital as it provides a motivating force and resources
- Roles/Responsibilities
 - employer/supervisors/workers/committee
Accountabilities IRS!
- Written safe work procedures
 - practices standard to the industry or required by legislation or by an OHS Officer
- Worker orientation and training
 - job specific safe work practices, plans, policies, and procedures



OHS Program Cont'd

- **Emergency preparedness**
 - planned response to accidental occurrence
- **OHS Committee**
 - maintain records, conduct inspections, receive complaints, promote safety, meetings, etc ...
- **Hazard recognition/evaluation/control**
 - identify potential hazards (eg. STI's) and report them, investigate their causation, and ensure accountability for correction of probable hazardous occurrence
- **Control of biological and chemical hazards**
 - where handled, used, stored, produced, dispensed, and/or disposed of at the workplace
 - Workplace Hazardous Materials Information System (WHMIS)

OHS Program Cont'd

- Contractor safety management
 - contractor compliance with the developed company program and OHS legislation
- Documentation
 - maintenance of records/statistics and communication of meeting minutes, inspections, investigations, etc
- Program monitoring and review
 - program implementation and effectiveness
eg. Disability management (Easeback/ESRTW) and Ergonomics
 - involve the OHS Committee in this process

Note: An effective OHS Program is fundamental to ensuring due diligence within the **Internal Responsibility System** (i.e. safety and continuous improvement is the responsibility of **everyone** within the organization).

Rights of Workers

- Right to Know
 - knowledge of hazards inherent in the workplace
- Right to Participate
 - participate in OHS Committee activity and safety decisions/consultations
- Right to Refuse
 - refuse work that he/she has reasonable grounds to believe is dangerous to their safety and/or the safety of others
 - three step process:
 - report concern to Supervisor
 - report concern to OHS Committee or Worker Representative
 - report concern to OHS Division, Dept of Government Services
 - reassignment to equivalent work without fear of discrimination

Role of OHS Committee or Worker Representative/Designate

- Monitors the health, safety and welfare of the workers employed at the workplace;
- Helps identify aspects of the workplace that may be unhealthy or unsafe;
- Receives, records and responds to complaints and work refusals from workers concerning unsafe acts and conditions in the workplace;
- Establishes and promotes worker health and safety awareness/education programs;

Committee/Worker Rep cont'd

- Recommends the enforcement of policies, standards, practices/procedures, training, tools/devices and equipment designed for the protection of all workers;
- Conducts regular on-site meetings to discuss workplace health/safety concerns and posts minutes in the workplace; and
- Co-operates with OHS Officers exercising their duties under the legislation. 😊

Due Diligence

What is it?

Due diligence is the **legal** responsibility of an employer to maintain a safe and healthy workplace which goes beyond simply complying with specific regulatory requirements. It requires individuals to take **all** precautions that are reasonable and practical in the circumstance to prevent physical harm to workers and/or others. For example, ensure that supervisors and workers are adequately trained to do their jobs safely and are aware of their legal obligations.

Bill C-45: What is it?

New federal legislation which amends the Criminal Code of Canada to enact **criminal negligence** for workplace safety:

- (a) Establishes that **organizations** can be criminally liable for the unsafe actions of its **representatives** and/or the conditions created in the workplace

- (b) Establishes a legal duty under the Code for **all** persons directing work to take “reasonable steps” to ensure the safety of workers and the public. Wanton or reckless disregard of this duty causing bodily harm (i.e. demonstrating a lack of care) would result in a charge of criminal negligence.

What is Safety?

- Safety is doing something, not just thinking about it.
- Development of safety policy and program
- It's ... a responsibility a commitment ... an obligation.
- It's understanding that hazards exist and a willingness to contribute to control these risks.



Why Do Accidents Occur?

- Lack of training
- Lack of experience
- Not wearing appropriate PPE
- Using incorrect tools
- Not following work practices
- Taking short cuts
- Fatigue
- Lack of concentration



Select the Proper Type of PPE for the Job

Identify the hazards first
i.e. Driller's assistant
duties.

*PPE is the last line of
defense and only work
if you wear it!*



Personal Protective Equipment

Hazard	Equipment
Struck on head	CSA hard hat
Eye injury	Safety glasses
Hand abrasion	Gloves
Crushing of foot or puncture	CSA safety boots
Fumes/mists	Proper respirator
Traffic in proximity of work area	Highly visible barricades Appropriate traffic control
High noise levels	Hearing protection

Common Safety and Health Hazards in the Workplace

- Safety Hazards
 - Material Handling
 - Mobile Equipment
 - Electrical Hazard
 - Working at Heights
 - Slips, trips and falls
 - Trenching
 - Compressed gas cylinders
 - Equipment guarding
- Health Hazards
 - Chemical
 - Biological
 - Ergonomic
 - Physical
 - Confined Space Hazards

Hazards more common to the Drilling Industry

- Mobile equipment – uneven terrain.
- Power lines overhead and underground.
- Electrical safety - Lockout / tagout.
- Working at heights - Fall Protection.
- Compressed gas cylinders.
- Equipment Guarding – pinch points, rotating rods.
- WHMIS – controlled products.
- Confine Space.
- Gas encounter, H₂S.
- Rigging.



Mobile Equipment

- The equipment operator is responsible
- Proper safeguards in place
- Properly maintained
- Manufacturer's instructions followed
- Any problems fixed prior to use

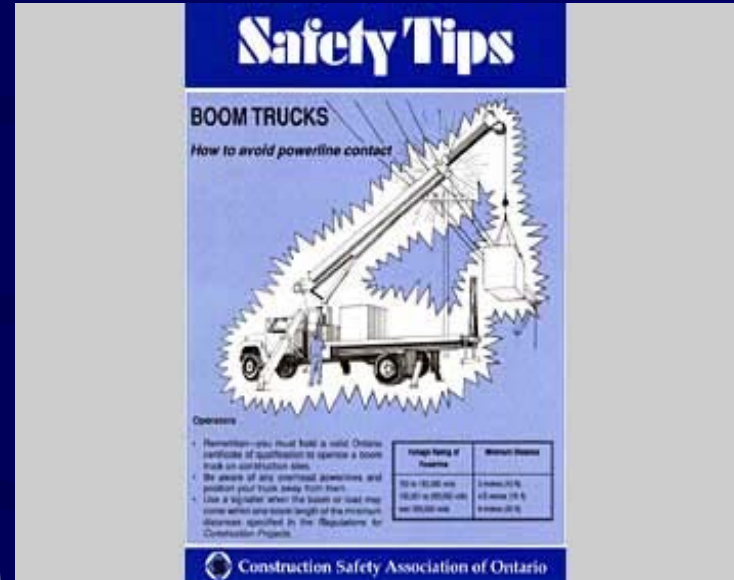


Powerline Hazards

- Specific Training for Powerline Hazards
- Contact Utility
- Minimum Clearances
 - Overhead Powerlines
 - Underground Powerlines
- Operation of Drills

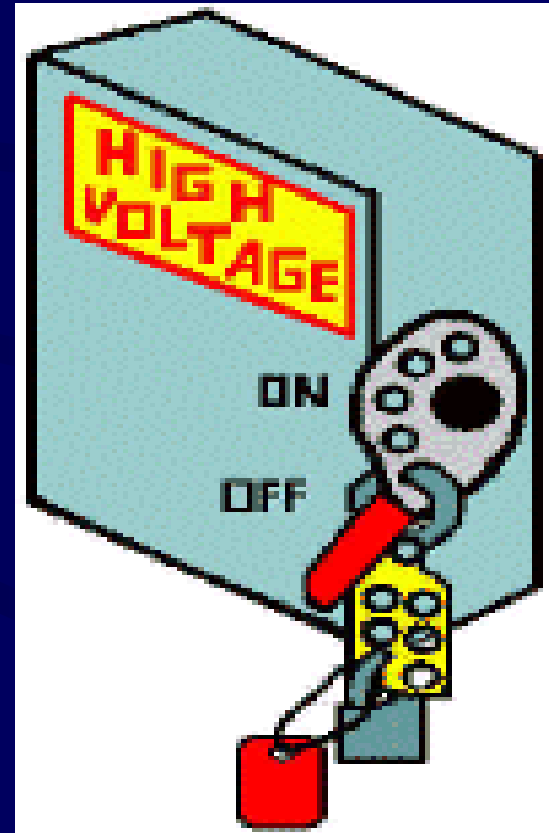
Electrical Safety

- Only qualified workers do electrical work
- Always use GFCI on wet and damp areas
- Working on electrical equipment **LOCK AND TAG** out.
- Do not remove another person's lock or tag
- Bleed hydraulic and pneumatic pressure



Lockout/Tagout “ISOLATE”

- Electrical, Mechanical, Piping
- Lockout must be performed by qualified personnel “only”
- After isolation procedures have been performed, attempt to start equipment to ensure it has been isolated
- See policy and procedures



Working at Height

Defined as work above 3.05 meters (10 ft.) above a platform or grade.

Examples:

- Working in the mast
- Building and construction
- Roofing and siding
- Etc.



What Workers Must Know and Do

- Use an appropriate fall protection system
- Be informed and recognise what system is required to ensure your safety
- Work from suitable scaffolds
- Use life nets
- Use travel restriction systems



Compressed Gas Cylinders

- Under pressure and pose an explosion hazard
- Must be properly secured (tied in position)
- Must be transported properly
- Shall be returned after task finished
- Handled With Care



Equipment Guarding

- Power take off units
- Drive belts and chains
- Saw blades
- Conveyers



WHMIS

Workplace

Hazardous

Materials

Information

System





WHMIS Overview

- Purpose of WHMIS
 - right to know-
- WHMIS Legislation
- WHMIS is a Hazard Communication System



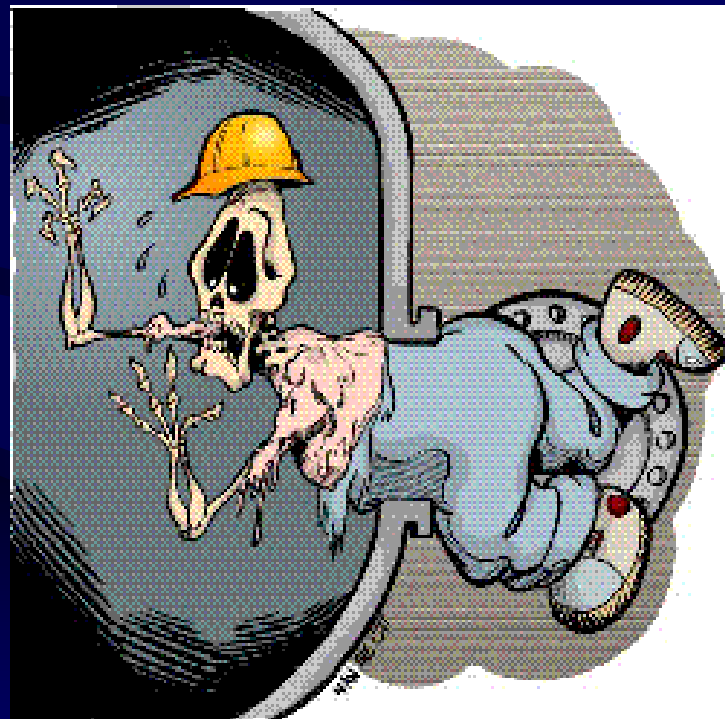
Workplace Hazardous Materials Information System (WHMIS)

WHMIS consists of three key elements:

- Labels
- Material Safety Data Sheets
- Worker Education

Confined Space Entry

Associated Hazards



Confined Space Entry

- A confined space may be defined as an enclosed or partially enclosed space that is large enough and so configured that an employee can enter and perform assigned work and have limited or restricted means of entry or exit and is NOT designed or intended for continuous human occupancy.
- A confined space can also pose respiratory concerns, such as oxygen levels being too high or too low. High levels of O₂ can also create explosion and fire hazards.

Monitoring Equipment

- “Confined Space Meter”
- Usually equipped with multiple sensors, including:
 - O₂ must be at least 19.5% to enter
 - LEL set at 10%
- Other sensors may be:
 - CO (carbon monoxide)
 - H₂S (hydrogen sulfide)
 - Chlorine



Monitoring Equipment Cont'd

- Regular care and maintenance of the equipment must be taken to ensure it performs accurately and consistently.
- Must be calibrated regularly, as according to manufacturer's specifications.
- Must be stored and handled appropriately.
- Users should be trained on how to use the device and how to interpret the readings.



New regulations

- Section 113 – Drilling equipment use
- (1) An employer shall ensure that
 - (a) a rock drill is not used unless equipped with a water jet or other device capable of suppressing rock dust; and
 - (b) adequate restraining devices are installed on hose connections under pressure, where inadvertent disconnection could endanger workers.
- (2) Operating controls shall not be installed on the feed side of a top-hammer percussion drill.

New regulations

- Section 115 – Rod handling
- (1) A drill operator shall not manually add or remove drill steel, a drill bit or service drilling equipment while the drill is rotating under power.
- (2) A worker assisting the drill operator with drill bit or drill steel handling shall remain clear of rotating parts of the drill system.

New regulations

- Section 115 – Rod handling
- (3) Except as provided in subsection (4), a boom-mounted percussion drill being used with multiple lengths of coupled drill steel shall have a rod changer or other effective device installed and used to add or remove drill steel.
- (4) Where it is not practicable to fit a rod changer to a boom-mounted percussion drill, adequate written safe work procedures for adding and removing drill steel shall be available and the drill shall be operated in accordance with those procedures.

New regulations

- Section 116 – Self propelled drills
- (1) An operator or other worker may only ride on a self-propelled drill where he or she is in a safe position inside a roll over protective structure.

New regulations

- Section 117 – Cleaning drilled holes
- Where a drilled hole is being cleaned using an air or water pressure blowpipe, the operator shall ensure that all persons are clear of the area made hazardous by blowback.

Regulations

- Section 251 – Operation and maintenance
- (1) All mobile equipment shall be maintained in safe operating condition and operation, inspection, repair, maintenance and modification shall be carried out in accordance with the manufacturer's instructions or, in the absence of instructions, as approved by a registered professional engineer.

Regulations

- Section 251 – Operation and maintenance
- (4) Maintenance and inspection records shall be maintained and made reasonably available to the operator and maintenance personnel during work hours.
- (5) Mobile equipment used off maintained roads shall be appropriate and safe for the intended use taking into account factors including the nature of the travel surface and its slope and the activities to be undertaken.

Penalties and Consequences

Fines and Imprisonment (per count)

- Person:
 - Minimum - \$500
 - Maximum - \$250,000
 - Up to 12 month imprisonment
 - Or both
- Corporation
 - Minimum - \$2000
 - Maximum - \$250,000
- Continuing Offences
 - maximum - \$25,000 per day

Contact information

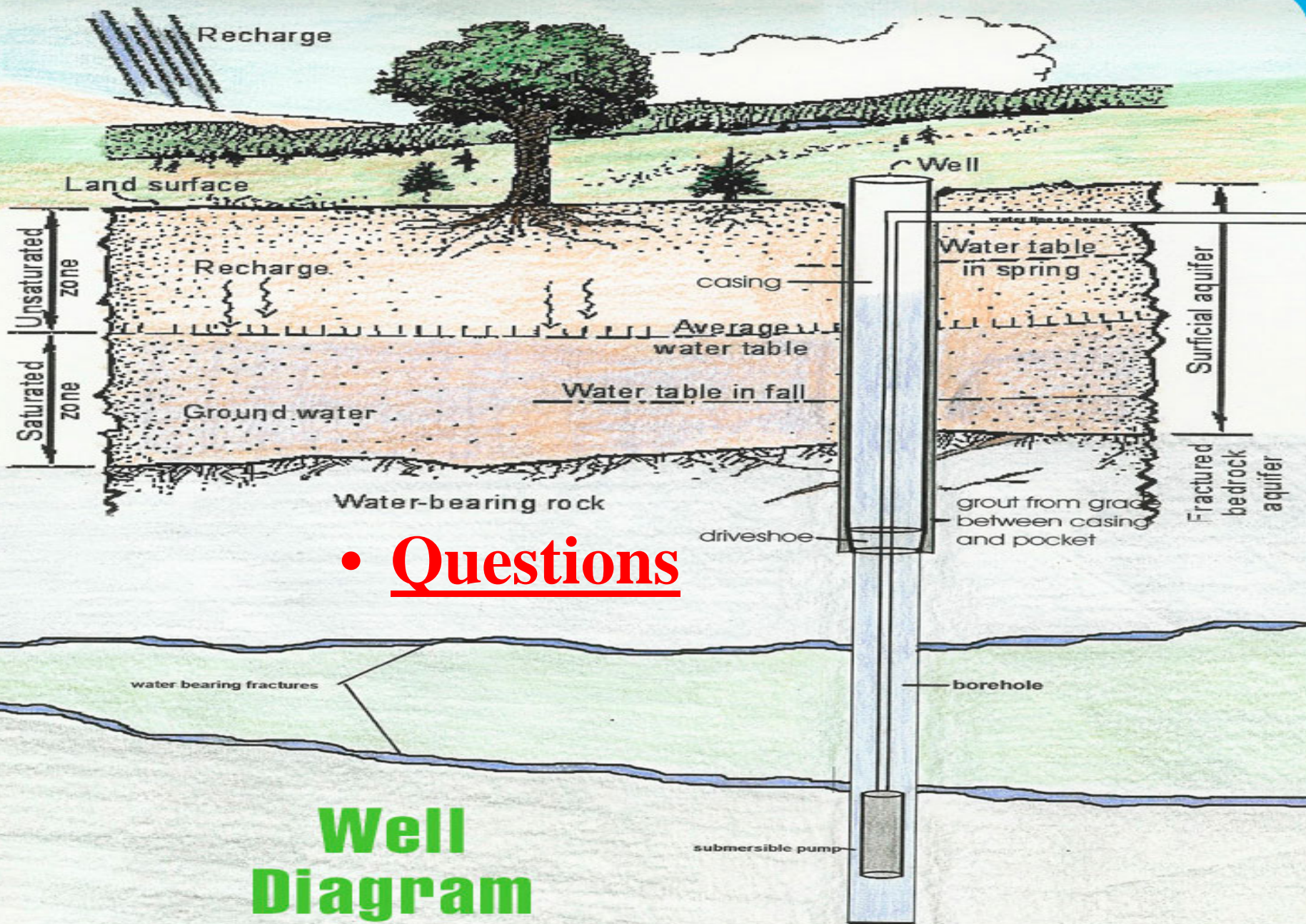
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Occupational Health and Safety Branch
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• Questions

Well Diagram