



GROUND DISTURBANCE HANDBOOK

Alberta

September 2007

TABLE OF CONTENTS

DISCLAIMER	3
1.0 PURPOSE	4
2.0 DEFINITION.....	4
3.0 SEARCH AND CONTROLLED AREAS.....	5
3.1 Search Area.....	5
3.2 Controlled Area.....	6
5.0 CROSSING AGREEMENT	8
5.1 Proximity Agreement.....	10
5.2 Internal Approval	10
5.3 External Approval	10
5.4 Reciprocal Agreement.....	11
5.5 Right-of-Entry Agreement.....	11
5.6 Right of Access.....	11
6.0 LINE LOCATION	12
6.1 Facility Markers.....	13
7.0 EXPOSURE	14
7.1 Mechanical Exposure	14
7.2 Backfill Inspections	15
7.3 Contacting a Buried Facility	16
7.4 Training	18
7.5 Supervision	18
7.6 Line Locator Training	19
8.0 GROUND DISTURBANCE RESPONSIBILITIES.....	20
9.0 EUB GUIDE-30 GUIDELINES FOR SAFE CONSTRUCTION NEAR PIPELINES	22
FORM 1 - Information Request for Alberta One-Call.....	24
FORM 2 - Ground Disturbance Permit	25
FORM 3 - Backfill / Crossing Inspection Report.....	26
FORM 4 - Exposed Pipeline Inspection and Cathodic Protection Form	27
FORM 5 - Facility Damage Report	28
FORM 6 - Foreign Right-of-Way Crossings	29
FORM 7 - Incident Notification Report	30
FORM 8 - As Built Crossings	31
FORM 9 - Record of Locating Buried Pipeline Facilities	32
FORM 10 - Corporate Ground Disturbance Self-Evaluation.....	33

DISCLAIMER

This Ground Disturbance Handbook for Caltex Energy Inc (Caltex Energy) provides a detailed summary of Ground Disturbance guidelines. For additional information when conducting a Ground Disturbance (see *Section 6.1*) audit, refer to the Caltex Energy *Pipeline Operating and Maintenance Guideline Manual* and/or *Section 8.0* of the Caltex Energy *Safe Operating Procedures Manuals*. Additional reference should also be made to the *Pipeline Act and Pipeline Regulation* for official statutes and regulations.

Corporate Requirement

All personnel; both Corporate and Contractors, involved with the actual Ground Disturbance process must have as a minimum the Industry Recommended Practices (IRP) 17 Certification in *Ground Disturbance*. The certificate expiry date must be recorded on the Hot Work Permit. This includes equipment operators, trenchers, foremen, inspectors, supervisors and any others directly involved in the Ground Disturbance process.

1.0 PURPOSE

The purpose of this handbook is to provide guidelines and processes that will:

- Comply with all requirements of the Pipeline Act and applicable Alberta Energy & Utilities Board (EUB) and Workplace Health and Safety Regulations.
- Eliminate or minimize the potential for incidents that could adversely affect the safety of the public, company employees and contract workers.
- Ensure the safety of the public and all workers by eliminating or reducing the possibility of a hit or contact with a pipeline or underground utility.
- Minimize all potential adverse effects on the environment, the public and the company that could result from a pipeline break or rupture.

2.0 DEFINITION

Caltex Energy adopts the following definition as contained in the Alberta Pipeline Act. The *Pipeline Act (Section 1 (1) (j))* defines:

- Ground Disturbance as `any work, operation or activity that results in a disturbance of the earth including, without limitation, excavating, digging, trenching, plowing, drilling, tunneling, augering, backfilling, blasting, topsoil stripping, land leveling, peat removing, quarrying, clearing and grading, but does not include,
- Except as otherwise provided in sub clause (ii), a disturbance of the earth to a depth of less than **30 cm** that does not result in a reduction of the earth cover over the pipeline to a depth that is less than the cover provided when the pipeline was installed,
 - Cultivation to a depth of less than **45 cm** below the surface of the ground, or
 - Any work, operation or activity that is specified in the regulations not to be ground disturbance.

Ground Disturbance has not been executed if it can be proven that there was less than **30 cm** of penetration and existing depth of cover over the pipeline has not been reduced to that of previous levels.

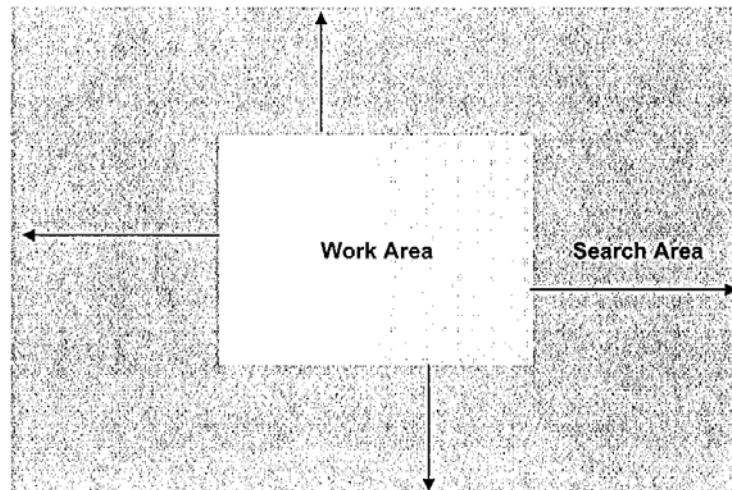
3.0 SEARCH AND CONTROLLED AREAS

3.1 Search Area

- The Search Area is the area within **30 m** of where a Ground Disturbance will occur.

Note: *The search area is often mistaken for the controlled area.*

- Approval from a licensee, or the EUB if approval cannot be reasonably attained, must be obtained when conducting a search to undertake a Ground Disturbance within **5 m** of the centerline of the pipeline or utility when there is no defined Right-of-Way.

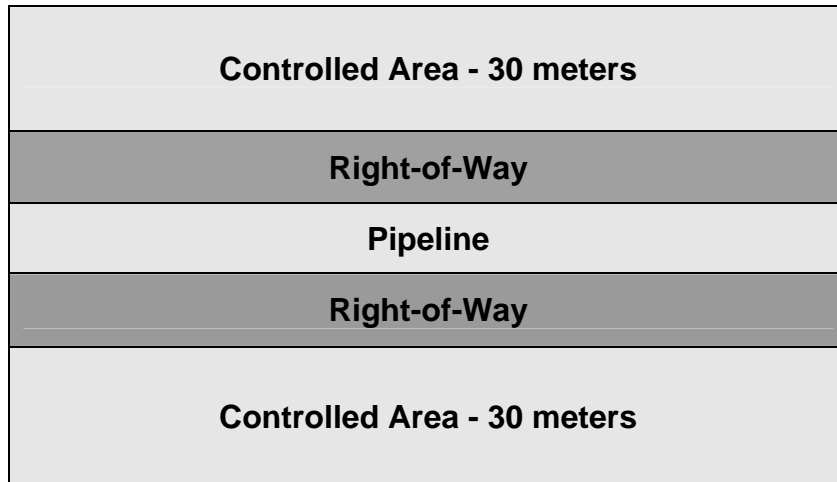


Visible Indicators

This will be defined as any visible indication that another Party has created a Ground Disturbance in the area, such as vegetation changes, scarring of the land, vehicle tracks, soil changes, buildings, above ground facilities, etc.

3.2 Controlled Area

- The Controlled/Safety Area is a strip of land **30 m wide** on each side of the pipeline as defined by EUB, for the National Energy Board (NEB). This zone is **30 m** on either side of the Right-of-Way measured from the pipe centerline, or the distance from the pipe centerline to the edge of the Right-of-Way, whichever is wider.
- Regardless of any confusion between *Search Area* and *Controlled Area* the Party proposing Ground Disturbance must adhere to the **30 m** zone as defined.



4.0 NOTIFICATION

When conducting a pipeline or utility disturbance notification must be given to the Pipeline or Utility Company prior to the event. Notification can be completed through Alberta One-Call at **1-800-242-3447** by submitting the following information:

- Intent to conduct a pipeline disturbance two to 10 days prior the event. This time frame will exclude weekends and holidays.
- The nature and proposed schedule of the disturbance.

Complete the Member Information Request for Alberta One-Call (Form 1) located at the back of this handbook or at <http://www.alberta1call.com> for additional urban forms and details.

If Caltex Energy is not member of Alberta One-Call, the same process remains the same prior to any Ground Disturbance occurring. The notification procedure will differ slightly, Caltex Energy will contact the affected Companies directly with documentation of all requests, approvals, and emergency contact information. This information must be properly recorded and maintained by both Companies. Caltex Energy will also make arrangements for an authorized representative to witness the disturbance.

In locations where the availability of documented historical data is limited or questionable, it is advantageous to consult with local operations personnel, contractors or landowners (where practical) to determine any un-documented information. Recording of this information for future reference is beneficial from both an operational and informational stance, as well as it has the ability to show *due diligence* was undertaken in the event of a dispute at a later date.

Alberta One-Call: 1-800-242-3447

5.0 CROSSING AGREEMENT

Before a crossing can be undertaken, a Crossing Agreement from the applicable Pipeline or Utility Company must be obtained. This Agreement will be in writing, as well as, authorized by both the Company Representatives and the person wishing to cross the Right-of-Way. The Agreement must be on-site prior to any work commencing on the Right-of-Way and contain the following information:

- a legal land description (LSD) of the intended Crossing;
- date;
- owner and/or applicant's name;
- name of facility;
- size (outside diameter) and material of pipe;
- purpose of Crossing facility;
- drawing numbers;
- name and phone numbers of the Crossing Coordinator, Contractor and Owner; and
- expiry date of Agreement.

Under no circumstances will any Ground Disturbance be initiated without this written Agreement. Upon receipt and approval of the Agreement, site work can commence as per the following:

A Representative will inspect the pipeline prior to Ground Disturbance to ensure identification, marking and accurate location. The Company being crossed may issue subsequent permits, dependent on Company standards and site location of Ground Disturbance, for undertaking of the actual site work.

- If the potential existence of foreign pipelines or utilities is still questionable after electronic locates have been completed, then hand exposure and/or Hydrovac must occur prior to any mechanical excavation. Never assume all has been located without a visual confirmation.
- All parties will review the written approved Crossing Agreement(s) to ensure approvals, accuracy and any special conditions.
- A written approval must be in place for when Ground Disturbance occurs within **5 m of any pipeline** when no Right-of-Way is present.
- A review of all applicable personnel's **current and valid IRP 17 Ground Disturbance Certification**.
- Following a pre-job meeting and issuance of a *Safe Work Permit* (SWP), a *Ground Disturbance Permit* will then be issued. If crossing more than one pipeline or utility, separate forms for each structure must be completed and attached to the SWP. All Parties involved in the Ground Disturbance process will sign off and record their *IRP 17 Ground Disturbance Certification* expiry date on this form.
- The On-site Company Representative(s) will monitor and inspect the mechanical excavation process to ensure that continued safety of the pipeline and all personnel is maintained.

- The On-site Company Representative(s) will also ensure that all warning signs or markers are kept visible and legible for the duration of the exposure. Temporary relocation of these signs is acceptable, if required, during this process.
- Upon pipeline(s) exposure check for nicks, coating flaws or other mechanical defects. Record, document and photograph any information prior to back filling.
- In the event that mechanical damage (hit, scrape, or nick) occurs at the time of Ground Disturbance all work must **immediately** stop. At that time the incident is reported to all affected Companies. Only upon resolution of incident, with reports to applicable authorities and approval by affected Companies, can the mechanical excavation be allowed to resume
- Provide 24 hours notice to the Pipeline or Utility Company's Representative prior to backfilling the exposure. Review and proceed with any Site Specific Company requests for backfilling. Document and retain a copy of the procedures. Provide copies of all documentation upon requested.

Failure to adhere to the procedures for Ground Disturbance may result in reprimand, suspension, dismissal or termination of services. This is at the sole discretion of Caltex Energy.

All of the above is also applicable when crossing Caltex Energy's own pipeline(s)

Guidelines for Facility Drawings attached to the Crossing Agreement

The Facility owner should check whether the Crossing drawings require and contain the following information:

- Detailed drawings or other suitable means to show facility location (property lines, descriptions, geographic, and physical landmarks)
- A detailed drawing(s) of the exact area of crossing including measurements from fixed reference points.
- A traverse cross section showing the following:
 - diameter and material of existing facility(s)
 - profile of proposed disturbance
 - clearance required between existing facility(s) and foreign structures.
- A longitudinal cross section to show:
 - changes in elevation
 - clarification of transverse cross section
- A plan and profile view showing the following:
 - direction of existing facility(s)
 - direction of proposed crossing
 - angle between crossing and existing facility. (as close as possible to 90° and not less than 45°)
 - top of facility to top of road grade measurement
 - location and color of coding of markers
 - location and depth of ramps
 - location of temporary fencing

- location of facility exposure points
- expiry date
- Detailed drawings should be prepared to show the following:
 - backfill material and specifications
 - test leads
 - cathodic protection arrangements
 - pipe supports during excavation work if required
 - safety fencing required around excavations
 - other special requirements
 - operating pressures
 - facility material
 - type of product
 - rewinding arrangements and cost responsibilities

5.1 Proximity Agreement

The Proximity Agreement is a written approval that allows a Party to create a Ground Disturbance within the 30 m proximity of the Owner's buried facility. The *Proximity Agreement* is very similar to a *Crossing Agreement* but removes the confusion of the term "Crossing". This Agreement is also utilized for providing direction and specifications for Ground Disturbances that are not related to installing a buried facility.

5.2 Internal Approval

This is an internal process that addresses the hazards and provides directions for mitigating them and may take the form of a Ground Disturbance Permit. It should be restricted to the situation where the Owner of a buried facility is disturbing the ground in the vicinity of his own facility with his own forces.

When the Owner of a buried facility engages an outside contractor to undertake a Ground Disturbance in the vicinity of his buried facility, more formal documentation governing the Ground Disturbance may be appropriate.

5.3 External Approval

A written External Approval is an executed document issued by the Owner of a buried facility when a Ground Disturbance is proposed by a Third Party, on the Facility owner's property, or within the Facility owner's Right-of-Way or within 5 m of a pipeline that is not in a Right-of-Way. The External Approval defines the terms and conditions under which the Ground Disturbance will be allowed to take place.

5.4 Reciprocal Agreement

A written Reciprocal Agreement is the approval that provides specifications in which both Parties will mutually adhere to when creating a Ground Disturbance. A Reciprocal Agreement is completed by the Facility owner's who are commonly working on both sides of the Right-of-Way.

5.5 Right-of-Entry Agreement

A Right-of-Entry Agreement is a written approval which provides terms and conditions for a Third Party to enter onto a Land Owner's property with the intent of creating a Ground Disturbance. A Right-of-Entry could apply to land, Right-of-Way owned by a Company, a country road ditch, or various other situations. It is common to have several Right-of-Entry Agreements.

5.6 Right of Access

A Right-of-Access is a written approval which provides the specific process for a Third Party to access and create a Ground Disturbance site. In many Companies a Right-of-Entry and Right-of-Access are addressed in a single document.

6.0 LINE LOCATION

All known pipelines and buried utilities must be staked or flagged as they are noted on the plot plans, site drawings, maps, and facility searches that pass within the **30 m** of Controlled Area or **5 m** of Search Area (if no Right-of-Way). When staking indicate the alignment, size and depth (where possible):

- The line locating procedure should be conducted by a competent individual, familiar with the area in question, and who is in the possession of all the necessary drawings, maps and other materials.
- The line locator must perform a function test on known pipeline(s), prior to the search of any unknown pipeline(s), to the satisfaction of the On-Site Supervisor. (On-Site Supervisor must review the equipment calibration tags). Direct clamping or connection to a pipeline for the actual locates should be used when possible.
- When conducting a search for unknown pipeline(s) the area must be swept in an *Opposite Grid* pattern (North-South, East-West, then angular) to ensure all detection capabilities.
- The On-site Supervisor must ensure that the Line Locators mark with a stake or flag all known pipelines and utilities that are within 30 m on either side of a Ground Disturbance. All newly located pipelines should be marked on the plot plan and maps. Boundaries of the job site or Right-of-Way (ROW) should also be marked.
- Where possible, ensure that the markings of pipeline locations extend past each side of your ROW to ensure live markings will remain visible.

The following International Colour Codes for marking must be used:

Colour	Definition
White	Limits of proposed excavation.
Pink	Temporary survey markings.
Red	Electric power lines, cables, conduits and ducts, or lighting wires and cables.
Yellow	Gas, oil, petroleum, steam or other gaseous materials.
Orange	Telephone, cable TV, communications, alarm or signal lines, wires, cables, conduits or ducts.
Blue	Potable water.
Green	Sanitary sewer, storm sewer, culvert or drain lines.
Purple	Reclaimed water, irrigation and slurry lines.

The Party proposing the Ground Disturbance is encouraged to mark the boundaries of job site with white flags. Stakes or paint may be used to provide the Line Locators or Project Personnel with an accurate understanding of the proposed construction area. In winter conditions black may be used rather than white.

6.1 Facility Markers

There are many accepted types and designs of markers, as well as the symbols applied during the line locate, which help provide more in-depth knowledge to the excavator. The Facility owner and the Line Locator should consider all factors when selecting a marker, such as: environmental, weather, safety, and site conditions. Some example markers are:

- Wire pin flags
- Biodegradable pin flags
- Colored pain
- UV (sunlight) sensitive paint
- Chalk
- Stake chasers (fibre clusters)

7.0 EXPOSURE

Hand excavation is defined by the Pipeline Regulation as *“the excavation of a pipeline or a part of a pipeline by hand and includes the excavation by water or air jets and, if the pipeline is more than 1.5 m below the surface of the ground, excavation by a combination of hand and mechanical means”*.

- All pipelines and utilities within a 5 m radius of the Ground Disturbance area or within the ROW must be hand exposed to verify size, depth and alignment.
- When using Hydrovac, ensure the exposure is sufficient to determine pipe size and alignment, confirm with the Owner of the pipeline that these processes are also acceptable.
- The Hydrovac can be used to a minimum depth of 30 cm below the pipe or 30 cm beneath the intended depth of the excavation.
- Mechanical excavation can be used within 60 cm of a pipeline as long as it is supervised by a representative of the Owner.

7.1 Mechanical Exposure

Before mechanical excavation equipment is used, within the hand expose zones for buried facilities, the facilities must be exposed using non-destructive excavation techniques acceptable to the Facility owner. There are no defined limits on the extent of exposure required. Buried facilities should be exposed sufficiently to confirm their identification and alignment.

When a proposed Ground Disturbance will be parallel to an existing buried facility, within the hand expose zone, the buried facility should be exposed at intervals set by the Facility owner. The Extractor should obtain the required exposure intervals in writing.

It is recommended that the initial exposure be made at the location the Ground Disturbance first enters the Right-of-Way, or first enters the hand exposed zone. Additional exposures should be made when a change in direction of the Ground Disturbance, or the buried facility, and where the Line Locator has identified limitation within the Ground Disturbance area. The pipeline Owner must be present at the time the buried facility is exposed.

Owners of buried facilities within EUB jurisdiction must also conduct:

- Daily inspections of any construction area that is in close proximity to a pipeline Right-of-Way.
- Continuous inspection of any construction activity that:
 - is occurring on a pipeline Right-of-Way, and
 - may affect the safety of the pipeline.

Adherence to Occupational Health and Safety (OH&S) Code:

- Shore trenches and excavations against cave in.
- Access and exit by ladder.
- Monitor for presence of toxic flammable gases.
- Ensure proper slope of walls (limits).
- Keep edges of excavation free of loose soil, debris, spoil piles and material stockpiles.
- Obtain an OH&S *Work Space Entry Permit*, if required.
- Take care when the machine approaches the outer limits of the hand excavation area.

When the buried facility has been exposed, mechanical equipment must not be used within **60 cm**, or a distance specified in the Crossing Agreement, whichever is greater. Excavation will continue under direction supervision by a Facility owner Representative.

Note: Most written approvals (*i.e.*, *Crossing*, *Proximity*, *Ground Disturbance Permit/Checklists*) maintain a stricter requirement than **60 cm** for mechanical excavation equipment. The *Crossing Agreement* will also commonly request hand exposure before entry onto Right-of-Way, stricter than the **5 m** or **1 m** point.

7.2 Backfill Inspections

Once a portion of a pipeline has been exposed, as defined by Provincial or Federal Regulations, the Excavator must notify the Facility owner a minimum of 24 hours prior to Backfilling the buried facility. Upon notification the Owner must inspect the exposed portion of the buried facility to ensure that no damage has occurred, then all written Inspection results will be kept for a minimum of 2 years.

The Excavator should follow these guidelines during the backfill process:

- Backfill using sand or other select material for initial backfill as specified by the Facility owner.
- Shovel sand around and under pipe to provide fire support.
- Do not use heavy vibrating equipment for compaction directly over pipelines until sufficient cover is in place.
- Locations where fill may otherwise settle, compact with hand operated compactor in approximately 15 mm layers or as agreed upon with the Facility owner, compacting each layer to prevent future settlement.

The Excavator must prove reasonable efforts have been taken to procure an inspection on the exposed pipeline prior to backfilling.

The Excavator will need to locate documentation for other types of buried facilities. This documentation will advise the Excavator if the Facility owner must be contacted for a Backfill Inspection prior to Backfilling.

Restore Site

Responsibility for Site Restoration (i.e., top soil replacement, reseeding, etc.) is usually specified in the *Crossing Agreement*. The guidelines below should be followed during *Site Restoration*:

- Compact soil sufficiently to prevent future settlement. The restored surface should be level and compatible with original surface.
- Remove temporary fencing and barricades.
- Remove temporary buildings.
- Remove all temporary markers (pin flags and lathe).
- Remove spoil piles, garbage and other debris.
- Remove temporary ramps.
- Install warning signs as specified by the Facility owner.

Note: When removing the ramp, ensure that the facility remains protected from heavy equipment.

7.3 Contacting a Buried Facility

Contact with a buried facility can potentially cause for personal injury, death, public injury, equipment damage, production loss, environmental consequences, or corporate image loss. All of these factors are considered to be a major risk. The Third Party creating the Ground Disturbance must have an effective Emergency Response procedure, dependent on the type and location of the buried facility, which outlines actions and contacts for all levels of an emergency. The Emergency Response procedure must be communicated effectively to all Parties on-site.

Pipeline Regulations clearly state that if contact is made during a Ground Disturbance with the buried facility the following maybe a result of:

- Puncture or crack in the facility, scratch, gouge, flattening, or dent of the surface,
or,
- Damage to the protective coating,

The Ground Disturbance work must be immediately terminated if any of the above conditions exist. The Exactor conducting the Ground Disturbance must immediately notify the Facility owner and provide the location where the contact has occurred as well as with the kind of damage that has resulted from the contact.

Notification of contact to a buried facility is to:

- Ensure that an *Emergency Locate Request of Contact* is placed through the Alberta One-Call centre to notify the Facility Owner.
- Provide an Emergency Locate request to all companies who are **not members** of the Alberta One-Call system.

Depending on the facility specific regulator, the Owner of the buried facility **will immediately notify** the required agencies and/or regulatory bodies concerning the location, type, and severity of damage.

If the Ground Disturbance has been terminated due to contact with a buried facility, the Ground Disturbance cannot be started again without the approval from the buried Facility Owner.

When the buried Facility Owner receives an *Emergency Locate* request they are expected to respond within one hour in urban areas and within two hours in rural areas.

Upon notification to the required agencies, a written record should be made and maintained. The Alberta One-Call Centre *Facility Damage Report* (Form 5) must be completed by all Alberta One-Call members and should be considered by non-members. A *Contact Incident Notification* (Form 7), which is included in this manual, is to be completed and faxed to the agencies and regulatory boards to confirm notification of contact.

The buried Facility Owner, in co-ordination with all Parties involved with the Ground Disturbance, should record the incident investigation into the Ground Disturbance causes then provide recommendations for change and prevention of future damage. This written report is commonly requested by investigating regulatory agencies, and must be available upon request.

Corporate Policies and Permits

Caltex Energy has now undertaken the first steps in addressing due diligence in Ground Disturbance, a Corporate Policy concerning the Code of Practice and/or Critical Procedure has implemented. It is imperative that personnel involved in all aspects of a Ground Disturbance have Ground Disturbance certification along with training on written documents, associated permits and checklists. A procedure or practice is meant to be a living document, and as such, should have a framework in place for tasks that require a Site-Specific procedure. Updating procedures is an ongoing process to ensure that the most current information is always on hand for the On-Site Ground Disturbance Supervisor.

An important component of the Corporate Policy, Code of Practice, or Critical Procedure is the development of an On-Site tool that meets the requirements of the written approval and identifies the steps to mitigate the risk of the Ground Disturbance. Through experience in other high-risk potential areas, the industry has found Ground Disturbance permits/checklists to be an effective way to both mitigate any hazard and meet the regulatory requirement of written approval.

Regulations require that Caltex Energy manage the Ground Disturbance from the Corporate Office to the On-Site disturbance with a high level of due diligence. The every company involved in Ground Disturbance to perform a *Corporate Evaluation* (Form 10), which is attached, to identify any deficiencies in their systems.

Environmental Awareness

Due to the increasing changes with environmental legislation, Caltex Energy has implemented various policies and procedures. It is critical that all Parties involved with the routing of the facilities are aware of governing regulations and guidelines, as well as how they affect business. Consideration must be established when routing a pipeline; such as the environmental import of crossing water bodies, wetlands, muskeg area, sensitive soil conditions, and existing soil contamination, etc. The proper design, construction and scheduling should minimize any negative impact on soil erosion, proper disposal of hydrovac slurry, or sedimentation. Also, steps should be taken to contour, stabilize, and reclaim any disturbed areas to pre-construction state.

7.4 Training

It is Caltex Energy's responsibility to recommend that a Risk Analysis be performed on each task to ensure proper control on Ground Disturbance risks. Risk Analysis is identifying the training requirements for Ground Disturbance and Line Locators.

A Ground Disturbance Supervisor along with any sub-ordinates directly involved in the Ground Disturbance must adhere to the objectives for orientation as follows:

- Explanation of a Ground Disturbance is, when and why common hits occur.
- Definition of a Code of Practice, the need for one.
- Undertaking a Ground Disturbance.
- The distance you must search for a buried facility.
- Illustrate the minimum sources for searching a buried facility.
- Permits and pre-job meetings.

7.5 Supervision

A Ground Disturbance Supervisor must be a certified Line Locator. The Ground Disturbance Supervisor will issue or receive a Ground Disturbance permit, checklist, or written approval. The learning objectives for Ground Disturbance Supervision are as follows:

- Successfully completed the Ground Disturbance Orientation.
- Clarified the sources when searching for buried facilities.
- Provided notification to Facility Owner.
- Received Facility Owner notification.
- Understand Approvals or Crossing Agreements.
- Know applicable Regulations.
- Know how to create the plot plan or site drawing.
- Understand Line Location, Exposure, and Backfill Inspections.
- Understand Permits, and Pre-Job Meetings.
- Develop Emergency Response Plans.
- Know what to do when there is contact with a buried facility.

7.6 Line Locator Training

Line Locate accuracy is completely dependent on the degree of difficulty and experience of the Line Locator. Correctly identifying the type of buried facilities can have a big impact on the ability of the Line Locator to find them. Training for Line Locators should consist of both a practical and a theoretical portion. It is up to each Company to ensure that their Line Locators are competent. No one standard is sufficient for all scenarios. The learning objects of training are as follows:

Theory

Understanding of:

- Science of line location.
- Different methods of line locating.
- Marking standards.
- Knowledge of local regulations.
- How to use documentation and mapping.

Practical

Demonstration of:

- A Visual Inspection for assess to buried facilities.
- A successful line locate.
- How to mark a located line properly.

8.0 GROUND DISTURBANCE RESPONSIBILITIES

When executing a Ground Disturbance all efforts and precautions must be taken to avoid hitting or rupturing a pipeline or underground utility. This applies not only to someone else's pipeline or utility, but also when **conducting Ground Disturbance on one's own pipeline(s)**.

The following table illustrates each person's responsibilities when conducting a Ground Disturbance on a Foreign or Company owned pipeline.

Responsibility	Site Supervisor	Project Eng./ Superintendent	Surface Land	Contractor
Review existing: survey drawings, construction drawings for existing underground pipelines or buried utilities.	R	R		R
Obtain written approvals for line Crossing Agreement.		R	R	
Ensure all Crossing Agreements are in place prior to a Ground Disturbance.	R	R		
Ensure On-site Supervisor is competent and has IRP 17 Ground Disturbance certification.	R	R		
Review scope of work with Engineer.	R	R		
Conduct a pre-job On-Site visitation with Line Locate Operator to visually confirm underground pipelines.	R	S		S
Contact Alberta One-Call at least 24 hours before crossing.	S	R		
Contact all Landowners or Operators who may be able to identify any pipelines not shown on survey or drawings.	R	S		
Contact all Third Party line crossing at least 48 hours before crossing.	S	R		
Ensure all buried lines are identified and clearly marked with stakes or flags. An electronic line locator must be used.	R	S		R
Meet with Landowner if required to explain Ground Disturbance.	R		S	
Have pre-job meeting to explain Ground Disturbance rules.	R	R		R
On-site Meeting to review certification requirements in regards to Ground Disturbance policies.	R	S		R
Have a Tailgate safety meeting each day then document.	R	R		R

R = Responsibility

S = Support

Responsibility	Site Supervisor	Project Eng./ Superintendent	Surface Land	Contractor
Ensure work crew knows there is to be no mechanical digging within 60 cm of an exposed pipeline. All discussions should be documented..	R	R		R
Fill out the Ground Disturbance / Line Exposure checklist. Separate forms for each individual Line Exposure.	R	S		R
Separate Safe Work Permit for each Ground Disturbance.	R	S		R
Supervision On-Site when lines are exposed and excavation takes place.	R	S		

R = Responsibility

S = Support

9.0 **EUB GUIDE-30 GUIDELINES FOR SAFE CONSTRUCTION NEAR PIPELINES**

...Remember,



Your responsibilities are to

- check records for the existence of pipelines
- obtain written permission for working within the pipeline right-of-way
- call pipeline owner at least two full working days before you dig so pipeline position can be marked
- erect temporary fencing along right-of-way, if needed
- construct proper crossings to allow access over right-of-way, if needed
- hand-expose pipeline before using machinery within 5 m, requesting attendance of pipeline owner
- avoid using machinery within 60 cm of pipeline, unless supervised by the owner
- call the pipeline owner at least one full working day before you cover any exposed pipeline

The pipeline owner's responsibilities are to

- provide pipeline information upon request
- provide reasonable assistance to anyone carrying out a ground disturbance
- mark the position of the pipeline before a ground disturbance takes place
- be present, if asked, during hand exposure
- inspect the pipeline for damage prior to backfilling, and keep a written record of this inspection
- supervise any mechanical excavation within 60 cm of the pipeline

If you hit a pipeline,

**STOP WORK
and
NOTIFY THE OWNER**

immediately!

The information contained in this brochure is intended for use as a guide only. Consult the *Pipeline Act* and the *Pipeline Regulations* for further information.

For more information call your local EUB field centre, open 24 hours a day:

- Bonnyville (780) 826-5352
- Calgary South (403) 297-8303
- Drayton Valley (780) 542-5182
- Grande Prairie (780) 538-5138
- Medicine Hat (403) 527-3385
- Red Deer (403) 340-5454
- St. Albert (780) 460-3800
- Wainwright (780) 842-7570

For more information about the EUB, please contact:

Information Services
Alberta Energy and Utilities Board
640-5 Avenue SW
Calgary, Alberta T2P 3G4
Tel: (403) 297-8311

or visit the EUB Web Site at:
<http://www.eub.gov.ab.ca>

Second edition, June 1998



Guide 30

**Guidelines for
Safe
Construction
Near Pipelines**

IF YOU ARE PLANNING TO create a ground disturbance...



...such as excavating, digging, trenching, plowing, drilling, tunneling, augering, backfilling, blasting, stripping topsoil, levelling, removing peat, quarrying, clearing, grading or pounding posts...

READ THIS BROCHURE CAREFULLY!

These actions are all defined as "ground disturbances" in the *Pipeline Act* and the *Pipeline Regulations*. Careless construction near pipelines can cause serious accidents—and cost you a lot of money—if you do not follow proper pre- and post-construction procedures.

The requirements in this brochure apply to

- operating pipelines
- discontinued pipelines
- abandoned pipelines

PLEASE NOTE

There are two exceptions that do not qualify as "ground disturbances":

1. land disturbances of less than 30 cm that do not reduce the pipeline cover to less than that when first installed, and
2. normal cultivation that does not exceed a 45-cm depth

Alberta Energy and Utilities Board

(page 1 of 2) <http://eub.gov.ab.ca>

IF you are planning to carry out a **GROUND DISTURBANCE** anywhere, you must:



1. Look for pipelines in the following records:

- Call Alberta One-Call at 1-800-242-3447 (*Note: not all companies are registered on the One-Call system*)
- Call the Alberta Energy and Utilities Board (EUB) to check area records for the existence of pipelines
- Check with your local utilities services
- Check land title for easements that may indicate the location of pipelines

2. Look for pipelines at the site:

- Look for warning signs where pipelines cross roads or waters
- Look for wells, tanks, or valves which may indicate the presence of pipelines
- Look for ground settling from previous work
- Talk to nearby/adjacent landowners and residents

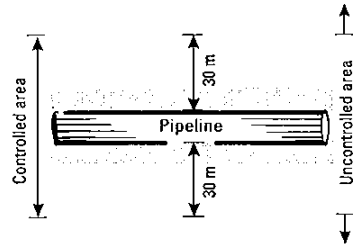
then...

DETERMINE where your project will be in relation to the existing pipeline.



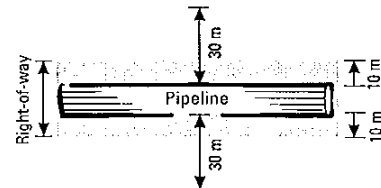
What is a controlled area?

A pipeline's controlled area is the land bordering it for 30 m along each side.



What is a right-of-way?

A pipeline right-of-way is the land allocated for the pipeline and its maintenance as set out in the agreement between the landowner and the pipeline company. The right-of-way will usually be less than the 30-m controlled area, but may, in fact, sometimes be more.



and...

IF you will be working in the controlled area **OUTSIDE** of the pipeline right-of-way, you must:



1. **Call the pipeline owner** at least two full working days before you dig so the pipeline can be located and marked before you dig



2. **Install temporary fencing**, if necessary, to control access

or...

IF you will be working **WITHIN** the pipeline right-of-way, you must:



1. **Get written approval** from the pipeline owner before you dig



2. **Call the pipeline owner** at least two full working days before you dig so the pipeline can be located and marked before you dig



3. **Expose the pipeline by hand** before digging with machinery within 5 m of the pipeline



4. **Ensure that NO machinery** comes within 60 cm of a pipeline without the supervision of the pipeline owner



5. **Call the pipeline owner** at least one full working day before you cover any exposed pipeline

FORM 1
Information Request for Alberta One-Call

Alberta One-Call: 1-800-242-3447 Assigned Number: _____

Company Name: _____ Off. Phone: _____

Contact Name: _____ Phone: _____

Position: _____ Fax: _____

E-mail: _____ Cell: _____

Alternate Contact: _____ Phone: _____

Position: _____ Fax: _____

E-mail: _____ Cell: _____

City or Town: _____ Work Location: _____

Property Owner: _____ Subdivision Name: _____

Legal Land Description: ¼ SEC: ____ SEC: ____ TWP: ____ RGE: ____ W ____ M

Additional info: _____

Type of Work: _____

Depth of Work: _____

Type of Property: *(circle and explain)* Public Private Street Other:

Company Requested Work: _____

Start Date: _____ Time: _____

Scheduled Meeting Date: _____ Time: _____

Companies Notified: _____

FORM 2
Ground Disturbance Permit

A separate Permit *Must* be completed for *Each* Ground Disturbance.

For the purposes of this permit "Ground Disturbance" shall be defined as any excavation or construction activity (other than hydrovac or hand exposure) that involves the use of powered mechanical equipment and results in the penetration of the ground to a depth of 30 cm or greater.

Date: _____ Location: _____ Permit Valid from: _____ to: _____
Location(s)

Brief description and scope of Ground Disturbance activity: _____

This permit shall be regarded as "void" and must be re-issued if:

- a) permit expires b) change of Designated Supervisor c) job description or scope change**

Section A: Surveyor/ Line Locating Company Responsibilities	Date	Line Locator/ Company Rep Initial
Obtain latest EUB area maps for all potential disturbance areas		
Obtain latest Company site plan		
Flag ROW and Crossing - surveyor.		
Locate and identify lease boundaries.		
Meeting to minimize crossings and identify tie-in points.		
Identify underground utilities On-site		
Identify facilities accessing and leaving lease		
Sweep the Ground Disturbance area within 30 m of Pipeline Crossing - four separate grid patterns (N, S, E, W)		
Numerically identify and flag all buried pipelines and utilities showing line number, size, depth to a distance of 30 m from the location		
Prepare site sketch of all underground utility locations (to remain with On-site Supervisor)		
Section B: On-Site Supervisor Responsibilities Prior to Construction or Reclamation	Date	On- Site Sup's Initial
Meet with surveyors/electrical/operations during initial survey.		
▪ Minimize line conflicts		
▪ Determine tie-in locations		
▪ Review latest available site sketch of underground utility locations drawings		
Alberta One-Call notification		
Landowner notification		
Contractor notification/pre start-up meeting.		
Verify Crossing Agreements and crossing locations - drive ROW and verify.		
Verbal hand-expose permission from foreign utility owner.		
Notify pipeline/utility owner 48 hours before crossing.		
On-Site Supervision by the Company's Representative and Foreign Representative throughout exposure procedure. If mechanical equipment will be operating within 5 m of the staked line all buried utilities must be exposed by hand or use of a Hydrovac.		
Review EUB Guide 30 and "Safe Procedures" manual with surveyors and operations.		
Section C: On-Site Supervisor Responsibilities During Construction Reclamation	Date	On-Site Sup's Initial
EUB notification/permit		
Alberta Environmental notification		
Foreign line Representative on-site during backfill		
Review Ground Disturbance activities with all equipment operators, in detail , prior to any work being conducted. IRP 17 Certification Expiry Date: _____ On-site Supervisor will ensure that:		
• Lines are identified, remain staked at all times,		
• Lines have been hand exposed where Ground Disturbance activities occur within 5 m of any underground utility. These lines will be clearly marked with a 3" I.D. PVC pipe extending at least 2 ft above ground until all Ground Disturbances is complete.		
• Scope of work is known to all Contractors and are aware of digging and ripping restrictions as per EUB Guide 30.		

I verify that the aforementioned construction responsibilities were completed.

Company Designated Supervisor: _____ Date: _____
Company Second Supervisor: _____ Date: _____
Contractor Designated Supervisor: _____ Date: _____

FORM 3
Backfill / Crossing Inspection Report

Project Number: _____ Date: _____

Location: LSD _____ SEC _____ TWP _____ Range _____ W _____ M

***NOTE – Before any backfill/crossing work begins, the Owner of the facility/land must be notified 24 hours in advance.**

Attach all written notes/comments to this report if more space is required.

1. Type of Crossing (check one):

- Pipeline (if yes, check type):
 - Oil Gas Water
- Utilities (if yes, check type):
 - Gas Water CO-OP Lines
- Water Crossing
 - River Lake Creek/Stream
 - Slough Drainage
- Road
 - Trail Gravel Paved
- Railway
- Other: _____

2. Facility Information (required):

Existing Owner: _____
 Crossing Agreement #: _____
 New Installation (facility) Info.: _____

 No Yes, (explain): _____

Contractor: _____
 Line Type (material): _____
 Line Size: _____
 Coating Type: _____
 Cathodic Protection: No Yes
 Damage present during Exposure/Installation:
 No Yes, (explain): _____

Damage to Facility during Backfill Operations:
 No Yes, (explain): _____

EUB and Owner notified if any Damage:
 No Yes

(if NO, Notification of both Parties required)
 Description of any/all repairs: _____

Approvals (if Backfill conditions Satisfactory)

Owner: _____

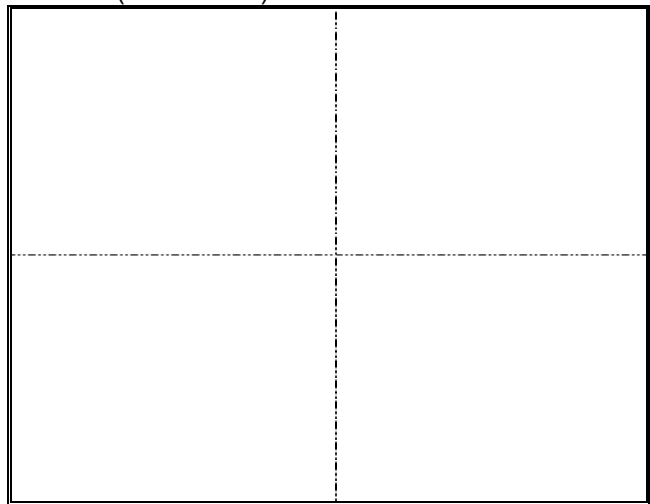
Company Rep: _____

Prepared by: _____

Backfill Completed (date): _____

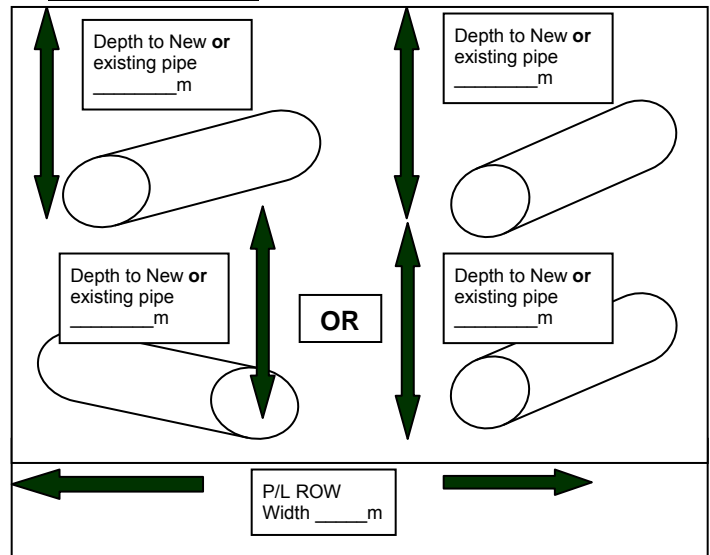
3. On Section Plan below include:

1. All surface improvement (i.e. roads, railways, fences, etc.)
2. All land characteristics (i.e. rivers, lakes, sloughs, etc.)
3. Staging Areas
4. Direction (show North)



When a new installation does not cross an exiting facility (line) but the new installation is within 5 m of the Third Party's ROW, or in the ROW, the line must be exposed to determine its exact location.

4. Ground Surface:



If more space is required use back of Page, Reference Backfill Section number

FORM 4
Exposed Pipeline Inspection and Cathodic Protection Form

1. Exposed Pipeline Inspection

Wire to Pipeline Attachment Method

	Thermite Weld	*Thermite Weld	Ground Clamp	Stainless Band-It
Existing Pipe (Grantor)				
New Pipe (Grantee)				

Note:*Indicates Thermite weld with following restrictions:

2. Exposed Pipe Coating

Pipeline Coating Repair

	Wrap Around Shrink Sleeve	Royston "Handicap" and Tape	Other: (Specify Below)
Existing Pipe (Grantor)			
New Pipe (Grantee)			
Coating Repair Other:			

3. Cathodic Protection

Zinc Anode (5 kg)

	Yes	No
Grantor	<input type="checkbox"/>	<input type="checkbox"/>
Grantee	<input type="checkbox"/>	<input type="checkbox"/>

Note: If both are yes, a 10 kg Zinc interference cell will be installed.

**FORM 5
Facility Damage Report**

		Report No.		Entered	
01 Facility Owner		02 District Office		03 Ref-Serv/Tap No.	
				04 Date (yy/mm/dd)	
05 Site Location (St Address/Legal LSD/Lot/Block/Rural Subdivision)				06 Municipality /M.D./County	
Area		Site		Type of Plant Damage	
07 <input type="checkbox"/> Urban		09 <input type="checkbox"/> Private Property		11 <input type="checkbox"/> Road Allowance	
08 <input type="checkbox"/> Rural		10 <input type="checkbox"/> Easement/ ROW/Lease		12 <input type="checkbox"/> Lane	
		13 <input type="checkbox"/> Other Public Property		14 <input type="checkbox"/> Trunk	
				15 <input type="checkbox"/> main	
				16 <input type="checkbox"/> Service	
				17 <input type="checkbox"/> Buried	
				18 <input type="checkbox"/> Surface	
				19 <input type="checkbox"/> Aerial	
Type of Incident					
20 <input type="checkbox"/> Dig Up		23 <input type="checkbox"/> Vandalism		27 <input type="checkbox"/> Fire/Water Damage	
21 <input type="checkbox"/> Near Miss		24 <input type="checkbox"/> Animal		28 <input type="checkbox"/> Vehicle Accident – Identified	
22 <input type="checkbox"/> High Load		25 <input type="checkbox"/> Natural Elements		29 <input type="checkbox"/> Vehicle Accident – Not Identified	
		26 <input type="checkbox"/> Thaw – Deliberate		30 <input type="checkbox"/> Other	
Activity					
31 <input type="checkbox"/> Backhoe/Trackhoe Excavation		37 <input type="checkbox"/> Blasting Vibrosis		44 <input type="checkbox"/> Vertical Auguring/Drilling	
32 <input type="checkbox"/> Bobcat/Loader Excavation		38 <input type="checkbox"/> Demolition/Breakout		45 <input type="checkbox"/> Horizontal Auger/Bore/Push	
33 <input type="checkbox"/> Trencher Excavation		39 <input type="checkbox"/> Snow Removal		46 <input type="checkbox"/> Driving Bars/Stakes/posts/Anchors	
34 <input type="checkbox"/> Grade/Dozer/Scraper/Excavation		40 <input type="checkbox"/> Cable/Pipe Plowing		47 <input type="checkbox"/> Hand Excavation	
35 <input type="checkbox"/> Ditch Shaping		41 <input type="checkbox"/> Deep Tillage		48 <input type="checkbox"/> Other	
36 <input type="checkbox"/> Saw Cutting/Jack Hammer		42 <input type="checkbox"/> General Agriculture			
		43 <input type="checkbox"/> Landscape/Tree Planting			
Damage By (Digging Community Sector)					
49 <input type="checkbox"/> Backhoe/Trackhoe Excavation		57 <input type="checkbox"/> Utility Contractor		66 <input type="checkbox"/> Well Site Contractor	
50 <input type="checkbox"/> Bobcat/Loader Excavation		58 <input type="checkbox"/> Excavation Contractor		67 <input type="checkbox"/> Survey/Engineer	
51 <input type="checkbox"/> Trencher Excavation		59 <input type="checkbox"/> Landscaper		68 <input type="checkbox"/> Seismic Contractor	
52 <input type="checkbox"/> Grade/Dozer/Scraper/Excavation		60 <input type="checkbox"/> Pipeliner		69 <input type="checkbox"/> Concrete/Paving Contractor	
53 <input type="checkbox"/> Ditch Shaping		61 <input type="checkbox"/> House Builder		70 <input type="checkbox"/> Road/Grading Contractor	
54 <input type="checkbox"/> Saw Cutting/Jack Hammer		62 <input type="checkbox"/> Irrigation District		71 <input type="checkbox"/> Sewer/Water Contractor	
55 <input type="checkbox"/> Elec/Mechanical Contractor		63 <input type="checkbox"/> Railway		72 <input type="checkbox"/> Petroleum Resources Company	
56 <input type="checkbox"/> Drilling Contractor		64 <input type="checkbox"/> General Contractor		73 <input type="checkbox"/> Other	
		65 <input type="checkbox"/> Fence/Sign Contractor			
74 Company Name				75 Contact Name	
76 Mailing Address				77 Phone	
78 Working For					
Locate Requested?		Locates Done?		Locates Accurate?	
79 <input type="checkbox"/> Yes 80 <input type="checkbox"/> No 81 <input type="checkbox"/> N/A		82 <input type="checkbox"/> Yes 83 <input type="checkbox"/> No		84 <input type="checkbox"/> Yes 85 <input type="checkbox"/> No	
				Hand Exposed?	
				86 <input type="checkbox"/> Yes 87 <input type="checkbox"/> No	
88 Ticket No.		89 Date Located		Facility Marked/Information Provided by	
				90 <input type="checkbox"/> Flags 91 <input type="checkbox"/> Paint 92 <input type="checkbox"/> Stakes	
				93 <input type="checkbox"/> Maps 94 <input type="checkbox"/> Verbally 95 <input type="checkbox"/> Not Marked	
Contact Authorized? 96 <input type="checkbox"/> Yes 97 <input type="checkbox"/> No		Damage Preventable? 98 <input type="checkbox"/> Yes 99 <input type="checkbox"/> No			
Comments:					

FORM 7
Incident Notification Report

Please complete **all** fields, circle **all** choices that apply

Incident Date: _____ Incident Time: _____

Incident Location: _____ Licence Number: _____

Licence Type: **Section 1.01, Facility** **Article II, Well** **Pipeline:** _____

Licensee Name: _____ Contact Name: _____

Operator Name: _____ Contact Phone: _____

Product Released: _____

Volume Released: _____ m³ H₂S Content: _____ %

Area Affected: _____ m³ Released Offsite: **Yes** **No**

Environment Affected: **Air** **Land** **Muskeg / Stagnant Water** **Flowing Water**

Wildlife/livestock affected (*provide details of any affect*): **No Affect** **Habitat** **Animals**

Public affected (*provide details of any affect*): **No Affect** **Public Notified** **Public Evacuated**

Cause of Incident (*equipment failure, operator error, etc.*): _____

Failure Type (*internal corrosion, mechanical joint failure, etc.*): _____

COMPLETE THE FOLLOWING SECTION FOR PIPELINE RELEASES ONLY

Segment line number: _____ Normal Operating Pressure: _____

Test Failure: Yes No

Cathodic Protection: Yes No

Corrosion Mitigation/
Monitoring Program Yes No

External Coating Yes No *type:* _____

Replacement Pipe Yes No

Pre-tested

Associated Facility Code (*where product is processed*): _____

Comments (*cause, containment, impact, remediation, etc. Attach a second page if required*): _____

Submission of this form **does not** take the place of oral notification to the EUB as required by Oil and Gas Conservation Regulation 8.050 (2).

FORM 8
As Built Crossings

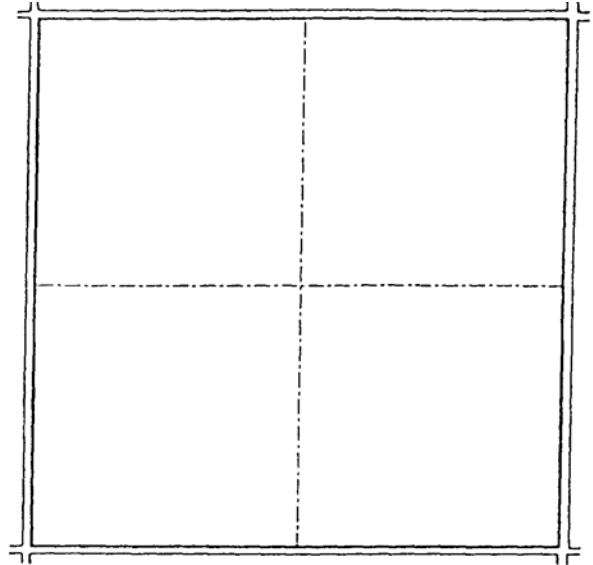
Existing Line Owner: _____

Project: _____ Crossing Agreement No.: _____

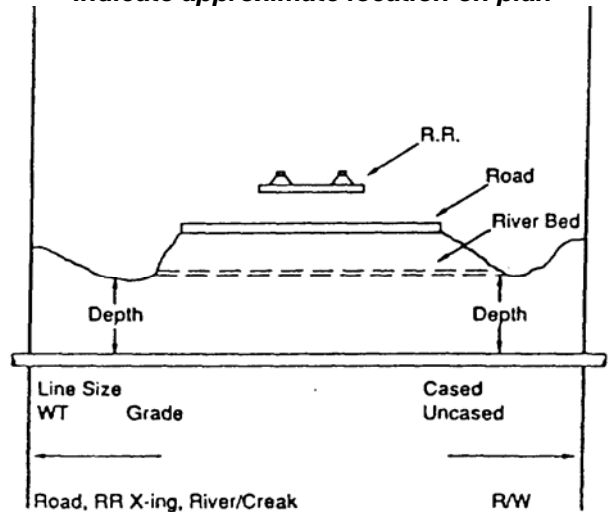
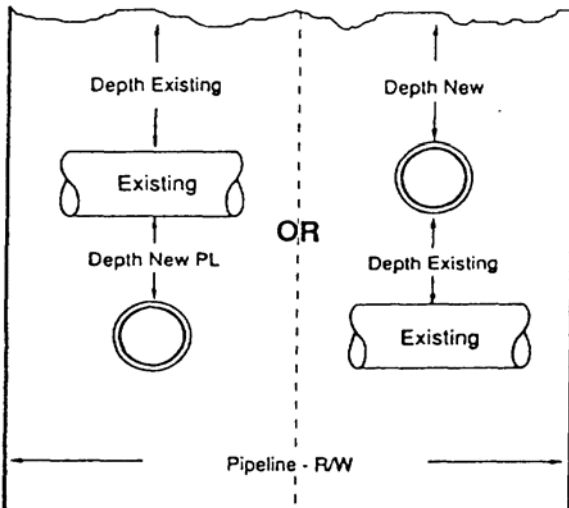
LSD _____ Sec _____ Twp _____ Rge _____ W _____ M

Type of Crossing: (Check One):

- Pipeline
- Road
- Rail Road
- Water Course
- Data Cable
- Other: (Specify)



Indicate approximate location on plan



1. Depth to existing line (on elevation)
2. Depth of new line above or below existing line (on elevation) Yes No
3. Cathodic Protection installed: what type?

Owner of Foreign or Existing Line: _____ Size & Condition of Existing Line: _____

(New) oil, gas, water, etc: _____ Contractor performing work: _____

Prepared by: _____ Date: _____

Approval by: _____ Date: _____

FORM 9
Record of Locating Buried Pipeline Facilities

Pipeline Right-of-Way Width meters		AB One-Call Ticket No.	
Located by: Stake <input type="checkbox"/> Flag <input type="checkbox"/> Paint <input type="checkbox"/> Other <input type="checkbox"/>			
Appointment kept by Party requesting the locate <input type="checkbox"/> yes <input type="checkbox"/> no		Comments:	
Company Name 24 Hour Emergency Number (000) 111-1111 Legal Description LSD		Show Directions Hydrant <input checked="" type="checkbox"/> Pole o Anchor -?- R/R ††† Fence -F-	Property Line -- Man Hole • Conduit ~ Pedastal □
<p>The diagram illustrates a facility layout. A central rectangular box represents a 'Building'. To its left, two parallel lines represent a 'Road'. Above the building, a 'Header System' is shown as a vertical structure with two lines extending upwards. From the top of the header system, a 'Sales Line' extends to the right, ending in an arrowhead. From the right side of the building, a 'Flow Line' extends to the right, ending in a solid black dot labeled 'Wellhead'.</p>			
Facilities were located at:		Will customer be crossing facility: <input type="checkbox"/> yes <input type="checkbox"/> no	
NOTE: The location marked is approximate only. Before excavating with machinery, within 5 meters of the crossing area, any facilities involved must be exposed by hand or hydrovac. No plowing cable with Right-of-Way. You are responsible for damage caused to the facilities by your operations. For facility locates or if facilities are damaged contact Alberta One-Call at 1-800-242-3447			
Located by (Print)		Locator's Signature	
Date Located	Time	Customer's Signature	
Customer's Name (Print)	Title	Company	

FORM 10
Corporate Ground Disturbance Self-Evaluation

Corporate Administration	Yes	No	N/A
1. Does Caltex have a Ground Disturbance Site Checklist or Permit?			
2. Does Caltex have a Ground Disturbance Policy?			
3. Does the Ground Disturbance policy address and/or define all of the following:			
a) Purpose of the policy			
b) Application of the policy			
c) Definition of a Ground Disturbance within Caltex's operations			
d) Corresponding government regulations			
e) Responsibilities of the Ground Disturbance Supervisor			
f) Framework of when and where the responsible Ground Disturbance Supervisor must be present during a Ground Disturbance			
g) Crossing Agreements and the order of precedence on site supported with the corporate policy			
h) Location of underground facilities/site drawings present			
i) Hand exposure guidelines, critical procedure/practices			
j) Mechanical limitations after hand exposure			
k) Permit requirements			
l) Pre-job meeting minimum requirements			
m) Protective measure for on-site control			
n) Backfill procedures			
o) Framework for exemptions and site specific changes			
4. Are all the appropriate Caltex personnel orientated and deemed competent on the Corporate Ground Disturbance Directive?			
5. Is there a record of orientation?			
6. Are all the appropriate Contractor personnel oriented and deemed competent on Ground Disturbance?			
7. Are all Caltex personnel or Representatives supervising Ground Disturbance competent on all aspects of Ground Disturbance?			
8. Are all the personnel locating the underground facilities on behalf of Caltex trained and deemed competent?			
9. Has a facility routing process been implemented involving surface land and project planning departments that allows for all Ground Disturbance information to go to the Site Supervisor?			
10. Has an updated record of changes or additions to underground facilities been forwarded in Caltex system to be used in future projects?			

Record Confirmation:	Yes	No	N/A

This form is optional and can be used as a reference guide to reevaluate Ground Disturbance protocols.