



Buried Facility Marking Practices

CAGC INFORMATION ALERT

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The following information is not a definitive guide to government legislation and does not release users of this document from their responsibilities under applicable legislation.

29 April 2005,

This bulletin is sent to the membership to clarify the marking of buried facilities. .

With technology advances in information gathering i.e. GPS nee GIS, new operational methodologies are identified and developed. However, an operational efficiency for one company can be an operational detriment to another. The new methodology can create a breach of policy and procedure and in addition, create a hazard. GIS'ing a buried facility and not marking the buried facility as per the Buried Facility Locator's course is in contravention of geophysical seismic industry Best Practice.

The following information is taken from the Industry Recommended Practice (IRP) #17. IRP 17 is one of several documents that is the basis of the 'Buried Facility Locator's' course and in addition, is the document that all of the oil and gas industry associations have ratified.

17.7.3 Identifying and Marking Buried Facilities lot plan/site drawing, maps, or facility searches that pass within the controlled/search area must be located and staked to indicate location alignment and line size.

Included on the following two pages is information that has been agreed upon by our industry and must be adhered to.

Please ensure that all applicable personnel are familiar with the information provided.

17.10.10 Appendix J – Geophysical Marking scheme

Purpose: To notify CAGC members (and non members) of standard CAGC buried facility marking practices.

Background: Geophysical operations do not follow the APWA Colour Code. The reason is that colours used in the code do not correspond to colours used in the geophysical industry i.e. orange is used to show geophysical line and off line routing, blue is used to designate shot hole location). Geophysical operations are a process where, when a facility is identified, the facility(s) are then deliberately avoided either by remodeling the proposed seismic line (program) or physically moving the seismic line and / or portions of. The purpose of the movement is to:

- Not conflict with the buried facility(s) present;
- To meet government legislation using regulated setback distance(s);






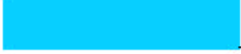


BURIED FACILITY MARKING PRACTICES

- To meet industry best practices and;
- To recover some measure of sub surface geophysical coverage.

Basic geophysical buried facility marking practices are as follows:






1. The standard buried facility marking flagging (survey tape) colour is yellow.
2. The buried facility location is identified by a 1.2 metre wooden stake with an orange painted top (approximately ten (10) cm) with a yellow streamer tied to the top of the stake.
3. When in areas of livestock in lieu of 1.2 metre wooden stakes, 45cm wooden stakes (hubs) may be used. In addition to the 45 cm wooden stakes to further ensure the physical location of the buried facility, orange paint may be sprayed on the ground denoting the direction of travel of the buried facility.
4. Spacing of the wooden stakes is based upon terrain considerations, buried facility direction and buried facility congestion. Note: Three (3) stakes will be seen in any one direction at any given point along the buried facility route.
5. The buried facility description will be written (abbreviated) on the wooden stake on both sides i.e. H.P.P/L (high pressure pipeline), H2O P/L (water pipeline) or stated i.e. 'fibre optic' 'telephone cable'. The lettering is done with a large black permanent ink marker.
6. The markings will extend to at least thirty-two (32) metres (depending upon shot hole charge size) past the area of conflict. Note: refer to applicable government regulations, possible stakeholder stipulations and owner crossing agreements.
7. In 2D geophysical programs only the crossing area of conflict will be marked. Note: It is strongly recommended that at least one identified buried facility location point is established at the point(s) of crossing.
8. In 3D geophysical programs, all buried facility routes will be located and marked within the confines of the program boundaries. Note: Check or beware of potential conflicts of geophysical source points and source point offsetting outside of the program boundaries
9. If a geophysical company is responsible for the actual buried facility locating, a geophysical company representative will request written verification of the said locates to be done in a timely manner by the buried facility owner or owner authorized representative.
10. At the pre-job meeting between the buried facility owner representative and the geophysical company representative any variations of the above or special considerations are to be addressed and resolved.

BURIED FACILITY MARKING PRACTICES

INTERNATIONAL COLOR CODE FOR MARKING BURIED FACILITIES		
	WHITE	Proposed Excavation
	PINK	Temporary Survey Markings
	RED	Electric Power Lines, Cable Conduit and Lighting Cables
	YELLOW	Gas, Oil, Petroleum and Gaseous Materials
	ORANGE	Telephone, Cable TV, Communication, Alarm and Signal
	BLUE	Potable Water
	GREEN	Sanitary Sewers, Storm Sewers and Drain Lines
	PURPLE	Reclaimed Water, Irrigation and Slurry Lines

Seismic Flagging Colors

Designed to be unique and avoid confusion with International Color Code

	ORANGE GLOW diagonal stripes 2x ORANGE or 50/50	Seismic Line location 2D or 3D receiver includes access arrows ect
	PINK GLOW diagonal stripes 2x PINK or 50/50	Seismic Line location 3D source includes access arrows ect
	YELLOW GLOW diagonal stripes 2x YELLOW or 50/50	Seismic hazard location
	RED GLOW Pin flag	Seismic Source Point location
	LIME GLOW Pin flag	Seismic Receiver Point location

Note: To avoid conflicts flagging with "SEISMIC" may be used as alternative to striped flagging for marking line location if other local users have used striped flagging.

BURIED FACILITY MARKING PRACTICES

In conclusion, it is first and foremost important to remember that one should never assume the buried facility information that is supplied i.e. Pipeline Platz is accurate. For example, on average it takes two years for a pipeline plan to be published from the date of submission. Usually there is physical evidence in these cases but if the utility was buried in a i.e. cultivated field, all evidence would be destroyed. A buried facility locator must be part detective, part technician. Also there are many cases where buried facilities have not been registered. The buried facility location information in these cases usually resides in one or two people's heads, the person who ran the trencher when it was being ditched in and the foreman. Some areas are worse than others but bottom line, there are no guarantees that information supplied is one hundred percent accurate in any given area on any given day.