Alberta Energy Regulator

Coal Hole Data File

Layout Document

August 2024

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1 Introduction

1.1 Overview

This document describes the physical characteristics and data contents of the Coal Hole Data File. This file contains coal hole identification, location, and description data for drill holes in Alberta. This file contains non-confidential data only. Includes chemical analysis data, coal hole identification, coal sample, coal sample analysis, dilatometer test, excavation data, free swelling index test, fusion analysis, giesler plastometer test, hardgrove grindability analysis, mine survey point, outcrop, petrographic analysis, proximate analysis, trace element analysis, ultimate analysis, well data.

1.2 New Subscribers

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- Makes no representation, warranties, or guarantees, expressed or implied, for the fitness of the data files with respect to intended use;
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- Accepts no responsibility for any costs incurred by a company to convert, install, or improve the data files; and
- Makes no guarantee to the continuing availability of any data or the consistency of the format of transferred data.

2 File Specification

The Coal Hole Data contains five XML files for each exploration entity type:

- Coal Hole
- Excavation
- Mine Survey Point
- Outcrop
- Well

Each of these XML files contains the following:

- Entity Details, including DLS, Lat/Long and 10TM location information
- Transverse Mercator location information (if applicable)
- Baseline Coordinate location information (if applicable)
- Log data (if applicable)
- Inclination Survey data (if applicable)
- Interpreted Interval data (if applicable)
- Geological Attitude (if applicable)

Separate XML files have been created for the Coal Sample, Coal Sample Analysis, and Analysis Type data.

NOTE: At this time, data is available for the following types of analyses: Proximate, Ultimate, Free Swelling, Chemical, Hardgrove Grindability, and Trace Element.

The XML tags within the files identify the associated data elements. For example:

```
<Coal_Interpreted_Interval>
    <ExplorationEntityId>397679</ExplorationEntityId>
    <IntervalTopDepth>0.00</IntervalTopDepth>
    <IntervalBottomDepth>2.29</IntervalBottomDepth>
    <IntervalMineralContent/>
    <IntervalAssignedSeamNumber/>
</Coal_Interpreted_Interval>
```

These files can be viewed within a browser or imported into a database application, such as Microsoft Access.

2.1 Metric Unit Listing

All data within the data file is in metric units. The following is an alphabetical listing of the metric units used for the various coal data attributes.

Attribute	Unit
10TM Easting	Metres
10TM Northing	Metres
Baseline X Coordinate	Metres
Baseline Y Coordinate	Metres
Coal Hole Diameter	Millimeters
East West Distance	Metres
Easting	Metres
Excavation Height	Metres
Excavation Length	Metres
Excavation Width	Metres
Final Total Depth	Metres
Ground Elevation	Metres
Interval Base Depth	Metres
Interval Top Depth	Metres
Kelly Bushing Elevation	Metres
Logged Depth	Metres
Max True Vertical Depth	Metres
Measured Depth	Metres
North South Distance	Metres
Northing	Metres
Outcrop Total Length	Metres
Proximate Analysis Heating Values	Megajoules/Kilogram
Sample Base Depth	Metres
Sample Top Depth	Metres
Sample Weight	Kilograms
Survey Point Floor Depth	Metres
Survey Point Measured Depth	Metres
Total Depth	Metres

3 Definition Types

Exploration Entity Type	Definitions
Coal Hole	A coal hole is a hole drilled for the purposes of coal exploration or development. Coal holes are normally drilled by vehicle mounted rotary drills.
Excavation	An excavation which could be a pit, dike, etc.
Mine Survey Point	A mine survey point is the exact geometric description of a location in a mine. It does not include the dimensions of an excavation.
Outcrop	An outcrop is an exposure of bedrock or of an unconsolidated deposit to the surface of the ground, or the part of a rock formation that appears at the surface of the ground.
Entity Details	**Definitions**
Lat/Long and 10TM location information	Defines all the valid sections in the Province of Alberta as defined by the Dominion Land Survey (DLS) system.
Transverse Mercator location information (if applicable)	The transverse Mercator projection type and values used to locate the excavation.
Baseline Coordinate location information (if applicable)	The baseline origin location of the coal hole.
Log data (if applicable)	This table contains information about the submission of a LAS format electronic well log received by the AER. The information contained in this table provides some key search parameters for the contents of the LAS file and the file's location
Inclination Survey data (if applicable)	Data from a directional survey which is comprised of individual directional survey points along the wellbore during a downhole survey. The measurements at the survey points record the inclination from the vertical axis that the wellbore trends and the clockwise departure of the survey point from the north reference used in the directional survey.

Interpreted Interval data (if applicable)	The top and bottom of an isolated interval, of consistent interpreted mineral matter. For coal, this was previously known as a coal occurrence.
Geological Attitude (if applicable)	The angle of the stratum or planar feature at a given depth measured in terms of Azimuth (dip direction) and dip. The Attitude data is derived from dip-meter logs. The geologic category or type of the attitude data.
Analysis Type	**Definitions**
Proximate	This test is the determination of the various major component elements of coal (carbon, hydrogen, oxygen, nitrogen, Sulphur).
Ultimate	This test is the determination of the various major component elements of coal (carbon, hydrogen, oxygen, nitrogen, Sulphur). If Ash %, Carbon %, Hydrogen %, Oxygen %, Nitrogen %, Sulphur % and Moisture % are all initialized, then the sum of all these percentages must be greater or equal to 99.98 and less than or equal to 100.02. If the sum is outside this range, it will be flagged.
Free Swelling	A test that measures the swelling of pulverized metallurgical coal under specified conditions.
Hardgrove Grindability	The test of ease of reducing a coarse coal sample to fine powder for the purposes of combustion.
Chemical	This test is the inorganic analysis of coal ash. The sum of all chemicals in this analysis must be less than or equal to 102.0.
Trace Element	The determination of trace elements by the inorganic analysis of coal. This test contains all the elements of the periodic table except those elements contained in the Ultimate Analysis.