

# **Individual Well Gas Analysis Data By Zone Layout Document**

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**Alberta Energy Regulator**

Report Individual Well Gas Analysis – Data by Zone

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# 1 Introduction

## 1.1 Overview

This document describes the physical characteristics and data contents of the Individual Well Gas Analysis Data by Zone. This file contains gas analysis data by zone on non-confidential wells: samples providing compositional breakdown of gas, associated liquids and recombined analysis; sample points and dates; and basic well information.

## 1.2 New Subscribers

To become a subscriber of this product please email your request specifying the product name to [informationrequest@aer.ca](mailto:informationrequest@aer.ca). You will be asked to provide a letter of intent at the time of order.

## 1.3 Problem Resolution

If you encounter problems with this product, please email [informationrequest@aer.ca](mailto:informationrequest@aer.ca). Please identify the problem as one or more of the following:

- Problems relating to the subscription or distribution
- Problems relating to data contents
- Other problems

## 1.4 Available Formats

This product is available in TXT. Products are zipped prior to being uploaded to the FTP site.

## 1.5 Confidentiality

The file is processed to exclude confidential data. Data are made available once they have been released from confidential status.

## 1.6 Disclaimer

The AER

- Makes no representation, warranties, or guarantees, expressed or implied, for the fitness of the data files with respect to intended use;
- Accepts no responsibility for any inaccuracies, errors, or omissions in the data files;
- 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 Specifications

### 2.1 General File Description

**Record Length:** 119

**Availability:** Annual

## 3 Record Types, Descriptions, and Elements

### 3.1 Record Types and Descriptions

The following table lists the record types that are available in the Individual Well Gas Analysis Data by zone.

Record Number	Record Description	Record
01	Gas Analysis	Location, Field/Pool, Test Interval, Date
02	Reservoir Fluid	Recombined Gas/Liquid, IF Sample Point =10 or 15 (otherwise equivalent to Separator Gas/Vapour Record)
03	Liquid Record	Separator Liquid Components (Mole Fraction)
04	Vapour Record	Separator Gas Components (Mole Fraction)
05	Remarks Record	Comments (i.e: Field Analysis, H2S, etc.)

### 3.2 (01) Gas Analysis

**Record Length:** 106

No.	Element Name	Length	Format	Comments
1	GAS-ANALYSIS	1		
	RECORD-TYPE	1	X (2)	A code to uniquely identify this record. Value is '01'.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
2	LOC-EXCEPTION	2	X (2)	<p>Unique identifier for the well assigned by the AER to a licensed wellbore. This follows the format for Unique Well Identifiers in Alberta as defined by appendix 2 of AER <i>Directive 059</i>.</p> <p>The well UWI is stored in the following packed format:</p> <ul style="list-style-type: none"> <li>Characters [1-3]: Township</li> <li>Characters [4]: Meridian</li> <li>Characters [5-6]: Range</li> <li>Characters [7-8]: Section</li> <li>Characters [9-10]: LSD</li> <li>Characters [11-12]: Location Exception</li> <li>Characters [13]: Event Sequence</li> </ul>
	TAB-FILLER	1	X	
	LSD	2	99	Legal subdivision is a number used within the Alberta Dominion Land Survey system to identify one of 16 LSDs within a section.
	TAB-FILLER	1	X	
	SEC	2	99	Section is a number used within the Alberta Dominion Land Survey system to identify one of 36 sections within a township.
	TAB-FILLER	1	X	
	TOWNSHIP	3	9(3)	Township is a number used within the Alberta Dominion Land Survey system to identify township lines that form part of the survey grid. These lines extend from east to west.
	TAB-FILLER	1	X	
	RANGE	2	99	Range is a number used within the Alberta Dominion Land Survey system to identify range lines that form part of the survey grid. These lines extend from north to south subdividing meridians.
	TAB-FILLER	1	X	
	MERIDIAN	1	9	Meridian is a number used within the Alberta Dominion Land Survey system to identify the meridians of longitude that form part of the survey grid. The province of Alberta is subdivided into three areas defined by the Meridians of Longitude north to south w4, w5, w6.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
3	METRIC-CODE	1	X	Metric that provides contextual information to support performance reporting.
	TAB-FILLER	1	X	
	EVENT-SEQ	1	9	To differentiate between the various major events which could occur in the life of a well, event sequence numbers are assigned in chronological order commencing with "0"
	TAB-FILLER	1	X	
4	SOL-GAS	1	X	Solution gas is dissolved in crude oil or crude bitumen under reservoir conditions and evolves as a result of pressure and temperature changes.
	TAB-FILLER	1	X	
5	KEYS	1	X	
	FSA-CODE	4	9(4)	Official code for the field in which a well (drill hole) is licensed or drilled.
	TAB-FILLER	1	X	
	FSA-IND	1	9	Indicates whether the FSA code refers to a field and/or gas strike area.
	TAB-FILLER	1	X	
	POOL-CODE	7	9(7)	A code assigned denoting a natural underground reservoir containing or appearing to contain an accumulation of oil or gas or both separated or appearing to be separated from any other such accumulation.
	TAB-FILLER	1	X	
	POOL-SEQUENCE-CODE	3	9(3)	Sequence number assigned to the pool by the reserves administration system.
	TAB-FILLER	1	X	
6	SAMPLE-POINT	2	99	Point at which sample was taken.



No.	Element Name	Length	Format	Comments
	TAB-FILLER	1	X	
7	QUALITY-CODE	2	99	Reflects the Gas Departments evaluation of the quality of the particular gas analysis.
	TAB-FILLER	1	X	
8	DOCUMENT-SOURCE	2	99	See Appendix #1 for definition.
	TAB-FILLER	1	X	
9	KELLY-BUSHING	7	9(4).99	The depth as measured from the kelly bushing along the well path to the bottom of the well (metres).
	TAB-FILLER	1	X	
10	INTERVAL-TOP	7	9(4).99	The distance from the surface of the hole to the top of an interval measured along the length of the hole.
	TAB-FILLER	1	X	
11	INTERVAL-BASE	7	9(4).99	The distance from the surface of the hole to the bottom of an interval measured along the length of the hole.
	TAB-FILLER	1	X	
12	GAS-LIQUID-RATIO	4	9(7)	The total quantity of Pentanes Plus injected for the summarization period. Pentane Plus fluids are the higher molecular weight natural gas liquids above Pentane.
	TAB-FILLER	1	X	
13	TEST DATE			The date used for determining the test schedule.
	TEST-DATE-YY	4	9(4)	
	TAB-FILLER	1	X	
	TEST-DATE-MM	2	9(2)	
	TAB-FILLER	1	X	
	TEST-DATE-DD	2	9(2)	The date the test is due. This date is checked as well as the fulfillment status to determine if compliance enforcement is required.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
14	DENSITY	5	.9(4)	Mass per unit of volume typically reported in g/cm3.
	TAB-FILLER	1	X	
15	DENSITY-INDICATOR	1	X	
	TAB-FILLER	1	X	

### 3.3 (02) Reservoir Fluid

**Record Length:** 119

No.	Element Name	Length	Format	Comments
	RESERVOIR-FLUID			
1	RECORD-TYPE	2	X(2)	A code to uniquely identify this record. Value is '02'.
	TAB-FILLER	1	X	
2	LOC-EXCEPTION	2	X(2)	Unique identifier for the well assigned by the AER to a licensed wellbore. This follows the format for Unique Well Identifiers in Alberta as defined by Appendix 2 of AER <i>Directive 059</i> .
				The Well UWI is stored in the following packed format: Characters [1-3]: Township Characters [4]: Meridian Characters [5-6]: Range Characters [7-8]: Section Characters [9-10]: LSD Characters [11-12]: Location Exception Characters [13]: Event Sequence
	TAB-FILLER	1	X	
	LSD	2	99	Legal subdivision is a number used within the Alberta Dominion Land Survey system to identify one of 16 LSDs within a section.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
	SEC	2	99	The valid DLS designation of a Section within Alberta. Section is a number used within the Alberta Dominion Land Survey system to identify one of 36 sections within a township. A section measures 1.609 by 1.609 km (1 mile by 1 mile).
	TAB-FILLER	1	X	
	TOWNSHIP	3	9(3)	The valid DLS designation of a Township within Alberta. Township is a number used within the Alberta Dominion Land Survey system to identify township lines that form part of the survey grid. These lines extend from east to west. A township measures 9.7 km (six miles) north to south.
	TAB-FILLER	1	X	
	RANGE	2	99	The valid DLS designation of a Range within Alberta.  Range is a number used within the Alberta Dominion Land Survey system to identify range lines that form part of the survey grid. These lines extend from north to south subdividing meridians. A range is approximately 9.7 km (6 miles) east to west.
	TAB-FILLER	1	X	
	MERIDIAN	1	9	The valid DLS designation of a Meridian within Alberta.  Meridian is a number used within the Alberta Dominion Land Survey system to identify the meridians of longitude that form part of the survey grid. The province of Alberta is subdivided into three areas defined by the Meridians of Longitude north to south.
	TAB-FILLER	1	X	
	EVENT-SEQ	1	9	This extended UWI has the same packed format as the standard UWI, but has two additional characters to allow event sequences between 10 and 999 to be referenced.
	TAB-FILLER	1	X	
	MOLE PERCENTS			The maximum H2S content of the raw inlet gas in moles per kilomole.

No.	Element Name	Length	Format	Comments
3	H2	5	99.99	Expressed as a molar percent.
	TAB-FILLER	1	X	
4	HE	5	99.99	4
	TAB-FILLER	1	X	
5	N2	5	99.99	5
	TAB-FILLER	1	X	
6	CO2	5	99.99	The carbon dioxide (CO2) component of the produced gas expressed as a molar percent. The concentration of CO2 gas to 1 part per 10 000.
	TAB-FILLER	1	X	
7	TRACE	1	X	The measurement in parts per million of the trace element as determined by the inorganic analysis of coal.
	TAB-FILLER	1	X	
8	H2S	7	99.9(4)	The H2S content in the produced gas. Expressed as a molar percent. The concentration of H2S gas to 1 part per 1 000 000.
	TAB-FILLER	1	X	
9	C1	5	99.99	The average reservoir fluid analysis value of the C1 (methane) component. This is an average of all resource interval fluid analysis averages within the resource isopach. The value is expressed as a molar fraction.
	TAB-FILLER	1	X	
10	C2	5	99.99	C2 (ethane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
11	C3	5	99.99	C3 (propane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
12	IC4	5	99.99	IC4 (isobutane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
13	NC4	5	99.99	NC4 (normal butane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
14	IC5	5	99.99	IC5 (isopentane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
15	NC5	5	99.99	NC5 (normal pentane) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
16	C6	5	99.99	C6 (hexanes) component of the reservoir fluid expressed as a percentage.
	TAB-FILLER	1	X	
17	C7P	5	99.99	
	TAB-FILLER	1	X	
18	MOLAR-MASS- LIQUID	5	9(3).9	Always zeroes for Record Type 02.
	TAB-FILLER	1	X	
19	MOLAR-MASS- LIQ-IND	1	X	Always a space for Record Type 02.

## 3.4 (03) Liquid Record

**Record Length:** 119

No.	Element Name	Length	Format	Comments
1	LIQUID-RECORD			
	RECORD-TYPE	2	X(2)	A code to uniquely identify this record. Value is '03'.
	TAB-FILLER	1	X	
2	LOCATION			
	LOC-EXCEPTION	2	X(2)	Unique identifier for the well assigned by the AER to a licensed wellbore. This follows the format for Unique Well Identifiers in Alberta as defined by appendix 2 of AER <i>Directive 059</i> .  The Well UWI is stored in the following packed format:  Characters [1-3]: Township Characters [4]: Meridian Characters [5-6]: Range Characters [7-8]: Section Characters [9-10]: LSD Characters [11-12]: Location Exception Characters [13]: Event Sequence
	TAB-FILLER	1	X	
	LSD	2	99	Legal subdivision is a number used within the Alberta Dominion Land Survey system to identify one of 16 LSDs within a section.
	TAB-FILLER	1	X	
	SEC	2	99	Section is a number used within the Alberta Dominion Land Survey system to identify one of 36 sections within a township.
	TAB-FILLER	1	X	
	TOWNSHIP	3	9(3)	Township is a number used within the Alberta Dominion Land Survey system to identify township lines that form part of the survey grid. These lines extend from east to west.
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
	RANGE	2	99	Range is a number used within the Alberta Dominion Land Survey system to identify range lines that form part of the survey grid. These lines extend from north to south subdividing meridians.
	TAB-FILLER	1	X	
	MERIDIAN	1	9	Meridian is a number used within the Alberta Dominion Land Survey system to identify the meridians of longitude that form part of the survey grid. The province of Alberta is subdivided into three areas defined by the Meridians of Longitude north to south w4, w5, w6.
	TAB-FILLER	1	X	
	EVENT-SEQUENCE	1	9	To differentiate between the various major events which could occur in the life of a well, event sequence numbers are assigned in chronological order commencing with "0".
	TAB-FILLER	1	X	
3	MOLE-PERCENTS			
	H2	5	99.99	
	TAB-FILLER	1	X	
4	HE	5	99.99	
	TAB-FILLER	1	X	
5	N2	5	99.99	
	TAB-FILLER	1	X	
6	C02	5	99.99	
	TAB-FILLER	1	X	
7	TRACE	1	X	
	TAB-FILLER	1	X	
8	H2S	7	99.9(4)	
	TAB-FILLER	1	X	
9	C1	5	99.99	

No.	Element Name	Length	Format	Comments
	TAB-FILLER	1	X	
10	C2	5	99.99	
	TAB-FILLER	1	X	
11	C3	5	99.99	
	TAB-FILLER	1	X	
12	IC4	5	99.99	
	TAB-FILLER	1	X	
13	NC4	5	99.99	
	TAB-FILLER	1	X	
14	IC5	5	99.99	
	TAB-FILLER	1	X	
15	NC5	5	99.99	
	TAB-FILLER	1	X	
16	C6	5	99.99	
	TAB-FILLER	1	X	
17	C7P	5	99.99	

### 3.5 (04) Vapour Records

**Record Length: 119**

No.	Element Name	Length	Format	Comments
1	LIQUID-RECORD			
	RECORD-TYPE	2	X(2)	A code to uniquely identify this record. Value is '04'.
	TAB-FILLER	1	X	
2	LOCATION			



No.	Element Name	Length	Format	Comments
	LOC-EXCEPTION	2	X(2)	<p>Unique identifier for the well assigned by the AER to a licensed wellbore. This follows the format for Unique Well Identifiers in Alberta as defined by appendix 2 of AER <i>Directive 059</i>.</p> <p>The Well UWI is stored in the following packed format:</p> <ul style="list-style-type: none"> <li>Characters [1-3]: Township</li> <li>Characters [4]: Meridian</li> <li>Characters [5-6]: Range</li> <li>Characters [7-8]: Section</li> <li>Characters [9-10]: LSD</li> <li>Characters [11-12]: Location Exception</li> <li>Characters [13]: Event Sequence</li> </ul>
	TAB-FILLER	1	X	
	LSD	2	99	Legal subdivision is a number used within the Alberta Dominion Land Survey system to identify one of 16 LSDs within a section.
	TAB-FILLER	1	X	
	SEC	2	99	<p>The valid DLS designation of a Section within Alberta.</p> <p>Section is a number used within the Alberta Dominion Land Survey system to identify one of 36 sections within a township. A section measures 1.609 by 1.609 km (1 mile by 1 mile).</p>
	TAB-FILLER	1	X	
	TOWNSHIP	3	9(3)	<p>The valid DLS designation of a Township within Alberta.</p> <p>Township is a number used within the Alberta Dominion Land Survey system to identify township lines that form part of the survey grid. These lines extend from east to west. A township measures 9.7 km (six miles) north to south.</p>
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
	RANGE	2	99	The valid DLS designation of a Range within Alberta. Range is a number used within the Alberta Dominion Land Survey system to identify range lines that form part of the survey grid. These lines extend from north to south subdividing meridians. A range is approximately 9.7 km (6 miles) east to west.
	TAB-FILLER	1	X	
	MERIDIAN	1	9	The valid DLS designation of a Meridian within Alberta. Meridian is a number used within the Alberta Dominion Land Survey system to identify the meridians of longitude that form part of the survey grid. The province of Alberta is subdivided into three areas defined by the Meridians of Longitude north to south.
	TAB-FILLER	1	X	
	EVENT-SEQUENCE	1	9	This extended UWI has the same packed format as the standard UWI, but has two additional characters to allow event sequences between 10 and 999 to be referenced.
	TAB-FILLER	1	X	
3	MOLE-PERCENTS			
	H2	5	99.99	
	TAB-FILLER	1	X	
4	HE	5	99.99	
	TAB-FILLER	1	X	
5	N2	5	99.99	
	TAB-FILLER	1	X	
6	C02	5	99.99	
	TAB-FILLER	1	X	
7	TRACE	1	X	
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
8	H2S	7	99.9(4)	
	TAB-FILLER	1	X	
9	C1	5	99.99	
	TAB-FILLER	1	X	
10	C2	5	99.99	
	TAB-FILLER	1	X	
11	C3	5	99.99	
	TAB-FILLER	1	X	
12	IC4	5	99.99	
	TAB-FILLER	1	X	
13	NC4	5	99.99	
	TAB-FILLER	1	X	
14	IC5	5	99.99	
	TAB-FILLER	1	X	
15	NC5	5	99.99	
	TAB-FILLER	1	X	
16	C6	5	99.99	
	TAB-FILLER	1	X	
17	C7P	5	99.99	
	TAB-FILLER	1	X	
18	MOLAR-MASS- LIQUID	5	9(3).9	Always zeroes for Record Type 04
	TAB-FILLER	1	X	
19	MOLAR-MASS- LIQ-IND	1	X	Always a space for Record Type 04
	TAB-FILLER	1	X	

### 3.6 (05) Remark Record

**Record Length: 78**

No.	Element Name	Length	Format	Comments
1	RECORD-TYPE	2	X(2)	A code to uniquely identify this record. Value is '05'.
	TAB-FILLER	1	X	
2	LOCATION			
	LOC-EXCEPTION	2	X(2)	Unique identifier for the well assigned by the AER to a licensed wellbore. This follows the format for Unique Well Identifiers in Alberta as defined by appendix 2 of AER <i>Directive 059</i> .
				The Well UWI is stored in the following packed format: Characters [1-3]: Township Characters [4]: Meridian Characters [5-6]: Range Characters [7-8]: Section Characters [9-10]: LSD Characters [11-12]: Location Exception Characters [13]: Event Sequence
	TAB-FILLER	1	X	
	LSD	2	99	Legal subdivision is a number used within the Alberta Dominion Land Survey system to identify one of 16 LSDs within a section.
	TAB-FILLER	1	X	
	SEC	2	99	The valid DLS designation of a Section within Alberta.  Section is a number used within the Alberta Dominion Land Survey system to identify one of 36 sections within a township. A section measures 1.609 by 1.609 km (1 mile by 1 mile).
	TAB-FILLER	1	X	

No.	Element Name	Length	Format	Comments
	TOWNSHIP	3	9(3)	The valid DLS designation of a Township within Alberta. Township is a number used within the Alberta Dominion Land Survey system to identify township lines that form part of the survey grid. These lines extend from east to west. A township measures 9.7 km (six miles) north to south.
	TAB-FILLER	1	X	
	RANGE	2	99	The valid DLS designation of a Range within Alberta. Range is a number used within the Alberta Dominion Land Survey system to identify range lines that form part of the survey grid. These lines extend from north to south subdividing meridians. A range is approximately 9.7 km (6 miles) east to west.
	TAB-FILLER	1	X	
	MERIDIAN	1	9	The valid DLS designation of a Meridian within Alberta.  Meridian is a number used within the Alberta Dominion Land Survey system to identify the meridians of longitude that form part of the survey grid. The province of Alberta is subdivided into three areas defined by the Meridians of Longitude north to south.
	TAB-FILLER	1	X	
	EVENT-SEQUENCE	1	9	This extended UWI has the same packed format as the standard UWI, but has two additional characters to allow event sequences between 10 and 999 to be referenced.
	TAB-FILLER	1	X	
3	REMARKS			
	REMARK-START	3	X(3)	
	TAB-FILLER	1	X	
	REMARK	50	X(50)	Any remarks or comments that were placed on the licence.
	TAB-FILLER	1	X	

## Appendix 1 Document Source

Code	Code Description
10	AOFP/pressure file
20	gas plant file
30	P.V.T. File (reservoir fluid study)
40	Fluid analyses micro fiche
50	Other
60	Electronic transmission