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CWIS – Handling today's industry reality

November, 2018

What is CWIS?

C – Canadian

W – Well

I - Identifier

S - System



PPDM

https://ppdm.org/ppdm/PPDM/Standards/Well_Identification/PPDM/Well_Identification.aspx



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But we have our UWI?



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We love the UWI, the UWI will remain a valuable descriptor of our wells

- What we love about the UWI
 - Tells in general term where on the surface of this earth we are
 - Tells us in time sequence which order the wells were drilled
 - Tells us how many events a well has(??? – or does it?)

Limitations of the UWI

- 15th character can only be a 0
- Doesn't link/group as drilling length increases (body of the UWI doesn't match with other boreholes) (link or group wells relationships)

CWIS...built on



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- Guiding Principle 1: Comprehensive
- Guiding Principle 2: Permanent
- Guiding Principle 3: Unique
- Guiding Principle 4: Connected Wellbore
- Guiding Principle 5: Connected Wellbore Completion
- Guiding Principle 6: Unambiguous
- Guiding Principle 7: Authority



**from PPDM Well Identification Canada pg 12

So ... going forward we need to ...



WELL COMPONENT DEFINITIONS

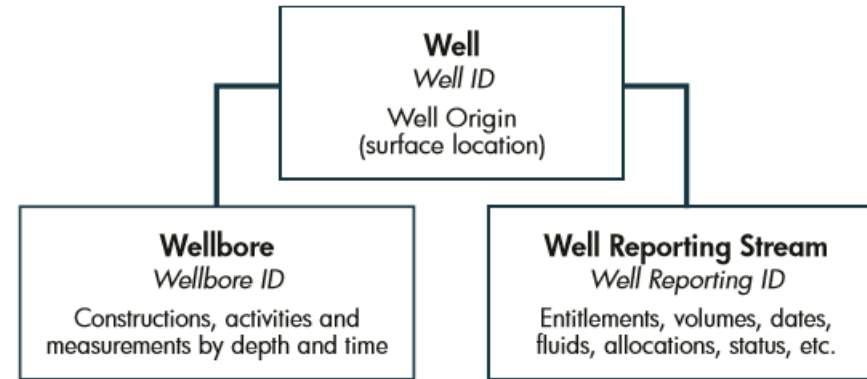
Well
A Well is a proposed or actual drilled hole in the ground designed to exchange (or facilitate the exchange of) fluids between a subsurface reservoir and the surface (or another reservoir), or to enable the detection and measurement of rock properties.

Well Identifiers
An identifier refers to names, numeric or alphanumeric sequences, codes, tags, abbreviations and so on that are maintained or exist in industry, government, vendor, business partner or proprietary systems, datasets or documents whose purpose is to uniquely identify a single Well or Well component (i.e., Well Origin, Wellbore, Well Reporting Stream).

- 1. Well Origin (WO)**
A Well Origin is the location on the surface of the earth or seabed where the drill bit is planned to penetrate or does penetrate the earth to establish or rework a Well.
- 2. Wellbore (WB)**
A Wellbore is a path of drilled footage from the Well Origin (top/start) to a terminating point (bottom/end).
- 3. Well Reporting Stream (V)**
A Well Reporting Stream is a derived stream of fluids to support the allocation and aggregation of volumes.

PPDM PAGE v www.ppdn.org

and “What is a well?” terminology
on its use



**from PPDM Well Identification Canada

So ... going forward we need to manage today's challenge

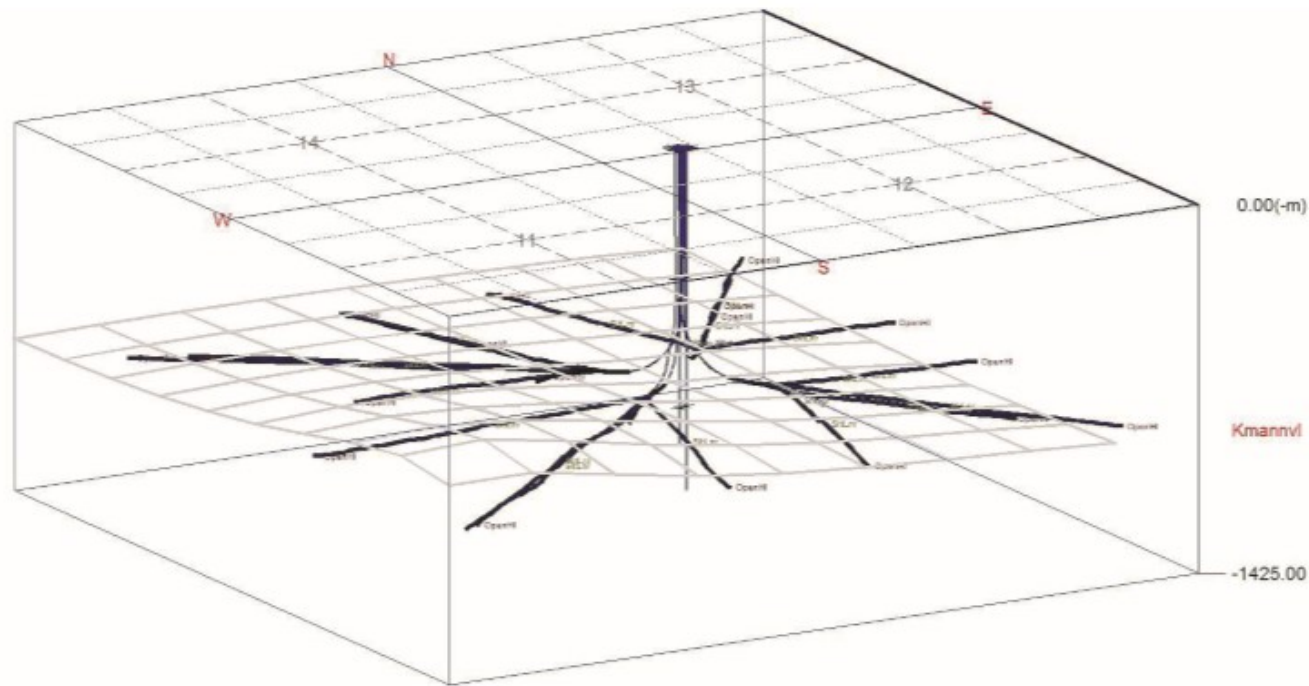


Figure 1: An Example of a Complex Multilateral Well

So... what does it look like when I license my well?

Description	Identifier Construction				Identifier
	Province /Territory	Well Code	Component Type	Component Value	
Well ID	AB	1597532			AB1597532
Wellbore ID	AB	1597532	B	001	AB1597532B001
Well Reporting ID	AB	1597532	V	001	AB1597532V001

An Authorized Well Not Yet Drilled

A Well ID and at least one Wellbore ID is provided with each authorization. Depending on regulatory practice, a Well Reporting ID may also be assigned at any time in a well's life.

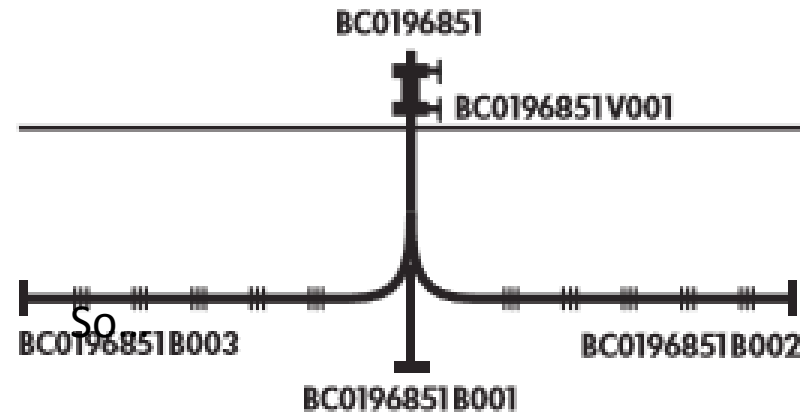
So... what happens when I report all my boreholes?



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Multilateral Producing Well

The two horizontal legs are open for production that is combined in the vertical Wellbore for a single stream at the wellhead. A single Well Reporting ID is assigned because the two legs contribute to a single stream of fluids at the wellhead. The Wellbore ID is used to capture the data (depths, zone description, treatments, etc.) specific to each Wellbore, including the vertical pilot hole (strat hole).



Description	Identifier
Well ID	BC0196851
Wellbore ID	BC0196851B001
Wellbore ID	BC0196851B002
Wellbore ID	BC0196851B003
Well Reporting ID	BC0196851V001



CWIS...keeping a better inventory

The Canadian Well Identification System Standard:

Each identifier is constructed in a similar way and is designed to be permanent and unique. The Wellbore ID and Well Reporting ID contain explicit reference to the parent Well.

The Well Identifier consists of two semantic parts

- Province / Territory code
- Well number

Structure of the Well Identifier

Positions:	Name	Example
1-2	Province / Territory	AB
3-9	Well Number	0123456

The Wellbore Identifier consists of three semantic parts

- Well ID
- Component type
- Component value

Structure of the Wellbore Identifier

Positions:	Name	Example
1-9	Well ID	AB0123456
10	Component Type	B
11-13	Component Value	001

The Well Reporting Identifier consists of three semantic parts

- Well ID
- Component type
- Component value

Structure of the Well Reporting Identifier

Positions:	Name	Example
1-9	Well ID	AB0123456
10	Component Type	V
11-13	Component Value	001

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Why does this matter now?



Saskatchewan has already done this and the AER has it on their plans for the very near future (2019), so the time to plan is now.

Remember: the **UWI still remains as a descriptor** – everyone can take comfort in that the CWIS enhances our ability to manage our wells without taking anything away.

What does CWIS facilitate?



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Better management of amendments, as the UWI is no longer what links well in systems.

Provides visibility into the subsurface configuration of our wells.

We can manage and report on wells with more than 9 boreholes on a license.

Empowers public data vendors to receive and publish the entire well family data. This enhances the marriage of the public and proprietary.

How can I get ready?



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Education yourself about the CWIS, become the champion of change within your organization.

Start the discussion with your public data vendor, understand how they are implementing it.

Start the discussion between all your functional areas (especially IT) to see if they are aware of this upcoming change.

Look for opportunities to use this new information to better manage

Key messages for your organization?



We will not lose our UWIs

CWIS enhances our ability to manage without taking anything away

The change is necessary and will require a different way of thinking

Complex wells are the future

That we should live in interesting times ...



Realize that this is addressing industry trends to more complex drilling, and not just something someone dreamed up to make our lives more difficult.

If you learn and get ahead of the wave, the ride is always smoother.

Even if your company is NOT one of those driving the need for this change, it may become one tomorrow, take a page from the Scouts and be prepared.

A learning from the PPDM Conference...



Oil and gas exploration has now transitioned to a manufacturing model.

If we believe/subscribe to this, then we also have to believe that we need to manage our well data in a way that will allow the most efficient, effective and complete way possible.

Succeed – Repeat – Succeed – Improve – Succeed - ...

Resources to Help?



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PPDM

https://ppdm.org/ppdm/PPDM/Standards/Well_Identification/PPDM/Well_Identification.aspx

Geoconvention

https://www.geoconvention.com/archives/2015/040_GC2015_The_Canadian_Well_Identification_System.pdf



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Questions?



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Thank you!

