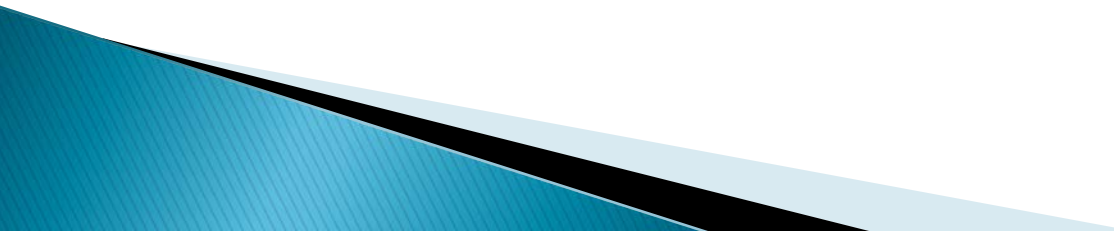




DATA QUALITY
THE SONG THAT NEVER ENDS

September 23, 2014

What are we talking about?

- ▶ **Master Data**
 - What is it?
 - Who maintains it?
 - Who consumes it?
 - ▶ **Who Uses Your Data?**
 - ▶ **Impacts of Bad Data**
 - ▶ **Advantages of Good Data**
 - ▶ **Good practices vs. “better” practices**
- 

Master Data

What is “Master Data”?

Information housed in a single, consistent, quality-cleansed reference table, located in a single location

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Business Associates (BA)**
 - **Land BA's** - Partners, Lessors, Depositories, Royalty Owners - originate from Mineral Land or Surface Land agreements and are maintained by the Land department
 - **Suppliers /Trade BA's** are maintained by Accounting Master Files group

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Business Associates (BA)**
 - Land BA's are maintained by Land; however, the BA table in the Accounting System is commonly used as the Master BA table and that data is consumed by other systems such as Land and Production Accounting
 - They can only be changed by notification in writing to the Land Department

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Business Associates (BA)**
 - Separate BA tables in Land, Financial Accounting, Production Accounting, and other internal systems
 - increased flexibility in individual systems, but...
 - duplicate maintenance
 - notifications to multiple departments to make changes
 - increased risk of incorrect data between systems

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Working Interests (DOI's)**
 - Maintained by Land, as dictated by Land and JV agreements
 - Consumed by Financial Accounting, Production Accounting, Wells Administration, etc.
 - No changes except by notification from Land

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Royalty Information**
 - Land maintains royalty data as dictated by Land agreements
 - Consumed by Production Accounting, Joint Venture Accounting

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Formation Tables**

- Land may consume formation names and codes provided by the government regulators or data vendors
- Land may maintain separate tables using internal naming conventions

- *Note: October's Lunch 'N Learn is all about Formations - hope to see you there*

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Corporate Hierarchy**
 - Land may consume the hierarchy used corporately - Division, District, Prospect, and Area names
 - Everyone is speaking the same language when requesting reports, etc.
 - Land may maintain separate hierarchy in Land System
 - More flexibility; greater risk of providing incorrect information

Master Data

What Types of Master Data does Land Maintain or Consume?

- **Cost Centre and AFE Numbers**
 - Maintained by Accounting
 - Consumed by Land

Who Uses Your Data?

- ▶ **Land data is not just for land people anymore**
 - Everyone is looking at your data, good or bad
 - Decisions are being made
 - Assumptions are being made
 - Reports are being created

Who Uses Your Data?

- ▶ **Financial Accounting**

- DOI's in Financial Accounting System
- Quarterly/Annual Reports
- Annual Information Form (AIF) Submissions

Who Uses Your Data?

▶ Joint Venture Accounting

◦ Payments

• Rentals

- Overpayments sometimes difficult to recover
- Paying incorrect people/companies
 - Lost leases
 - Duplicate payment potential

Who Uses Your Data?

▶ Joint Venture Accounting

- Receivables
 - Reviewing disputed invoices
 - Short payments
 - Re-work

Who Uses Your Data?

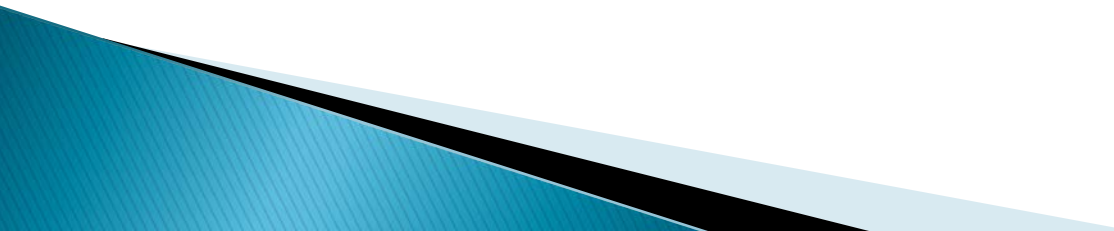
▶ Production Accounting

◦ Royalties Paid or Received

- Overpayments sometimes difficult to recover
- Underpayments
 - Default notices
 - Re-work
- Incorrect Deductions
 - Effect on viability of certain plays and operating costs

Who Uses Your Data?

▶ **Asset Teams**

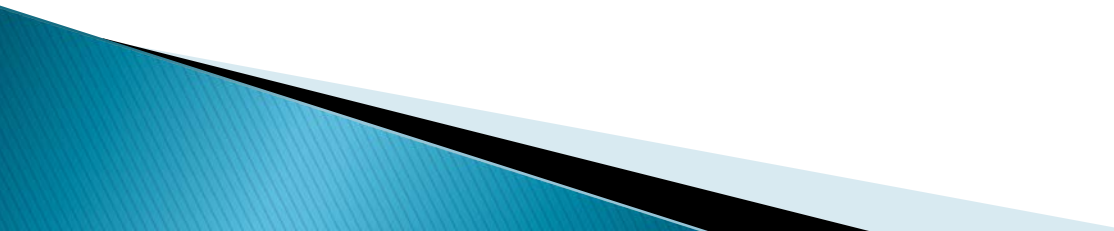
- Working Interests
 - Land and Rights held
 - Acreage numbers
 - Expiries
- 

Who Uses Your Data?

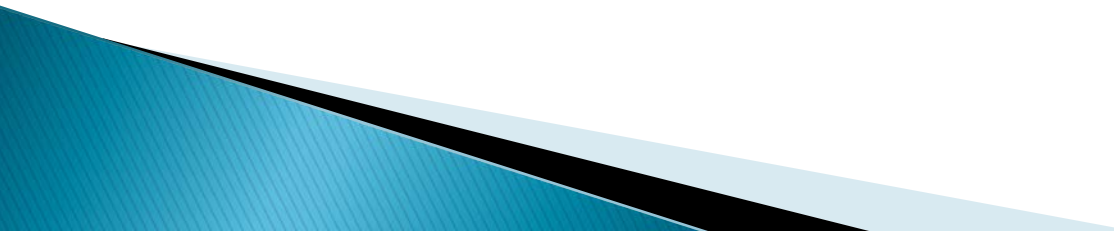
- ▶ **Well Asset Management**
 - Working Interests
 - Gross/Net well reporting
 - Land and Rights held

Who Uses Your Data?

▶ **Business Development/A&D**

- Lands and Rights held
 - Working Interests
 - Wells
 - Facilities
 - Lease and Contract lists
- 

Impacts of Bad Data

- ▶ Area names
 - ▶ Lease dates
 - ▶ Lessor names and addresses
 - ▶ Working interests (DOI's)
 - ▶ Legal descriptions
 - ▶ Royalty set-ups
 - ▶ Acreage numbers
- 

Impacts of Bad Data

- ▶ **Incorrect area names**

- Leases/contracts/wells being incorrectly included or excluded from A&D activities; additional manual review required
- Acreage misrepresented

Impacts of Bad Data

- ▶ **Incorrect lease date information**
 - Rental dates - missed rentals resulting in lost leases
 - Expiry dates - missed continuation applications resulting in lost leases or rights; potential for trespass

Impacts of Bad Data

- ▶ **Incorrect lessor names and/or addresses**
 - Missed payments resulting in lost leases

Impacts of Bad Data

- ▶ **Incorrect Working Interests (DOI's)**
 - Incorrect partners being billed
 - Partners being billed with incorrect interests
 - Dispositions – incorrect working interests resulting in adjustments to purchase and sale agreements

Impacts of Bad Data

- ▶ **Incorrect Legal Descriptions**
 - Potential for trespass
 - Lost opportunities for drilling of wells
 - Mapping errors – lands in wrong locations

Impacts of Bad Data

- ▶ **Incorrect Royalty Setup**
 - Royalty disputes
 - Overpayments - ability to recover
 - Underpayments - default notices
 - Re-work

Impacts of Bad Data

- ▶ **Incorrect Acreage Numbers**
 - Errors in reporting
 - Errors in payments related to acreage

Impacts of Bad Data

- ▶ **Corporate Reputation**

- How do we want to be regarded by our industry partners?

Advantages of Good Data

- ▶ **Bottom Line**

- Time
 - Cost
- 

Advantages of Good Data

▶ Reporting

- The ability to report accurate land data is critical to your organization
- Good data in your systems eliminates the need to track information separately and gather data from various sources for reporting
 - Get rid of spreadsheets being used as databases

Advantages of Good Data

▶ Reporting Tools

- “Canned” Reports from your land system
- Custom reports created and maintained by system vendors
- Ad hoc reporting
 - Sql queries, Microsoft Access, Microsoft Excel
 - Crystal Reports, Synergy, SSRS Reporting, Cognos, QlikView, etc.

Advantages of Good Data

- ▶ **Cross-reference/data source for other systems**
 - Verification of joint information
 - Eliminate the need for other systems to maintain the same information

Advantages of Good Data

▶ **Structured Rights**

- Easily identify specific zones of interest
- Using the same formation table for land rights and well producing and total depth zones - apples to apples
 - Identify missing wells
 - Confirmation of correct linkages of wells and rights
 - Identify incorrect linkages of wells and rights

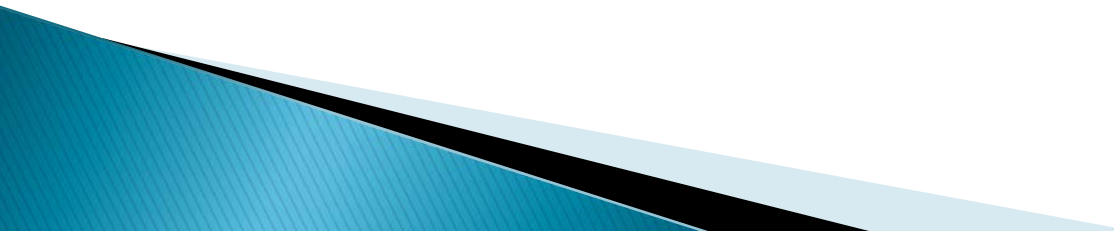
Advantages of Good Data

- ▶ **Electronic creation of documents**
 - Assignments
 - Transfers
 - Schedules
 - Bulk letters/notifications

Good Practices vs. “Better” Practices

- ▶ **Good:** Documented procedures
 - **Better:** add screen shots, step-by-step instructions, examples, online delivery, etc.
 - **Better:** regular review of procedures and data input practices
- ▶ **Better:** Peer Reviews
 - time consuming but they ensure correct data right from the start
 - re-inforces the culture of “getting it right”

Good Practices vs. “Better” Practices

- ▶ **Good:** Group training sessions
 - **Better:** follow-up the training with individual sessions
 - ▶ **Good:** Documented procedures and training
 - **Better:** create a suite of data integrity reports and run them monthly
- 

Good Practices vs. “Better” Practices

- ▶ **Examples of data integrity reports:**
 - Acreage problems – missing acreage numbers, lands coded as undeveloped with wells linked or vice versa
 - Date errors – invalid dates; extensions earlier than initial expiry; rental dates not the same month as effective dates or government regulation dates such as Sask
 - Rental amounts not matching with government regulations
 - Rent review notice obligations not entered

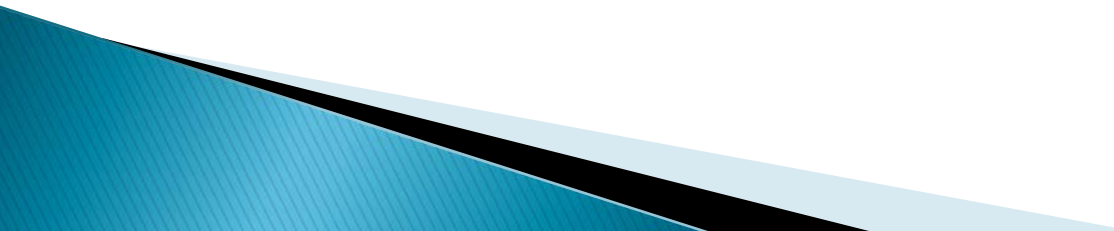
Good Practices vs. “Better” Practices

- ▶ **Examples of data integrity reports:**
 - Wells not linked to mineral rights or operated wells not linked to surface leases
 - Missing wells
 - Leases past primary term with no extension coded
 - Contracts with no mineral rights linked
 - Leases expiring with active wells
 - Cost Centres - missing, incorrect

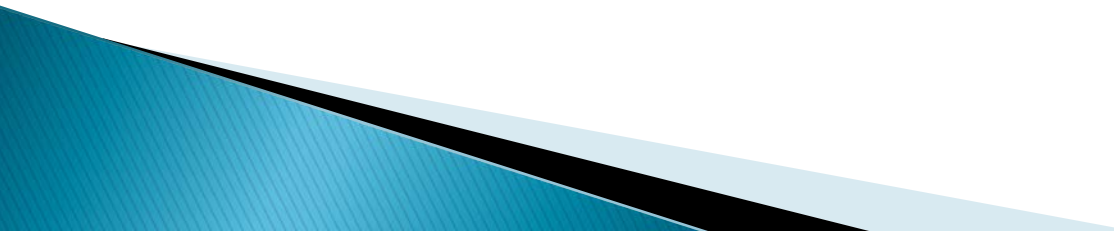
Good Practices vs. “Better” Practices

- ▶ **Good:** use of standard naming conventions, company-wide
- ▶ **Good:** Manual tracking and notification of data changes
 - **Better:** electronic change notifications to applicable departments
 - **Best:** integration of data between systems where possible such as DOI integration, electronic invoicing, EFT payments

Good Practices vs. “Better” Practices

- ▶ **Good:** documenting manual processes
 - ▶ **Better:** review re-occurring manual processes
 - Why is it manual?
 - What data is available?
 - What’s the state of the existing data?
 - Evaluate for potential electronic process
 - Clean up data
 - Communicate new process
 - Implement
- 

End result of good data and best practices?

- ▶ The Opportunities!
 - ▶ Adding Value to your Organization!
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The END.....

NOT...
The Song *Never* Ends