



Apache

FIRST YEAR DRILLING

2.26.2013

CODY

MARTIN



LESSONS

- ▶ Sleep when you can, it is now a commodity.
- ▶ Be ready to learn something new every day.
 - ▲ And be enthusiastic about it!
- ▶ Don't be afraid to ask questions.
 - ▲ There's a lot you need to know that wasn't covered in class.

ACCOUNTING 101

- Learn to track every dollar spent.
 - ▲ Your boss will want to know!
- Balance your checkbook often.
- You are responsible for the expenses!
- Is it YOUR AFE!

AFE RESPONSIBILITY

- ▶ Break your AFE down into small parts
 - ▲ Keep it manageable!
- ▶ Morning reports can contain a wealth of knowledge
 - ▲ But it must contain quality data!
- ▶ If something looks wrong, ask questions

GRADING YOUR WORK

- ▶ AFE to Actual – How companies make their money
- ▶ How close is your actual drilling cost to the estimate?
- ▶ Is your cost estimate repeatable?
- ▶ What caused any overages or efficiencies?
 - ▲ DOCUMENT!

WORDS OF WISDOM

- Visit your field and do an extended stay on a rig
 - ▲ Operational experience will be paramount to your career
- Learn operations from your Superintendents and Consultants
- Learn to keep records and document everything
- Never 'delegate up'. Always have a solution to the problem before addressing your boss

WORDS OF WISDOM

- Learn the lingo
 - ▲ Drilling has their own language, learn it!
- Build a team
 - ▲ Your consultants and Superintendents should be a working team with engineering and regulatory. Teamwork is best!
- Explore technology, but don't forget the basics
 - ▲ What is the best application to drill faster, deeper, and cheaper?

WORDS OF WISDOM

- ▶ Two things you must do as a Drilling Engineer:
 - ▲ Never drill a well in the wrong spot.
 - ▲ Check your plats, SHL, and BHL
 - ▲ No casing design failures
 - ▲ Burst/Collapse/Body/Joint

WORDS OF WISDOM

► Plats and surface locations:

- ▲ Go with your land/field team to stake locations
 - ▲ Look for the things that make a buildable location!
- ▲ Google Earth is your friend
 - ▲ Look at satellite imagery before putting a stake in someone's barn!
- ▲ A small change in surface location may save money on building or directional costs.
 - ▲ Is there a well near you that would require expensive tools unless the location is moved?

WORDS OF WISDOM

► Casing design:

▲ Offsets and their importance –

- ▲ Don't reinvent the wheel, but understand why certain casing points exist

- Can we challenge those points?

▲ Remember your design loads

- ▲ Use good engineering to design the most economic string of pipe

WORDS OF WISDOM

- ▶ Wake up every day ready to learn something new and apply that to you job
- ▶ Build a team. Progress stops when office and field cannot communicate.
- ▶ Have fun, and enjoy your career!