Oil & Gas Mid-Stream Business

Ward Petroleum Corporation is an oil and gas exploration and production company. We drill and complete oil and gas wells and produce them, selling the production to various markets. In the industry, we are called an “Upstream Company.” When Ward sells oil or gas, the product immediately enters what is called the “Mid-Stream.” Businesses in the Mid-Stream sector include companies that market oil or gas, operate gas pipelines, processing plants, oil pipelines, and truck or rail oil transport vessels. When oil and gas leave the Mid-Stream they go into the “Down Stream” sector. This sector includes the purchasers of oil and/or gas who turn them into products that they market to consumers. There are many examples of Down Stream businesses, but some are oil refiners, pharmaceutical manufacturers, gas stations, utilities, and other companies that sell productions with petroleum constituents.

The Mid-Stream sector of the business is very important to producers like Ward Petroleum. Most of Oklahoma has extensive mid-stream infrastructure for natural gas. Oil is generally trucked out. In the Rocky Mountain area where we are beginning to drill wells, there are fewer pipelines, and products must be transported much greater distances. This is critical to Ward when we plan to drill...
wells, especially in a new area.

Like any business, we need to start receiving a return on our investment as quickly as possible. Getting our products to sales is an integral part of that process. We would like to be able to complete a well and start selling the oil or gas immediately, but thorough research and planning is the only way to make this happen. Several delays can slow down the sales process.

The first step in our process is to locate and contact pipelines in our area of interest. The engineers will relay what kinds of pressures they are looking for and if the gas needs processing. We then estimate how much gas we will have so we know how much pipeline capacity we’ll need. We lay out a plan for the locations and timing of our wells so that we’ll have a long range strategy. We visit with the different pipeline companies in the area to see what facilities they have and what they think they can do for us on our project. When we have information from the companies interested in working with us, we compare their proposals to see which will work best for us.

One thing we look for in a proposal is the proximity of our drilling locations to an existing gas pipeline. A pipeline that is closer to us will usually cost less to connect to our well and may not take as long. But a number of other issues can arise when looking at pipelines, and they can be more important than close proximity. Some pipelines are full of gas or oil being transported from other wells and they can’t take any more. They don’t have any “capacity.” If they aren’t completely full, they may not have enough capacity for our product, and even if they can take from one or two of our wells, they may not be able to take all that we ultimately hope to bring on line. If this is what we find, we have to start looking again. When we find pipelines that do have capacity, we look to the company who will give us the best deal for connecting the wells and transporting the product.

Pipelines must obtain right-of-way agreements to build across landowners’ property. In some areas the pipelines are required to get permits from the state or county which can take six months or longer. We have to plan ahead to account for such permits. We will run into the same issues with oil pipelines, but oil is often transported by trucks. In certain parts of the country, there are not enough pipelines and trucks to haul all of the produced oil to market and companies have built railways into oil fields to take the oil to market. We’re seeing a lot of this in the Bakken play in North Dakota and Montana.
Another important mid-stream factor we research is area product prices. Oil and gas are bought and sold at market prices for the area. These prices are initially based on Henry Hub gas prices and West Texas Intermediate oil prices. The prices are set as commodities traded on the NYMEX. In each producing area, value is subtracted from the oil or gas based on the cost to ship the product to market. Prices can be cut even lower if there are transportation or refining constraints, called “differentials.” At times in some areas, differentials can reduce the gas price to almost nothing and reduce the oil price in half. Differentials can have a tremendous effect on the economics of our project and might stop us from proceeding with drilling it for a time.

Knowledge of the area and communication with all pertinent parties is a must if we are going to accomplish our goals for quick turn around on revenue from our wells. Ward can get its wells timely connected for sales and get the best prices available when research and communication is done early enough to get all the pieces in place before we start drilling. This result makes Ward and its partners “happy, happy, happy.”

*Thank you Brenda Brummal for your help on this article.*

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**Run, run, run—but avoid these rookie mistakes**

Running is one of the simplest exercises you can take up. Aside from a good pair of shoes, you don’t need any specialized equipment—just some open space and a certain amount of endurance. Just be careful to avoid injury from these beginners’ mistakes:

- **The wrong shoes.** Don’t just buy the cheapest pair of sneakers you can find. Visit a store that specializes in running shoes and talk to an experienced salesperson to find the footwear that’s best for your feet.

- **Too much, too soon.** You may start out with a lot of enthusiasm, but don’t try to run a half-marathon your second time out. Remember that you need to work up to greater and greater distances over time to avoid undue stress on your body.

- **Lack of recovery.** Learn how to cool down properly after your run with a slow jog or walk for about five minutes, followed by some stretching, rehydrating, and ice on your muscles to alleviate soreness. Take at least one day off every week to let your body rest and repair itself.

- **Improper technique.** Don’t just run full out. An overlong stride can waste energy and may cause injuries like shin splints. Concentrate on landing on the middle of your sole, swinging your arms, and taking light, quick steps.

- **Ignoring pain.** Don’t try to be a hero. If you feel pain while running, stop until it goes away. If necessary, see a doctor. Pain is your body’s way of telling you something is wrong.

- **Lack of a goal.** Some people find running enjoyable all by itself, but most of us do better with a clear plan. Set a goal that will motivate you to put on your running shoes even when you don’t feel like it. It should be concrete and specific: not “Lose weight,” but “Lose 10 pounds in six months,” or “Work up to five miles by the end of the year.”
Farm Day at Ward—Christening the New Tractor and a Big Country Breakfast!

“The Christening”

Retiring the 1950 Ford Tractor Caprock used for many years.

The 1950 Ford Tractor
Summer Intern—Austin Skaggs

First off I would like to thank everyone at Ward Petroleum for this amazing opportunity that was given to me to learn about the oil and gas industry as I continue my education as a Petroleum Engineer at the University of Oklahoma. It is such an important part of America and the rest of this world.

My summer kicked off working with the roustabouts, Tim Hammons and Joe Bashaw. These guys helped me learn so much about the maintenance and what to do after production has begun. While working as a roustabout we hooked up a compressor, put in the flow line to the wellhead, and also hooked up the flare stack. I definitely got stronger and a nice little tan for the summer. Following that I got to ride around with a pumper named Jay Otey, I asked several question regarding all the different parts and how they compensate one another. Needless to say he was very informative with it all and taught me so much, which helped me in understanding everything else I did this summer. I also got to learn a neat little trick called witching thanks to a Bob McKinnon. This summer was one of the greatest summers I’ve ever had. I remember telling all my friends back at OU about everything I was doing, and yes they were all extremely jealous and happy for me at the same time. I never would have guessed how much I would actually experience this summer.

Most of my summer I spent riding around with a great guy named Wally Gilbreath, he taught me about everything there is to know on the production side of the oil and gas industry. On my first work over rig experience we had to pull all the tubing due to two pieces of tubing that were worn and one with a hole about the size of a dime. We even had a coil tubing unit out on site, so I got to learn about BOP’s and everything that a coil tubing unit is capable of, which is quite a few things. I would like to think that my first time to be out there was a success. To add to this I also got to experience how to put in and replace plunger systems. I was able to experience one, two, and three stage plunger systems on different wells and also the different types of plungers that could be used. On top of getting to put in plunger systems using the same slickline or braided line truck, we were able to cut paraffin. Being able to learn and understand all of this on the production side has been a blessing, I could definitely see myself working in completion or production in my career.

My time spent in Colorado learning about drilling was absolutely fascinating. I was so excited to actually be able to go because I have always been so interested in this aspect of the oil and gas industry. I couldn’t have asked for a better time spent there, I learned more about drilling in a week than I thought possible. While I was there, I got to tour around the entire site meeting everyone. I spent most of my time in the dog house helping with calculations; such as figuring how many feet we needed to slide after making our connection and also how much mud was in the hole so we could keep good circulation. I was also able to meet with the mud logger and took samples of the cuttings to test them. Being able to do all these calculations and learning these formulas will really put me ahead of others this fall semester.

My summer was not all out in the field. There were a few days where I was able to bug Mark Jopling as he gave me several problems that pertained to drilling and other petroleum problems. I was actually able to work most of the problems before I went to Colorado, which helped tremendously. This summer I was also able to attend a safety meeting (SPCC) Spill Prevention Counter Control, where I was able to learn about all the safety regulation in effect. In addition to the rules applied by the EPA and DOT I was told what to look out for while out in the field.

I would like to thank everyone here at Ward for an incredible summer and hope you find this entertaining and informational. I would like to give special thanks to everyone that I came across this summer and helped contribute to my knowledge as an intern. That being said, thank you Wally Gilbreath, John Keeling, Bob McKinnon, Kevin Smith, Gary Hunter, Tim Hammons, Joe Bashaw, Mike Sparkman, Jay Otey, Stuart Houska, Jody Kuberskey, Judy Trook, Judy Bradford, Rosie Pomeroy, Mark Jopling and last but not least Lew Ward and Bill Ward. I would also like to give Bill and his team a big congratulations on the Trilantic deal. Thank you all again for this great opportunity to work for such a great company.
Ward Petroleum Corporation and Trilantic Capital Partners Form New Oil and Gas Partnership

Bill Ward making the announcement to Ward Employees

Quotes

Wisdom is not a product of schooling but of the lifelong attempt to acquire it. —Albert Einstein

People of excellence go the extra mile to do what’s right. —Joel Osteen

You’re not obligated to win. You’re obligated to keep trying. To do the best you can do everyday. —Jason Mraz

You need a dream if you’re going to succeed in anything you do. —Mark Gorman

A hand that’s dirty with honest labor is fit to shake with any neighbor. —Proverb
Patriot’s Day commemorates the events that led eventually to American independence.

Many people celebrate the day by re-enacting the historical battles that started the war. These take place at Lexington Green and the Old North Bridge.

Patriots Day has been observed since the 18th century. In addition to battle re-enactments, flag raising and costume parades form part of the celebrations.

One important feature of the re-enactment is a ride retracing the route of Paul Revere and William Dawes when they warned that the British were coming.
They Had To Handle The Stuff

The Kansas Torpedo Company, Western Torpedo Company and American Glycerin Company located their offices in Bartlesville in 1904. Nitro-glycerin, used to shoot open the oil sands at the bottom of the wells to increase their flow, was stored outside the city and was transported in cans by wagons: at each well it was poured into cylindrical shells while lowered into position down the well, thus the name “torpedoes”.

According to Irby Cate, the nitroglycerine men he knew stayed drunk most of the time. As Cate put it, “They had to be to handle the stuff.” They would drop cans of nitro in a well and, occasionally, if it happened to be heading up (building up from gas) a can would come right back. So, the shooters would stand there and grab it as it came out of the hole. Otherwise, it would have fallen to the derrick floor, detonated, and killed everybody working nearby. Today, controlled methods are used to break down the formations, with much less risk involved.

Save money on auto insurance

Here are a few basic tips on how you can save money on your coverage

Re-evaluating your car insurance every few years to determine whether you’re getting the best deal is a good idea. Here are a few basic tips on how you can save money on your coverage:

• Shop around. Get at least three quotes, but don’t choose solely on the basis of lowest cost. Look at the fine print and keep service in mind. Check the Internet, ask your friends, and call your state insurance department for recommendations.

• Reconsider your coverage. Drop collision or comprehensive coverage on older cars. It’s usually not cost-effective to have these kinds of coverage on cars worth less than $1,000.

• Look for options. Ask about discounts on vehicles with good mileage, automatic seat belts, airbags, anti-lock brakes, and fuel efficiency.

Tips on tipping: How much to reward service staff?

Waiters and other service staff members depend on tips, so how are they doing? A Harris Poll survey of 2,000 adults conducted for Michelin found that the average American claims to tip 18 percent for good service. Getting more specific, 70 percent of Americans say they usually leave a tip of 15-20 percent when service is good, and about one in 10 tip 20 percent or more. Only about 1 percent confess to leaving nothing.

Age is a factor in how much people tip, though: Thirty percent of survey participants age 18-24 admit they frequently tip less than 15 percent even when the service is good, but only 16 percent of adults 35 and older say the same.

September 13th

Positive Thinking Day is all about attitude.... a positive attitude. It's a lot like the ant, when faced with moving a rubber tree plant thought "I think I can". With that in mind, I just know that everything will go fine from this day forward.

The power of positive thinking is absolutely astounding. Medical research confirms that a positive attitude works wonders at fighting disease and ailments, from the common cold to cancer. People with an "I think I can" attitude, are far more likely to succeed at work, and in accomplishing every goal they set in life.

Have a happy Positive Thinking Day! I just know you're going to have a spectacular day.
Neanderthals: Maybe not that different from us

Many people think of Neanderthals as ugly, stupid, brutal precursors to modern-day humans. But that thinking is changing, thanks to new evidence uncovered by today’s scientists.

Neanderthals lived in Europe and Asia up until about 40,000 years ago, when they gradually disappeared as new humans migrated from Africa. Scientists have hypothesized that they faded away because they were less intelligent, hampering their ability to hunt, communicate, and adapt to changing environments. But recent discoveries, outlined on the Sci-News website, paint a different picture:

- **Hunting.** Neanderthals were apparently able to lure herds of bison, mammoth, and other animals to their death in deep sinkholes explored in France, indicating an ability to plan ahead, communicate complex ideas, and use their environment efficiently.
- **Diet.** Microfossils of Neanderthal teeth, as well as remnants found in their cooking sites, suggest that they ate a diverse diet that included wild peas, acorns, pistachios, wild olives, and pine nuts.
- **Parenting.** Archaeologists have found evidence that Neanderthal parents cared for sick and injured children for months and even years. A study of child burial sites indicates that children were buried in graves more elaborate than those given to grownups.

New teeth may grow with help from lasers

Losing teeth is part of growing up, but it’s more of a problem for adults, since teeth stop naturally growing at some point. But scientists may have discovered a way to regrow teeth—using lasers.

A story from the NBC News website reports that scientists at the National Institute of Dental and Craniofacial Research (part of the U.S. National Institutes of Health) have used a low-powered laser to stimulate dental stem cells to create dentin, the bonelike tissue that forms the large portion of a tooth. Regenerating the tooth’s enamel is more difficult, but building dentin could reduce the necessity of some root canal treatments, which require the removal of diseased or dead nerve tissue and bacteria from inside a tooth. The initial experiments involved rats and mice, but researchers are hopeful that they’ll be able to move on to human clinical trials in the near future.

You just can’t trust some animals—like this clever bird

Some animals can be downright sneaky. Take, for example, the fork-tailed drongo. This wily little African bird, with its red eyes and hooked beak, is a liar when hunting for food.

Scientists from the University of Cape Town in South Africa tracked 65 drongos across the Kalahari Desert, and observed a devious practice: The drongos have a specific call they use to warn other birds when predators are close by. Most of the time they’re honest, but apparently when food is scarce, they raise a false alarm to scare their feathered friends and trick them into flying away, leaving their food behind.

If the other birds catch on, the drongo has another strategy: An excellent mimic, it’s able to broadcast an alarm using the cry of another animal, thus frightening rivals away so it can snatch up their food.
Oklahoma Crude Chocolate Cake

2 cups sugar
3 teaspoons vanilla
1 cup shortening
1 cup chopped pecans (optional)
4 eggs
1 7-ounce jar marshmallow crème
1½ cups flour
1/4 teaspoon salt
1/3 cup cocoa

Icing:
1/3 cup cocoa
1/3 cup evaporated milk
1 16-ounce box of powdered sugar
1 teaspoon vanilla
2 sticks of margarine, softened
1 cup pecans, chopped

Yield: 12 servings
Preheat oven to 350°. For cake, cream together sugar and shortening; add eggs and continue to beat. In separate bowl, sift together flour, salt and cocoa and gradually add to creamed mixture. Add vanilla and nuts, if desired. Pour batter into 9 x 13-inch cake pan and bake 25 to 30 minutes. Remove cake from oven. While cake is still hot, spread marshmallow cream on top; allow to cool. For icing, mix together cocoa and sugar; add margarine and remaining ingredients. Spread icing on top of marshmallow layer.

To All Our Geologist:

September 16th is Collect Rocks Day

Collect Rocks Day is a day to enjoy and add to your rock collection. Ahh, to be a kid again, and have a rock collection. Well, we have good news for you. No one ever said you had to give up your rock collection when you became an adult. We hope you always keep and cherish your invaluable rock collection.

Kids collect rocks because it is a fun thing to do. They even trade rocks among other rock collectors. There are no books on what rocks to collect, or how much each rock is valued at. Rather, rocks are selected for a collection based upon a wide range of attributes. A lot of it is individual appeal. The rock could be big or small, a particular color or range of colors. smooth or rough, or display a unique characteristic. When it comes to rock collecting, beauty is indeed in the eyes of the beholder (or a geologist in this case).
WARD PETROLEUM CORPORATION

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**OCTOBER BIRTHDAYS**

Amanda Goodman 10-03
Rosie Pomeroy 10-06
Terri Houska 10-08
Wally Gilbreath 10-14
Richard Easley 10-15
Mark Jopling 10-22
Kent Clingenpeel 10-24
Susan Hessel 10-28

**ANNIVERSARIES**

Mary Kruger 10-13 33 yrs
Stuart Houska 10-15 6 yrs
Gilbert Tompson 10-17 31 yrs
Judy Martin 10-17 26 yrs
Amanda Goodman 10-21 1 yr
Rosie Pomeroy 10-23 33 yrs
Ginny McCoy 10-31 13 yrs

**SEPTEMBER BIRTHDAYS**

Shirley Salisbury 9-01
Allison Angleton 9-27

**ANNIVERSARIES**

Dave Stone 9-9 1 yr
Richard Easley 9-10 2 yrs

Answers to puzzle on page 7— 1I; 2E; 3K; 4H; 5D; 6J; 7L; 8B; 9G; 10C; 11F; 12A
WARD PETROLEUM CORPORATION

Foreign oil imports did not make this newsletter possible

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Oklahoma City, OK 73134
Phone: 405-242-4484
Fax: 405-242-4334

www.wardpetroleum.com

Around Ward

Judy M

Melodie

Fruit Fest

Ward Employees enjoyed the afternoon break with fresh fruit, crackers and cheeses

Holli

Allison

Janet

Ryan

Shirley

Myra

Lew

Cheryl

Mary

Patricia