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BREAKFAST SERIES *for*
Surface and Mineral Owners
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- DATE: **September 1, 2015**
- TOPIC: **Eagle Ford Shale at \$110 A Barrel and at \$45 A Barrel**
- LOCATION: **San Antonio Petroleum Club**
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- TIME: 7:30 AM Breakfast - 8:00 AM Presenters
8:50 AM Questions & Answers
- INTRODUCTION: **E.O. (Trey) Scott, III, Trinity Mineral Management, Ltd.**
- PRESENTERS: **George Person, Person, Whitworth, Borchers & Morales, LLP**
- Eagle Ford Shale at \$110 A Barrel and at \$45 A Barrel**
- The Impact of \$110 Oil on South Texas
 - The Impact of \$45 Oil on South Texas
 - Miscellaneous Issues
- UPCOMING: Oct 06: Jason Pulliam
Nov 03: To Be Announced
Dec/Jan: Seasonal Break

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George was raised in Goliad, Texas. He graduated from Rice University in 1965 and got his law degree from the University of Texas Law School in 1968.

He began his law practice in Laredo, Texas shortly thereafter and began what is now a 44 year career in representing ranchers, mineral owners and royalty owners. He has been a speaker at many legal as well as landowner seminars around the state.

He is a member of the Texas Land and Mineral Owner's Association and has supported many of its efforts to protect landowners.

**PRESENTATION TO THE TRINITY
MINERAL MANAGEMENT PROFITABLE
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SEMINAR**

**A DISCUSSION OF THE EFFECT AND IMPACT OF
COMMODITY PRICES ON THE LEASING AND
DEVELOPMENT OF THE EAGLE FORD SHALE
FORMATION AND OTHER COMMERCIAL
FORMATIONS IN SOUTH TEXAS AND SOME
SUGGESTIONS AS TO THE PRESERVATION AND
PROTECTION OF YOUR MINERAL RIGHTS.**

September 1, 2015

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A DISCUSSION OF THE EFFECT AND IMPACT OF COMMODITY PRICES ON THE LEASING AND DEVELOPMENT OF THE EAGLE FORD SHALE FORMATION AND OTHER COMMERCIAL FORMATIONS IN SOUTH TEXAS AND SOME SUGGESTIONS AS TO THE PRESERVATION AND PROTECTION OF YOUR MINERAL RIGHTS.

**George J. Person
Person, Whitworth, Borchers & Morales**

What I would like to cover in the next 20 minutes is an overview of what I have experienced over the past six (6) years in the leasing, development and production of oil, gas, condensate and natural gas liquids in the Eagle Ford Shale Formation (EFS). My practice area is in the representation of mineral and royalty owners in negotiating leases and related instruments and in their maintenance and enforcement. In many ways, it has been a unique experience for me, and probably for other attorneys in my line of work, mainly due to the advanced horizontal drilling and completion technology and operations and shale formation development. Heretofore, shale formations were considered a waste of time to pursue. Advanced horizontal drilling and hydraulic fracture stimulation changed all that. This technology will not work on all formations but it does in shale formations across the nation. It was initially used in Texas in the Barnett Shale Formation in north Texas. But that is a gas formation and began at a time of high gas prices. In 2008, gas prices collapsed. But oil prices began to climb. And luck would have it that PetroHawk and its consultant decided to try this horizontal drilling and completion technology on a formation in South Texas, the EFS. Initially, it was pursued for gas but as time passed it was determined that the EFS would also produce gas and condensate above the gas portion of the formation, and oil above the gas/condensate portion of the formation. Additionally, in many areas, the gas volume also contained commercial quantities of "natural gas liquids" or "NGLs". So a grand land rush ensued to lease and develop the EFS. I am attaching as Exhibit "A" a sketch of productive oil and gas formations in Texas. What follows is my view of the evolution of the EFS to date.

I. THE IMPACT OF \$110 OIL ON SOUTH TEXAS.

1. **Money and Rigs:** Money and rigs moved from dry gas areas to the EFS in South Texas. The leasing phase was completed in large part in 2-3 years and drilling began immediately, even before the necessary infrastructure was in place. Additionally, oil prices continue to rise and gas prices continue to fall. I have attached as Exhibits "B", "C" and "D" some information on commodity prices and wells drilled in the EFS and Barnett Shale.

2. **Technology:** Horizontal drilling and completion technology improved tremendously since 2009.

a. Initially drilling time for a 4,000' lateral was over 30 days but now it takes only 5-6 days to drill shorter laterals and 10-12 days to drill a 8,000' to 10,000' laterals.

b. Lateral lengths went from 3,500' to 10,000' and fracking stages when from 10 to 40 stages.

c. Well Tracts, being the productive area designated around laterals, went from 1000 acres in many instances down to as little as 40 or 80 acres.

d. The distance between laterals was initially as much around 1200' but now we are seeing laterals as close as 400' to 500' apart.

e. some areas of the EFS are productive in both the lower portion of the EFS and the upper portion, allowing for stacked rows of laterals 500' feet apart and comprising 40 acre well tracts around them.

f. costs of drilling and completing a 5,000' lateral went from around \$12 million to about \$5.5 million.

II. THE IMPACT OF \$45 OIL ON SOUTH TEXAS.

1. Falling Revenues but also Falling Costs: The effect of the current price for oil on revenues for oil and condensate is obvious. It is about half of what it was a year ago. The current price for dry gas is falling as well (yesterday it was at \$2.58 per MCF) and doesn't seem to be interested in rising any time soon. However, the cost of drilling a horizontal well has dropped considerably. So if the cost of drilling a horizontal well is cut in half, and the price of oil is cut in half, the point of "payout", which is the point in time when the revenue from production from a well equals the cost of drilling, completing and equipping the well - one of the key elements of developing a field - should be getting closer to what it was when the price of oil was \$110.00 per barrel. The falling costs help the Lessee but not necessarily every royalty owner.

2. Continuous Drilling Requirements: Many Lessees have leases that require continuous drilling requirements in order to earn the acreage under lease. This is a major concern for most Lessees. So what can they do? Some Lessees are asking their Lessors to give them a deferral of drilling to see if prices come back. Some are drilling horizontal wells but not completing them (note: the cost of completion is about half of the cost of a horizontal well). Some are just giving up the undeveloped portion of their leases (this is usually in marginal areas of the EFS). Some Lessors are requiring compensation for the deferral of drilling; some are also requiring that the deferred wells be ultimately drilled in later years but IN ADDITION TO the drilling required under their leases to earn acreage; and some Lessors have voluntarily approached their Lessee and offered a deferral until prices rise.

3. Royalty Audits:

a. Lease Compliance: Many of my clients are undertaking audits of their leases. Such "audits" include an analysis of all of the lease provisions to be sure their lease is in good standing. This includes the royalty clause. They want to be sure they

are being paid correctly. In the past, such audits were not particularly difficult to do. However, the industry has evolved and the production, transportation, marketing and sale of production is much more complicated. In the EFS, production includes a gas stream that also includes oil or condensate and natural gas liquids, each of which requires different processes to get to the market and different markets. So an audit of EFS production is much more detailed.

It is common for production to be commingled with production from other leases and wells before it is measured and before it gets to the buyer. Its identity is lost and so the Lessee is incapable of accurately measuring production; incapable of telling you where your production went; or what it was actually sold for. Often some portion of your production is either lost in transit or given as compensation to the pipeline transporter or to the processor who separates the NGLs from the gas stream. Hence the ability to accurately audit (i) volumes of production; (ii) the price or value of production; and (iii) any adjustments or deductions made against your royalty is lost in the process. To compute your royalty, the Lessee will resort to “allocation” being the taking of the total volume of commingled production sold and allocate it back to each Lessee contributor and then arrive at a “price” by computing a “weighted average sale price” for the commingled production. However, those acts of “commingling”, “allocation” and “weighted average sale price” are not authorized under most leases. However, there are not many plausible solutions available to royalty owners to overcome commingling and allocation and loss of the ability to accurately meter, measure, sample and test your production before it is commingled. The best advice is to prohibit those activities.

SUGGESTION: I recommend that you deny the Lessee the right to commingle prior to metering, measuring, testing and sampling production at each well; insist on the use of a published index as one of the “prongs” for determining the “price” or value for each product (gas, condensate, oil and NGLs) and full right to get copies of all contracts and agreements directly or indirectly involved in calculating your royalty.

b. **Hedging:** One very important thing to keep in mind when commodity prices are down is “hedging”. Some Lessees have hedged their production. A “hedge” is an arrangement whereby the Lessee is insured of getting a floor price for his production. However, Lessees do not always share that hedge “price” with royalty owners. And they do not advise their royalty owners that they even have such hedges. Lessors don’t have a place to go to find this information unless the Lessee is a publically held company, in which event he will have to publish it. I provide in my Oil and Gas Leases that my clients are entitled to be paid on all benefit, including hedges. Even then, Lessees resist sharing – their response is (a) hedging is not a sale but a financing instrument; (b) they are not hedging your 25% of the production; or (c) they are not hedging any production from your lease. My firm has a case pending in the Federal District Court here in San Antonio which we hope will resolve the question of whether or not my client can share in its Lessee’s hedging.

SUGGESTION: I have attached Exhibit “E”, which is a provision I recommend to my clients.

c. Unpaid Royalties and the Statutes of Limitations: Most EFS production and royalty payments began in 2009-2010. In most cases, the Statutes of Limitations for collecting unpaid royalties is four (4). This is important since royalty owners will lose the right to collect any unpaid royalties on production beyond 4 years. And this is even more important in the EFS since the strongest production from an EFS well is in the first 6-10 months of production. But things got really complicated when the price of oil dropped over a few short months to below \$45. Then it becomes important to pursue unpaid royalties in early months of production because (1) each lost month of production from a well (meaning unpaid royalties for production months that are over 4 years ago) means that you lose the best months of production and (2) lose the benefit of the highest prices for oil for those production months. And you pick up a new month on the front end but at that point, the same well will be experiencing lowering volumes and the low prices. So you would lose the best production/price months and gain the lower production/price month. Simply stated, you would lose value as each production month ages beyond 4 years.

SUGGESTION: I recommend that you include in your Lease a provision that you must be paid royalty on all production, regardless of what happens to it after it arrives at the surface. This includes volumes lost in transit or given as compensation or flared or flashed.

SUGGESTION: I also suggest that you be sure your Lease has a comprehensive provision giving you the right to audit and that if royalties are owed, that the Lessee will pay the unpaid royalties, all interest thereon and all of your consulting fees and expenses incurred in the audit.

SUGGESTION: You might want to include a provision in your Lease that if the Lessee fails to pay unpaid royalties within 30-60 days after notice, then the Lease shall terminate.

SUGGESTION: Finally, I suggest that you consider a “Tolling Agreement” mentioned below.

d. Tolling Agreements: It is important that you audit your production. And, if your lease does not include one, then it is important that you ask your Lessee, at the inception of the audit, to sign a “Tolling Agreement”. That will freeze the running of the Statues of Limitation and stop further loss of rights during the audit. Many Lessees won’t agree to sign them and, if that is the case, you are faced with a dilemma – continue auditing and sustain possible lost rights during the audit, or file suit to stop the statutes of limitations and allow you to conduct the audit without prejudicing your rights (and also give you the right of subpoena if the Lessee is not providing you with the data needed for the audit). This is not the best option but the circumstances may dictate that you do.

SUGGESTION: I also recommend that you include a “Tolling of Limitations” provision in your oil and gas leases. Then you won’t be facing the penalty of losing rights or being forced into filing suit before you finish the audit. This is especially true for Trusts.

4. **Bankruptcy:** Nothing good happens when a Lessee files bankruptcy. From the perspective of the Lessor or royalty owner, there are risks of non-payment and being classified as an unsecured creditor. There are certain protections offered under Texas Law but not in all cases. The most critical period is the few months just before and just after the Lessee files bankruptcy. If your lease doesn't provide that the Lessor/royalty owners have a first lien, then you will have to rely on Texas Law and the rights recognized by the Bankruptcy Judge to collect your royalties. If your lease provides for termination if royalties aren't paid after notice, then the Court will probably require that all royalties must be paid to protect the lease. If your lease expressly states that the Lessor has a first lien then you can be assured of ultimately collecting all or at least most of your unpaid royalties. If you have not lien or termination provision, then, as to royalties not paid during the period just before and after filing, you may be classified as an unsecured creditor and must wait in line with other unsecured creditors to get paid (and possibly paid only a portion of what is owed). As for payments after the Court gets involved, it is most probable that you will begin to get paid by a Trustee, if the Lessee goes into Chapter 7 bankruptcy (liquidation) or by the Lessee himself, if the Lessee goes into Chapter 11 Bankruptcy (reorganization) and is designated "Debtor-in-Possession".

SUGGESTION: I might recommend that you include a provision in your lease whereby you, and the royalty owners, reserve a first and superior lien on all production and equipment as collateral to secure all sums owed to you, the Lessor, and all royalty owners. This should give you secured creditor status in Bankruptcy. Again this is wise for Trusts holding executive leasing rights.

SUGGESTION: You might consider providing in the royalty clause that if unpaid royalties are not paid within 30-60 days after the Lessee receives notice of non-payment, then the lease terminates (either at your option or automatically).

5. **Lease Maintenance:** During cycles like we are now experiencing, I recommend to my clients that they pay close attention to the status of their leases. Are all the lease provisions being adhered to? Is the lease valid? Are there wells adjoining your tract that may be draining your minerals and your Lessee hasn't protected you with an "offset well"? With the drop in prices, is the current production sufficient to make a profit over operating expenses over a period of time? If the lease is an older lease and is marginally productive, you may want to pursue a release of all or the non-producing portions of the lease so that your minerals will be available when commodity prices improve. It is easier to get marginal or unprofitable leases released in hard times than in glory days.

III. **MISCELLANEOUS ISSUES:**

1. **Regulatory Action:**

a. **Allocation Wells:** The Texas Railroad Commission (RRC) is having a difficult time trying to balance the rights of private mineral ownership against the problems being encountered by Lessees seeking to drill horizontal laterals across multiple

tracts. This problem doesn't exist with vertical wells. But it can be a problem when the Lessee wants to drill a long lateral under 2 or more tracts but he doesn't have the right to pool under one or more of the affected leases. At present the Texas Legislature is trying to get many of these companies out of the box they are in – namely drilling with new technology but under leases that don't address this technology. Private mineral owners do not want the RRC to have the right to determine their mineral rights (in this case decreeing how commingled production is to be divided among royalty owners along the lateral) and Lessees don't want to either have to go to the mineral owners and ask for concessions and amendments or face litigation and possible liability for doing something not authorized under their lease. Currently, the RRC is issuing "Allocation Well Permits" in an attempt to get the Lessees over the first hurdle, which is the granting of a drilling permit. But that doesn't get them out of the mouse trap with the various mineral and royalty owners who they propose to drill through. The problem is that the Lessee is unable to tell each affected Lessor how much production is coming from his or her lease - he can't accurately meter, measure, test and sample each Lessor's production. As a result he can't accurately pay each respective royalty owner his or her correct royalty. It is called "commingling" and this right is not permitted under most leases.

SUGGESTION: My recommendation is to include something in your lease that addresses this situation. One possibility is that you will grant the right to drill "allocation wells" but you reserve the right to (1) approve of the proposed unit around the well and (2) reserve the option of having your royalty calculated on a surface acreage basis or on a lateral foot basis (between the first and last "take point").

b. **Environmental Matters:** Environmental agencies are concerned with numerous things. One matter is the subsurface impact of fracking, particularly on fresh water. And they are very concerned about flaring, which is getting much publicity recently. Flaring is still going on and a concern to royalty owners as well as state and federal agencies. And most Lessees refuse to pay royalty on flared gas.

SUGGESTION: As mentioned above, I recommend that you include in your lease a provision that you are to be paid royalty on ALL production and that includes production that may be lost for any reason or given away as compensation or that may be flared or flashed. Also require that all production be metered, measured, sampled and tested at each well or lateral.

c. **Earthquakes:** The newspapers are full of articles and opinions about the "dangers" of hydraulic fracturing stimulation. I don't think anyone knows for sure if fracking causes earthquakes. However, there is a recent report out by SMU that suggests that the disposal of frack water and produced salt water (coming from a formation along with oil and gas) into depleted formations may be the cause of minor earthquakes in north and central Texas. I think we can expect more local and state investigation and possible regulation here. The State seems to be taking the position that fracking and disposal do not cause earthquakes, while some north Texas counties are taking the opposite position and are trying to ban fracking. Surprisingly, the State appears to be leaning

toward denying local authorities jurisdiction over this issue. We will just have to see how this plays out.

2. Litigation:

a. Title Issues: What we are seeing now is much litigation surrounding the interpretation of title documents and mineral ownership. The EFS was such a land rush that many Lessees didn't do the tradition title due diligence before signing leases and that has caused problems for the Lessees and the contesting mineral or royalty owners. Often the company was in such a rush to get a foothold that it would take a lease from anyone with any semblance of a claim and then leave the parties to fight it out as to ownership.

SUGGESTION: I suggest you include a provision in your lease that if the Lessee believes there are conflicting claims to title, then he will notify you first and allow you time to try to resolve the issues before leasing the competing interest.

b. Allocation Wells: There are legal issues as to the validity of the "Allocation Wells" mentioned in III 1.a. above. The implications of those suits will be far reaching. The introduction of horizontal laterals (some up to 10,000' horizontally) often means drilling through more than one tract. And if the lease under any affected tract does not authorize pooling or if any affected "non-participating royalty owner" doesn't ratify the lease covering his interest, then the question of commingling and accurate payment of royalties arises.

SUGGESTION: I make the same recommendation as in Paragraph III 1.a. above.

c. Royalty Audits: There are pending suits for unpaid royalties and those require time and patience as the Lessees involved are not really excited about these audits. It takes perseverance but, as I mentioned above, you may have no real options otherwise.

d. Wrongful Pooling: There are suits pending that challenge the size and configuration of pooled units – that the units were put in place to simplify Lessee's operations and/or simply to perpetuate leases rather than to prevent drainage. As I mentioned above, most of the EFS wells only drain from 40 to 80 acres so creating a larger unit around an EFS well has to be consider suspect.

e. Non-Participating Royalty Interests (NPRI) and Non-Executory Mineral Interests (NEMI): These are interests that do not include the power to negotiate or execute oil and gas leases or amendments but are dependent on the holder of the "executive rights" to act in their best interest when negotiating and executing oil and gas leases. If your customers or clients own a NPRI or NEMI, then you might be interested in cases pending in almost all of the EFS courthouses among NPRI or NEMI claimants and/or between either one of them and the affected Lessee. I don't want to exhaust you with the machinations of these cases and the various issues that arise here but it is an area

where the law isn't always settled. Also, the documents creating or reserving these interests can vary widely and so legal case precedent isn't always helpful.

There are also suits by NPRI or NEMI owners claiming that the holder of the executive leasing rights affecting his/her NPRI/NEMI didn't do a good enough job in leasing the minerals.

SUGGESTION: You should not assume that your Lessee has correctly interpreted the documents in your chain of title. You should conduct your own title examination before signing a Division Order.

f. **Development:** Most, if not all, oil and gas leases have an expressed or implied obligation requiring the Lessee to fully develop a formation that is known to be commercially productive under the lease. If your lease is a printed form lease and (i) doesn't have an expressed development provision or (ii) a provision that imposes a "drill or drop" development obligation, then Texas law imposes an "implied duty to reasonably develop". However, many leases have a provision that requires the Lessee to continuously drill wells on a timely basis in order to retain a portion of the lease around or along the wells.

Over the course of drilling in the EFS, the industry has refined the drilling and completion techniques to the point that they have a pretty good idea how many acres a typical EFS horizontal well will drain and hence they know how close they can get to an existing well without damaging the existing well - in other words they know how many wells they can drill on a tract or pooled unit. And if the Lessee is a publically held company, it will publicize this information. So, in such instances, mineral owners will have access to this information and can use it to urge their Lessee to drill wells on their leases in conformity with the publicized spacings of their Lessee or competitor Lessees. Most Lessees now believe the EFS formation can sustain one (1) well per 40-80 acres in the lower portion of the EFS formation and, in some areas, also the same spacing in the upper portion of the EFS.

While I haven't yet seen suits by mineral owners seeking to enforce the expressed or implied duty of their Lessee to develop on much smaller units, I anticipate this will be happening, especially in cases where the Lessee is claiming much larger well tracts for a single well. Also, RRC issues rules for established fields and these Rules may have a favorable or unfavorable impact on development of your lease.

SUGGESTION: If you are dealing with tracts larger than 100 acres, I suggest you include in your lease, provisions for the timely development of each productive formation and the release of all vertical and horizontal rights outside of specified "Well Tracts" around productive wells. And I suggest you provide that when drilling stops after the primary term, that each "Well Tract" shall be a "separate lease".

SUMMARY: So, prices have a big impact on leasing and development of your minerals. The key for the Lessee is PAYOUT and ULTIMATE RECOVERY. The key for the mineral owner is LEASE PROTECTION, MAINTENANCE, COMPLIANCE or ENFORCEMENT.

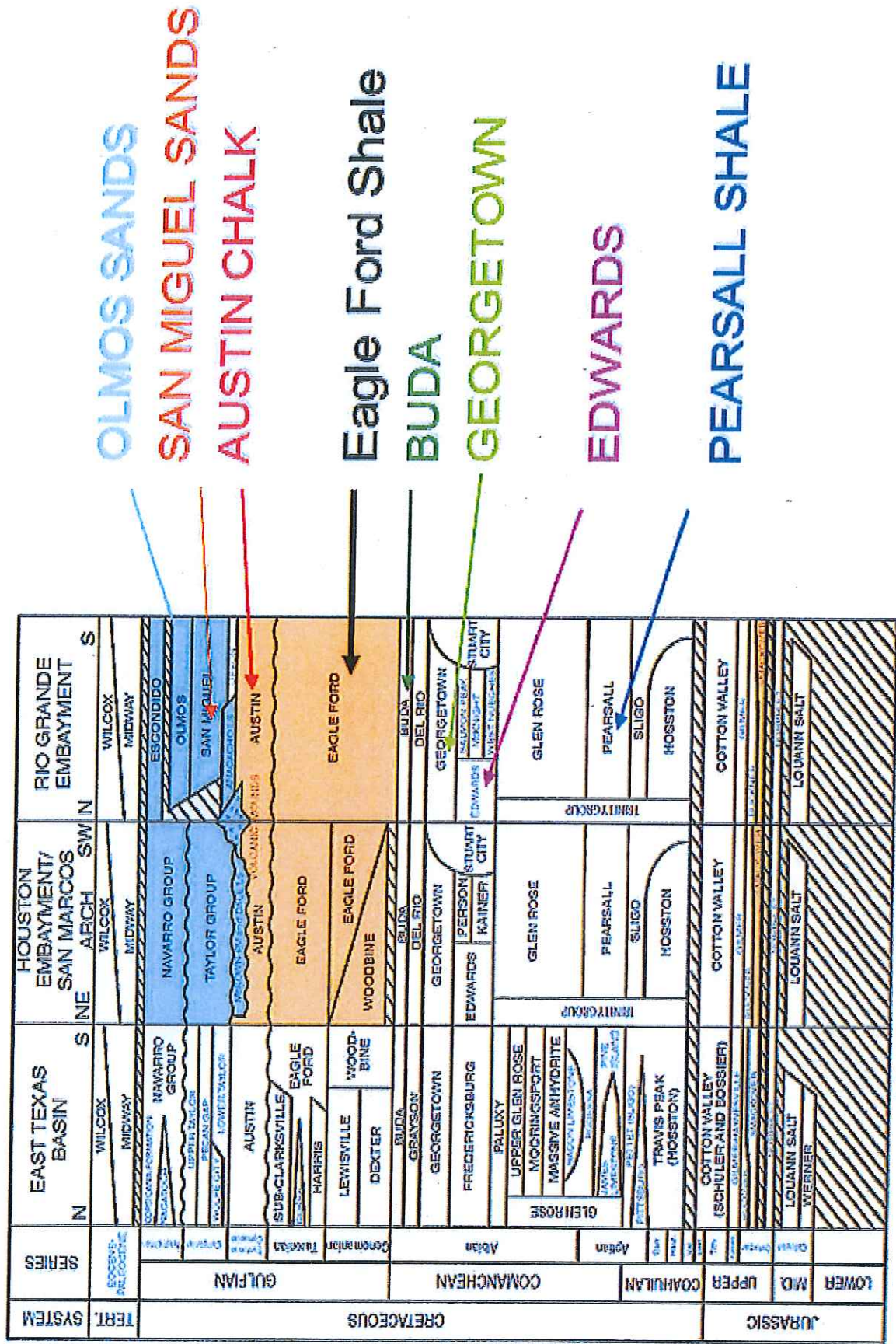
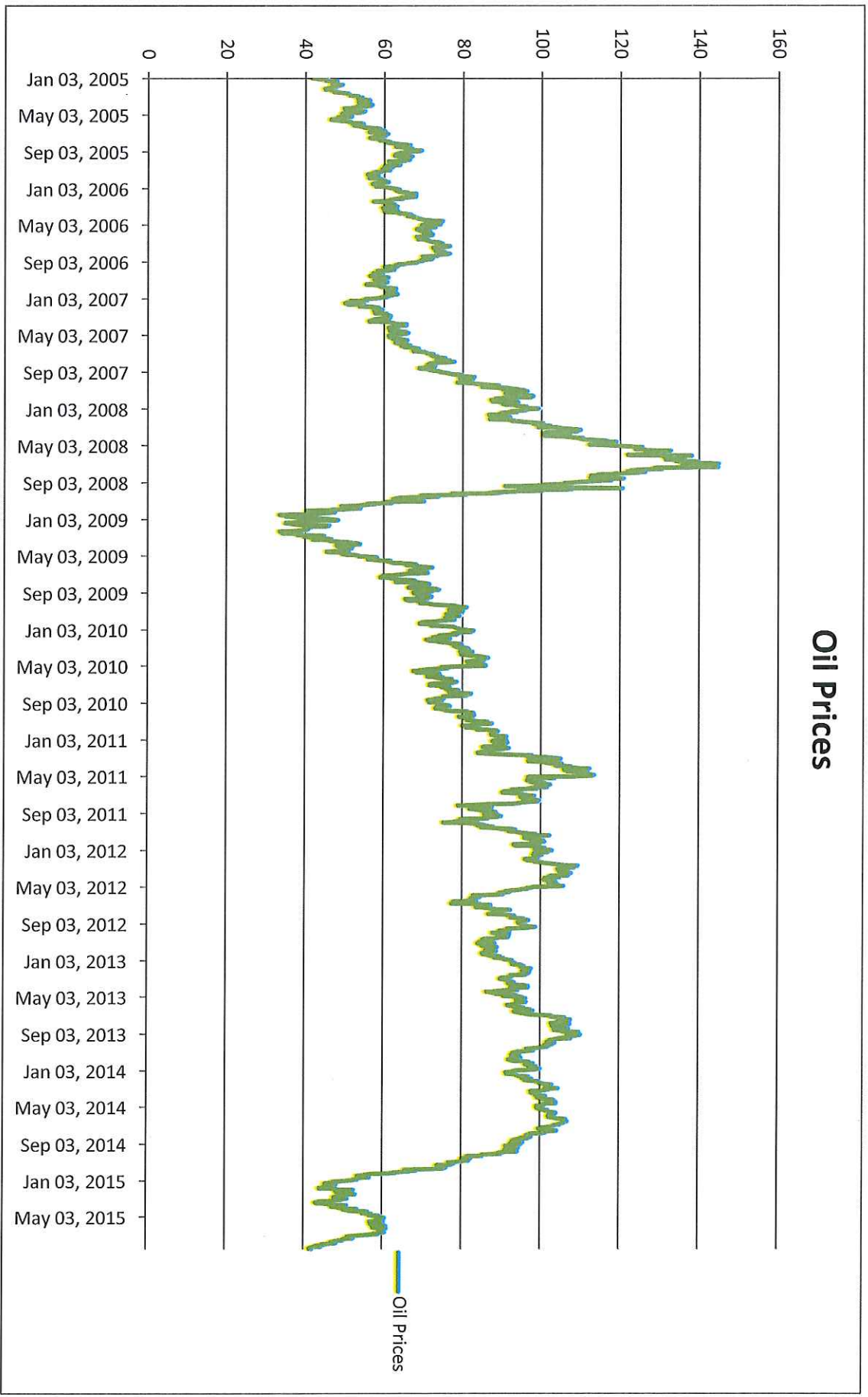


Figure 3. Columnar sections of Jurassic and Cretaceous stratigraphic units in southern and eastern Texas (modified from Kasters and others, 1999).

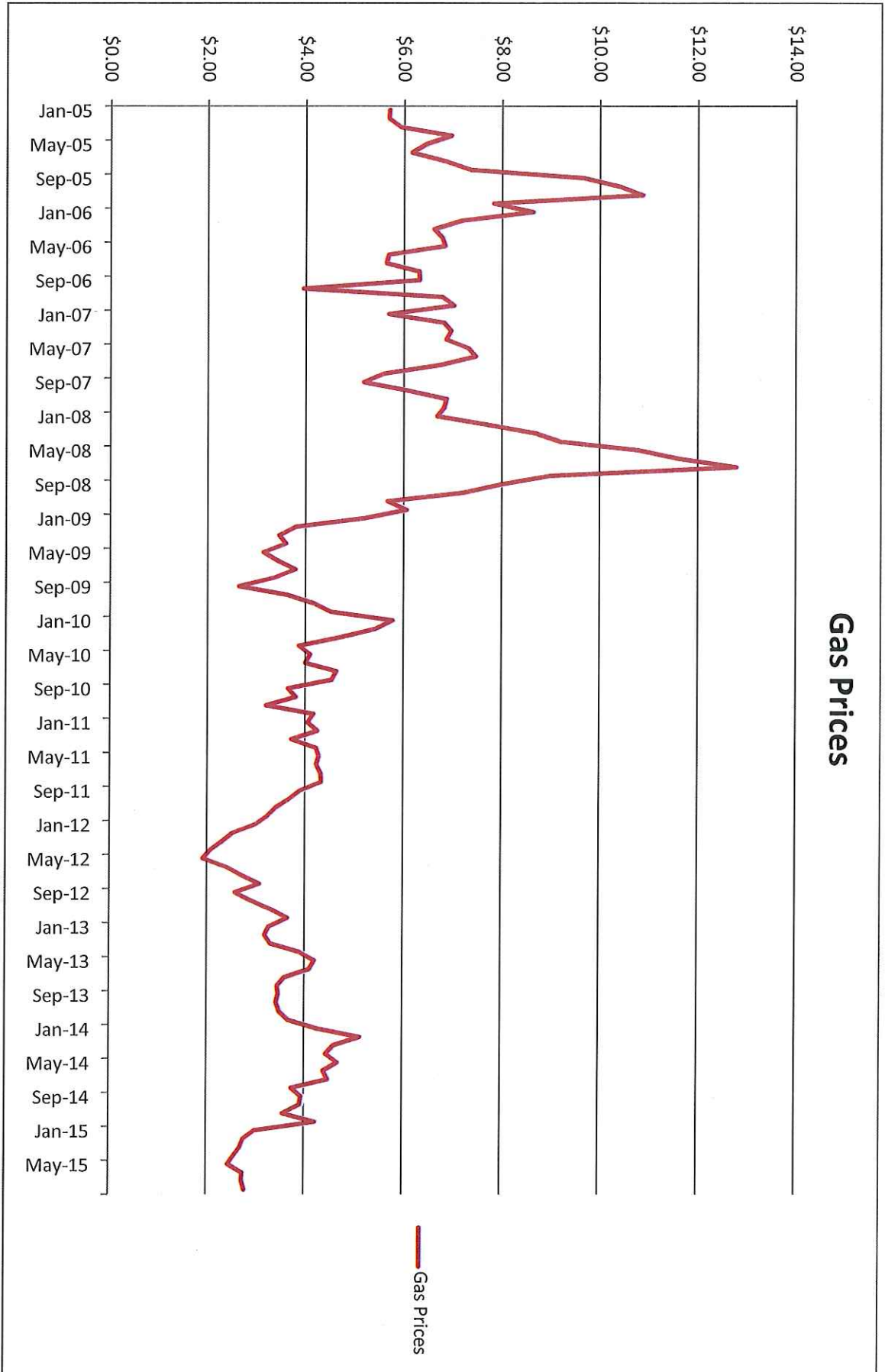
EXHIBIT "B"



Oil Prices

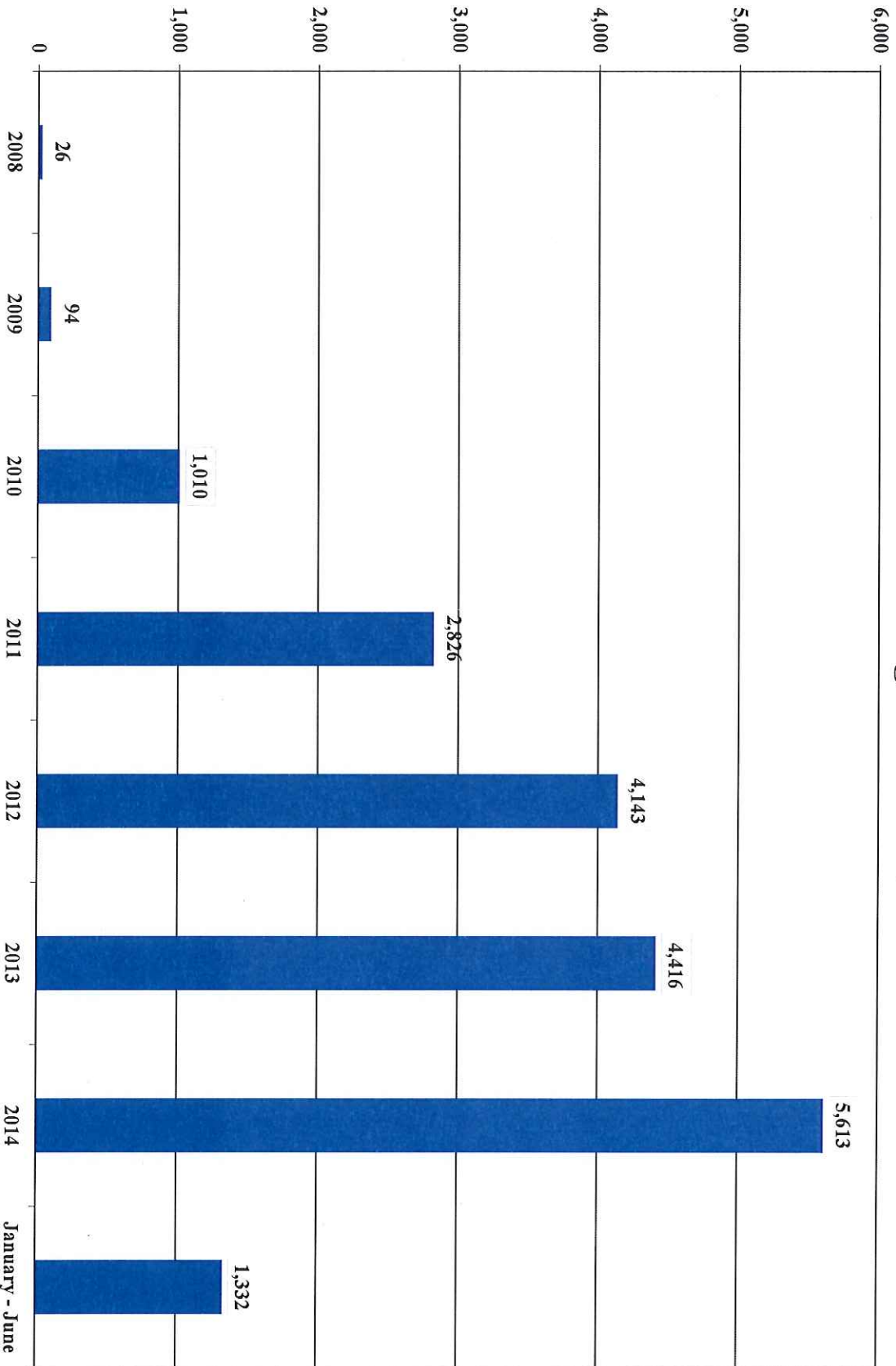
Oil Prices

EXHIBIT "C"



Texas Eagle Ford Shale Drilling Permits Issued 2008 through June 2015

EXHIBIT "D"



07/01/2015

Source: Texas Railroad Commission DrillingPermitQuery(Includes New Drill & ReEnter Permits)

Texas Newark, East (Barnett Shale) Drilling Permits Issued 2000 through June 2015

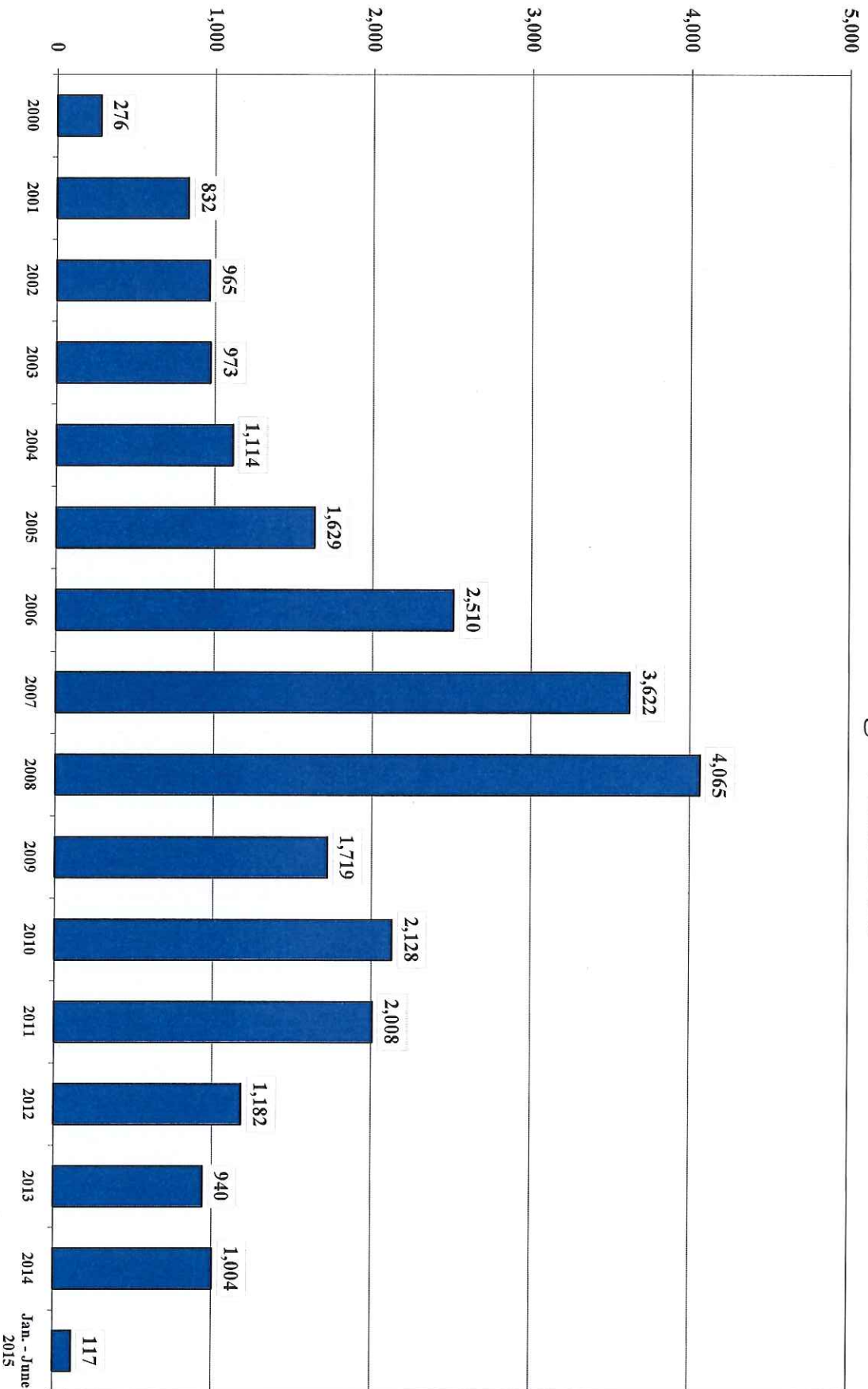


EXHIBIT "E"

07/06/2015

Source: Texas Railroad Commission Drilling Permit Query (Includes New Drill & ReEnter Permits)

CONTRACTS AND AGREEMENTS:

In the event Lessee enters into any agreement containing what is commonly referred to as a "take or pay provision" or a provision of similar import (such provision meaning that the purchaser agrees to take delivery of a specified minimum volume or quantity of Minerals over a specified term at a specified price or to make minimum periodic payments to the producer for Minerals not taken by the purchaser) and the purchaser under such agreement makes payments to Lessee by virtue of such purchaser's failure to take delivery of such minimum volume or quantity of Minerals, then Lessor shall be entitled to twenty-seven and one half percent (27½%) of all such sums paid to Lessee or producer under such agreement. Such payments shall be due and owing to Lessor within the same time period as provided for in Paragraph 5.10 below. If the purchaser "makes up" such Minerals within the period called for in the agreement and Lessee is required to give such purchaser a credit for Minerals previously paid for but not taken, then Lessor shall not be entitled to royalty on such "make up" Minerals.

Lessor is a third-party beneficiary of any agreement affecting the sale, exchange, use, disposition, marketing or transportation of Minerals under the Leased Premises, irrespective of any provision in said contracts to the contrary. Further, Lessor shall be entitled to twenty-seven and one half percent (27½%) of any amount or benefits realized, recovered, derived, received, or obtained by or for the benefit of Lessee, or its affiliate or subsidiary, directly or indirectly, or granted to Lessee from any person or party, (i) for or emanating from the barter, contribution, disposition, settlement, exchange, sale, usage, hedging,, buy-out or buy-back of Minerals (ii) under transportation agreements, purchase agreements, contracts, sales agreements, severance, any type of derivative agreement or swap of any one or more Minerals, (iii) for the execution, amendment, modification, extension, alteration, consolidation, transfer, cancellation, compromise or settlement of any agreement mentioned above, (iv) paid as a premium, commission, commitment, inducement, demand fee, load management fee or fee of similar import in order to commit Minerals to such buyer or dealer, or (v) as an inducement to sell Minerals or in settlement thereof or any right, obligation or claim. Further, within sixty (60) days after execution, Lessee shall notify Lessor of any proposed transaction that falls within this provision and give Lessor full details about same prior to consummating same. The acceptance of any such payments by Lessor shall never be taken or construed as waiving any of Lessor's rights or remedies for breach by Lessee of any express or implied covenant of this Lease. It is the intent of Lessor and Lessee that Lessee pay royalty on each and every benefit received by Lessee while marketing production as the result of each and every arrangement between Lessee and any third party emanating from the value of hydrocarbons produced from the Leased Premises.

EXHIBIT "F"