University Lands: Strategizing for the Long Term

Mark Houser, Chief Executive Officer
University Lands Overview

- Owns and manages surface and mineral rights of 2.1+ million west Texas acres
- History dating back to 1838
- First oil discovery in 1923
  - ~20,000 wells drilled to date
  - 9,000 wells currently producing
  - >1,800 horizontal wells
  - >200 operators
- Surface activities include:
  - Pipelines and power line easements
  - Grazing, ranching and hunting
  - Wind farms
  - Winery
  - Airports
  - Public schools
  - Water sales
- Revenue Benefits the University of Texas and Texas A&M University System via the Permanent University Fund
“Texas holds embedded in its earth rocks and minerals which now lie idle because unknown, resources of incalculable industrial utility, of wealth and power. Smite the earth, smite the rocks with the rod of knowledge and fountains of unstinted wealth will gush forth.”

- Ashbel Smith, M.D., first Chairman of the U. T. Board of Regents at the dedication of the University of Texas, 1881
University Lands Operations

- University Lands holds mineral interest and typically a royalty interest
- >200 Oil & Gas Operators
- 3,466 Oil & Gas Leases
- 5,168 Easements
- 1,997 Commercial Surface Leases
- 112 Grazing Leases → 36,000 Head of Livestock
- Miscellaneous Activities:
  - Antiquities Compliance
  - Wildlife Management
  - Geophysical Permitting
  - Environmental Management
University Lands Operations
What’s all this talk about a wall?

There’s already one there!!
Oil and Gas Assets

- Total Reserves (8/2015)
  - 1,126 million BOE
  - 13% Proved

- 2015 Gross Daily Production
  - ~220,000 BOE per day
  - 70% oil

- 2015 Net Daily Production
  - ~42,000 BOE per day

- 21,000 Identified “3P” Drilling Locations

- Incredible potential database for oil and gas AND water resources

2.1 million acres: ~1.5 million leased for oil and gas activity
### 2015 Top Producers (as of 12/2015)

#### Top 20 Producers

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>MMBOE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APACHE CORPORATION</td>
<td>8.25</td>
</tr>
<tr>
<td>PIONEER NATURAL RESOURCES</td>
<td>8.11</td>
</tr>
<tr>
<td>DEVON ENERGY</td>
<td>8.08</td>
</tr>
<tr>
<td>EP ENERGY E&amp;P COMPANY</td>
<td>7.68</td>
</tr>
<tr>
<td>QEP ENERGY COMPANY</td>
<td>4.84</td>
</tr>
<tr>
<td>AMERICAN ENERGY-PERM BASIN</td>
<td>4.23</td>
</tr>
<tr>
<td>EOG RESOURCES</td>
<td>4.00</td>
</tr>
<tr>
<td>OXY USA</td>
<td>3.43</td>
</tr>
<tr>
<td>APPROACH OPERATING</td>
<td>3.23</td>
</tr>
<tr>
<td>XTO ENERGY</td>
<td>2.55</td>
</tr>
<tr>
<td>CONOCOPHILLIPS</td>
<td>1.98</td>
</tr>
<tr>
<td>ENERGEN RESOURCES CORPORATION</td>
<td>1.61</td>
</tr>
<tr>
<td>SHERIDAN PRODUCTION COMPANY</td>
<td>1.59</td>
</tr>
<tr>
<td>SHELL WESTERN</td>
<td>1.03</td>
</tr>
<tr>
<td>DIAMONDBACK</td>
<td>1.02</td>
</tr>
<tr>
<td>FORGE ENERGY</td>
<td>0.93</td>
</tr>
<tr>
<td>CALLON PETROLEUM</td>
<td>0.86</td>
</tr>
<tr>
<td>LEGACY RESERVES</td>
<td>0.84</td>
</tr>
<tr>
<td>SANDRIDGE</td>
<td>0.73</td>
</tr>
<tr>
<td>CLAYTON WILLIAMS</td>
<td>0.71</td>
</tr>
</tbody>
</table>

**Top 20 Producers ➔**

85% of total production

---

**Top 20 Producers 2015 Production**

65.7 MMBOE
University Lands: 2015 Activity Highlights

Orogrande Basin
Torchlight well
Potentially exciting new trend
$50MM exploration plan

N Central Basin Platform
Conventional V and Hz plays - plus Spraberry.
COP and XTO main players

Delaware Basin
Wolfcamp/ Bone Spring
31 wells drilled
Energen Wolfcamp well IP 1135 BO/d

Northern Midland Basin
Bid Round early 2016
Spraberry main focus - Pioneer Spraberry wells IP >1000 BO/D

E Central Basin Platform
Infill drilling of prolific Devonian and Grayburg Fields. 16 wells drilled. Henry and Apache are the main players.

S Central Basin Platform/ Sheffield Channel
6 wells - all vertical Wolfbone tests drilled
Best well: PT IP 556 BO/d

Val Verde Basin/ Ozona Uplift
Historic Gas Province
Sculpia drilled

Southern Midland Basin/ Ozona Uplift
Wolfcamp, Spraberry
Last year. 51 wells IP > 500 BO/d

35 Wells in 2015 with IP’s >1000 BOPD
6 in past 2 months!
Wells Drilled by Fiscal Year

- **Total Drilled**
  - FY2004: 129
  - FY2005: 195
  - FY2006: 200
  - FY2007: 289
  - FY2008: 420
  - FY2009: 301
  - FY2010: 593
  - FY2011: 904
  - FY2012: 1108
  - FY2013: 920
  - FY2014: 884
  - FY2015: 494
  - FY2016: 109

- **Horizontal Drilled**
  - FY2004: 5
  - FY2005: 8
  - FY2006: 11
  - FY2007: 27
  - FY2008: 63
  - FY2009: 34
  - FY2010: 44
  - FY2011: 80
  - FY2012: 225
  - FY2013: 419
  - FY2014: 392
  - FY2015: 298
  - FY2016: 71

**250 total by year-end**
University Lands Historical Production

Gross Oil (in bbls)

Gross Oil
The Permanent University Fund (PUF)

### Net Investment Value
- **$7.2B**
- **$10.3B**
- **$5.14B**

### University Lands Deposits

### Market Value (August 31, 2015)
- **$17.5B**

### University Lands Revenue
FY2006 - FY2016 (in millions)

- **$227** (FY2006)
- **$287** (FY2007)
- **$473** (FY2008)
- **$356** (FY2009)
- **$352** (FY2010)
- **$912** (FY2011)
- **$978** (FY2012)
- **$882** (FY2013)
- **$1,159** (FY2014)
- **$856** (FY2015)
- **PROJECTED $545** (FY2016)

4-7% of PUF Market Value Plus University Lands Revenue Annually to UT System (2/3) and A&M System (1/3)
University Lands Strategy: What’s New?

- **Create a more commercial, forward-looking culture**
  - Study the highest performing mineral companies to determine best practices

- **Increase internal knowledge of resource potential**
  - Enhance capabilities for managing extensive data through targeted, key hires and technology improvements
  - Build technical expertise and expand industry relationships by opening Houston office
  - Partner with the Texas Oil & Gas Institute (TOGI)

- **Work with industry partners to continue creating value through commodity and technology volatility by diversifying and incentivizing**:
  - Upstream opportunities
  - Midstream opportunities
  - Water development opportunities
  - New opportunities – solar development?

- **Assess organizational structure and statutory framework of UL to determine best structure for stewardship and management of lands**
New Mindset: UL as a Technical Partner

Focused initiatives to develop technical expertise:

- **Staffing**: Diligent efforts to build the right team
- **UL Data**: Understanding, accessibility, and enhancement
- **Mapping**: ARCGIS and subsurface mapping
- **Reserves Evaluation**: Effective development planning
- **Operator Intelligence and Cooperation**: What can we do to help operators grow their position and improve technology?
- **Growth**: Employing technical and other initiatives to grow UL
Organizational Structure

- **Total 2016 Overhead Costs:**
  - $15.6M
  - Per unit of production $1.01/boe

**Similar Minerals Companies Overhead -> 2.00+ per BOE**
Oil Market Uncertainty
Spot Prices vs. the Forward Curve

Source: Plains All American
Oil Markets – Where are they heading?

West Texas Intermediate (WTI) Crude Oil Price

(dollars per barrel)


Historical spot price
STEO price forecast
NYMEX futures price
95% NYMEX futures lower confidence interval
95% NYMEX futures upper confidence interval

Source: Short-Term Energy Outlook, January 2016

Note: Confidence interval derived from options market information for the 5 trading days ending Jan. 7 2016. Intervals not calculated for months with sparse trading in near-the-money options contracts.
Where Will Oil Prices Exit 2016?

1. $20-$30
2. $30-$40
3. $40-$50
4. $50-$60
5. $60+

- $20-$30: 3.0%
- $30-$40: 28.1%
- $40-$50: 44.4%
- $50-$60: 17.8%
- $60+: 6.7%
How Many U.S. Rigs Will be Drilling at end of 2016?

1. 300
2. 400
3. 500
4. 600
5. 700
6. 800

- 300: 1.4%
- 400: 34.1%
- 500: 29.0%
- 600: 18.1%
- 700: 13.8%
- 800: 3.6%
What Is The Best Energy Investment Opportunity, Today?

1. Crude
2. Natural Gas
3. E&P Equities
4. Services Equities
5. Midstream Equities
6. Energy Debt
7. Private Markets
8. Solar

- Crude: 32.2%
- Natural Gas: 2.1%
- E&P Equities: 11.9%
- Services Equities: 4.9%
- Midstream Equities: 12.6%
- Energy Debt: 27.3%
- Private Markets: 6.3%
- Solar: 2.8%
Permian Basin Will Remain a Strong Player in U.S. Supply Growth

**Oil - Average Yearly Growth by Play (MBoe/d)**

- **Total U.S. Offshore**
- **Others**
- **California**
- **Alaska**
- **Utica**
- **Permian**
- **Eagle Ford**
- **Niobrara**
- **Midcon**
- **Marcellus**
- **Bakken**

**Total U.S. Crude**

- **Bakken**
- **Eagle Ford**
- **Permian**

**Permian Basin Will Remain a Strong Player in U.S. Supply Growth**

**SOURCE:** RAYMOND JAMES & ASSOCIATES, EIA, HPDI, Baker Hughes
Average 540 bopd in 2016 vs. 80 bopd in 2007!
Despite a rapid rig rate reduction, Permian production is just now declining, but when will the decline become significant?
Increasing Efficiencies: Returns Still Challenging for Producers

Well Economics Create Competition for Capital

- University Lands is evaluating potential ways for ensuring efficient development of lands over time, including potential price-sensitive royalty structures.

Source: EP Energy
Permian Shale Boom Kicks Off – FY2009

Need more predictability, consistency in resource development over time!

*Years of inventory based on 21,000 drilling locations

*Years of inventory based on 20% increase in drilling locations
Oil and Gas: Long-Term Production Ranges

**UNRISKED Reserves**

- **Current Production Level**

**RISKED Reserves**

- **Current Production Level**

Legend:
- PROVED DEVELOPED PRODUCING
- PROVED DEVELOPED NON-PRODUCING
- PROVED UNDEVELOPED
- PROBABLE RESERVES
- POSSIBLE RESERVES
- FORECASTED
De-Risking of Assets through Enhanced Evaluation and Data Usage

POSSIBLE RESERVES RISK IMPROVED FROM 25% TO 50% - BETTER EVALUATION

ANNUAL EQUIVALENT BARRELS OF PRODUCTION

- 25,000,000
- 20,000,000
- 15,000,000
- 10,000,000
- 5,000,000
- 0

PROVED DEVELOPED PRODUCING
PROVED DEVELOPED NON-PRODUCING
PROVED UNDEVELOPED NET RESERVES (Risked at 70%)
PROBABLE RESERVES (Risked at 50%)
POSSIBLE RESERVES (Risked at 20%)
FORECASTED PRODUCTION
De-Risking of Assets through Enhanced Evaluation and Data Usage

POSSIBLE RESERVES RISK IMPROVED FROM 25% TO 50%

5% Annual Growth Rate

Growth contingent upon activity!
Total Acres = 2,108,104
Total Acres Under Lease = 1,391,213
~588,000 acres held in D&D Units
Total Available Acres = 716,891

Performing technical evaluation with eyes on potential September sale
University Lands: Key Takeaways

- Significant long-term resource potential
- Scale provides huge potential synergies
  - Oil and gas resource capture
  - Water resource development
- University Lands should be an industry leader in knowledge of resource capture
  - Data provides huge advantage

Must work practically with industry with a long-term view! Effective long-term development is very complex.
Perspective...