Eagleford Location

The Eagle Ford has been around for nearly a decade and has had over 20,000 Hz wells drilled to date. It was the most active play prior to the price collapse in 2014, and currently is the most active play in terms of Hz Rigs outside of the Permian. The play is very large, covering 16 counties.
The Eagle Ford’s Rebound

- Operators have been drilling into the Eagle Ford for nearly a decade.
- Well Spuds rapidly increased then sharply dropped with the 2014 price crash. Spuds rose in 2017.
- 2017 wells enjoyed +22% rise in IP30 over 2016 wells, with production declines holding steady relative to prior yearly vintages
- The Eagle Ford play has rebounded in both activity and well performance.
- Due to the Eagle Ford’s developmental maturity, most operators’ acreage positions are firmly consolidated.

![Spuds by Year](chart)

![Eagle Ford Vintage Type Curves](chart2)

Top 15 Operators by active HZ well count

Learn more at drillinginfo.com
Expanding Permian Infrastructure → Stronger Eagle Ford Differentials

- There are major takeaway capacity limitations in the Permian due to rapid production growth that is developing ahead of midstream infrastructure construction.
- Massive pipelines are under construction to meet this demand, which traverse through the Eagle Ford.
- The Eagle Ford does not have the takeaway issues that the Permian is experiencing, since it has already experienced an era of higher production, while Permian is still growing.
- Further, the Eagle Ford is optimally placed adjacent to refineries in Corpus Christy and Houston.
- The end result is a greatly improved differential compared to WTI, with premiums being realized for several operators.

Learn more at drillinginfo.com
Eagle Ford Operator Positions
Geological Overview

- The Eagle Ford is Cretaceous in age
- There are a large number of stratigraphic and structural features in the Eagle Ford that create complexity and “sweet spots” for production
- The Eagle Ford Shale was the source rock the prolific vertical Austin Chalk Play across Texas
- Eagle Ford’s TOC varies based on the depositional environment

- The Eagle Ford’s production profile trends with geological structure. Oil, condensate, and gas windows correlate well to depth.
- Structure rapidly dips in the NW and has a more gentle dip in the SE
- The Eagle Ford is broken into Upper and Lower zones, with the Lower Eagle Ford being the more prominently targeted zone across the play
- Upper and Lower Eagle Thickness varies across the play, from 100’ to 600’
Eagle Ford Cross Sections – La Salle B to B’

- This Cross Section illustrates the steep structural dip across the Eagle Ford, around a 6000’ rise in a single county
- Gassier wells towards B, Oiler wells towards B’
Upside Potential Targets

- Formations targeted above the Eagle Ford are available in the deeper areas to the South, most likely due to pressure.
- Formations targeted below the Eagle Ford are available in the shallower areas to the North, most likely due to pressure.
Eagle Ford Area Type Curve Summary

<table>
<thead>
<tr>
<th>Area</th>
<th>EUR MBOE</th>
<th>% Liquids</th>
<th>NPV10, MM</th>
<th>Average IRR</th>
<th>Median IRR</th>
<th>Oil Breakeven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>1,400</td>
<td>51%</td>
<td>$5.60</td>
<td>82%</td>
<td>59%</td>
<td>$24</td>
</tr>
<tr>
<td>Wet Gas</td>
<td>1,300</td>
<td>70%</td>
<td>$7.22</td>
<td>111%</td>
<td>101%</td>
<td>$28</td>
</tr>
<tr>
<td>Dry Condensate</td>
<td>747</td>
<td>79%</td>
<td>$5.25</td>
<td>113%</td>
<td>64%</td>
<td>$36</td>
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<tr>
<td>Wet Condensate</td>
<td>720</td>
<td>81%</td>
<td>$5.75</td>
<td>98%</td>
<td>73%</td>
<td>$32</td>
</tr>
<tr>
<td>Oil</td>
<td>637</td>
<td>83%</td>
<td>$5.97</td>
<td>134%</td>
<td>92%</td>
<td>$35</td>
</tr>
<tr>
<td>Black Oil</td>
<td>379</td>
<td>87%</td>
<td>$2.38</td>
<td>47%</td>
<td>41%</td>
<td>$47</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>864</strong></td>
<td><strong>75%</strong></td>
<td><strong>$5.36</strong></td>
<td><strong>98%</strong></td>
<td><strong>72%</strong></td>
<td><strong>$34</strong></td>
</tr>
</tbody>
</table>

- All Type Curve Averages:
  - 864 MBOE EUR @ 75% Liquids
  - $5.36 MM NPV10 with 98% IRR average, 72% IRR median
  - $34/bbl Breakeven
- Normalized to 2,000 lb/ft frac and 6800’ Lateral
- 3-Stream EURs used. Varied NGL Yield based on GOR, public disclosure and DI Estimates
Oil Area Summary

- Type Curve Averages:
  - **637 MBOE EUR @ 83% Liquids**
  - **$5.97 MM NPV10 with 134% IRR average, 92% IRR median**
  - **$35/bbl Breakeven**
  - Normalized to 2,000 lb/ft frac and 6800’ Lateral

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### Type Curve

| Type Curve | Proppant per Foot | Pcf Length | Nm % of | GOR | D&B $/MMbbl | IP Oil | Oil b | IP gas | Gas Di | Gas h | % Liquids | IRR, % | Gas BE, $ | Oil BE, $ | EUR MMBbl | EUR $/MMbbl | EUR $/MMbbl | EUR MBOE | NPV10, MMbbl |
|------------|------------------|------------|---------|-----|-------------|-------|------|-------|-------|-------|-----------|-------|-----------|----------|------------|-------------|------------|-------------|-------------|-------------|----------------|
| EF TC 32   | 3070             | 5220       | 1.25    | -0.01 | 6.12        | 1025  | 0.33 | 1.1   | 1000  | 0.22  | 1.1       | 84%   | $21.48    | $22.36   | 560        | 444         | 591         | $3.51       |
| EF TC 33   | 1980             | 5700       | 1.16    | 0.04  | 6.63        | 1740  | 0.38 | 1.1   | 1914  | 0.15  | 1.1       | 79%   | $20.92    | $22.14   | 1393       | 754         | 1118        | $12.96      |
| EF TC 34   | 1050             | 5150       | 1.27    | -0.01 | 6.12        | 1780  | 0.40 | 1.1   | 1750  | 0.25  | 1.1       | 83%   | $25.30    | $27.20   | 547        | 744         | 951         | $12.38      |
| EF TC 39   | 3100             | 5710       | 1.45    | 0.03  | 6.12        | 1117  | 0.33 | 1.1   | 1207  | 0.34  | 1.2       | 83%   | $11.28    | $25.42   | 1037       | 615         | 878         | $9.24       |
| EF TC 30   | 2130             | 8600       | 0.60    | 0.02  | 5.78        | 880   | 0.31 | 1.2   | 920   | 0.31  | 1.1       | 80%   | $79.91    | $29.02   | 823        | 701         | $6.56       |
| EF TC 32   | 1830             | 6200       | 1.13    | 0.05  | 5.78        | 960   | 0.50 | 1.2   | 1684  | 0.43  | 1.1       | 84%   | $10.47    | $34.07   | 533        | 839         | 551         | $4.56       |
| EF TC 33   | 1600             | 7470       | 1.04    | -0.04 | 5.44        | 636   | 0.50 | 1.1   | 578   | 0.28  | 1.1       | 84%   | $5.58     | $68.64   | 280        | 227         | 296         | $0.98       |
| EF TC 34   | 1250             | 7000       | 1.24    | 0.01  | 5.78        | 454   | 0.50 | 1.2   | 464   | 0.30  | 1.1       | 78%   | $3.14     | $60.75   | 442        | 193         | 300         | $0.07       |
| EF TC 44   | 1450             | 11600      | 0.88    | -0.02 | 4.76        | 965   | 0.43 | 1.2   | 927   | 0.31  | 1.2       | 78%   | $16.43    | $26.54   | 891        | 424         | 670         | $6.43       |
| EF TC 66   | 2260             | 5770       | 1.08    | 0.05  | 4.08        | 385   | 0.36 | 1.1   | 432   | 0.10  | 1.3       | 75%   | $2.76     | $46.66   | 463        | 173         | 309         | $3.11       |

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