A Case History of the East Hardy Unit, Mississippian Highway 60 Trend, Osage County, OK*

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Abstract

A Case History of the East Hardy Unit, Mississippian Highway 60 Trend, Osage County, Oklahoma Abstract: The Highway 60 Trend derives its name from the fact that the trend lies in and along the route of U.S. Highway 60 that runs west from Pawhuska to the western edge of Osage County. The trend produces from numerous horizons within the section but is most widely known for the production obtained from the well defined stratigraphic pinch-out of the upper Mississippian trioplitic facies that has been historically called ‘chat’. The East Hardy Unit consists of portions of sections 2, 3, 4, 5, 9, 10 and 11-25N-3E. Earliest drilling activity along this trend occurred before 1920 and has continued until present day. Throughout the years, industry's constant push to develop new techniques in exploration and development has served the Highway 60 Trend well. This paper serves to document the development of the acreage over time and outlines the methods and reasons for the constant push to understand the complex Mississippian reservoirs through the use of advancing technologies.
A Case History of the East Hardy Unit
Mississippian Highway 60 Trend
Osage County, Oklahoma

Contributors
Weldon Spitzer
Richard Carter
Dan Jacobs
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Ron Snyder - Speaker

CEJA CORPORATION
East Hardy Unit
Cities Service
Layton 1934

T25N-R3E

1940

Marland
Chat 1919
Deepen 1926
Miss Lime
Slides for Ron's AAPG Talk

East Hardy Unit

T25N-R3E

CWO Chat 1956

CWO Chat 1953

1960
Braden B #4
SW/4 2-25N-3E
Osage County, OK
<table>
<thead>
<tr>
<th>SP</th>
<th>Gamma Ray</th>
<th>Synthetic Seismic Trace</th>
<th>Sonic</th>
<th>Bulk Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chat</td>
<td>Miss. Lime</td>
<td>Chat Model</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CW Oliphant Early 100% Seismic Map

Detail of the Seismic

CWO Chat 1956

CWO Chat 1953

CWO Chat 1953
East Hardy Chat Oil Production

- BO/MO
- Cumulative BO

EUR - 2,650,000 BO
RR - 200,000 BO

- 3D Acquired
- Wellbore Integrity
- 2D Acquired
- Benjamin #3 Drilled

Cumulative Barrels
Top of Chat Trough Amplitude

1 Mile
Slides for Ron's AAPG Talk
Dual Induction

Density-Neutron

Top Mississippian

Chat

Chat
(Secrest or Highway 60)

Base Mississippian

Arbuckle

Slides for Ron's AAPG Talk