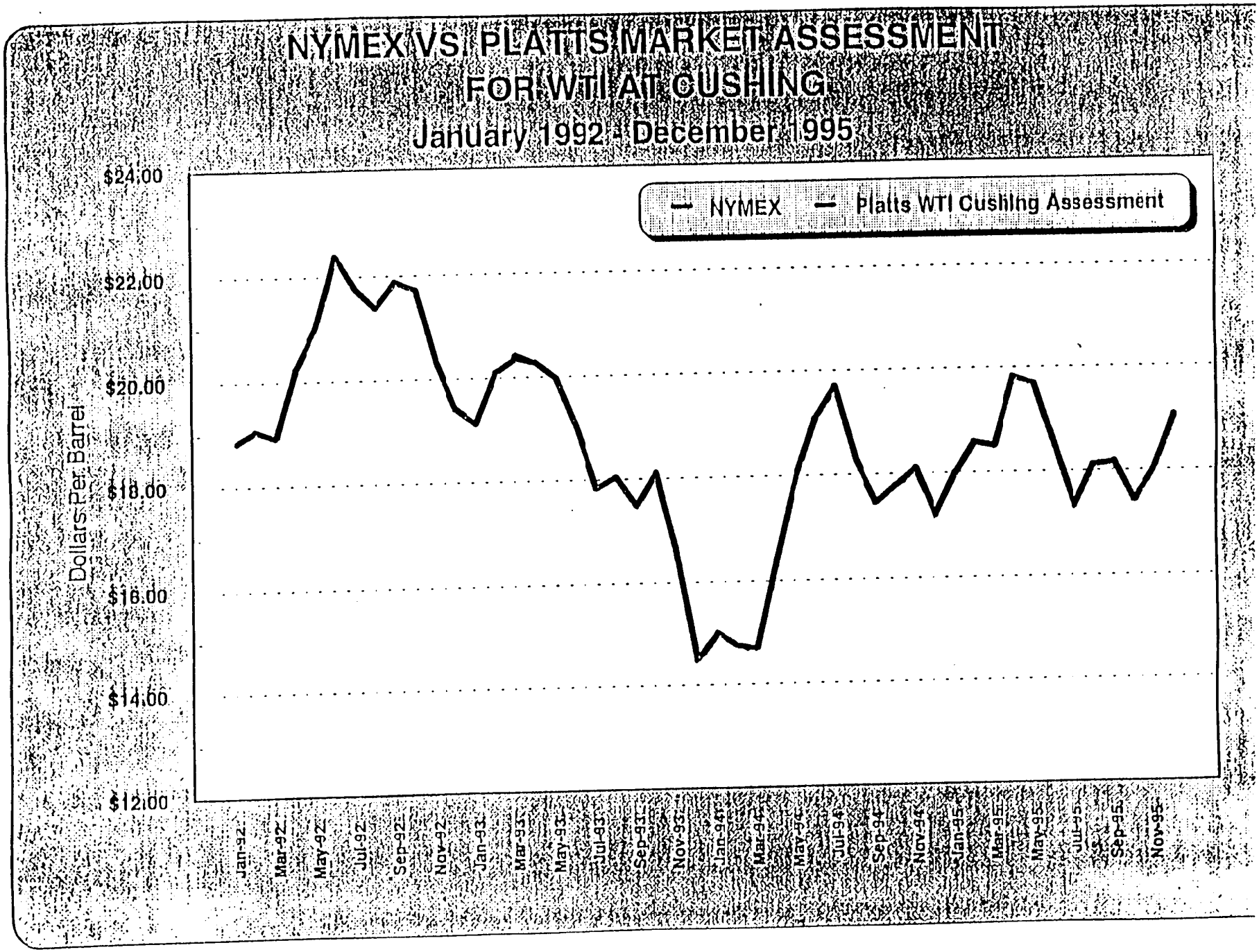
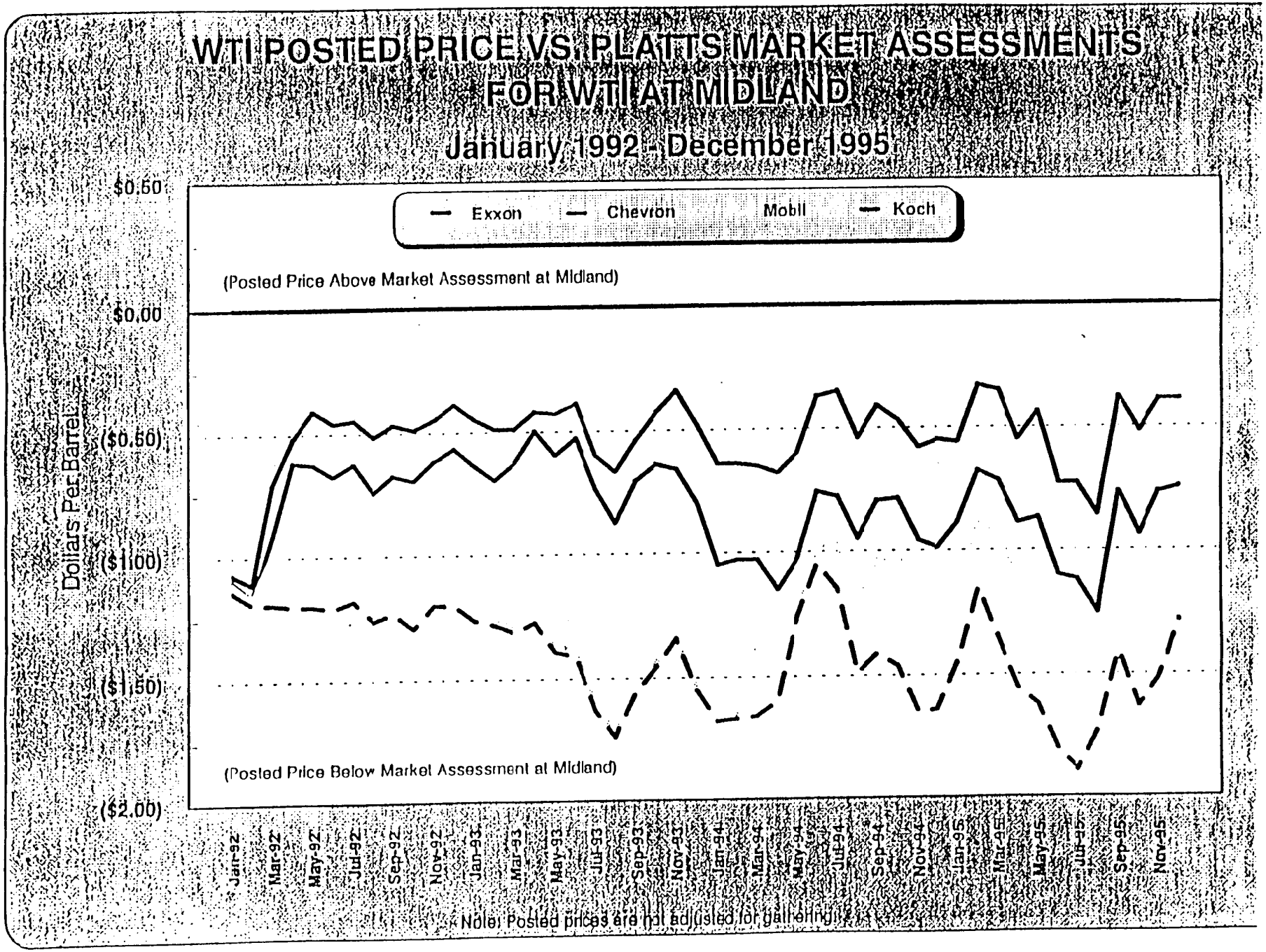

NYMEX VS. PLATTS MARKET ASSESSMENT
FOR WTI AT CUSHING
January 1992 - December 1995
NYMEX
Platts WTI Cushing Assessment
Dollars Per Barrel
$24.00
$22.00
$20.00
$18.00
$16.00
$14.00
$12.00
Jan-92
Mar-92
May-92
Jul-92
Sep-92
Nov-92
Jan-93
Mar-93
May-93
Jul-93
Sep-93
Nov-93
Jan-94
Mar-94
May-94
Jul-94
Sep-94
Nov-94
Jan-95
Mar-95
May-95
Jul-95
Sep-95
Nov-95

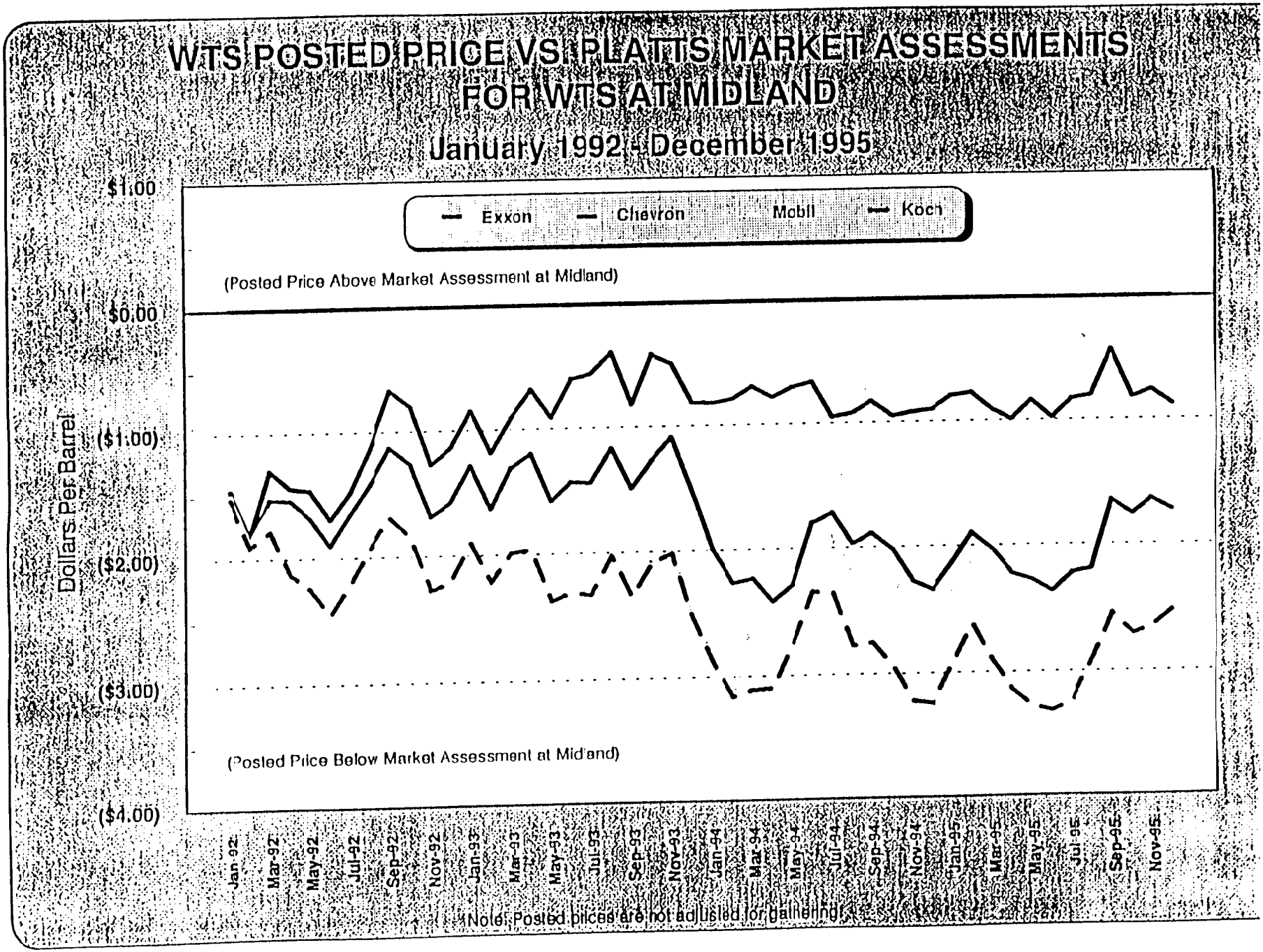
Posted Prices

- Do not measure market value of crude well
- Have historically lagged market value
- During the 1990s, posted prices have systematically understated market value. Evidence includes:
  - Relationship to assessments / NYMEX
  - Large premia in PPlus transactions
  - Loss of lease crude to gatherer / resellers such as KOCH, Permian, and Scurlock paying premia over postings

WTI POSTED PRICE VS. PLATTS MARKET ASSESSMENTS FOR WTI AT MIDLAND

January 1992 - December 1995




WTS POSTED PRICE VS PLATTS MARKET ASSESSMENTS
FOR WTS AT MIDLAND
January 1992 - December 1995
Exxon
Chevron
Mobil
Koch
(Posted Price Above Market Assessment at Midland)
(Posted Price Below Market Assessment at Midland)
Dollars Per Barrel
$1.00
$0.00
($1.00)
($2.00)
($3.00)
($4.00)
Jan-92
Mar-92
May-92
Jul-92
Sep-92
Nov-92
Jan-93
Mar-93
May-93
Jul-93
Sep-93
Nov-93
Jan-94
Mar-94
May-94
Jul-94
Sep-94
Nov-94
Jan-95
Mar-95
May-95
Jul-95
Sep-95
Nov-95
Note: Posted prices are not adjusted for gathering

Postings Plus

- Tracks NYMEX / Market assessments over time
- Based on current spread between posted price (typically KOCH) and NYMEX, and expectation of NYMEX prices in forward months
- Used as hedging tool when market prices for delivery during current and forward months widen
- Limitations:
  - Only one grade reported in trade press
  - Timing mismatch with NYMEX / assessments based on expectations of future prices

Widely Traded Crudes -- West Coast

- ANS -- large volume; extensive market activity; recognized benchmark crude on West Coast
- California crudes -- limited market activity
- Foreign crudes -- historically not much activity; imports are on the rise (e.g., Oriente); likely more with lifting of ANS export ban

Widely Traded Crudes -- East of Rockies

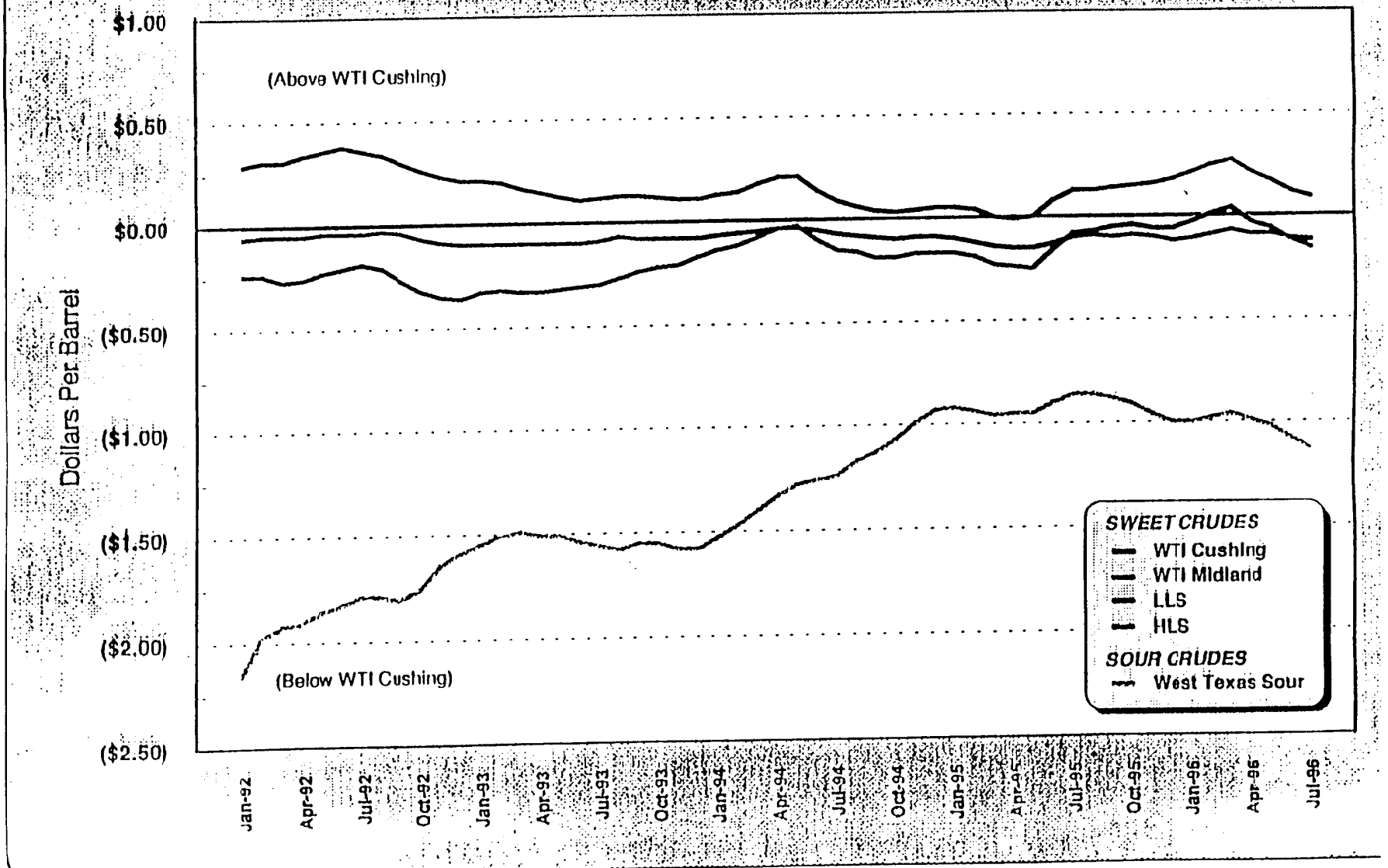
- WTI
  - liquid markets at Cushing and Midland
  - NYMEX contract for WTI at Cushing
  - recognized as the benchmark for U.S. crudes East of Rockies
- WTS - liquid market at Midland; recognized as a benchmark for sour U.S. crudes
- LLS - light/sweet crude traded at St. James, LA
- HLS - heavy/sweet crude traded at Empire, LA

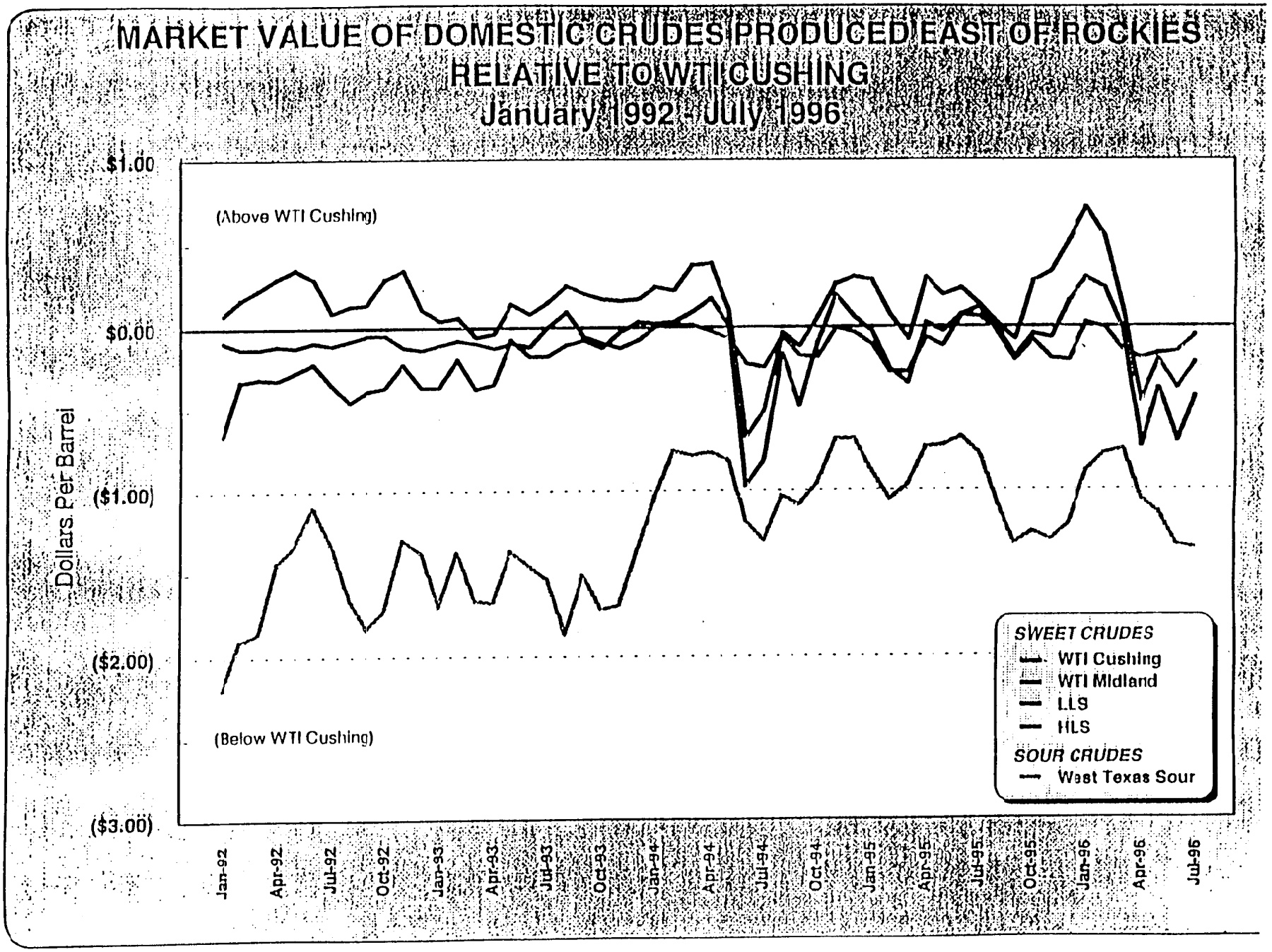
Development of Quality / Location Adjustments

- Develop quality / location adjustments based on historic relationships
  - Differences in market assessments
  - Posted price gravity tapers
  - FERC / State regulated transportation rates to netback to field
  - Review of transactions provided by producers -- exchanges and buy / sells
- Develop screening mechanism to determine if quality / location differentials need to be reviewed or adjusted

MARKET VALUE OF DOMESTIC CRUDES PRODUCED EAST OF ROCKIES RELATIVE TO WTI CUSHING

12 Month Rolling Average
January 1992 - July 1996




MARKET VALUE OF DOMESTIC CRUDES PRODUCED EAST OF ROCKIES
RELATIVE TO WTI CUSHING
January 1992 - July 1996
$1.00
$0.00
($1.00)
($2.00)
($3.00)
Dollars Per Barrel
(Above WTI Cushing)
(Below WTI Cushing)
SWEET CRUDES
WTI Cushing
WTI Midland
LLS
HLS
SOUR CRUDES
West Texas Sour
Jan-92
Apr-92
Jul-92
Oct-92
Jan-93
Apr-93
Jul-93
Oct-93
Jan-94
Apr-94
Jul-94
Oct-94
Jan-95
Apr-95
Jul-95
Oct-95
Jan-96
Apr-96
Jul-96