



RESTECH

Reservoir Evaluation Services

ADCAP®

(Advanced Capillary Pressure Analysis)

Minimum Data Required

- Open Hole Logs
- Hydrocarbon Type

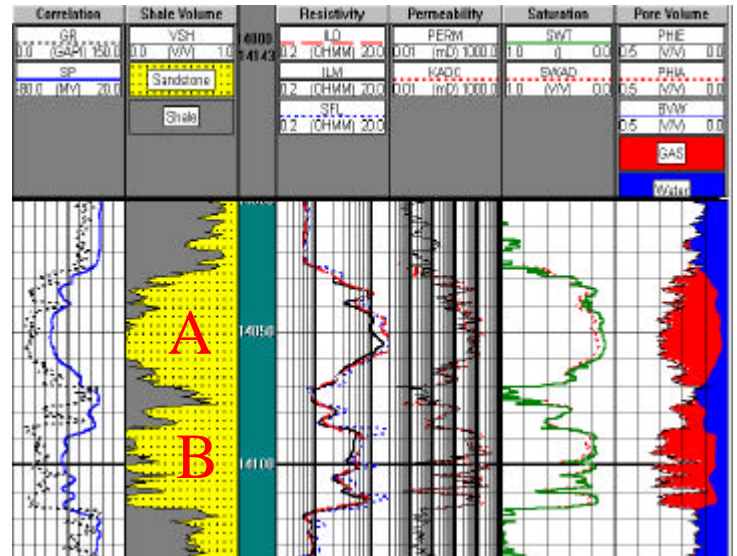
Additional Data (if available)

- Routine Core Analysis
- Capillary Pressure Data
- RFT / MDT Data
- Flow Test / PBU Results

Purpose

- Determine Free Water Level
 - * Downdip Reservoir Limits
 - * Quantify Reserves Below LKO / LKG
- * Define Delineation Plan

TWO ZONES IN HYDRAULIC GAS PHASE CONTINUITY

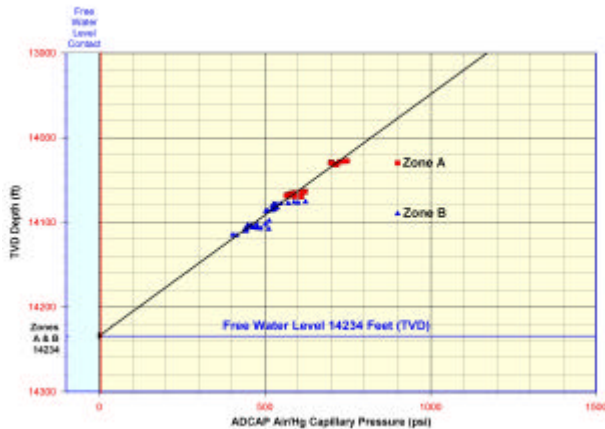


FWL = ?, Two zones connected?
 FWL_A = 14219'
 FWL_B = 14240'

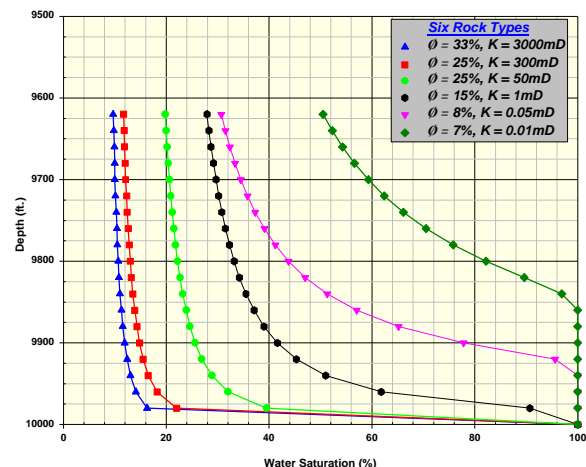
LKG = 20 BCF
 FWL_{A+B} = 14234' (+/- 18')
 Gross column = 200'
 Booked reserves = 100 BCF

ADCAP® Analysis

Capillary Pressure vs. TVD Depth



Example Capillary Pressure Curves For Varying Rock Types Assuming FWL = 10,000ft.



For More Information About ADCAP® Contact
 ResTech @ (281) 537-8300 www.restechinc.com



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PDP UPSIDE ANALYSIS

Using detailed Hydrocarbon Pore Volume calculations and patented capillary pressure modeling, ResTech, Inc. provides an intelligent answer to “true recoverable reserves”.

We do this by integrating **ADCAP**[®] analysis with detailed log work for porosity and saturation determinations. Our experience provides a timely turnaround for this upside volumetric analysis. ResTech specializes in providing answers that are based on fundamental petrophysics, geology and reservoir engineering. This approach maximizes our clients energy investment in asset rationalization and onward to acquisition and divestiture applications.

The accompanying cases illustrate in map view the impact to “traditional” volumetrics of ResTech’s analysis. The table below lists the results: Case 2 shows over 50% increase to Net Pay Sand volumes, Case 3 results in over 100% increase compared to traditional Net Pay Sand volumetrics.

RECOVERABLE RESERVE SUMMARY

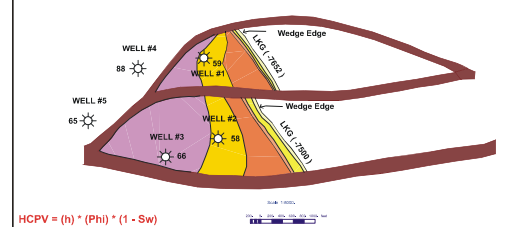
- Case 1 Net Pay Sand Volumetric Analysis (EUR = GIP * 60%) = 4238 MMCF
- Case 2 Hydrocarbon Pore Volume Analysis (EUR = GIP * 60%) = 6027 MMCF
- Case 3 Incorporation of **ADCAP**[®] With Hydrocarbon Pore Volume Analysis (EUR = GIP * 60%) = 9915 MMCF

Value added @ \$3/MCF

- Case 2 vs. Case 1 = 5.3 MM\$
- Case 3 vs. Case 2 = 11.6 MM\$
- Case 3 vs. Case 1 = 17.0 MM\$

Case 1

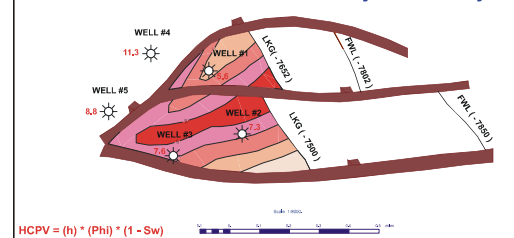
Standard Volumetric Determination By Net Pay Analysis



Productive Area (LKG) : 138.4 Acres
Total HCPV Acre – Feet : 675.7 Acre – Feet
Gas – In – Place: 7,064 MMCF
EUR (60% recovery): 4,238 MMCF

Case 2

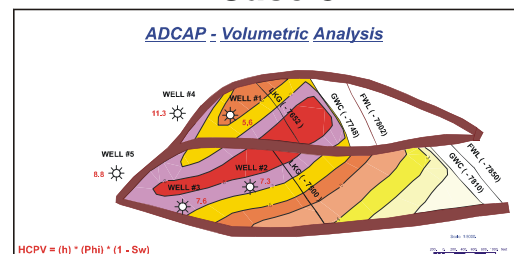
Detailed Volumetric Determination By HCPV Analysis



Productive Area (LKG) : 138.4 Acres
Total HCPV Acre – Feet : 960.8 Acre – Feet
Gas – In – Place: 10,045 MMCF
EUR (60% recovery): 6,027 MMCF

Case 3

ADCAP - Volumetric Analysis



Productive Area (GWC) : 264.6 Acres
Total HCPV Acre – Feet : 1,580.8 Acre – Feet
Gas – In – Place: 16,526 MMCF
EUR (60% recovery): 9,915 MMCF

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