

MultiLateral

MultiLateral™ is a multi-purpose well evaluation tool that can be utilized for:

- Multi-lateral wells or multi-fractured wells, with up to 8 drains (A drain is either a lateral hole or a vertical fracture.)
- Any configuration of drains can be analyzed
- History matching to determine reservoir parameters

Key Features:

- Results are graphically displayed with multiple plots:
 - Rate vs. Time (Semi-log)
 - Rate vs. Time (log-log)
 - Cumulative Production vs. Time
 - Rate vs. Cumulative
- Gas or oil production forecasts
- Reservoir forecasts for a constant rate or constant pressure
- Either homogeneous or naturally fractured reservoirs can be modeled
- Cartesian and Cylindrical coordinates systems for describing drains
- Hierarchical data entry to reduce data errors and users input time

Proven and Improved through years of use in JTI Projects Worldwide

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JTI SOFTWARE: METHODS AND FEATURES



MultiLateral™ is a practical tool that can be used for stand-alone evaluations or as a screening tool for more in-depth studies.

MultiLateral Input Screen (General tab):
Reservoir ID: NoHist_Arps_BP2
Case ID: Dr2_Case154
Arp's and Fetkovich Decline Curve Analysis
Decline Exponent (b): 0.3
Decline Coefficient: 0.0 1/years
Calculated by program:
Num. of Back Pressure Changes: 2

MultiLateral Input Screen (Reservoir tab):
Reservoir ID: Hist_Const
Case ID:
Reservoir Pressure: 8600 psi
Drainage Area: 640 acres
X/Y Ratio: 1
Net Pay Thickness (h): 12 ft
Horizontal Permeability (Kh): 50 md
Ver/Horiz. Permeability Ratio: 0.1
Fracture Length (ft): 0.18 fraction
Fracture Spacing (ft): 0.25 fraction
Fracture Width (in): 0.248 in
Fracture Conductivity (Darcies-ft): 0 d/Md

MultiLateral Input Screen (Well tab):
Reservoir ID: Hist_Arps_BP2cy
Case ID: Dr2_Case74
Coordinate System: Cartesian
Number of Drains: 2
N.B.: The data in the grid below is updated after you change rows.

Drain #	Elevation #	Pw, ft	Fracture	Skin	XStart, ft	YStart, ft	XEnd, ft	YEnd, ft
1	10	0.33	1	0	0	100	0	500
2	6	0.33	1	0	0	0	500	500

Areal View of Drains: A graph showing the spatial distribution of two drains on a 600x600 foot grid. Drain 1 is a vertical line at X=0 from Y=0 to Y=500. Drain 2 is a diagonal line from (0,0) to (500,500).

Horizontal View of Drains: A graph showing the horizontal extent of the drains on a 600x600 foot grid. Both drains are represented as horizontal lines at Y=0 from X=0 to X=500.

MultiLateral™ forecasts include a transient solution coupled with decline equations for the depletion period to give a forecast that is rigorous and flexible to account for various drive mechanisms.

For further information:

visit www.joshitech.com or * email itware@joshitech.com * phone 918-665-6419 * fax 918-665-0807