

# UBDPRO

## Underbalanced drilling model

Underbalanced drilling is often performed with the primary motivation of reducing formation damage and increasing production, and air / mist / foam drilling fluids are commonly employed. Computer modeling has allowed far better understanding of the managed pressure drilling than was previously possible.



Compressible fluid hydraulics for vertical or directional wells

Survey input allows 1000 survey stations

Up to 40 points for pore and fracture profiles

Up to 40 points for temperature gradients

Up to 20 wellbore intervals and 50 pipe sections

Handle jet sub calculations

Motor pressure drop

Handles formation influxes (up to 6 depths)

Bingham plastic, power law, Chevron's model, Reidenbach and Harris model

Aerated mud: Beggs-Brill method

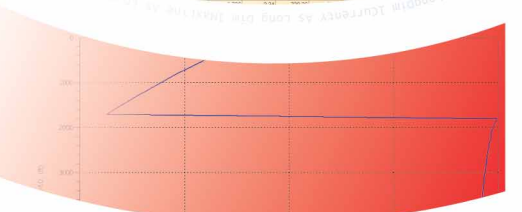
Pressure, ECD, gas volume, density, velocity and cutting transport profiles

Optimized flow rate design

MS Word report

Supports oil field, SI and customized units

Wellbore ID	Depth (ft)	Pressure (psi)	Temperature (°F)	Flow Rate (gpm)	Velocity (ft/min)	Density (lbm/ft³)	Viscosity (cp)	Friction Loss (psi)	Pressure Gradient (psi/ft)
001	100	1000	100	100	100	100	100	100	100
002	200	2000	200	200	200	200	200	200	200
003	300	3000	300	300	300	300	300	300	300
004	400	4000	400	400	400	400	400	400	400
005	500	5000	500	500	500	500	500	500	500



Property	Value
Density	5.0000 g/cc
Viscosity	1.0000 cp
Gas name	Composite
Use type	Air
Molecular weight	28.9664
Rate of reaction	1.0000
Viscosity	0.0180 (cp)
Gas specific gravity	1.0000

