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# ABBREVIATIONS AND SYMBOLS

A = Oil-/Gas-bearing Area of Reservoir, sq m

bbl = Barrel

$B_{gi}$ = Initial Formation Volume Factor of Gas, cu ft/scf

$B_{oi}$ = Initial Formation Volume Factor of Oil, bbl/STB

BOPD = Barrel of Oil Per Day

cu ft = Cubic Feet

EV(Z) = Expected Value of Z

F = Formation Resistivity Factor

Gas Reserve = Recoverable Gas Volume, scf

GCF = Geometric Correction Factor, fraction

CDF = Cumulative Distribution Function

GIIP = Gas-Initially-In-Place, cu ft

$GR_{log}$ = Gamma Ray Value read on Gamma Ray Log, API units

$GR_{min}$ = Minimum Value of Gamma Ray on Log, API units

$GR_{max}$ = Maximum Value of Gamma Ray on Log, API units

h = Gross Reservoir Thickness, m

HIIP = Hydrocarbons-Initially-In-Place

$I_{GR}$ = Gamma Ray Index

m = Mean

*MLT* = Measured Log Thickness, m

MM STB = Million Stock Tank Barrel

mTVD = True Vertical Depth, m

n = Saturation Exponent, usually 2

N/G_ratio = Net to Gross Ratio, fraction

Oil Reserve = Recoverable Oil Volume, STB

OIIP = Oil-Initially-In-Place, bbl

OOIP = Original-Oil-In-Place, bbl

OGIP = Original-Gas-In-Place, cu ft

OWC = Oil-Water-Contact

P10 = 10 Percentile

P50 = 50 Percentile

P90 = 90 Percentile

PDF = Probability Density Function

RF = Recovery Factor, fraction

$R_t$ = Resistivity of a Rock, ohm meter

$R_W$ = Water Resistivity, ohm meter

$S_w$ = Water Saturation, fraction

$S_o$ = Oil Saturation, fraction

$S_g$ = Gas Saturation, fraction

*SD* = Standard Deviation

sq km = Square kilometer

sq m = Square meter

STB = Stock Tank Barrel

scf = Standard cubic feet

*TVT* = True Vertical Thickness, m

$V_{SS}$ = Sand Volume, fraction

$V_{cl}$ = Clay (shale) Volume, fraction

$w_i$ = Weight (probability) of the $i^{th}$ Data Point

$\alpha$ = Wellbore Deviation Angle, degree

$\beta$ = True Bed Dip, degree

$\Delta t$ = Tool Measured Interval Transit Time, microsecond per foot

$\Delta t_{ma}$ = Transit Time of Matrix Material, microsecond per foot

$\Delta t_f$ = Transit Time of Interstitial Fluid, microsecond per foot

$\Phi$ = Reservoir Porosity, fraction

$\Phi_D$ = Density Porosity, fraction

$\Phi_{N\text{-}D}$ = Neutron-Density Porosity, fraction

$\Phi_S$ = Sonic Porosity, fraction

$\gamma$ = Acute Angle between the Wellbore Azimuth and the Azimuth of True Bed Dip

$\mu$ = Mean of the Natural Logarithm of the Distribution

$\rho_{ma}$ = Matrix Density, g/cc

$\rho_f$ = Fluid Density, g/cc

$\rho_b$ = Corrected Bulk Density, g/cc

$\sigma$ = Standard Deviation of the Natural Logarithm of the Distribution