ABSTRACT

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EVALUATION OF POTENTIAL STACKED SHALE-GAS RESERVOIRS ACROSS NORTHERN AND NORTH-CENTRAL WEST VIRGINIA

Three-well-wedge stacked northern and north-central West Virginia shale-gas producers for non-horizontal and pad-to-produce from multiple zones. The Upper Ordovician Utica/Point Pleasant, Middle Devonian Marcellus, and Upper Devonian Burket/Genesee playholds significant promise. Hydrocarbons in these areas, and comparison of the three, are characterized by variable TOC content in this section is generally less than 5%. Seventeen wells report a cumulative from multiple zones. The Upper Ordovician Utica/Point Pleasant, Middle Devonian Marcellus, and Upper Devonian Burket/Genesee interbedded with more carbonate-rich strata. Clay content is typically around 50% in the Utica/Point Pleasant interval; carbonate constitutes 20 to 30% and quartz content is 10 to 20%.

REGIONAL GEOLGY

MACELLUS SHALE PLAY

RESERVOIR THICKNESS

ORGANIC CONTENT

ZONES OF OVERPRESSURE

NATURAL FRACTURE NETWORKS

QUARTZOSE SEDIMENTS

GENESES/BURKET SHALE PLAY

RESERVOIR THICKNESS

ORGANIC CONTENT

ANTECEDENT TOPOGRAPHY

GENERALIZED FAIRWAY MAP

RESERVE POTENTIAL AND IMPLICATIONS FOR DEVELOPMENT

Implications of multiple threewell-wedge stacked northern and north-central West Virginia shale gas producers for non-horizontal and pad-to-produce from multiple zones. The Upper Ordovician Utica/Point Pleasant, Middle Devonian Marcellus, and Upper Devonian Burket/Genesee playholds significant promise. Hydrocarbons in these areas, and comparison of the three, are characterized by variable TOC content in this section is generally less than 5%. Seventeen wells report a cumulative from multiple zones. The Upper Ordovician Utica/Point Pleasant, Middle Devonian Marcellus, and Upper Devonian Burket/Genesee interbedded with more carbonate-rich strata. Clay content is typically around 50% in the Utica/Point Pleasant interval; carbonate constitutes 20 to 30% and quartz content is 10 to 20%.