

NGL Water Solutions DJ, LLC

NGL C5A

Formation Data & Detailed Lithologic Description

Formation	Tops	Btm	Porosity	Lithology	To be Determined		
					TDS	Frac Gradient	Permeability
Lyons	9383'	9554'	10.9 %	Sandstone, Leonardian age, very fine to fine grained, red, friable to locally silica cemented, fair to moderate porosity	11,000	0.53	116 md
Lower Satanka	9554'	9835'	0 %	Siltstone, shale, sparse very fine grained sandstone, brick red, anhydritic, tight	11,000	0.53	116 md
Wolfcamp	9835'	9900'	0%	Dolostone, pink to light brown, massive bedded, tight, local anhydrite, white, massive bedded, tight, sparse, thin beds of siltstone and shale	15,000	0.53	116 md
Amazon	9900'	9978'	13.1 %	Dolostone, pink to light brown, massive bedded, moderate porosity	15,000	0.53	116 md
Council Grove	9978'	10134'	8.5%	Dolostone, pink to light brown, massive bedded, locally anhydritic, poor porosity, thin beds of red shale	15,000	0.53	116 md
Admire	10134'	10192'	0 %	Sandstone, red to light gray, very fine grained, anhydritic to dolomitic, tight, shale and siltstone, tight, sparse thin beds of dolostone, poor porosity	15,000	0.53	116 md
Virgil	10192'	10431'	7.6 %	Limestone, pink to light gray, massive to thin bedded, locally anhydritic, tight, Dolostone, light gray to pink, massive bedded, moderate to good porosity, sparse, thin beds of red shale and red siltstone	14,000	0.53	116 md
Missouri	10431'	10570'	0 %	Limestone, pink to light gray, massive to thin bedded, tight, Dolostone, light gray to pink, massive bedded, poor to fair porosity, sparse, thin beds of red shale and red siltstone	14,000	0.53	116 md
Fountain	10570'	10652'	0 %	Sandstone, very fine to medium grained, red to pink, calcareous, tight, interbedded with red shale and siltstone, locally micaceous, tight	14,000	0.53	116 md
Des Moines	10652'	11076'	0 %	Sandstone, very fine to medium grained, red to pink, calcareous, tight, interbedded with red shale and siltstone, locally micaceous, tight	NA	0.53	116 md
Atoka	11076'	11130'	0 %	Sandstone, very fine to medium grained, red to pink, calcareous, tight, interbedded with red shale and siltstone, locally micaceous, tight	NA	0.53	116 md

*Depths and porosity are based on the NGL C-1 (1-30) SWD (05-123-26004) and Select (Lone Star) LSWD 1 (05-123-30367)