NGL Water Solutions DJ, LLC

NGL Apollo 11

					To be Determined		
Formation	Tops	Btm	Porosity	Lithology	TDS	Frac Gradient	Permeability
Lyons	8,528'	8,639'	16%	Sandstone, Leonardian age, very fine to lower medium grained, orange brown to translucent, friable to locally silica cemented, moderate to good porosity, 15ft shale parting above basal sandstone			
Lower Satanka	8,639'	8,867'	2%	Sandstone, lower to upper very fine grained, red orange, poor porosity, interbedded with red orange siltstone and shale, locally anhydritic, becoming very shaly in lower part			
Wolfcamp	8,867'	8,951'	1%	Anhydrite, white, fine to very fine crystalline, massive bedded, tight, overlying Dolostone, very fine to microcrystalline, off-white to light pink, purple, massive bedded, tight, sparse, thin beds of red siltstone and shale			
Amazon	8,951'	8,997'	24%	Dolostone, medium to dark grayish brown, off white to light gray, very fine to microcrystalline, massive bedded, moderate to good porosity			
Council Grove	8,997'	9,179'	10%	Dolostone, white to very light gray, microcrystalline, locally very fine to fine crystalline, massive bedded, tight to locally good porosity, interbedded with sparse limestone, light to medium gray, microcrystalline, tight, and sparse, thin beds of red orange siltstone and red shale			
Admire	9,179'	9,225'	2%	Dolostone, very light to light gray, microcrystalline, thinly bedded, tight, interbedded with thin beds of limestone, light gray to medium gray, microcrystalline, and red to medium brown shale, tight to poor porosity			
Virgil	9,225'	9,311'	14%	Limestone, white to light gray, very fine to microcrystalline, massive bedded, tight, underlain by dolostone, very light gray to off-white, very fine to microcrystalline, chalky, massive bedded, fair to locally good porosity, sparse, thin beds of red shale			
Missouri	9,311'	9,569'	18%	Dolostone, light gray to light grayish brown, very fine to microcrystalline, massive to thick bedded, fair to good porosity, interbedded with sparse limestone, light gray to light grayish brown, microcrystalline, thick bedded, tight and frequent, thin to medium beds of red shale			
Des Moines	9,569'	9,635'	10%	Limestone, white to light gray, very fine to microcrystalline, massive to thin bedded, tight to locally moderate porosity, interbedded with moderately common, thin beds of reddish orange shale			
Fountain	9,635'	9,795'	4%	Shale, reddish brown to maroon, slightly calcareous, locally silty, interbedded with sparse, thin to medium beds of sandstone, very fine to fine grained, grayish brown to reddish brown, slightly to moderately calcareous, micaceous, tight			
Atokan	9,795'	9,965'	2%	Sandstone, very fine to upper medium and coarse grained, white to pink, medium to thick bedded, quartzose to feldspathic, noncalcareous, fair porosity, interbedded with moderately common, medium to thick beds of red to maroon shale and siltstone, locally micaceous, tight			
Morrow	9,965'	10,023'	2%	Shale, maroon to green, medium gray, with sparse, thin to medium beds of sandstone, very fine to medium grained, pink to maroon, locally light gray, quartzose to feldspathic, micaceous, tight, and sparse light gray to light brown limestone, tight			

*Depths and porosity are based on the Synergy Apollo 15-18i (05-123-25694), NGL C-7A (05-123-32207), and NGL C-7B (05-123-34520)