Appalachian Storage Hub (ASH) Project

Semi-Annual Meeting
March 14, 2017
WVU Erickson Alumni Center

BACKGROUND

- Liquids-rich Marcellus and Utica Shale production in the tri-state area of OH, PA and WV
- Desire to move natural gas liquids (NGLs) from wet gas areas to industrial sites throughout the greater Appalachian region
- A proposed "6-pack" pipeline from Monaca, PA to northeastern KY and Charleston, WV along the Ohio & Kanawha rivers
- Subsurface storage will be a necessary component along the pipeline route

FIRST QUARTER GOALS & ACCOMPLISHMENTS

- **Defined the Area of Interest (AOI)**
- **Data Collection within the AOI**
- **Developed a Project Database & Website**
- **Correlated Subsurface Units of Interest in the AOI**

GEOLOGIC INTERVALS OF INTEREST

Mined-rock caverns

- Greenbrier Limestone (suitable for mining)

Salt caverns

- Salina Group salts (suitable for solution mining) – Newburg sandstone

Gas reservoirs

- Keener sandstone to Berea Sandstone
- Upper Devonian sandstones (Venango, Bradford, Elk)
- Oriskany Sandstone
- Clinton-Medina Group through Tuscarora Sandstone
- Rose Run and Upper Sandy Member of the Gatesburg Formation

SECOND QUARTER GOALS & ACCOMPLISHMENTS

- **Completed the Correlation of Key Subsurface Units**
- **Completed Mapping of Structure & Gross Thickness**
- **Initiated the Study of Reservoir Character**

A LOOK AHEAD TO THE THIRD QUARTER

- Complete Detailed Subsurface Correlation (pay sands)
- Refine & Complete Detailed Mapping of Key Units
- Complete Reservoir Character Study
- Develop Ranking Criteria

TODAY'S PROGRAM

- Strategy 1, Data Collection: Jessica Moore – Program Manager, Applied Oil & Gas, WVGES
- Strategy 2, Stratigraphic Correlation - Mohammad Fakhari, Energy Resources Group Supervisor, OGS
- Strategy 3, Mapping: Kyle Metz– Senior Geologist, OGS
- Strategy 4, Studies of Reservoir Character: Kristin Carter – Assistant State Geologist and Economic Geology Division Manager, PAGS