

Summary of Geologic Factors Assuring Integrity and Safety of Proposed AGI

1. No significant structural offsets or discontinuities in Geologic Section
2. Caprock (Wanakah) is low porosity siltstone and recrystallized limestone which is effective barrier above injection zone
3. Overlying Jurassic and Cretaceous Section up to Lewis Shale is over 5000 feet of low -permeability shales, mudstones with interbedded sandstones which effectively add to the isolation of the injection zone from BHP mine and surface water resources
4. Caprock integrity will be confirmed with detailed logging and coring during drilling
5. Proposed injection pressure is well below fracture pressure of reservoir and caprock and injected gas will remain within solution in the injection zone
6. Injection history of SWD wells in Entrada demonstrate closed system
7. No wellbores penetrated injection zone within the 1 mile area of review

Summary of Well Design Factors Assuring Integrity and Safety of Proposed AGI

1. Well design (Figure 4) indicates setting of surface casing in impermeable Lewis Shale cemented to surface at about 1000-1100' depth . This is 500-600 feet below BHP coal workings in Fruitland Formation and approximately 800 feet below any domestic water wells in the area
2. Production casing to be set within surface casing and cemented to surface with CRA joints at base in which packer will assure the integrity of the base of the production casing exposed to acid gas in injection zone below the packer
3. Cement bond logs will assure casing seal to Formations
4. Corrosion resistant teflon-lined tubing will be inside the production casing and stabbed into CRA packer with annular space filled with inert fluid (diesel) and monitored for pressure to indicate potential tubing leak before it can affect production casing
5. Similar designs have been implemented successfully without any leakage problems at similar and deeper zones in SE NM, Texas and Alberta for many years including 3 such installations designed , permitted and completed by Geolex