SMRI Abstract – Bad Ischl

"Integration of Commercial Aspects and Technical Requirements For Natural Gas Storage in Salt Caverns" By John Istvan, Kenneth Beckman and Keith Schultz

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The value and use of high deliverability underground natural gas storage within the energy industry has evolved dramatically in the past 10 years. When contemplating natural gas storage in salt, most companies usually look for the presence of salt, solution mining water supply, brine disposal possibilities and then determine how the proposed storage customer will value the service, thus creating positive project economics. Cavern storage projects based only on technical merits suffer the danger that the project will not be economic if the value of the storage service, hence, operational plans, are based on weak business criteria. Selecting the optimal facility design from both a technical and commercial viewpoint must be based on multiple criteria and realization that not all customers for storage have the same operational requirements. That factor makes the technical aspects of the surface facility, compression size and type, header pipeline, pipeline interconnections, and the subsurface elements, cavern tubulars, depth to casing shoe, and developed capacity, elements of the commercial design. This paper will outline both commercial and technical criterion required to arrive at an economically viable project, including a brief discussion of the specific utility to each customer type. Additionally, the paper will provide design concepts selected to illustrate markedly different storage service profiles as well as unit storage costs.

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