

Curriculum Vitae Uwe Schmidt

Name: Uwe **Schmidt**
Date of Birth: 14.03.1955
Nationality: German
Profession: Civil Engineer
Languages: German, English



Professional Experience:

Since July 2005: **STORCONSULT-Managing Partner**
Consulting Engineer – Member of the Engineers Chamber of Lower Saxony

1986 – June 2005 **Kavernen Bau- und Betriebs-GmbH, Hannover**
Chief Engineer Department Geotechnology
Project Manager with power of attorney
Centre of Excellence bei **Schlumberger** (Mutterkonzern)

1979 – 1986 **Technische Universität, Hannover**
Technical Assistant

1977 **Beratende Ingenieure Dr. Ing. Peters und Partner, Hamburg**
Civil Engineer

Professional Education:

1977 – 1986 **Universität Hannover**
Civil Engineer Degree graduated 1986 (M. Sc.)

1973 – 1976 **Polytechnikum Hamburg**
Civil Engineer Degree graduated 1976 (Ing. grad.)

Selected Tasks and Projects for Key Areas of Expertise:

Due diligence studies

- Technical due diligence salt cavern project (Germany)
- Technical due diligence salt cavern project (Great Britain)
- Technical due diligence salt mine (Great Britain)
- Technical due diligence salt cavern project (Germany)
- Technical due diligence gas storage caverns (Grait Britain)

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Acquisition of Literature

- Systematic acquisition of geoscientific literature (national, international) for a special federal library systems

Exploration Projects

- Exploration of a gas storage cavern project in rock salt in central Iran
- Evaluation of potash deposits (Saudi Arabia)

CO₂ – Storage

- Site selection for CO₂ storage in Lower Saxony and adjacent North Sea (Germany)
- Site selection for CO₂ storage in Mecklenburg-Vorpommern, Brandenburg and adjacent Baltic Sea (Germany)
- Site selection for CO₂ storage (Kosovo)

Planning Services for Mining Activities

- Study about the requirement, efficiency and feasibility of pressure inside a mine in the case of a beyond designed solution inflow
- Disposal of low and middle radioactive waste, mine filling with insulation fluid under pressure, preliminary design (Germany)
- Closure of the Asse mine, mine filling with insulation fluid under pressure, detailed planning (Germany)

Rock mechanical design of storage caverns

- Study on the transfer of the rock mechanical layout of cavern Reckrod 1 to cavern Reckrod 2 for Gasunion (Germany)
- Rock mechanical design for the gas storage cavern Kiel 102. (Germany)
- Rock mechanical investigations for raising the maximum operating pressure of a salt cavern (Germany)
- Rock mechanical design for different gas storage caverns(Germany)

Rock mechanical design of brine production caverns

- Feasibility study on brine production at Abu Dhabi (Abu Dhabi)
- Sinkhole investigations for Belvedere Spinello brine field (Italy)
- Rock mechanical calculations for deep brine production caverns (The Netherlands)

Rock mechanical assessment of existing salt caverns

- Feasibility study for abandonment of a cavern field (Germany)
- Concept for abandonment of a cavern (Germany)

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- Waste disposal in salt caverns (Thailand)

Rock mechanical assessment of existing salt mines

- Rock mechanical calculations for a shaft (Germany)
- Numerical Simulation of the inclusion method (Germany)

Feasibility studies und cost estimates for storage plants

- Cost estimate for two different gas cavern storage plants (Germany)
- Feasibility studies of gas storage plants in Germany and the Netherlands
- Prefeasibility study potential gas storage in salt formations (Germany)

Project Management

- Member of Project Management Team; development of Project Management Manual – Version 1 (KBB/Germany)

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Special Software Qualification:

- ADINA (Finite Elements Program, used for salt mechanics)
- ANSALT (Finite Elements Program, specialising in salt mechanics)
- PATRAN (Preprocessor for Finite Element Programs)
- CorelDraw
- MS Office

Selected Publications:

- FOLLE, S.; SCHMIDT, U. (2012): **Gasspeicherung in Salzformationen des Mittleren Ostens - Aussichten**
[Gas storage in salt formations in the Middle East - Outlook]
mining geo (2012) 1 (in preparation)
- ROLFS, O.; SCHMIDT, U.; ZAPKE, M. (2006): **The planning of a gas storage facility; basis for an investment decision**
SMRI Fall Meeting, 01.-04.10.2006, Rapid City
- SCHMIDT, U.; ROLFS, O.; STAUDTMEISTER, K. (2006): **Endverwahrung von Speicherkavernen im Salzgebirge, die für die Energiespeicherung nicht mehr wirtschaftlich zu betreiben sind**
[Abandonment of storage caverns in rock salt which cannot be operated economically any more]
DGMK-Frühjahrstagung, 20.-21.04.2006, Celle. S.491-500
- HEUSERMANN, S.; ROLFS, O.; SCHMIDT, U. (2003): **Nonlinear finite-element analysis of solution mined storage caverns in rock salt using the LUBBY2 constitutive law**
Computers & Structures 81 (2003), S.629-638
- SCHMIDT, U., CROTOGINO, F. (1999): **Abschlußmaßnahmen für Salzkavernen / Stand der derzeitigen Entwicklung**
[Cavern abandonment. State of the art]
50. Berg- und Hüttenmänn. Tag, 16 + 18.06.99, Koll. 7, Tagungsbd. S. 303-317
- CROTOGINO, F.; SCHMIDT, U. (1998): **Endverwahrung von Salzkavernen / Stand der derzeitigen Entwicklung**
[Cavern abandonment. State of the art]
DGMK-Frühjahrstagung, 27.-28.04.1998, Celle
- ROLFS, O.; SCHMIDT, U.; CROTOGINO, F. (1993): **Rock mechanical studies on the post-operational phase of a disposal cavern**
Proc. 3rd Conf. on Mech. Behaviour of Salt, Palaiseau, 14.-16.09.93, S.403-412

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- CROTOGINO, F.; ROLFS, O.; SCHMIDT, U. (1992): **Gebirgsmechanische Untersuchungen zur Nachbetriebsphase einer Deponiekaverne** (Kurzfass.)
DGEg Essen, 10. Nat. Felsmech.-Symp., Nov. 1992
- SCHMIDT, U., STAUDTMEISTER, K. (1991): **Geomechanical investigations on the underground disposal of hazardous waste in rock salt**
Proc. 7. Int. Conf. on Computer Methods and Advances in Geomechanics, Cairns, 06.-10.05.91, Vol.2, S.1603-1610
- SCHMIDT, U., STAUDTMEISTER, K. (1989): **Determining minimum permissible operating pressure for a gas cavern using the finite element method**
Proc. Int. Conf. on Storage of Gases in Rock Caverns, Trondheim, 26.-28.6.89, S. 103-113
- Patent DE 3 739 453 A1
PANZER, D.; SCHMIDT, U.; SCHNEIDER, H.-J. (1987): **Mehrschalige, auf Leckagen kontrollierbare Auskleidung unterirdischer Tanklager**
[Multi-shell lining system with leakage control for underground tank farms]

Memberships:

- Deutsche Gesellschaft für Geotechnik e.V. (DGGT) [German Geotechnical Society]
- Deutsche Wissenschaftliche Gesellschaft für Erdöl, Erdgas und Kohle e.V. (DGMK) [German Society for Petroleum and Coal] Their official journal **Erdöl Erdgas Kohle** is available in an international edition **Oil Gas European Magazine** and can be subscribed from non-members at the Urban –Verlag, too.
- Ingenieurkammer Niedersachsen [Chamber of Engineers, Lower Saxony]
- KUGS im WEG [Study Group Underground Gas Storage in Caverns, Trade Association Petroleum and Natural Gas Production]
- Verein Deutscher Ingenieure (VDI) [Association of German Engineers]