

L. William Abel, P.E.



Competencies:

Corporate President – Founded ABEL Engineering/Well Control Co. in 1984 and operated same by providing well control services worldwide for firefighting, capping, relief well operations and high risk toxic gas handling projects.

Special Well Control and Engineering Projects

Kuwait Oil Well Fires (Controlled 41 wells with one team in 71 days)

Created well control management systems and written over 250 Blowout Contingency Plans for worldwide operations.

Taught Drilling Practices for Preston L. Moore, Inc.

Taught Advanced Well Control seminars for Pemex, TOTAL, Mobil Oil, UNOCAL, EXPRO, NAM, etc.

Taught a special snubbing school for Mobil Oil Co. including the manual creation

Managed 5 rig drilling company for 2 years

Well control projects in India, Bangladesh, Indonesia, Republic of China, Angola, Nigeria, Congo, Venezuela, Argentina, Texas, Oklahoma, Kansas, Louisiana, Mexico, Canada, United Kingdom, Norway and Germany. Mr. Abel has been involved in complex well control operations worldwide in the past 25 years.

Rig Site Supervision – Deep high-pressure gas wells, Well Control, Relief Well drilling, Deep wells in Oklahoma, Texas and Louisiana. Also in Tunisia deep rank wildcat. Worked as drilling superintendent for Aramco in Saudi Arabia on H₂S type wells in deep Kuff exploration program.

Publications – Thirty-four technical publications in trade journals mostly on specialized well control operations and project management for well control operations.

Technical Training:

Advanced Well Control and HAZOP

Computer Skills – Word processing, Data Bases, Spread Sheets, Project Management

Basics: Bachelor of Science Civil Engineering Texas Tech University 1967-1971
Master of Business Administration Southern Methodist University 1971-1974

Passport: USA no. 135389617 issued in Houston, 23Feb06 expires 22Feb16

Registered Professional Engineer – Texas (#40719) and Oklahoma (#14489)

Married with 2 sons (born 1982/1984). DOB: 17 June 1949

Member of Society of Petroleum Engineers, IADC, Society of Professional Engineers, Nat.

Society of Civil Engineers, ASCE and St. Luke's United Methodist Church

EXPERIENCE

President, ABEL Engineering/Well Control Co.

1984 – Present (see mergers WWCI /IWC) Responsible for company operations that focus on drilling engineering and completion operations worldwide. The prime objective is to provide technology and experience for well operations with a focus on well control operations. Principle engineer for well control tasks: relief well drilling, dynamic two-phase flow modeling, blowout contingency planning and the project management of well control incidents including firefighting and capping operations.

Responsible for all engineering tasks for the company, including relief well and intervention operations. Company focuses on preventive and remedial tasks for well control operations which include Blowout Contingency Planning, relief wells, snubbing operations, H₂S operations, training services, consultant to Lloyds of London. Engineering services include dynamic two-phase flow modeling, drilling engineering, and project management. Drilled 8 relief wells, planned and engineered capping and kill operations and lead a firefighting team in Kuwait that capped and killed 41 wells in Kuwait in a 71 day period. Total well control experience includes over 100 wells.

- July00 – April01 President, Action Professional Engineering APRO Responsible for the company operations which consist of five (5) profit centers: Based on its collective backgrounds and talents, and having proved the TSN technique, in Phase II, APRO will compete in five business divisions: Drilling Contracting (both conventional and using TNSTM), Well Control and Firefighting, Engineering and Well Site Services for underbalanced drilling projects, Push Pull System (under development) and rig manufacturing (for internal use and outside sale). The company started began operations in July of 2000 with a single built for purpose underbalanced drilling rig the TNS-1.
- Aug95 to July96 President, IWC Engineering Service Inc. Responsible for all engineering tasks for the company, including relief well and intervention operations. Company focuses on preventive and remedial tasks for well control operations which include Blowout Contingency Planning, dynamic two-phase flow modeling, drilling engineering, etc.
- May93-July95 VP Engineering, Wild Well Control, Inc.
Responsible for all engineering tasks for the company, including relief well and intervention operations. Company focuses on preventive and remedial tasks for well control operations which include Blowout Contingency Planning, dynamic two-phase flow modeling, drilling engineering, etc. Participated in 43 well control operations and relief wells in this time frame.
- 1982-1983 Operations Manager, Funk Exploration, Inc.
Managed a \$350m drilling and completion project where 245 wells were drilled in two years. Had responsibility for drilling workover, completion and purchasing where 35 men were employed.
- 1981-1982 Drilling Engineer / Drilling Co. Operations Manager, Grace Shursen & Moore Associates
Supervised construction of \$15m drilling rig project. Managed the turnkey drilling operations for the company. Worked as consultant for relief well projects (Apache Key 1-11) and dynamic kill operations (Canada, USA, etc.). Taught Drilling Practices Seminars in 5 countries.
- 1977-1981 Drilling Superintendent / Drilling Engineer
Arabian American Oil Co.
Drilling superintendent for offshore (jackup) drilling operations for deep high pressure gas exploration wells, development drilling projects. Has responsibility for 5 jackup operations. Worked on 3 blowouts, two offshore and one onshore, where large volumes of H₂S were present.
Drilling engineer for offshore drilling operations, designed casing, cement program, bit selection, bid packages, etc. Performed tests of exploration wells and provided engineering support for field operations.
- 1974-1977 Civil Engineer, M. W. Kellogg Co., Houston, Texas
Civil design of petrochemical facilities. Interfaced to project group. Did dynamic analysis of compressor foundations, steel and concrete design for \$1,000m facility projects.
- 1972-1974 Project Engineer, Texas Power & Light Co., Dallas, Texas
Design and built high voltage transmission lines, which involved the bid specification and purchase packages for material. Special project was complete design of a family of transmission towers for 345kv line. Did all foundation work for transmission and substation work for \$300m construction project.

SUMMARY OF PUBLICATIONS and US PATENTS
by L. William Abel, P.E.

US Patents

Feb-04 US Patent Applications filed for "High Pressure Shooting Nipple" a safety device for rigging small diameter BOPs to larger BOPs in rapid time with full integrity of the BOP stack and adds additional flow barriers both usage and physical device patents.

1. "LWD/MWD proximity techniques offer accelerated relief well operations", L. William Abel and James N. Towle, World Oil, Jan 2003.
2. "Cooperatives: The Regional Approach for Well Control Operations", L. William Abel, World Oil, May 1996.
3. "Planning a Dynamic Kill", Journal of Petroleum Technology, Technology Today Services, April 1996.
4. 7-Part Series on Well Control Topics, "H₂S, Capping, Project Management, etc.", Oil&Gas Journal, 1995.
5. "Capping Friendly Platform Design", David Barnett & L.W. Abel, Offshore, 1995.
6. "Blowout Contingency Planning: For Multi-National Operations", IADC-SPE, Well Control Conference for Asia/Pacific Regions, 10 pages, Singapore, 1-2 December 1994.
7. "Post Capping Kill Comparisons", IADC-SPE, European Well Control Conference, 12 pages, Stavanger, Norway, June 1994.
8. "Blowout Contingency Planning: Risk Management Techniques", Oil&Gas Journal, 6 pages, June 7, 1993.
9. "Blowout Contingency Planning: Preparing for the Worst Case Event", IADC-SPE, European Well Control Conference, 51 pages, Paris, France, 3-5 June 1993.
10. "Non-Technical Well Control", Lloyd's of London Training School, 193 pages, 1989.
11. "Wild Well Control Techniques", VI Congress of Latin American Oil Producers, June 1988.
12. "Lessons of Kuwait", Abel Engineering/Well Control Co., 13 pages, 1992
13. "Blowout Contingency Planning", Abel Engineering/Well Control Co., 19 pages, 1991.
14. "Hands-On Basic Well Control", Abel Engineering/Well Control Co., 128 pages, 1990.
15. "Casing Design", ARAMCO Drilling Manual, 1979.

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16. "Cooperatives: The Regional Approach to Well Control", L. William Abel, SPE, ABEL Engineering Co. and Jerry L. Winchester, SPE, Halliburton Energy Services, Inc., presented 12-14 May 1996, Aberdeen, Scotland Orleans, La. IADC Well Control Conference.

17. "Comparison of Steady State and Transient Analysis Dynamic Kill Models for Prediction of Pumping Requirements", IADC/SPE 35120, L. William Abel, SPE, ABEL Engineering Co. and Donald W. Shackelford, SPE, Halliburton Energy Services, Inc., presented 12-14 March 1996, New Orleans, La. IADC/SPE conference.
18. "Fire Fighting and Blowout Control", L. William Abel, et al, ABEL Engineering (Gulf Publishing), 540 pages, January 1994.
19. "Guidelines for Snubbing", Mobil Training Course, 1987.
20. "Coil Tubing Operations Guideline", Mobil Training Course, 1989.
21. "Advanced Well Control Techniques", Mobil Training Course, 1,000 pages, 1990.

L. William Abel & Robert Franklin

22. "Snubbing & Stripping Operations", Wild Well Control Inc., 275 pages, 1989.
23. "Safer Snubbing Depends on Proper Pre-job Calculations", World Oil, October 1988.
24. "Well Control Factors to Consider When Snubbing", World Oil, November 1988.
25. "Well Control Equipment for Safer Snubbing", World Oil, December 1988.
26. "Guidelines for Safer Snubbing", World Oil, January 1989.

L. William Abel & Gary D. Oberlender

27. "Full-Scale Rig Test Applies 1.2 million lb. Hook Load", Drilling, June/July 1986.
28. "Full-Scale Structural Testing of Deep Drilling Masts", SPE Paper #5429, Offshore Technology Conference, 1987.

Marvin Lisnitzer, Donald C. Chang & L. William Abel

29. "The Design of Support Structures for Elevated Centrifugal Machinery", Sixth Turbomachinery Symposium, Texas A&M, 1977.