

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FULL-METAL-POWER B.V.,
Petitioner,

v.

INFOCUS DOWNHOLE SOLUTIONS USA LLC,
Patent Owner.

Case IPR2025-00391
Patent No. 10,676,992

DECLARATION OF JEFF CHESTNUT

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I, Jeffry (“Jeff”) Chestnut, declare as follows:

I. INTRODUCTION AND SCOPE

1. I have been retained by counsel for Patent Owner Infocus Downhole Solutions USA LLC as a technical expert in this proceeding, which involves a challenge to the validity of U.S. Patent No. 10,676,992 (the “’992 patent”). I submit this declaration in support of Patent Owner’s Preliminary Response and to rebut certain statements in the Petition.

II. EXPERIENCE AND QUALIFICATIONS

2. I received a B.S. in geology from the University of Idaho in 1974. I then spent 2 years in engineering studies at the University of Idaho, 1974-1975, leading to an M.S. in Engineering, although I did not complete that advanced degree.

3. In addition, over the years, I have received professional education in Management, MIS, Sales and Marketing, as well as technical training.

4. I have over 50 years of experience in the oilfield services industry. My work experience includes over 40 years in petroleum exploration and production and over 35 years of technical sales and management of technology companies in the petroleum exploration and production business.

5. For example, after college, I started working for Cities Service Oil Company dealing with field problems involving drilling, production, and injection. I worked for Total where I ran a drilling program for in the Four Corners area of

Colorado. I was the engineer, manager, and project accountant. I worked for Core Labs, where, among other functions, I performed engineering, lab and sales work. I worked for Halliburton as a field engineer, where I focused on specialty tools. While at Halliburton I interacted with Otis Engineering, helping apply Otis tools to Halliburton service efforts. I went back to Core Labs, by whom I was transferred to Houston in 1987 and I have worked in Houston ever since. I also worked Schlumberger selling high-end software and intellectual property.

6. Between many of the aforementioned jobs, I did independent consulting work.

7. My work experience has also included extensive work in China, including for Chinese National Petroleum Corporation (CNPC) and Sinopec, for whom I consulted regarding horizontal wells with and without motors, and bottomhole assemblies.

8. Currently, I am a principal of Critical Point, which has been my consulting company since 2015. Critical Point specializes in sales of completion tools and completion consulting. Critical Point is located in Houston, Texas.

9. I have been the CEO of Coil Tubing Technology Inc. ("CTT") since 2016. CTT supplies a full line of proprietary tools, manufactured in accordance with and to oil industry specifications. The core business of CTT is the development and marketing of specialty tools and related innovative technical solutions used with coil

tubing and jointed pipe in the bottomhole assembly for the exploration and production of hydrocarbons. CTT, headquartered in Houston, Texas, is active worldwide.

10. Over the years, I have been an active member of multiple professional organizations, including Society of Petroleum Engineers (SPE, formerly SME), American Association of Petroleum Geologists (AAPG), Wyoming Geological Association, Dallas Geological Association, Houston Geological Association, and Houston Geophysical Association. As part of my activities, I have been a keynote speaker and panel member at several events, including events at The University of Texas and Texas A&M University. I have also served on numerous committees.

11. In addition, I have experience with creating intellectual property, working with attorneys to prepare patent applications, and defending intellectual property. For example, while at Halliburton, I reviewed several patent filings for various tools and technologies. I am generally familiar with the patent process.

12. A copy of my curriculum vitae is attached as Appendix A, which contains further details regarding my experience, education, and other qualifications to render an expert opinion in connection with this proceeding.

13. Over the years, I have met, and my companies have done business with, individuals associated with Petitioner and Patent Owner. But my opinions are based on my own views of the patented technology and the prior art. My compensation is

not dependent on the outcome of this proceeding and in no way affects the substance of my statements in this Declaration.

14. For my work, I am being compensated at the rate of \$250/hour plus any reasonable expenses I might incur.

III. MATERIALS CONSIDERED

15. In addition to the Petition in this proceeding, I have considered the following materials in preparing this Declaration:

Petitioner's Exhibits:

Exhibit	Description
1001	U.S. Patent No. 10,676,992 ("the '992 Patent")
1002	Amendment After Non-Final Rejection dated December 1, 2019, in Prosecution History of the '992 Patent ("ROA")
1003	Notice of Allowance, in Prosecution History of the '992 Patent ("NOA")
1004	CA2961629 – "the '629 priority application"
1005	Chinese Patent Publication Number CN102501016A – Translated ("Zhilong")
1006	Yang, F., Ren, T., Wang, H., Liu, B., & Chen, M. (2016). Analysis of Flow Field for Electrochemical Machining Metal Screw Pump Stator. <i>The International Journal of Advanced Manufacturing Technology</i> . https://doi.org/10.1007/s00170-016-9187-y ("Yang")
1007	U.S. Patent Application Publication No. 2010/0006342 ("Froehlich")
1008	U.S. Patent Application Publication No. 2016/0168912 ("Mitchell")
1009	U.S. Patent No. 9,976,227 ("Wangenheim")
1010	Chinese Patent Publication Number CN201121583Y - Translated ("Jinqi")
1011	Chinese Patent Publication Number CN102139440A – Translated ("Jinglong")
1012	Chinese Patent Publication Number CN102051016A – Untranslated
1013	Chinese Patent Publication Number CN201121583Y – Untranslated

1014	Chinese Patent Publication Number CN102139440A – Untranslated
1015	Affidavit for Translations of CN102501016A and CN102139440A
1016	Affidavit for Translation of CN201121583Y

Patent Owner's Exhibits

Exhibit	Description
2001	Declaration of Archibald Cruz in Support of Motion for Pro Hac Vice Admission
2002	Declaration of Archibald Cruz in Support of Request for Discretionary Denial
2003	Docket Control Order (ECF No. 27), <i>InFocus Downhole Solutions USA LLC v. Full-Metal Power B.V.</i> , No. 2:24-cv-00875 (E.D. Tex.)
2004	Defendants' invalidity contentions, <i>InFocus Downhole Solutions USA LLC v. Full-Metal Power B.V.</i> , No. 2:24-cv-00875 (E.D. Tex.)
2005	File History of CA2985258

16. I have reviewed the above exhibits and any other materials cited in this Declaration.

IV. LEGAL STANDARD

17. I am not an attorney. For the purposes of this Declaration I have been informed by Patent Owner's counsel about certain legal principles that are relevant to my analysis and opinions. I have applied those legal principles in arriving at my opinions expressed in this Declaration.

A. Level of Ordinary Skill in the Art

18. I understand that a person evaluating the claims of the '992 Patent and assessing the prior art must do so based on the perspective of one of ordinary skill in the art at the relevant earliest claimed effective filing date.

19. I understand that several factors are to be considered in determining who would be a person of ordinary skill in the art. These factors include: (1) the types of problems encountered in the art; (2) the prior art solutions to those problems; (3) the rapidity with which innovations are made; (4) the sophistication of the technology; and (5) the educational level of active workers in the field.

B. Claim Construction

20. I understand that “claim construction” is the process of determining a patent claim’s meaning. I also have been informed that the proper construction of a claim term is the meaning that a person of ordinary skill in the art (*i.e.*, the technical field to which the patent relates) would have given to that term at the time when the relevant patent application was filed in the United States Patent & Trademark Office.

21. I also have been informed that, in this proceeding, claim construction will be determined by the Patent Trial and Appeal Board (“the Board”). I further understand that the proper construction of any term that requires construction is how a person of ordinary skill in the art would understand the term based on its use in the claims, specification, and file history of the patent.

22. I understand that claim terms that are not construed by the Board should be given their ordinary and customary meaning as understood by a person of ordinary skill in the art at the time of the claimed invention.

C. Obviousness

23. I am informed that obviousness is a question of law premised on underlying issues of fact, all of which must be considered, including: (i) the scope and content of the prior art; (ii) the level of ordinary skill in the art; (iii) the differences between the claimed invention and the prior art; and (iv) secondary considerations of nonobviousness, such as commercial success, long-felt need, and the failure of others.

24. I am informed that each element of a claim must be disclosed in the prior art references for a claim to be found obvious. I am informed that when analyzing the question of obviousness, it is improper to use hindsight reconstruction, and that one should not use the patent as a road map for selecting and combining items of prior art. I am informed that the relevant question is what a person of ordinary skill in the art would have understood at the time the invention was made in light of all the prior art before him or her.

25. I am informed that when deciding whether to combine various items described in the prior art, the relevant question is whether the prior art combination would have been obvious to a person with ordinary skill in the art at the time of the claimed invention. I have been further informed that it can be important to identify a teaching, suggestion, or motivation, in either the prior art or the knowledge of persons skilled in the art, that would have prompted a person of ordinary skill in the

relevant field to combine the elements in the prior art in the way the claimed invention does.

26. I am informed that the teachings of two or more references may be combined, or a single reference may be modified, if such a combination or modification would have been obvious to a person having ordinary skill in the art at the time of the claimed invention. In determining whether a combination or modification would have been obvious, I have been informed that it is appropriate to consider, among other factors: (1) whether the teachings of the prior art references disclose known concepts combined in familiar ways, which, when combined, would yield predictable results; (2) whether a person of ordinary skill in the art could implement a predictable variation, and would see the benefit of doing so; (3) whether the claimed elements represent one of a limited number of known design choices, and would have had a reasonable expectation of success by those skilled in the art; (4) whether a person of ordinary skill would have recognized a reason to combine known elements in the manner described in the claim; (5) whether there is some teaching or suggestion in the prior art to make the modification.

27. I am informed that a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was independently known in the prior art. I am informed that while one must look carefully at a patent that claims as an innovation the combination of known devices according to their

established functions, it is important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. For example, a person of ordinary skill in the art could have been motivated to combine elements described by different prior art references where the prior art discloses the benefits of such a combination or the combination would have solved the problem the person of skill was attempting to solve.

28. I have been informed that to show a motivation to combine, one is not required to show how the references would be physically combined to render a claim obvious. The analysis is not focused on whether the features of one reference can be physically incorporated into the structure of another reference, but rather whether a person of ordinary skill in the art would have been motivated to combine the teachings of the references to achieve the claimed invention.

D. Burden of Proof

29. I am informed that, to institute an IPR, Petitioner bears the burden, by a preponderance of the evidence, to establish a reasonable likelihood of prevailing with respect to at least one challenged claim. Petitioner has the burden to identify with particularity the evidence that supports the grounds for the challenge to each claim. I have been informed that Petitioner's burden never shifts to Patent Owner.

30. I understand that Petitioner’s burden of proof is not satisfied by employing mere conclusory statements. I further understand that obviousness determinations based on conclusory and unsupported statements risks allowing the challenger to use the challenged patent as a roadmap to reconstruct the claimed invention using disparate elements from prior art—i.e., the impermissible ex post reasoning and hindsight bias.

31. I also am instructed that attorney argument is not evidence. I am further instructed that Petitioner cannot employ mere conclusory statements to satisfy its burden of proving obviousness. Petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.

V. OPINIONS

A. Threshold Opinions

32. When I reviewed the Petition and accompanying materials, I noted it was not supported by a declaration from an expert. Instead, the Petition proposes claim constructions for “a sufficiently narrow clearance” and “an efficient seal without seizing the progressive cavity in use” Paper 1 (pages 13, 15), based only on lawyer argument. (Those lawyer arguments also are incorrect, as I explain below.) Moreover, the Petition argues about what one of ordinary skill would understand or be motivated to do (for example at page 18), again without support from an expert. Thus, in my opinion the Petition relies solely on attorney argument for points

necessary to meet Petitioner's threshold burden. As I noted above, I have been instructed that attorney argument is not evidence. For this reason alone, in my opinion Petitioner has failed to meet its threshold burden of proof.

33. When I reviewed the Petition, I also noted the Petition was silent about the level of ordinary skill. Thus, in my opinion, the Petition suffers from a second fatal deficiency. The first deficiency, which I discuss immediately above, is the Petition relies on attorney argument instead of evidence. The second deficiency is that even its attorney argument is not based on any level of ordinary skill in the art. For these two reasons, in my opinion Petitioner has not met its threshold burden of proof.

34. When I reviewed the Petition, I also noted the lawyer argument on which the Petition relied is conclusory. For example, the Petition states that it "would be merely a matter of obvious engineering choice" (page 19) to form a stator from a single integral block of material. That conclusory statement is unsupported by any evidence at all, let alone by evidence supporting an appropriate level of ordinary skill. For these three reasons, in my opinion Petitioner has not met its threshold burden of proof.

35. As I noted above, the Petition does not propose, even in conclusory fashion, a level of ordinary skill in the art. I understand it is not my task to fix this fatal flaw in the Petition. With that said, I offer opinions on claim construction and

non-obviousness. For the purpose of this response, I have been asked to focus my response to Grounds 1 and 4, which are the only two grounds that challenge the validity of the two independent claims. I have been advised that if the independent claims are not obvious, neither are any of their dependent claims.

36. Since my claim construction and non-obviousness opinions rely on the understanding of a person of ordinary skill in the art, I also offer a supporting opinion about the level of ordinary skill in the art. In particular, based on the technical disclosure of the '992 Patent, my claim construction and non-obviousness opinions are based on my opinion that as of January 2017, a person of ordinary skill in the art would have had a bachelor's degree in chemical, petroleum, or mechanical engineering, two to three years of operational experience relating to the exploration and production of hydrocarbons downhole, or equivalents of the foregoing.

37. I understand there may be a dispute about whether the earliest claimed effective filing date is March or November 2017. With that said, based on my background and experience, as set forth above, I am a person of at least ordinary skill in the art throughout at least as early January 1, 2017 (and have been for quite a long time).

38. The Petition relies on the combination of Zhilong and Froehlich for Ground 1 and the combination of Yang and Jinqi for Ground 4. I have been advised that if the Petition does not convince the Board in Ground 1 or Ground 4 of the

obviousness of independent claims 1 or 11, then the Petition also fails to make a prima facie case of obviousness of any of the dependent claims. Accordingly, while I disagree with many of the unsupported arguments in the Petition concerning dependent claims 2-10 and 12-19, I have been advised that because this Declaration is in support of Patent Owner's Preliminary Response, I can focus on analysis and opinions related to Grounds 1 and 4 and independent claims 1 and 11. I reserve the right to offer additional opinions should the Board institute review.

B. Opinions Rebutting Petitioner's Lawyer Arguments

1. Claim Construction

39. For the purpose of this Declaration, I focus on only a few of the claim construction deficiencies in the Petition's argument. That should not be taken to assume I agree with the Petition's other claim construction positions.

40. The Petition discusses the limitation in both independent claims of "the stator is formed by electrochemical machining (ECM) to structure the rotor contacting surfaces of the stator to achieve a sufficiently narrow clearance or negative interference fit with the rotor to form an efficient pumping seal without seizing the progressive cavity section in use". (EX. 1001, 30:59-62 and 32:3-6).

41. The Petition argues "a sufficiently narrow clearance" and "an efficient seal without seizing the progressive cavity in use" in independent claims 1 and 11 should each be construed to mean merely "a stator/rotor arrangement that would be

operable as opposed to inoperable.” Paper 1 at 15. Petitioner argues it is unable to determine the breadth for the limitations in claims 1 and 11 of “a sufficiently narrow clearance” and “an efficient pumping seal without seizing the progressive cavity section in use.” (EX. 1001, 30:59-62 and 32:3-6). Paper 1 at 14-15. The Petition argues that the claim language is “indefinite,” but the Board should construe the language as requiring only an operable stator/rotor arrangement. Paper 1 at 15. The Petition fails to set forth any understanding of what makes claim language definite or indefinite. I have been instructed that a patent claim, read in light of the specification and prosecution history must inform those skilled in the art about the scope of the art with reasonable certainty.

42. The Examiner explained in the Notice of Allowance that the prior art cited did not disclose ECM “to structure the rotor contacting surfaces of the stator to achieve a sufficiently narrow clearance or negative interference fit with the rotor to form an efficient pumping seal without seizing the progressive cavity section in use.” (EX. 1003, 3:4-7). Thus, the Examiner did not consider that language to be unclear to a person of ordinary skill in the art, and neither do I.

43. To be clear, I disagree that a person of ordinary skill having the benefit of the teaching of the ’992 Patent would be unable to determine the meaning of “sufficiently narrow clearance” or “efficient pumping seal” when read in the context of the other portions of the claim, the other claims, the specification and the

prosecution history, and the knowledge of a person of ordinary skill in the art without undue experimentation.

44. In my opinion, the Petition's argument that the claim needs to be construed as requiring only an operable stator/rotor arrangement ignores the claim language of "to form an efficient pumping seal without seizing the progressive cavity section in use" and the knowledge of a skilled artisan. The claim language requires a seal that is more than merely operable. A seal could operate, but not be efficient. The construction set forth in the Petition is not how the claim term would be understood by a POSITA in my opinion. The Petition's unsupported lawyer argument is not correct.

45. Moreover, in my opinion, a skilled artisan (which the Petition fails to define) would, with the detailed teachings in the '992 Patent, be able to make and use a system with "an efficient pumping seal that avoids seizing the progressive cavity section in use," without undue experimentation. Further, in my opinion, these claim terms need no construction beyond plain and ordinary meaning.

2. The Petition Fails to Create a Reasonable Likelihood that Petitioner Will Prevail with respect to at least One Claim

46. My review of the Petition suggests to me that whoever wrote it is not experienced in the oil services industry. Here is one very simple reason why I say this. The title of the '992 Patent is downhole tools with progressive cavity sections,

and related methods of use and assembly. The Petition relies on a paper written by Yang. The paper is titled Analysis of flow field for electrochemical machining metal screw pump stator. EX. 1006. The paper proposes the design idea of an “all-metal screw pump.” The Petition argues that Yang teaches a downhole tool “since the pump is used downhole in a well.” Paper 1 at 38. Those of ordinary skill in the art know that a pump is not a downhole pump because it is used downhole in a well. Rather, a downhole pump is used to lift fluids to the surface. While such a pump is in the hole, that does not make it a downhole pump. Screw pumps of the type described in Yang may be used to move fluids on the surface. The all-metal screw pump idea in Yang is intended to be used in high temperature wells, high viscosity wells, and high sediment concentration wells. EX. 1006 at 1. Yang never states it is used as a tool for work downhole in the well, and the three conditions Yang discusses are all conditions that can be encountered on the surface.

47. My review of the Petition revealed that the Petition relies only on its “operable” stator/rotor arrangement construction for obviousness invalidity for Ground 1. See Paper 1 at 20, 29 (“The screw pump disclosed in Zhilong formed by this ECM makes an operable stator/rotor arrangement). The Petition also relies on its “operable” stator/rotor arrangement construction for obviousness invalidity based on Yang for Ground 4. See Paper 1 at 40, 46 (“The screw pump disclosed in Yang formed by this ECM makes an operable stator/rotor arrangement.”).

48. In my opinion, and contrary to the lawyer argument in the Petition, the two references on which the Petition relies for Ground 1, either alone or taken together, do not disclose or suggest the claim language requiring “an efficient pumping seal that avoids seizing.” For this reason alone, in my opinion Ground 1 fails to create a reasonable likelihood that Petitioner will prevail with respect to at least one claim.

49. For Ground 4, the Petition also points to Jinqi as an alternative source for “a sufficiently narrow clearance or negative interference fit” if that language “might mean something more than an operable stator/rotor arrangement.” Paper 1 at 40, 46. The Petition argues that Jinqi discloses a ‘full-metal screw pump’ like Yang such that it would be obvious to use specific dimensions disclosed in Jinqi where Yang is silent on such dimensions. (EX. 1010, 1:3-4). Paper 1 at 40, 46.

50. However, this argument ignores the claim language requiring “an efficient pumping seal that avoids seizing.” For that reason alone, the Petition failed to meet its burden as to this claim limitation in my opinion. In addition, in my opinion, Jinqi does not disclose or suggest structure that is “an efficient pumping seal that avoids seizing.”

51. The Petition does not state that the prior art in Ground 1 or Yang in Ground 4, as applied in the Petition, discloses or suggests the claimed an efficient pumping seal that avoids seizing. Nor does the Petition’s alternative argument assert

Jinqui discloses or suggests an efficient pumping seal that avoids seizing. For this reason alone, the Petition's incorrect claim construction leads to an incorrect conclusory argument.

52. In my opinion, the prior art the Petition applies to the independent claims does not disclose or suggest a stator formed by ECM to structure the rotor contacting surfaces of the stator to achieve a sufficiently narrow clearance or negative interference fit with the rotor to form an efficient pumping seal without seizing the progressive cavity section in use.

53. Because this limitation is in both independent claims, and the Petition's prior art does not disclose or suggest this limitation, the Petition has failed to meet its institution burden for any claim.

VI. AVAILABILITY FOR CROSS-EXAMINATION

54. By signing this Declaration, I recognize that the Declaration will be filed as evidence in a contested case before the Board at the USPTO. I also recognize that I may be subject to cross-examination in the case and that cross-examination will take place within the United States. If cross-examination is required of me, I will appear for cross-examination within the United States during the time allotted for cross-examination.

VII. RIGHT TO SUPPLEMENT AND FURTHER OPINE

55. As stated herein, I submit this declaration in support of Patent Owner's Preliminary Response and to rebut certain statements in the Petition. Should review be instituted, I plan to submit a declaration in support of Patent Owner's Response.

56. I also reserve the right to supplement my opinions in the future to respond to any arguments that the Petitioner raises, as well as to take into account new information as it becomes available to me.

57. I declare that all statements made herein of my own knowledge are true and correct and that all statements made on information and belief are believed to be true; and further that these statements were made with the full knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: April 29, 2025


Jeffrey Chestnut

EXHIBIT A

JEFFRY (JEFF) F. CHESTNUT

2818 Kingly Pine Trl ♦ Conroe, TX 77385 ♦ 713.515.2725 (Cell)
jchestnut@coiltubingtechnology.com

Oilfield Services Executive experienced in management, market research, field operations analysis, and sales.

- Over 50 years of industry experience worldwide with major organizations, start-ups, and small to medium oilfield service companies.
- Senior executive positions
- Senior operational management positions
- Senior technical positions
- Responsible for radical growth - oilfield services domestic and international markets
- Turnaround of troubled organizations
- Experience with IP creation and Patent generation; defense of Patents case preparation

Professional Organizations – all memberships were discontinued in 2023

- SPE – started membership in college with SME that predated the formation of SPE
- AAPG
- Wyoming Geological Association
- Dallas Geological Association
- Houston Geological Association
- Houston Geophysical Association

The first 5 years of my career were spent in the field carrying out a variety of technical functions as an engineer and geologist. Working for two large oil and gas operators (Cities Service Oil Company Research and Total) to solve production problems, improve drilling performance and manage drilling programs in the western half of the USA formed a solid technical base to move into more senior technical positions at Core Laboratories, Halliburton, and Schlumberger, for over 12 years. While working with the largest international major oil companies a keen interest in start-up organizations was a strong call. The next 19 years were spent growing new start-ups and driving significant growth. Some very successful engagements resulted in customers resolving reservoir engineering challenges, overcoming production management issues, architecting resolution for significant enterprise software deficiencies, and working with C-Suite Executives to improve operations analysis to improve organizational performance. The strong technical perspective applied to these engagements provided valuable insight and guided critical thinking for accountable results and change.

For the last 20 years Mr. Chestnut has focused on oilfield technologies applied to my passion to improve completions and production performance. This has been a focus on drilling and completions equipment for conventional and unconventional resources, and managing oilfield tools companies for growth and positive returns for investors in global markets.

A synopsis of the last 20 years:

PACKERS PLUS ENERGY SERVICES, INC.

Business Development Manager - USA

Focus on Open Hole Multi-Stage completions. Lead USA revenue growth to double sales from previous year. Advise technical perspective on legal issues and patent issues. Consult with customers on wellbore design and downhole tool application.

PEAK COMPLETION TECHNOLOGIES, INC.

Global Business Development Manager

Create Business Growth Plan to double worldwide company revenue for 2012, including specific account penetration and specific technology level for each new and existing account. Advise in house legal team on patent issues. Significant work in China.

TRYTON TOOLS USA INC.

Business Development Manager

Manage the startup of the US business for Canadian based completion tools and services division of Essential Energy Services. Full P&L responsibility. Define market strategy and business plan, successfully executed. Establish banking relationships and establish credit with major suppliers. Went from ground level to full operation in 4 months, resulting in \$1 million per month run rate business, 3 service centers, Houston HQ Office. Evaluate products imported from Canada and sold for patent issues. Manage cross border charges, export/import fees and issues, negotiate third party patent licenses.

ION GEOPHYSICAL - GEOVENTURES DIVISION

Business Development Manager

Introduce new technology for shallow buried array with proprietary geophone, and microseismic processing. Resulting in the first revenue since business unit startup 3 years prior to \$1.5 million per month run rate.

CRITICAL POINT

Principal

Consulting services in Oil and Gas Exploration and Production.

- ◆ Fit for purpose drilling, design specification for new proprietary ream while drilling product.
- ◆ New product specification for large ID frac Plug, dissolvable material, proprietary product.
- ◆ Contract wholesale sales of major USA based service company's completion tools.
- ◆ Sales of new drill well completion tools and services.
- ◆ Re-completion, Re-frac, and well workover tools – design, sales and services.
- ◆ Completions failures forensics – recover costs for operators.
- ◆ Retained to function as COO for coil tubing tools company.

COIL TUBING TECHNOLOGY, INC.

CEO, Chairman Board of Directors

Focus on recovery of thru tubing tools business. Lead the technical aspects of lawsuit on business issues and patent issues, multiple suits resolved. Retire over \$2 million in debt, restructure financial operations, rebuild manufacturing and customer service operations. Evaluate new technology of patented products and form Joint Venture with holding company of numerous oilfield service companies. Manage daily operations, sales of tools, rentals, design, and manufacturing. Perform sustaining engineering on proprietary products/devices.

PERSONAL DATA

BS, Geology, University of Idaho; Moscow, ID 1974.

Completed Engineering coursework toward MS Engineering, University of Idaho Graduate School; Moscow, ID 1974-1975.

Additional professional education in Management, MIS, Sales and Marketing, and relevant Technical training.

Married 44+ years, one daughter. Eagle Scout. Enjoy golf, fishing, and designing/building PC systems.

Proficient PC user.