1. Two-dimensional conductivity image from the data measured by electromagnetic cross-well tools

Zhang, Jianhua (1); Liu, Ce (1)
Source: *Proceedings of SPIE - The International Society for Optical Engineering*, v 4129, p 180-189, 2000; **ISSN:** 0277786X; **Conference:** Subsurface Sensing Technologies and Applications II, July 31, 2000 - August 3, 2000; **Sponsor:** SPIE; **Publisher:** Society of Photo-Optical Instrumentation Engineers
Author affiliation: (1) Xian Petroleum Inst, Xian, China

Abstract: The predicting and monitoring of fluid movement during a steam-injection operation is much important in an EOR process. A crosswell two-dimensional conductivity imaging technique is developed to monitor the injection or production profiles by inverting formation conductivity from crosswell electromagnetic measurements. The tool responses are calculated from electromagnetic field equations using perturbation approach. Maximum entropy constraint is used to regularize the inversion problem. To assure the stability and fast convergence, the inversion procedure is conducted in three steps: homogeneous inversion that assumes the formation with an unique conductivity; one-dimensional inversion that generates horizontally layered formation; and two-dimensional inversion that regards the conductivity anomalies both in vertical and radial directions. An initial guessed value of homogeneous background is needed for the program at the beginning. The calculated result of homogeneous medium is then used as the initial value of one-dimensional inversion, and the reconstructed layered conductivity profiles are the initial input for the two-dimensional inversion. By the steps from homogeneous to heterogeneous inversion, the misfit between measured and calculated data decreases sharply. The examples for both synthetic data and field data are illustrated. The inversion results show that the reconstructed conductivity images are in agreement with the known formation characters within given error tolerances. (12 refs)

Main heading: Imaging techniques
Controlled terms: Electric conductivity - Electromagnetic field measurement - Electromagnetic logging - Enhanced recovery - Perturbation techniques - Two dimensional
Uncontrolled terms: Electromagnetic crosswell tools - Electromagnetic imaging - Steam injection operation
Classification Code: 511.1 Oil Field Production Operations - 512.1.2 Petroleum Deposits : Development Operations - 701.1 Electricity: Basic Concepts and Phenomena - 723.2 Data Processing and Image Processing - 921.6 Numerical Methods - 942.4 Magnetic Variables Measurements
Treatment: Applications (APP) - Theoretical (THR)
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

2. Calculation of magnetic strip article antitheft system

Yu, Min ; Yang, Xinhai
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 6, p 26-29, Nov 25 2000; **Language:** Chinese; **ISSN:** 10015361
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

3. Simple numerical algorithm for the solution of evolutionary random responses

Li, Junqiang ; Liu, Shuyuan ; Fang, Tong
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 73-75, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

4. Mesozoic-cenozoic sedimentary facies in Chalangla area, Qiangtang basin, Tibet

Bai, Yubao ; Wei, Yuanjiang ; Sun, Dongsheng ; Pang, Wen
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 1-5, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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5. Extraction of catalytic cracking diesel by complex solvents

Zhang, Keliang ; He, Li

Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 30-33, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

Database: Compendex

Data Provider: Engineering Village

6. Blow-up of solutions for two classes of strongly damped nonlinear wave equations

Shang, Yadong

Source: *Gongcheng Shuxue Xuebao/Chinese Journal of Engineering Mathematics*, v 17, n 2, p 65-70, 2000;
Language: Chinese; **ISSN:** 10053085; **Publisher:** Xi'an Jiaotong Univ

Abstract: In this paper, we study the blow up problems of solutions for the initial boundary value problems of two classes of strongly damped nonlinear wave equations $utt - \#\#ut - \beta\Delta\# = f(u)$ $(\alpha$ gt; 0, β >= 0), $utt - \#\#ut - \beta\Delta\# = f(ut$ $(\alpha$ gt; 0, β >= 0) It is proved that under certain assumptions on the nonlinear function and the initial data the solutions of the initial boundary value problems of these two equations blow up in finite time.

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7. Field test of 'loosening rock by the dilatancy of explosive waves" in the casing well 4242 in Zichang oil field

Wang, Aihua ; Tian, Hejin ; Zhang, Jie ; Li, Tang ; Tian, Min

Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 17-20, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

Database: Compendex

Data Provider: Engineering Village

8. Stability controlling model of built-in eccentric directional controller

Jiang, Dongxia ; Zhou, Jing ; Fu, Xinsheng

Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 44-49, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

Database: Compendex

Data Provider: Engineering Village

9. Dynamic model of rotary sucker rod string and its finite difference equation

Jiang, Yangmin ; Peng, Yong ; Xu, Jianning

Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 54-56, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

Database: Compendex

Data Provider: Engineering Village

10. High-precision integration for problems of evolutionary random responses

Li, Jun-qiang ; Fang, Tong

Source: *Jixie Kexue Yu Jishu/Mechanical Science and Technology*, v 19, n 4, p 577-578, 589, Jul 2000; **Language:** Chinese; **ISSN:** 10038728; **Publisher:** Northwestern Polytechnical Univ

Abstract: By introducing the high-precision integration, the problems of evolutionary random responses for non-uniform modulated random excitations can be solved simply. By comparing the results with those obtained by the complex modal analysis, it is shown that the present method is efficient. The method has many advantages, such as the formulas are simple, the programming is easy, and the calculating speed is fast.

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Data Provider: Engineering Village

11. Vertical micro-migration of hydrocarbon and its near surface geochemical effect

Zhao, Kebin ; Sun, Changqing ; Chen, Xinhua
Source: *Shiyou Kan Tan Yu Kai Fa/Petroleum Exploration and Development*, v 27, n 4, p 99-101, Aug 2000;
Language: Chinese; **ISSN:** 10000747; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village

12. Establishing of dynamics equations and the transfer functions of the steering assembly of the downhole closed-loop drilling system

Di, Qinfeng ; Zhao, Yerong
Source: *Shiyou Xuebao/Acta Petrolei Sinica*, v 21, n 4, p 87-92, Jul 2000; **Language:** Chinese; **ISSN:** 02532697;
Publisher: Sci Publ House
Database: Compendex
Data Provider: Engineering Village

13. Analysis of effect of bottom hole assembly on whipstocking capacity

Di, Qinfeng
Source: *Shiyou Zuantan Jishu/Petroleum Drilling Techniques*, v 28, n 1, p 39-41, Feb 2000; **Language:** Chinese;
ISSN: 10010890; **Publisher:** J Agency OGST
Database: Compendex
Data Provider: Engineering Village

14. Fatigue corrosion behavior of 2024-T3 aluminum alloy with 4 surface protective coatings

Wang, Rong ; Gao, Huilin
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 45-48, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village

15. Explicit exact solutions of two nonlinear evolution equations

Shang, Yadong
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 83-85, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village

16. Prospect of laser drilling technology

Han, Changxing
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 38-40, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village

17. Influences of cross-linking agents on the properties of diesel-base gel fracturing fluids

Wang, Manxue ; Chen, Maotao

Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 49-51, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

18. Division and space distribution description of the impermeable intercalations in E2S16 oil-bearing formation of Zhen-12 block, Zhenwu oilfield

Gao, Xingjun ; Song, Ziqi ; Tan, Chengqian
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 10-13, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

19. Single-chip computer control system for hydrometallurgical extraction

Xiong, Guangyu ; Huo, Aiqing
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 63-66, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

20. Preliminary discussion on numerical simulation of microbial flooding process

Chen, Junbin ; Zhang, Rongjun ; Gao, Xiaopeng
Source: *Shiyou Kan Tan Yu Kai Fa/Petroleum Exploration and Development*, v 27, n 1, p 44-46, Feb 2000;
Language: Chinese; **ISSN:** 10000747; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

21. Determination of nickel and copper in the crude oil simultaneously with single-sweep polarography

Zheng, Li ; Wang, Wei ; Liu, Shuren
Source: *Shiyou Xuebao, Shiyou Jiagong/Acta Petrolei Sinica (Petroleum Processing Section)*, v 16, n 1, p 84-88, Feb 2000; **Language:** Chinese; **ISSN:** 10018719; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

22. Determination of nickel and copper in the crude oil simultaneously with single-sweep polarography

Zheng, Li ; Wang, Wei ; Liu, Shuren
Source: *Shiyou Xuebao, Shiyou Jiagong/Acta Petrolei Sinica (Petroleum Processing Section)*, v 16, n 1, p 84-88, Feb 2000; **Language:** Chinese; **ISSN:** 10018719; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

23. Buried pipeline corrosion punching failure model

Fan, Yuguang ; Wang, Jingang
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 70-72, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex

24. Explicit and exact solutions to the compound BBM - Burgers equation

Shang, Yadong
Source: *Shiyou Huagong Gaodeng Xuexiao Xuebao/Journal of Petrochemical Universities*, v 13, n 2, p 73-77, Jun 2000; **Language:** Chinese; **ISSN:** 1006396X; **Publisher:** Fushun Petrol Inst

Abstract: Some explicit and exact travelling wave solutions to the compound BBM - Burgers equation are obtained by a kind of combination of the direct method and the hypothesis method. These solutions include solitary wave solutions, singular traveing wave solutions, and triangular function periodic wave solutions. The equation of the compound BBM, mBBM - Burgers, mBBM, BBM - Burgers and BBM can by soluted exactly by the method respectively.
Database: Compendex

25. Study on the productivity contribution of single horizon in multiple horizons exploitation by reservoir geochemistry

Chang, Xiangchun ; Zhang, Zhihuan ; Wang, Tieguan
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 35-38, 66, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex

26. Principle and algorithm of 3D color reservoir model

Zheng, Kai-Dong
Source: *Jisuanji Fuzhu Sheji Yu Tuxingxue Xuebao/Journal of Computer-Aided Design & Computer Graphics*, v 12, n 6, p 414-418, Jun 2000; **Language:** Chinese; **ISSN:** 10039767

Abstract: A new principle and algorithm for 3D color mapping model of petroleum reservoir are presented. At first, the original seismic and/or well-logging data are converted into spatial grid data body by using Ordinary Kriging Method. Then several 3D visualization geometric models are built by tracing the visual faces in the grid data body, and the traced faces undergo the hidden face removal and coloring process. In this way, we can get a serial of reservoir maps of 3D geophysical parameter data. By means of these 3D color models and their corresponding maps, it is easy and convenient to recognize the geological characteristics and their distribution patterns.
Database: Compendex

27. New development of surfactant oil displacement systems

Zhao, Liyan ; Fan, Xijing
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 55-58, 106, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex

28. Extraction of catalytic cracking diesel by complex solvents

Zhang, Keliang ; He, Li
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 30-33, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex

29. Synthesis and properties of acrylamide-starch graft copolymer

Liu, Xiang ; Li, Qianding ; Shi, Jun
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 34-35, 38, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

30. Deep basin gas trap in the Upper Paleozoic of Ordos basin

Zhang, Jinliang ; Chang, Xiangchun ; Zhang, Jingong
Source: *Shiyou Kan Tan Yu Kai Fa/Petroleum Exploration and Development*, v 27, n 4, p 30-35, Aug 2000;
Language: Chinese; **ISSN:** 10000747; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

31. Mesozoic-cenozoic sedimentary facies in Chalangla area, Qiangtang basin, Tibet

Bai, Yubao ; Wei, Yuanjiang ; Sun, Dongsheng ; Pang, Wen
Source: *Xiangtan Kuangye Xueyuan Xuebao/Journal of Xiangtan Mining Institute*, v 15, n 1, p 1-5, Mar 2000;
Language: Chinese; **ISSN:** 10009930; **Publisher:** Xiangtan Mining Institute
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

32. Preliminary discussion on numerical simulation of microbial flooding process

Chen, Junbin ; Zhang, Rongjun ; Gao, Xiaopeng
Source: *Shiyou Kan Tan Yu Kai Fa/Petroleum Exploration and Development*, v 27, n 1, p 44-46, Feb 2000;
Language: Chinese; **ISSN:** 10000747; **Publisher:** Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

33. Drilling extended reach well with rotary steering drilling system

Zhang, Shaohuai ; Di, Qinfeng
Source: *Shiyou Xuebao/Acta Petrolei Sinica*, v 21, n 1, p 76-80, Jan 2000; **Language:** Chinese; **ISSN:** 02532697;
Publisher: Sci Publ House
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

34. Development of the application software for power systems based on artificial neural network by using Delphi4.0

Wang, Shishan
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 81-85, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

35. Calculation of the isentropic temperature change exponent and isentropic volume change exponent of real gases

Liu, Hui
Source: *Shiyou Huagong Gaodeng Xuexiao Xuebao/Journal of Petrochemical Universities*, v 13, n 4, p 42-45, Dec 2000; **Language:** Chinese; **ISSN:** 1006396X; **Publisher:** Fushun Petrol Inst
Abstract: The equation of state, RKS, is chosen to evaluate the isentropic temperature change exponent kT and isentropic volume change exponent kv of real gases in this paper. All the required equations are provided for

calculating the two parameters. For five pure substance gases N2, H2, CO, CH4 and NH3, and a mixture gas of nitrogen and hydrogen, as an example, the isentropic temperature change exponents are calculated at 21 points for each gas (14 points for NH3) during the wide range from 0.098 MPa to 98 MPa and 20°C to 200°C (150°C to 300°C for NH3). Compared with literature values, the average calculation errors for each gas are 1.18%, 0.16%, 1.88%, 0.73%, 0.98% and 0.36% respectively, and the total average error is 0.88% for all the gases above. For the mixture gas of nitrogen and hydrogen, key mixing rule is combined with RKS equation to evaluate the isentropic temperature change exponent, and the errors are less than those from the equation of state, BWRS, during the pressure range from 0.098 MPa to 29.4 MPa inclusive.

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Data Provider: Engineering Village
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36. Study of the influence of well trajectory parameters on side force acting on bit

Di, Qinfeng ; Peng, Guorong
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 6, p 20-23, Nov 25 2000; **Language:** Chinese; **ISSN:** 10015361
Database: Compendex
Data Provider: Engineering Village
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37. Establishment and optimization of the stock model of an oil depot system

Li, Wenkui ; Xue, Zhongtian ; Pu, Chunsheng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 46-48, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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38. Synthesis and water-solubility of EO-PO copolymer

Liu, Xiang ; Li, Qianding ; Yu, Hongjiang
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 56-58, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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39. Determination of inductance and resistance for the three-electrode spark switch

Dang, Ruirong
Source: *Gaoya Dianqi/High Voltage Apparatus*, v 36, n 4, p 35-37, Aug 18 2000; **Language:** Chinese; **ISSN:** 10011609; **Publisher:** Xi'an High Voltage Apparatus Research Institute
Database: Compendex
Data Provider: Engineering Village
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40. Stability controlling model of built-in eccentric directional controller

Jiang, Dongxia ; Zhou, Jing ; Fu, Xinsheng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 44-49, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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41. Theory for the identification of Fuze environmental information

Dang, Ruirong ; Li, Shiyi

Abstract: Describes an environmental information identification theory for new generation safety and arming system of weapon equipment. The safety and arming system identifies the environmental information measured by sensors and controls the safety state in terms of the identified results by electro-mechanical or electronic systems. It also discusses the relationship of environmental number, safety and reliability. An environmental and identifying method of (N-K) is put forward in order to resolve the contradiction between safety and reliability, and a mutual prime theory is advanced in order to eliminate the probable safety failure caused by periodic vibration in the course of logistics.
Database: Compendex

Data Provider: Engineering Village

42. Stochastic simulation in reservoir description

Lei, Qihong ; Song, Ziqi ; Tan, Chengqian
Database: Compendex

Data Provider: Engineering Village

43. Analysis of effect of bottom hole assembly on whipstocking capacity

Di, Qinfeng
Database: Compendex

Data Provider: Engineering Village

44. Field test of "loosening rock by the dilatancy of explosive waves" in the open hole well 4207 in Zichang oil field

Zhang, Jie ; Tian, Hejin ; Wang, Aihua ; Liu, Faxi ; Li, Tang ; Tianmin
Database: Compendex

Data Provider: Engineering Village

45. Effect of seismic inversion technique in reservoir modeling

Yang, Xiaoping ; Dong, Chunrong
Database: Compendex

Data Provider: Engineering Village

46. Research of integrative network's techniques from productive field control to business information management - feasibility analysis to build the integrative network for petroleum enterprise

Chen, Jianduo
Database: Compendex

Data Provider: Engineering Village

47. Study on the condensation heat-exchange characteristic of a separate-type heat-pipe

Zhu, Yuqin
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 72-74, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

48. Existence of global solutions and 'blow up' phenomenon for a class of fourth order nonlinear evolution equation

Shang, Yadong
Source: *Gongcheng Shuxue Xuebao/Chinese Journal of Engineering Mathematics*, v 17, n SUPPL., p 109-110, 108, 2000; **Language:** Chinese; **ISSN:** 10053085; **Publisher:** Xi'an Jiaotong Univ
Abstract: In this paper, the initial boundary value problem for a class of fourth order nonlinear evolution equations modelling the longitudinal vibration of a finite viscoelastic rod are studied. The existence, uniqueness, and stability of global strong solutions are proved by means of the Galerkin method and a energy priori estimates of the solutions. Furthermore, the asymptotic behaviour of solutions as t -&gt + infinity and 'blow up' phenomenon of the solutions for the problem under certain conditions are considered.
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

49. Fault diagnosis approach for a diesel engine based on Dempster-Shafer's evidence theory

Wang, Hongfei
Source: *Neiranji Xuebao/Transactions of CSICE (Chinese Society for Internal Combustion Engines)*, v 18, n 1, p 20-23, Jan 25 2000; **Language:** Chinese; **ISSN:** 10000909; **Publisher:** Chinese Soc for Internal Combustion Engines
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

50. A Review of Gas Fracturing Technology

Li, Wenkui (1); Xue, Zhongtian (1)
Source: *Proceedings of the SPE International Petroleum Conference and Exhibition of Mexico*, p 95-100, 2000; **DOI:** 10.2118/58980-ms; **Conference:** Proceedings of the 2000 SPE International Petroleum Conference and Exhibition in Mexico, February 1, 2000 - February 3, 2000; **Sponsor:** SPE; **Publisher:** Society of Petroleum Engineers (SPE)
Author affiliation: (1) Xi'an Petroleum Inst., China
Abstract: Gas Fracturing, an oil/gas well stimulation technology by means of powder and/or propellant inflaming in wells to create multiple radial fractures in the vicinity of well-bore and hence to enhance the well production, has been widely studied, tested and applied both home and abroad, and shown a bright prospect in oil and gas industry. The emerging technology for stimulation of oil/gas wells'Gas Fracturing can rapidly generate a high pressure gas pulse. This pulse of gas causes the rock to fracture and produces multiple, short(5 $\leftarrow$ 20 ft.) fractures, radiating from the well-bore; Another benefit of Gas Fracturing is the reduction in pressure drop at the well-bore which can reduce solids dropping out of the flowing phase into the pore spaces(e.g.: paraffin, scale, etc.). This paper summarizes the achievements of our effort on research and application of the technology. In theory, we will describe the acting mechanism, the forming fractures mechanism and stimulation mechanism of Gas Fracturing. Laboratory results and field evidence will be presented to validate those theory. Application of the Gas Fracturing technique will be outlined. It will refer to many aspects, such as exploration, production, injection and ultra-deep wells. (13 refs)
Main heading: Fracturing (oil wells)
Controlled terms: Acidization - Boreholes - Exploratory oil well drilling - Flow of fluids - High pressure effects - Injection (oil wells) - Natural gas well production - Petroleum industry - Propellants - Well pressure - Well stimulation
Uncontrolled terms: Gas fracturing - Ultra deep wells
Classification Code: 511.1 Oil Field Production Operations - 512.1.2 Petroleum Deposits : Development Operations - 512.2.1 Natural Gas Fields - 512.2.2 Natural Gas Deposits: Development Operations - 523 Liquid Fuels - 631.1 Fluid Flow, General - 802.2 Chemical Reactions - 804 Chemical Products Generally - 931.1 Mechanics - 931.2 Physical Properties of Gases, Liquids and Solids
Treatment: General review (GEN)

51. Network modeling of the migration of solid particles in fractal porous media

Zhang, Wei ; Zhang, Ningsheng

52. Prospect of laser drilling technology

Han, Changxing

53. Idea of reconstructing campus trunk network using Gigabit Ethernet technology

Ren, Duoli

54. Field test of "loosening rock by the dilatancy of explosive waves" in the open hole well 4207 in Zichang oil field

Zhang, Jie ; Tian, Hejin ; Wang, Aihua ; Liu, Faxi ; Li, Tang ; Tianmin

55. New development of surfactant oil displacement systems

Zhao, Liyan ; Fan, Xijing

56. Influences of cross-linking agents on the properties of diesel-base gel fracturing fluids

Wang, Manxue ; Chen, Maotao

57. New advances in the study of the rheological property of fracturing fluid

Li, Wenkui ; Zhang, Jie ; Zhang, Xinqing
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 33-37, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

58. Analysis and prevention of tube bundle's deformation in air-cooler in hydrogenation unit

Fan, Yuguang ; Zhao, Zhijie ; Ji, Yuming
Source: *Shiyou Huagong Shebei/ Petro-Chemical Equipment*, v 29, n 6, p 47-49, Nov 20 2000; **Language:** Chinese; **ISSN:** 10007466
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

59. Synthesis and properties of acrylamide-starch graft copolymer

Liu, Xiang ; Li, Qianding ; Shi, Jun
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 34-35, 38, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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60. Absorption-exchange reactions of the modified peat to UO_2^{2+}, ^{137}Cs, ^{169}Yb and HPO_4^{2-}

Wang, Yukun ; Yue, Tingsheng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 36-38, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
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61. Network modeling of the migration of solid particles in fractal porous media

Zhang, Wei ; Zhang, Ningsheng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 14-17, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

62. Field test of 'loosening rock by the dilatancy of explosive waves" in the casing well 4242 in Zichang oil field

Wang, Aihua ; Tian, Hejin ; Zhang, Jie ; Li, Tang ; Tian, Min
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 17-20, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal
Database: Compendex
Data Provider: Engineering Village
Compilation and indexing terms, Copyright 2023 Elsevier Inc.

63. Absorption-exchange reactions of the modified peat to UO_2^{2+}, ^{137}Cs, ^{169}Yb and HPO_4^{2-}

Wang, Yukun ; Yue, Tingsheng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 36-38, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

64. Fine-structure research on Niu 12 fault-block in Niuju oilfield

Xie, Xiangyang ; Zhao, Yinglun ; Luo, Jihong
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 1-2, 24, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

65. Application of group decision support system (GDSS) to two kinds of decision

Shangguan, Jingcong ; Chen, Haopeng
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 5, p 78-80, Sep 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

66. Identification of drill-string system by means of pseudo-random signals

Li, Ling ; Han, Jiyong
Source: *Xinan Shiyou Xueyuan Xuebao/Journal of Southwestern Petroleum Institute*, v 22, n 3, p 65-68, Aug 2000; **Language:** Chinese; **ISSN:** 10002634; **Publisher:** Sci Publ House

67. Sedimentary microfacies of Chang-6 reservoir in Houshi district, Ansai Oilfield

Zhang, Jinliang ; Li, Shujun ; Jin, Wenqi
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 4, p 1-7, 55, Jul 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

68. Stochastic simulation in reservoir description

Lei, Qihong ; Song, Ziqi ; Tan, Chengqian
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 1, p 13-16, Jan 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

69. Fatigue corrosion behavior of 2024-T3 aluminum alloy with 4 surface protective coatings

Wang, Rong ; Gao, Huilin
Source: *Xi'an Shiyou Xueyuan Xuebao/Journal of Xi'an Petroleum Institute (Natural Science Edition)*, v 15, n 2, p 45-48, Mar 25 2000; **Language:** Chinese; **ISSN:** 10015361; **Publisher:** Xi'an Petroleum Institute Journal

70. New advances in the study of the rheological property of fracturing fluid

Li, Wenkui ; Zhang, Jie ; Zhang, Xinqing

71. Dynamic mechanics experiment of rock and its application in development of oil field

Tian, Hejin (1); Li, Dang (1); Wang, Aihua (1); Zhang, Jie (1)
Author affiliation: (1) Xi'an Petroleum Inst, Xi'an, China
Abstract: The advances of dynamic mechanics experiment of rock of method loading are introduced with the common loading methods, such as the indirected methods including sonic method and Hopkins on method, the direct methods loaded by pressurized liquid and by falling hammer. Furthermore, the measurement of dilatancy parameter of rock under dynamic loading, the application of dilatancy parameter in the design of hydraulic fracturing, as well as the loseness fracturing owing to rock dilatancy to increase production of oil are presented. (12 refs)
Main heading: Rock mechanics
Controlled terms: Hydraulic fracturing - Load testing - Oil field development - Oil well production - Petrology - Structural geology
Uncontrolled terms: Hopkins method - Sonic method
Classification Code: 481.1 Geology - 481.1.2 Petrology (Before 1993, use code 482) - 483.1 Soils and Soil Mechanics - 511.1 Oil Field Production Operations - 512.1.2 Petroleum Deposits : Development Operations - 931.1 Mechanics
Treatment: Experimental (EXP)
Database: Compendex
Data Provider: Engineering Village

72. Fault Diagnosis Theory: Method and Application Based on Multisensor Data Fusion

Wang, Hong Fei ; Wang, Jiang Ping
Author affiliation: (1) Mechanical Department, Xi'an Petroleum Institule, Xi'an Shaanxi, 710065, China
Abstract: This article discusses the elementary theory and method of condition monitoring and fault diagnosis in complex mechanical systems, using multisensor data fusion and integration technology. The basic concept of decision-layer multi-sensor data fusion, i.e., Dempster-Shafer evidence theory, is concisely described. The algorithms and implementation of decision-layer data fusion for condition monitoring and fault diagnosis, based on Dempster-Shafer evidence theory, are studied. We present an approach to diagnose multiple faults of a working diesel engine, based on the above algorithms. The analysis results show that this approach effectively improves the accuracy and reliability of fault diagnosis of the diesel engine. (9 refs)
Database: Compendex
Data Provider: Engineering Village

73. A technique of fuzzy reasoning and control based on degree function

Lian, Shiyou (1)
Author affiliation: (1) Department of Computer, Xi'an Petroleum Institute, Xi'an 710065, China
Abstract: In this paper, the fuzzy rule is looked on as a corresponding relation between language values and their degree. Thus, a concept of degree function is presented. Consequently, the fuzzy reasoning changed into simple symbolic inference and functional compute, and the fuzzy control is realized by three steps: number/(language value, degree) conversion, (language value, degree) transformation and (language value, degree)/number conversion.
Main heading: Fuzzy control
Controlled terms: Computer programming languages - Functions - Mathematical models
Uncontrolled terms: Fuzzy rules
Classification Code: 723.1.1 Computer Programming Languages - 731.1 Control Systems - 921 Mathematics

Treatment: Theoretical (THR)
Database: Compendex
Data Provider: Engineering Village

74. Two-dimensional conductivity image from the data measured by electromagnetic crosswell tools

Zhang, Jianhua (1); Liu, C. Richard (2)
Source: *Proceedings of SPIE - The International Society for Optical Engineering*, v 4129, p 180-189, 2000; **ISSN:** 0277786X, **E-ISSN:** 1996756X; **DOI:** 10.1117/12.390615; **Publisher:** SPIE
Author affiliation: (1) Xian Petroleum Institute (China), China (2) Department of Electrical and Computer Engineering, University of Houston, 4800 Calhoun Road, Houston, TX 77204-4793, United States
Abstract: The predicting and monitoring of fluid movement during a steam-injection operation is much important in an EOR process. A crosswell 2D conductivity imaging technique is developed to monitor the injection or production profiles by inverting formation conductivity from crosswell electromagnetic measurements. The tool responses are calculated from electromagnetic field equations using perturbation approach. Maximum entropy constraint is used to regularize the inversion problem. To assure the stability and fast convergence, the inversion procedure is conducted in three steps: homogeneous inversion that assumes the formation with an unique conductivity; 1D inversion that generates horizontally layered formation; and 2D inversion that regards the conductivity anomalies both in vertical and radial directions. An initial guessed value of homogeneous background is needed for the program at the beginning. The calculated result of homogeneous medium is then used as the initial value of 1D inversion, and the reconstructed layered conductivity profiles are the initial input for the 2D inversion. By the steps from homogeneous to heterogeneous inversion, the misfit between measured and calculated data decreases sharply. The examples for both synthetic data and field data are illustrated. The inversion results show that the reconstructed conductivity images are in agreement with the known formation characters within given error tolerances. (12 refs)
Main heading: Electromagnetic fields
Controlled terms: Injection (oil wells)
Uncontrolled terms: Conductivity anomalies - Conductivity imaging - Cross-well - Electromagnetic imaging - Electromagnetic measurement - Perturbation approach - Steam injection - Two-dimensional conductivity
Classification Code: 511.1 Oil Field Production Operations - 701 Electricity and Magnetism
Funding Details: Number: -, Acronym: NSF, Sponsor: National Science Foundation;
Database: Compendex
Data Provider: Engineering Village

75. Multifractal phase transitions in the non-Debye relaxation processes

Leyderman, Alexander (1); Qu, Shi-Xian (1, 2)
Source: *Physical Review E - Statistical Physics, Plasmas, Fluids, and Related Interdisciplinary Topics*, v 62, n 3 A, p 3293-3298, September 2000; **ISSN:** 1063651X; **DOI:** 10.1103/PhysRevE.62.3293; **Publisher:** American Inst of Physics
Author affiliation: (1) Department of Physics, University of Puerto Rico, Mayagüez, 00680, Puerto Rico (2) Department of Basic Courses, Xi'an Petroleum Institute, Xi'an 710065, China
Abstract: The relaxation-time distributions of some typical non-Debye dielectric relaxation processes were analyzed using the multifractal measures of the distributions. The characteristics of the thermodynamics were discussed. Generalized multifractal phase transitions were found in the relaxation processes. (19 refs)
Main heading: Phase transitions
Controlled terms: Dielectric relaxation - Differential equations - Fractals - Functions - Mathematical models - Probability distributions - Thermodynamics
Uncontrolled terms: Lipschitz-Hold singular exponent - Multifractal partition functions
Classification Code: 641.1 Thermodynamics - 708.1 Dielectric Materials - 801.4 Physical Chemistry - 921.2 Calculus - 922.1 Probability Theory - 931.2 Physical Properties of Gases, Liquids and Solids
Treatment: Theoretical (THR)
Database: Compendex
Data Provider: Engineering Village

76. Multifractal phase transition in the Davidson-Cole relaxation process

Qu, Shi-Xian (1, 2); Zheng, Hairong (1); Barrientos, Alfonso (1); Leyderman, Alexander (1)
Source: *Physics Letters, Section A: General, Atomic and Solid State Physics*, v 268, n 4-6, p 360-365, April 17, 2000;
Author affiliation: (1) Department of Physics, University of Puerto Rico, Mayaguez, PR 00680, United States (2) Department of Basic Courses, Xi'An Petroleum Institute, Xi'an 710065, China
Abstract: A multifractal measure for the relaxation time distribution in Davidson-Cole dielectric relaxation is analytically obtained. A general first-order multifractal phase transition is reported. It is characterized by the existence of three different phases and the corresponding triple point. (C) 2000 Elsevier Science B.V. (12 refs)
Main heading: Dielectric relaxation
Controlled terms: Fractals
Uncontrolled terms: Davidson - Elsevier - First order - Multi fractals - Relaxation time distribution - Triple points
Classification Code: 921 Mathematics
Database: Compendex
Data Provider: Engineering Village

77. Erratum: Multifractal phase transition in the Davidson-Cole relaxation process (Physics letters A (2000) 268 (360-365) S0375-9601(00)00205-X)

Qu, Shi-Xian (1, 2); Zheng, Hairong (1); Barrientos, Alfonso (1); Leyderman, Alexander (1)
Source: *Physics Letters, Section A: General, Atomic and Solid State Physics*, v 270, n 3-4, p 220, May 29, 2000;
Author affiliation: (1) Department of Physics, University of Puerto Rico, Mayaguez, PR 00680, United States (2) Department of Basic Courses, Xi'An Petroleum Institute, Xi'an 710065, China
Main heading: Relaxation processes
Controlled terms: Fractals
Uncontrolled terms: Davidson - Multi fractals
Classification Code: 921 Mathematics - 931.1 Mechanics
Database: Compendex
Data Provider: Engineering Village