

2021

Granted Patents

Adsorbent Polymeric Structures for Separating Polar Liquids from non-Polar Hydrocarbons

Granted Patent: U.S. Patent 10,882,024
Grant Date: January 5, 2021

Fahd I. Alghunaimi and Tawfik A. Saleh

Cement Slurries, Cured Cement and Methods of making and Use of These

Granted Patent: U.S. Patent 10,882,788
Grant Date: January 5, 2021

B. Raghava Reddy

Methods for Gas Phase Oxidative Desulfurization of Hydrocarbons Using CuZnAl Catalysts Promoted with Group VIB Metal Oxides

Granted Patent: U.S. Patent 10,882,801
Grant Date: January 5, 2021

Omer R. Koseoglu, Yaming Jin, Zinfer Ismagilov, Svetlana Yashnik, Anton Salnikov, Mikhail Kerzhentsev and Valentin Parmon

Process for the Production of Water and Solvent-Free Hydrogenated Nitrile Rubbers

Granted Patent: U.S. Patent 10,882,980
Grant Date: January 5, 2021

Matthias Soddemann, Werner Obrecht, Franz-Josef Mersmann, Hanns-Ingolf Paul, Paul Wagner, Rolf Feller, Thomas Koenig, Jorg Kirchoff and John Lovegrove

Fibrous Lost Circulation Material (LCM)

Granted Patent: U.S. Patent 10,883,032
Grant Date: January 5, 2021

Md Amanullah, Timothy E. Moellendick and Raed Alouhali

Date Palm Seed-Based Lost Circulation Material (LCM)

Granted Patent: U.S. Patent 10,883,053
Grant Date: January 5, 2021

Md Amanullah

Enhancing Acid Fracture Conductivity

Granted Patent: U.S. Patent 10,883,042
Grant Date: January 5, 2021

Aslan Bulekbay and Ahmed M. Goma

Fracturing Fluid Compositions Having Portland Cement Clinker and Methods of Use

Granted Patent: U.S. Patent 10,883,043
Grant Date: January 5, 2021

B. Raghava Reddy and Feng Liang

Fracturing Fluid Compositions Having Portland Cement Clinker and Methods of Use

Granted Patent: U.S. Patent 10,883,044
Grant Date: January 5, 2021

B. Raghava Reddy and Feng Liang

Integrated Hydrotreating and Steam Pyrolysis Process Including Residual Bypass for Direct Processing of a Crude Oil

Granted Patent: U.S. Patent 10,883,058
Grant Date: January 5, 2021

Raheel Shafi, Abdennour Bourane, Essam Sayed, Ibrahim A. Abba and Abdul R. Zafer Akhras

Equalizing Hydrocarbon Reservoir Pressure

Granted Patent: U.S. Patent 10,883,359
Grant Date: January 5, 2021

Wisam Shaker and Faisal Al-Naseef

Subterranean Well Torpedo System

Granted Patent: U.S. Patent 10,883,810
Grant Date: January 5, 2021

Brett W. Bouldin, Robert J. Turner, Ahmed Y. Bukhamseen, Andrey V. Bakulin and Michael Jervis

Systems and Methods for Tri-Axial NMR Testing

Granted Patent: U.S. Patent 10,884,084
Grant Date: January 5, 2021

Mustafa Hakimuddin

Environment Aware Cross-Layer Communication Protocol in Underground Oil Reservoirs

Granted Patent: U.S. Patent 10,887,743
Grant Date: January 5, 2021

Ian F. Akyildiz, Howard K. Schmidt, Shih-Chun Lin and Abdallah A. Al-Shehri

Drying Compressed Gas

Granted Patent: U.S. Patent 10,888,815
Grant Date: January 12, 2021

Abdulmajeed Alshaye

Inline Process to make Antifouling Agent Co-Catalyst for Ethylene Oligomerization

Granted Patent: U.S. Patent 10,889,553
Grant Date: January 12, 2021

Faisal M. Melibari, Hussain M. Yami, Sohel K. Saikh, Zhonglin Zhang and Wei Xu

Ultrapure Rubber and Method Thereof

Granted Patent: U.S. Patent 10,889,671
Grant Date: January 12, 2021

David Thompson

Composition and Method of Manufacturing of Whole Date Palm Seed Lost Circulation Material (LCM)

Granted Patent: U.S. Patent 10,889,747
Grant Date: January 12, 2021

Md Amanullah and Turki Alsubaie

Oil Recovery Process Using an Oil Recovery Composition of Aqueous Salt Solution and Metal Oxide Nanoparticles for Carbonate Reservoirs

Granted Patent: U.S. Patent 10,889,750
Grant Date: January 12, 2021

Subhash C. Ayirala, Ali A. Al-Yousef and Abdulkareem M. Al-Sofi

Foaming Mixtures and Methods of Use Thereof

Granted Patent: U.S. Patent 10,889,752
Grant Date: January 12, 2021

Mustafa Alkhowaildi, Zuhair Yousef and Sunil L. Kokal

High Severity Fluidized Catalytic Cracking Systems and Processes for Producing Olefins from Petroleum Feeds

Granted Patent: U.S. Patent 10,889,768
Grant Date: January 12, 2021

Abdennour Bourane, Raed H. Abudawoud and Ibrahim Abba

Producing Fibers Using Spinnerets

Granted Patent: U.S. Patent 10,889,915
Grant Date: January 12, 2021

Seung-Hak Choi and Sarah N. Almahfoodh

Determination of a Rock Testability Index for Formation Testing

Granted Patent: U.S. Patent 10,890,066
Grant Date: January 12, 2021

Mohd A. Ibrahim, Clovis S. Bonavides, Faisal N. Nezi and Maged F. Kanfar

Method to Use a Buoyant Body to Measure Two-Phase Flow in Horizontal Wells

Granted Patent: U.S. Patent 10,890,067
Grant Date: January 12, 2021

Ahmed Y. Bukhamseen, Brett W. Bouldin and Robert J. Turner

Systems and Methods for Finding and Solving Wet Gas Venturi Meter Problems in Real-Time

Granted Patent: U.S. Patent 10,890,480
Grant Date: January 12, 2021

Muhammad Idris and Mohammed A. Al-Atwi

System and Method for Automated Inflow Control Device Design

Granted Patent: U.S. Patent 10,891,407
Grant Date: January 12, 2021

Obiomalotaoso L. Isichei

Identifying Geometrical Properties of Rock Structure through Digital Imaging

Granted Patent: U.S. Patent 10,891,462
Grant Date: January 12, 2021

Weishu Zhao

Maintaining a Solar Power Module

Granted Patent: U.S. Patent 10,892,706
Grant Date: January 12, 2021

James C. Hassell Jr. and Luiz G. Do Val

Method for Enhancement of Mechanical Strength and CO₂ Storage in Cementitious Products

Granted Patent: U.S. Patent 10,894,743
Grant Date: January 19, 2021

Issam T. Amr, Bandar Fadhel, Ali S. Al Hunaidi, Rami A. Bamagain, Haeng K. Lee and Solmoi Park

Integrated Process for Optimum Production of Paraxylene

Granted Patent: U.S. Patent 10,894,755
Grant Date: January 19, 2021

Qi Xu, Zhonglin Zhang and Raed H. Abudawoud

Additives for Oil and Gas Drilling and Production

Granted Patent: U.S. Patent 10,894,910
Grant Date: January 19, 2021

Ashok Santra and Matthew G. Hilfiger

Addition of Monovalent Salts for Improved Viscosity of Polymer Solutions Used in Oil Recovery Applications

Granted Patent: U.S. Patent 10,894,914
Grant Date: January 19, 2021

Saleh F. Hassan and Abdulkareem M. Al-Sofi

Targeting Enhanced Production through Deep Carbonate Stimulation: Stabilized Acid Emulsions Containing Insoluble Solid Materials with Desired Wetting Properties

*Granted Patent: U.S. Patent 10,894,915
Grant Date: January 19, 2021*

Amy J. Cairns, Ghaithan A. Al-Muntasheri, Mohammed Sayed, Liling Fu, Genggeng Qi and Emmanuel P. Giannelis

Integrated Process for Solvent Deasphalting and Gas Phase Oxidative Desulfurization of Residual Oil

*Granted Patent: U.S. Patent 10,894,925
Grant Date: January 19, 2021*

Omer R. Koseoglu

System for Conversion of Crude Oil to Petrochemicals and Fuel Products Integrating Steam Cracking, Fluid Catalytic Cracking, and Conversion of Naphtha into Chemical Rich Reformate

*Granted Patent: U.S. Patent 10,894,926
Grant Date: January 19, 2021*

Mohammed S. Al-Ghamdi, Bader Bahammam, Naif Al Osaimi and Sami Barnawi

Natural Gas Liquids Recovery Process

*Granted Patent: U.S. Patent 10,894,929
Grant Date: January 19, 2021*

Ayman M. Mohammad, Diki Andrian and Yaqoub Y. Al-Kalaf

Systems and Methods for Improved Centralization and Friction Reduction Using Casing Rods

*Granted Patent: U.S. Patent 10,895,117
Grant Date: January 19, 2021*

Abdulaziz Al-Qasim and Muataz Al-Ghamdi

Hybrid Loss Prevention Material (LPM) for Preventive and Curative Loss Control

*Granted Patent: U.S. Patent 10,895,118
Grant Date: January 19, 2021*

Md Amanullah

Hybrid Loss Prevention Material (LPM) for Preventive and Curative Loss Control

*Granted Patent: U.S. Patent 10,895,119
Grant Date: January 19, 2021*

Md Amanullah

Methods for Reducing Condensation

*Granted Patent: U.S. Patent 10,895,156
Grant Date: January 19, 2021*

Ayman R. Al-Nakhli, Mohammed A. Bataweel, Mohamed A. Mahmoud and Amjed M. Hassan

Compositions and Methods for Controlled Delivery of Acid

*Granted Patent: U.S. Patent 10,895,140
Grant Date: January 19, 2021*

Amy J. Cairns, Katherine L. Hull and Mohammed Sayed

Apparatus for Smart Material Analysis

*Granted Patent: U.S. Patent 10,895,447
Grant Date: January 19, 2021*

Enrico Bovero

Determining Structural Tomographic Properties of a Geologic Formation

*Granted Patent: U.S. Patent 10,895,497
Grant Date: January 19, 2021*

Howard K. Schmidt, Jesus M. Felix Servin, Frode Hveding and Daniele Colombo

Wettability Determination of Rock Samples

*Granted Patent: U.S. Patent 10,895,497
Grant Date: January 19, 2021*

Quan Chen, Sultan M. Al Enezi and Ali A. Al-Yousef

Wettability Determination of Rock Samples

*Granted Patent: U.S. Patent 10,895,545
Grant Date: January 19, 2021*

Quan Chen, Sultan M. Al Enezi and Ali A. Al-Yousef

Embedded Dynamic Configuration Assignment for Unprotected Remote Terminal Unit (RTU)

*Granted Patent: U.S. Patent 10,897,598
Grant Date: January 19, 2021*

Hassan S. Al-Yousef, Fouad M. Alkhabbaz, Zakarya A. Al Saud and Solomon M. Almadi

Method for Providing High Availability Services on One-Way Data Diode

*Granted Patent: U.S. Patent 10,897,414
Grant Date: January 19, 2021*

Abdulatif A. Al-Rushaid and Eid S. Al-Harbi

Zeolites, the Production Thereof, and their Uses for Upgrading Heavy Oils

*Granted Patent: U.S. Patent 10,898,884
Grant Date: January 26, 2021*

Lianhui Ding, Manal Al-Eid, Essam Al-Sayed, Kareemuddin Shaik and Abdenour Bourane

Nano-Sized Zeolite Supported Catalysts and Methods for their Production

*Granted Patent: U.S. Patent 10,898,885
Grant Date: January 26, 2021*

Lianhui Ding, Essam Al-Sayed, Manal Al-Eid and Hanaa Habboubi

Sanitizing Wastewater

*Granted Patent: U.S. Patent 10,899,644
Grant Date: January 26, 2021*

Serhan Gercek

Catalytic Hydrodearylation of Heavy Aromatic Stream Containing Dissolved Hydrogen

*Granted Patent: U.S. Patent 10,899,685
Grant Date: January 26, 2021*

Omer R. Koseoglu, Robert P. Hodgkins, Bruce R. Beadle and Vinod Ramaseshan

Polychloroprene Compositions

*Granted Patent: U.S. Patent 10,899,857
Grant Date: January 26, 2021*

Victor Nasreddine, Heiner Stange, Nicolas Sary, Martin Schneider and Kay Varnhorn

Functionalized Nanosilica as Shale Inhibitor in Water-Based Fluids

*Granted Patent: U.S. Patent 10,899,955
Grant Date: January 26, 2021*

Peter J. Boul, B. Raghava Reddy and Carl Thaeplitz

Additives to Minimize Viscosity Reduction for Guar/Borate System under High Pressure

*Granted Patent: U.S. Patent 10,899,957
Grant Date: January 26, 2021*

Peter J. Boul, B. Raghava Reddy and Carl Thaeplitz

Fluid Catalytic Cracking of Petroleum Oil with Reduced Emissions

*Granted Patent: U.S. Patent 10,899,972
Grant Date: January 26, 2021*

Saeed Al-Alloush and Othman Taha

Drilling Bottom-Hole Assembly for Loss Circulation Mitigation

*Granted Patent: U.S. Patent 10,900,289
Grant Date: January 26, 2021*

Khalifah M. Amri, Abdulrahman A. Al Essa and Shaohua Zhou

Tubing Hanger System

*Granted Patent: U.S. Patent 10,900,315
Grant Date: January 26, 2021*

Jinjiang Xiao

Extendable Perforation in Cased Hole Completion

*Granted Patent: U.S. Patent 10,900,352
Grant Date: January 26, 2021*

Hamoud A. Al-Anazi

Forming Mineral in Fractures in a Geological Formation

*Granted Patent: U.S. Patent 10,900,359
Grant Date: January 26, 2021*

Desmond Schipper, Katherine L. Hull and Mohammad H. Haque

Determining Wellbore Leak Crossflow Rate between Formations in an Injection Well

*Granted Patent: U.S. Patent 10,900,544
Grant Date: January 26, 2021*

Nasser M. Al-Hajri and Mohammed D. Al-Ajmi

Method and Device for Obtaining Measurements of Downhole Properties in a Subterranean Well

*Granted Patent: U.S. Patent 10,900,551
Grant Date: January 26, 2021*

Max Deffenbaugh, Gregory D. Ham, Jose O. Alvarez, Gregory Bernero, Sunder Ramachandran, Miguel Gonzalez, Sebastian Csutak, Christopher Powell and Huseyin Seren

Method and Apparatus for Sub-Terrain Chlorine Ion Detection in the Near Wellbore Region in an Open Hole Well

*Granted Patent: U.S. Patent 10,900,555
Grant Date: January 26, 2021*

Mohamed N. Noui-Mehidi and Ilies Mostefai

Apparatus, System and Method for Increasing Friction between a Cable and Surrounding Soil

*Granted Patent: U.S. Patent 10,900,614
Grant Date: January 26, 2021*

Thibault Villette, Waheed Alrafaei and Iqbal Hussain

Sensor Device for Distance Offset Measurements

Granted Patent: U.S. Patent 10,900,776
Grant Date: January 26, 2021
 Brian J. Parrott, Sahejad Patel, Fadl Abdellatif, Pablo C. Zanini, Ayman M. Amer, Ali H. Outa and Abdullah F. Arab

Tri-Axial Centrifuge Apparatus with Electrical Sensor, Acoustic Sensor, and X-ray Instrument

Granted Patent: U.S. Patent 10,900,945
Grant Date: January 26, 2021
 Mustafa Hakimuddin

Removable Trap Stations for Hydrocarbon Flow Lines

Granted Patent: U.S. Patent 10,905,975
Grant Date: February 2, 2021
 Alwaleed A. Al-Gouhi, Mayadah M. Alhashem, Ibrahim S. Al Dossari and Xiaolong D. Cai

Methods of Making Spray-Dried Metathesis Catalysts and Uses Thereof

Granted Patent: U.S. Patent 10,905,975
Grant Date: February 2, 2021
 Faisal H. Alshafei, Munir D. Khokhar, Sohel K. Shaikh, Mohammed R. Alalouni and Gopal Juttu

Synthesis of Transition-Metal Adamantane Salts and Oxide Nanocomposites, and Systems and Methods Including the Salts or the Nanocomposites

Granted Patent: U.S. Patent 10,906,028
Grant Date: February 2, 2021
 Manohara G. Veerabhadrapa, Hugh C. Greenwell, Andrew Whiting, John A. Hall and Gasan Alabedi

Adamantane-Intercalated Layered Double Hydroxide

Granted Patent: U.S. Patent 10,906,859
Grant Date: February 2, 2021
 Manohara G. Veerabhadrapa, Hugh C. Greenwell, Gasan S. Alabedi, John A. Hall, Abdullah A. Al-Shahrani and Andrew Whiting

Two-Component Lost Circulation Pill for Seepage to Moderate Loss Control

Granted Patent: U.S. Patent 10,907,082
Grant Date: February 2, 2021
 Jothibasu Ramasamy and Md Amanullah

Methods and Compositions for Diversion during Enhanced Oil Recovery

Granted Patent: U.S. Patent 10,907,087
Grant Date: February 2, 2021
 Ahmad N. Rizq and Badr H. Zahrani

Devices and Methods for Placement of Loss Control Slurry

Granted Patent: U.S. Patent 10,907,425
Grant Date: February 2, 2021
 Md Amanullah and Turki Al-Subaie

Thru-Tubing Retrievable Subsurface Completion System

Granted Patent: U.S. Patent 10,907,442
Grant Date: February 2, 2021
 Muhammad Arsalan and Mohamed N. Noui-Mehidi

Methods for Fracturing a Formation Containing Hydrocarbons Using an Enabler that Heats in Response to Electromagnetic Radiation

Granted Patent: U.S. Patent 10,907,456
Grant Date: February 2, 2021
 Sameeh I. Batarseh and Haitham A. Othman

Acid Fracturing Treatments in Hydrocarbon-Bearing Formations in Close Proximity to Wet Zones

Granted Patent: U.S. Patent 10,907,457
Grant Date: February 2, 2021
 Moataz M. Alharbi

Disconnectable Fluid Coupling

Granted Patent: U.S. Patent 10,907,759
Grant Date: February 2, 2021
 Abdulrahman H. Al Ghanmi

Air-Cooled Heat Exchanger Cleaning and Temperature Control Apparatus and Method

Granted Patent: U.S. Patent 10,907,914
Grant Date: February 2, 2021
 Abdullah M. Al-Otaibi

Multiphase Flow Metering System for Horizontal Well Compartments

Granted Patent: U.S. Patent 10,908,007
Grant Date: February 2, 2021
 Ahmed Y. Bukhamseen, Brett W. Bouldin, Robert J. Turner and Moataz O. Abu-ALSaud

Nano-Indentation Tests to Characterize Hydraulic Fractures

Granted Patent: U.S. Patent 10,908,056
Grant Date: February 2, 2021
 Katherine L. Hull and Younane N. Abousleiman

Dynamically Determining a Rock Wettability Alteration

Granted Patent: U.S. Patent 10,908,063
Grant Date: February 2, 2021
 Ahmed Gmira and Mohammed Algeer

Thermography Image Processing with Neural Networks to Identify Corrosion under Insulation (CUI)

Granted Patent: U.S. Patent 10,908,068
Grant Date: February 2, 2021
 Ayman M. Amer, Ali Al Shehri, Brian J. Parrott and Mohammed Sarraj

Measuring Total Organic Content of Source Rock

Granted Patent: U.S. Patent 10,908,142
Grant Date: February 2, 2021
 Sebastian R.G. Henderson

System and Method for Aligning a Laser Scanning Device for Measurement of a Volume of a Container

Granted Patent: U.S. Patent 10,908,263
Grant Date: February 2, 2021
 Hassane Trigui, Ali H. Outa, Sahejad Patel and Fadl Abdellatif

Evaluating Processing Imprint on Seismic Signals

Granted Patent: U.S. Patent 10,908,307
Grant Date: February 2, 2021
 Andrey V. Bakulin, Robert Smith and Abdullah Alramadhan

Containment Design to Handle Low Temperature Systems

Granted Patent: U.S. Patent 10,910,122
Grant Date: February 2, 2021
 Abdullah M. Al-Otaibi and Omar S. Al-Mutairi

Extending Public WiFi Hotspot to Private Enterprise Network

Granted Patent: U.S. Patent 10,911,411
Grant Date: February 2, 2021
 Abdullah A. Aldossary and Ahmad A. Alharbi

Cardo-Type Co-Polyimide Membranes for Sour Gas Feed Separations from Natural Gas

Granted Patent: U.S. Patent 10,913,036
Grant Date: February 2, 2021
 Garba O. Yahaya, Ilham Mokhtari and Ahmad A. Bahamdan

Simultaneous Cement Enhancement and Carbon Dioxide Utilization by Mounting a Carbon Dioxide Capture System Onboard a Concrete Mixer Vehicle

Granted Patent: U.S. Patent 10,913,179
Grant Date: February 9, 2021
 Bandar Fadhel, Ahmad D. Hammad, Issam T. Amr and Rami A. Bamagain

Cement-Based Direct Ink for 3D Printing of Complex Architected Structures

Granted Patent: U.S. Patent 10,913,683
Grant Date: February 9, 2021
 Muhammad M. Rahman, Seyed M. Sajadi, Ashok Kumar, Peter J. Boul, Carl Thaeamlitz and Pulickel M. Ajayan

Methods for Forming Ethylbenzene from Polystyrene

Granted Patent: U.S. Patent 10,913,694
Grant Date: February 9, 2021
 Nouf M. Al-Jabri and Kuo-Wei Huang

Methods for Producing Seawater-Based, High Temperature Viscoelastic Surfactant Fluids with Low Scaling Tendency

Granted Patent: U.S. Patent 10,913,889
Grant Date: February 9, 2021
 Leiming Li, Feng Liang and Tao Chen

Integrated Process for Mesophase Pitch and Petrochemical Production

Granted Patent: U.S. Patent 10,913,901
Grant Date: February 9, 2021
 Remi Mahfouz, Ola Ali, Isidoro M. Osorio, Wei Xu, Xinglong Dong and Yu Han

System for Conversion of Crude Oil to Petrochemicals and Fuel Products Integrating Steam Cracking and Fluid Catalytic Cracking

Granted Patent: U.S. Patent 10,913,908
Grant Date: February 9, 2021
 Mohammed S. Al-Ghamdi, Bader Bahammam, Naif Al Osaimi and Sami Barnawi

Treatment of Casing-Casing Annulus Leaks Using Thermally Sensitive Sealants

Granted Patent: U.S. Patent 10,914,154
Grant Date: February 9, 2021
Attallah N. Harbi

Dual Injection for Hydrocarbon Reservoir Management

Granted Patent: U.S. Patent 10,914,150
Grant Date: February 9, 2021
Amar Jaber M. Alshehri

Methods and Systems for Hydrocarbon Resources Exploration Assessment

Granted Patent: U.S. Patent 10,914,158
Grant Date: February 9, 2021
Hussain M. Otaibi, Fahad N. Najrani and Marcin Folwarczny

Detecting Saturation Levels of a Sample Core Using Electromagnetic Waves

Granted Patent: U.S. Patent 10,914,688
Grant Date: February 9, 2021
Muhammad Ayub, Muhammad Arsalan, Muhammad A. Karimi and Atif Shamim

Continuous Seismic Reservoir Monitoring Using a Common Focus Point Method

Granted Patent: U.S. Patent 10,914,853
Grant Date: February 9, 2021
Mustafa Al-Ali, Hongwei Liu and Philippe Nivlet

Residual Refraction Statics Calculation for Automated Near Surface Analysis

Granted Patent: U.S. Patent 10,914,854
Grant Date: February 9, 2021
Daniele Colombo and Federico Miorelli

System and Method for Secure Billing for IMS-Based VoIP Networks

Granted Patent: U.S. Patent 10,917,442
Grant Date: February 9, 2021
Kashif Khawaja and Hulaiyel Khaldi

Field Filtration Assembly for Injection Water Quality Assessment and Monitoring

Granted Patent: U.S. Patent 10,918,997
Grant Date: February 16, 2021
Enow A. Kima and Qassem Al-Momatini

Fluorinated Polytriazole Membrane Materials for Gas Separation Technology

Granted Patent: U.S. Patent 10,919,002
Grant Date: February 16, 2021
Husnul Maab and Eyad A. Qasem

Systems and Methods for Steam Ring Heating for Bearing Removal from Shaft

Granted Patent: U.S. Patent 10,919,155
Grant Date: February 16, 2021
Rakan S. Al-Zahrani

Dual Catalyst Processes and Systems for Propylene Production

Granted Patent: U.S. Patent 10,919,822
Grant Date: February 16, 2021
Munir D. Khokhar, Faisal H. Alshafei, Noor A. Sulais, Sohel K. Shaikh and Raed H. Abudawoud

Membrane-Based Process for Butanols Production from Mixed Butenes

Granted Patent: U.S. Patent 10,919,825
Grant Date: February 16, 2021
Faisal M. Althenayan

Synthesis of Sodium Formate and Drilling Fluid Comprising the Same

Granted Patent: U.S. Patent 10,919,835
Grant Date: February 16, 2021
Abdullah S. Al-Yami, Vikrant B. Wagle, Zainab A. Alsaihati, Ali M. Al-Safran, Nasser Alalhareth and Abdulaziz Alhelal

Vulcanizable Compositions Based on Hydrogenated Nitrile Rubber, Method for Producing Same, and Use Thereof

Granted Patent: U.S. Patent 10,920,056
Grant Date: February 16, 2021
Susanna Lieber, Ulrich Frenzel and Karola Schneiders

Polymer Gel with Nanocomposite Crosslinker

Granted Patent: U.S. Patent 10,920,065
Grant Date: February 16, 2021
Ayman M. Almohsin, Mohammed A. Bataweel, Faheem Ahmed and Edreese Alsharaeh

Methods of Reducing Lost Circulation in a Wellbore Using Saudi Arabian Volcanic Ash

Granted Patent: U.S. Patent 10,920,121
Grant Date: February 16, 2021
Khawlah A. Alanqari and Abdullah S. Al-Yami

Oil Recovery Process Using an Oil Recovery Composition of Aqueous Salt Solution and Dilute Polymer for Carbonate Reservoirs

Granted Patent: U.S. Patent 10,920,128
Grant Date: February 16, 2021
Subhash C. Ayirala, Ali A. Al-Yousef and Abdulkareem M. Al-Sofi

Oil Recovery Process Using an Oil Recovery Composition of Aqueous Salt Solution and Dilute Polymer for Carbonate Reservoirs

Granted Patent: U.S. Patent 10,920,129
Grant Date: February 16, 2021
Subhash C. Ayirala, Ali A. Al-Yousef and Abdulkareem M. Al-Sofi

Hydrocracking Process and System Including Separation of Heavy Poly Nuclear Aromatics from Recycle by Ionic Liquids and Solid Adsorbents

Granted Patent: U.S. Patent 10,920,157
Grant Date: February 16, 2021
Omer R. Koseoglu

Supercritical Water Process to Produce Bottom Free Hydrocarbons

Granted Patent: U.S. Patent 10,920,158
Grant Date: February 16, 2021
Ki-Hyouk Choi, Bader Alotaibi and Mohammad Garhoush

Casing Friction Reduction Methods and Tool

Granted Patent: U.S. Patent 10,920,502
Grant Date: February 16, 2021
Abdulaziz S. Al-Qasim, Mohammed K. Al-Arfaj, Mohammad S. Al-Badran and Sunil L. Kokal

Tool Positioning Devices for Oil and Gas Applications

Granted Patent: U.S. Patent 10,920,511
Grant Date: February 16, 2021
Clovis S. Bonavides and Vladislav Torlov

Vibration-Induced Installation of Wellbore Casing

Granted Patent: U.S. Patent 10,920,517
Grant Date: February 16, 2021
Victor C. Costa de Oliveira, Dean S. Porter and Khaled K. Abouelnaaj

Self-Contained Well Intervention System and Method

Granted Patent: U.S. Patent 10,920,521
Grant Date: February 16, 2021
Robert J. Turner and Brett W. Bouldin

Method and Apparatus for Rig-Less Deployment of Electric Submersible Pump Systems

Granted Patent: U.S. Patent 10,920,548
Grant Date: February 16, 2021
Rafael A. Lastra Melo, Mohannad Abdelaziz and Jinjiang Xiao

Creating Fractures in a Formation Using Electromagnetic Signals

Granted Patent: U.S. Patent 10,920,549
Grant Date: February 16, 2021
Haitham A. Othman and Sameeh I. Batarseh

Stimulating U-Shape Wellbores

Granted Patent: U.S. Patent 10,920,554
Grant Date: February 16, 2021
Khalid M. Alruwaili and Mohamed N. Noui-Mehidi

Using Radio Waves to Fracture Rocks in a Hydrocarbon Reservoir

Granted Patent: U.S. Patent 10,920,556
Grant Date: February 16, 2021
Jinhong Chen, Daniel T. Georgi and Stacey M. Althaus

Inverted Y-Tool for Downhole Gas Separation

Granted Patent: U.S. Patent 10,920,559
Grant Date: February 16, 2021
Amr M. Zahran

Acoustic Testing of Core Samples

Granted Patent: U.S. Patent 10,920,574
Grant Date: February 16, 2021
Yunlai Yang and Maher I. Almarhoon

Determining Sand Dune Velocity Variations

Granted Patent: U.S. Patent 10,920,585
Grant Date: February 16, 2021
Daniele Colombo, Gary W. McNeice, Diego Rovetta, Ersan Turkoglu and Ernesto S. Curiel

Systems and Methods for Logging while Treating

Granted Patent: U.S. Patent 10,920,586
Grant Date: February 16, 2021
Abdulaziz Al-Qasim and Alberto F. Marsala

Measuring the Wettability of Porous Media Based on the Temperature Sensitivity of Nuclear Magnetic Resonance Relaxation Time

Granted Patent: U.S. Patent 10,921,270
Grant Date: February 16, 2021
Hyung T. Kwak and Ahmad M. Al-Harbi

Decontaminating Rock Samples by Thermovaporization

Granted Patent: U.S. Patent 10,921,307
Grant Date: February 16, 2021
 Sedat Inan

Determining First-Break Points in Seismic Data

Granted Patent: U.S. Patent 10,921,472
Grant Date: February 16, 2021
 Jewoo Yoo and Roald van Borselen

Systems and Methods to Harvest Energy and Determine Water Holdup Using the Magnetohydrodynamic Principle

Granted Patent: U.S. Patent 10,925,998
Grant Date: February 16, 2021
 Frode Hveding and Muhammad Arsalan

Root Cause Analysis for Unified Communications Performance Issues

Granted Patent: U.S. Patent 10,924,528
Grant Date: February 16, 2021
 Baher Y. Al Ramady, Zahrah Almousa and Mawada M. Felemban

Method and Apparatus for Promoting Droplets Coalescence in Oil Continuous Emulsions

Granted Patent: U.S. Patent 10,926,192
Grant Date: February 23, 2021
 Simone Less, Sebastien A. Duval, Abderrazak Traidia and Regis D. Vilagines

Method and Apparatus for Promoting Droplets Coalescence in Oil Continuous Emulsions

Granted Patent: U.S. Patent 10,926,193
Grant Date: February 23, 2021
 Simone Less, Sebastien A. Duval, Abderrazak Traidia and Regis D. Vilagines

Method and Apparatus for Promoting Droplets Coalescence in Oil Continuous Emulsions

Granted Patent: U.S. Patent 10,926,194
Grant Date: February 23, 2021
 Simone Less, Sebastien A. Duval, Abderrazak Traidia and Regis D. Vilagines

Method and Apparatus for Promoting Droplets Coalescence in Oil Continuous Emulsions

Granted Patent: U.S. Patent 10,926,195
Grant Date: February 23, 2021
 Simone Less, Sebastien A. Duval, Abderrazak Traidia and Regis D. Vilagines

Method and Apparatus for Promoting Droplets Coalescence in Oil Continuous Emulsions

Granted Patent: U.S. Patent 10,926,196
Grant Date: February 23, 2021
 Simone Less, Sebastien A. Duval, Abderrazak Traidia and Regis D. Vilagines

Fabricating Calcite Nanofluidic Channels

Granted Patent: U.S. Patent 10,926,227
Grant Date: February 23, 2021
 Dong K. Cha, Mohammed B. Alotaibi, Sultan M. Al Enezi and Ali A. Al-Yousef

Point-of-Sale Octane/Cetane-on-Demand Systems for Automotive Engines

Granted Patent: U.S. Patent 10,926,994
Grant Date: February 23, 2021
 Ahmad O. Al-Khowaiter, Esam Z. Hamad, Husain A. Baaqel and Amer A. Amer

Catalyst for Converting Heavy Reformate to Produce BTX Compounds

Granted Patent: U.S. Patent 10,927,059
Grant Date: February 23, 2021
 Veera Venkata R. Tammana, Raed H. Abudawoud, Avelino Corma Canos, M. Teresa Portilla Ovejero, M. Cristina Martinez Sanchez and Ibrahim M. Al-Zahrani

Lost Circulation Material (LCM) Pill for Partial Loss Control

Granted Patent: U.S. Patent 10,927,281
Grant Date: February 23, 2021
 Md Amanullah and Turki Al-Subaie

Lost Circulation Material (LCM) Pill for Partial Loss Control

Granted Patent: U.S. Patent 10,927,282
Grant Date: February 23, 2021
 Md Amanullah and Turki Al-Subaie

Invert Emulsion Drilling Fluids with Fatty Acid and Fatty Amine Rheology Modifiers

Granted Patent: U.S. Patent 10,927,284
Grant Date: February 23, 2021
 Vikrant B. Wagle, Abdullah S. Al-Yami, Khawlah Alanqari and Sara Alkhalaf

Alkyl Ester Spotting Fluid Compositions for Differential Sticking

Granted Patent: U.S. Patent 10,927,285
Grant Date: February 23, 2021
 Md Amanullah

Alkyl Ester Spotting Fluid Compositions for Differential Sticking

Granted Patent: U.S. Patent 10,927,286
Grant Date: February 23, 2021
 Md Amanullah

Chemical Imbibition by Gels Containing Surfactants for Fractured Carbonate Reservoirs

Granted Patent: U.S. Patent 10,927,290
Grant Date: February 23, 2021
 Ming Han, Jinxun Wang, Dongqing Cao, Abdullah Al-Boqmi and Amar J. Alshehri

Compositions for Treating a Subterranean Formation with a Foamed System and Corresponding Methods

Granted Patent: U.S. Patent 10,927,291
Grant Date: February 23, 2021
 Ali A. Al-Taq and Zuhair A. Al-Yousif

Delayed Coking Plant Combined Heating and Power Generation

Granted Patent: U.S. Patent 10,927,305
Grant Date: February 23, 2021
 Mahmoud B. Noureldin and Hani M. Al Saed

Conserving Fresh Wash Water Usage in Desalting Crude Oil

Granted Patent: U.S. Patent 10,927,309
Grant Date: February 23, 2021
 Vilas S. Koleshwar and Saif F. Albluwi

Production of Upgraded Petroleum by Supercritical Water

Granted Patent: U.S. Patent 10,927,312
Grant Date: February 23, 2021
 Ki-Hyouk Choi, Joo-Hyeong Lee, Mohammad S. Garhoush and Ali H. Alshareef

Supercritical Water Process Integrated with Visbreaker

Granted Patent: U.S. Patent 10,927,313
Grant Date: February 23, 2021
 Ki-Hyouk Choi, Mazin M. Fathi, Mohnnad H. Alabsi and Vinod Ramaseshan

Lubricity Additive for Transportation Fuels

Granted Patent: U.S. Patent 10,927,318
Grant Date: February 23, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Downhole Mobility Module for Logging and Intervention of Extended Reach Wells

Granted Patent: U.S. Patent 10,927,610
Grant Date: February 23, 2021
 Abubaker Saeed, Mohannad Abdelaziz, Shazad Sadick, Jeff Shasho, Jason Herman, John Wilson and Michael Maksymuk

Delivering Materials Downhole Using Tools with Moveable Arms

Granted Patent: U.S. Patent 10,927,618
Grant Date: February 23, 2021
 Hussain Albahrani, Mohammad Aljubran and Timothy E. Moellendick

Operating a Subsurface Safety Valve Using a Downhole Pump

Granted Patent: U.S. Patent 10,927,645
Grant Date: February 23, 2021
 Chidirim E. Ejim and Brian A. Roth

Recovering Hydrocarbons in Multilayer Reservoirs with Coiled Tubing

Granted Patent: U.S. Patent 10,927,654
Grant Date: February 23, 2021
 Soha O. El-Hayek and Essam M. Alyan

Multiphase Flow Meter with Tuning Fork

Granted Patent: U.S. Patent 10,927,673
Grant Date: February 23, 2021
 Brett W. Bouldin, Robert J. Turner, Frode Hveding and Mohamed N. Noui-Mehidi

Separating a Fuel On-Board a Vehicle

Granted Patent: U.S. Patent 10,927,799
Grant Date: February 23, 2021
 Esam Z. Hamad and Ahmad A. Khan

Characterization of Crude Oil and its Fractions by Fluorescence Spectroscopy Analysis

Granted Patent: U.S. Patent 10,928,375
Grant Date: February 23, 2021
 Adnan Al-Hajji and Omer R. Koseoglu

Identifying Potential Hydrocarbon Traps in a Subterranean Region Using Recursive Anisotropic Erosion of Seismic Data

Granted Patent: U.S. Patent 10,928,533
Grant Date: February 23, 2021
 Xu Ji and Yuxiang Wang

Mapping Chemostratigraphic Signatures of a Reservoir with Rock Physics and Seismic Inversion

Granted Patent: U.S. Patent 10,928,556
Grant Date: February 25, 2021
 Rudi Lubbe, Neil W. Craigie and Nikolaos A. Michael

Logging Tool with Magnetic Source and Electric Dipole Sensor for Forward and Lateral Imaging

Granted Patent: U.S. Patent 10,928,541
Grant Date: February 25, 2021
 Teruhiko Hagiwara

Rock Type Based Free Water Level Inversion

Granted Patent: U.S. Patent 10,928,548
Grant Date: February 25, 2021
 Ramsin Y. Eyvazzadeh, Denis P. Schmitt, David Kersey and George Saghiyyah

Systems and Methods for Securely Transferring Selective Data Sets between Terminals with Multi-Applications Support

Granted Patent: U.S. Patent 10,931,790
Grant Date: February 25, 2021
 Fouad M. Alkhabbaz, Maatoug Al-Maatoug and Zakarya A. Abu Al Saud

Multiple Stage Catalyst Systems and Processes for Propene Production

Granted Patent: U.S. Patent 10,934,251
Grant Date: March 2, 2021
 Faisal H. Alshafei, Munir D. Khokhar and Sohel K. Shaikh

N-Hydroxyalkylated Polyamines, Methods of Making N-Hydroxyalkylated Polyamines, and Fluids Containing an N-Hydroxyalkylated Polyamine

Granted Patent: U.S. Patent 10,934,249
Grant Date: March 2, 2021
 Matthew Hilfiger and B. Raghava Reddy

Date Seed-Based Multimodal Particulate Admixture for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 10,934,465
Grant Date: March 2, 2021
 Md Amanullah

Date Seed-Based Multimodal Particulate Admixture for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 10,934,466
Grant Date: March 2, 2021
 Md Amanullah

Storable Gas Generating Compositions

Granted Patent: U.S. Patent 10,934,468
Grant Date: March 2, 2021
 B. Raghava Reddy

Process to Recover Gasoline and Diesel from Aromatic Complex Bottoms

Granted Patent: U.S. Patent 10,934,495
Grant Date: March 2, 2021
 Omer R. Koseoglu, Robert P. Hodgkins, Bruce R. Beadle, Vinod Ramaseshan and Rakan S. Bilau

Combustion of Spent Adsorbents Containing HPNA Compounds in a Membrane Wall Partial Oxidation Gasification Reactor

Granted Patent: U.S. Patent 10,934,498
Grant Date: March 2, 2021
 Omer R. Koseoglu

Self-Adjusting Downhole Motor

Granted Patent: U.S. Patent 10,934,782
Grant Date: March 2, 2021
 Peter I. Egbe

Drill Bit Valve

Granted Patent: U.S. Patent 10,934,785
Grant Date: March 2, 2021
 Ahmad A. Amoudi and Ossama R. Sehsah

Repulsion Force Systems and Methods for Metal Fish Retrieval

Granted Patent: U.S. Patent 10,934,797
Grant Date: March 2, 2021
 Ali R. Alssafwany

Liner Installation with Inflatable Packer

Granted Patent: U.S. Patent 10,934,814
Grant Date: March 2, 2021
 Muhammad Arsalan, Henrik W. Clayborough and Jarl A. Fellinghaug

Flow Meter Well Tool

Granted Patent: U.S. Patent 10,934,820
Grant Date: March 2, 2021
 Rafael A. Lastra Melo

Systems, Apparatuses, and Methods for Downhole Water Separation

Granted Patent: U.S. Patent 10,934,829
Grant Date: March 2, 2021
 Muhammad Ayub

Sampling Techniques to Detect Hydrocarbon Seepage

Granted Patent: U.S. Patent 10,934,839
Grant Date: March 2, 2021
 Mahdi A. Abuali, Maher I. Almarhoon and Khaled Arouri

System and Method for Acoustic Container Volume Calibration

Granted Patent: U.S. Patent 10,935,408
Grant Date: March 2, 2021
 Vincent Cunningham, Ali H. Outa, Ihsan Al-Taie and Ayman M. Amer

Generating Geophysical Images Using Directional Oriented Wavefield Imaging

Granted Patent: U.S. Patent 10,935,680
Grant Date: March 2, 2021
 Constantinos Tsingas, Young S. Kim and Woodon Jeong

Using Snapshots for Data Backups

Granted Patent: U.S. Patent 10,936,436
Grant Date: March 2, 2021
 Ahmed S. Alsalam

Extensible Well Data Integrity Smart Detector

Granted Patent: U.S. Patent 10,936,561
Grant Date: March 2, 2021
 Martin D. Hiu, Troy W. Thompson and Murtadha I. Habib

Method and Material for Isolating a Severe Loss Zone

Granted Patent: U.S. Patent 10,941,326
Grant Date: March 9, 2021
 Raed A. Alouhali, Md Amanullah, Mohammed K. Arfaj and Turki Alsubaie

Method and Material for Isolating a Severe Loss Zone

Granted Patent: U.S. Patent 10,941,327
Grant Date: March 9, 2021
 Mohammed K. Arfaj, Md Amanullah, Raed A. Alouhali and Turki Alsubaie

Hydrocracking Catalyst Comprising a Beta Zeolite (*BEA) Framework Submitted with Ti and Zr and Methods for its Preparation and Use

Granted Patent: U.S. Patent 10,941,354
Grant Date: March 9, 2021
 Robert P. Hodgkins, Omer R. Koseoglu, Koji Uchida, Tomoyasu Kagawa and Mitsunori Watabe

Paraxylene Production from Naphtha Feed

Granted Patent: U.S. Patent 10,941,356
Grant Date: March 9, 2021
 Yufeng He and Qi Xu

High Power Laser Completion Drilling Tool and Methods for Upstream Subsurface Applications

Granted Patent: U.S. Patent 10,941,618
Grant Date: March 9, 2021
 Sameeh I. Batarseh

Cementing Plug System

Granted Patent: U.S. Patent 10,941,631
Grant Date: March 9, 2021
 Atallah N. Harbi, Ziyad Alsahlawi and Ossama R. Sehsah

Multistage Hydrocarbon Lifting

Granted Patent: U.S. Patent 10,941,639
Grant Date: March 9, 2021
 Al-Waleed A. Al-Gouhi

Downhole Well Integrity Reconstruction in the Hydrocarbon Industry

Granted Patent: U.S. Patent 10,941,644
Grant Date: March 9, 2021
 Mohammad Aljubran, Hussain Albahrani, Sameeh I. Batarseh and Timothy E. Moellendick

Real-Time Monitoring of Hydrocarbon Productions

Granted Patent: U.S. Patent 10,941,645
Grant Date: March 9, 2021
 Vinay Raman, Anthony A. Kmetz II and Jason R. Cox

Tool for Testing within a Wellbore

Granted Patent: U.S. Patent 10,941,649
Grant Date: March 9, 2021
 Peter I. Egbe and Ossama R. Sehsah

Motorized Pump

Granted Patent: U.S. Patent 10,941,778
Grant Date: March 9, 2021
 Jinjiang Xiao, Rafael A. Lastra Melo and Chidirim E. Ejim

Acoustic Calibration Array for Tanks and Vessels

Granted Patent: U.S. Patent 10,942,054
Grant Date: March 9, 2021
 Brian J. Parrott and Fadl Abdellatif

Characterization of Crude Oil and its Fractions by Fourier Transform Infrared (FTIR) Spectroscopy Analysis

Granted Patent: U.S. Patent 10,942,160
Grant Date: March 9, 2021
 Omer R. Koseoglu, Adnan Al-Hajji and Amer A. Al-Tuwailib

Root Cause Analysis for Unified Communications Performance Issues

Granted Patent: U.S. Patent 10,944,622
Grant Date: March 9, 2021
 Baher Y. Al Ramady, Zahrah Almousa and Mawada M. Felemban

System and Method for Removing Acid Gas from a Sour Gas Stream

Granted Patent: U.S. Patent 10,946,550
Grant Date: March 16, 2021
 Guillaume R.J.-F. Raynel and Thibault T. Villette

System and Method for Removing Acid Gas from a Sour Gas Stream

Granted Patent: U.S. Patent 10,946,551
Grant Date: March 16, 2021
 Guillaume R.J.-F. Raynel and Thibault T. Villette

Method of Synthesis of Nano-Sized Beta Zeolites Containing Mesopores and Uses Thereof

Granted Patent: U.S. Patent 10,946,567
Grant Date: March 16, 2021
 Manal Eid, Lianhui Ding and Kareemuddin Shaik

Pipe Cutting Tool

Granted Patent: U.S. Patent 10,946,465
Grant Date: March 16, 2021
 Ossama R. Sehsah, Muhammad Muqem and Fauzia Waluyo

Chemical Composition of Superabsorbent Vesicles, Method for Mortar Cement Admixture, and Applications of the Same

Granted Patent: U.S. Patent 10,947,457
Grant Date: March 16, 2021
 Elizabeth Q. Contreras and Carl Thaemlitz

Method for Monitoring Cement Using Polymer-Based Capsules

Granted Patent: U.S. Patent 10,947,458
Grant Date: March 16, 2021
 Elizabeth Q. Contreras

Cement Compositions Comprising Aqueous Latex Containing Dispersed Solid and Liquid Elastomer Phases

Granted Patent: U.S. Patent 10,947,459
Grant Date: March 16, 2021
 B. Raghava Reddy

Cement Compositions Comprising Aqueous Latex Containing Dispersed Solid and Liquid Elastomer Phases

Granted Patent: U.S. Patent 10,947,440
Grant Date: March 16, 2021
 B. Raghava Reddy

Dual-Phase Acid-Based Fracturing Composition with Corrosion Inhibitors and Method of Use Thereof

Granted Patent: U.S. Patent 10,947,446
Grant Date: March 16, 2021
 Saleh H. Al-Mutairi, Yaser K. Al-Duailej, Ibrahim S. Al-Yami, Abdullah M. Al-Hajri and Hameed H. Al-Badairy

Selective Liquid-Liquid Extraction of Oxidative Desulfurization Reaction Products

Granted Patent: U.S. Patent 10,947,461
Grant Date: March 16, 2021
 Emad N. Al-Shafei and Esam Z. Hamad

Downhole Tool

Granted Patent: U.S. Patent 10,947,789
Grant Date: March 16, 2021
 Najeeb Al-Abdulrahman, Suliman M. Azzouni and Mohammed K. Muqri

Method and System for Extended Reach Coiled Tubing

Granted Patent: U.S. Patent 10,947,794
Grant Date: March 16, 2021
 Mohamed N. Noui-Mehidi

Oil Swellable, Surface Treated Elastomeric Polymer and Methods of Using the Same for Controlling Losses of Non-Aqueous Wellbore Treatment Fluids to the Subterranean Formation

Granted Patent: U.S. Patent 10,947,795
Grant Date: March 16, 2021
 B. Raghava Reddy

Systems and Methods for Pipe Concentricity, Zonal Isolation, and Stuck Pipe Prevention

Granted Patent: U.S. Patent 10,947,811
Grant Date: March 16, 2021
 Abdulaziz S. Al-Qasim and Ahmed Y. Bukhamseen

Systems and Methods for Preventing Sand Accumulation in Inverted Electric Submersible Pump

Granted Patent: U.S. Patent 10,947,815
Grant Date: March 16, 2021
 Chidirim E. Ejim and Jinjiang Xiao

Fluid Driven Commingling System for Oil and Gas Applications

Granted Patent: U.S. Patent 10,947,851
Grant Date: March 16, 2021
 Jinjiang Xiao, Rafael A. Lastra Melo and Shoubo Wang

Rock Sample Preparation Method by Using Focused Ion Beam for Minimizing Curtain Effect

Granted Patent: U.S. Patent 10,948,429
Grant Date: March 16, 2021
 Dong K. Cha, Sultan Enezi, Mohammed Al Otaibi and Ali A. Al-Yousef

Methods and Systems for Measuring Pore Volume Compressibility with Low Field Nuclear Magnetic Resonance Techniques

Granted Patent: U.S. Patent 10,948,459
Grant Date: March 16, 2021
 Marwah M. AlSinan and Hyung T. Kwak

Generating a Velocity Model for a Subsurface Structure Using Refraction Traveltime Tomography

Granted Patent: U.S. Patent 10,948,617
Grant Date: March 16, 2021
 Fuhao Qin, Constantinos Tsingas and Tong W. Fei

Apparatus for Increasing Energy Yield in Bifacial Photovoltaic Modules

Granted Patent: U.S. Patent 10,948,617
Grant Date: March 16, 2021
 Issam Gereige and Ahmed Al Saggaf

Securing an IMS-Based VoIP Network with Multiple VPNs

Granted Patent: U.S. Patent 10,951,665
Grant Date: March 16, 2021
 Kashif Khawaja, Mudashiru Busari and Baraka H. Mutairi

Ni-Ru-CgO Based Pre-Reforming Catalyst for Liquid Hydrocarbons

Granted Patent: U.S. Patent 10,955,588
Grant Date: March 23, 2021
 Aadesh Harale, Sai P. Katikaneni, Joongmyeon Bae, Youshan Ma and Ahmed Al-Naimi

Methods for Producing Mesoporous Zeolite Multifunctional Catalysts for Upgrading Pyrolysis Oil

Granted Patent: U.S. Patent 10,955,596
Grant Date: March 23, 2021
 Miao Sun, Ke Zhang and Veera Venkata R. Tammana

Advanced Heat Integration in Sulfur Recovery Unit — SafarClaus

Granted Patent: U.S. Patent 10,954,126
Grant Date: March 23, 2021
 Yazeed S. Alshahrani

Advanced Heat Integration in Sulfur Recovery Unit — SafarClaus

Granted Patent: U.S. Patent 10,954,127
Grant Date: March 23, 2021
 Yazeed S. Alshahrani

Date Seed-Based Multi-Modal Particulate Admixture for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 10,954,424
Grant Date: March 23, 2021
 Md Amanullah

Oil-Based Drilling Fluids for High-Pressure and High Temperature Drilling Operations

Granted Patent: U.S. Patent 10,954,425
Grant Date: March 23, 2021
 Musarrat H. Mohammed, Andrew Whiting, Hugh C. Greenwell, Mona Al Batal, John A. Hall, Gasan S. Alabedi and Michael H. Hodder

Method and Composition for Sealing a Subsurface Formation

Granted Patent: U.S. Patent 10,954,427
Grant Date: March 23, 2021
 Rajendra A. Kalgaonkar and Vikrant B. Wagle

Controlled Release of Surfactants for Enhanced Oil Recovery

Granted Patent: U.S. Patent 10,954,429
Grant Date: March 23, 2021
 Yun C. Chang and Mazen Y. Kanj

Coated Proppants and Methods of Making and Use Thereof

Granted Patent: U.S. Patent 10,954,454
Grant Date: March 23, 2021
 B. Raghava Reddy, Feng Liang

Integrated Process for Producing Anode Grade Coke

Granted Patent: U.S. Patent 10,954,447
Grant Date: March 23, 2021
 Omer R. Koseoglu

Non-Solvent Crude Oil Heavy Oil Stream De-Asphalting Process

Granted Patent: U.S. Patent 10,954,454
Grant Date: March 23, 2021
 Miao Sun, Zhonglin Zhang and Soheli K. Shaikh

Methods Including Direct Hydroprocessing and High-Severity Fluidized Catalytic Cracking for Processing Crude Oil

Granted Patent: U.S. Patent 10,954,457
Grant Date: March 23, 2021
 Mansour A. Al-Herz and Musaed S. Al-Ghrami

Smart Rotating Control Device Apparatus and System

Granted Patent: U.S. Patent 10,954,759
Grant Date: March 23, 2021
 Ossama R. Sehsah and Muhammad Muqem

Subsurface Safety Valve with Rotating Disk

Granted Patent: U.S. Patent 10,954,750
Grant Date: March 23, 2021
 Marius Neacsu, Ahmed Al-Ramadhan and Ahmed Al-Mousa

Tailored Injection Water Slug Designs for Enhanced Oil Recovery in Carbonates

Granted Patent: U.S. Patent 10,954,764
Grant Date: March 23, 2021
 Subhash C. Ayirala, Ammar Alshehri, Sultan Enezi and Ali A. Al-Yousef

Automated Pipeline Pig Handling System

Granted Patent: U.S. Patent 10,955,082
Grant Date: March 23, 2021
 Pablo D. Genta

Fiber Optic Line for Monitoring of Well Operations

Granted Patent: U.S. Patent 10,955,264
Grant Date: March 23, 2021
 Jonathan W. Brown, Kirk Bartko and Brett W. Bouldin

System and Method for Determining Dynamic Dependencies for Enterprise IT Change Management, Simulation and Rollout

Granted Patent: U.S. Patent 10,956,145
Grant Date: March 23, 2021
 Aqeel A. Al-Naser and Murtadha I. Al-Habib

Augmented Reality for End-to-End Data Center IT Infrastructure Layout

Granted Patent: U.S. Patent 10,958,765
Grant Date: March 23, 2021
 Ibraheem A. Sheikh

Monitoring System for Site Safety and Tracking

Granted Patent: U.S. Patent 10,959,056
Grant Date: March 23, 2021
 Ziyad Alsahlawi, Mahmoud A. Alqurashi and Ossama R. Sehsah

Crosslinked Polymer Membranes and Methods of their Production

Granted Patent: U.S. Patent 10,960,361
Grant Date: March 30, 2021
 Justin T. Vaughn and Benjamin J. Sundell

Catalysts Systems that Include Metal Co-Catalysts for the Production of Propylene

Granted Patent: U.S. Patent 10,961,171
Grant Date: March 30, 2021
 Munir D. Khokhar, Mohammed R. Alalouni, Noor A. Sulais, Brian Hanna and Soheli K. Shaikh

Development of Anti-Bit Balling Fluids

Granted Patent: U.S. Patent 10,961,426
Grant Date: March 30, 2021
 Abdullah S. Al-Yami, Abdulaziz A. Ba Hamdan, Saleh A. Haidary, Vikrant B. Wagle, Hussain Albahrani, Ali M. Al-Safran, Nasser Alhareth and Abdulla H. Awadh

Loss Circulation Material Composition Having Alkaline Nanoparticle-Based Dispersion and Water Insoluble Hydrolysable Polyester

Granted Patent: U.S. Patent 10,961,450
Grant Date: March 30, 2021
 Vikrant B. Wagle, Rajendra Kalgaonkar, Abdullah S. Al-Yami and Zainab A. Alsaihati

Hydrocarbon Well Deliquification Using Dry Ice

Granted Patent: U.S. Patent 10,961,455
Grant Date: March 30, 2021
 Aslan Bulekbay, Prasad B. Karadkar and Mustafa Alkhowaildi

Hydrocarbon Recovery Using Complex Water and Carbon Dioxide Emulsions

Granted Patent: U.S. Patent 10,961,455
Grant Date: March 30, 2021
 Fawaz M. Al-Otaibi and Sunil L. Kokal

Hydrocarbon Recovery Using Complex Water and Carbon Dioxide Emulsions

Granted Patent: U.S. Patent 10,961,456
Grant Date: March 30, 2021
 Fawaz M. Al-Otaibi, Sunil L. Kokal

Sandstone Stimulation Using in Situ Mud Acid Generation

Granted Patent: U.S. Patent 10,961,440
Grant Date: March 30, 2021
 Ayman R. Al-Nakhli, Amy J. Cairns and Katherine L. Hull

Delayed Coking Plant Combined Heating and Power Generation

Granted Patent: U.S. Patent 10,961,460
Grant Date: March 30, 2021
 Mahmoud B. Noureldin and Hani M. Al Saed

Thermal Hydrodealkylation of Hydrocracking Feedstock to Mitigate HPNA Formation

Granted Patent: U.S. Patent 10,961,470
Grant Date: March 30, 2021
 Omer R. Koseoglu

Loss Circulation Drilling Packer

Granted Patent: U.S. Patent 10,961,807
Grant Date: March 30, 2021
 Herschel Foster, Ossama R. Sehsah and Mahmoud A. Alqurashi

Systems and Methods for Smart Wellbore Clean Out

Granted Patent: U.S. Patent 10,961,809
Grant Date: March 30, 2021
 Ossama R. Sehsah and Mahmoud A. Alqurashi

Wellbore Casing Liner Printing

Granted Patent: U.S. Patent 10,961,815
Grant Date: March 30, 2021
 Peter J. Boul and Carl J. Thaeamlitz

Polymer Flooding Processes for Viscous Oil Recovery in Carbonate Reservoirs

Granted Patent: U.S. Patent 10,961,851
Grant Date: March 30, 2021
 Subhash C. Ayirala, Abdulkareem M. Al-Sofi, Ali A. Al-Yousef and Jinxun Wang

Sandstone Stimulation Using in Situ Mud Acid Generation

Granted Patent: U.S. Patent 10,961,855
Grant Date: March 30, 2021
 Ayman R. Al-Nakhli and Amy J. Cairns

Power Generation from Waste Energy in Industrial Facilities

Granted Patent: U.S. Patent 10,961,875
Grant Date: March 30, 2021
 Mahmoud B. Noureldin, Hani M. Al Saed and Ahmad S. Bunaiyan

Methods and Apparatus for Providing ESP Stage Sequential Engagement

Granted Patent: U.S. Patent 10,962,015
Grant Date: March 30, 2021
 Jinjiang Xiao, Brian A. Roth and Rafael A. Lastra Melo

Multiphase Flow Rate Measurement with Elliptical Ultrasonic Transceiver Array

Granted Patent: U.S. Patent 10,962,595
Grant Date: March 30, 2021
 Talha J. Ahmad and Mohamed N. Noui-Mehidi

Quasi-Fundamental Mode Operated Multimode Fiber for Distributed Acoustic Sensing

Granted Patent: U.S. Patent 10,962,408
Grant Date: March 30, 2021
 Frode Hveding, Islam Ashry, Mao Yuan, Mohd Sharizal Bin Alias, Boon S. Ooi and Muhammad Arsalan

Surface-Scattered Noise Reduction*Granted Patent: U.S. Patent 10,962,668**Grant Date: March 30, 2021*

Hongwei Liu, Luo Yi and Vincent Etienne

Predicting Failures in Electrical Submersible Pumps Using Pattern Recognition*Granted Patent: U.S. Patent 10,962,968**Grant Date: March 30, 2021*

Abdulmonam Al-Maghlouth, Obioma Lotaoso L. Isichei and Mohammad F. Al-Qasimi

Adhesive Compositions and Methods*Granted Patent: U.S. Patent 10,968,350**Grant Date: April 6, 2021*

Chin-Chang Shen

Polymer Enhanced Surfactant Flooding for Permeable Carbonates*Granted Patent: U.S. Patent 10,968,382**Grant Date: April 6, 2021*

Ming Han, Ali A. Al-Yousef, Salah H. Al-Saleh and Alhasan Fuseni

Water Treatment Schemes for Injection Water Flooding Recovery Processes in Carbonate Reservoirs*Granted Patent: U.S. Patent 10,968,383**Grant Date: April 6, 2021*

Subhash C. Ayirala and Ali A. Al-Yousef

Nanoparticle Enhanced Resin Coated Frac Sand Composition*Granted Patent: U.S. Patent 10,968,385**Grant Date: April 6, 2021*

Wengang Li and Jin Huang

Method and Process for Producing Needle Coke from Aromatic Polymer Material and Aromatic Bottoms of an Aromatic Recovery Complex*Granted Patent: U.S. Patent 10,968,396**Grant Date: April 6, 2021*

Omer R. Koseoglu, Robert P. Hodgkins and Tulay Inan

Process to Remove Olefins from Light Hydrocarbon Stream by Mercaptanization Followed by MEROX Removal of Mercaptans from the Separated Stream*Granted Patent: U.S. Patent 10,968,400**Grant Date: April 6, 2021*

Omer R. Koseoglu

Method and System for the Control of Water Concentration in Crude Oil Entering the Dehydrators*Granted Patent: U.S. Patent 10,968,402**Grant Date: April 6, 2021*

Guillaume R.J-F. Raynel, Debora S. Marques and Olanrewaju M. Oshinowo

Preventing Hydrate Formation in a Flow Line*Granted Patent: U.S. Patent 10,968,411**Grant Date: April 6, 2021*

Jana M. Aljindan

In Situ Laser Generator Cooling System for Downhole Application and Stimulations*Granted Patent: U.S. Patent 10,968,704**Grant Date: April 6, 2021*

Sameeh I. Batarseh and Mohamed N. Noui-Mehidi

Systems and Methods for Stuck Drillstring Mitigation*Granted Patent: U.S. Patent 10,968,714**Grant Date: April 6, 2021*

Krzysztof K. Machocki and Michael A. Affleck

Laser Tool*Granted Patent: U.S. Patent 10,968,736**Grant Date: April 6, 2021*

Sameeh I. Batarseh

Acoustic Coupler for Downhole Logging while Drilling Applications*Granted Patent: U.S. Patent 10,968,737**Grant Date: April 6, 2021*

Alberto F. Marsala

Methods and Apparatus for Providing ESP Stage Sequential Engagement*Granted Patent: U.S. Patent 10,968,914**Grant Date: April 6, 2021*

Jinjiang Xiao, Brian A. Roth and Rafael A. Lastra Melo

Systems and Methods for Special Core Analysis Sample Selection and Assessment*Granted Patent: U.S. Patent 10,969,323**Grant Date: April 6, 2021*

Muhammad S. Al Readean, Abdullah A. Alakeely and Endurance O. Ighodalo

Determining Permeability of Porous Media Based on Nuclear Magnetic Resonance Measurement*Granted Patent: U.S. Patent 10,969,352**Grant Date: April 6, 2021*

Hyung T. Kwak and Ahmad M. Al-Harbi

Determining Permeability of Porous Media Based on Nuclear Magnetic Resonance Measurement*Granted Patent: U.S. Patent 10,969,353**Grant Date: April 6, 2021*

Hyung T. Kwak and Ahmad M. Al-Harbi

Seismic Channel Geobody Extraction for Basin Fairway Simulation*Granted Patent: U.S. Patent 10,969,507**Grant Date: April 6, 2021*

Andrew M. Morton and Roger R. Sung

Self-Powered Pipeline Hydrate Prevention System*Granted Patent: U.S. Patent 10,971,972**Grant Date: April 6, 2021*

Sameeh I. Batarseh, Nabeel Al Habib and Talha J. Ahmad

System for Flare Gas Recovery Using Gas Sweetening Process*Granted Patent: U.S. Patent 10,974,194**Grant Date: April 15, 2021*

Ahmed K. Al Muhsen

Treatment of Water Comprising Dissolved Solids in a Wellbore*Granted Patent: U.S. Patent 10,974,972**Grant Date: April 15, 2021*

Abdulrahman A. Al-Mulhem

Integrated Process for Production of Ethylene from Propylene*Granted Patent: U.S. Patent 10,975,004**Grant Date: April 15, 2021*

Sohel Shaikh, Raed H. Abudawoud, Zhonglin Zhang, Munir Khokhar and Miao Sun

Method and Material for Isolating a Severe Loss Zone*Granted Patent: U.S. Patent 10,975,283**Grant Date: April 15, 2021*

Md Amanullah, Raed A. Alouhali and Mohammed K. Arfaj

Methods for Treating a Subterranean Formation with a Foamed Acid System*Granted Patent: U.S. Patent 10,975,293**Grant Date: April 15, 2021*

Ali A. Al-Taq and Zuhair A. Al-Yousif

Upgrading of Heavy Oil for Steam Cracking Process*Granted Patent: U.S. Patent 10,975,317**Grant Date: April 15, 2021*

Ki-Hyoun Choi, Mazin M. Fathi, Muneef F. Alqarzouh and Bandar K. Alotaibi

Expansion Tubing Joint with Extendable Cable*Granted Patent: U.S. Patent 10,975,630**Grant Date: April 15, 2021*

Ahmed M. Al Haji

Milling Wellbores*Granted Patent: U.S. Patent 10,975,645**Grant Date: April 15, 2021*

Ahmed Al-Mousa and Marius Neacsu

Wellhead Telescopic Adaptor for Wellhead Assembly*Granted Patent: U.S. Patent 10,975,654**Grant Date: April 15, 2021*

Marius Neacsu, Ahmed A. Al-Ramadhan and Ahmed Al-Mousa

Real-Time Monitoring of Hydrocarbon Productions*Granted Patent: U.S. Patent 10,975,685**Grant Date: April 15, 2021*

Vinay Raman, Anthony A. Kmetz II and Jason R. Cox

Natural Gas Liquid Fractionation Plants Low Grade Waste Heat Conversion to Cooling, Power and Water*Granted Patent: U.S. Patent 10,975,735**Grant Date: April 15, 2021*

Mahmoud B. Noureldin and Akram H. Kamel

Process Integration for Natural Gas Liquid Recovery*Granted Patent: U.S. Patent 10,976,103**Grant Date: April 15, 2021*

Mahmoud B. Noureldin, Akram H. Kamel and Abdulaziz A. Alnajjar

Measuring the Wettability of Porous Media Based on the Temperature Sensitivity of Nuclear Magnetic Resonance Relaxation Time*Granted Patent: U.S. Patent 10,976,274**Grant Date: April 15, 2021*

Hyung T. Kwak and Ahmad M. Al-Harbi

Multiple Function Dual Coreflooding Apparatus and Methods

Granted Patent: U.S. Patent 10,976,296
Grant Date: April 15, 2021
 Fawaz Al-Otaibi, Xianmin Zhou, Ahmed A. Eidan, Sunil L. Kokal and Almohannad A. Alhashboul

Final Statics Calculation for Automated Near Surface Analysis

Granted Patent: U.S. Patent 10,976,459
Grant Date: April 15, 2021
 Daniele Colombo and Federico Miorelli

System for Flare Gas Recovery Using Gas Sweetening Process

Granted Patent: U.S. Patent 10,981,104
Grant Date: April 20, 2021
 Ahmed K. Al Muhsen

Aerosolization Method for Producing Solid Product Particles Having Desired Characteristics from Precursor Particles

Granted Patent: U.S. Patent 10,981,152
Grant Date: April 20, 2021
 Michele L. Ostraat

Composite Hierarchical Zeolite Catalyst for Heavy Reformate Conversion to Xylenes

Granted Patent: U.S. Patent 10,981,160
Grant Date: April 20, 2021
 Veera Venkata R. Tammana, Raed H. Abudawoud, Ahmad A. Jazzar and Mohammed Al Amer

Polymer Compositions and Methods

Granted Patent: U.S. Patent 10,982,056
Grant Date: April 20, 2021
 Scott D. Allen and Wayne R. Willkomm

Drill-in Fluid Compositions and Methods

Granted Patent: U.S. Patent 10,982,124
Grant Date: April 20, 2021
 Hussain Albahrani, Abdullah S. Al-Yami and Abdulla H. Al-Awadh

Integrated Multistage Solvent Deasphalting and Delayed Coking Process to Produce High Quality Coke

Granted Patent: U.S. Patent 10,982,153
Grant Date: April 20, 2021
 Omer R. Koseoglu

Casing Patch for Loss Circulation Zone

Granted Patent: U.S. Patent 10,982,499
Grant Date: April 20, 2021
 Fawaz M. Alshuraim

Cement Squeeze Well Tool

Granted Patent: U.S. Patent 10,982,504
Grant Date: April 20, 2021
 Ahmed Al-Mousa and Ahmed A. Al-Ramadhan

Systems and Methods for Operating Downhole Inflow Control Valves to Provide Sufficient Pump Intake Pressure

Granted Patent: U.S. Patent 10,982,516
Grant Date: April 20, 2021
 James O. Arukhe, Obiomalotaoso L. Isichei and Faisal Khelaiwi

Hydrogen Production by Downhole Electrolysis of Reservoir Brine for Enhanced Oil Recovery

Granted Patent: U.S. Patent 10,982,517
Grant Date: April 20, 2021
 Abdulrahman A. Al-Mulhem, Mohammed A. Al-Daous and Hussam A. Bahlouli

Sampling Techniques to Detect Hydrocarbon Seepage

Granted Patent: U.S. Patent 10,982,557
Grant Date: April 20, 2021
 Mahdi A. Abuali, Maher I. Almarhoon and Khaled Arouri

Multi-Zone Well Testing

Granted Patent: U.S. Patent 10,982,558
Grant Date: April 20, 2021
 Shrikant Tiwari and Prasad Karunakaran

Method for Dynamic Calibration and Simultaneous Closed-Loop Inversion of Simulation Models of Fractured Reservoirs

Granted Patent: U.S. Patent 10,983,253
Grant Date: April 20, 2021
 Marko Maucec, Otto E. Meza Camargo, Babatunde Moriwawon and Ali A. Taiban

Characterizing Depositional Features by Geologic-Based Seismic Classification

Granted Patent: U.S. Patent 10,983,255
Grant Date: April 20, 2021
 Si-Hai Zhang, Yin Xu and Mahdi A. Abuali

Super-Resolution Radon Transform Based on Thresholding

Granted Patent: U.S. Patent 10,983,256
Grant Date: April 20, 2021
 Yue Ma and Yi Luo

Enhancing Seismic Images

Granted Patent: U.S. Patent 10,983,257
Grant Date: April 20, 2021
 Song Han, Tong W. Fei and Yi Luo

Calcite Channel Nanofluidics

Granted Patent: U.S. Patent 10,983,459
Grant Date: April 20, 2021
 Dong K. Cha, Mohammed Al Otaibi and Ali A. Al-Yousef

Automated Algorithm and Real-Time System to Detect MPFM Preventive Maintenance Activities

Granted Patent: U.S. Patent 10,983,515
Grant Date: April 20, 2021
 Mohammad S. Al Kadem, Mohammed Gomaa, Karam S. Al Yateem, Abdulmonam S. Al Maghlouth, Abdullah A. Alghamdi and Mazen Alnofal

Wearable Device for Site Safety and Tracking

Granted Patent: U.S. Patent 10,984,644
Grant Date: April 20, 2021
 Ziyad Alsahlawi, Mahmoud A. Alqurashi and Ossama R. Sehsah

Date Tree Waste-Based Tertiary Fibrous Mix for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 10,988,658
Grant Date: April 27, 2021
 Md Amanullah

Layered Double Hydroxides for Oil-Based Drilling Fluids

Granted Patent: U.S. Patent 10,988,659
Grant Date: April 27, 2021
 Musarrat H. Mohammed, Andrew Whiting, Hugh C. Greenwell, Manohara G. Veerabhadrapa, John A. Hall, Gasan S. Alabedi and Michael H. Hodder

Composition of Encapsulated Chemical Additives and Methods for Preparation of the Same

Granted Patent: U.S. Patent 10,988,662
Grant Date: April 27, 2021
 Elizabeth Q. Contreras and B. Raghava Reddy

Compositions for Sealing a Lost Circulation Zone in a Wellbore

Granted Patent: U.S. Patent 10,988,664
Grant Date: April 27, 2021
 Abdullah S. Al-Yami, Ali M. Al-Safran, Vikrant B. Wagle and Zainab A. Alsayhathi

Permeable and Decomposable Plug Forming Rapidly Dehydrating Fluid (RDF)

Granted Patent: U.S. Patent 10,988,665
Grant Date: April 27, 2021
 Md Amanullah and Ali Radhwan

Permeable and Decomposable Plug Forming Rapidly Dehydrating Fluid (RDF)

Granted Patent: U.S. Patent 10,988,666
Grant Date: April 27, 2021
 Md Amanullah and Ali Radhwan

Permeable and Decomposable Plug Forming Rapidly Dehydrating Fluid (RDF)

Granted Patent: U.S. Patent 10,988,667
Grant Date: April 27, 2021
 Md Amanullah and Ali Radhwan

Polymer Flooding Processes for Viscous Oil Recovery in Carbonate Reservoirs

Granted Patent: U.S. Patent 10,988,675
Grant Date: April 27, 2021
 Subhash C. Ayirala, Abdulkareem M. Al-Sofi, Ali A. Al-Yousef and Jinxun Wang

Nanocomposite Coated Proppants and Methods of Making and Use Thereof

Granted Patent: U.S. Patent 10,988,681
Grant Date: April 27, 2021
 Mohammad H. Haque, Rajesh K. Saini and Mohammed Sayed

Prevention of Gas Accumulation Above ESP Intake

Granted Patent: U.S. Patent 10,989,025
Grant Date: April 27, 2021
 Chidirim E. Ejim, Jinjiang Xiao and Rafael A. Lastra Melo

Electrical Submersible Pump with Gas Venting System

Granted Patent: U.S. Patent 10,989,026
Grant Date: April 27, 2021
 Alwaleed A. Al-Gouhi, Osman M. Hieba and Robert L. Cox

Methods and Apparatus for Spatially Oriented Chemically Induced Pulsed Fracturing in Reservoirs

Granted Patent: U.S. Patent 10,989,029
Grant Date: April 27, 2021
 Ayman R. Al-Nakhli and Sameeh I. Batarseh

Synthetic Sweet Spots in Tight Formations by Injection of Nanoencapsulated Reactants

Granted Patent: U.S. Patent 10,989,050
Grant Date: April 27, 2021
 Abdulrahman A. Al-Mulhem and Hazim H. Abass

Real-Time Equivalent Circulating Density of Drilling Fluid

Granted Patent: U.S. Patent 10,989,046
Grant Date: April 27, 2021
 Mohammed M. Al-Rubaii, Abdullah S. Al-Yami and Salem H. Al Gharbi

Natural Gas Liquid Fractionation Plant Waste Heat Conversion to Simultaneous Power and Cooling Capacities Using Integrated Organic-Based Compressor-Ejector-Expander Triple Cycles System

Granted Patent: U.S. Patent 10,989,078
Grant Date: April 27, 2021
 Mahmoud B. Noureldin and Akram H. Kamel

Process Integration for Natural Gas Liquid Recovery

Granted Patent: U.S. Patent 10,989,470
Grant Date: April 27, 2021
 Mahmoud B. Noureldin, Akram H. Kamel and Abdulaziz A. Alnajjar

Magnetically Coupled Integrated Ultrasonic Testing and Cathodic Protection Measurement Probe

Granted Patent: U.S. Patent 10,989,529
Grant Date: April 27, 2021
 Fadl Abdellatif, Ayman M. Amer, Ali H. Outa, Amer H. Patel and Abdullah F. Arab

Industrial Gas Detection

Granted Patent: U.S. Patent 10,989,618
Grant Date: April 27, 2021
 Khalid R. Al Jabri

Systems and Methods for Rapid Prediction of Hydrogen-Induced Cracking (HIC) in Pipelines, Pressure Vessels, and Piping Systems and for Taking Action in Relation Thereto

Granted Patent: U.S. Patent 10,990,875
Grant Date: April 27, 2021
 Abderrazak Traidia and Abdelmounam Sherik

Inferring Petrophysical Properties of Hydrocarbon Reservoirs Using a Neural Network

Granted Patent: U.S. Patent 10,991,078
Grant Date: April 27, 2021
 Mustafa Hakimuddin

Organosilane Templates and Methods for the Synthesis of Mesoporous Zeolites

Granted Patent: U.S. Patent 10,995,107
Grant Date: May 4, 2021
 Sarah L. Kobaslija and Jeremy T. O'Brien

Method and Material for Isolating a Severe Loss Zone

Granted Patent: U.S. Patent 10,995,251
Grant Date: May 4, 2021
 Md Amanullah, Raed A. Alouhali and Mohammed K. Arfaj

Capsule Design for the Capture of Reagents

Granted Patent: U.S. Patent 10,995,254
Grant Date: May 4, 2021
 Elizabeth Q. Contreras

Lost Circulation Material Compositions and Methods of Isolating a Lost Circulation Zone of a Wellbore

Granted Patent: U.S. Patent 10,995,256
Grant Date: May 4, 2021
 Abdullah S. Al-Yami, Ali M. Al-Safran, Vikrant B. Wagle and Zainab A. Alsaihati

Enhancing Acid Fracture Conductivity

Granted Patent: U.S. Patent 10,995,265
Grant Date: May 4, 2021
 Aslan Bulekbay and Ahmed M. Gomaa

Disposal of Disulfide Oil Compounds and Derivatives in Delayed Coking Process

Granted Patent: U.S. Patent 10,995,278
Grant Date: May 4, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Supercritical Reactor Systems and Processes for Petroleum Upgrading

Granted Patent: U.S. Patent 10,995,281
Grant Date: May 4, 2021
 Ki-Hyoun Choi, Abdullah T. Alabdulhadi and Mohammad A. Al-Abdullah

Polymer Geo-Injection for Protecting Underground Structures

Granted Patent: U.S. Patent 10,995,466
Grant Date: May 4, 2021
 Waheed N. Alrafaei, Thibault Villette and Iqbal Hussain

Subterranean Well Thrust-Propelled Torpedo Deployment System and Method

Granted Patent: U.S. Patent 10,995,574
Grant Date: May 4, 2021
 Michael Jervis and Brett W. Bouldin

System and Method for Artificially Recharging a Target Reservoir via Water Injection from a Local Source

Granted Patent: U.S. Patent 10,995,595
Grant Date: May 4, 2021
 Ali S. Rabba and Sultan S. Al-Madani

Organic Rankine Cycle-Based Conversion of Gas Processing Plant Waste Heat into Power

Granted Patent: U.S. Patent 10,995,656
Grant Date: May 4, 2021
 Mahmoud B. Noureldin and Akram H. Kamel

Gas-Assisted Liquid Fuel Oxygen Reactor

Granted Patent: U.S. Patent 10,995,948
Grant Date: May 4, 2021
 Rached Ben-Mansour, Mohamed A. Habib and Aqil Jamal

Nuclear Magnetic Resonance Gas Isotherm Technique to Evaluate Reservoir Rock Wettability

Granted Patent: U.S. Patent 10,996,154
Grant Date: May 4, 2021
 Hyung T. Kwak and Ahmad M. Al-Harbi

Nuclear Magnetic Resonance Gas Isotherm Technique to Evaluate Reservoir Rock Wettability

Granted Patent: U.S. Patent 10,996,155
Grant Date: May 4, 2021
 Hyung T. Kwak and Ahmad M. Al-Harbi

Low Voltage Ride-Through Test Apparatus and Method of Using Same

Granted Patent: U.S. Patent 10,996,275
Grant Date: May 4, 2021
 Athanatu M. Aziz

Image-Guided Velocity Interpolation Using a Mask Cube

Granted Patent: U.S. Patent 10,996,358
Grant Date: May 4, 2021
 Lei Cao, Jiarui Yang, Xiongwen Wang and Yi Luo

Adaptive Receiver Deghosting for Seismic Streamer

Granted Patent: U.S. Patent 10,996,361
Grant Date: May 4, 2021
 Yimin Sun, Dirk J. Verschuur and Roald van Borselen

Wellbore Non-Retrieval Sensing System

Granted Patent: U.S. Patent 10,996,657
Grant Date: May 4, 2021
 Bodong Li, Chinthaka P. Gooneratne and Shaohua Zhou

Method and System for Capturing High-Purity CO₂ in a Hydrocarbon Facility

Granted Patent: U.S. Patent 10,998,566
Grant Date: May 4, 2021
 Ali S. Al Hunaidy and Stamatios Souentis

Microchips for Downhole Data Collection

Granted Patent: U.S. Patent 10,999,946
Grant Date: May 4, 2021
 Bodong Li, Chinthaka P. Gooneratne, Guodong Zhan and Zhaorui Shi

Removal of Kinetic Hydrate Inhibitors

Granted Patent: U.S. Patent 11,000,778
Grant Date: May 11, 2021
 Megat A. Rithauddeen, Shadi I. Al-Adel and Ahmad F. Mohammad

Removal of Kinetic Hydrate Inhibitors

Granted Patent: U.S. Patent 11,000,779
Grant Date: May 11, 2021
 Megat A. Rithauddeen, Shadi I. Al-Adel and Ahmad F. Mohammad

Electrochemical Reduction of Carbon Dioxide to Upgrade Hydrocarbon Feedstocks

Granted Patent: U.S. Patent 11,001,549
Grant Date: May 11, 2021
 Ahmad D. Hammad, Bandar Fadhel, Issam T. Amr and Wajdi I. Al Sadat

Treatment of Epoxidized Unsaturated Isoolefin Copolymers

Granted Patent: U.S. Patent 11,001,648
Grant Date: May 11, 2021
Paul Nguyen, Treena Crockett,
Gregory J.E. Davidson and Sharon Guo

Low Temperature Cross Linkable Polychloroprene Compositions

Granted Patent: U.S. Patent 11,001,655
Grant Date: May 11, 2021
Victor Nasreddine, Nicolas Sary and Martin Schneider

Methods for Producing Seawater-Based, High Temperature Viscoelastic Surfactant Fluids with Low Scaling Tendency

Granted Patent: U.S. Patent 11,001,749
Grant Date: May 11, 2021
Leiming Li, Feng Liang and Tao Chen

Hydraulic Fracturing Fluid

Granted Patent: U.S. Patent 11,001,750
Grant Date: May 11, 2021
Leiming Li, Feng Liang, Ghaithan A. Al-Muntasheri and Amy J. Cairns

Production of High Quality Diesel by Supercritical Water Process

Granted Patent: U.S. Patent 11,001,766
Grant Date: May 11, 2021
Ki-Hyoun Choi, Vinod Ramaseshan and Mohnad H. Alabsi

Systems and Methods for Processing Heavy Oils by Oil Upgrading Followed by Refining

Granted Patent: U.S. Patent 11,001,770
Grant Date: May 11, 2021
Kareemuddin Shaik, Lianhui Ding, Mazin Tamimi, Ibrahim Abba and Abdennour Bourane

System and Process for Steam Cracking and PFO Treatment Integrating Selective Hydrogenation and Selective Hydrocracking

Granted Patent: U.S. Patent 11,001,775
Grant Date: May 11, 2021
Qi Xu and Raed H. Abudawoud

Semi-Autonomous Downhole Taxi with Fiber Optic Communication

Granted Patent: U.S. Patent 11,002,095
Grant Date: May 11, 2021
Brett W. Bouldin, Robert J. Turner and Ahmed Y. Bukhamseen

Systems and Methods for Smart Multifunction Hole Cleaning Sub

Granted Patent: U.S. Patent 11,002,108
Grant Date: May 11, 2021
Ossama R. Sehsah and Mahmoud A. Alqurashi

Hydrocarbon Flow Line Corrosion Inhibitor Overpressure Protection

Granted Patent: U.S. Patent 11,002,111
Grant Date: May 11, 2021
Fathi Bugubaia, Khalid Al Ghamdi, Mohammad R. Khunaizi, Rashid D. Al Hajri, Khalid Al Subaia and Zayed Qahtani

Parallel-Processing of Invasion Percolation for Large-Scale, High-Resolution Simulation of Secondary Hydrocarbon Migration

Granted Patent: U.S. Patent 11,002,112
Grant Date: May 11, 2021
Suha N. Kayum and Larry S-K. Fung

Parallel-Processing of Invasion Percolation for Large-Scale, High-Resolution Simulation of Secondary Hydrocarbon Migration

Granted Patent: U.S. Patent 11,002,115
Grant Date: May 11, 2021
Suha N. Kayum and Larry S-K. Fung

Parallel-Processing of Invasion Percolation for Large-Scale, High-Resolution Simulation of Secondary Hydrocarbon Migration

Granted Patent: U.S. Patent 11,002,114
Grant Date: May 11, 2021
Suha N. Kayum and Larry S-K. Fung

Parallel-Processing of Invasion Percolation for Large-Scale, High-Resolution Simulation of Secondary Hydrocarbon Migration

Granted Patent: U.S. Patent 11,002,115
Grant Date: May 11, 2021
Suha N. Kayum and Larry S-K. Fung

Parallel-Processing of Invasion Percolation for Large-Scale, High-Resolution Simulation of Secondary Hydrocarbon Migration

Granted Patent: U.S. Patent 11,002,116
Grant Date: May 11, 2021
Suha N. Kayum and Larry S-K. Fung

Determining Structural Tomographic Properties of a Geologic Formation

Granted Patent: U.S. Patent 11,002,595
Grant Date: May 11, 2021
Howard K. Schmidt, Jesus M. Felix Servin, Frode Hveding and Daniele Colombo

Automated Organic Petrology

Granted Patent: U.S. Patent 11,002,721
Grant Date: May 11, 2021
Assad H. Ghazwani

Aromatic Co-Polyimide Gas Separation Membranes Derived from 6FDA-6FpDA-Type Homo-Polyimides

Granted Patent: U.S. Patent 11,007,491
Grant Date: May 18, 2021
Garba O. Yahaya, Ali Hayek, Abdulkarim Alsamah and Ahmad Bahamdan

Aromatic Co-Polyimide Gas Separation Membranes Derived from 6FDA-6FpDA-Type Homo-Polyimides

Granted Patent: U.S. Patent 11,007,492
Grant Date: May 18, 2021
Garba O. Yahaya, Ali Hayek, Abdulkarim Alsamah and Ahmad Bahamdan

Methods for the Synthesis of Tunable Mesoporous Zeolites

Granted Patent: U.S. Patent 11,007,511
Grant Date: May 18, 2021
Sarah L. Kobaslija and Jeremy T. O'Brien

Platinum Encapsulated Zeolite Hydrocracking Catalyst and Methods of Making Same

Granted Patent: U.S. Patent 11,007,512
Grant Date: May 18, 2021
Lianhui Ding and Manal Al-Eid

Controlling Flow of Black Powder in Hydrocarbon Pipelines

Granted Patent: U.S. Patent 11,007,556
Grant Date: May 18, 2021
James C. Hassell Jr.

Cement Slurry Responsive to Hydrocarbon Gas

Granted Patent: U.S. Patent 11,008,498
Grant Date: May 18, 2021
Herschel Foster, Mahmoud A. Alqurashi and Shrikant Tiwari

Nanosurfactants for Improved and Enhanced Oil Recovery Applications

Granted Patent: U.S. Patent 11,008,501
Grant Date: May 18, 2021
Amr I. Abdel-Fattah, Dmitry Kosynkin, Mohammad Alaskar, Ayrat Gizzatov and Shannon L. Eichmann

Nanoparticle-Enhanced Resin Coated Frac Sand Composition

Granted Patent: U.S. Patent 11,008,507
Grant Date: May 18, 2021
Wengang Li and Jin Huang

Control of Demulsifier Injection into Crude Oil Entering Separators

Granted Patent: U.S. Patent 11,008,521
Grant Date: May 18, 2021
Guillaume R.J.F. Raynel, Debora S. Marques and Olanrewaju M. Oshinowo

Drill Bits for Oil and Gas Applications

Granted Patent: U.S. Patent 11,008,816
Grant Date: May 18, 2021
Guodong Zhan, Chinthaka P. Gooneratne, Bodong Li and Timothy E. Moellendick

Vertically Cutting Downhole Tubulars

Granted Patent: U.S. Patent 11,008,824
Grant Date: May 18, 2021
Ahmed Al-Mousa, Ahmed A. Al-Ramadhan and Marius Neacsu

Method for Fast Calculation of Seismic Attributes Using Artificial Intelligence

Granted Patent: U.S. Patent 11,009,617
Grant Date: May 18, 2021
Kirill Gadylyshin, Andrey V. Bakulin and Ilya Silvestrov

Calculating Shut-In Bottom-Hole Pressure in Numerical Reservoir Simulations

Granted Patent: U.S. Patent 11,009,625
Grant Date: May 18, 2021
Babatope O. Kayode

Automated Analysis of Petrographic Thin Section Images Using Advanced Machine Learning Techniques

Granted Patent: U.S. Patent 11,010,883
Grant Date: May 18, 2021
Fatai A. Anifowose and Mokhles M. Mezghani

Electronic Devices Comprising Butyl Rubber

Granted Patent: U.S. Patent 11,015,135
Grant Date: May 18, 2021
Lorenzo Ferrari, Gregory J.E. Davidson and Tricia B. Carmichael

Systems and Methods for Separating Multiphase Compositions

Granted Patent: U.S. Patent 11,014,021

Grant Date: May 25, 2021

Regis D. Vilagines, Guillaume R.J-F. Raynel, Fahd I. Alghunaimi and Abdullah A. Alomier

Fabrication of Composite Parts by Additive Manufacturing and Microstructure Topology Optimization

Granted Patent: U.S. Patent 11,014,295

Grant Date: May 25, 2021

Thibault Villette

Polymer Gel with Nanocomposite Crosslinker

Granted Patent: U.S. Patent 11,015,050

Grant Date: May 25, 2021

Ayman M. Almohsin, Mohammed A. Bataweel, Faheem Ahmed and Edreese Alsharaeh

Loss Circulation Material Composition Having Alkaline Nanoparticle-Based Dispersion, Water Insoluble Hydrolysable Polyester, and Formaldehyde Resin

Granted Patent: U.S. Patent 11,015,102

Grant Date: May 25, 2021

Vikrant B. Wagle, Rajendra Kalgaonkar, Abdullah S. Al-Yami and Zainab A. Alsaihati

Cement Slurries, Cured Cements and Methods of Making and Use Thereof

Granted Patent: U.S. Patent 11,015,104

Grant Date: May 25, 2021

Abdullah S. Al-Yami, Vikrant B. Wagle, Hussain Albahrani and Ali M. Al-Safran

Cement Slurries, Cured Cements and Methods of Making and Use Thereof

Granted Patent: U.S. Patent 11,015,105

Grant Date: May 25, 2021

Abdullah S. Al-Yami, Vikrant B. Wagle, Hussain Albahrani and Ali M. Al-Safran

Methods of Reducing Lost Circulation in a Wellbore Using Saudi Arabian Volcanic Ash

Granted Patent: U.S. Patent 11,015,108

Grant Date: May 25, 2021

Khawlah A. Alanqari and Abdullah S. Al-Yami

Mitigation of Condensate Banking Using Surface Modification

Granted Patent: U.S. Patent 11,015,111

Grant Date: May 25, 2021

Mohammed Sayed, Feng Liang, Hooisweng Ow and Jason Cox

Sampling Subterranean Formation Fluids in a Wellbore

Granted Patent: U.S. Patent 11,015,447

Grant Date: May 25, 2021

Khalid A. Zainalabedin, Mark A. Proett and Shouxiang M. Ma

Purging for Welding

Granted Patent: U.S. Patent 11,016,000

Grant Date: May 25, 2021

Tariq A. Ali Alghamdi

Methods and Systems for Characterization of Geochemical Properties of Hydrocarbons Using Microwaves

Granted Patent: U.S. Patent 11,016,075

Grant Date: May 25, 2021

Jose Oliverio Alvarez and David Jacobi

Generating Target-Oriented Acquisition Imprint-Free Prestack Angle Gathers Using Common Focus Point Operators

Granted Patent: U.S. Patent 11,016,205

Grant Date: May 25, 2021

Hongwei Liu and Mustafa Al-Ali

Compressing Seismic Wavefields in Three-Dimensional Reverse Time Migration

Granted Patent: U.S. Patent 11,016,212

Grant Date: May 25, 2021

Bingbing Sun, Hongwei Liu, Vincent Etienne and Xu Ji

Water Crest Monitoring Using Electromagnetic Transmissions

Granted Patent: U.S. Patent 11,016,217

Grant Date: May 25, 2021

Jesus M. Felix Servin and Howard K. Schmidt

Extended Sealing Gels, Process for Production Thereof and Use Thereof in Sealing Compounds for Self-Sealing Tires

Granted Patent: U.S. Patent 11,020,915

Grant Date: June 1, 2021

Jiawen Zhou, Thomas Fruh and Torsten Thust

Compact Magnetic Crawler Vehicle with Anti-Rocking Supports

Granted Patent: U.S. Patent 11,021,197

Grant Date: June 1, 2021

Pablo C. Zanini, Fadl Abdellatif, Abdullah F. Arab and Brian J. Parrott

Compact Magnetic Crawler Vehicle with Anti-Rocking Supports

Granted Patent: U.S. Patent 11,021,198

Grant Date: June 1, 2021

Pablo C. Zanini, Fadl Abdellatif, Abdullah F. Arab and Brian J. Parrott

Integrated Processes to Produce Gasoline Blending Components from Light Naphtha

Granted Patent: U.S. Patent 11,021,422

Grant Date: June 1, 2021

Omer R. Koseoglu

High Strength Polyurethane Foam Compositions and Methods

Granted Patent: U.S. Patent 11,021,564

Grant Date: June 1, 2021

Scott D. Allen, Vahid Sendjarevic and Aisa Sendjarevic

Hydrogenated Nitrile-Diene-Carboxylic Ester Copolymers

Granted Patent: U.S. Patent 11,021,596

Grant Date: June 1, 2021

Hiyam Salem, Karola Schneiders and Susanna Lieber

Drilling Fluids and Methods of Making Thereof

Granted Patent: U.S. Patent 11,021,644

Grant Date: June 1, 2021

Jothibasu Ramasamy, Md Amanullah, Abdullah S. Al-Yami and Ali Radhwan

Methods and Compositions for Diversion during Enhanced Oil Recovery

Granted Patent: U.S. Patent 11,021,647

Grant Date: June 1, 2021

Ahmad N. Rizq and Badr H. Zahrani

Additives for Supercritical Water Process to Upgrade Heavy Oil

Granted Patent: U.S. Patent 11,021,659

Grant Date: June 1, 2021

Ki-Hyouk Choi, Emad N. Shafei, Mohammed Z. Albahar and Abdulaziz A. Ghabbani

Supercritical Reactor Systems and Processes for Petroleum Upgrading

Granted Patent: U.S. Patent 11,021,660

Grant Date: June 1, 2021

Ki-Hyouk Choi, Abdullah T. Alabdulhadi and Mohammad A. Al-Abdullah

Integrated Enhanced Solvent Deasphalting and Coking System to Produce Petroleum Green Coke

Granted Patent: U.S. Patent 11,021,665

Grant Date: June 1, 2021

Omer R. Koseoglu

Two-Stage Recycle Hydrocracking Processes

Granted Patent: U.S. Patent 11,021,665

Grant Date: June 1, 2021

Omer R. Koseoglu

Systems and Methods for Reducing the Effect of Borehole Tortuosity on the Deployment of a Completion Assembly

Granted Patent: U.S. Patent 11,021,915

Grant Date: June 1, 2021

Herschel Foster and Mahmoud A. Alqurashi

Self-Calibrating Base Station for Offset Measurements

Granted Patent: U.S. Patent 11,022,479

Grant Date: June 1, 2021

Sahejad Patel, Brian J. Parrott, Abdullah F. Arab, Fadl Abdellatif and Pablo C. Zanini

Characterization of Crude Oil by Simulated Distillation

Granted Patent: U.S. Patent 11,022,588

Grant Date: June 1, 2021

Omer R. Koseoglu, Adnan Al-Hajji and Frederick M. Adam

Fluid Sensing System Using Planar Resonators

Granted Patent: U.S. Patent 11,022,597

Grant Date: June 1, 2021

Muhammad A. Karimi, Atif Shamim and Muhammad Arsalan

Identifying Anomalies in a Subterranean Formation Based on Seismic Attributes

Granted Patent: U.S. Patent 11,022,710

Grant Date: June 1, 2021

Sami N. Awfi

Methods and Systems for Determining Bulk Density, Porosity, and Pore Size Distribution of Subsurface Formations

Granted Patent: U.S. Patent 11,022,715

Grant Date: June 1, 2021

Jilin Zhang, Stacey M. Althaus and Jin-Hong Chen

Methods and Systems for Determining Bulk Density, Porosity, and Pore Size Distribution of Subsurface Formations

Granted Patent: U.S. Patent 11,022,716
Grant Date: June 1, 2021
 Jilin Zhang, Stacey M. Althaus and Jin-Hong Chen

System and Method for Enhanced Security Analysis for Quarantined Email Messages

Granted Patent: U.S. Patent 11,025,651
Grant Date: June 1, 2021
 Reem A. Algarawi, Fawaz Y. Al-Homoud and Abdullah M. Almahmoud

Methods for Producing Multifunctional Catalysts for Upgrading Pyrolysis Oil

Granted Patent: U.S. Patent 11,027,271
Grant Date: June 8, 2021
 Miao Sun

N-Hydroxyalkylated Polyamines, Methods of Making N-Hydroxyalkylated Polyamines, and Fluids Containing an N-Hydroxyalkylated Polyamine

Granted Patent: U.S. Patent 11,028,043
Grant Date: June 8, 2021
 Matthew Hilfiger and B. Raghava Reddy

Treating Seawater for Hydrocarbon Production

Granted Patent: U.S. Patent 11,028,512
Grant Date: June 8, 2021
 Leiming Li, Hejian Sun, Feng Liang and Mohammed A. Bataweel

Systems and Processes for Catalytic Reforming of a Hydrocarbon Feed Stock

Granted Patent: U.S. Patent 11,028,528
Grant Date: June 8, 2021
 Ali H. Alshareef and Mohammad A. Al-Rebh

Producing C6-C8 Aromatics from FCC Heavy Naphtha

Granted Patent: U.S. Patent 11,028,529
Grant Date: June 8, 2021
 Yufeng He, Abdullah Al Ghazal and Qi Xu

Integrated Selective Hydrocracking and Fluid Catalytic Cracking Process

Granted Patent: U.S. Patent 11,028,532
Grant Date: June 8, 2021
 Omer R. Koseoglu

Managing Storage of Water

Granted Patent: U.S. Patent 11,028,561
Grant Date: June 8, 2021
 Suliman M. Azzouni

Laser Drilling Tool with Articulated Arm and Reservoir Characterization and Mapping Capabilities

Granted Patent: U.S. Patent 11,028,647
Grant Date: June 8, 2021
 Sameeh I. Batarseh

Well Completion System

Granted Patent: U.S. Patent 11,028,667
Grant Date: June 8, 2021
 Muhammad Arsalan, Stian M. Hansen and Henrik W. Clayborough

Thru-Tubing Operations

Granted Patent: U.S. Patent 11,028,673
Grant Date: June 8, 2021
 Muhammad Arsalan and Jarl A. Fellinghaug

Forming Mineral in Fractures in a Geological Formation

Granted Patent: U.S. Patent 11,028,680
Grant Date: June 8, 2021
 Desmond Schipper, Katherine L. Hull and Mohammad H. Haque

Sono Tool and Related Systems and Methods

Granted Patent: U.S. Patent 11,028,686
Grant Date: June 8, 2021
 Sameeh I. Batarseh

System and Method for On-Board Catalytic Upgrading of Hydrocarbon Fuels

Granted Patent: U.S. Patent 11,028,805
Grant Date: June 8, 2021
 Esam Z. Hamad and Christos Kalamaras

Generating Common Image Gather Using Wave-Field Separation

Granted Patent: U.S. Patent 11,029,431
Grant Date: June 8, 2021
 Dongliang Zhang, Tong W. Fei and Yi Luo

Methods for Reacting Chemical Streams with Catalysts Comprising Silica, Alumina, and Tungsten

Granted Patent: U.S. Patent 11,033,892
Grant Date: June 15, 2021
 Brian Hanna and Michele Ostraat

Enhanced Filtration Control Packages, Wellbore Servicing Fluids Utilizing the Same, and Methods of Maintaining the Structure of a Wellbore

Granted Patent: U.S. Patent 11,034,875
Grant Date: June 15, 2021
 Abdullah S. Al-Yami, Vikrant B. Wagle, Hussain Albahrani, Ali M. Al-Safran and Nasser Alhareth

Oil-Based Drilling Fluids for High-Pressure and High Temperature Drilling Operations

Granted Patent: U.S. Patent 11,034,880
Grant Date: June 15, 2021
 Musarrat H. Mohammed, Mona Al Batal, Hugh C. Greenwell, Andrew Whiting, John A. Hall, Gasan S. Alabedi and Michael H. Hodder

Nanosilica Dispersion for Thermally Insulating Packer Fluid

Granted Patent: U.S. Patent 11,034,881
Grant Date: June 15, 2021
 Vikrant B. Wagle, Abdullah S. Al-Yami, Zainab A. Alsaihati and Abdulaziz Alhelal

Desalting Plant Systems and Methods for Enhanced Tight Emulsion Crude Oil Treatment

Granted Patent: U.S. Patent 11,034,893
Grant Date: June 15, 2021
 Mohamed Soliman, Khalid Alanazi, Samusideen A. Salu and Talal Al-Zahrani

Scheme for Supercritical Water Process for Heavy Oil Upgrading

Granted Patent: U.S. Patent 11,034,897
Grant Date: June 15, 2021
 Khalid Al Kaabi, Ki-Hyouk Choi and Mazin M. Fathi

Biochips and Rapid Methods for Detecting Organisms Involved in Microbially Influenced Corrosion (MIC)

Granted Patent: U.S. Patent 11,035,009
Grant Date: June 15, 2021
 Abdulmohsen A. Al-Humam, Vitaly Zinkevich, Nelly Sapojnikova, Tamar Kartvelishvili and Nino Asatiani

Systems and Method for Adjusting a Drilling Rig

Granted Patent: U.S. Patent 11,035,143
Grant Date: June 15, 2021
 Fathalla Shalouf

Disconnecting a Stuck Drillpipe

Granted Patent: U.S. Patent 11,035,179
Grant Date: June 15, 2021
 Ali N. Al-Meqbel and Abdulrahman M. Al-Musare

Fish Retrieval from Wellbore

Granted Patent: U.S. Patent 11,035,190
Grant Date: June 15, 2021
 Marius Neacsu, Ahmed A. Al-Ramadhan and Ahmed Al-Mousa

Stimulating U-Shape Wellbores

Granted Patent: U.S. Patent 11,035,212
Grant Date: June 15, 2021
 Khalid M. Alruwaili and Mohamed N. Noui-Mehidi

Tilt and Distance Profiling Vehicle

Granted Patent: U.S. Patent 11,035,669
Grant Date: June 15, 2021
 Sahejad Patel, Fadl Abdellatif and Brian J. Parrott

Nuclear Magnetic Resonance Gas Isotherm Technique to Evaluate Reservoir Rock Wettability

Granted Patent: U.S. Patent 11,035,769
Grant Date: June 15, 2021
 Hyung T. Kwak and Ahmad M. Al-Harbi

Methods of Generating and Corrosion Testing Aqueous Gas Streams Prepared from Aqueous Acid and Salt Precursor Solutions

Granted Patent: U.S. Patent 11,035,856
Grant Date: June 15, 2021
 Steven C. Hayden, Timothy J. Kucharski, Michele L. Ostraat, Rachael O. Grudt and James P. Mullahoo

Monitoring the Performance of Protective Fluids in Downhole Tools

Granted Patent: U.S. Patent 11,035,841
Grant Date: June 15, 2021
 Brian A. Roth

Systems and Methods for Electromagnetic Waterfront Surveillance in a Vicinity of an Oil Well

Granted Patent: U.S. Patent 11,035,972
Grant Date: June 15, 2021
 Daniele Colombo, Gary W. McNeice and Ernesto Sandoval-Curiel

Data Storage Device with Stored Instructions for Measurement of Hydrocarbon Content of Tight Gas Reservoirs

Granted Patent: U.S. Patent 11,055,977
Grant Date: June 15, 2021
 Jinhong Chen, Stacey M. Althaus, Daniel T. Georgi and Hui-Hai Liu

Controlling a Vehicle Using a Remotely Located Laser and an On-Board Camera

Granted Patent: U.S. Patent 11,056,217
Grant Date: June 15, 2021
 Jeff S. Shamma, Mohammed Z. Shaqura, Khalid F. Alzuhair and Fadl Abdellatif

Enhanced Surfactant Polymer Flooding Processes for Oil Recovery in Carbonate Reservoirs

Granted Patent: U.S. Patent 11,041,109
Grant Date: June 22, 2021
 Subhash C. Ayirala, Abdulkareem M. Al-Sofi, Jinxun Wang and Ali A. Al-Yousef

Compositions of and Methods for Using Hydraulic Fracturing Fluid for Petroleum Production

Granted Patent: U.S. Patent 11,041,110
Grant Date: June 22, 2021
 Fakuen F. Chang, Paul D. Berger and Christie H. Lee

Encapsulation and Controlled Delivery of Strong Mineral Acids

Granted Patent: U.S. Patent 11,041,116
Grant Date: June 22, 2021
 Leah M. Johnson, Ghaithan A. Al-Muntasheri, Ginger Denison Rothrock and Sarah Shepherd

Encapsulation and Controlled Delivery of Strong Mineral Acids

Granted Patent: U.S. Patent 11,041,117
Grant Date: June 22, 2021
 Leah M. Johnson, Ghaithan A. Al-Muntasheri, Ginger Denison Rothrock and Sarah Shepherd

Two-Stage Hydrotreating Process Employing Mercaptanization and Hydrodesulfurization

Granted Patent: U.S. Patent 11,041,150
Grant Date: June 22, 2021
 Omer R. Koseoglu

Composition and Method of Manufacturing of Whole and Ground Date Palm Seed Lost Circulation Material (LCM)

Granted Patent: U.S. Patent 11,041,547
Grant Date: June 22, 2021
 Md Amanullah and Turki Al-Subaie

System and Method for Operating Inflow Control Devices

Granted Patent: U.S. Patent 11,041,567
Grant Date: June 22, 2021
 Hussain A. Al-Quwaism, Fahad M. Al-Shammari and Fowzi O. Al-Shammari

Method and Apparatus for Detection of Pitting Corrosion under Iron Sulfide Deposition

Granted Patent: U.S. Patent 11,041,578
Grant Date: June 22, 2021
 Tao Chen, Qiwei Wang and Fakuen F. Chang

Supercritical CO₂ Cycle Coupled to Chemical Looping Arrangement

Granted Patent: U.S. Patent 11,041,410
Grant Date: June 22, 2021
 Mourad Younes, Aadesh Harale and Aqil Jamal

Generating Common Image Gather Using Wavefield Separation

Granted Patent: U.S. Patent 11,041,970
Grant Date: June 22, 2021
 Dongliang Zhang, Tong W. Fei and Yi Luo

Systems and Methods for Accurate Measurement of Gas from Wet Gas Wells

Granted Patent: U.S. Patent 11,045,762
Grant Date: June 29, 2021
 Abdulmohsen S. Al-Kuait and Muhammad Arsalan

Production of Linear Alpha Olefins from Organic Sulfides

Granted Patent: U.S. Patent 11,046,624
Grant Date: June 29, 2021
 Ki-Hyoun Choi, Muneef F. Alqarzouh, Abdullah T. Alabdulhadi and Maddala V. Bhanumurthy

Hydrogenated Nitrile-Butadiene-PEG-Acrylate Co-Polymers

Granted Patent: U.S. Patent 11,046,799
Grant Date: June 29, 2021
 Hiyam Salem, Susanna Lieber, Sarah David and Karola Schneiders

Flaky Date Fruit Cap for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 11,046,878
Grant Date: June 29, 2021
 Md Amanullah

Flaky Date Fruit Cap for Moderate to Severe Loss Control

Granted Patent: U.S. Patent 11,046,879
Grant Date: June 29, 2021
 Md Amanullah

Nanoparticle-Enhanced Resin Coated Frac Sand Composition

Granted Patent: U.S. Patent 11,046,882
Grant Date: June 29, 2021
 Wengang Li and Jin Huang

Pyrolysis to Determine Hydrocarbon Expulsion Efficiency of Hydrocarbon Source Rock

Granted Patent: U.S. Patent 11,046,890
Grant Date: June 29, 2021
 Sedat Inan

Systems and Processes for Separating and Upgrading Hydrocarbons Integrating a Refinery System with Steam Cracking of an Aromatic Bottoms Stream

Granted Patent: U.S. Patent 11,046,898
Grant Date: June 29, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Two-Stage Hydrodearylation Systems and Processes to Convert Heavy Aromatics into Gasoline Blending Components and Chemical Grade Aromatics

Granted Patent: U.S. Patent 11,046,899
Grant Date: June 29, 2021
 Robert P. Hodgkins, Omer R. Koseoglu and Frederick Adam

Naphthenic Acid Corrosion Inhibitors for a Refinery

Granted Patent: U.S. Patent 11,046,901
Grant Date: June 29, 2021
 Muthukumar Nagu and Nayef M. Alanazi

In-Pipe Passive Centering Mechanism with Radial Probe or Tool Deployment Mechanism

Granted Patent: U.S. Patent 11,047,179
Grant Date: June 29, 2021
 Abdouleh Al-Hannabi, Mohamed Abdelkader, Hassane Trigui, Sahejad Patel and Fadl Abdellatif

Curing a Lost Circulation Zone in a Wellbore

Granted Patent: U.S. Patent 11,047,204
Grant Date: June 29, 2021
 Sergei Kozodeev and Pavel Golikov

Simultaneous Injection and Fracturing Interference Testing

Granted Patent: U.S. Patent 11,047,218
Grant Date: June 29, 2021
 Mohamed Larbi Zeghlache and Mark Proett

Predicting Carbonate Porosity Based on Petrographic Data

Granted Patent: U.S. Patent 11,047,228
Grant Date: June 29, 2021
 Shuo Zhang, Peng Lu, Dave Cantrell, Tiffany D. McAlpin and Susan Agar

Identifying Hydrocarbon Sweet Spots Using Carbon Dioxide Geochemistry

Granted Patent: U.S. Patent 11,047,255
Grant Date: June 29, 2021
 Pan Luo, Peng Lu and Khaled Arouri

Sealing a Gate Valve

Granted Patent: U.S. Patent 11,047,485
Grant Date: June 29, 2021
 Bader M. Al-Jarallah and Mousa R. Alharbi

Systems, Methods, and Computer-Readable Media for Modeling Complex Wellbores in Field-Scale Reservoir Simulation

Granted Patent: U.S. Patent 11,048,018
Grant Date: June 29, 2021
 Larry S-K. Fung and Xiang Y. Ding

Method and System for Remediating Cybersecurity Vulnerabilities Based on Utilization

Granted Patent: U.S. Patent 11,050,777
Grant Date: June 29, 2021
 Sultan S. Alsharif

Date Tree Leaflet-Based Flaky Lost Circulation Material

Granted Patent: U.S. Patent 11,053,425
Grant Date: July 6, 2021
 Md Amanullah

Chemical Plugs for Preventing Wellbore Treatment Fluid Losses

Granted Patent: U.S. Patent 11,053,426
Grant Date: July 6, 2021
 Rajendra A. Kalgaonkar, Vikrant B. Wagle, Abdullah S. Al-Yami and Ayman M. Almohsin

Method and Composition for Sealing a Subsurface Formation

Granted Patent: U.S. Patent 11,055,428
Grant Date: July 6, 2021
 Rajendra A. Kalgaonkar and Vikrant B. Wagle

Laser Array Drilling Tool and Related Methods

Granted Patent: U.S. Patent 11,055,781
Grant Date: July 6, 2021
 Sameeh I. Batarseh

Acoustic Downhole Oil-Water Separation

Granted Patent: U.S. Patent 11,055,788
Grant Date: July 6, 2021
 Amr Abdel-Fattah, Brian A. Roth and Wessam A. Busfar

Method for Inspecting Composite Structures Using Quantitative Infra-Red Thermography

Granted Patent: U.S. Patent 11,054,376
Grant Date: July 6, 2021
 Thibault Villette and Abderrazak Traïdia

Computer Implemented Method for Measurement of Hydrocarbon Content of Tight Gas Reservoirs

Granted Patent: U.S. Patent 11,054,540
Grant Date: July 6, 2021
 Jinhong Chen, Stacey M. Althaus, Daniel T. Georgi and Hui-Hai Liu

System and Method of Secure Analysis for Encrypted Electronic Mail Attachments

Granted Patent: U.S. Patent 11,057,324
Grant Date: July 6, 2021
 Urfan Ahmed

Method for Data Center Network Segmentation

Granted Patent: U.S. Patent 11,057,348
Grant Date: July 6, 2021
 Abdallah M. Baabdallah

Catalyst Compositions Having Enhanced Acidity for Bi-Reforming Processes

Granted Patent: U.S. Patent 11,059,050
Grant Date: July 13, 2021
 Bandar H. Alsolami, Bandar A. Fadhel, Mohammed A. Albuali and Rami Bamagain

Catalyst Carrier for Dry Reforming Processes

Granted Patent: U.S. Patent 11,059,720
Grant Date: July 13, 2021
 Bandar A. Fadhel, Bandar H. Alsolami and Rami Bamagain

Acryloyl-Based Copolymers, Terpolymers, and Use as Hydrate Inhibitors

Granted Patent: U.S. Patent 11,059,926
Grant Date: July 13, 2021
 Mohamed Elanany, Abdullah Al-Malki, Manal Al-Eid, Mohammed Al-Daous, Shaikh A. Ali and Khalid Majnoui

Polymer Compositions and Methods

Granted Patent: U.S. Patent 11,059,969
Grant Date: July 13, 2021
 Scott D. Allen, Christopher A. Simoneau and Jay J. Farmer

Date Palm Seed-Based Lost Circulation Material (LCM)

Granted Patent: U.S. Patent 11,060,008
Grant Date: July 13, 2021
 Md Amanullah

Densifying Carbon Dioxide with a Dispersion of Carbon Dioxide-Philic Water Capsules

Granted Patent: U.S. Patent 11,060,014
Grant Date: July 13, 2021
 Fawaz Al-Otaibi, Sunil L. Kokal, Howard K. Schmidt and Yun Chang

Succinimide-Based Copolymers and Use as Hydrate Inhibitors

Granted Patent: U.S. Patent 11,060,042
Grant Date: July 13, 2021
 Mohamed Elanany, Khalid Majnoui, Rashed Alessa, Abdullah Al-Malki, Hassan Al-Ajwad, Mohammed Al-Daous and Shaikh A. Ali

System and Method for Subsurface Cable Insertion for the Protection of Underground Assets

Granted Patent: U.S. Patent 11,060,260
Grant Date: July 13, 2021
 Thibault Villette, Waheed Alrafaei and Iqbal Hussain

Completing a Wellbore

Granted Patent: U.S. Patent 11,060,377
Grant Date: July 13, 2021
 Magid A. Alghamdi and Rami G. Alhazmi

Magnetic Crawler Vehicle with Passive Rear-Facing Apparatus

Granted Patent: U.S. Patent 11,060,669
Grant Date: July 13, 2021
 Pablo C. Zanini, Fadl Abdellatif, Brian J. Parrott and Ali H. Outa

Method and Device for Measuring Fluid Properties Using an Electromechanical Resonator

Granted Patent: U.S. Patent 11,061,158
Grant Date: July 13, 2021
 Miguel Gonzalez, Max Deffenbaugh, Huseyin Seren and Sebastian Csutak

Catalyst Compositions Having Enhanced Acidity for Steam Reforming Processes

Granted Patent: U.S. Patent 11,066,299
Grant Date: July 20, 2021
 Bandar A. Fadhel, Bandar H. Alsolami, Rami Bamagain and Mohammed A. Albuali

Methods and Systems of Upgrading Heavy Aromatics Stream to Petrochemical Feedstock

Granted Patent: U.S. Patent 11,066,344
Grant Date: July 20, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Cationic Polymers and Porous Materials

Granted Patent: U.S. Patent 11,066,491
Grant Date: July 20, 2021
 Yu Han, Qiwei Tian, Xinglong Dong, Zhaohui Liu, Jean-Marie Basset, Youssef Saih, Miao Sun, Sohel Shaikh and Wei Xu

Copolymer Having Low Cyclic Oligomer Content

Granted Patent: U.S. Patent 11,066,498
Grant Date: July 20, 2021
 Paul Nguyen, Jessica Watson and Gilles Arsenault

Fluoropolymers to Reduce Retention of Nanosurfactants to Carbonate Reservoir Rock for Applications in Oil Fields

Granted Patent: U.S. Patent 11,066,594
Grant Date: July 20, 2021
 Ayrat Gizzatov, Chang Da, Amr Abdel-Fattah and Shitong Zhu

Systems and Methods for Catalytic Upgrading of Vacuum Residue to Distillate Fractions and Olefins

Granted Patent: U.S. Patent 11,066,605
Grant Date: July 20, 2021
 Emad N. Al-Shafei, Mohamed Al-Bahar, Ali N. Al-Jishi, Ki-Hyouk Choi, Mohammad Al-Jishi and Ali Al-Nasir

Systems and Methods for Catalytic Upgrading of Vacuum Residue to Distillate Fractions and Olefins with Steam

Granted Patent: U.S. Patent 11,066,606
Grant Date: July 20, 2021
 Emad N. Al-Shafei, Mohamed Al-Bahar, Ali N. Al-Jishi, Ki-Hyouk Choi, Ali Al-Nasir and Mohammad Al-Jishi

Process for Producing Deasphalted and Demetallized Oil

Granted Patent: U.S. Patent 11,066,607
Grant Date: July 20, 2021
 Omer R. Koseoglu

Integrated Methods and Systems of Hydrodearylation and Hydrodealkylation of Heavy Aromatics to Produce Benzene, Toluene, and Xylenes

Granted Patent: U.S. Patent 11,066,609
Grant Date: July 20, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Systems and Processes for Suppressing Heavy Polynuclear Aromatic Deposition in a Hydrocracking Process

Granted Patent: U.S. Patent 11,066,610
Grant Date: July 20, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

System for Conversion of Crude Oil to Petrochemicals and Fuel Products Integrating Vacuum Gas Oil Hydrotreating and Steam Cracking

Granted Patent: U.S. Patent 11,066,611
Grant Date: July 20, 2021
 Mohammed S. Al-Ghamdi

Used Automobile Tires as Loss Circulation Material

Granted Patent: U.S. Patent 11,066,879
Grant Date: July 20, 2021
 Md Amanullah and Mohammed K. Arfaj

Well Cellar Excavating Device and Method

Granted Patent: U.S. Patent 11,066,887
Grant Date: July 20, 2021
 Ahmed Al-Mousa and Ahmed Al-Ramadhan

Methods of Sealing a Subsurface Formation with Saudi Arabian Volcanic Ash

Granted Patent: U.S. Patent 11,066,899

Grant Date: July 20, 2021

Khawlah A. Alanqari and Abdullah S. Al-Yami

Sequential Fully Implicit Well Model with Tridiagonal Matrix Structure for Reservoir Simulation

Granted Patent: U.S. Patent 11,066,907

Grant Date: July 20, 2021

Ali H. Dogru

Alkaline Water Flooding Processes for Enhanced Oil Recovery in Carbonates

Granted Patent: U.S. Patent 11,066,910

Grant Date: July 20, 2021

Subhash C. Ayirala, Sultan Alenezi, Muhammad Alabdullateef, Salah Seleh, Waleed M. Alhodythi and Ali A. Al-Yousef

Operating Hydrocarbon Wells Using Modeling of Immiscible Two-Phase Flow in a Subterranean Formation

Granted Patent: U.S. Patent 11,066,911

Grant Date: July 20, 2021

Mohammed J. Alshakhs

Foam from Low-Cost Petroleum Sulfonate Surfactants for Fracturing Along with Wettability Alteration

Granted Patent: U.S. Patent 11,066,914

Grant Date: July 20, 2021

Ayrat Gizzatov, Shehab Alzobaidi and Amr Abdel-Fattah

Identifying Oil and Gas Reservoirs with Oxygen Isotopes

Granted Patent: U.S. Patent 11,066,929

Grant Date: July 20, 2021

Feng Hu Lu

High Compression Boosting and Water Generation

Granted Patent: U.S. Patent 11,067,059

Grant Date: July 20, 2021

Vincent S. Costanzo

Catalyst Layering in Commercial Reactor Baskets

Granted Patent: U.S. Patent 11,071,959

Grant Date: July 27, 2021

Omer R. Koseoglu

Apparatus and Method for in Situ Cathodic Protection of Piggable Water Pipelines

Granted Patent: U.S. Patent 11,072,005

Grant Date: July 27, 2021

Husain M. Al-Mahrous

Rheology Modifier for Organoclay-Free Invert Emulsion Drilling Fluid Systems

Granted Patent: U.S. Patent 11,072,756

Grant Date: July 27, 2021

Jothibasu Ramasamy, Vikrant B. Wagle and Md Amanullah

Two-Stage Delayed Coking Process to Produce Anode Grade Coke

Granted Patent: U.S. Patent 11,072,745

Grant Date: July 27, 2021

Omer R. Koseoglu

Selective Reforming Process to Produce Gasoline Blending Components and Aromatics

Granted Patent: U.S. Patent 11,072,748

Grant Date: July 27, 2021

Omer R. Koseoglu and Ali H. Al-Shareef

Integrated Hydrotreating and Deep Hydrogenation of Heavy Oils, Including Demetallized Oil as Feed for Olefin Production

Granted Patent: U.S. Patent 11,072,751

Grant Date: July 27, 2021

Omer R. Koseoglu

Sequential Fully Implicit Horizontal Well Model with Tridiagonal Matrix Structure for Reservoir Simulation

Granted Patent: U.S. Patent 11,073,001

Grant Date: July 27, 2021

Ali H. Dogru

Smart Completion with Drilling Capabilities

Granted Patent: U.S. Patent 11,073,005

Grant Date: July 27, 2021

Abdullah I. Muraikhi

Kalina Cycle-Based Conversion of Gas Processing Plant Waste Heat into Power

Granted Patent: U.S. Patent 11,073,050

Grant Date: July 27, 2021

Mahmoud B. Noureldin and Akram H. Kamel

Measuring Rock Wettability

Granted Patent: U.S. Patent 11,073,464

Grant Date: July 27, 2021

Jun Gao, Ahmad M. Al-Harbi and Hyung T. Kwak

Method and Apparatus for CT Scanning of Longer Whole Cores

Granted Patent: U.S. Patent 11,073,485

Grant Date: July 27, 2021

Sinan Caliskan and Abdullah Shebatalhamd

Selection of Pick Values for Automated Near Surface Analysis

Granted Patent: U.S. Patent 11,073,631

Grant Date: July 27, 2021

Daniele Colombo and Federico Miorelli

Data Structure for Fast Invasion Percolation Modeling Software

Granted Patent: U.S. Patent 11,073,637

Grant Date: July 27, 2021

Eric A. Dow and Yeqing Fu

Thruster-Based Locomotion for Perched Unmanned Aerial Vehicles

Granted Patent: U.S. Patent 11,077,955

Grant Date: August 3, 2021

Pablo C. Zanini and Hassane Trigui

Cationic Coatings for Improved Nanoparticle Transport in a Carbonate Reservoir

Granted Patent: U.S. Patent 11,078,594

Grant Date: August 3, 2021

Erika S. Ellis and Howard K. Schmidt

Spacer Fluid Compositions, Methods, and Systems for Aqueous-Based Drilling Mud Removal

Granted Patent: U.S. Patent 11,078,596

Grant Date: August 3, 2021

Hussain Albahrani, Abdullah S. Al-Yami and Vikrant B. Wagle

Spacer Fluid Compositions, Methods, and Systems for Aqueous-Based Drilling Mud Removal

Granted Patent: U.S. Patent 11,078,597

Grant Date: August 3, 2021

Hussain Albahrani, Abdullah S. Al-Yami and Vikrant B. Wagle

Drilling Fluids that Include Water Insoluble Acid Catalyst Precursors

Granted Patent: U.S. Patent 11,078,598

Grant Date: August 3, 2021

Vikrant B. Wagle, Abdullah S. Al-Yami and Abdulaziz Althehal

3 in 1 Foam Formulation for Enhanced Oil Recovery, Including Conformance Control, Ultra-Low Interfacial Tension, and Wettability Alteration

Granted Patent: U.S. Patent 11,078,405

Grant Date: August 3, 2021

Ayrat Gizzatov, Shehab Alzobaidi and Amr Abdel-Fattah

Altering Wettability in Subterranean Formations

Granted Patent: U.S. Patent 11,078,406

Grant Date: August 3, 2021

Katherine L. Hull and Mohammed Sayed

Methods for Producing Seawater-Based, High Temperature Viscoelastic Surfactant Fluids with Low Scaling Tendency

Granted Patent: U.S. Patent 11,078,408

Grant Date: August 3, 2021

Leiming Li, Feng Liang and Tao Chen

Generating a Soft Sensor for Crude Stabilization in the Petroleum Industry

Granted Patent: U.S. Patent 11,078,428

Grant Date: August 3, 2021

Shuyee Lee, Omar Al-Mohisin and Mohammed Al-Saeed

Modified Ultra-Stable Y (USY) Zeolite Catalyst for Deolefinization of Hydrocarbon Streams

Granted Patent: U.S. Patent 11,078,451

Grant Date: August 3, 2021

Omer R. Koseoglu, Robert P. Hodgkins, Mitsunori Watabe, Tomoyasu Kagawa and Koji Uchida

Fiber Optics to Monitor Pipeline Cathodic Protection Systems

Granted Patent: U.S. Patent 11,078,577

Grant Date: August 3, 2021

Saeed O. Aljabri

Hydrophobic Stainless-Steel Copper-Coated Mesh and Method of Synthesizing Same

Granted Patent: U.S. Patent 11,078,589

Grant Date: August 3, 2021

Fahd I. Alghunaimi, Nadeem Baig, Duaa Al Saeed and Tawfik A. Saleh

Wellbore Radial Positioning Apparatus

Granted Patent: U.S. Patent 11,078,740

Grant Date: August 3, 2021

Clovis Satyro Bonavides and Vladislav Torlov

Lost Circulation Shapes

Granted Patent: U.S. Patent 11,078,748

Grant Date: August 3, 2021

Graham Hitchcock

Tubular Wire Mesh for Loss Circulation and Wellbore Stability

Granted Patent: U.S. Patent 11,078,749

Grant Date: August 3, 2021

Ahmad M. Al-Abduljabbar

Thru-Tubing Retrievable Intelligent Completion System

Granted Patent: U.S. Patent 11,078,751

Grant Date: August 3, 2021

Muhammad Arsalan and Mohamed N. Noui-Mehidi

Smart Cementing Wiper Plug

Granted Patent: U.S. Patent 11,078,752

Grant Date: August 3, 2021

Victor C. Costa de Oliveira, Ramon Rodriguez Rico and Mario A. Rivas Martinez

HIPS Proof Testing in Offshore or Onshore Applications

Granted Patent: U.S. Patent 11,078,755

Grant Date: August 3, 2021

Pedro A. Mujica, Herman R. Cipriano and Michael A. Picou

Sequential Fully Implicit Well Model with Tridiagonal Matrix Structure for Reservoir Simulation

Granted Patent: U.S. Patent 11,078,759

Grant Date: August 3, 2021

Ali H. Dogru

Stimulating U-Shape Wellbores

Granted Patent: U.S. Patent 11,078,770

Grant Date: August 3, 2021

Khalid M. Alruwaili and Mohamed N. Noui-Mehidi

Performing Continuous Daily Production Allocation

Granted Patent: U.S. Patent 11,078,773

Grant Date: August 3, 2021

Muhammad Idris, Ahmed H. Mahsoon and Mohammed A. Al-Atwi

Systems and Methods for Actuating Downhole Devices and Enabling Drilling Workflows from the Surface

Granted Patent: U.S. Patent 11,078,780

Grant Date: August 3, 2021

Chinthaka P. Gooneratne, Jothibasu Ramasamy, Bodong Li, Mohammad S. Al-Badran and Timothy E. Moellendick

Real-Time Well Drilling Evaluation Systems and Methods

Granted Patent: U.S. Patent 11,078,785

Grant Date: August 3, 2021

Anas Almarzooq, Charles M. Bradford and Mustafa Abdulmohsin

Salt Mobility Assessment and Review Technique (Smart) for Exploratory Wells

Granted Patent: U.S. Patent 11,078,786

Grant Date: August 3, 2021

Shrikant Tiwari, Opeyemi Adewuya, Jaber Al-Fayyadh, Ali Al-Mousa and Gregory Dolciani

Natural Gas Liquid Fractionation Plant Waste Heat Conversion to Simultaneous Power and Potable Water Using Kalina Cycle and Modified Multi-Effect Distillation System

Granted Patent: U.S. Patent 11,078,809

Grant Date: August 3, 2021

Mahmoud B. Noureldin and Akram H. Kamel

Pipe Cross-Sectional Fiber Optic Multiphase Apparatus

Granted Patent: U.S. Patent 11,079,260

Grant Date: August 3, 2021

Karam Chand and Frode Hveding

Methods and Systems for Determining Core Permeability Pulse Decay Experiments

Granted Patent: U.S. Patent 11,079,313

Grant Date: August 3, 2021

Jilin J. Zhang, Hui-Hai Liu and Huangye Chen

Remotely Assessing Real-Time Wooden Pole Integrity

Granted Patent: U.S. Patent 11,079,358

Grant Date: August 3, 2021

Khaled A. Al-Buraik

Resolution Preserving Methodology to Generate Continuous Log Scale Reservoir Permeability Profile from Petrographic Thin Section Images

Granted Patent: U.S. Patent 11,079,581

Grant Date: August 3, 2021

Mokhles M. Mezghani and Fatai A. Anifowose

Method and System to Modify the Performance of a Redox Flow Battery

Granted Patent: U.S. Patent 11,081,712

Grant Date: August 3, 2021

Ahmad D. Hammad, Stamatios Souentie, Abdulrahman Alsuhaibani and Issam T. Amr

Fly Ash Cement for Oil and Gas Cementing Applications

Granted Patent: U.S. Patent 11,084,758

Grant Date: August 10, 2021

Khawlah A. Alanqari, Abdullah S. Al-Yami, Ali M. Al-Safran and Vikrant B. Wagle

Functionalized Nanosilica as Shale Inhibitor in Water-Based Fluids

Granted Patent: U.S. Patent 11,084,967

Grant Date: August 10, 2021

Peter J. Boul, B. Raghava Reddy and Carl Thaemlitz

Surface Charge Modified Nanosurfactants for Reduced Retention by Reservoir Rock

Granted Patent: U.S. Patent 11,084,972

Grant Date: August 10, 2021

Ayrat Gizzatov, Chang Da and Amr Abdel-Fattah

Two-Phase Moving Bed Reactor Utilizing Hydrogen Enriched Feed

Granted Patent: U.S. Patent 11,084,991

Grant Date: August 10, 2021

Omer R. Koseoglu

Systems and Methods for Upgrading Heavy Oils

Granted Patent: U.S. Patent 11,084,992

Grant Date: August 10, 2021

Lianhui Ding, Essam Al-Sayed and Ibrahim Abba

Configuration for Olefins Production

Granted Patent: U.S. Patent 11,084,993

Grant Date: August 10, 2021

Ujjal Mukherjee, Kareemuddin Shaik, Pedro Santos, Essam A. Al-Sayed, Theodoros Maesen, Mazin Tamimi, Julie Chabot, Ibrahim Abba, Kandasamy Sundaram, Sami Barnawi and Ronald Venner

Drill Bit Cutter

Granted Patent: U.S. Patent 11,085,245

Grant Date: August 10, 2021

Bakr A. Al-Masri and Naser A. Al-Otaibi

Permeability Prediction Using a Connected Reservoir Regions Map

Granted Patent: U.S. Patent 11,085,291

Grant Date: August 10, 2021

Babatope O. Kayode

Thermal- and Photo-Assisted Aftertreatment of Nitrogen Oxides

Granted Patent: U.S. Patent 11,085,544

Grant Date: August 10, 2021

Christos M. Kalamaras, Esam Z. Hamad, Remi Mahfouz and Tamour Javed

AVO Imaging Condition in Elastic Reverse Time Migration

Granted Patent: U.S. Patent 11,086,056

Grant Date: August 10, 2021

Yang Zhao, Houzhu Zhang and Hongwei Liu

System and Method of Surface Consistent Processing

Granted Patent: U.S. Patent 11,086,057

Grant Date: August 10, 2021

Hyongsu Baek

Well Performance Classification Using Artificial Intelligence and Pattern Recognition

Granted Patent: U.S. Patent 11,087,221

Grant Date: August 10, 2021

Badr M. Al-Harbi, Amell A. Al-Ghamdi and Ali A. Al-Turki

Dewatering a Hydrocarbon Storage Tank

Granted Patent: U.S. Patent 11,090,580

Grant Date: August 17, 2021

Taher L. Al-Jundi, Aziz U. Rehman, Fadhel H. Asfoor and Isa H. Al-Mudaibegh

Oil and Water Separation

Granted Patent: U.S. Patent 11,090,581

Grant Date: August 17, 2021

Olanrewaju M. Oshinowo

Systems and Methods for Zeolite Catalyst Pore Blocking Modifications for Hydrocarbon Conversion Reactions

Granted Patent: U.S. Patent 11,090,645

Grant Date: August 17, 2021

Emad N. Al-Shafei, Oki Muraza, Ki-Hyounk Choi, Ali Al-Nasir, Zain H. Yamani, Idris A. Bakare and Mohammad Al-Abdullah

Laser Tool for Removing Scaling

Granted Patent: U.S. Patent 11,090,765

Grant Date: August 17, 2021

Sameeh I. Batarseh, Wisam J. Assiri and Haitham A. Othman

Methods of Heavy Reformate Conversion into Aromatic Compounds

Granted Patent: U.S. Patent 11,091,415

Grant Date: August 17, 2021

Raed H. Abudawoud, Avelino C. Canos, M. Teresa Portilla Ovejero, Vicente J. Margarit Benavent, M. Teresa Navarro Villalba, M. Cristina Martinez Sanchez and Ibrahim M. Al-Zahrani

Methods of Using Drilling Fluid Compositions with Enhanced Rheology

Granted Patent: U.S. Patent 11,091,682

Grant Date: August 17, 2021

Hussain Albahrani, Abdullah S. Al-Yami, Ali M. Al-Safran and Abdulaziz Alhelal

Hydrocarbon Well Deliquification Using Alkali Metal Silicides

Granted Patent: U.S. Patent 11,091,688

Grant Date: August 17, 2021

Mohammed A. Bataweel and Prasad B. Karadkar

Conversion of Olefinic Naphthas by Hydration to Produce Middle Distillate Fuel Blending Components

Granted Patent: U.S. Patent 11,091,701

Grant Date: August 17, 2021

Omer R. Koseoglu and Ali Sawan

System and Process for Steam Cracking and PFO Treatment Integrating Selective Hydrogenation and Ring Opening

Granted Patent: U.S. Patent 11,091,708

Grant Date: August 17, 2021

Qi Xu and Raed H. Abudawoud

System and Process for Steam Cracking and PFO Treatment Integrating Selective Hydrogenation, Ring Opening and Naphtha Reforming

Granted Patent: U.S. Patent 11,091,709

Grant Date: August 17, 2021

Qi Xu and Raed H. Abudawoud

Stage Cementing an Annulus of a Wellbore

Granted Patent: U.S. Patent 11,091,978

Grant Date: August 17, 2021

Ali A. Hijles

Smart Circulation Sub

Granted Patent: U.S. Patent 11,091,985

Grant Date: August 17, 2021

Victor C. Costa de Oliveira, Mario A. Rivas Martinez and Helmut J. Luquetta Berrio

Downhole System and Method for Selectively Producing and Unloading from a Well

Granted Patent: U.S. Patent 11,091,988

Grant Date: August 17, 2021

Chidirim E. Ejim and Brian A. Roth

Downhole Corrosion, Erosion, Scale and Deposit Monitoring System

Granted Patent: U.S. Patent 11,091,998

Grant Date: August 17, 2021

Vladimir Jovancevic, Sunder Ramachandran, Amro Mukhles and Irfan Syafii

Polymeric Tracers

Granted Patent: U.S. Patent 11,092,005

Grant Date: August 17, 2021

Jason R. Cox

Dynamic Multi-Legs Ejector for Use in Emergency Flare Gas Recovery System

Granted Patent: U.S. Patent 11,092,354

Grant Date: August 17, 2021

Samusideen A. Salu, Mohamed A. Soliman and Nisar A. Ansari

Use of Wavelet Cross-Correlation for Virtual Source Denoising

Granted Patent: U.S. Patent 11,092,709

Grant Date: August 17, 2021

Yang Zhao and Weichang Li

Simplified Logic Injection Control (SLIC) for Demulsifier Chemical Automation

Granted Patent: U.S. Patent 11,092,955

Grant Date: August 17, 2021

Syed H. Khuzzan, Marnix J. Teuling and Randall L. Franklin

Core-Plug to Giga-Cells Lithological Modeling

Granted Patent: U.S. Patent 11,095,576

Grant Date: August 17, 2021

Roger R. Sung and Ahmed S. Al-Ramadan

Helical Motor Oil Circulation System

Granted Patent: U.S. Patent 11,095,191

Grant Date: August 17, 2021

Christopher Wrighton and Jinjiang Xiao

Unidirectional and Bidirectional Cross-Domain (Secure Exchange Gateway) Design

Granted Patent: U.S. Patent 11,095,649

Grant Date: August 17, 2021

Mostafa Al Amer, Mohammed K. Ujaimi and Eid S. Harbi

Thermal- and Photo-Assisted Aftertreatment of Nitrogen Oxides

Granted Patent: U.S. Patent 11,097,222

Grant Date: August 24, 2021

Christos M. Kalamaras, Esam Z. Hamad, Remi Mahfouz and Tamour Javed

Catalytic Hydrocarbon Dehydrogenation

Granted Patent: U.S. Patent 11,097,257

Grant Date: August 24, 2021

Mohammed A. Al-Daous and Hussam A. Bahlouli

Composite Hierarchical Zeolite Catalyst for Heavy Reformate Conversion to Xylenes

Granted Patent: U.S. Patent 11,097,262

Grant Date: August 24, 2021

Veera Venkata R. Tammana, Raed H. Abudawoud, Ahmad A. Jazzar, Ahmad Al Mahdi and Thamer A. Mohammad

Underwater Pipeline Inspection Crawler

Granted Patent: U.S. Patent 11,097,428

Grant Date: August 24, 2021

Ammar Al Nahwi, Fadl Abdellatif, Ali H. Outa and Ihsan Al-Taie

Articulated Magnet-Bearing Legs for UAV Landing on Curved Surfaces

Granted Patent: U.S. Patent 11,097,796

Grant Date: August 24, 2021

Fadl Abdellatif, Mohamed Abdelkader and Jeff S. Shamma

Process for Production of Mixed Butanol and Disobutenes as Fuel Blending Components

Granted Patent: U.S. Patent 11,097,998

Grant Date: August 24, 2021

Essa I. Alnaimi, Anas S. Al-Aqeeli, Kareemuddin Shaik, Hamad S. Al-Khaldi, Ali M. Alshehri, Ahmed A. Alkhulaif and Faris I. Alnajran

Production of 1-Butene and Ultra-High Molecular Weight Polyethylene

Granted Patent: U.S. Patent 11,098,140

Grant Date: August 24, 2021

Ola S. Ali, Wei Xu, Hussain Al Yami and Faisal Melebari

Spacer Fluid Compositions that Include Surfactants

Granted Patent: U.S. Patent 11,098,251

Grant Date: August 24, 2021

Hussain Albahrani, Abdullah S. Al-Yami and Vikrant B. Wagle

Lubricants for Water-Based Drilling Fluids

Granted Patent: U.S. Patent 11,098,252

Grant Date: August 24, 2021

Abdullah S. Al-Yami, Hussain Albahrani, Vikrant B. Wagle, Ali M. Al-Safran, Naser Alhareth, Abdulaziz Alhelal and Abdulla H. Awadh

Methods of Converting Drilling Fluids into Geopolymer Cements and Use Thereof

Granted Patent: U.S. Patent 11,098,255

Grant Date: August 24, 2021

Khawlah A. Alanqari and Abdullah S. Al-Yami

Modified Ultra-Stable Y (USY) Zeolite Catalyst for Improving Cold Flow Properties of Distillates

Granted Patent: U.S. Patent 11,098,256

Grant Date: August 24, 2021

Omer R. Koseoglu, Mitsunori Watabe, Tomoyasu Kagawa and Koji Uchida

Freeing Stuck Tubulars in Wellbores

Granted Patent: U.S. Patent 11,098,547

Grant Date: August 24, 2021

Ahmad A. Amoudi, Ossama R. Sehsah and Abdulrahman K. Aleid

Systems and Methods for Freeing Stuck Pipe*Granted Patent: U.S. Patent 11,098,552**Grant Date: August 24, 2021*

Atallah Alharbi

Hydraulic Fracturing Using Multiple Fracturing Fluids Sequentially*Granted Patent: U.S. Patent 11,098,564**Grant Date: August 24, 2021*

Leiming Li and Rajesh K. Saini

Method of Operating an Oil/Gas Facility Based on Accurate Determination of Capillary Pressure and Interfacial Tension*Granted Patent: U.S. Patent 11,098,581**Grant Date: August 24, 2021*

Bander N. Al Ghamdi

Determination of Calibrated Minimum Horizontal Stress Magnitude Using Fracture Closure Pressure and Multiple Mechanical Earth Model Realizations*Granted Patent: U.S. Patent 11,098,582**Grant Date: August 24, 2021*

Otto E. Meza Camargo and Tariq Mahmood

Mechanical Calibration of Turbine Over Speed Trip*Granted Patent: U.S. Patent 11,098,611**Grant Date: August 24, 2021*

Hussain H. Rasheed and Abdulkareem A. Alturki

Bonnet Vent Attachment*Granted Patent: U.S. Patent 11,098,811**Grant Date: August 24, 2021*

Ali N. Meshaikhis, Luay H. Al-Awami and Mohammad R. Khunaizi

Magnetic Crawler Vehicle with Passive Rear-Facing Apparatus*Granted Patent: U.S. Patent 11,098,854**Grant Date: August 24, 2021*

Pablo C. Zanini, Fadl Abdellatif, Brian J. Parrott and Ali H. Outa

Systems and Methods for Constructing and Testing Composite Photonic Structures*Granted Patent: U.S. Patent 11,099,155**Grant Date: August 24, 2021*

Enrico Bovero, Vincent B. Cunningham, Ilham Mokhtari, Aziz Fihri and Remi Mahfouz

Method and Apparatus for Stabilizing Gas/Liquid Flow in a Vertical Conduit*Granted Patent: U.S. Patent 11,099,584**Grant Date: August 24, 2021*

Maher M. Shariff, Regis D. Vilagines and Olanrewaju M. Oshinowo

Source Code Similarity Detection Using Digital Fingerprints*Granted Patent: U.S. Patent 11,099,842**Grant Date: August 24, 2021*

Firas Alomari

High Current Detection and Field Loop Isolation Circuit*Granted Patent: U.S. Patent 11,101,632**Grant Date: August 24, 2021*

Ali Z. Al-Haddad

Antifouling Oligomerization Catalyst Systems*Granted Patent: U.S. Patent 11,104,621**Grant Date: August 31, 2021*

Motaz Khawaji, Hussain Al Yami, Sohel Shaikh, Wei Xu and Kenji Sogo

Composition and Method for Water and Gas Shut-Off in Subterranean Formations*Granted Patent: U.S. Patent 11,104,858**Grant Date: August 31, 2021*

Mohammed A. Bataweel, Jin Huang, Ayman M. Almohsin, Prasad B. Karadkar, Hans O. Lagnemo, Andreas A. Sundblom and Per A. Restorp

Methods and Compositions for Mitigating Water Production*Granted Patent: U.S. Patent 11,104,859**Grant Date: August 31, 2021*

Leiming Li, Rajesh K. Saini and Feng Liang

Method and Process for Depolymerization of a Plastic Polymer*Granted Patent: U.S. Patent 11,104,851**Grant Date: August 31, 2021*

Omer R. Koseoglu and Robert P. Hodgkins

Drillable Cementing Plug*Granted Patent: U.S. Patent 11,105,176**Grant Date: August 31, 2021*

Noureldeen N. Agour

Plugging Formation Fractures*Granted Patent: U.S. Patent 11,105,180**Grant Date: August 31, 2021*

Ahmed Al-Mousa, Marius Neacsu and Ahmed A. Al-Ramadhan

Method for Aligning a Rotor of a Rotary Equipment*Granted Patent: U.S. Patent 11,105,202**Grant Date: August 31, 2021*

Mohamad A. Al-Ibrahim

Screening Demulsifiers for Crude Live Oil-Water Emulsions*Granted Patent: U.S. Patent 11,105,722**Grant Date: August 31, 2021*

Sunil L. Kokal and Zuhair Al-Yousif

Hydrodearylation Reactor*Granted Patent: U.S. Patent 11,110,428**Grant Date: September 7, 2021*

Omer R. Koseoglu and Robert P. Hodgkins

Methods and Systems for Producing Paraxylene from C8 Containing Compositions*Granted Patent: U.S. Patent 11,111,192**Grant Date: September 7, 2021*

Zhonglin Zhang, Sohel K. Shaikh, Veera Vemkata R. Tammanna, Raed H. Abudawoud, Bruce R. Beadle, Hisham T. Bassam and Rakan S. Bilaus

Oxidized Disulfide Oil Solvent Compositions*Granted Patent: U.S. Patent 11,111,212**Grant Date: September 7, 2021*

Omer R. Koseoglu, Robert P. Hodgkins, Adnan Al-Hajji, Hendrik Muller, Nadrah Al-Awani, Frederick M. Adam and Qasim Saleem

In Situ Salinity Adjustment to Improve Waterflooding Performance in Oil-Wet Carbonate Reservoirs*Granted Patent: U.S. Patent 11,111,426**Grant Date: September 7, 2021*

Mohammed B. Al-Otaibi, Dong K. Cha and Ali A. Al-Yousef

Laser Tool Configured for Downhole Beam Generation*Granted Patent: U.S. Patent 11,111,726**Grant Date: September 7, 2021*

Sameeh I. Batarseh

High-Power Laser Drilling System*Granted Patent: U.S. Patent 11,111,727**Grant Date: September 7, 2021*

Omar M. Al Obaid and Sameeh I. Batarseh

Drill Bits with Incorporated Sensing Systems*Granted Patent: U.S. Patent 11,111,752**Grant Date: September 7, 2021*

Guodong Zhan, Chinthaka P. Gooneratne, Bodong Li and Timothy E. Moellendick

Apparatus for Loss Circulation Material Performance Evaluation*Granted Patent: U.S. Patent 11,111,742**Grant Date: September 7, 2021*

Md Amanullah and Jothibasu Ramasamy

Correcting Offsets in Wellbore Tubulars*Granted Patent: U.S. Patent 11,111,749**Grant Date: September 7, 2021*

Sajid Hussain and Victor J. Bustamante Rodriguez

Telescoping Electrical Connector Joint*Granted Patent: U.S. Patent 11,111,750**Grant Date: September 7, 2021*

Iii B. Kelly

Polymer Gel Compositions for Treating Aqueous Zones in Subterranean Formations and Methods of Treating the Aqueous Zones*Granted Patent: U.S. Patent 11,111,755**Grant Date: September 7, 2021*

Ayman Almohsin, Jin Huang and Mohammed A. Bataweel

Isolation Polymer Packer*Granted Patent: U.S. Patent 11,111,754**Grant Date: September 7, 2021*

Abdulrahman A. Al-Mulhem and Ayman M. Almohsin

Well Livening Tool Based on Nitrogen Producing Chemistry*Granted Patent: U.S. Patent 11,111,765**Grant Date: September 7, 2021*

Abdulrahman A. Al-Mulhem and Mohammed A. Bataweel

Systems and Methods for Testing Wellbore Completion Systems*Granted Patent: U.S. Patent 11,111,773**Grant Date: September 7, 2021*

Mohamed Larbi Zeghlache

Onshore Equipped Ocean Thermal and Hydraulic Energy Conversion System and Method*Granted Patent: U.S. Patent 11,111,906**Grant Date: September 7, 2021*

Abdulaziz M. Aldossary

Prevention of Ferromagnetic Solids Deposition on Electric Submersible Pumps (ESPS) by Magnetic Means

Granted Patent: U.S. Patent 11,111,925

Grant Date: September 7, 2021

Mohannad Abdelaziz and Rafael A. Lastra Melo

Natural Gas Liquid Fractionation Plant Waste Heat Conversion to Simultaneous Power and Cooling Capacities Using Modified Goswami System

Granted Patent: U.S. Patent 11,112,187

Grant Date: September 7, 2021

Mahmoud B. Noureldin and Akram H. Kamel

Passive Thermal Diode for Pipelines

Granted Patent: U.S. Patent 11,112,190

Grant Date: September 7, 2021

Thibault T. Villette and Guillaume R.J-F. Raynel

Metal Loss Determinations Based on Thermography Machine Learning Approach for Insulated Structures

Granted Patent: U.S. Patent 11,112,549

Grant Date: September 7, 2021

Ayman M. Amer, Ali Al Shehri and Vincent Cunningham

Systems and Methods for Slice Selective Nuclear Magnetic Resonance Testing of Fractured Core Plugs to Determine in Situ Pore Volume

Granted Patent: U.S. Patent 11,112,375

Grant Date: September 7, 2021

Marwah M. AlSinan and Hyung T. Kwak

Systems and Methods for Computed Resource Hydrocarbon Reservoir Simulation and Development

Granted Patent: U.S. Patent 11,112,514

Grant Date: September 7, 2021

Suha N. Kayum

Data Processing System for Measurement of Hydrocarbon Content of Tight Gas Reservoirs

Granted Patent: U.S. Patent 11,112,525

Grant Date: September 7, 2021

Jinhong Chen, Stacey M. Althaus, Daniel T. Georgi and Hui-Hai Liu

Securing Layer-3 Virtual Private Network

Granted Patent: U.S. Patent 11,115,325

Grant Date: September 7, 2021

Mudashiru Busari, Salah M. Buraiky and Muhammad I. Khayyal

Synthetic Layered Magnesium Silicates and their Derivatives for High Performance Oil-Based Drilling Fluids

Granted Patent: U.S. Patent 11,118,092

Grant Date: September 14, 2021

Hasmukh Patel, Ashok Santra and Carl Thaemlitz

Micronized Loss Prevention Material (LPM) for Preventive Loss Control

Granted Patent: U.S. Patent 11,118,095

Grant Date: September 14, 2021

Md Amanullah and Turki Al-Subaie

Compositions and Methods of Use of Water-Based Drilling Fluids with Increased Thermal Stability

Granted Patent: U.S. Patent 11,118,094

Grant Date: September 14, 2021

Vikrant B. Wagle, Abdullah S. Al-Yami and Hussain Al-Bahrani

Removal of Barite Weighted Mud

Granted Patent: U.S. Patent 11,118,096

Grant Date: September 14, 2021

Mubarak A. Aldhufairi and Saif A. Al-Thabit

Catalyst and Process of Upgrading Heavy Oil in the Presence of Steam

Granted Patent: U.S. Patent 11,118,121

Grant Date: September 14, 2021

Mazin M. Fathi, Ki-Hyouk Choi and Mohammed R. Aldossary

Integrated Residuum Hydrocracking and Hydrofinishing

Granted Patent: U.S. Patent 11,118,122

Grant Date: September 14, 2021

Vinod Ramaseshan, Yufeng He, Hiren Shethna and Mohammed A. Alwohaibi

Processes and Systems for Petrochemical Production Integrating Coking and Deep Hydrogenation of Coking Products

Granted Patent: U.S. Patent 11,118,125

Grant Date: September 14, 2021

Omer R. Koseoglu

Lost Circulation Balloon

Granted Patent: U.S. Patent 11,118,417

Grant Date: September 14, 2021

Bandar S. Almalki and Ismail A. Adebiji

Borehole Sealing Device

Granted Patent: U.S. Patent 11,118,421

Grant Date: September 14, 2021

Krzysztof K. Machocki

Managing Corrosion and Scale Buildup in a Wellbore

Granted Patent: U.S. Patent 11,118,427

Grant Date: September 14, 2021

Anuj Gupta, Sunder Ramachandran and Sebastian Csutak

Displacing Fluid for Enhanced Oil Recovery

Granted Patent: U.S. Patent 11,118,459

Grant Date: September 14, 2021

Mazin M. Fathi, Ki-Hyouk Choi and Muneef F. Alqarzouh

Well Completion System for Dual Wellbore Producer and Observation Well

Granted Patent: U.S. Patent 11,118,445

Grant Date: September 14, 2021

Faleh M. Shammeri

Multiphase Flow Meters and Related Methods for Oil and Gas Applications

Granted Patent: U.S. Patent 11,118,452

Grant Date: September 14, 2021

Karam Yateem and AbdulRahman Al-Ghamdi

Natural Gas Liquid Fractionation Plant Waste Heat Conversion to Simultaneous Power, Cooling and Potable Water Using Integrated Mono-Refrigerant Triple Cycle and Modified Multi-Effect Distillation System

Granted Patent: U.S. Patent 11,118,485

Grant Date: September 14, 2021

Mahmoud B. Noureldin and Akram H. Kamel

Water Injection to Increase Hydrogen Production by On-Board Reforming of Fuel for Automotive Internal Combustion Engines

Granted Patent: U.S. Patent 11,118,545

Grant Date: September 14, 2021

Alexander K. Voice and Vincent S. Costanzo

Segment Isolation of Internal Pipe Wall

Granted Patent: U.S. Patent 11,118,715

Grant Date: September 14, 2021

Abdulaziz M. Al Otaibi

Systems and Methods for Detecting Seismic Discontinuities Using Singular Vector Variances

Granted Patent: U.S. Patent 11,119,254

Grant Date: September 14, 2021

Xu Ji, Yue Ma, Hongbin Xiao and Yi Luo

Method and System for Land Encroachment Detection and Surveillance

Granted Patent: U.S. Patent 11,120,259

Grant Date: September 14, 2021

Ali H. Hammad and Sekar Arunachalam

Systems and Methods for Preventing Damage to Unseen Utility Assets

Granted Patent: U.S. Patent 11,120,692

Grant Date: September 14, 2021

Muhammad S. Aljuaid, Mazen A. Baragaba and Marek Zidek

Methods for Producing Mesoporous Zeolite Multifunctional Catalysts for Upgrading Pyrolysis Oil

Granted Patent: U.S. Patent 11,125,725

Grant Date: September 21, 2021

Miao Sun, Ke Zhang and Veera Venkata R. Tammana

Synthesized Lubricants for Water-Based Drilling Fluid Systems

Granted Patent: U.S. Patent 11,124,687

Grant Date: September 21, 2021

Md Amanullah, Jothibasuramasamy and Ali Radhwan

In Situ Generation of Glass-Like Materials Inside Subterranean Formation

Granted Patent: U.S. Patent 11,124,689

Grant Date: September 21, 2021

Mohammed A. Bataweel, Prasad B. Karadkar, Ayman Al-Mohsin and Haitham A. Othman

Method and Materials to Convert a Drilling Mud into a Solid Gel-Based Lost Circulation Material

Granted Patent: U.S. Patent 11,124,691

Grant Date: September 21, 2021

Vikrant B. Wagle, Rajendra A. Kalgaonkar and Abdullah S. Al-Yami

Addition of Monovalent Salts for Improved Viscosity of Polymer Solutions Used in Oil Recovery Applications

Granted Patent: U.S. Patent 11,124,694
Grant Date: September 21, 2021
Saleh F. Hassan and Abdulkareem M. Al-Sofi

Production of Liquid Hydrocarbons from Polyolefins by Supercritical Water

Granted Patent: U.S. Patent 11,124,707
Grant Date: September 21, 2021
Ki-Hyouk Choi, Ali S. Alnasir and Mohammed Z. Albahar

Process for Fluidized Catalytic Cracking of Disulfide Oil to Produce Ethylene Used for Metathesis to Produce Propylene

Granted Patent: U.S. Patent 11,124,713
Grant Date: September 21, 2021
Omer R. Koseoglu and Robert P. Hodgkins

Processes and Systems for Petrochemical Production Integrating Coking and Deep Hydrogenation of Coking Reaction Products

Granted Patent: U.S. Patent 11,124,716
Grant Date: September 21, 2021
Omer R. Koseoglu

Hydroprocessing Units and Methods for Preventing Corrosion in Hydroprocessing Units

Granted Patent: U.S. Patent 11,124,717
Grant Date: September 21, 2021
Omer R. Koseoglu, Ata C. Koseoglu and Anas F. Alkhani

Completing Slim-Hole Horizontal Wellbores

Granted Patent: U.S. Patent 11,125,026
Grant Date: September 21, 2021
Soha O. El-Hayek and Essam M. Alyan

Tubing Head Adapter for Cable Deployed (Wireline) Electric Submersible Pump (ESP)

Granted Patent: U.S. Patent 11,125,042
Grant Date: September 21, 2021
Mohammed E. Mukhlifi

Pressurized Flotation for Tubular Installation in Wellbores

Granted Patent: U.S. Patent 11,125,044
Grant Date: September 21, 2021
Andres A. Ramirez and Alaa Wahbi

Deploying Wellbore Patch for Mitigating Lost Circulation

Granted Patent: U.S. Patent 11,125,046
Grant Date: September 21, 2021
Bodong Li, Chinthaka P. Gooneratne and Timothy E. Moellendick

Simultaneous Injection and Fracturing Interference Testing

Granted Patent: U.S. Patent 11,125,061
Grant Date: September 21, 2021
Mohamed Larbi Zeghlache and Mark Proett

Wellbore Fluid Level Monitoring System

Granted Patent: U.S. Patent 11,125,075
Grant Date: September 21, 2021
Bodong Li, Chinthaka P. Gooneratne, Guodong Zhan and Timothy E. Moellendick

Accelerometer-Based Casing Collar Locator

Granted Patent: U.S. Patent 11,125,076
Grant Date: September 21, 2021
Mohamed Larbi Zeghlache

Internal Combustion Engines Which Utilize Multiple Fuels and Methods for the Operation of Such

Granted Patent: U.S. Patent 11,125,172
Grant Date: September 21, 2021
Kai J. Morganti, Yoann Viollet and Robert A. Head

Process and Method for Transporting Liquid Hydrocarbon and CO₂ for Producing Hydrogen with CO₂ Capture

Granted Patent: U.S. Patent 11,125,391
Grant Date: September 21, 2021
Ahmad O. Al-Khowaiter, Aqil Jamal and Mourad Younes

Flare Spill Protection

Granted Patent: U.S. Patent 11,125,451
Grant Date: September 21, 2021
Mohammad A. Umair, Ossama R. Sehsah and Mahmoud A. Alqurashi

Mechanical Seal Testing

Granted Patent: U.S. Patent 11,125,644
Grant Date: September 21, 2021
Ibrahim S. Bubshait, Nayif I. Khonaifer, Abdullah N. Khudhayr and Ahmad A. Mijhed

Laboratory Measurement of Dynamic Fracture Porosity and Permeability Variations in Rock Core Plug Samples

Granted Patent: U.S. Patent 11,125,671
Grant Date: September 21, 2021
Antonio A. Santagati, Otto E. Meza Camargo, Tariq Mahmood and Edwin Caliboso

Methods for Automated History Matching Utilizing Muon Tomography

Granted Patent: U.S. Patent 11,125,905
Grant Date: September 21, 2021
Michel Cancelliere and Ozgur Kirlangic

Locating New Hydrocarbon Fields and Predicting Reservoir Performance from Hydrocarbon Migration

Granted Patent: U.S. Patent 11,126,762
Grant Date: September 21, 2021
Ali H. Dogru

Systems and Methods for Optimizing Camera and Microscope Configurations for Capturing Thin Section Images

Granted Patent: U.S. Patent 11,126,819
Grant Date: September 21, 2021
Hussain Alqattan

Method of Capturing User Presence via Session Unlocking and Centralizing Using an Identity Directory Platform

Granted Patent: U.S. Patent 11,128,632
Grant Date: September 21, 2021
Gary Simmons

Methods for Producing Multifunctional Catalysts for Upgrading Pyrolysis Oil

Granted Patent: U.S. Patent 11,130,119
Grant Date: September 28, 2021
Miao Sun

Method for Improving Cement Toughness

Granted Patent: U.S. Patent 11,130,900
Grant Date: September 28, 2021
Hasmukh A. Patel and Carl Thaemlitz

Integrated Process and System for Treatment of Hydrocarbon Feedstocks Using Deasphalting Solvent

Granted Patent: U.S. Patent 11,130,920
Grant Date: September 28, 2021
Omer R. Koseoglu

Rotary Dynamic System for Downhole Assemblies

Granted Patent: U.S. Patent 11,131,144
Grant Date: September 28, 2021
Ibrahim A. Althowiqeb

Flow Management Systems and Related Methods for Oil and Gas Applications

Granted Patent: U.S. Patent 11,131,158
Grant Date: September 28, 2021
Maher M. Shariff and Taras Y. Makogon

Smart Tubular Running Machine

Granted Patent: U.S. Patent 11,131,160
Grant Date: September 28, 2021
Ossama Sehsah and Mahmoud A. Alqurashi

Electric Submersible Pump Completion in a Lateral Well

Granted Patent: U.S. Patent 11,131,170
Grant Date: September 28, 2021
Khaled Alsunary and Ahmed Alkhalifah

Matrix Stimulation Tool

Granted Patent: U.S. Patent 11,131,175
Grant Date: September 28, 2021
Qasim Sahu, Fakuen F. Chang, Eyad Alali and Brian A. Roth

Method and System for Determining a Drilling Hazard Condition Using Well Logs

Granted Patent: U.S. Patent 11,131,184
Grant Date: September 28, 2021
Ammar Alali, Ali Aljishi and Arturo Magana-Mora

Identifying Hydrocarbon Production Zones

Granted Patent: U.S. Patent 11,131,187
Grant Date: September 28, 2021
Feng H. Lu

Managing Power Usage in an Industrial Process

Granted Patent: U.S. Patent 11,131,482
Grant Date: September 28, 2021
Ali A. Al-Ugla

Method and Apparatus to Measure Water Content of Petroleum Fluids

Granted Patent: U.S. Patent 11,131,660
Grant Date: September 28, 2021
Elaf A. Ahmed, Sebastian A. Duval and Simone Less

Planned Zero Downtime Server Switching for Web Applications

Granted Patent: U.S. Patent 11,132,270
Grant Date: September 28, 2021
Yasser A. Alqahtani, Khaled A. Alhumaid, Haidar A. Aldajani, Ammar R. Aleid and Torky K. Almohaisen

System and Method for Detecting and Alerting of Flooding in Telecommunications Manholes

Granted Patent: U.S. Patent 11,154,156

Grant Date: September 28, 2021

Naji N. Al-Motairy and Badie A. Guwaisem

Crosslinked Polyethylene Glycol Polymer Membranes for Gas Separation

Granted Patent: U.S. Patent 11,155,556

Grant Date: October 5, 2021

Daniel J. Harrigan

Date Seed-Based Chips Lost Circulation Material

Granted Patent: U.S. Patent 11,156,487

Grant Date: October 5, 2021

Md Amanullah and Turki Al-Subaie

Iron Sulfide Removal in Oil Field Applications

Granted Patent: U.S. Patent 11,156,491

Grant Date: October 5, 2021

Tao Chen, Qiwei Wang and Fakuen F. Chang

Two-Stage Hydrocracking Unit with Intermediate HPNA Hydrogenation Step

Granted Patent: U.S. Patent 11,156,512

Grant Date: October 5, 2021

Omer R. Koseoglu

Dual String Fluid Management Devices for Oil and Gas Applications

Granted Patent: U.S. Patent 11,156,849

Grant Date: October 5, 2021

Ahmed Al-Mousa, Marius Neacsu and Ahmed A. Al-Ramadhan

Aqueous Flash Treatment in Well Applications

Granted Patent: U.S. Patent 11,156,868

Grant Date: October 5, 2021

Mahmoud A. Alqurashi and Ossama R. Sehsah

Systems, Apparatuses, and Methods for Downhole Water Separation

Granted Patent: U.S. Patent 11,156,875

Grant Date: October 5, 2021

Muhammad Ayub

Seismic Reservoir Monitoring Using Common Transmission Points

Granted Patent: U.S. Patent 11,157,510

Grant Date: October 5, 2021

Hongwei Liu and Yi Luo

Directional Sensitive Fiber Optic Cable Wellbore System

Granted Patent: U.S. Patent 11,157,562

Grant Date: October 5, 2021

Frode Hveding

Geo-Augmented Field Excursion for Geological Sites

Granted Patent: U.S. Patent 11,158,802

Grant Date: October 5, 2021

Abdullah S. Al-Mojel and Maha J. Al-Dossary

Supercritical Water and Ammonia Oxidation System and Process

Granted Patent: U.S. Patent 11,141,706

Grant Date: October 12, 2021

Mourad Younes and Aqil Jamal

Hydrocyclone Systems and Methods for Separating Multiphase Compositions

Granted Patent: U.S. Patent 11,141,741

Grant Date: October 12, 2021

Regis D. Vilagines, Guillaume R.J-F. Raynel, Fahd I. Alghunaimi and Abdullah A. Alomier

Fluid Catalytic Cracking with Catalyst System Containing Modified Beta Zeolite Additive

Granted Patent: U.S. Patent 11,142,705

Grant Date: October 12, 2021

Omer R. Koseoglu, Robert P. Hodgkins, Mitsunori Watabe and Koji Uchida

Methods and Systems of Steam Stripping a Hydrocracking Feedstock

Granted Patent: U.S. Patent 11,142,704

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Fluid Catalytic Cracking and Deep Hydrogenation of Fluid Catalytic Cracking Reaction Products

Granted Patent: U.S. Patent 11,142,706

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Deep Hydrogenation of Middle Distillates

Granted Patent: U.S. Patent 11,142,707

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Deep Hydrogenation of Hydrotreated Diesel

Granted Patent: U.S. Patent 11,142,708

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Deep Hydrogenation of Middle Distillates from Gas-Oil Hydroprocessing

Granted Patent: U.S. Patent 11,142,709

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Deep Hydrogenation of Middle Distillates Obtained from Residue Hydrocracking

Granted Patent: U.S. Patent 11,142,710

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Deep Hydrogenation of Middle Distillates

Granted Patent: U.S. Patent 11,142,711

Grant Date: October 12, 2021

Omer R. Koseoglu

Processes and Systems for Petrochemical Production Integrating Fluid Catalytic Cracking and Deep Hydrogenation of Fluid Catalytic Cracking Reaction Products

Granted Patent: U.S. Patent 11,142,712

Grant Date: October 12, 2021

Omer R. Koseoglu

Supporting Formwork to Rebar for Concrete Forms

Granted Patent: U.S. Patent 11,142,919

Grant Date: October 12, 2021

Scott B. Thompson

Laser Tool Configured for Downhole Movement

Granted Patent: U.S. Patent 11,142,956

Grant Date: October 12, 2021

Sameeh I. Batarseh

Thrust Driven Tractor by Fluid Jetting

Granted Patent: U.S. Patent 11,142,975

Grant Date: October 12, 2021

Ali R. Ssafwany and Samih Alsyed

Positioning Downhole-Type Tools

Granted Patent: U.S. Patent 11,142,976

Grant Date: October 12, 2021

Ahmed Al-Mousa, Marius Neacsu and Ahmed A. Al-Ramadhan

Methods of Hydraulic Fracturing

Granted Patent: U.S. Patent 11,143,008

Grant Date: October 12, 2021

Mohammad H. Haque, Younane N. Abousleiman, Rajesh K. Saini and Katherine L. Hull

Determining in Situ Rock Stress

Granted Patent: U.S. Patent 11,143,578

Grant Date: October 12, 2021

Khalid M. Alruwaili and Mirajuddin R. Khan

Dolomite Mapping Using Multiscale Fracture Characterization

Granted Patent: U.S. Patent 11,143,771

Grant Date: October 12, 2021

Si-Hai Zhang, David Tang and Wenbin Tan

Three-Component Seismic Data Processing and Interpretation Method for Seismic while Fracking

Granted Patent: U.S. Patent 11,143,775

Grant Date: October 12, 2021

Yujin Liu, Yue Du, Tong W. Fei and Yi Luo

Intrinsic Geological Formation Carbon to Oxygen Ratio Measurements

Granted Patent: U.S. Patent 11,143,786

Grant Date: October 12, 2021

Shouxiang M. Ma, Nacer Guergueb and Weijun Guo

Gas Separation Membrane Comprising Crosslinked Blends of Rubbery Polymers

Granted Patent: U.S. Patent 11,148,105

Grant Date: October 19, 2021

Junyan Yang

Hierarchical Zeolite Y and Nano-Sized Zeolite Beta Composite

Granted Patent: U.S. Patent 11,148,124

Grant Date: October 19, 2021

Lianhui Ding, Ibrahim Al-Nutafi and Manal Al-Eid

Gasification of Disulfide Oil to Produce Hydrogen and Carbon Monoxide (Syngas)

Granted Patent: U.S. Patent 11,148,948
Grant Date: October 19, 2021
 Omer R. Koseoglu

Treating Desalter Water Effluent for Wash Water Reuse in a GOSP Using a Ceramic Nanofiltration Membrane

Granted Patent: U.S. Patent 11,148,962
Grant Date: October 19, 2021
 Fahd I. Alghunaimi, Young C. Choi and Regis D. Vilagines

Sorel Cement Composition and Method to Cure Loss of Circulation

Granted Patent: U.S. Patent 11,148,977
Grant Date: October 19, 2021
 Carl Thaemlitz and Ashok Santra

Method and Materials to Convert a Drilling Mud into a Solid Gel-Based Lost Circulation Material

Granted Patent: U.S. Patent 11,149,181
Grant Date: October 19, 2021
 Vikrant B. Wagle, Abdullah S. Al-Yami, Rajendra A. Kalgaonkar and Zainab A. Alsaihati

Compositions and Methods for Acid Diversion during Acid Stimulation of Subterranean Formations

Granted Patent: U.S. Patent 11,149,190
Grant Date: October 19, 2021
 Rajendra A. Kalgaonkar and Qasim Sahu

Method to Produce Light Olefins from Crude Oil

Granted Patent: U.S. Patent 11,149,215
Grant Date: October 19, 2021
 Ki-Hyouk Choi, Ali S. Alnasir and Emad N. Shafei

Method and Process to Maximize Diesel Yield

Granted Patent: U.S. Patent 11,149,214
Grant Date: October 19, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Supercritical Water Process to Produce Bottom Free Hydrocarbons

Granted Patent: U.S. Patent 11,149,215
Grant Date: October 19, 2021
 Ki-Hyouk Choi, Bader Alotaibi and Mohammad Garhoush

Integrated Hydrothermal Process to Upgrade Heavy Oil

Granted Patent: U.S. Patent 11,149,216
Grant Date: October 19, 2021
 Ki-Hyouk Choi, Mazin M. Fathi, Bader M. Alotaibi and Ali S. Al-Nasir

Integrated Supercritical Water and Steam Cracking Process

Granted Patent: U.S. Patent 11,149,218
Grant Date: October 19, 2021
 Ki-Hyouk Choi, Abdullah T. Alabdulhadi, Gonzalo F. Martinez, Ali M. Alsomali, Mohammad A. Alabdullah and Essam A. Al-Sayed

Enhanced Visbreaking Process

Granted Patent: U.S. Patent 11,149,219
Grant Date: October 19, 2021
 Ki-Hyouk Choi, Mohnnad H. Alabsi, Muneeb F. Alqarzouh, Rakan S. Mubayedh and Sung H. Choi

Process and System for Hydrogenation, Hydrocracking and Catalytic Conversion of Aromatic Complex Bottoms

Granted Patent: U.S. Patent 11,149,220
Grant Date: October 19, 2021
 Robert P. Hodgkins, Omer R. Koseoglu and Frederick M. Adam

Laser Array Drilling Tool and Related Methods

Granted Patent: U.S. Patent 11,149,499
Grant Date: October 19, 2021
 Sameeh I. Batarseh

Trojan Drillpipe

Granted Patent: U.S. Patent 11,149,509
Grant Date: October 19, 2021
 Raed Alouhali, Timothy E. Moellendick, Mohammed Badran and Md Amanullah

Freeing a Stuck Pipe from a Wellbore

Granted Patent: U.S. Patent 11,149,510
Grant Date: October 19, 2021
 Najeeb Al-Abdulrahman, Bandar S. Al-Malki, Magbel Alharbi and Zainab A. Alsaihati

High-Pressure Sealing Tool for Use in Downhole Environment

Granted Patent: U.S. Patent 11,149,516
Grant Date: October 19, 2021
 Krzysztof K. Machocki

Mobile Natural Gas Storage and Transportation Unit Based on Adsorption

Granted Patent: U.S. Patent 11,149,905
Grant Date: October 19, 2021
 Yuguo Wang, Rashid Othman and Georgios Lithoxoos

Thermal Analysis for Source Rocks

Granted Patent: U.S. Patent 11,150,206
Grant Date: October 19, 2021
 Shannon L. Eichmann, Katherine L. Hull, Younane N. Abusleiman and David Jacobi

Frequency-Based Geological Feature Detection from Seismic Data

Granted Patent: U.S. Patent 11,150,568
Grant Date: October 19, 2021
 Mohammed S. Gubair and Maher Al Marhoon

Polygonal Liner for Electric Submersible Pump Canned Motor

Granted Patent: U.S. Patent 11,152,851
Grant Date: October 19, 2021
 Christopher Wrighton

Method to Transfer Process Data Utilizing Highly Secure Boundary Networks

Granted Patent: U.S. Patent 11,153,275
Grant Date: October 19, 2021
 Mohammed A. Batouq, Prem Kumar and Omar A. Mohisin

Hydrocracking Catalysts Containing USY and Beta Zeolites for Hydrocarbon Oil and Method for Hydrocracking Hydrocarbon Oil with Hydrocracking Catalysts

Granted Patent: U.S. Patent 11,154,845
Grant Date: October 26, 2021
 Omer R. Koseoglu, Robert P. Hodgkins, Mitsunori Watabe and Koji Uchida

Hydrogen Production from Hydrocarbons with Near Zero Greenhouse Gas Emissions

Granted Patent: U.S. Patent 11,155,462
Grant Date: October 26, 2021
 Serguey V. Arkadaskiy, Humoud W. Al-Utaibi, Noushad Kunnummal, Zeyad T. Ahmed, Faisal S. Al-Jar and Christopher E. Stapp

Polycarbonate Block Copolymers

Granted Patent: U.S. Patent 11,155,747
Grant Date: October 26, 2021
 Scott D. Allen, Chris A. Simoneau, John M. Salladay, David M. Hatfield and John W. Stevens

Isomerization Process Using Feedstock Containing Dissolved Hydrogen

Granted Patent: U.S. Patent 11,155,757
Grant Date: October 26, 2021
 Omer R. Koseoglu

Wellbore Tool Assembly to Open Collapsed Tubing

Granted Patent: U.S. Patent 11,156,052
Grant Date: October 26, 2021
 Ahmed Al-Mousa, Ahmed A. Al-Ramadhan and Qadir Looni

Thru-Tubing Subsurface Completion Unit Employing Detachable Anchoring Seals

Granted Patent: U.S. Patent 11,156,059
Grant Date: October 26, 2021
 Muhammad Arsalan and Mohamed N. Noui-Mehidi

Methods for Delivering in Situ Generated Acids for Stimulation of Downhole Structures

Granted Patent: U.S. Patent 11,156,070
Grant Date: October 26, 2021
 Mohammed Sayed, Katherine L. Hull and Rajesh K. Saini

Method of Subterranean Fracturing

Granted Patent: U.S. Patent 11,156,071
Grant Date: October 26, 2021
 Fakuen F. Chang, Brett W. Bouldin and Ikhsan Nugraha

Drilling Wellbores in a Multilayered Reservoir

Granted Patent: U.S. Patent 11,156,073
Grant Date: October 26, 2021
 Ali S. Rabba and Sultan S. Madani

Downhole Tool for Gas Kick Detection and Liquid Characterization Using Coaxial Resonators

Granted Patent: U.S. Patent 11,156,079
Grant Date: October 26, 2021
 Jose O. Alvarez

System and Method for Sampling Formation Fluid

Granted Patent: U.S. Patent 11,156,085
Grant Date: October 26, 2021
 Bander S. Al-Malki and Faisal M. Sarwi

Prechamber Device for Internal Combustion Engine

Granted Patent: U.S. Patent 11,156,147
Grant Date: October 26, 2021
 Xin Yu and Anqi Zhang

Active Prechamber for Use in an Internal Combustion Engine

Granted Patent: U.S. Patent 11,156,148
Grant Date: October 26, 2021
 Nayan Engineer

Natural Gas Liquid Fractionation Plant Waste Heat Conversion to Simultaneous Cooling Capacity and Potable Water Using Kalina Cycle and Modified Multi-Effect Distillation System

Granted Patent: U.S. Patent 11,156,411
Grant Date: October 26, 2021
 Mahmoud B. Noureldin and Akram H. Kamel

Fluid Separation Systems for Oil and Gas Applications

Granted Patent: U.S. Patent 11,161,058
Grant Date: November 2, 2021
 Vilas S. Koleshwar, Saif F. Albluwi, Olanrewaju M. Oshinowo and Maher M. Shariff

Crude Oil Demulsification

Granted Patent: U.S. Patent 11,161,059
Grant Date: November 2, 2021
 Mohamed A. Soliman and Nisar A. Ansari

Microwave-Based Systems for Bacteria Removal from Water Cooling Towers

Granted Patent: U.S. Patent 11,161,758
Grant Date: November 2, 2021
 Hassan A. Al-Hashmy, Enrico Bovero, Aziz Fihri and Mohamed Bouhara

Additives to Minimize Viscosity Reduction for Guar/Borate System under High Pressure

Granted Patent: U.S. Patent 11,162,020
Grant Date: November 2, 2021
 Feng Liang, Ghaithan A. Al-Muntasheri and Abdulrahman F. Alharbi

Catalytic Upgrading of Heavy Oil with Supercritical Water

Granted Patent: U.S. Patent 11,162,055
Grant Date: November 2, 2021
 Ki-Hyouk Choi and Faisal M. Almula

Conversion of Crude Oil to Aromatic and Olefinic Petrochemicals

Granted Patent: U.S. Patent 11,162,058
Grant Date: November 2, 2021
 Raed H. Abudawoud, Thamer Mohammad, Alberto L. Ballesteros and Essam Al Sayed

Systems and Processes Integrating Hydroprocessing and an Aromatics Recovery Complex for Separating and Upgrading Hydrocarbons

Granted Patent: U.S. Patent 11,162,059
Grant Date: November 2, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Living Marine Quay Wall

Granted Patent: U.S. Patent 11,162,256
Grant Date: November 2, 2021
 Ronald A. Loughland, Michael P. Hennigan and Hattan J. Balkhi

Systems and Methods for Zonal Cementing and Centralization Using Winged Casing

Granted Patent: U.S. Patent 11,162,324
Grant Date: November 2, 2021
 Abdulaziz Al-Qasim and Muataz Al-Ghamdi

Quick Connect System for Downhole ESP Components

Granted Patent: U.S. Patent 11,162,539
Grant Date: November 2, 2021
 Rafael A. Lastra Melo and Faris H. Tulbah

Integrated Pump and Compressor and Method of Producing Multiphase Well Fluid Downhole and at Surface

Granted Patent: U.S. Patent 11,162,540
Grant Date: November 2, 2021
 Jinjiang Xiao and Randall A. Shepler

Acid Fracturing Treatments in Hydrocarbon-Bearing Formations in Close Proximity to Wet Zones

Granted Patent: U.S. Patent 11,162,544
Grant Date: November 2, 2021
 Moataz M. Alharbi

Determining Safe Drilling Mud Weight

Granted Patent: U.S. Patent 11,162,557
Grant Date: November 2, 2021
 Chao Liu, Younane N. Abousleiman and Yanhui Han

System and Method for Providing Supercritical Steam

Granted Patent: U.S. Patent 11,162,589
Grant Date: November 2, 2021
 Wei Zhang, Armand Levasseur, Tidjani Niass, Mourad Younes, Glen Jukkola, Bruce Wilhelm, Daryl Philo and Timothy Maidenford

Managing a Fuel for a Power Generator

Granted Patent: U.S. Patent 11,162,464
Grant Date: November 2, 2021
 Haitham T. Albladi, Ayed A. Ruwaili, Majed A. Zahrani and Abdulaziz H. Saiyari

Equal Walled Gerotor Pump for Wellbore Applications

Granted Patent: U.S. Patent 11,162,495
Grant Date: November 2, 2021
 Rafael A. Lastra Melo and Jinjiang Xiao

Apparatus for Tank Bottom Soil Side Corrosion Monitoring

Granted Patent: U.S. Patent 11,162,887
Grant Date: November 2, 2021
 Faisal M. Al-Abbas, Mohammed Y. Salloum and Ala'a Edin M. Salameh

Cloud-Based Machine Learning System and Data Fusion for the Prediction and Detection of Corrosion under Insulation

Granted Patent: U.S. Patent 11,162,888
Grant Date: November 2, 2021
 Ali Al Shehri, Ser N. Lim, Ayman M. Amer, Mustafa Uzunbas, Ahmad Aldabbagh, Muhammad Ababtain and Vincent Cunningham

Ultrasonic-Based Internal Inspection of Tubes

Granted Patent: U.S. Patent 11,162,919
Grant Date: November 2, 2021
 Aziz U. Rehman, Taher L. Al-Jundi, Mansour M. Al-Ajji and Isa H. Al-Mudaibegh

Machine Learning-Based Differencing Tool for Hydrocarbon Well Logs

Granted Patent: U.S. Patent 11,163,084
Grant Date: November 2, 2021
 Abdullah A. Theyab

In Situ Hydrocarbon Detection and Monitoring

Granted Patent: U.S. Patent 11,163,091
Grant Date: November 2, 2021
 Abrar Alabbad, Wisam Alkawai and Mahdi Abuali

Autonomous Procurement System

Granted Patent: U.S. Patent 11,164,152
Grant Date: November 2, 2021
 Mazen Al-Sinan and Zainab A. Aljaroudi

Initiator System for Cationic Polymerization of Olefins

Granted Patent: U.S. Patent 11,168,100
Grant Date: November 9, 2021
 Gilles Arsenaault, Hazin Khatera and Derek Gates

Cement Compositions Including Epoxy Resin Systems for Preventing Fluid Migration

Granted Patent: U.S. Patent 11,168,245
Grant Date: November 9, 2021
 Abdullah S. Al-Yami, Vikrant B. Wagle, Zainab A. Alsaihati, Tushar Mukherjee, Ali A. Binali and Ali Alqahtani

Heavy Oil as Fracturing Fluid to Increase Hydraulic Fracturing Efficiency

Granted Patent: U.S. Patent 11,168,245
Grant Date: November 9, 2021
 Ayman R. Al-Nakhli, Mohamed A. Mahmoud and Arqam Muqtadir

Integrated Gas-Oil Separation Plant for Crude Oil and Natural Gas Processing

Granted Patent: U.S. Patent 11,168,262
Grant Date: November 9, 2021
 Mohamed Soliman, Samusideen A. Salu, Talal Al-Zahrani and Nisar A. Ansari

Heavy Aromatic Solvents for Catalyst Reactivation

Granted Patent: U.S. Patent 11,168,266
Grant Date: November 9, 2021
 Omer R. Koseoglu and Robert P. Hodgkins

Process for Producing Diesel Fuel from Olefinic Refinery Feedstreams

Granted Patent: U.S. Patent 11,168,269
Grant Date: November 9, 2021
 Omer R. Koseoglu

Drilling System with Circulation Sub

Granted Patent: U.S. Patent 11,168,524
Grant Date: November 9, 2021
 Ossama Sehsah, Ahmad Amoudi and Abdulrahman K. Aleid

Method and Apparatus for Sacrificial Wellhead Protector and Testing Adapter

Granted Patent: U.S. Patent 11,168,552
Grant Date: November 9, 2021
Mohammed E. Mukhlifi

Downhole Crossflow Containment Tool

Granted Patent: U.S. Patent 11,168,554
Grant Date: November 9, 2021
Ibrahim M. El-Zefzafy, Abdullah A. Al-Ghamdi, Mohammed Al-Suliman and Kay I. Steinsheim Rovik

Geothermal Energy Recovery Process with Selective Recirculation

Granted Patent: U.S. Patent 11,168,675
Grant Date: November 9, 2021
Mourad Younes, Aadesh Harale and Aqil Jamal

Method and System for Automated Velocity Model Updating Using Machine Learning

Granted Patent: U.S. Patent 11,169,287
Grant Date: November 9, 2021
Saleh M. Al-Saleh, Ewenet Gashawbeza, Yi Luo and Jianwu Jiao

System and Method for Creating On-Demand Virtual File System Having Virtual Burst Buffers Created on the Fly

Granted Patent: U.S. Patent 11,169,720
Grant Date: November 9, 2021
Razen M. Al-Harbi, Mohammed K. Al-Ghuson, Osaid F. Hajjar and Ali A. Al-Turki

Network System and Method for Access Management Authentication and Authorization

Granted Patent: U.S. Patent 11,170,118
Grant Date: November 9, 2021
M. Weam Al-Shanqity, Mohamed F. Kooliyattayil Saidali, Eman A. Al Abdulraheem and Mohammad H. Fraihat

Smart Method and Apparatus for Smart Dull Grading and Modification Identification

Granted Patent: U.S. Patent 11,170,494
Grant Date: November 9, 2021
Alawi Al Alsayed Nassir and Ossama R. Sehsah

Combustion of Spent Adsorbents Containing HPNA Compounds in FCC Catalyst Regenerator

Granted Patent: U.S. Patent 11,175,482
Grant Date: November 16, 2021
Omer R. Koseoglu

Treating Seawater for Oil Field Operations

Granted Patent: U.S. Patent 11,174,178
Grant Date: November 16, 2021
Katherine L. Hull, Brent Cooper and Ghaithan A. Al-Muntasher

Demetallization by Delayed Coking and Gas Phase Oxidative Desulfurization of Demetallized Residual Oil

Granted Patent: U.S. Patent 11,174,441
Grant Date: November 16, 2021
Omer R. Koseoglu

Coupling Enhanced Oil Recovery with Energy Requirements for Crude Production and Processing

Granted Patent: U.S. Patent 11,174,715
Grant Date: November 16, 2021
Michael Atisele

Systems and Methods for Analyzing Natural Gas Flow in Subterranean Reservoirs

Granted Patent: U.S. Patent 11,175,211
Grant Date: November 16, 2021
Huangye Chen and Hui-Hai Liu

Seismic Data De-Blending

Granted Patent: U.S. Patent 11,175,424
Grant Date: November 16, 2021
Robertus F. Hegge and Rolf Baardman

High Integrity Protection System for Hydrocarbon Flow Lines

Granted Patent: U.S. Patent 11,175,685
Grant Date: November 16, 2021
Mohammad R. Al Khunaizi, Rashid D. Al Hajri, Anthony E. Kakpovbia and Fahad A. Al Hindas

Process for Fluidized Catalytic Cracking of Disulfide Oil to Produce BTX

Granted Patent: U.S. Patent 11,180,452
Grant Date: November 23, 2021
Robert P. Hodgkins and Omer R. Koseoglu

Sustainable Polymer Compositions and Methods

Granted Patent: U.S. Patent 11,180,609
Grant Date: November 23, 2021
Jay J. Farmer

Hydrocracking Process and System Including Separation of Heavy Poly Nuclear Aromatics from Recycle by Extraction

Granted Patent: U.S. Patent 11,180,701
Grant Date: November 23, 2021
Omer R. Koseoglu, Adnan Al-Hajji, Hendrik Muller and Nadrah Al-Awani

Configuration for Olefins Production

Granted Patent: U.S. Patent 11,180,706
Grant Date: November 23, 2021
Essam A. Al-Sayed, Ujjal Mukherjee, Kareemuddin Shaik, Pedro Santos, Theodoros Maesen, Mazin Tamimi, Julie Chabot, Ibrahim Abba, Kandasamy Sundaram, Sami Barnawi, Ronald Venner, Raghu Narayan and Meredith Lansdown

Wellbore Drill Bit

Granted Patent: U.S. Patent 11,180,959
Grant Date: November 23, 2021
Mohammed A. Jathmi

Systems and Methods to Safeguard Well Integrity from Hydraulic Fracturing

Granted Patent: U.S. Patent 11,180,982
Grant Date: November 23, 2021
Waheed S. Arshad and Khaqan Khan

Ion Exchange Membrane for a Redox Flow Battery

Granted Patent: U.S. Patent 11,185,700
Grant Date: November 23, 2021
Ahmad D. Hammad, Issam T. Amr and Garba O. Yahaya

Front-Heavy Dust Cleaning Vehicle

Granted Patent: U.S. Patent 11,185,966
Grant Date: November 23, 2021
Brian J. Parrott, Pablo C. Zanini and Ali Alshehri

Dual Functional Composite Catalyst for Olefin Metathesis and Cracking

Granted Patent: U.S. Patent 11,185,850
Grant Date: November 30, 2021
Munir D. Khokhar, Zahra Almisbaa, Sohail K. Shaikh and Raed H. Abudawoud

Catalysts for Polycarbonate Production

Granted Patent: U.S. Patent 11,185,855
Grant Date: November 30, 2021
Scott D. Allen

Chemical Plugs for Preventing Wellbore Treatment Fluid Losses

Granted Patent: U.S. Patent 11,186,759
Grant Date: November 30, 2021
Rajendra A. Kalgaonkar, Vikrant B. Wagle, Abdullah S. Al-Yami and Ayman M. Almohsin

Treatment of Sulfide Scales

Granted Patent: U.S. Patent 11,186,806
Grant Date: November 30, 2021
Katherine L. Hull and Brent Cooper

Production Cavern

Granted Patent: U.S. Patent 11,187,044
Grant Date: November 30, 2021
Mohamed N. Noui-Mehidi and Khalid M. Alruwaili

Lifting Condensate from Wellbores

Granted Patent: U.S. Patent 11,187,066
Grant Date: November 30, 2021
Jana M. Aljindan and Mohamed N. Noui-Mehidi

Downhole Tools for Controlled Fracture Initiation and Stimulation

Granted Patent: U.S. Patent 11,187,068
Grant Date: November 30, 2021
Sameeh I. Batarseh

Internal Combustion Engine Systems Including Criteria Pollutant Mitigation

Granted Patent: U.S. Patent 11,187,124
Grant Date: November 30, 2021
Esam Z. Hamad

Pyrophoric Liquid Ignition System for Pilot Burners and Flare Tips

Granted Patent: U.S. Patent 11,187,409
Grant Date: November 30, 2021
Mohamed Soliman and Ali Al Abbas

Device and Process for Maintaining Zero Capillary Pressure Boundary Condition during Coreflood Experiments

Granted Patent: U.S. Patent 11,187,642
Grant Date: November 30, 2021
Quan Chen, Sultan Enezi and Ali A. Al-Yousef

Detecting Black Powder Levels in Flow Lines

Granted Patent: U.S. Patent 11,187,661
Grant Date: November 30, 2021
Vincent Cunningham, Ezzat Hegazi and Turki Alomairi

Methods and Systems for Determining Fluid Content in Formation Samples Using Low Field Nuclear Magnetic Resonance

Granted Patent: U.S. Patent 11,187,766

Grant Date: November 30, 2021

Jilin J. Zhang, Jin-Hong Chen and Stacey M. Althaus

Integration of Seismic Driven Rock Property into a Geo-Cellular Model

Granted Patent: U.S. Patent 11,187,821

Grant Date: November 30, 2021

Debasis Chaudhuri

Integrated Solution for Generating Environmental Emergency Response, Preparedness, and Investigation

Granted Patent: U.S. Patent 11,189,088

Grant Date: November 30, 2021

Eyad Buhulaiga, Basil Milibary, Mohammed Tomehy, Yousif Abualsoud and Hamdy A. Noureldin

Synthesis of Alkynones via Carbonylative Sonogashira Coupling Reactions Catalyzed by New Pd(II)-N-Heterocyclic Carbene-Pyridine Complexes

Granted Patent: U.S. Patent 11,192,912

Grant Date: December 7, 2021

Bassam El Ali, Waseem Mansour and Mohammed Fettouhi

Sealing Compositions and Methods of Plugging and Abandoning of a Wellbore

Granted Patent: U.S. Patent 11,193,052

Grant Date: December 7, 2021

Abrar Alshaiikh, Mohammad Aljubran, Abdullah S. Al-Yami, Vikrant B. Wagle, Ali M. Al-Safran and Nassar Alhareth

Coated Proppants and Methods of Making and Use Thereof

Granted Patent: U.S. Patent 11,193,056

Grant Date: December 7, 2021

B. Raghava Reddy and Feng Liang

Simultaneous Crude Oil Dehydration, Desalting, Sweetening, and Stabilization

Granted Patent: U.S. Patent 11,193,071

Grant Date: December 7, 2021

Mohamed Soliman

Processing Facility to Form Hydrogen and Petrochemicals

Granted Patent: U.S. Patent 11,193,072

Grant Date: December 7, 2021

Aadesh Harale, Ibrahim Abba, Aqil Jamal, Abdennour Bourane, Mourad Younes and Alberto Lozano Ballesteros

Systems and Methods for Transient Testing of Hydrocarbon Wells

Granted Patent: U.S. Patent 11,193,370

Grant Date: December 7, 2021

Noor A. Rahman

Cold Recycle Process for Gas Turbine Inlet Air Cooling

Granted Patent: U.S. Patent 11,193,421

Grant Date: December 7, 2021

Mourad Younes, Aadesh Harale, Sebastien Duval and Ghulam Shabbir

Method and Apparatus for Platform as a Service (PaaS) Automation Control

Granted Patent: U.S. Patent 11,194,559

Grant Date: December 7, 2021

Alaa N. Tashkandi

Downhole Hydrogen Sulfide Neutralizer

Granted Patent: U.S. Patent 11,199,079

Grant Date: December 14, 2021

Shrikant Tiwari

Determining Sediment Source Locations

Granted Patent: U.S. Patent 11,199,640

Grant Date: December 14, 2021

Nikolaos A. Michael and Christos Saragiotis

System and Method for Virtual Private Network Connectivity

Granted Patent: U.S. Patent 11,201,790

Grant Date: December 14, 2021

Hani S. Almasmoum and Mansour Almutairi

Sun Shade

Granted Patent: U.S. Patent 11,202,488

Grant Date: December 21, 2021

Zhenzhu Wan and Yin Xu

Use of Ruthenium and Osmium Catalysts for the Metathesis of Nitrile Rubber

Granted Patent: U.S. Patent 11,203,679

Grant Date: December 21, 2021

Silvia Schnitzler and Sarah David

Gas Generating Compositions

Granted Patent: U.S. Patent 11,203,708

Grant Date: December 21, 2021

B. Raghava Reddy

Method and Materials to Convert a Drilling Mud into a Solid Gel-Based Lost Circulation Material

Granted Patent: U.S. Patent 11,203,710

Grant Date: December 21, 2021

Vikrant B. Wagle, Rajendra A. Kalgaonkar and Abdullah S. Al-Yami

Methods and Compositions of Using Viscoelastic Surfactants as Diversion Agents

Granted Patent: U.S. Patent 11,203,712

Grant Date: December 21, 2021

Rajendra A. Kalgaonkar, Khalid Alnoaimi, Nour Baqader, Nisar Ullah and Muhammed Mansha

Oil Well Flow Back with Zero Outflow

Granted Patent: U.S. Patent 11,203,918

Grant Date: December 21, 2021

Osama Abdelhamid, Kamran Sabir and Aymen Sieny

Process for the Large-Scale Manufacture of Zeolite-Templated Carbon

Granted Patent: U.S. Patent 11,208,327

Grant Date: December 28, 2021

Yuguo Wang, Rashid M. Othman, Minkee Choi and Seokin Choi

Methods of Dissolving Gas Hydrates

Granted Patent: U.S. Patent 11,208,588

Grant Date: December 28, 2021

Mohammed Sayed and Rajesh K. Saini

Mixed Phase Two-Stage Hydrotreating Processes for Enhanced Desulfurization of Distillates

Granted Patent: U.S. Patent 11,208,600

Grant Date: December 28, 2021

Haitao Huang, Omer R. Koseoglu and Youshan Ma

Devices and Methods for Placement of Loss Control Slurry

Granted Patent: U.S. Patent 11,208,858

Grant Date: December 28, 2021

Md Amanullah and Turki Al-Subaie

Removal of Water Blockage in Tight Gas Reservoir Using Thermochemical Fluids

Granted Patent: U.S. Patent 11,208,877

Grant Date: December 28, 2021

Ayman R. Al-Nakhli, Amjed M. Hassan, Alade O. Saheed and Mohamed A. Mahmoud

Polymer Geo-Injection for Underground Pipeline Protection

Granted Patent: U.S. Patent 11,209,116

Grant Date: December 28, 2021

Iqbal Hussain, Yannick Joubeaux, Thibault Villette and Waheed Alrafaei

Hybrid Distributed Acoustic Testing

Granted Patent: U.S. Patent 11,209,307

Grant Date: December 28, 2021

Frode Hveding, Islam Ashry, Mao Yuan, Mohd S. Alias, Boon S. Ooi and Muhammad Arsalan

Smart Dewatering

Granted Patent: U.S. Patent 11,209,396

Grant Date: December 28, 2021

Fawaz Alhadlaq, Fawaz A. Alsahan and Omar Z. Alzayed

Underwater Vehicles with Integrated Surface Cleaning and Inspection

Granted Patent: U.S. Patent 11,209,402

Grant Date: December 28, 2021

Ayman M. Amer and Fadl Abdellatif

Deghosting of Seismic Data through Echo-Deblending Using Coincidence Filtering

Granted Patent: U.S. Patent 11,209,564

Grant Date: December 28, 2021

Jewoo Yoo, Roald van Borselen and Robertus F. Hegge

Pressure Surge and Water Hammer Mitigation Device and Method

Granted Patent: U.S. Patent 11,209,842

Grant Date: December 28, 2021

Mohamed A. Soliman, Samusideen A. Salu and Ali H. Alshehri