

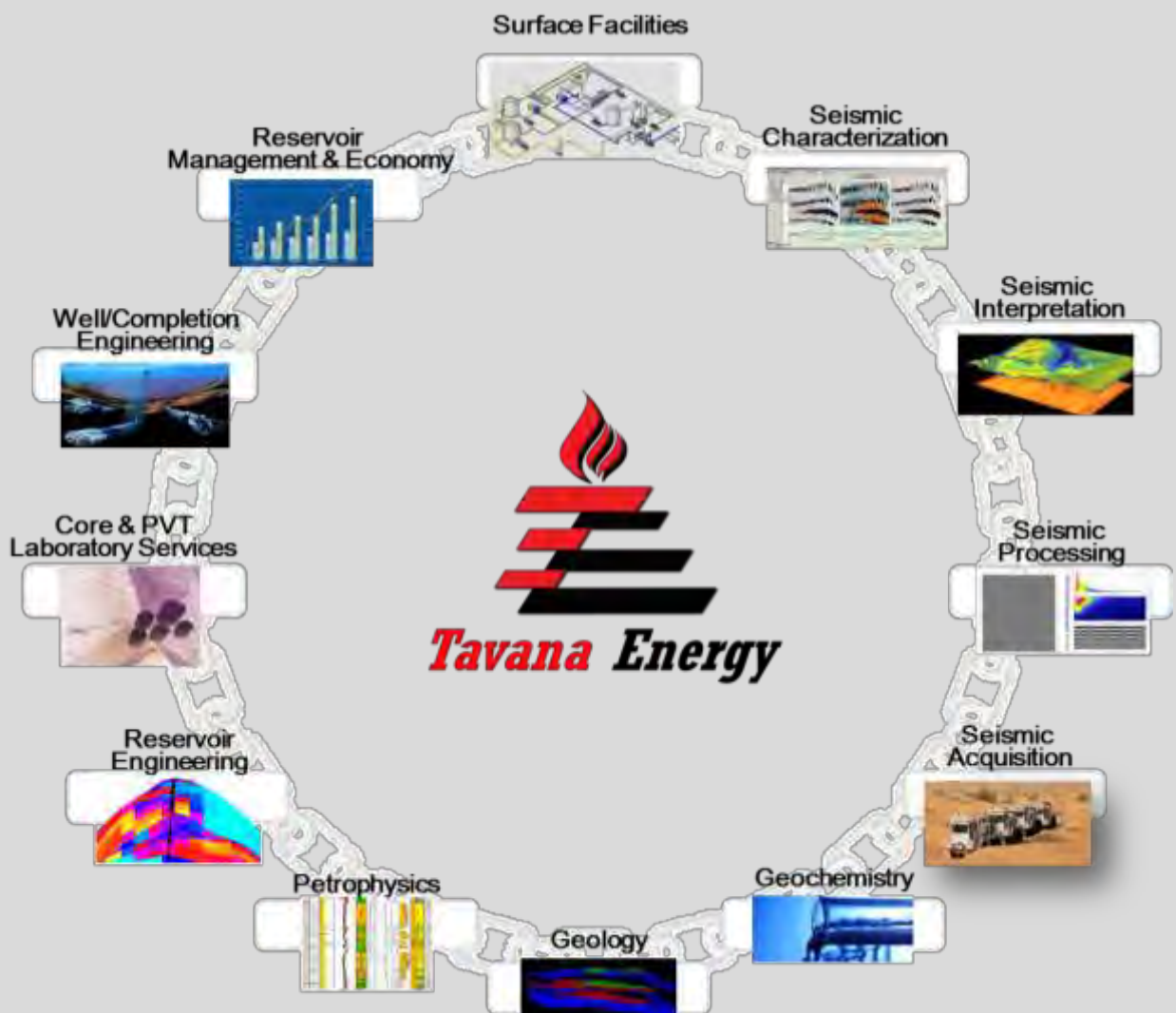
TAVANA Energy Company

A Technology Driven Enterprise

TAVANA Energy Company (TECO)

*Provides Services To The Upstream Oil and Gas Industry
Using **State-of-the-Art** Technologies*

Full Chain of Services



INTRODUCTION AND HISTORY

TAVANA founded in 2012 and registered in Kish Island, Iran and also registered at Science and Technology Park of Tehran University as a technology driven enterprise.

TAVANA provides services to the upstream oil and gas industry in a close cooperation with the well-known international service providers.

VISION FOR TAVANA

To become a pioneer in providing advanced services to the oil and gas Industry, recognised for

- ✓ State-of-the-art technologies,
- ✓ Outstanding technical quality and
- ✓ Value creation

MISSIONS FOR TAVANA

- ✓ To realize the actual needs,
- ✓ To monitor the last technologies
- ✓ To create and /or transfer the necessary technologies
- ✓ Provide the best services using the most efficient technologies

Message of The Founder

Increasing needs of the world to the energy make us to gain the advantages of the last technologies and innovations to produce the energy resources in an optimized manner, with minimum cost.

We in **TAVANA** will do our best to provide the most efficient services to our clients relying on the last technologies and preventing any inefficient traditional methods.

We will try to be the best, and offer the best services to the best clients, since we believe that “**The Best Deserves The Best**”

Dr. Ali Misaghi

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WHAT TAVANA OFFERS

TAVANA provides a **complete range of integrated reservoir services** to the oil and gas industry. Exploration geosciences, petroleum engineering and well design & operations are all centralised in a single one-stop shop.

TAVANA is a **project based organisation**. Outsourced projects are executed by integrated technical teams in TAVANA offices or its partners' according to the quality assured workflows.

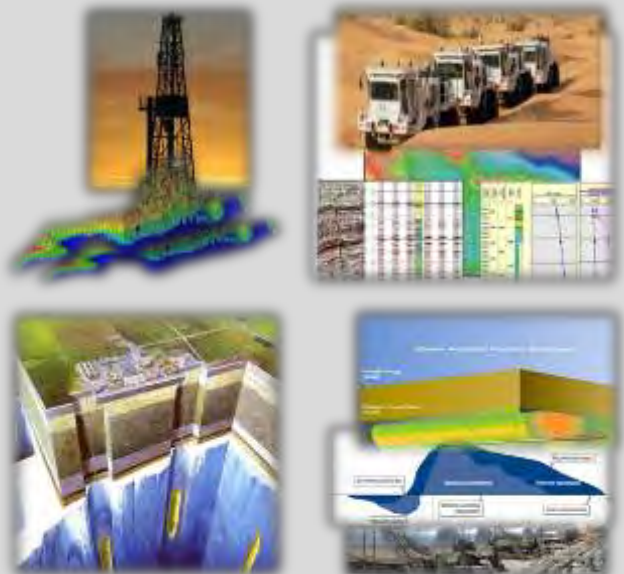
TAVANA has the capability to **manage and execute all aspects of exploration and development** in the entire life cycle of the field.

TAVANA and its distinguished partners and associates are at the forefront of application of **innovative** reservoir development technologies like EOR, UGS and CCS.

TAVANA in cooperation with the partners and the associates provides a complete range of integrated reservoir services to the upstream oil and gas industry.

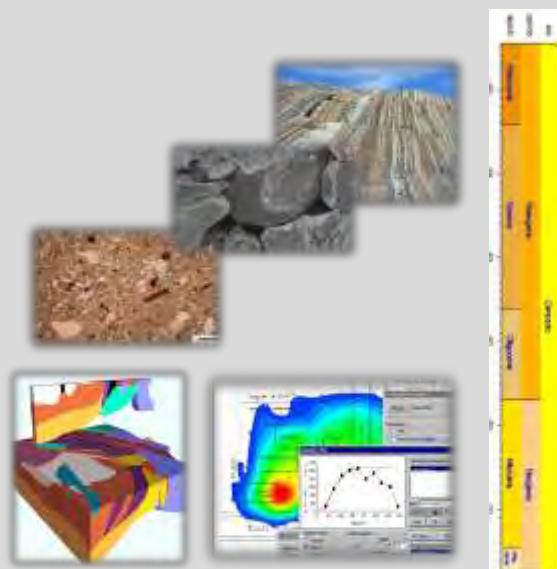
These services include,

- **Geological** services,
- **Geochemical** studies,
- Full range of **Geophysical** services,
- **Petrophysical** services,
- **Reservoir engineering**
- **Drilling** services,
- **Economical** studies,
- **Surface facilities** studies
- **Advanced Training Courses**
- **Supervision and Quality Control** of Upstream Oil and Gas Projects



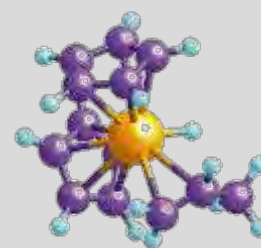
Geological services

- Geological surveying, and preparation of surface geology maps in different scales
- Imaging and laboratory test i.e. SEM, XRD & EDX
- Thin sections preparation and study
- Core description and fracture studies
- Fault seal analysis & structural modeling
- Facies and stratigraphic modelling
- Integrated sequence stratigraphy
- Geostatistics
- Depositional modeling
- Rock property modeling
- Reservoir volumetric
- Geocellular modeling
- 2D/3D basin modeling



Geochemical services

- High Resolution Gas Chromatography Mass Spectrometry (GCMS-Biomarkers)
- ^{13}C Stable Isotopic Analysis (DEL ^{13}C) . Oil-oil and oil-source rock correlation.
- ^{13}C Stable Isotopic Analysis of Gases by (GC-IRMS). Gas characterization and reservoir compartmentation.
- Gas Chromatography (GC). Oil and extract characterization.
- High Temperature Gas Chromatography. Wax characterization C_{14} to C_{80+} .
- High Performance Liquid Chromatography (HPLC)
- Pyrolysis - Gas Chromatography (PGC). Oil to gas generation potential.
- Pyrolysis - "Rock Eval" . Petroleum potential.
- Elemental Analysis (TOC and S%). Source rock richness.
- Vitrinite Reflectance. Sediment maturity profile.
- Physical property and elemental analysis. API Gravity, Viscosity, S, Ni, V, N, TAN, Wax content etc.
- Oil and Gas Source Rock Full Analysis



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Geophysical services

We provide full range of **geophysical** services,

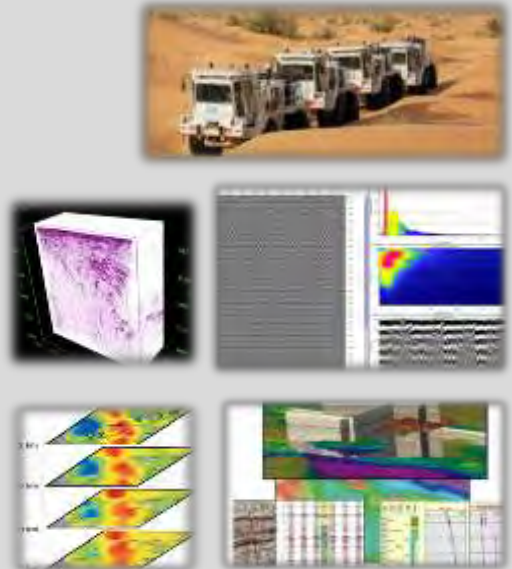
- Seismic Methods,

- 2D/3D/4D seismic data acquisition; in Plain, Mountainous and TZ areas
- 2D/3D/4D Seismic Signal Processing; Standard, PSTM and PSDM
- 2D/3D/4D Seismic Interpretation; Structural and Stratigraphic
- Seismic reservoir Characterization; AVO and Inversion
- Time-lapse (4D) seismic Analysis

- Non-seismic methods including;

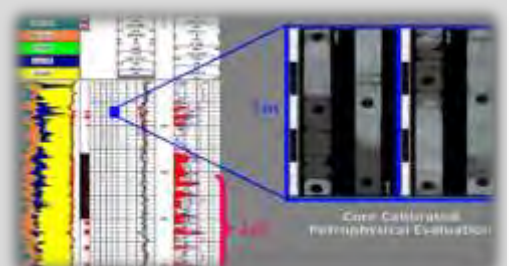
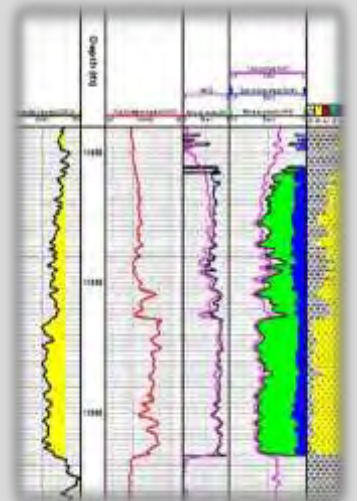
Gravity, Magnetic and Magnetotelluric

- Passive Seismic surveys



Petrophysical services

- Well and digital log cataloging
- Log editing, conditioning and environmental corrections
- Histograms, cross-plots and cluster analysis
- Petrophysical parameter calculation
- Rock and clay typing
- Formation test and fluid contact determination
- Automatic facies and lithology interpretation
- Porosity, saturation and permeability evaluation
- True scale display in hardcopy or digital format
- Well to well petrophysical study
- Full field petrophysical study
- Formation fluids saturation estimation



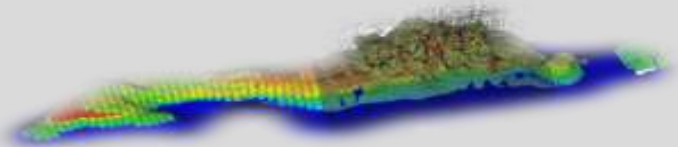
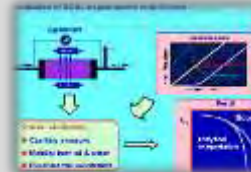
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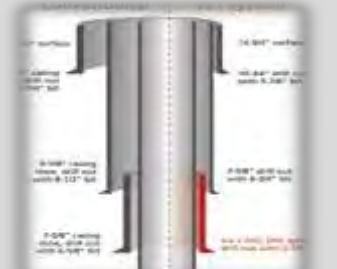
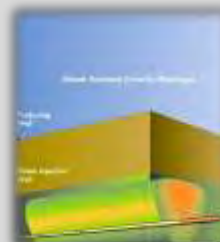
Reservoir engineering services

- Rock analysis/**Core** laboratory tests, RCAL, **SCAL**, **EOR** Flooding etc.
- Fluid analysis/**PVT** tests
- Material balance
- Well test analysis
- Upscaling
- Pressure analysis
- Reservoir **simulation**
- History matching
- Production analysis/forecasting
- Reserves classification
- Reservoir **monitoring**
- IOR /EOR scenarios



Drilling services

- Borehole stability and cement analysis
- Drilling fluids analysis
- Conceptual well design
- Casing design
- Formation strength
- Data acquisition
- Completion design
- Artificial lift
- Drilling programs
- Rig selection
- Costing



Reservoir **management & economy** services

- Optimized production schemes
- Enhanced/Improved Recovery scenarios
- Integrated production-monitoring-enhancement chain
- Energy pricing, analysis and forecast development
- Reserves evaluations and audits
- Proposing the best contractual model
- Expert technical witness
- Resource assessments
- Resource value mediation
- Supply and demand forecasting



Surface **facility** services

We provide:

- Conceptual design
- Basic engineering
- Front End Engineering Design (FEED)
- Detailed design
- Procurement engineering

For

- Water, sand, salt & Sulphur treatment units
- Pressure maintenance units
- Gas storage facilities
- Construction and piping



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We offer a **full life cycle**



Software

- **Seismic survey design**
OMNI 3D
- **Seismic data Processing**
GeoThrust
Landmark
- **Seismic data Interpretation**
OpendTect
Petrel
SMT
Hampson-Russell
- **Petrophysics**
Geolog
Interactive Petrophysics
- **Geological modeling**
Petrel
RMS
- **Reservoir Simulation**
Eclipse
CMG

Hardware

Cluster machine

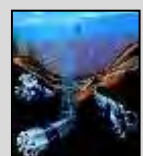
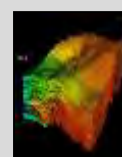
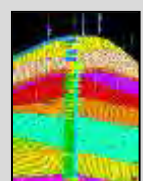
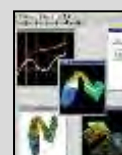
- 4 TFLPS Processing Capacity
- 50 Terabyte Storage

Workstations

- Linux and Windows

Tape drives

- LTO 2/3/4/5
- DLT/ SDLT
- 3490/3590/3592



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TAVANA's Strengths

- **A technology oriented enterprise,**
 - Registered at Science and Technology Park of Tehran University
 - Close cooperation with the Research Institute of Petroleum Industry (RIPI)
 - A member of Society of Research Oil and Gas Companies
- **Outstanding team of technical partners**
- **Key knowledge of specific areas and technologies**
 - Seismic acquisition, processing and interpretation
 - Reservoir engineering and integrated reservoir modeling
 - Management of uncertainties
- **Integration of all disciplines**
 - Coherent project-based organization
 - Seamless workflows
- **Focus**



International Partners

KAZAKH GEOPHYSICAL

For 2D/3D Seismic Data Acquisition

KazGeCo

Anatolian Geophysical

For 2D/3D /4D Seismic Data Processing and Interpretation

**Anatolian
Geophysical**

Landtech

For Passive seismic and Non-Seismic Methods



Corex

For Core & PVT tests, RCAL/SCAL, Formation Damage EOR/IOR



EMR- Aachen University

For Geochemical laboratories and studies, Basin Modelling, Unconventional resources, Petrophysical tests



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TAVANA Provides The Best

"THE BEST DESERVES THE BEST"



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