



EXECUTIVE SUMMARY

- Our companies
- Our international presence
- Our Methodology & Proprietary Technology
- Consultancy
- Our software
- Success stories
- Our patents :
- <https://patents.justia.com/patent/6619393>
- <https://patents.justia.com/patent/6206099>

Our companies

Today GEOFIELD is enter the field of fast paced reservoir management and engineering, using science based principles to identify the bullseye in the oilfields. We analyze fast and effectively the reservoir characteristics from the regional level, up to the precise well location to provide a Master Development Plan. We follow the best practice methodologies used in exploration and oilfield development with our proprietary patents and software that are unique in the world.

For the above purpose, we team up with domestic and international industry experts to collectively analyze and put together a precise plan to maximize efficiency with minimum risk.

Our International Presence



Our offer

To provide an accurate and cost effective method to locate more productive wells to extract the remaining oil in a field, based on “The Method for Relating Multiple Oil or Gas Wells to each other”

Today, oil companies produce an average of three barrels of water for each barrel of oil from their depleting reservoirs. Every year more than \$40 billion is spent dealing with unwanted water. . In many cases, water technology can lead to significant cost reduction and improved oil production.

But, is better to avoid water from the very beginning as much as possible to hit the “bull’s eye” by using our unique method for locating oil wells while avoiding the water.

Solution

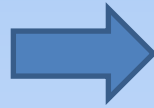
High-resolution visualization data, seismic volume interpretation and earth modeling from basin to reservoir scale to provide valuable insights into the oil and water network reservoir, oil draining patterns through convergence of faults or fractures to have a better understanding of trapping. It can also enable a detailed characterization of the potential reservoir, enabling the successful exploration of reserves and identification of the best drilling targets.

This integral approach improves understanding of geologic mechanics, engineering and economic risks, enabling drilling to begin with confidence. Better understanding enhances the ability to estimate reserves and determine investment potential, facilitating the exploitation of your prospects –adding value to the decision making process.

Our Methodology & Proprietary Technology

1 Input Data:

- a) Production history and depth of each well
- b) Geographical location of the production targets of each well.
- c) Verticalized (Tvd) production intervals of each well
- d) Production geological formation
- e) Structural map of the production formation



2 All the producing wells are correlated with the Norm function (distance between wells)



3 It is calculated with the Law of Well Correlation in each Norm in the geographic plane. Therefore, the initial position of each axial plane* is the beginning of the structural fold.

$$d = \| w \| = \sqrt{(X_1 - X_2)^2 + (Y_1 - Y_2)^2}$$

4 Reconstruction of each fault or fracture trend in each axial plane with the exponential function



5 Calculate the depth at each point of each fault or fracture trend with the Kriging method.

*Axial surface. In folded rocks, the imaginary surface bisecting the limbs of the fold. The axial surface is called the axial plane when the fold is symmetrical and the lines defined by the points of maximum curvature of each folded layer, or hinge lines, are coplanar.

MASTER DEVELOPMENT PLAN / PROPRIETARY APPROACH*

- A. BUILD UP OF THE GEOMECHANIC STRESS DISTRIBUTION NETWORK IN THE OILFIELD UNDER STUDY*
- B. GETTING ALL THE STRESS SYSTEMS WHERE THE FAULTS OR FRACTURES CONVERGE TO IDENTIFY CENTERS OF DRAIN TO LOCATE HYDROCARBON TRAPS*
- C. DETERMINE LOCATIONS OR TARGETS TO DRILL GATHERING SEISMIC SECTIONS
- D. INTEGRATE GEOLOGIC STRUCTURAL SECTIONS OF EACH LOCATION OR TARGET TO DRILL
- E. INTEGRATE PETROPHYSICAL CORRELATIONS OF EACH LOCALIZATION OR TARGET TO DRILL
- F. INTEGRATE DRILLING'S TRAJECTORY OF EACH LOCALIZATION OR TARGET TO DRILL
- G. INTEGRATE GEOLOGICAL COLUMN OF EACH LOCALIZATION OR TARGET TO DRILL
- H. INTEGRATE NODAL ANALYSIS OF EACH LOCALIZATION OR TARGET DRILL
- I. COMPARE THE LOCATIONS TO DRILL UNDER GEOLOGICAL RISK MATRIX ASSESSMENT
- J. EVALUATE OR QUALIFY THE LOCATION TO DRILL UNDER THE ABOVE CRITERIA
- K. ESTIMATE THE PRODUCTION OF LOCATION TO DRILL
- L. ECONOMIC EVALUATION OF EACH LOCATION OR TARGET TO DRILL



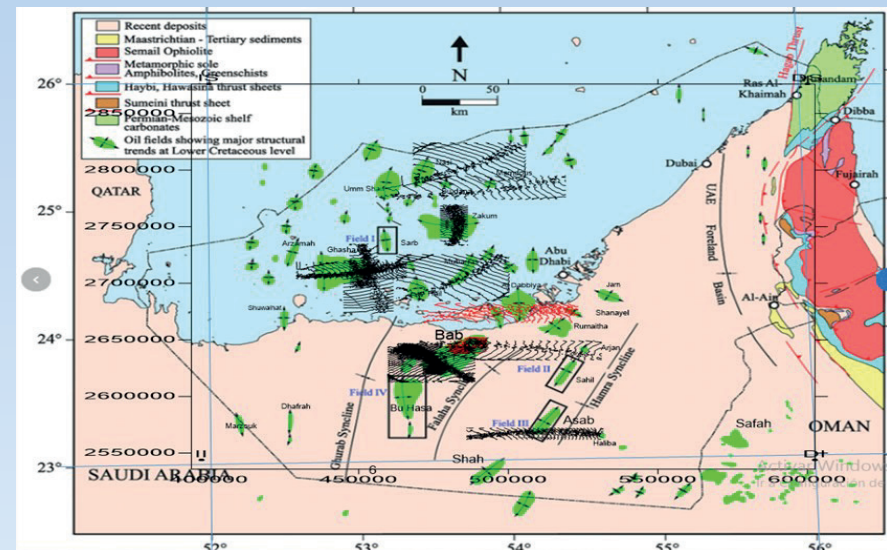
CONSULTANCY

Exploration

Exploration is the primary activity for the oil and gas industry. Analysis and reinterpretation of historic data, incorporating new data, applying new insight of geo-mechanics, new tools, and new scientific concepts forms the basis of modern exploration. We have developed multidisciplinary teams and methodologies that will help to define new plays and prospects and to reduce risk in exploration.

Scope of studies

- Regional Evaluation
- Offshore analysis
- Undeveloped basins
- Mature basins



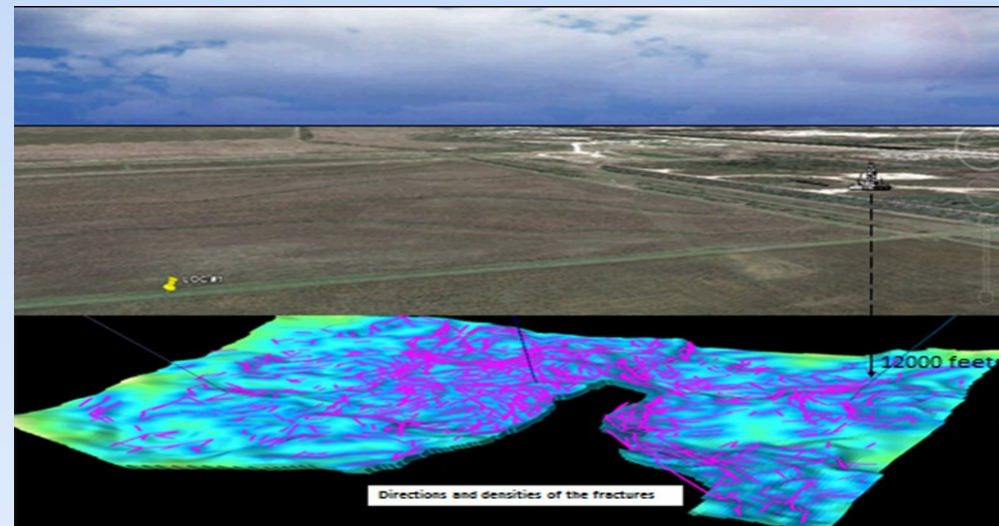
Field Development

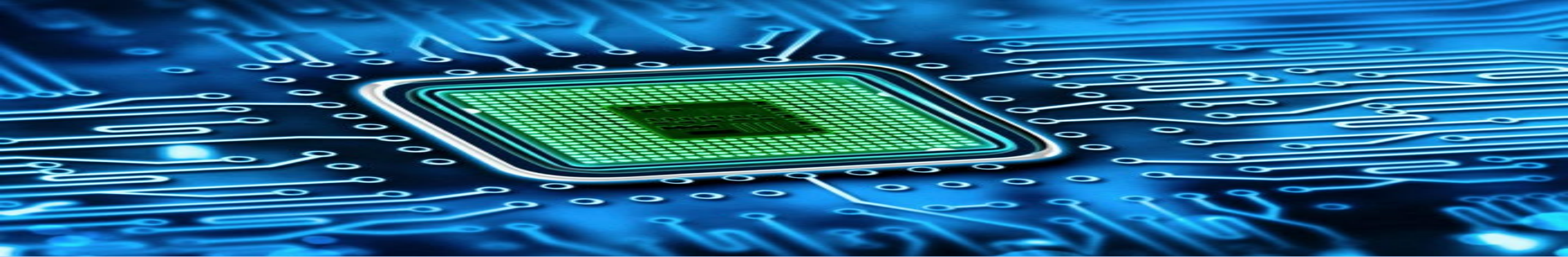
In order to target sweet spots or start an EOR process we need to involve many disciplines such as geophysics, structural analysis, sedimentology, petro-physics, reservoir engineers, simulation experts.

Integration of all disciplines is the key element to successfully understand a reservoir and provide the right solutions to optimize field development. We team up with specialists to combine their experience and knowledge to achieve a successful integrated study or master plan in a limited amount of time.

Scope of Studies

- Integrated field analysis
- Master Development Plan

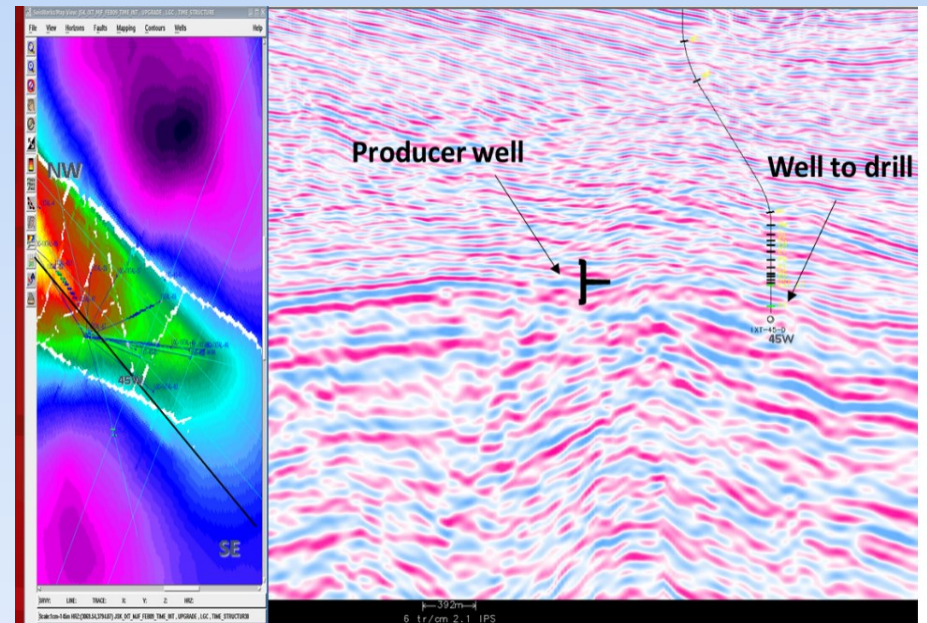
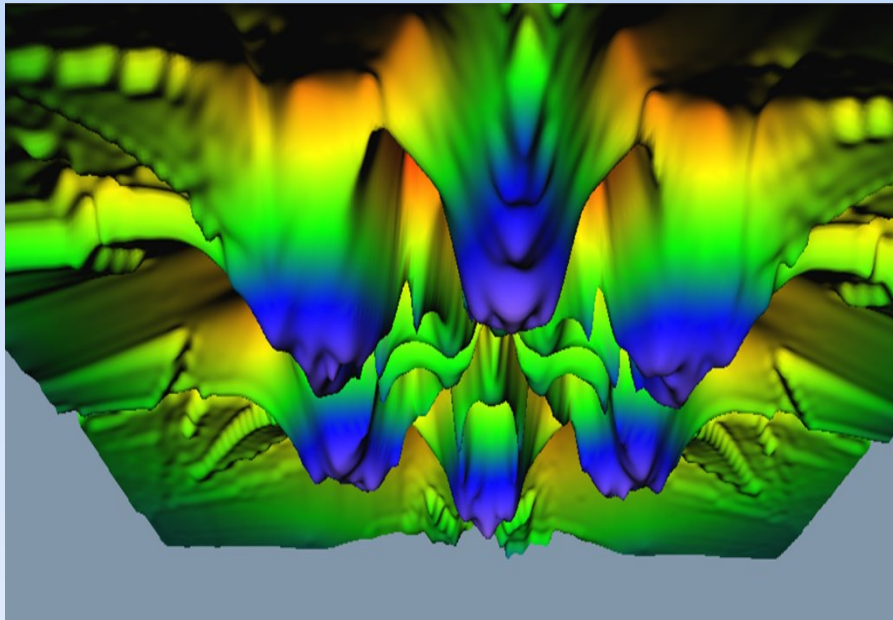




Our Software

GEOFIELD EX™ Exploration Suite

GEOFIELD FD™ Field Development Suite

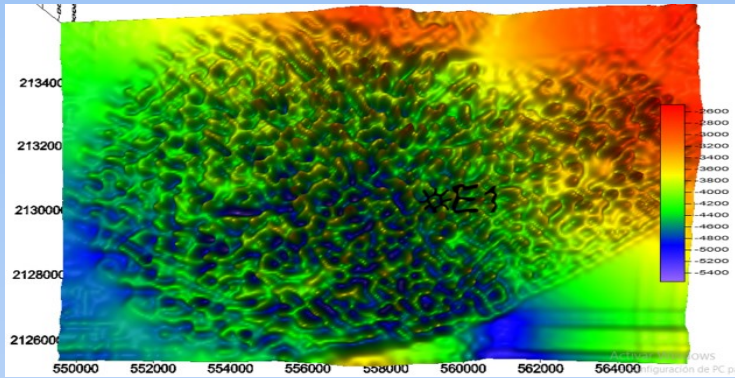


GEOFIELD EX MODULES Exploration Suite

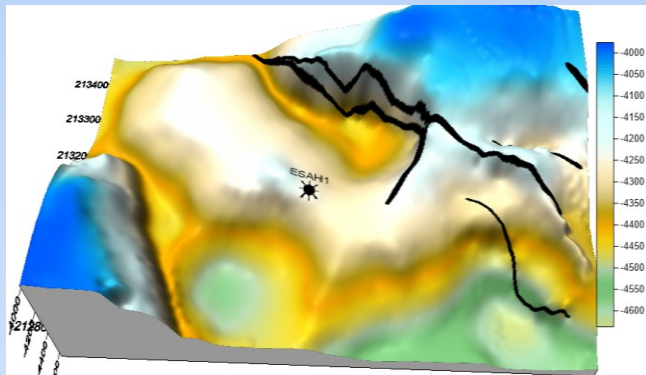
Primary Information *



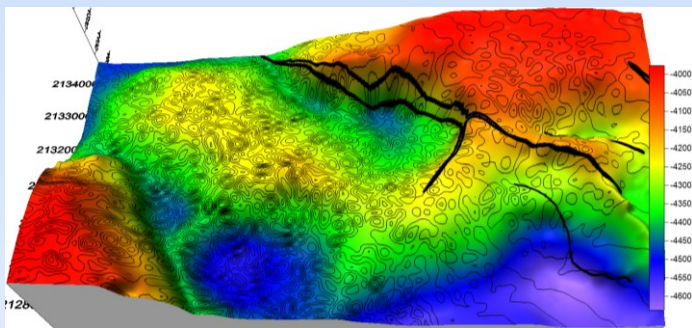
Visual Output Geofield



Visual Output 3 D Seismic



Both Visuals Overlapped



DEPTH FIELD

TADJUSTW

TABS FIELD

REL FIELD

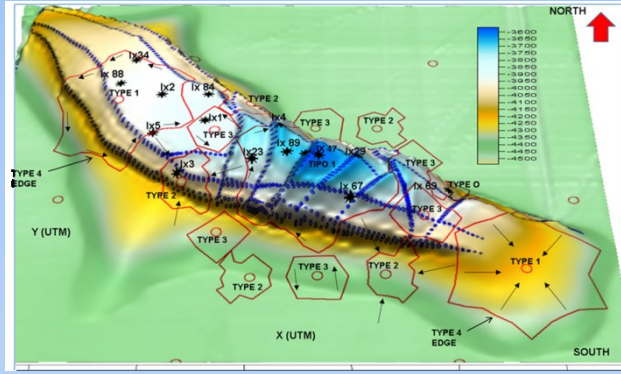
DIS FIELD

LAND FIELD

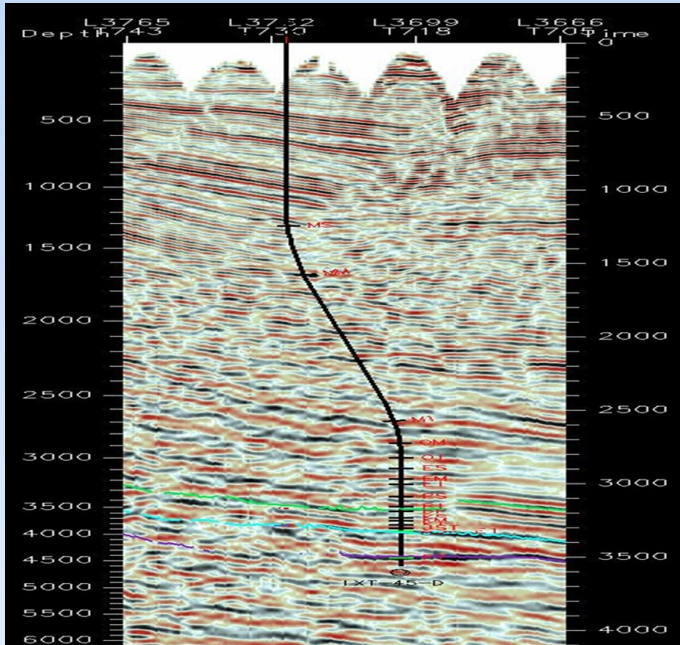
BASIC INFORMATION

- Basin location
- Most productive Wells in the Basin and X, Y, Z details

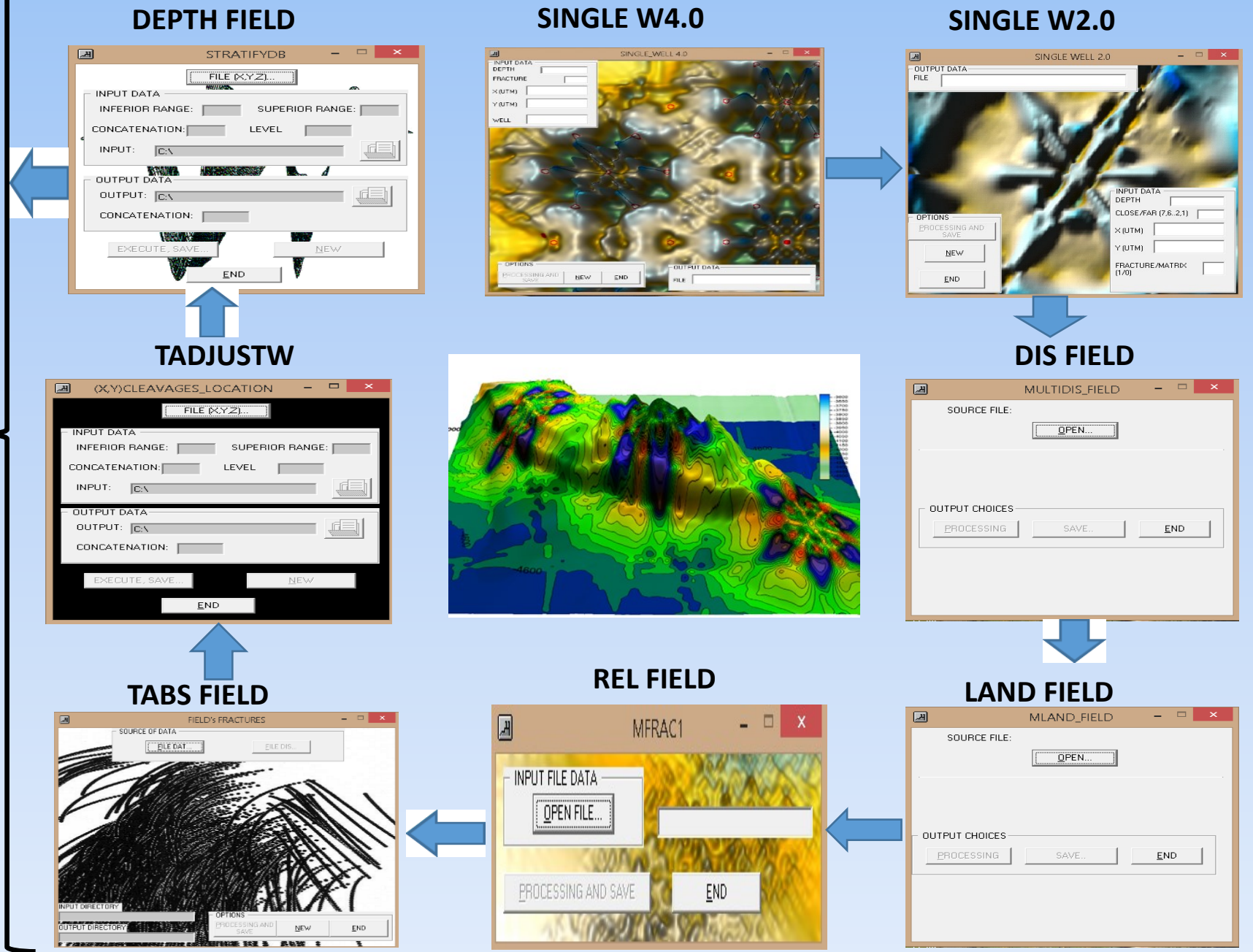
Graphic Results Showing Convergence Systems

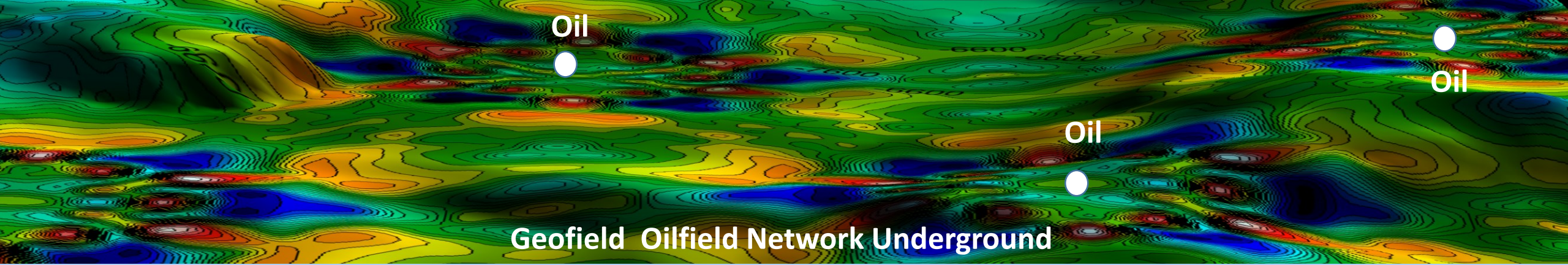


Based on interpretation of the above, we can determine well trajectory



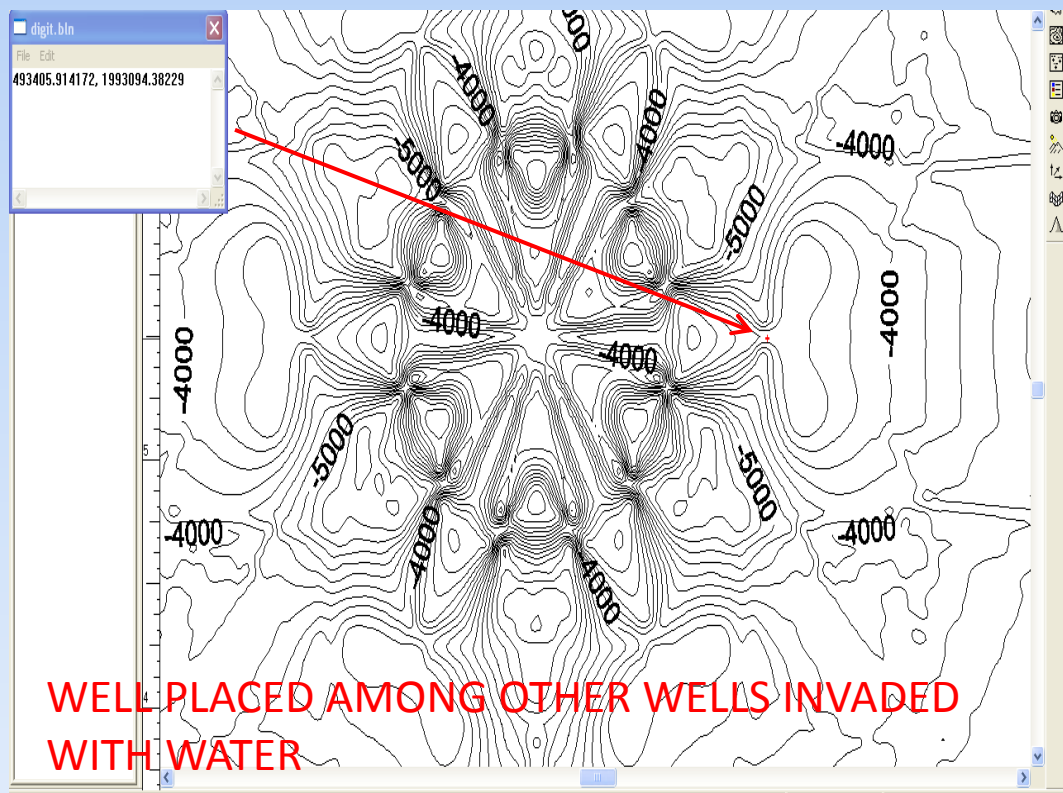
GEOFIELD FD MODULES Field Development Suite





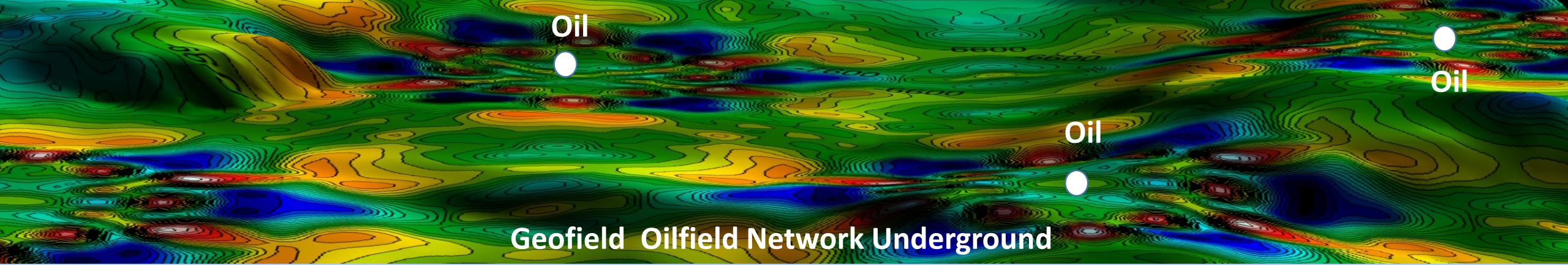
Geofield Oilfield Network Underground

Our References Well IRIDE 148



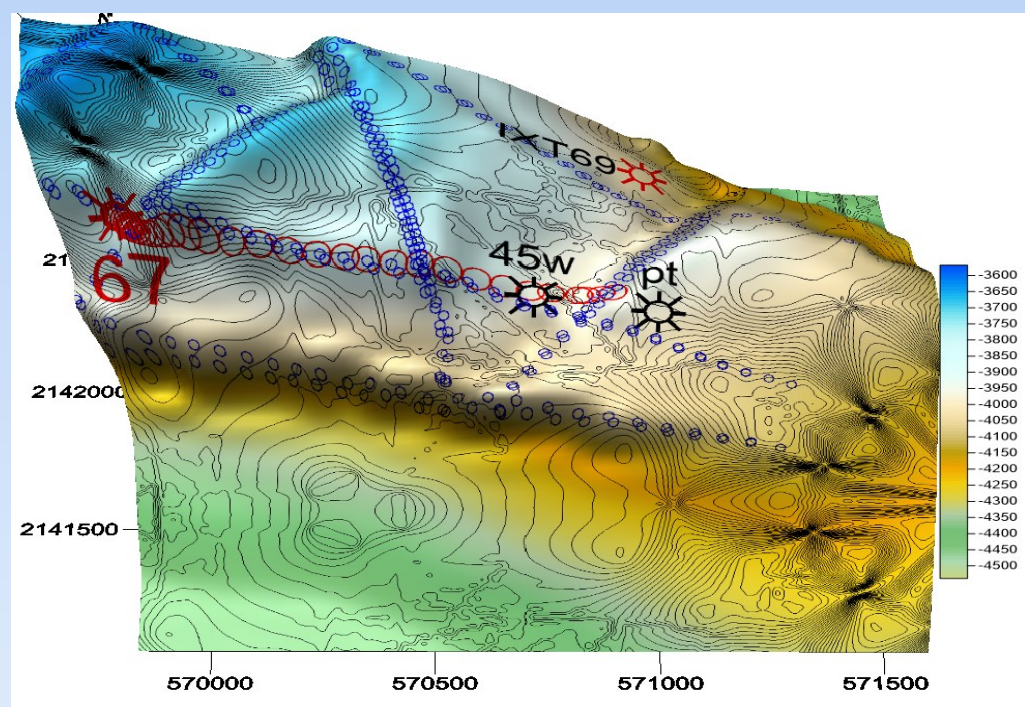
$N_p = 780,000$ BARRELS
 IRIDE 148, 4 YEARS PRODUCING OIL WITHOUT WATER
PROFIT
 $72.37 \text{ \$/bpd} =$
 $534.24 \text{ bdp} \times 365 \times 4 =$
 $780,000 \text{ bbl} \times \$73.27 =$
GROSS PROFIT
 $\$ 57,150,600 \text{ USD}$





Geofield Oilfield Network Underground

Our References Ixtal 45



$N_p = 7,840,000$ barrells

IXTAL – 45, 2 YEARS
PRODUCING WITHOUT
WATER

PROFIT

$\$72.37 \text{ \$/bpd} =$
 $11,200 \text{ bdp} \times 365 \times 2 =$
 $8,176,000 \times 73.27 =$

Gross Profit
 $\$599,055,520$

