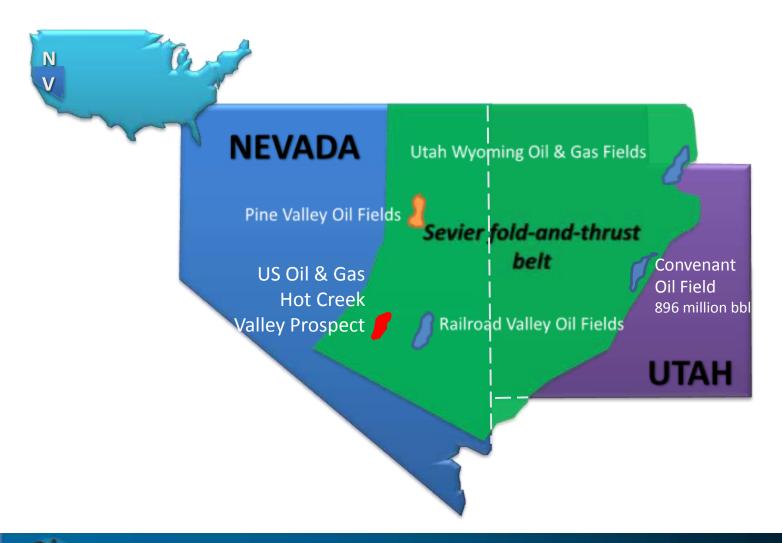
# Technical Aspects of Hot Creek Valley Discovery



Annual General Meeting 19<sup>th</sup> June, 2015

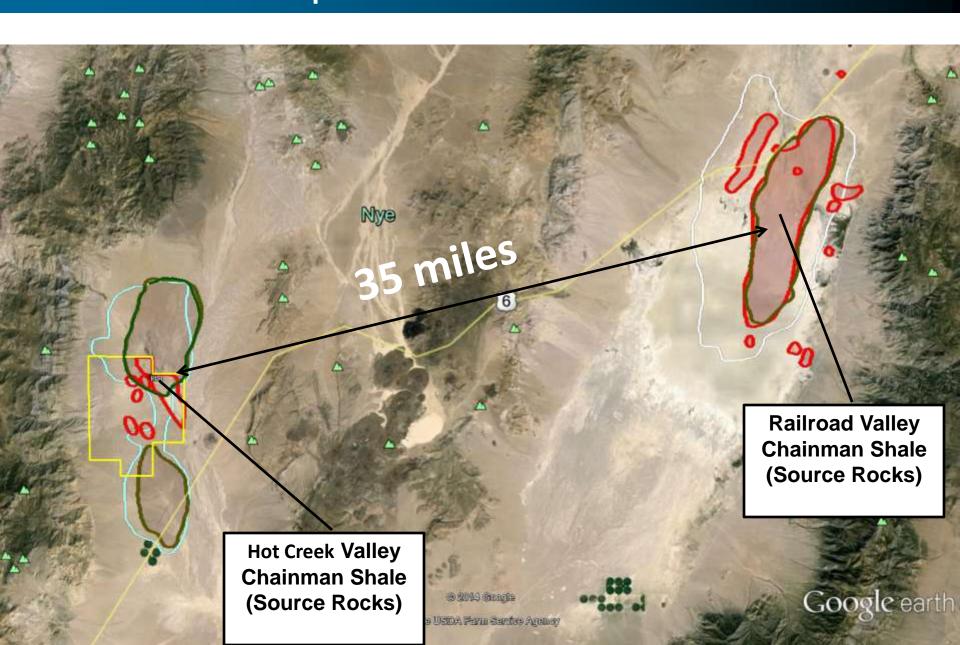
Raddison Blu, St. Helens Hotel, Stillorgan Road, Blackrock, Co Dublin, Ireland

### Mississippian Antler Foreland Basin

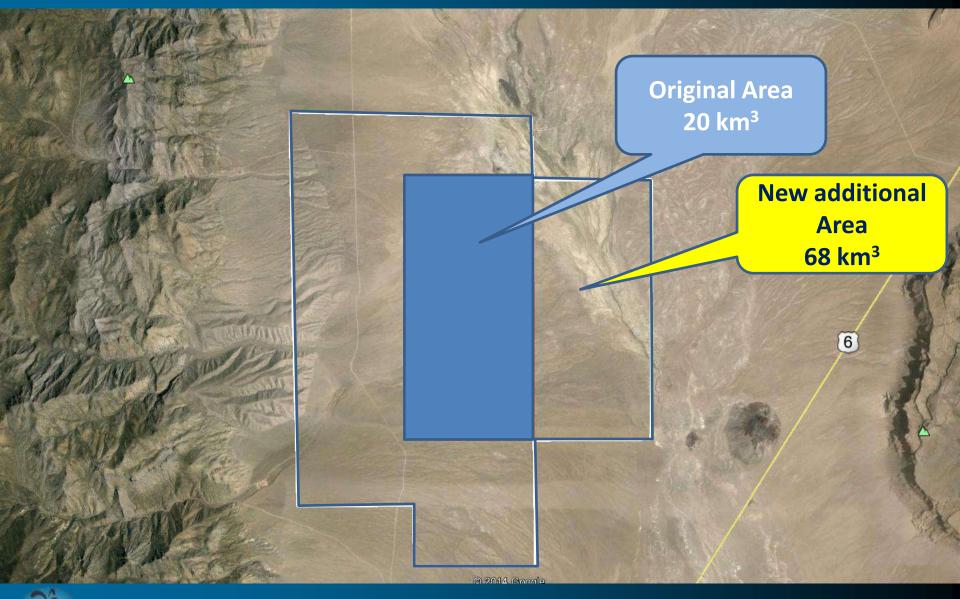




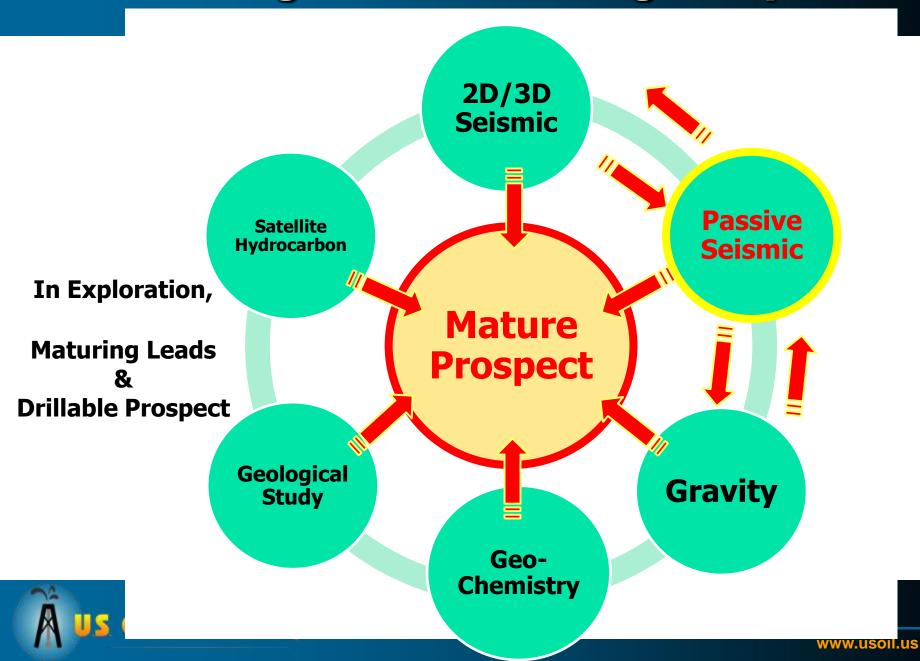
# Location Map of Hot Creek Valley and Railroad Valley with boundary assumption of Chainman Shale Basins



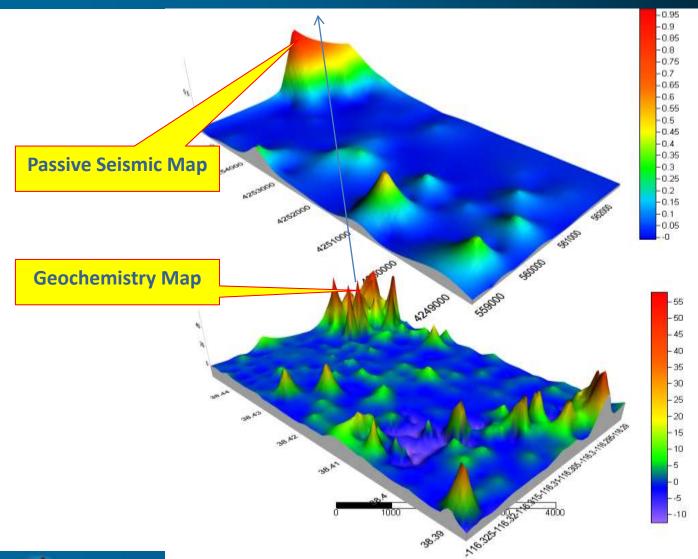
### Current USOIL Block 88 m<sup>2</sup> (2012)



### **Data Integration – Maturing Prospects**

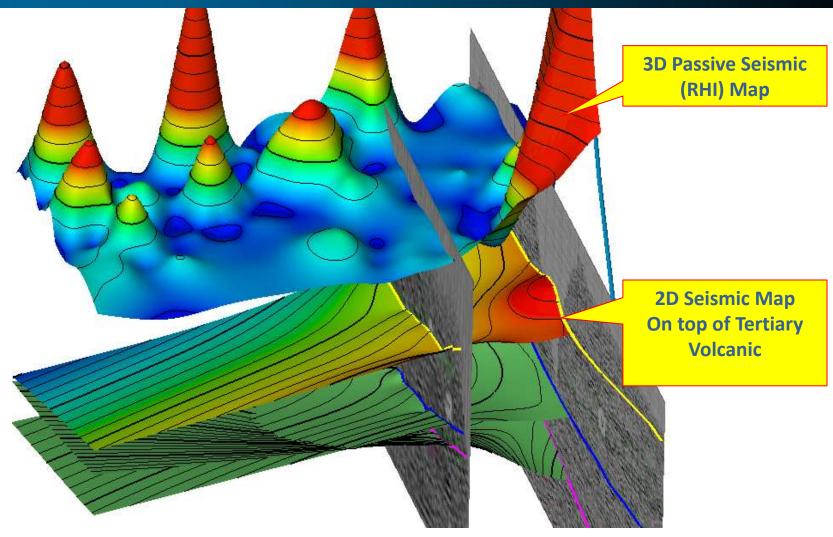


# Correlation between RHI map on top, and Geochemical Z-Sum map in bottom over Initial 20 sq.km acrage



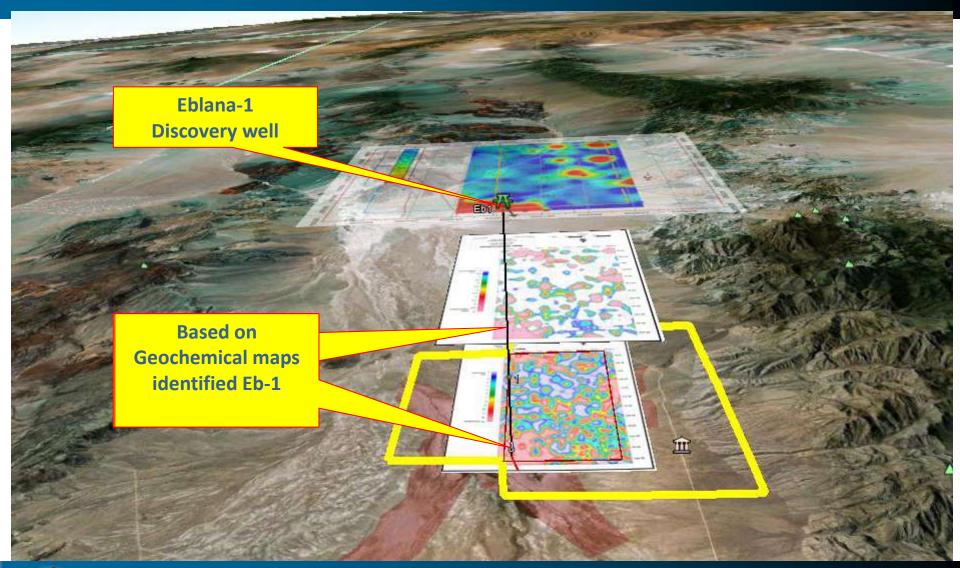


# 3D reservoir Model, RHI, 2D seismic map with seismic lines over Initial 20 sq.km acrage





# Eblana-1 (well status)





### New Geochemical-III survey results-2014

The results from the reconnaissance Geochemical & Gravity Surveys of US Oil's before un-surveyed wider lease area confirm that:

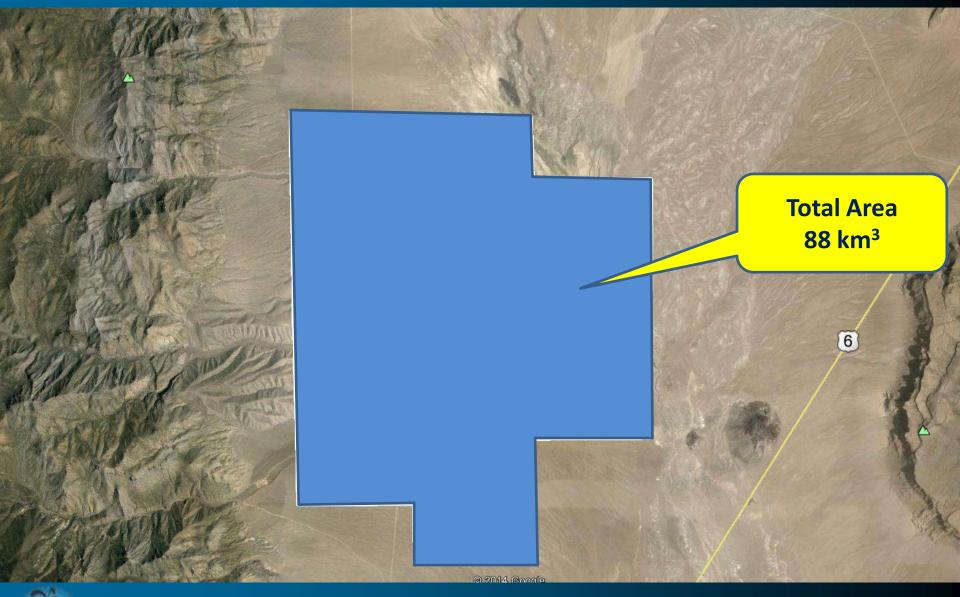
- ➤ The oil reservoir previously identified, and targeted by the Eblana-1 well, extends significantly further to South East & South West into the Company's acreage.
- ➤ The intersection of the two sets of fault lines shows stronger indications of the presence of hydrocarbons more than does anywhere else on the USOIL acreage.

### New Geochemical-III survey results-2014

## Based on Geochemical-III Survey Results, produced the following Geochemical indicator Maps:

- 1. Magnetic Susceptibility (MS),
- 2. High Resolution Soil Spectral Analysis (HRSSA)
- 3. Conductivity (umhos)
- 4. Iodine,
- 5. Hydrocarbons by UV-Vis Spectroscopy
- 6. HRSSA components L Star
- 7. HRSSA components A Star
- 8. HRSSA components B Star
- 9. Soil Spectral map
- 10. Thermal Spectral-T
- 11. Thermatic Spectra

### Current USOIL Block 88 m<sup>2</sup> (2012)



### Five Hydrocarbon Potential prospects within USOIL Block (Based on available Geochemical data)

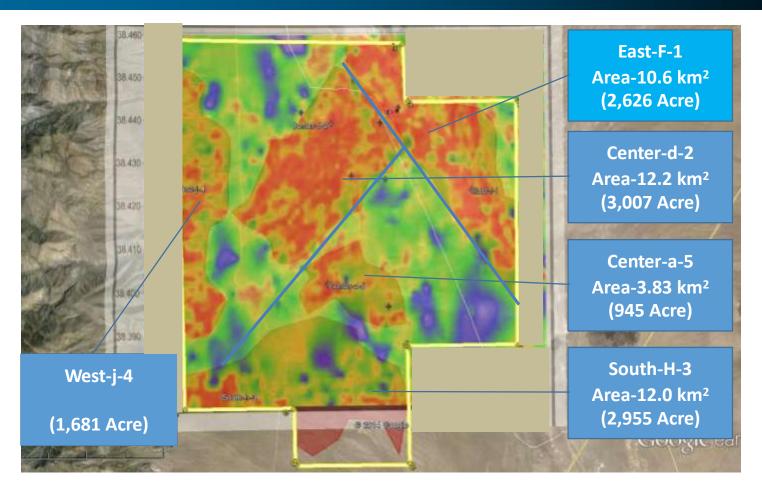


Figure-3: Five Potential Hydrocarbon prospects Pool Areas

Based on USOIL (Geochemical-III & Passive Seismic –II

Results)



### Five Hydrocarbon Potential prospects within USOIL Block (Based on available Geochemical data)

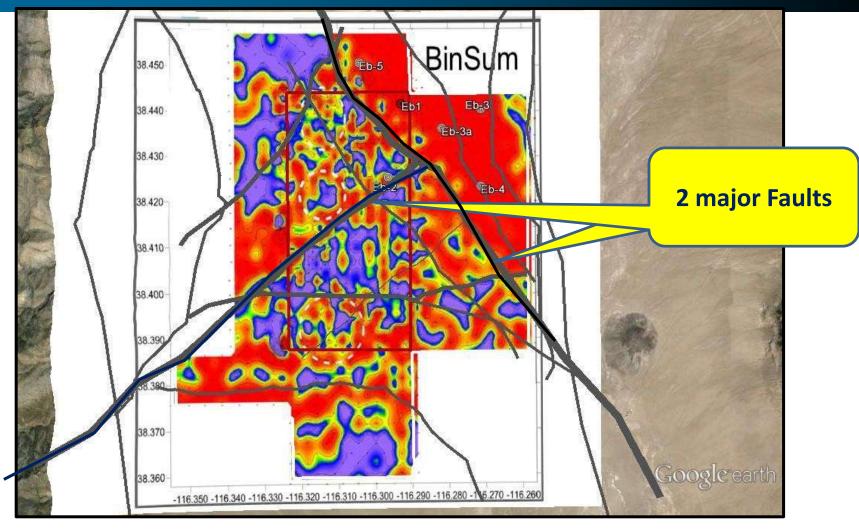
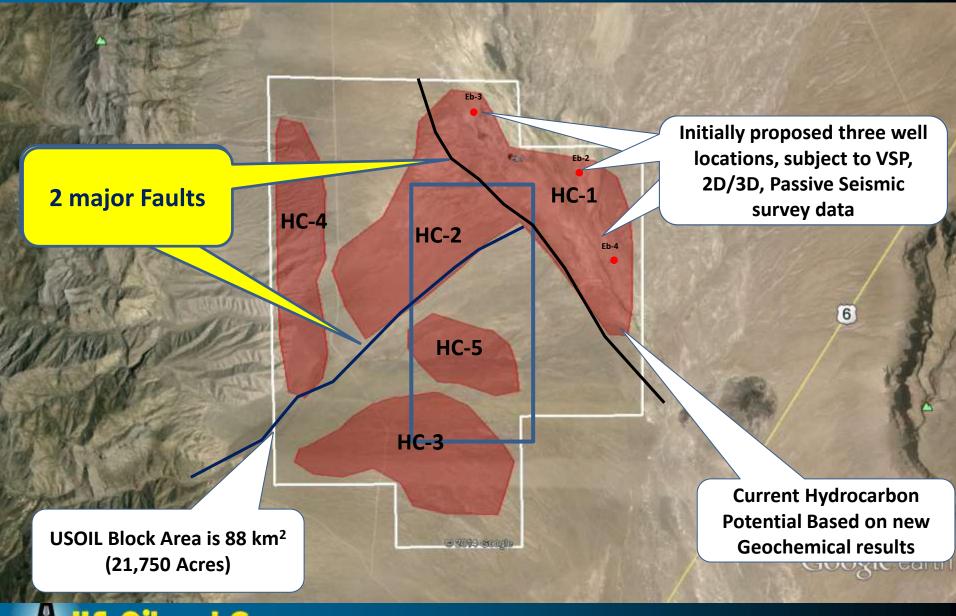
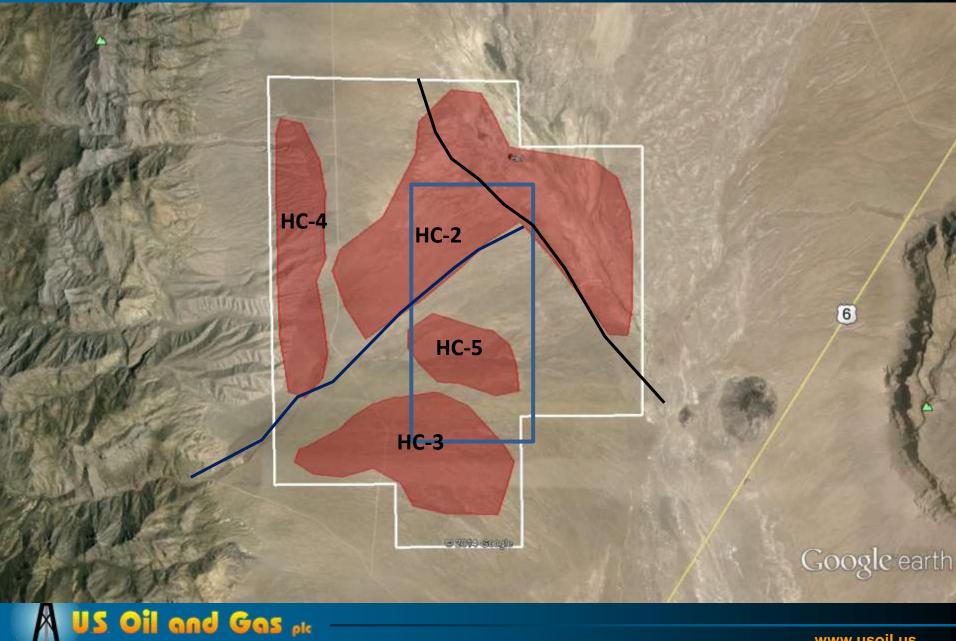


Figure-12: Geochemical "BinSum" Map of Hot Creek Valley with proposed well locations

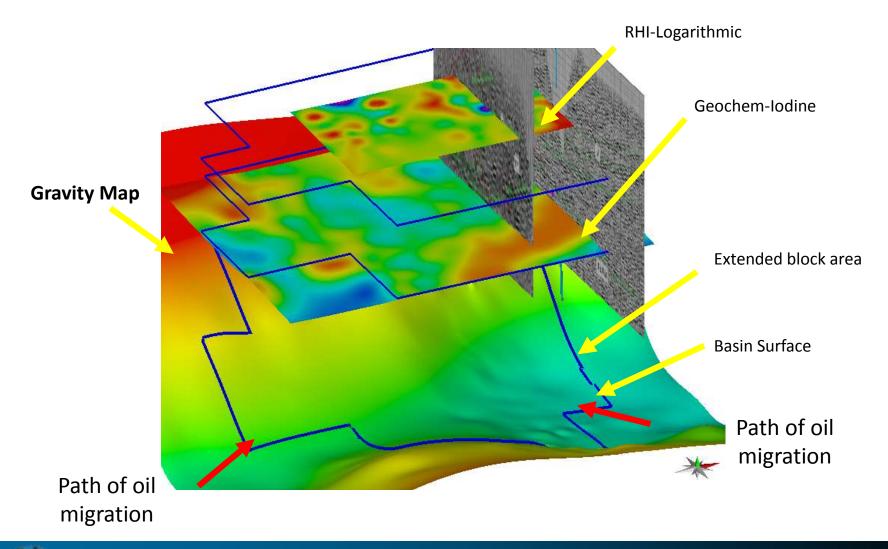
### Hydrocarbon Potential prospects within USOIL Block (Based on available Technical data), possible well locations



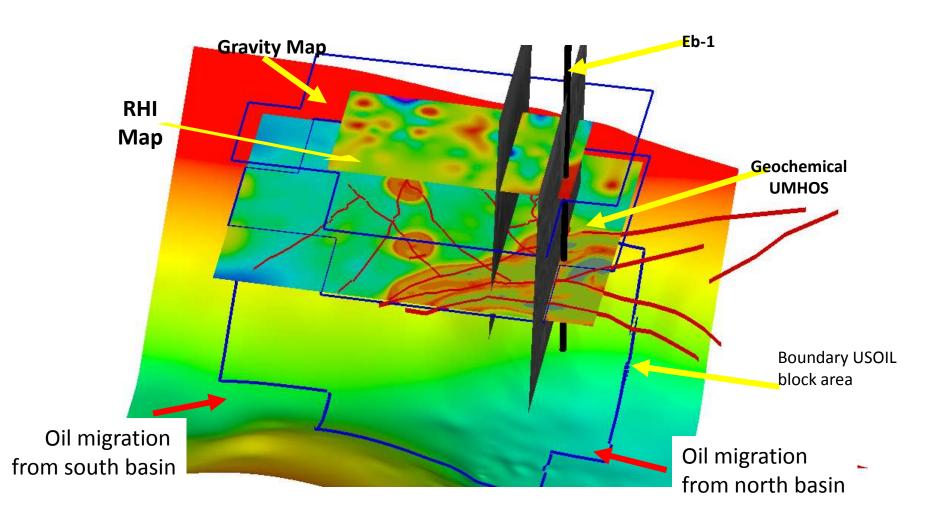
Hydrocarbon Potential prospects within USOIL Block (Based on available Technical data), possible well locations



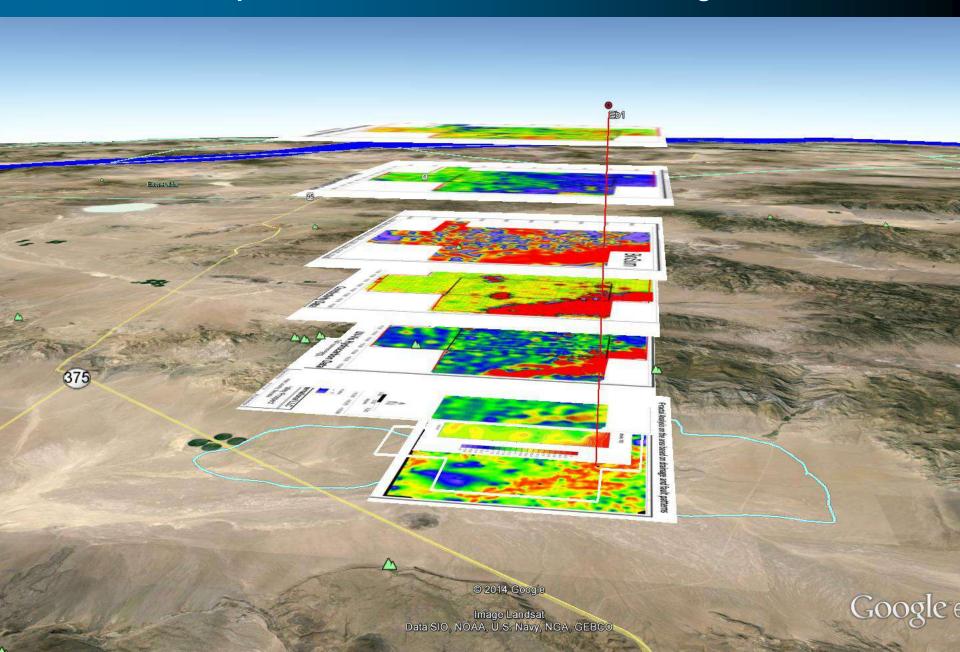
# 3D Geological Model, 2D Seismic, RHI, Geochemical & Gravity surveys



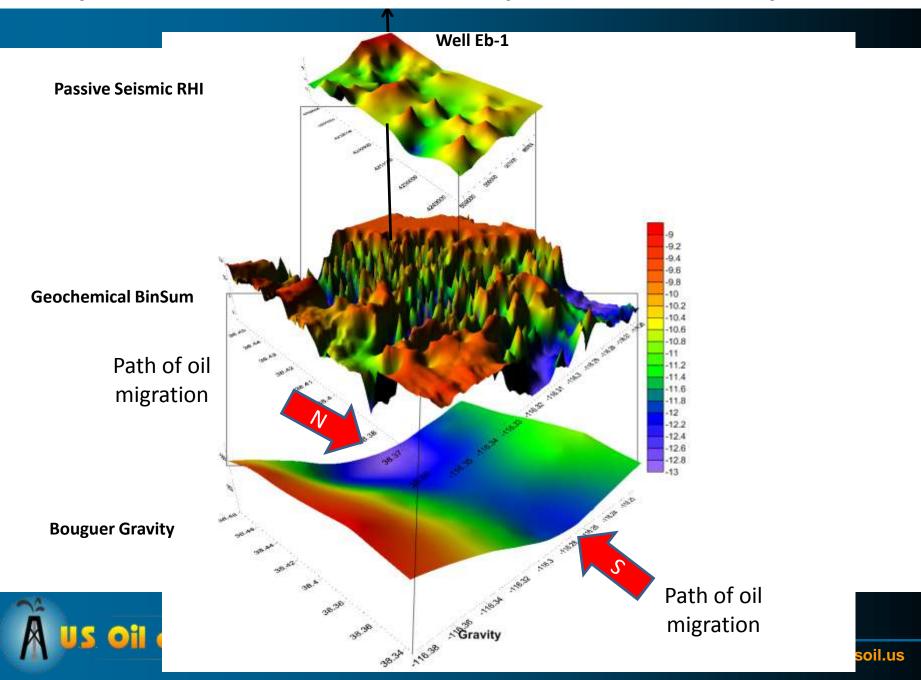
# 3D Geological Model, 2D Seismic, RHI, Geochemical & Gravity surveys



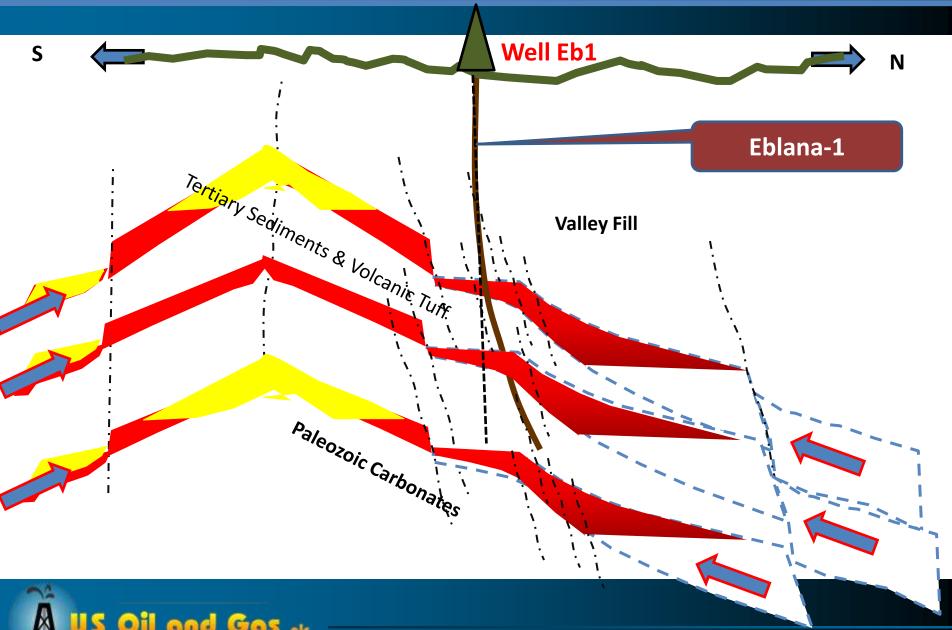
# USOIL ran several Gravity, Geochemical, Geophysical and Geological Surveys to optimize the results and reduce the drilling risk.



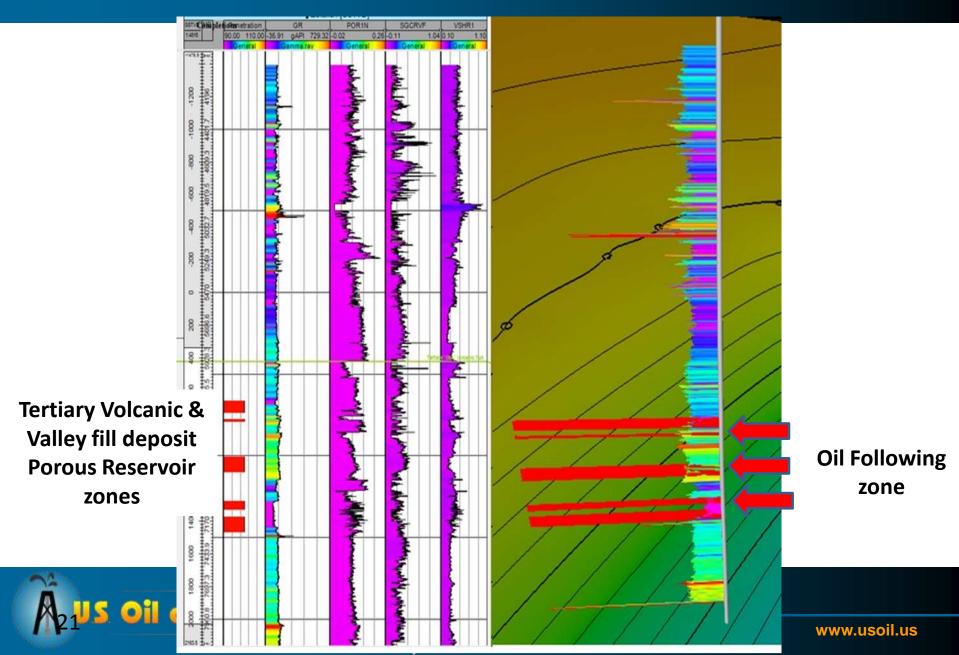
#### **Gravity & Geochemical and RHI 3D Map of Hot Creek Valley**



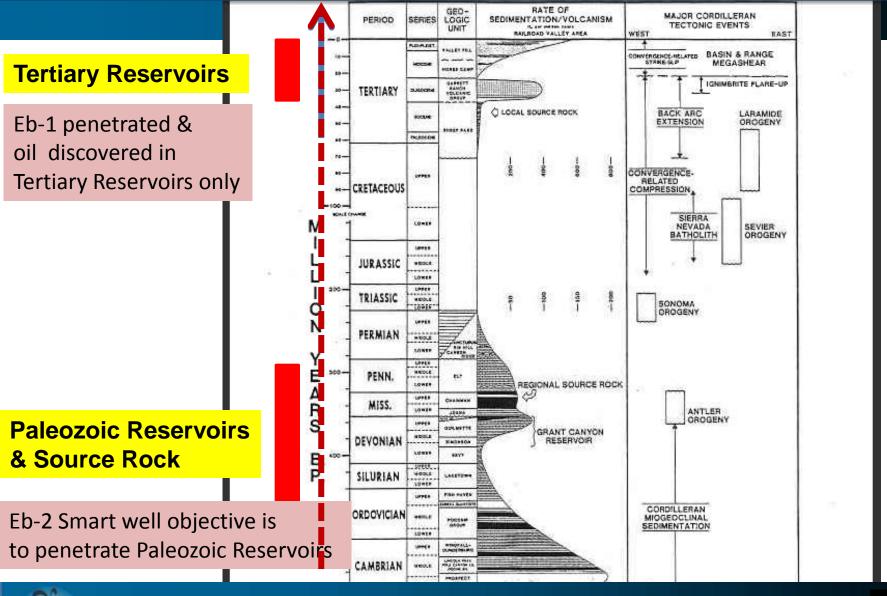
#### **Generalized South-North Cross-section of Hot Creek Valley - Eblana Field**



### Reservoir Evaluation of Eb1 Well Logs, with main perforation producing reservoir zones

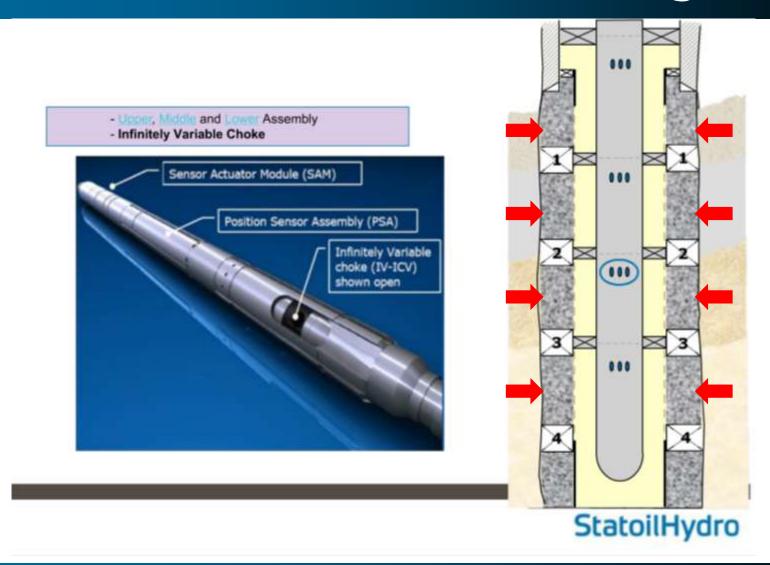


### Stratigraphic Section & Petroleum System Summary

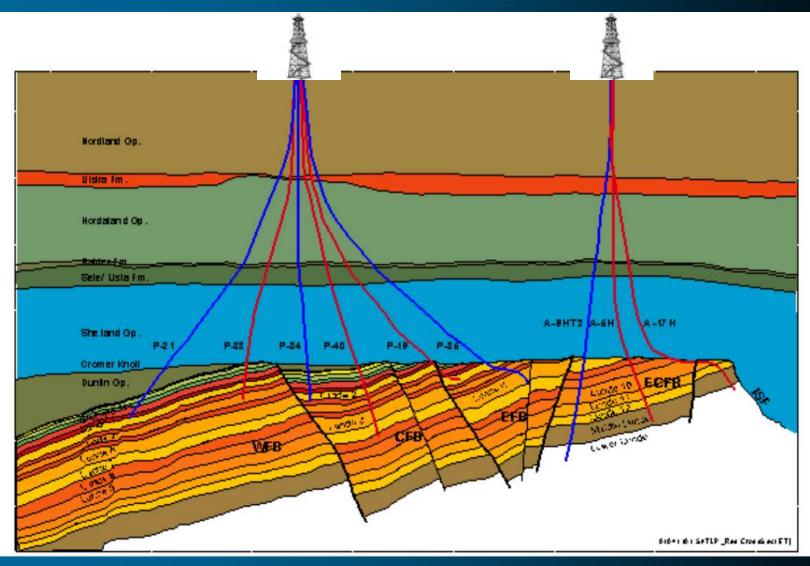




### Eblana-2 (Smart well Design)

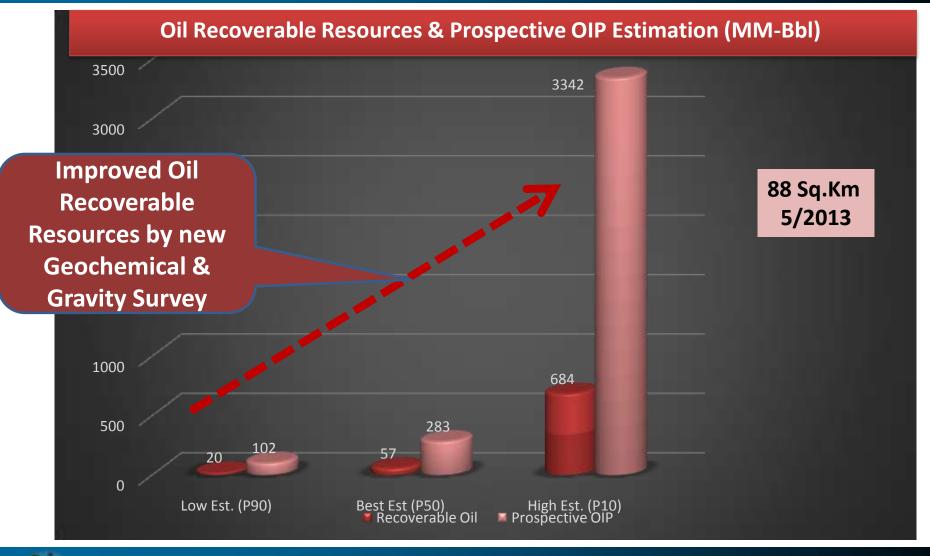


### Development plan for Smart multi-lateral wells





# Based on (CPR) FORREST A. GARB & ASSOCIATES, INC. (2013) after drilling Eb-1 & Acquired additional Acreage



### Conclusions

- We are improving our understanding Nevada oil system by reducing technical uncertainties
- ✓ USOIL during the last one year; performed successfully ten studies and surveys,
- ✓ Identified and delineated new extensional potential areas within 88 sq.km
- ✓ Improved & increased current oil recoverable resources within 88 sq.km
- ✓ To finalize the 3D earth Mode, plan to run Well VSP, Passive Seismic, 2D/3D Seismic.
- ✓ The Plan is to drill three smart wells.
- Confirmed that the oil system exists in Hot Creek Valley (Cap Rock, Source Rock, Reservoir Rock and Traps).
- ✓ Based on Eb-1 well results & new surveys, we have better understanding Hot Creek valley Nevada geology and reservoir modelling, production and fluid behaviour.
- ✓ The new technical data and results will help to reduce uncertainties, minimize risk & reduce cost \$/B. Lead to build full field development plan.
- ✓ We moved oil resources from Prospective Resources to Contingent Resources classification
  This step is adding value to the project economy and also to shareholder value.



### Eblana-1 (Well History)

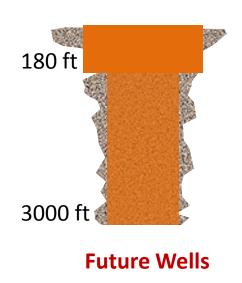
**EB-1** 

#### **Conductor foundation and Surface Hole**

Surface rocks are unconsolidated with formation water flow

■ 14' cond. Pipe @ 40 ft

- Best at 180 ft
- 9 5/8" Casing Shoe @ 764 ft
- Better to set future surface casing deep –
   3000 ft
- Will avoid lots of complications faced
- No need for more casings, Only liner is OK



### EB – 1 Drilling History

Open Hole Logged Interval

1717 ft

- > 14' cond. Pipe @ 40'
- 9 5/8" Casing Shoe @ 764'

HC Shows while drilling and logs - From 2,948" down 8,550 ft

Oil flow zone 6,377 – 6,436 ft (33 API)

Oil Flow zone 7,010 – 7,066 ft (28.5 API)

Open Hole test at 7200 ft showed

18 BBL/hr flow Crude oil collected at surface 7200 ft

Only RPM tool run C/O



Total depth @ 8,550 ft www.usoil.us

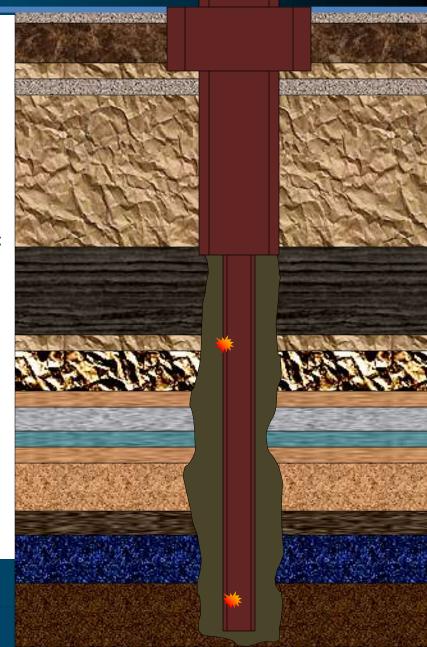
### Plan for new Wells

Conductor @ 180 ft

\* Perforation & Testing based on OH Logs

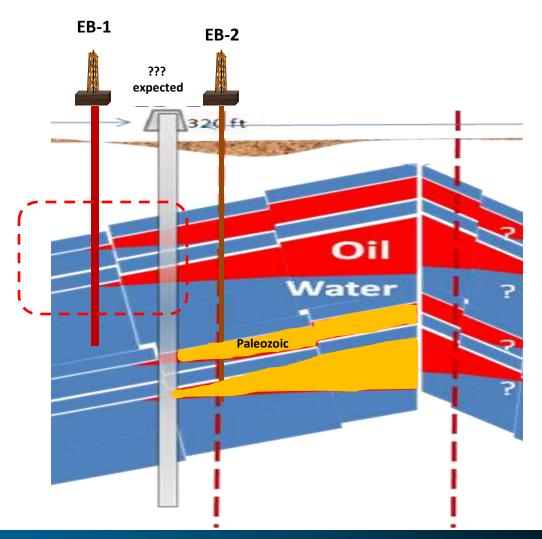
Smart well design to produce from all horizons

Surface casing @ 3000ft





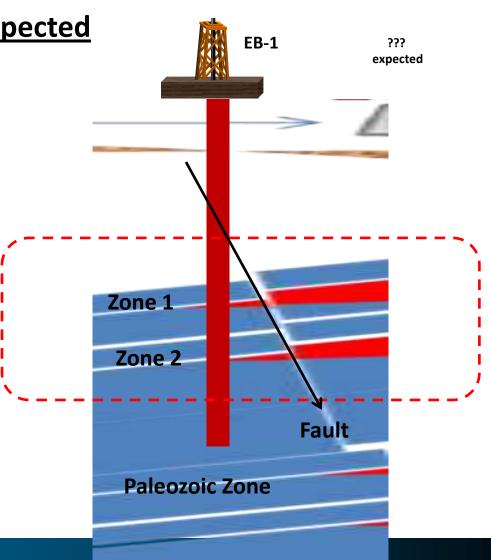
### **EB -1 Location & New Planned Wells**



#### **EB -1 Location & New Planned Wells**

Why EB – 1 did not flow as expected

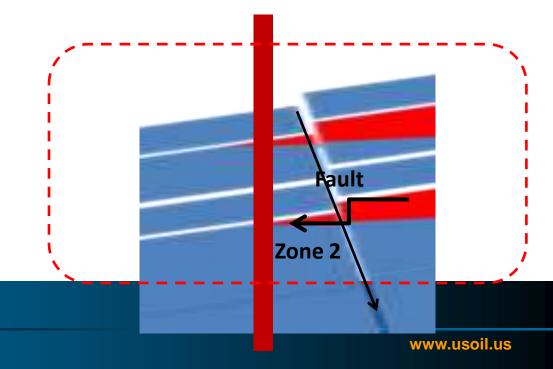
- Compartments blocking HC flow
- Fault crushed and re-crystallized
- Drilled at the OWC edge
- We barely touched the HC zone



#### **EB -1 Location & New Planned Wells**

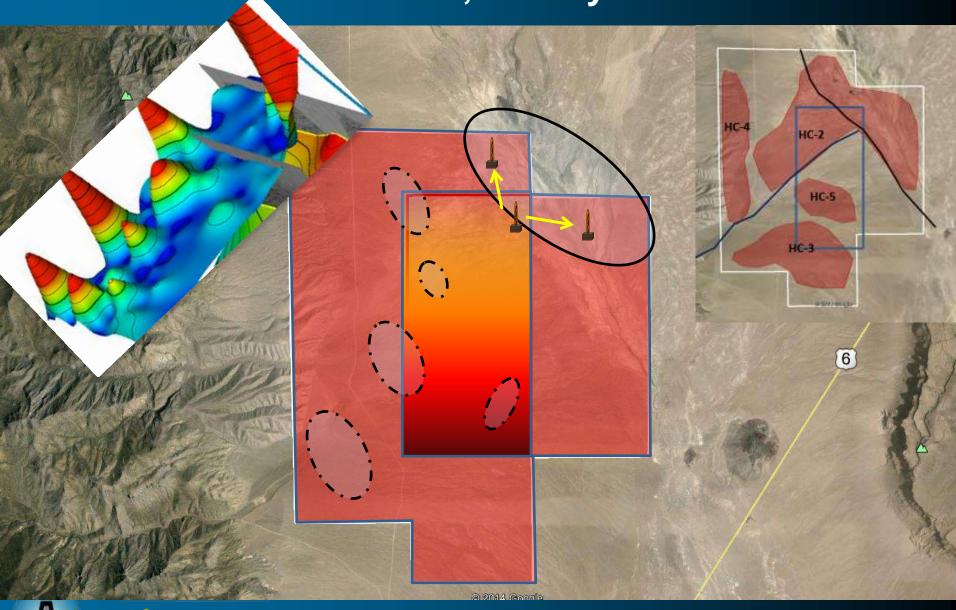
#### **EB – 1 WHP**

- WHCIP = 20 psi
- This is resulted from 4-5 days build up
- It confirms oil seeping via faults though weak





### New Planned Wells, Surveyed Structure





# Thanks for your attention

