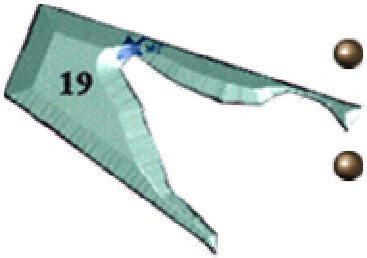
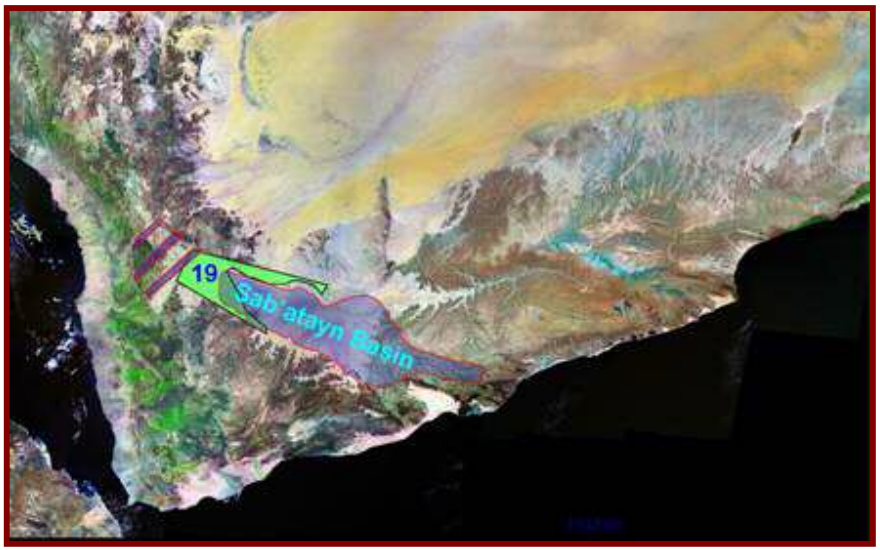
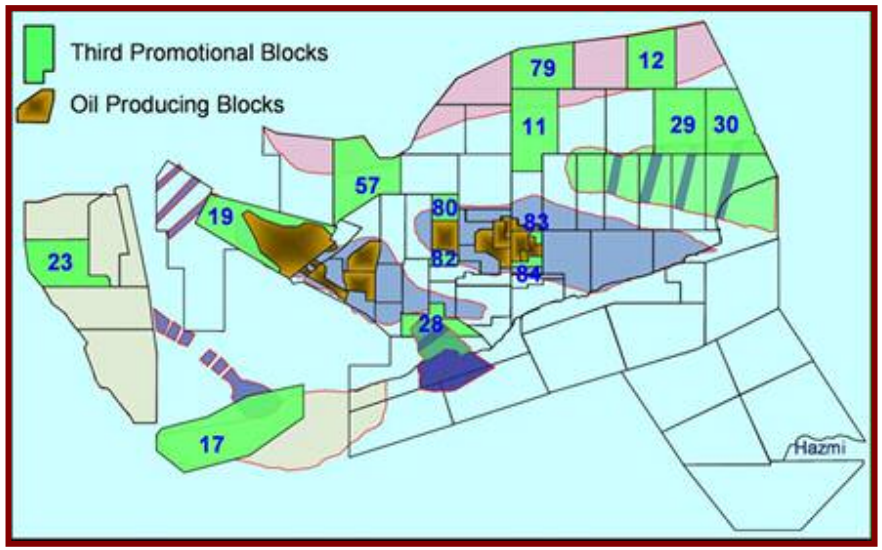
PEPA

Block 19 (Al Jawf)

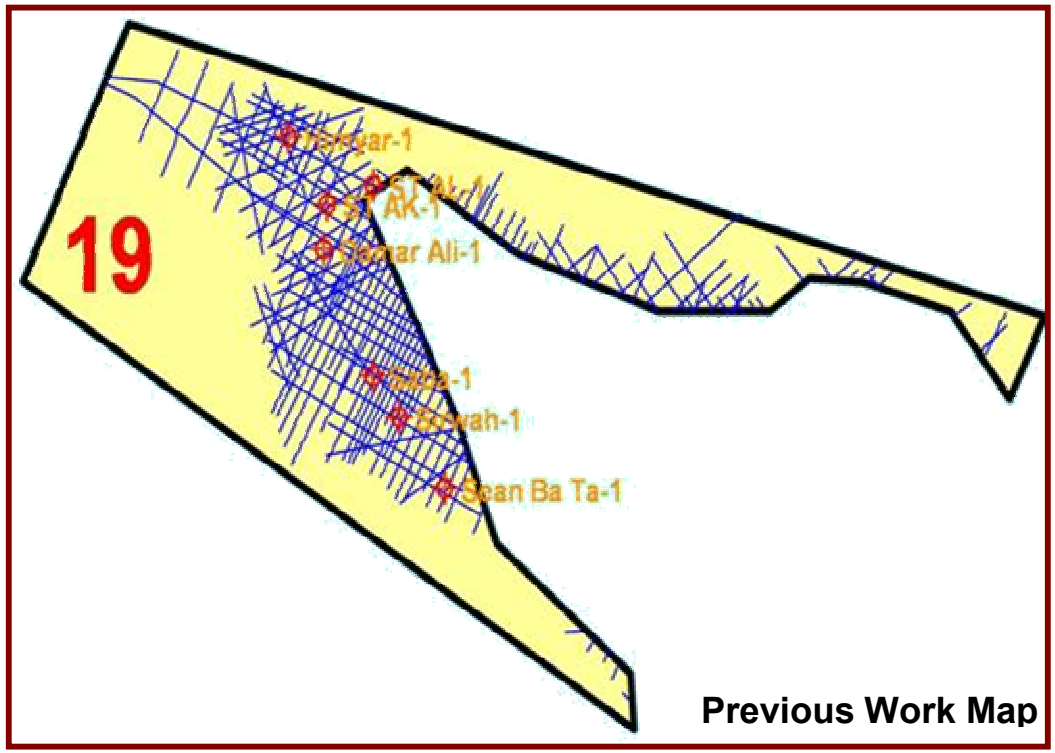


- Al Jawf Block (19) occupies an area of 8424 km2 in the western part of Marib-Al Jawf Basin (Sab'atayn Basin) in the western part of Yemen.
- The Block bordered on the east by oil/gas producing Block (18).





Area (Km^2)	:	8,424
Province	:	Marib / Al Jawf
Basin	:	Marib – Al Jawf Basin
Wells	:	8
Seismic	:	1620 Km 2D
Nearby Fields & Discovery	:	Marib Block (18)



PREVIOUS EXPLORATION ACTIVITIES

Company	Period	Activities
Hunt	1982-1991	Geophysical (2D seismic) Drilling (8) wells

DRILLED WELLS

WELL NAME	COMPANY	DATE	TD TD FM	SHOWS STATUS
Saba#1	Hunt	86	1771 m Basement	No shows P & A
Himyar#1	Hunt	86	2540 m Basement	Gas shows P & A
Arwa#1	Hunt	86	1341 m Basement	No shows P & A
Sean-Ba-Ta#1	Hunt	87	1756 m Saba/	No shows P & A
Sirwah#1	Hunt	87	1333 m Saba/	No shows P & A
Al-Hazm / ST-AK#1	Hunt	87	3134 m Meem	Oil shows P & A
Al-Hazm / ST-AL#1	Hunt	87	2068 m Lam	Oil/gas shows P & A
Damar Ali#1	Hunt	87	4060 m Saba/	No shows P & A

Basin configuration suggests a half-graben dominated by northwest-southeast faults downthrown to the south. Tilted fault blocks can be seen at the surface. Potential traps associated with these basin-forming faults may occur, along with numerous stratigraphic traps associated with facies changes within the Amran section. Numerous structures compatible with trap configurations have been photogeologically mapped, principally within the Jurassic Amran outcrop area. Similarly, structural leads are evident on some seismic sections within the area

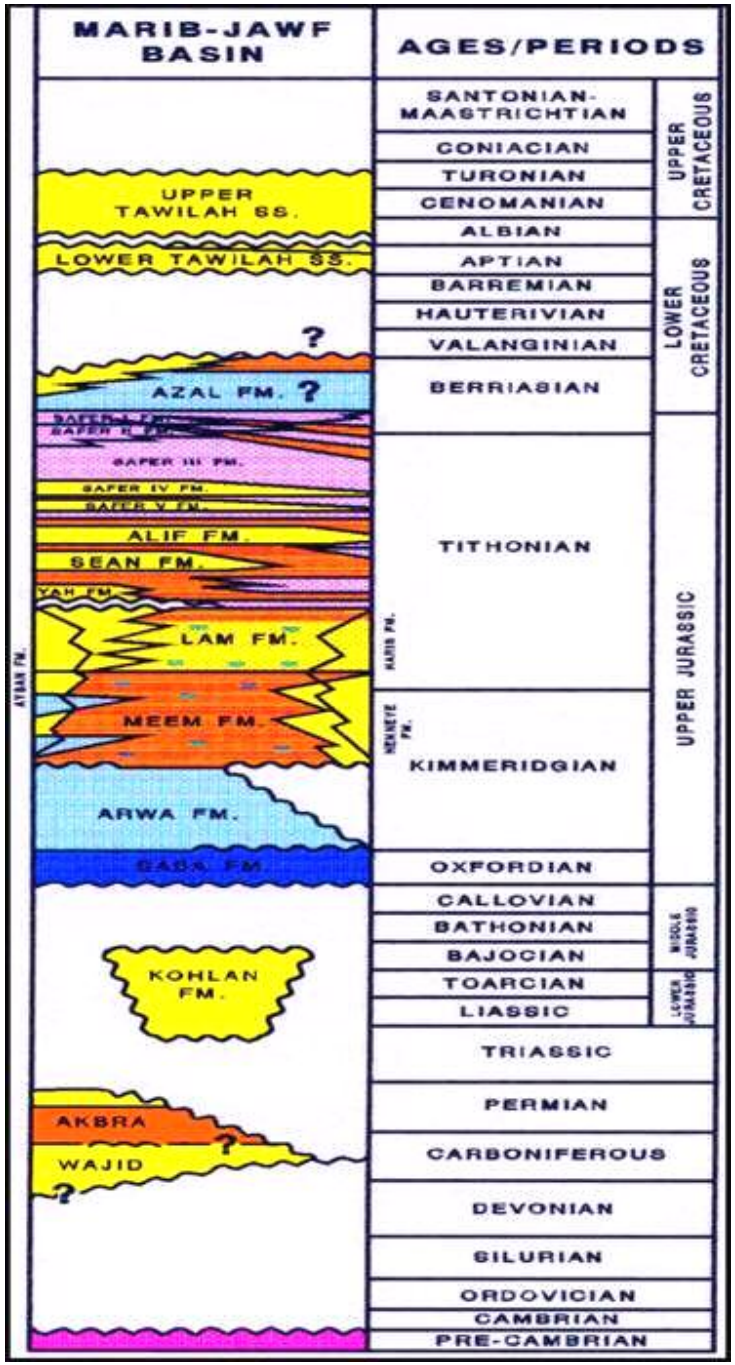
Seismic data and photogeologic mapping completed throughout the area of Block (19) where Pre-Cambrian or volcanic piles are not present at the surface shows many prospects.

A light hydrocarbon analysis of rear surface samples taken in the Wadi Al Jawf area resulted in:

- Microseepage of light hydrocarbons was detectable within the Wadi Al Jawf area.
- Several of the seepage areas detected are interpreted to be thermogenic in origin
- and associated with reservoired hydrocarbons.
- A major seepage feature is defined in the northeastern portion of the area of interest and yields scattered C2/C3 ratio values indicative of an oil source.
- Preliminary analysis of subsurface structure maps, surface fault and fracture patterns indicate significant structure control of migration and seepage of the thermogenic LTHC's.

Mature source rocks in sub-surface and out-cropped layers, where confirmed in the Block (19) and surrounding blocks.

Many reservoirs (clastics and carbonates) where encountered in the drilled wells in the block.



PETROLEUM SYSTEM

SOURCE ROCKS

- The Jurassic Lam Shale of the Madbi Formation source rock was confirmed by the exploration wells drilled in the Block (19). The TOC ranged between 1 and 6.4%.
- The Jurassic Meem Shale of the Madbi Formation source rock was also confirmed by the exploration wells drilled in the Block (19). The TOC ranged between 1.5 and 5.4.

RESERVOIR - SEAL

- The fractured Precambrian Basement can be good reservoir.
- The Lower Jurassic Kohlan and the Paleozoic Wajid Formations (clastics) have good reservoir potential.
- The Jurassic Shuqra Formation (limestone-dolomite) is a good reservoir.
- Lam Clastics (Madbi Formation) have potential reservoir facies. The evaporites and Lam shale-carbonates act as seal.
- The Upper Jurassic Infra-Evaporite clastics are a potential reservoir (if presences).