

PROJECT FACT SHEET

CONTRACT TITLE: Discrete Feature Approach for heterogeneous reservoir Production Enhancement/Fundamental Geoscience Award

ID NUMBER: DE-AC26-98BC15101

CONTRACTOR: Golder Associates

B&R CODE: AC1005000

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PROJECT SITE

CITY: Redmond

STATE: WA

CITY:

STATE:

CITY:

STATE:

CONTRACT PERFORMANCE PERIOD:

9/29/1998 to 9/28/2001

PROGRAM: Supporting Research

RESEARCH AREA:

PRODUCT LINE: ADIS

FUNDING (1000'S)	DOE	CONTRACTOR	TOTAL
PRIOR FISCAL YRS	385	0	385
FISCAL YR 1999	354	300	654
FUTURE FUNDS	0	0	0
TOTAL EST'D FUNDS	739	300	1039

OBJECTIVE: Object is to develop the Discrete Feature Network (DFN) approach as an integrated structure from site characterization data at multiple scales, through data analysis to an integrated DFN model, and finally to apply the DFN model to reservoir production enhancement.

PROJECT DESCRIPTION:

Background: The project is aimed at the development of discrete feature modeling technologies in support of improved oil recovery (IOR) for heterogeneous reservoirs.

Work to be Performed:

PROJECT STATUS:

Current Work: Work is carried out on following tasks:

Task1.1.1.- Fractured Size analysis

Task1.1.2 fracture Shape Analysis

Task1.1.4- Spatial Structure Analysis

Task1.3- Heterogeneous Reservoir Database

Task2.1- Preliminary DFN Model development, Yates Field

Task2.2 Preliminary DFN Model development, South Oregon Basin

Task2.4 Preliminary DFN Model Development , North Oregon Basin

task5.2.3- Presentations

Task6- Management

Data necessary for reservoir efficiency demonstration, was received from Marathon Oil Company's regional office in Midland.

Currently negotiating subcontract with MIT.

Scheduled Milestones:

- Accomplishments:**
1. Developed and demonstrated an approach for evaluation of fractured shape from fracture image and outcrop data.
 2. Developed and demonstrated an approach for estimation of fracture size distributions from outcrop and lineament data.
 3. Developed and demonstrated a new neural network approach for definition of fracture sets.
 4. Assembled reservoir and discrete feature data for each of the project study sites, and data was posted to <http://heteroil.golder.com>
 5. Implemented initial DFN models for project study sites at North Oregon basin, South Oregon Basin, and Stoney Point.
 6. Several abstracts were submitted for papers.
 7. Several presentations were made.