# LLOYD BENNETT BRANUM (BEN)

E-mail address: bbranum@gravesconsulting.us

## PROFESSIONAL QUALIFICATIONS

## **EDUCATION:**

B. S. Petroleum Engineering, University of Missouri at Rolla, 1970

#### PROFESSIONAL ASSOCIATIONS:

Registered Professional Engineer in Texas Society of Petroleum Engineer of AIME

#### **AREA OF EXPERTISE:**

Over forty years of industry experience including prospect generation, acreage acquisition, drilling and completion, well stimulation, production methods, contract negotiations, and reserve and economic evaluation and forecasting.

Reservoir Evaluations - Has performed numerous reserve calculations and projections using classical reservoir engineering techniques that include decline curve analysis, volumetrics, pressure buildup/drawdown analysis and reservoir limits testing, PVT and gas analysis, and well log analysis. Has familiarity with production throughout the continental United States as well as South America, Asia and Africa. Has extensive experience with production characteristics in many traditional trend areas and can apply that experience to reserve and reservoir analysis. Experience as a field engineer provides an additional tool in developing reasonable and appropriate conclusions.

Secondary/Tertiary Recovery Evaluations - Has performed numerous studies relating to the additional recovery being achieved or to be achieved through the use of water flooding, gas injection, and/or tertiary recovery means such as CO2 injection. These studies have ranged from evaluations of water floods from West Texas to onshore China, gas injection into salt dome reservoirs and CO2 injection projects in Texas and Mississippi. Had direct involvement as one of the involved company's representative in determining the proper secondary recovery means for a major Texas oil field. This required participation in unitization procedures, and in feasibility studies and simulation studies to determine the most efficient and economic method and pattern to use.

**Multi-personnel Studies** - Routinely works with geologists and geophysicists as well as client operational personnel on projects that require their expertise in reservoir interpretation. Has also coordinated and assimilated the results of projects requiring input from company's Houston and Pittsburgh offices for evaluations for a common client.

**Client Representation** - Has interfaced often with clients and their lending institutions, the purpose being to cause understanding and confidence of the lending institution of the client's properties and value.

#### **SUMMARY OF EMPLOYMENT:**

#### Ralph E. Davis Associates, Inc. (2003 – 2017)

**Vice President:** Responsibilities include performing and supervising evaluations of international and domestic conventional and non-conventional reserves for client companies. These evaluations are aimed at reserve reporting for both financial and governmental requirements, as well as preparing ongoing development programs to fully exploit known reserves in a timely and cost efficient manner. This will include conventional reservoir studies and secondary recovery projects as well as coal bed methane studies and reserve reports.

#### Ryder Scott Company (1989 - 2002)

Responsibilities included performing and/or directing both ongoing and non-recurring reservoir engineering studies. These studies included single well to total company evaluations for annual SEC filings, public offerings, purchase, sale, financing, litigation and estate settlement. They included the determination of oil, gas, condensate, plant products and sulfur volumes and the future value of these volumes. These also include the evaluation of secondary and tertiary recovery oil reservoirs and geopressured and retrograde gas/condensate re reservoirs.

## **Independent Petroleum Engineering Consultant (1986-1989)**

Evaluation of producing properties for bank loans, purchases and sales. Also worked as a field drilling and completion engineer and on-site log analyst, drilling and completing approximately 20 wells during this period. Also worked as a contract engineer for Ryder Scott Company.

#### MCZ, Inc./Petroleum Advisors International, Inc. (1983-1986)

In charge of engineering functions relating to company reservoir and evaluation matters on undrilled, new, and producing properties. Acted as consultant to client companies on reservoir, evaluation, and operational matters. Made recommendations and directed operations on initial completions, remedial work, well stimulation. Company witness at Texas Railroad Commission hearings.

# Sandlin Development, Inc. (1981-1983)

In charge of company operations including evaluation of potential drilling prospects, sale package preparation, and sale of prospects. Also directed matters relating to acreage acquisition, accounting, disbursements, daily well operations, landowner and joint interest owners relations.

#### Wainoco Oil & Gas Company (1980-1981)

Evaluation of company properties. Evaluation of properties for potential purchase. Reviewed and made recommendations for workover/remedial work on problem wells.

## Tejas Gas Corporation/Tejas Production Company (1979-1980)

Joint responsibility of evaluation of other company gas reserves for the parent pipeline company and handling the reservoir engineering matters for the producing arm of the company.

## Natural Gas Pipeline Company of America (1974-1979)

Evaluation of natural gas reserves for pipeline transmission. Trained junior engineers. Federal and state filings. Completed Arps Hamilton Log Analysis Course.

## **U.S. Navy (1970-1974)**

Final grade, Lieutenant. Assistant Supply Officer, Disbursing Officer, Ship Service Officer, Commissary Officer, Cryptography Officer, Wardroom Officer, Protocol Officer on USS Julius A Furer-DEG6. Top Secret Security Clearance.

## **Natural Gas Pipeline Company of America (1970)**

Reservoir Engineer

## **GEOGRAPHICAL AREAS OF EXPERIENCE:**

		<b>Domestic</b>		
Alabama	Florida	Mississippi	Oklahoma	Wyoming
Alaska	Illinois	Montana	Pennsylvania	Offshore Gulf of
Arkansas	Kansas	Montana	Tennessee	Mexico
California	Louisiana	New Mexico	Texas	
Colorado	Michigan	North Dakota	West Virginia	

Foreign	l

Argentina	Sicily	Kazakhstan
Ecuador	Pakistan	Colombia
Tunisia	China	Venezuela

# **EXPERT TESTIMONY:**

Served as an expert witness before the Texas Railroad Commission and Louisiana Department of Conservation..

Deposition before agents of the U. S. Security and Exchange Commission.