

## SUPPLEMENTAL DRILLING DATA

ARROWHEAD OIL CORPORATION  
WELL #1 BROWN FEDERAL  
NW1/4NW1/4 SEC. 31-17S-32E  
LEA COUNTY, NEW MEXICO  
(DEVELOPMENT WELL)

1. SURFACE FORMATION: Quaternary.

2. ESTIMATED TOPS OF GEOLOGIC MARKERS:

Salt	1045'	Queen	3210'
Base Salt	2040'	Grayburg	3597'
Yates	2068'	San Andres	4004'
Seven Rivers	2454'		

3. ANTICIPATED POROSITY ZONES:

Water	Above 800'
Oil	2068' - 5500'

4. CASING DESIGN:

SIZE	INTERVAL	WEIGHT	GRADE	JOINT	CONDITION
8 5/8"	0-800'	24.0#	K-55	STC	New
5 1/2"	0-5500'	15.5#	K-55	STC	New

5. SURFACE CONTROL EQUIPMENT: A double ram-type or annular BOP will be used. (See diagram attached as Exhibit "E")

6. CIRCULATING MEDIUM:

0 - 800'	Fresh water mud with gel or lime as needed for viscosity control.
800' - 5500'	Salt water mud, conditioned as necessary for control of viscosity and water loss or gain.

7. AUXILIARY EQUIPMENT: Drill string safety valve.

8. LOGGING PROGRAM: CNL-FDC W/GR Log will be run to TD.

9. ABNORMAL PRESSURES, TEMPERATURES OR GASES: A water flow may be encountered in the salt section.

10. ANTICIPATED STARTING DATE: It is planned that operations will commence about December 20, 1987. Duration of drilling, testing and completion operations should be one to four weeks.