

## APPLICATION FOR DRILLING

### TMBR/Sharp Drilling, Inc.

TMBR/Sharp "21" Federal Com., Well No. 1  
1980' FSL & 990' FWL, Sec. "21"-T18S-R32E  
Lea County, New Mexico  
Lease No.: NM-89805  
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, TMBR/Sharp Drilling, Inc. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Rustler	1,010'	Wolfcamp	10,120'
Yates	2,550'	Strawn	11,500'
Queen	3,755'	Atoka	11,800'
Grayburg	4,390'	Morrow	12,300'
San Andres	4,875'	T.D.	13,000'
Bone Spring Lime	6,695'		

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water between 100' - 300'.

Oil: Possible in the Bone Spring below 6,695'.

Gas: Possible in the Atoka below 11,800' and the Morrow below 12,300'.

4. Proposed Casing Program:

HOLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48.0#	H-40	ST&C	460'	Circ. 500 sx "C" + add.
12 1/4"	9 5/8"	40.0#	J-55	ST&C	4,400'	Circ. 1057 sx (35/65) Poz; "C" + 250 sx "C"
8 1/2"	5 1/2"	17.0#	N-80	LT&C	10,000'	761 sx of "H" to TOC @ 10,100'
	5 1/2"	17.0#	S-95	LT&C	3,000'	

1175 ft. min

5. Proposed Control Equipment: A 13 5/8" 5000 psi wp Shaffer Type LWS Double Gate BOP will be installed on the 13 3/8" casing. Casing and BOP will be tested before drilling out with 12 1/4" and will be tested daily. See Exhibit "E".

MUD PROGRAM:	MUD WEIGHT	VIS.	W/L CONTROL
0' - 460': Fresh water mud:	8.6 - 9.0 ppg	32 - 35	No W/L control
425' - 4400': Brine mud:	9.9 - 10.0 ppg	28 - 29	No W/L control
4400' - 10,000': Fresh water mud:	8.4 - 10.4 ppg	28 - 29	No W/L control
10,000' - 11,400': Cut Brine mud:	9.6 - 10.0 ppg	28 - 29	No W/L control
11,400' - 13,000': Cut Brine mud:	10.0 - 10.4 ppg	36 - 45	W/L control 8 - 12 cc +/- W/L < 8 in pay zones

7. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: Ten (10) possible in pay zones.

Logging: T.D. to 4400': CNL/LDT/DLL

T.D. to Surface: GR-Neutron

Coring: None.

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9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated evacuated BHP = 5200 with a temperature of 190°.
10. H<sub>2</sub>S: None expected.
11. Anticipated starting date: October 25, 2000.  
Anticipated completion of drilling operations: Approximately 30 days.