30-025-29807

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM #19143

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Federal

9. WELL NO.: #2 ~~19143~~

10. FIELD AND POOL, OR WILDCAT: Antelope Ridge - Atoka

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 34, T22S, R34E

12. COUNTY OR PARISH: Lea

13. STATE: NM

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Diamond Shamrock Exploration Company

3. ADDRESS OF OPERATOR: 2001 Ross Ave., Ste 1200, LTV Center, Dallas, TX 75201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FSL & 660' FEL
At proposed prod. zone: 660' FSL & 660' FEL

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 20 miles Northwest of Jal, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	640	320
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
---	12,500'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3043 GR

22. APPROX. DATE WORK WILL START*: Upon approval

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8	48#	700'	circulate to surface
12 1/4	9 5/8	36#	4850'	circulate to surface
8 3/4	7	23# & 26#	11,700'	780 sx
6 1/8	5	17.93#	12,500'	circulate to liner top

BOP Program - 5000 psi. Annular w/double ram to 11,700'
10000 psi. Annular w/double ram 11,700-12,500'

Atoka NSL approved by R-833'

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED [signature] TITLE Senior Drilling Engineer DATE 11-21-86

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE 12-2-86

CONDITIONS OF APPROVAL, IF ANY:

Subject to Like Approval by State

*See Instructions On Reverse Side

N... MEXICO OIL CONSERVATION COMMIS...

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
DIAMOND SHAMROCK CORP.	FEDERAL	2-~~19143~~

Unit Letter	Section	Township	Range	County
P	34	22-S	34-E	LEA

Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3403'		Antelope Ridge - Atoka	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

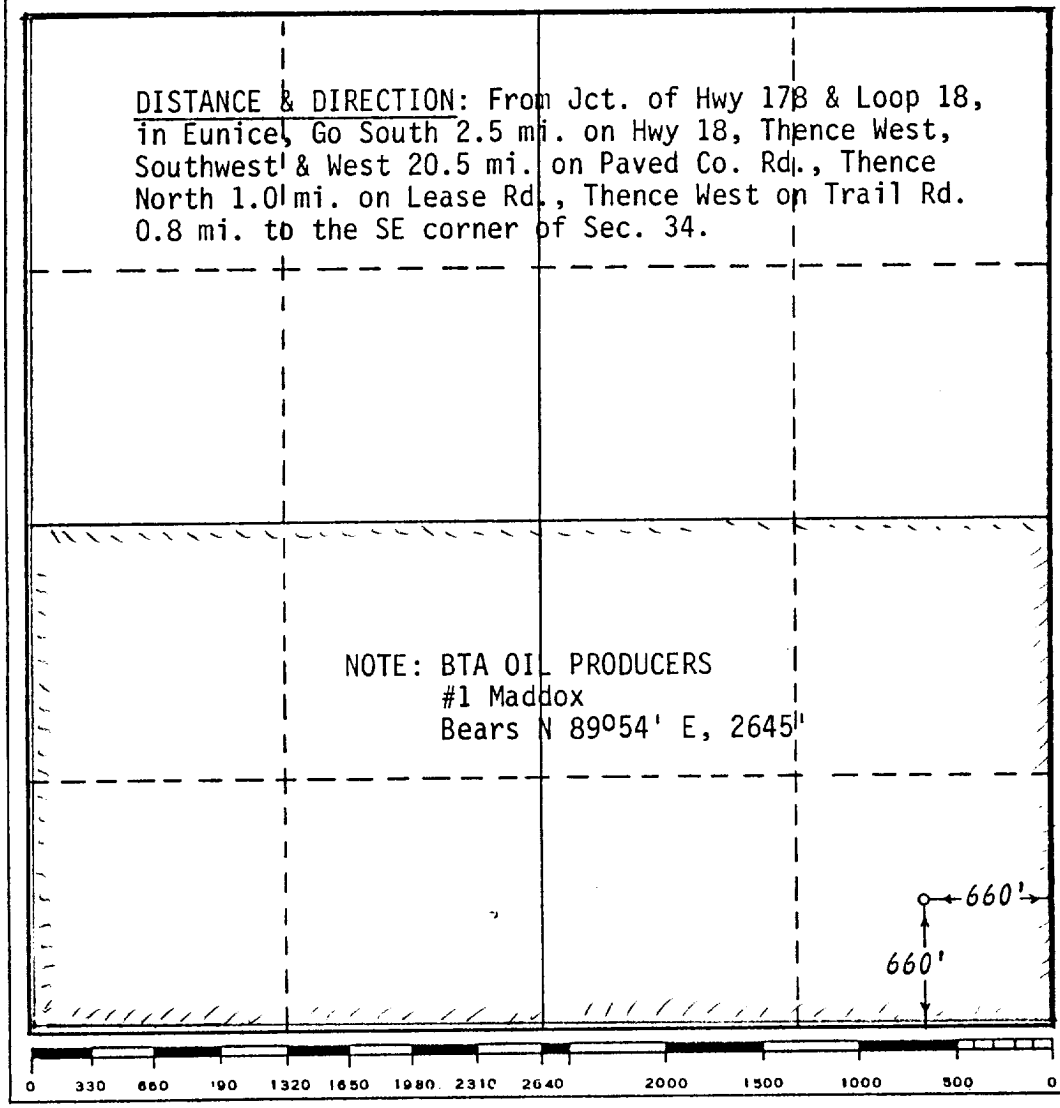
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☒ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: Craig Mickleberry
Position: Senior Drilling Engineer
Company: Diamond Shamrock Exploration Company
Date: 11-21-86

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: Sept. 13, 1986

Registered Professional Engineer and/or Land Surveyor: Gary D. Boswell

Certificate No. 6689

DRILLING PROGRAM

Federal #2-19143
660 FSL & EL
Section 34-T22S-R34E
Lea County, New Mexico

1. ESTIMATED FORMATION TOPS

FORMATION	DEPTH
T/Delaware Group	5,373'
Cherry Canyon	5,646'
T/Bone Spring	8,461'
Bone Spring 1	8,627'
Bone Spring 2	9,781'
Wolfcamp	10,567'
Strawn	11,825'
Atoka	12,111'
Atoka A. Bank	12,223'
B/Atoka	12,326'
T.D.	12,500'

2. ESTIMATED DEPTH OF WATER, OIL, GAS, OR MINERALS

Gas & Oil: Gas and oil are expeced in the Wolfcamp, Strawn, and/or the Atoka formations.

Water: Ground water is anticipated to approximately 500'. Some brackish water sand could possibly exist below this level, however the hydrostatic head of the drilling fluid will safely contain those waters within their formations.

3. PRESSURE CONTROL EQUIPMENT

A. Refer to Diagrams A-1 & A-2.

B. Minimum pressure ratings on any and all B.O.P. or related control equipment will be 5,000psi to intermediate point. From intermediate point to T.D., minimum ratings will be 10,000 psi.

C. B.O.P. stack will be pressure tested to working pressure of B.O.P. or 80% yield on surface pipe prior to drilling out of surface casing. The stack will then be checked on each trip to insure workability.

D. Hydraulic B.O.P. controls will be located on the accumulator and rig floor. Manual controls will be located on the B.O.P.

4. A. Casing Design:

Casing String	Interval	Section Length	Size OD	WT.	Grade	Type	Cond.
Surface	0'-700'	700'	13 3/8"	48#	H-40	ST&C	New
Intermediate	0'-3,200'	3,200'	9 5/8"	36#	K-55	LT&C	New
	3,200'-4,850'	1,650'	9 5/8"	36#	S-80	LT&C	New
Intermediate	0'-8,800'	8,800'	7"	23#	S-95	LT&C	New
	8,800'-11,700'	2,900'	7"	26#	S-95	LT&C	New
Liner	11,300'-12,500'	1,200'	5"	17.93#	N-80	FL&S	New

B. Cement Program:

	Type and Amount of Cement
Surface	Circulate to surface with Class "C" cement containing 2% calcium chloride, 4% gel. Tail in with Class "C" cement containing 2% calcium chloride.
9 5/8" Intermediate	Circulate to surface. DV tool to be placed at approximately 3800'. Both stages to consist of lightweight cement followed by Class "C" cement.
7" Intermediate	50/50 Pozmix containing 6#/sack salt followed by Class "H" neat cement. Cement to 8000'. Estimated amount 780 sacks. Volume to be determined by open hole caliper.
5" Liner	Cement to liner top with Class "H" cement. Estimated amount 120 sacks. Volume to be determined by open hole caliper.

C. Auxillary Equipment

1. Upper and lower kelly cock.
2. No floats will be used.
3. One full opening stabbing valve on rig floor at all times.

5. THE TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATING FLUID

Low solid nondispersed brine system to 11,700'.

Max Wt	9.8
Vis	48
WL	No control

X C Polymer system from 11,700' to 12,500'

Max Wt	14.5
Vis	50
WL	8-30

Enough weighting materials and chemicals will be kept on location to maintain these mud characteristics.

Monitoring Equipment: Mud pit volume totalizer with return indicator. Mud logging unit from 4,500' to T.D.

6. EVALUATION PROCEDURES

A. Drill Stem Tests: Will be determined by onsite geologist.

B. Coring: Will be determined by onsite geologist.

C. Logging: 5,000'-11,700' - Dual Laterlog, CNL/FDC, Gamma Ray, Caliper
11,700'-12,500' - CNL/LDT, Gamma Ray, Caliper, Dual Induction, Dipmeter.

D. Completion Plan: If hydrocarbons are found, a fracturing procedure may be initiated. If this fracturing procedure is used, the pumping equipment, tanks of combustible fluids, and well head will be a minimum of 75' apart. Fracturing size and type will be determined after evaluation of logs.

7. ABNORMAL DRILLING CONDITIONS

A. Abnormal Pressure: Anticipated thru Strawn and Atoka zones.

B. Abnormal Temperatures: None anticipated

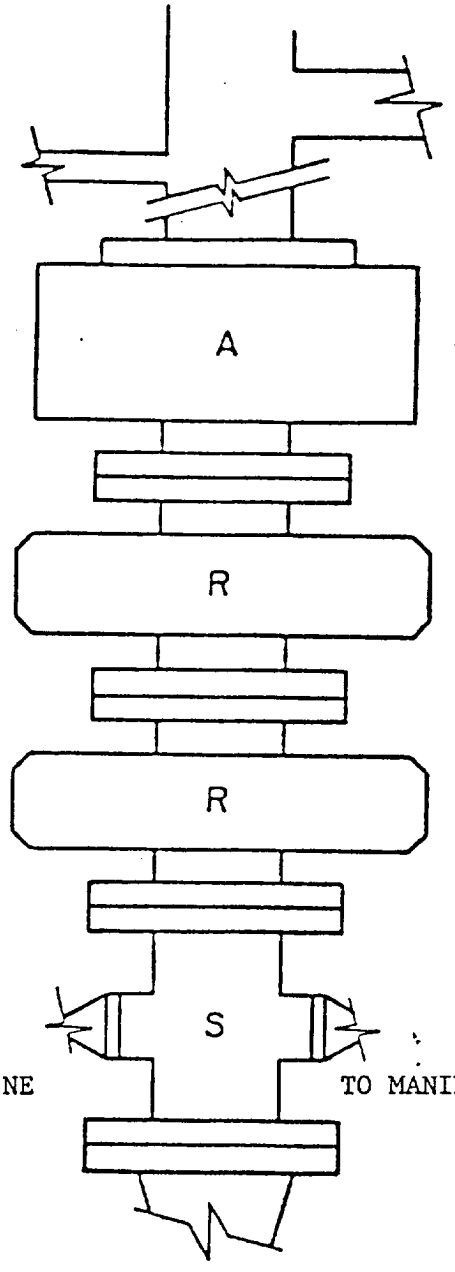
C. Hydrogen Sulfide: None anticipated

D. Anticipated Bottom Hole Pressure: 8200psi.

8. ANTICIPATED STARTING DATE AND DURATION

We anticipate commencing operations by Dec. 15, 1986, or as soon as governmental approval is obtained. The anticipated duration of drilling and completion is approximately 4 months.

5 00# WP BOP
DIAGRAM A-1

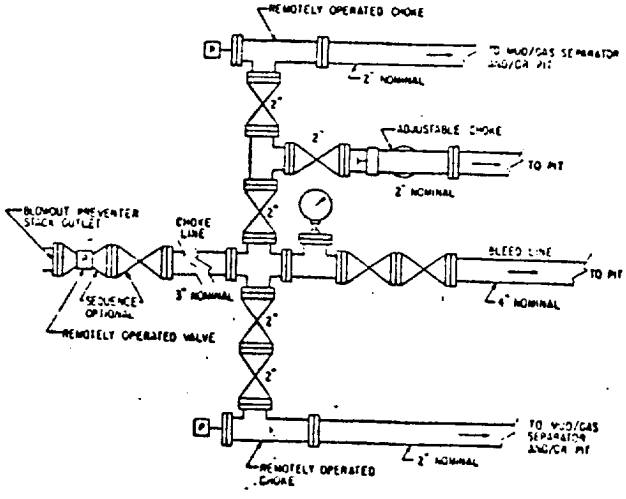


PIPE RAMS

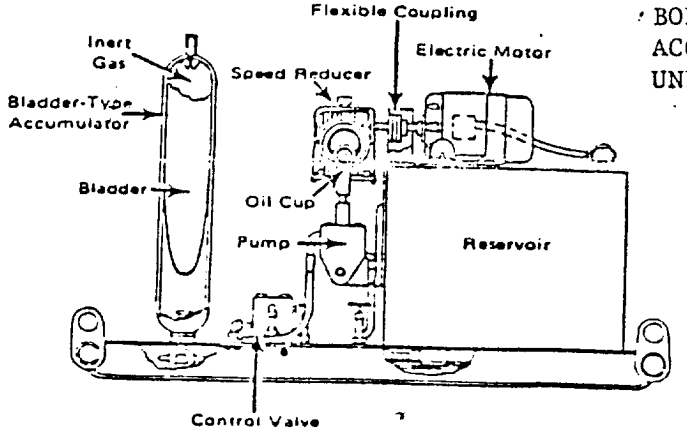
BLIND RAMS

KILL LINE

TO MANIFOLD

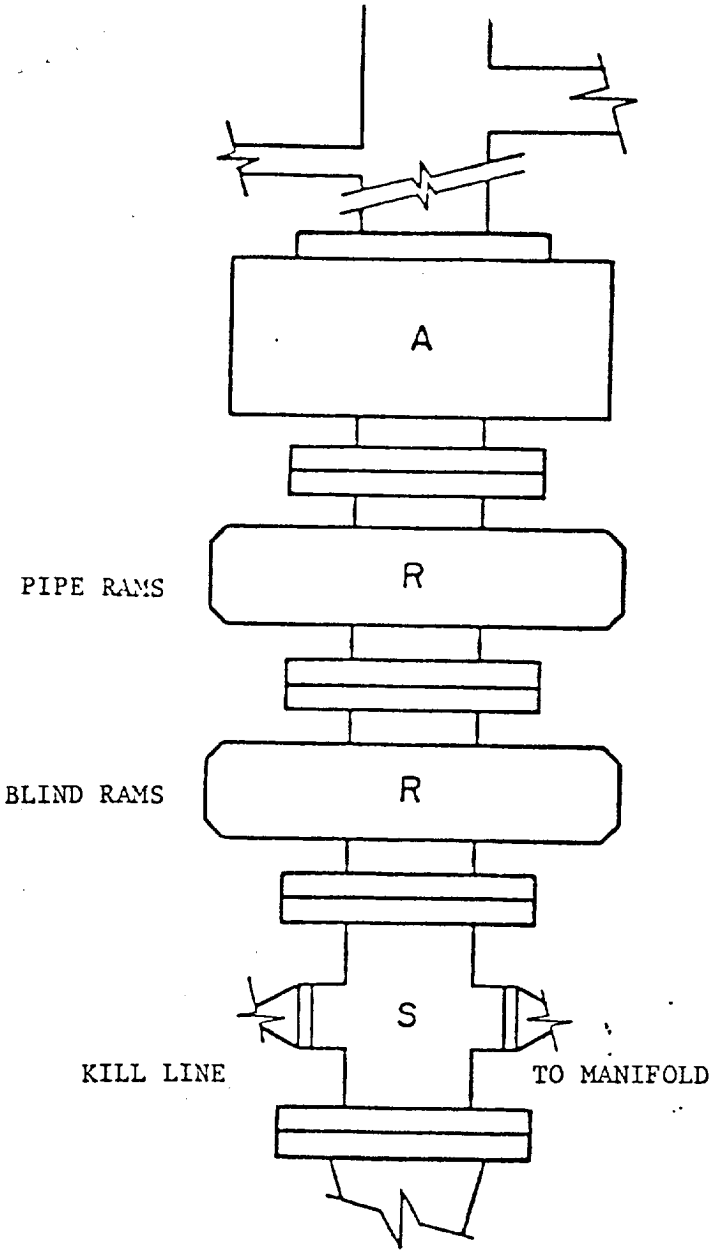


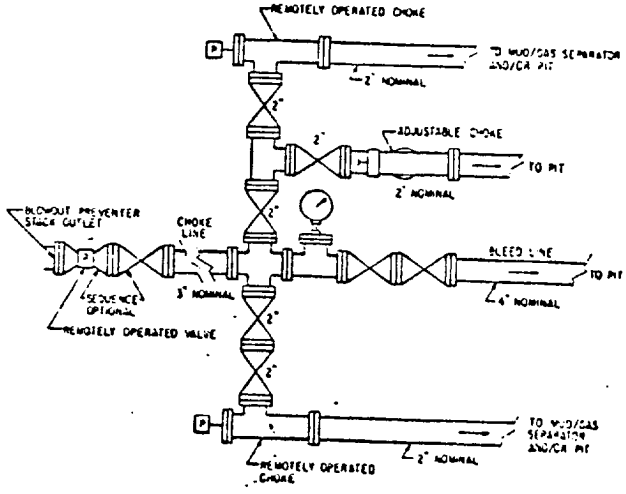
CHOKE MANIFOLD
All Valves to be 5,000 psi



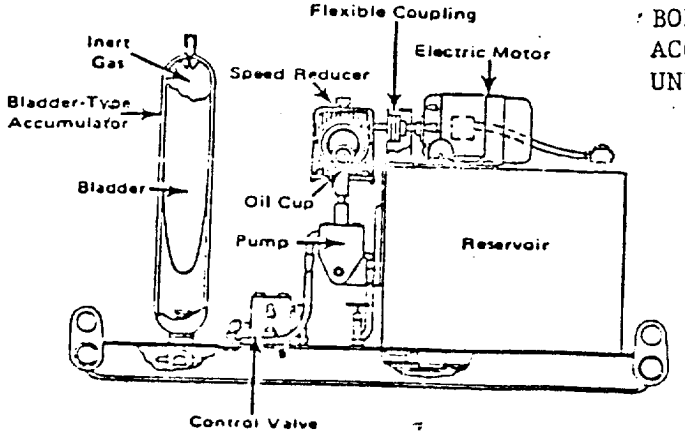
BOP
ACCUMULATOR
UNIT

10, J# WP BOP
DIAGRAM A-2





CHOKE MANIFOLD
All Valves to be 10,000 psi



BOP
ACCUMULATOR
UNIT

ELP

Rec'd 10-12-87