

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE*
(See other ins
reverse side)

Form approved.

9/9/96

N.M. Oil Cons. Division

APPLICATION FOR PERMIT TO DRILL OR DEEPEN 1 S. 1st Street

1a TYPE OF WORK: DRILL ☐ DEEPEN ☒ Artesia, NM 88210-2834

b TYPE OF WELL:
OIL WELL ☐ GAS WELL ☐ Other WTW SINGLE ZONE ☐ MULTIPLE ZONE ☒

2 NAME OF OPERATOR
DEVON ENERGY CORPORATION (NEVADA)

3 ADDRESS AND TELEPHONE NO.
20 N. BROADWAY, SUITE 1500, OKC, OK 73102 (405) 235-3611

4 LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface 1980' FNL & 660' FEL of Section 30

At top proposed prod. zone (SAME)

14.DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

5 miles east of Loco Hills, NM

15.DISTANCE FROM PROPOSED
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT. 660'
(Also to nearest drlg. unit line if any)

16.NO. OF ACRES IN LEASE
160

17.NO. OF ACRES ASSIGNED
TO THIS WELL
40

18.DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT. 904'

19.PROPOSED DEPTH
3600'

20.ROTARY OR CABLE TOOLS*
Rotary

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

GR=3616'

22. APPROX. DATE WORK WILL START*
December 15, 1996

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
	10 3/4"	32.75#	614'	100 sxs
	7"	20#	3396'	100 sxs
6 1/4"	4 1/2" J-55	11.6#	3600'	circulate to surface

Current: TD @ 3397'

Perforations: 2903' - 3390' (OA)

Proposed: TD @ 3600'

Run 4 1/2" casing string and set at 3600'. Cement back to surface.

Perforate: 2850' - 3550' (OA)

Return well to water injection.

*Please contact Jim Amos at the Carlsbad BLM office
at (505) 687-6544 prior to commencing operations.*

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, 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

Charles H. Carleton

Charles H. Carleton
TITLE Sr. Engineering Tech.

DATE 10/16/96

*(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY (ORIG. SGD.) ARMANDO A. LOPEZ

TITLE

PETROLEUM ENGINEER

DATE

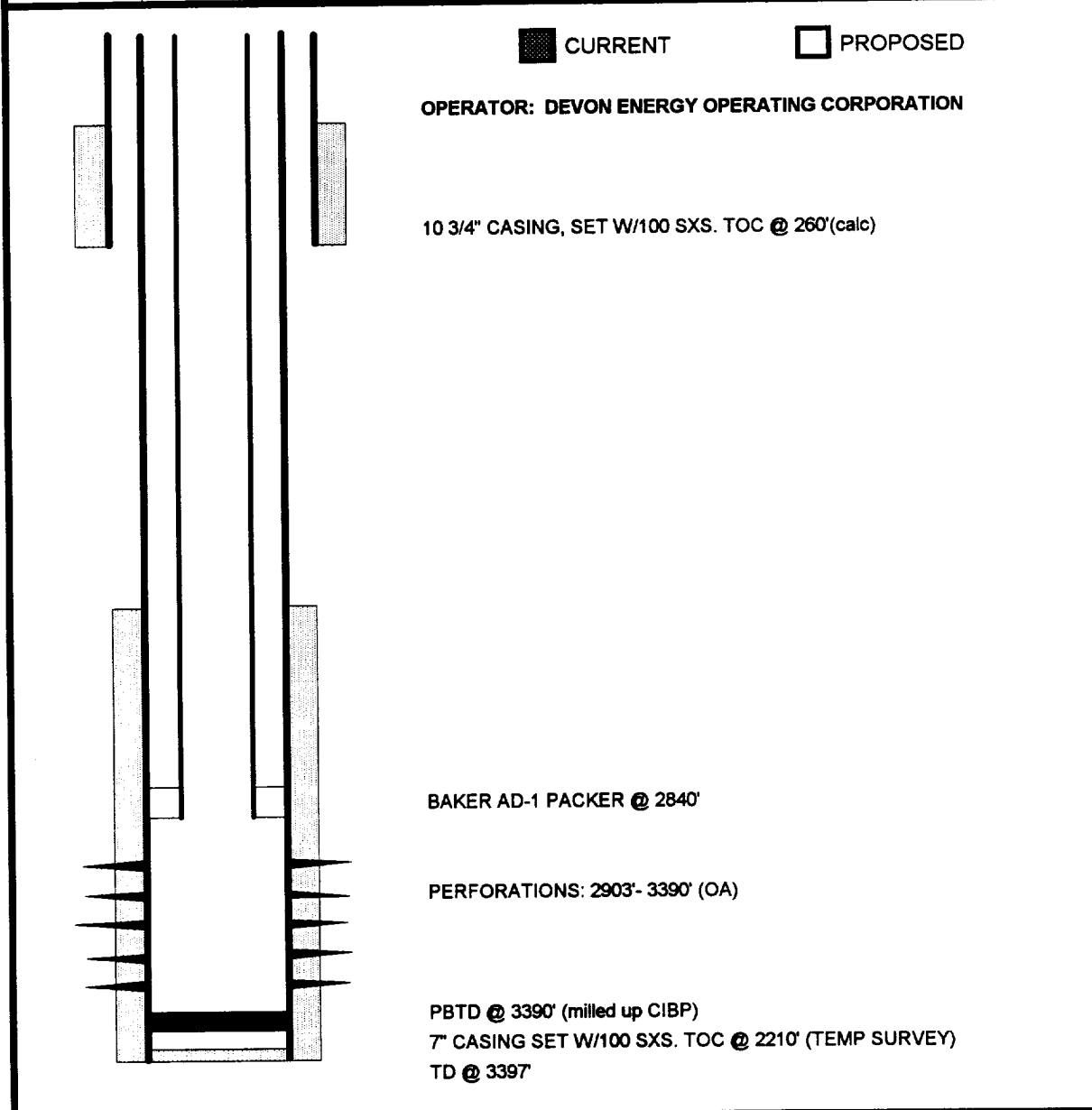
10/22/96

See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

DEVON ENERGY OPERATING CORPORATION WELLBORE SCHEMATIC

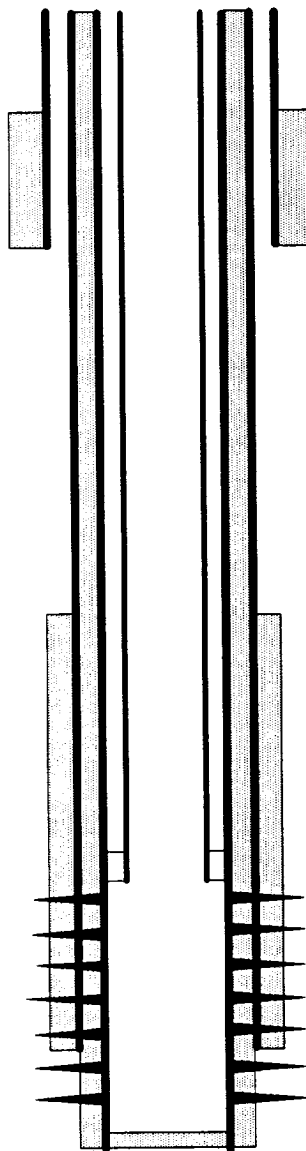
WELL NAME: MAX FRIESS #4			FIELD: GRAYBURG-JACKSON			
LOCATION: 1980'FNL & 660'FEL, SEC 30-T17S-R31E			COUNTY: EDDY			STATE: NM
ELEVATION: GL=3616'; KB=UNK			SPUD DATE: 08/26/57		COMP DATE: 10/06/57	
API#: 30-015-05471		PREPARED BY: C.H. CARLETON			DATE: 10/08/96	
	DEPTH	SIZE	WEIGHT	GRADE	THREAD	HOLE SIZE
CASING:	0' - 614'	10 3/4"	32.75#			
CASING:	0' - 3396'	7"	20#			
CASING:						
TUBING:	0' - 2840'	2 3/8"	4.7#	J-55	EUE 8rd	
TUBING:						



NOTE: FOR CALCULATED CEMENT TOPS A YIELD OF 1.32 CU FT/SX AND 50% FILLUP WERE ASSUMED.

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CASING:	0' - 3600'	4 1/2"	11.6#	J-55	LT&C	6 1/4"
TUBING:	0' - 2800'	2 3/8"	4.7#	J-55	EUE 8rd	
TUBING:						



☐ CURRENT

☒ PROPOSED

OPERATOR: DEVON ENERGY OPERATING CORPORATION

10 3/4" CASING, SET W/100 SXS. TOC @ 260'(calc)

INJECTION INTERVAL: 2850'- 3550'

BAKER AD-1 PACKER @ 2800'

PERFORATIONS: 2850'- 3550' (OA)

7" CASING SET W/100 SXS. TOC @ 2210' (TEMP SURVEY)

4 1/2" CASING. TOC @ SURFACE.
TD @ 3600'

NOTE: FOR CALCULATED CEMENT TOPS A YIELD OF 1.32 CU FT/SX AND 50% FILLUP WERE ASSUMED.

DEVON ENERGY OPERATING CORPORATION

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

A. Hydrogen Sulfide Training

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of the H₂S safety equipment and of personal protective equipment to be utilized at the location such as H₂S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
3. Proper rescue techniques and procedures will be discussed and established.

In addition to the above, supervisory personnel will be trained in the prevention of oil and gas well blowouts in accordance with Minerals Management Service Standards Subpart - 0 - 250 - 212.

Prior to penetrating any known H₂S bearing formation, all rig crews and company personnel will be required to have received appropriate H₂S training course and have certification of such training. All contract personnel employed on an unscheduled basis will be required to have received appropriate H₂S training.

This Hydrogen Sulfide Drilling And Operations Plan shall be available at the wellsite during drilling operations.

B. H₂S Safety Equipment And Systems

All H₂S safety equipment and systems will be installed, tested, and operational when drilling operations reaches a depth approximately 500' above any known or probable H₂S bearing formation. The safety systems to be utilized during drilling operations are as follows:

1. Well Control Equipment

- (a) Double ram BOP with a properly sized pipe rams to accommodate all pipe sizes in use.**

2. H2S Detection And Monitoring Equipment

- (a) Two (2) H2S detection monitors will be placed in service at the location. One monitor will be placed on the rig floor and, one will be at the working mud pits. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 20 ppm.**
- (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.**

3. Protective Equipment For Essential Personnel

Protective equipment will consist of the following:

- (a) One (1) - five minute escape pack will be available for the rig's derrick man.**
- (b) Two (2) - thirty minute rescue packs to be located at the designated briefing areas.**

4. Visual Warning System

Visual warning system will consist of the following:

- (a) Two wind direction indicators.**
- (b) One condition / warning sign which will be posted on the road providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered be at the location.**

5. Mud Program

- (a) The mud program has been designed to minimize the volume of H₂S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H₂S bearing formations.

6. Metallurgy

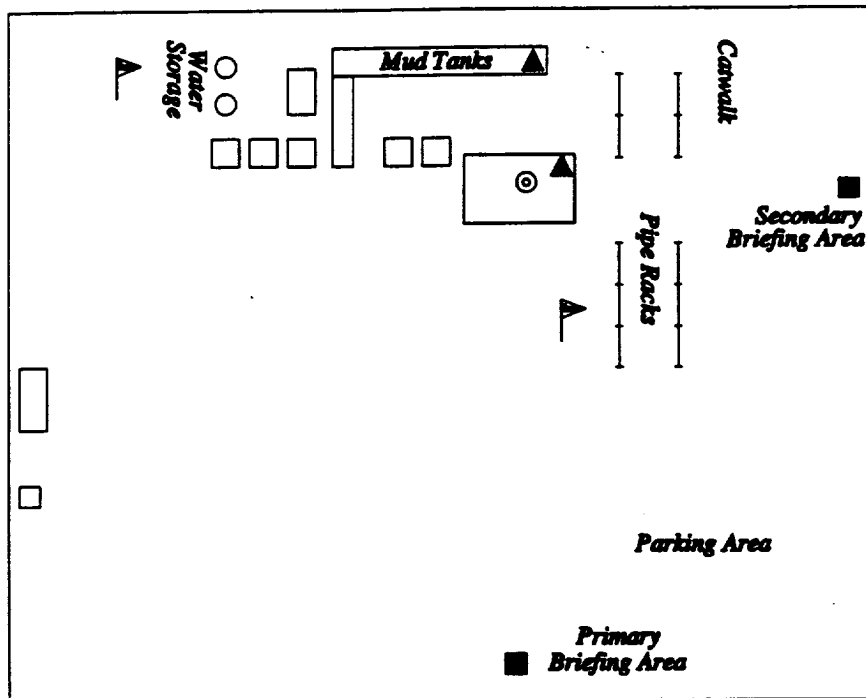
- (a) All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.

7. Communication

- (a) Two way radio and cellular telephone communication will be available in company vehicles.

C. Diagram Of Drilling Location

1. Attached is a diagram representing a typical location layout as well as the location of H₂S monitors, briefing areas, and wind direction indicators.



- ▲ H2S MONITORS WITH ALARMS AT THE RIG FLOOR, AND STEEL MUD PITS
- ▴ WIND DIRECTION INDICATORS
- SAFE BRIEFING AREAS WITH CAUTION SIGNS AND PROTECTIVE BREATHING EQUIPMENT



Devon Energy Operating Corp.

GRAYBURG-JACKSON AREA

EROY COUNTY, NEW MEXICO

H2S PLAN

Scale in Feet
25 0 25 50 75 100

EXHIBIT 1

MINIMUM BLOWOUT PREVENTER REQUIREMENTS

3000 psi Working Pressure

3 MWP

STACK REQUIREMENTS

No.	Item	Min. I.D.	Min. Nominal
1	Stripping head		
2	Two single or one dual hydraulically operated rams		
3	Tubing head W/2-2" outlets		
4	2" min. kill line and 3" min. choke line outlets in ram. (alternate to 3 above)		
5	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2"	
6	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2"	
7	Casing head		
8	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	1-13/16"	
9	Pressure gage with needle valve		

OPTIONAL

10	Flanged valve	1-13/16"	
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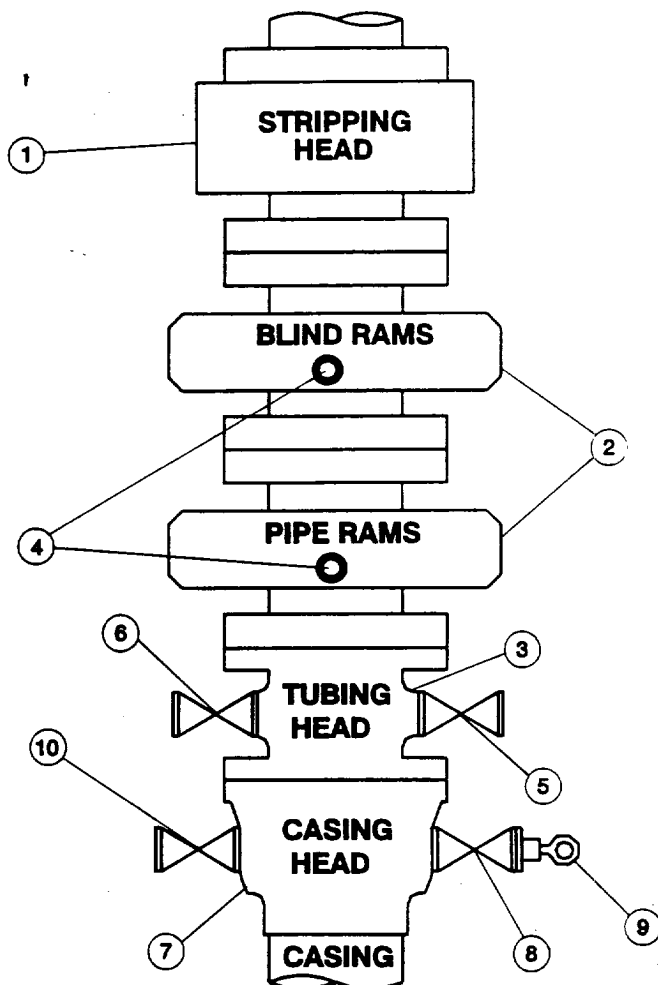
MEC TO FURNISH

1. Bradenhead or casinghead and side valves.
2. Wear bushing, if required.

GENERAL NOTES

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling manager.
2. All connections, valves, fittings, piping, etc., subject to well pump pressure must have minimum working pressure of preventers up through choke. Valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. All valves to be equipped with handwheels or handles ready for immediate use.
5. Choke lines must be suitably anchored.
6. Handwheels and extensions to be connected and ready for use.
7. All seamless steel control piping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
8. Casinghead connections shall not be used except in case of emergency.

CONFIGURATION A



H. E. WEST "A" & "B" WATERFLOOD EXPANSION

Deepening Wells Prior to Conversion

Devon Energy Operating Corporation plans to deepen the subject wells utilizing a completion unit in conjunction with a reverse circulating unit. A standard 3000 psi working pressure double ram BOP with a stripping head will be utilized. Since all wells proposed for deepening have casing set and are cemented below 2500', a conventional choke manifold is not needed. The BOP and stripping head have the capability of controlling flow while drilling and / or shutting the well in.

All drilling fluids will be contained in steel pits. No reserve pit will be needed. All proposed work will be contained on the original pad with no disturbance to the surrounding area.

The drilling mud program will be a 9.0 ppg - 10.0 ppg brine water. This should be sufficient weight to allow circulation of drilling fluids to the surface while at the same time controlling the reservoir pressures customary for this area.