

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

EXHIBIT TO THE PERMIT TO DRILL  
TO BE FILED WITH THE

30-039-23391  
3. LEASE DESIGNATION AND SERIAL NO.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL  
OIL WELL ☒ GAS WELL ☐ OTHER ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR  
Bolack Minerals Co.

3. ADDRESS OF OPERATOR  
P.O. Box 255, Farmington, N.M. 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface 1860 ft. fnl, 950 ft. fwl

At proposed prod. zone same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE  
Two miles north of Counselor's Trading Post

15. DISTANCE FROM PROPOSED LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any) 950'

16. NO. OF ACRES IN LEASE 480 ac.

18. DISTANCE FROM PROPOSED LOCATION TO NEAREST WELL, DRILLING COMPLETED, OR ABANDONED FOR, ON THIS LEASE, FT. None

19. PROPOSED DEPTH 5550 ft.

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
6795 ft. ground level, 6808 ft. estim. kelly bushing

22. APPROX. DATE WORK WILL START  
Jan., 1984

23. DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

PROPOSED CASING AND CEMENTING PROGRAM

This action is subject to administrative appeal pursuant to 30 CFR 290.

SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	CEMENT
12 1/4"	8 5/8"	24.0	200 ft. 193 cu. ft.
7 7/8"	4 1/2"	10.5	5,550 ft. 1,800 cu. ft. in 2 stages

Operator proposes to rotary drill a Gallup fm. test well to 5550'. A 12 1/4" hole will be drilled to 200 ft. and 8 5/8", 24.0 lb., J-55 casing set with approx. 195 cu. ft. of Class B cement circulated to the surface. A dual-ram, 900 series, 3,000 psi-test blow-out preventer will be installed & pressure-tested before drilling casing shoe. A 7 7/8" hole will be drilled to T.D. with a gel-based mud of appropriate properties. No abnormal pressure zones are anticipated. At T.D. and Induction-Electrical, formation density and compensated neutron log will be run. It is anticipated that 4 1/2 lb., 10.5 lb., J-55 casing will be run to T.D. and cemented with approx. 1,800 cu. ft. of pozmix cement in two stages to cover the Gallup and Ojo Alamo formations. Cement tops will be determined by temp. survey and cement bond log. The Gallup fm. will be selectively perforated, acidized and sand/water fractured with appropriate treatments & produced thru 2 3/8", 4.7 lb. tubing. Estimated drilling time 10 days, commencing in January, 1984. Estimated formation tops: Ojo Alamo Ss.-1440', Kirtland Sh.-1685', Fruitland fm.-1805', Pictured Cliffs Ss.-2035', Lewis Sh.-2105', Mesaverde Cliff House (over)

IN ABOVE SPACE IS SPACE FOR 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 1" vent preventer program, if any.

24.

SIGNED *William R. Speer* TITLE Agent

DECEMBER 21, 1983

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY

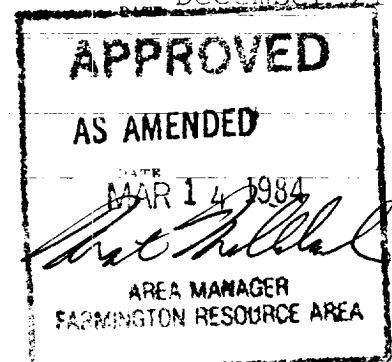
CONDITIONS OF A

RECEIVED

MAR 15 1984

OIL CON. DIV.  
DIST. 3

NMOCC



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

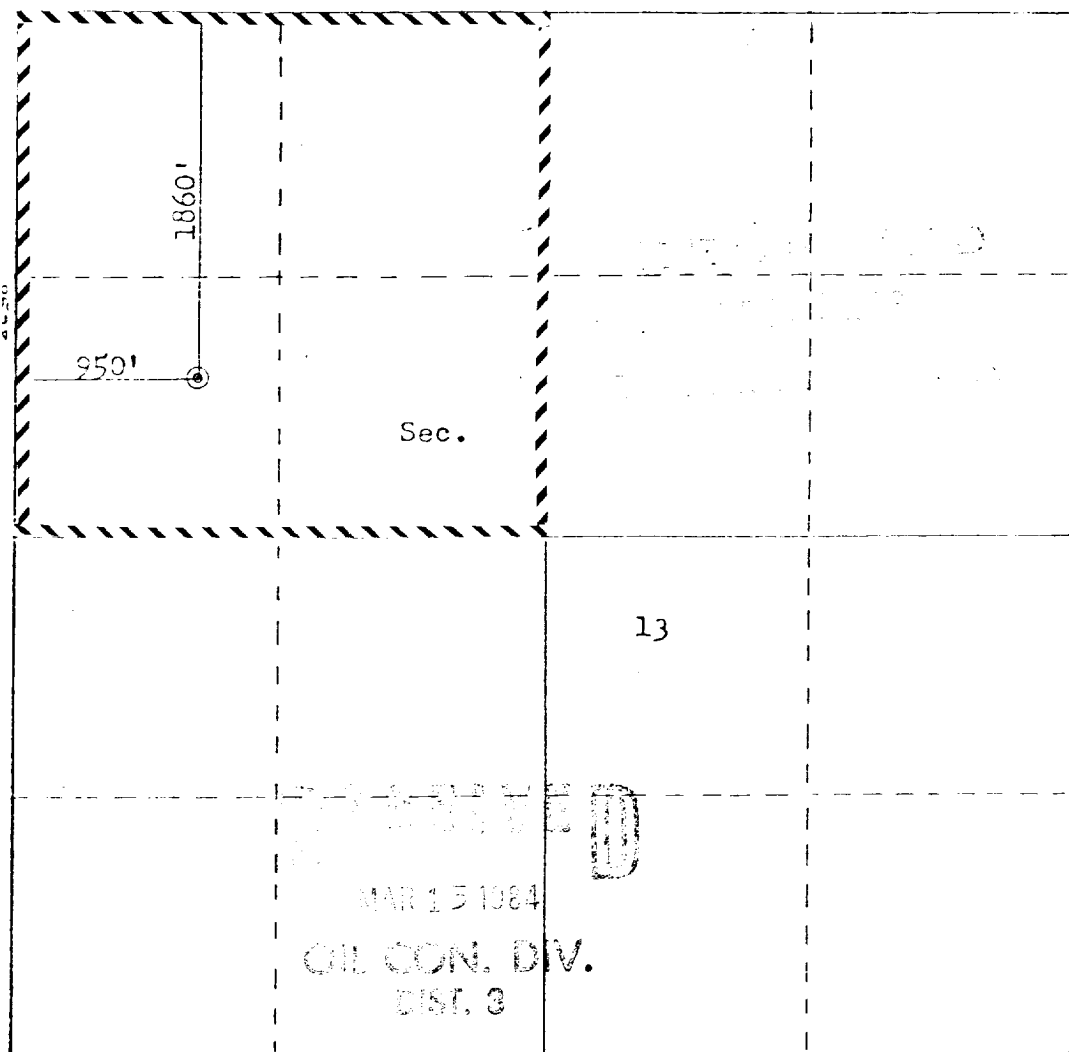
Operator <b>BOLACK MINERALS COMPANY</b>			Lease <b>GALLO CANYON</b>		Well No. <b>1</b>
Unit Letter <b>E</b>	Section <b>13</b>	Township <b>23N</b>	Range <b>6W</b>	County <b>Rio Arriba</b>	
Actual Footage Location of Well: <b>1860</b> feet from the <b>North</b> line and <b>950</b> feet from the <b>West</b> line					
Ground Level Elev. <b>6795</b>	Producing Formation <b>Gallup</b>	Pool <b>Counselor Gallup</b>		Dedicated Acreage: <b>160</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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.



Scale: 1"=1000'

CERTIFICATION

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

Name William R. Speer  
 Position Agent

Company Bolack Minerals Co.

Date December 19, 1983

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 December 11, 1983  
 Registered Professional Engineer and Land Surveyor  
Fred E. Kerr Jr.  
 Certificate No. 3950