

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY(Other lines on  
reverse side)

30-025-27024

5. LEASE DESIGNATION AND SERIAL NO.

NM 40658

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Buckskin Federal

9. WELL NO.

2

10. FIELD AND POOL, OR WILDCAT

Dollarhide - Queen

11. SEC., T., R., M., OR BLK.  
AND SURVEY OR AREA

Sec. 18, T24S, R38E

12. COUNTY OR PARISH

Lea

13. STATE

N.M.

## 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

Alpha Twenty-One Production Company

3. ADDRESS OF OPERATOR

2100 First National Bank Building

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.\*)

At surface

1874 FWL and 554 FSL, Section 18, T24S, R38E

At proposed prod. zone

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

Seven Miles Northeast of Jal, N.M.

15. DISTANCE FROM PROPOSED\*

LOCATION TO NEAREST  
PROPERTY OR LEASE LINE, FT.  
(Also to nearest drlg. unit line, if any)

660'

16. NO. OF ACRES IN LEASE

240

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.

150

19. PROPOSED DEPTH

4000'

20. ROTARY OR CABLE TOOLS

Rotary

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

3174 G.L.

22. APPROX. DATE WORK WILL START\*

10-15-80

23.

## PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15	12-3/4	33	30	Redimix to Surface
12-1/4	8-5/8	28	400	400 sx. (Circulate)
7-7/8	5-1/2	17	4000	600 sx. (Circulate)

A 10-3/4-inch 2000-psi Rotating Head will be used while drilling the surface hole. Before drilling out from under the surface pipe, the well will be equipped with a 3000-psi 10-inch Series 900 Double-Ram Hydraulic BOP System.

Note: For other necessary BOP Data Required with the APD, see the attached Drilling Prognosis.

RECEIVED

JUL 21 1980

U. S. GEOLOGICAL SURVEY  
HOBBS, NEW MEXICO

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

Tommy Phipps

TITLE Executive Vice President

DATE 7-9-80

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

APPROVED

DATE

AUG 28 1980

DISTRICT SUPERVISOR

\*See Instructions On Reverse Side

**N MEXICO OIL CONSERVATION COMMISS**  
**WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form 1-77  
 Supersedes 0-128  
 Date 1-1-78

All distances must be from the outer boundaries of the Section

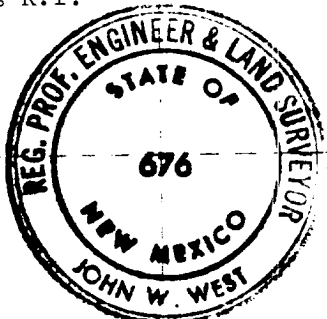
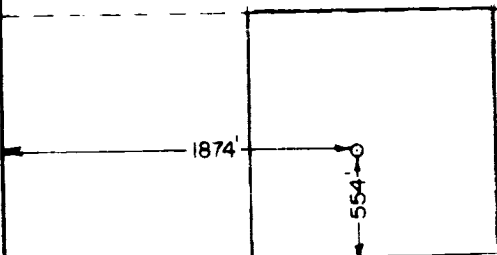
Operator <b>Alpha 21 Production Company</b>			Lease <b>Buckskin Federal</b>		Well No. <b>2</b>
Section <b>N</b>	Section <b>18</b>	Township <b>24 South</b>	Range <b>38 East</b>	County <b>Lea</b>	
Actual Well Location of Well:					
<b>554</b>	feet from the	<b>South</b>	line and	<b>1874</b>	feet from the <b>West</b>
Ground Level Elev. <b>3174.1</b>	Producing Formation <b>Queen</b>		Foot	Estimated Acreage <b>40 Acres</b>	

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 \_\_\_\_\_

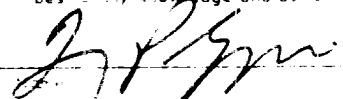
If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

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.

<p><b>Ownership:</b>                  Alpha Twenty-One Prod. Co.                  United States of America</p>	<p>100% W.I.                  12½% R.I.</p>	
		

**CERTIFICATION**

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

  
 Tommy Phipps

Executive Vice President

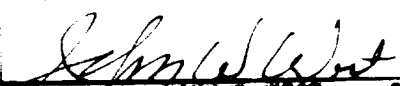
Alpha Twenty-One Production Co.

7-9-80

I hereby certify that the well location shown on this plat was plotted from field notes or 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.

July 1 & 2, 1980

Registered Professional Engineer and Land Surveyor



Certificate No. **JOHN W. WEST 676**  
**PATRICK A. ROMERO 8863**  
**Ronald J. Eidson 3239**

330 660 990 1320 1650 1980 2310 2640 2970 3300 3630 3960 4290 4620 4950 5280 5610 5940 6270 6600

## DRILLING PROGNOSIS

### I. Well Identification:

Lease Name: Buckskin Federal

Well No.: 2

Location: 554 FSL & 1874 FWL Section 18, T-24-S, R-38-E

County: Lea

State: New Mexico

Elevations: 3174 G. L.

### II. Drilling Objective:

• Zone: Queen

Total Depth: 4000

Pool Name: Dollarhide Queen

Productive Interval: 3750 - 3960

### III. Formation Tops:

Zone	Tops		Gross Interval Drilled	Probable Fluid Production
	Drilling Depth	Subsea Depth		
<u>Ogallala (Surface)</u>	<u>- - -</u>	<u>- - -</u>	<u>- - -</u>	<u>- - -</u>
<u>Dewey Red Beds &amp; Shale</u>	<u>-0-</u>	<u>-</u>	<u>-</u>	
<u>Rustler Anhydrite</u>	<u>1280</u>	<u>+ 1894</u>	<u>1280</u>	
<u>Salado Salt</u>	<u>1560</u>	<u>+ 1614</u>	<u>280</u>	
<u>Tansil</u>	<u>2700</u>	<u>+ 474</u>	<u>1140</u>	
<u>Yates</u>	<u>2810</u>	<u>+ 364</u>	<u>110</u>	
<u>Seven Rivers</u>	<u>3050</u>	<u>+ 124</u>	<u>240</u>	
<u>Queen</u>	<u>3600</u>	<u>- 426</u>	<u>550</u>	<u>Hydrocarbons</u>
<u>Grayburg</u>	<u>3960</u>	<u>- 786</u>	<u>360</u>	
<u>Total Depth</u>	<u>4000</u>	<u>- 826</u>	<u>4000</u>	

IV. Hole Size:

<u>Hole</u>	<u>Bit Size</u>	<u>T.D.</u>	<u>Gross Interval</u>
Conductor	<u>15</u>	<u>30</u>	<u>30</u>
Surface	<u>12 1/4</u>	<u>400</u>	<u>370</u>
Production	<u>7 7/8</u>	<u>4000</u>	<u>3600</u>

V. Casing Program:

A. Casing Design

<u>String</u>	<u>O.D.</u>	<u>Casing Size</u>		<u>Threads</u>	<u>Amount</u>	<u>Cond.</u>
		<u>Wt.</u>	<u>Grade</u>			
Conductor	12 3/4	33	B	8 Rd	30	New
Surface	8 5/8	28	B	8 Rd	400	New
Production	5 1/2	17.0	J-55	8 Rd	4000	New

B. Float Equipment:

Surface Casing: 8 5/8-inch guide-shoe and 8 5/8-inch insert float.

Production Casing: 5 1/2-inch guide-shoe and 5 1/2-inch float collar with  
automatic fill.

C. Centralizers:

Surface Casing: One Centralizer at the float collar and one centralizer  
two joints above float collar.

Production Casing: Run a total of 8 centralizers. Place one centralizer  
at the guide shoe and one centralizer at the float collar with the  
remaining being placed 80 to 90 feet apart or every other joint.

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D. Wellhead Equipment:

Larkin 8 5/8 x 5 1/2 Fig 92 Casinghead. Larkin 5 1/2 x 2 3/8

Type TH tubinghead complete with slips and bell nipple.

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VI. Mud Program

A. Surface Hole:

Drill surface hole with a fresh-water gel (approximately 8.5 lb/gal)  
while maintaining a high enough viscosity to adequately clean hole. Add  
paper as needed to control excess seepage. Before drilling below surface  
pipe, jet cuttings out of working pit into reserve pit and then switch  
from circulating through working pit to circulating through reserve pit.

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B. Production Hole:

Before entering salt section, switch mud system to a saturated salt system  
(10.1 lb/gal). At 2600', switch back out of reserve pit and back into  
working pit. Also, at this point, start adding starch and brine gel to lower water  
loss and raise viscosity. The mud shall have a water loss of 10 cc/30 min.  
and a viscosity of 34 to 36 sec. before reaching 2800' (top of Yates).

In order to protect the drill string, sufficient lime shall be added to the  
mud to maintain a safe PH level.

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## **VII. Cementing Program**

### **A. Surface Pipe:**

Cement surface pipe with approximately 400 sacks (or as required) of API  
Class-C cement containing 2% Calcium Chloride. Before resuming drilling  
operations, allow cement to set for a sufficient time to gain a 500-psi  
compressive strength (18 hours). Also, before drilling plug, the pipe shall  
be tested to 700 psi for 30 minutes.

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### **B. Production String:**

Cement long string with approximately 600 sacks of a 50-50 blend of Pozmix "A"  
and API Class-C containing 18% salt and 2% gel and having a slurry weight of  
14.1 lb/gal. Pump 30 barrels of water ahead of the cement to help remove the  
mud filter cake. Once top plug is bumped, pressure test casing to 1500 psi.  
The total specified cement volume of 600 sacks should be sufficient to bring  
the cement top back to the surface. Before the cement job  
is actually performed, the required cement volume will be checked against the  
open hole caliper log to determine the actual amount of cement necessary.

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VIII. Formation Evaluation:

A. Drilling Rate:

1. The drilling rate shall be monitored with a geolograph from the surface  
to total depth.  

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2. 

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B. Well Cutting Samples:

One set of well cutting samples shall be gathered every 10 feet from  
the surface to total depth. Each sample is to be cleaned, bagged, and  
tagged and then grouped into bundles of ten samples per bundle with one  
bundle representating each 100-feet drilled.  

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C. Mud Logging: From 2,000' to T.D.

D. Drill-Stem Testing: None

E. Coring: None

F. Well Logging:

Open-Hole Logs

Log	Interval	
	<u>2" = 100'</u>	<u>5" = 100'</u>
<u>CDL-Neutron-GR</u>	<u>T.D. - Surface</u>	<u>T.D. - 2000'</u>
<u>Guard - Forxo</u>	<u>T.D. - 2000'</u>	<u>T. D. - 2000'</u>
<u> </u>	<u> </u>	<u> </u>

Cased-Hole Logs

Log	Interval	
	<u>2" = 100'</u>	<u>5" = 100'</u>
<u>GRN-CCL</u>	<u>T.D. - 2000'</u>	<u>T.D. - 2000'</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Log Distribution

Company	No. of Copies	
	<u>Field Prints</u>	<u>Final Prints</u>
Alpha Twenty-One Production Company 2100 First National Bank Building Midland, Texas 79701	8	8
United States Geological Survey P. O. Box 1157 Hobbs, New Mexico 88240	0	2



IX. Blowout Preventer System:

A 10 3/4 2000-psi rotating head will be used while drilling the surface hole.

Before drilling out from under the surface pipe, the well will be equipped with a  
3000-psi 10-inch series 900 double-ram hydraulic preventer. The blowout preventer  
shall be used through the running of the production string.

Attached is a diagram of the required BOP system.

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X. Hazardous Zones:

None anticipated.

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XI. Duration of Operations:

The total elapsed time required for drilling and completing the subject well is  
expected to be 30 days.

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COUNTY	LEA	FIELD	Dollarhide	STATE	NM
OPR	ALPHA TWENTY-ONE PRODUCTION CO.			API	30-025-27024
NO	2	LEASE	Buckskin Federal	MAP	
	Sec 18, T24S, R38E			CO-ORD	
	554 FSL, 1874 FWL of Sec				1-3-17 NM
	16 mi SE/Eunice			SPD	10-6-80
				CMP	12-20-80

CSG	WELL CLASS: INIT D FIN DO LSE. CODE			
	FORMATION	DATUM	FORMATION	DATUM
	TD 4000 (QUEN)		PBD 3954	

IP (Queen) Perfs 3761-3809 P 35 BOPD + 10 BW. Pot  
 based on 24 hr test. GOR 571; gty 35

CONTR	OPRS ELEV	3174 GL	PD	4000 RT
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1-12-81  
 1-12-81  
 1-17-81  
 1-7-81

1-3-80  
 (Queen)  
 TD 4000; PBD 3954; Complete  
 Perf (Queen) @ 3761, 3767, 3772, 3773, 3774,  
 3775, 3799, 3802, 3805, 3807, 3809  
 Acid (3761-3809) 2000 gals  
 Frac (3761-3809) 50,000 gals + 110,000# sd  
 LOG TOPS: Rustler 1255, Tansill 2595,  
 Yates 2823, Queen 3618  
 COMPLETION ISSUED  
 RE-ISSUED TO ADD ACID, FRAC, LOG TOPS,  
 GRINDING & TUBING

1-3-17 NM  
 10 30-025-70447-80