(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

(Other instructions on reverse side)

Budget Bureau No. 42-R1425.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

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

2. NAME OF OPERATOR
Walter W. Krug DBA Wallen Production Company

3. ADDRESS OF OPERATOR
Box 1960, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
990 FWL & 330 FSL
At proposed prod. zone
Same as above

RECEIVED
MAR 21 1978
U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

5. LEASE DESIGNATION AND SERIAL NO.
NM 070315

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Wallen Federal Bass

9. WELL NO.
10 - 1

10. FIELD AND POOL, OR WILDCAT
Middle Eumont Yates, 7-Rivers UNDESIGNATED

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 21, T20S, R34E

12. COUNTY OR PARISH
Lea

13. STATE
New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
28 miles WNW from Eunice New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 330'

16. NO. OF ACRES IN LEASE
640

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. 4800'

19. PROPOSED DEPTH
3650'

20. ROTARY OR CABLE TOOLS
Cable Tool

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 3672

22. APPROX. DATE WORK WILL START*
4/15/78

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
15½"	13 3/8	72#	225	300Sxs Class "C" CIRCULATE
12¼"	10 3/4"	48#	750	Mudded in
10"	8 5/8"	32#	1200	Mudded in
8"	7"	23#	3300	1000 Sxs Class "C" w/ 2% Gel & ¼# flocele/Sx.
Liner 6¼"	4½"	10½#	3650'	50 Sxs Class "C" w/¼# flocele/Sx. CIRCULATE

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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 Walter W. Krug TITLE Engineer DATE 3/10/78

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NE EXICO OIL CONSERVATION COMMISSIC

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.
WALLEN PRODUCTION CO.	FEDERAL	10

Unit Letter	Section	Township	Range	County
"M"	21	-20-S	-34-E	LEA

Actual Footage Location of Well:
330 feet from the SOUTH line and 990 feet from the WEST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3672	YATES & SEVEN RIVERS	MIDDLE LYNCH ~~UNDESIGNATED~~ YATES SEVEN RIVERS	40 Acres

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

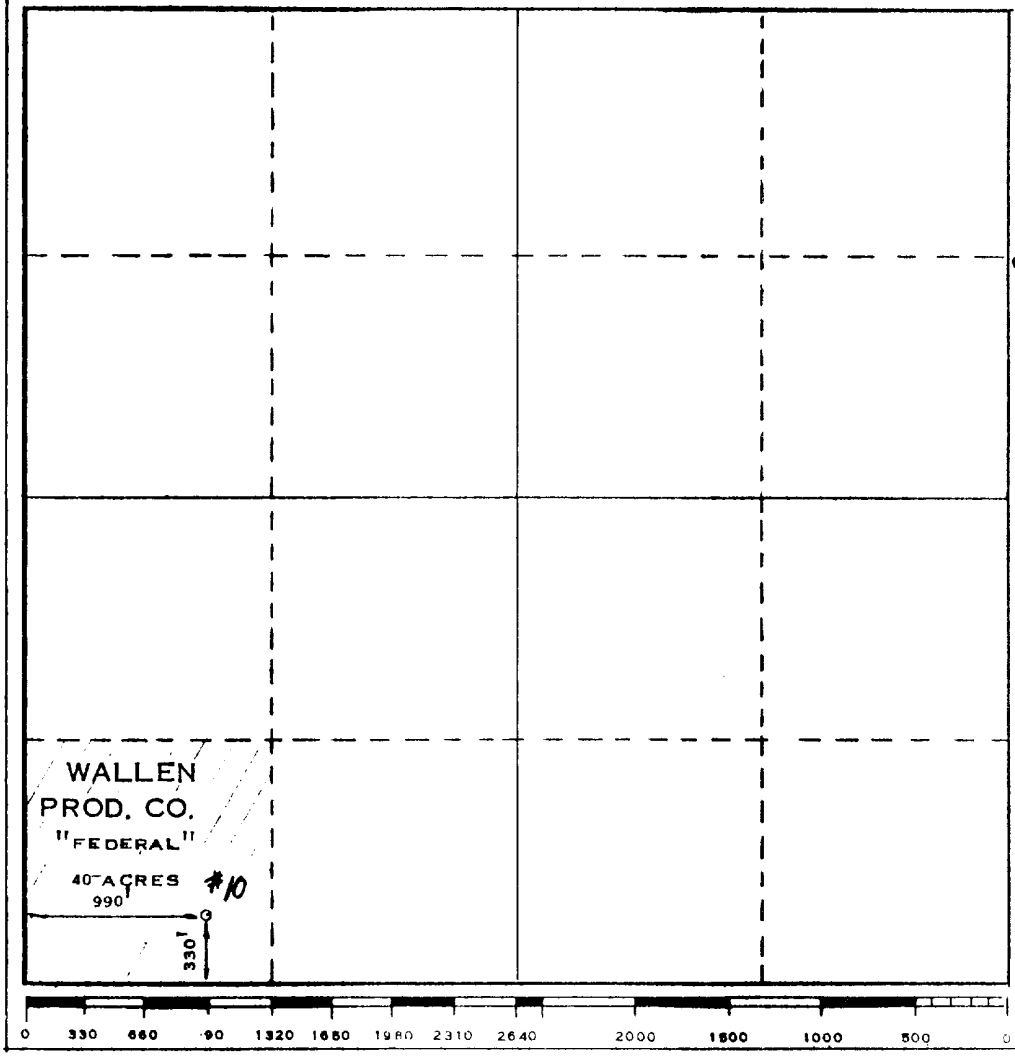
2. **If more than one lease** is dedicated to the well, **outline each and** identify the ownership thereof (both as to working **interest and royalty).**

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.

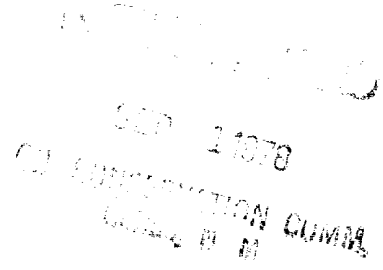
Name: Walter D. Krug
Position: Engineer
Company: Wallen Prod. Co.
Date: 3/14/78

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
MARCH 7, 1978

Registered Professional Engineer and/or Land Surveyor
MAX A SCHUMANN JR

Certificate No.
1510



OPTIONAL FORM NO. 10
MAY 1962 EDITION
GSA FPMR (41 CFR) 101-11.6

UNITED STATES GOVERNMENT

Memorandum

TO : Oil and Gas Supervisor, SRMA
Through: Mining Supervisor, SRMA

DATE: May 24, 1978

FROM : District Engineer, Hobbs

SUBJECT: Application for Permit to Drill, Potash Area, lease L.C. 070315

Transmitted herewith is Walter W. Krug dba Wallen Production Company's Application for Permit to Drill in the SW¼SW¼ sec. 21, T. 20 S., R. 34 E., Lea County, New Mexico, to a depth of 3650 feet to test the Yates and Seven Rivers formation.

The drillsite is in the Secretary's Potash area as designated on October 16, 1951, and is in the Oil Conservation Commission's R-111-A area. Drilling and casing programs are believed to be adeauate.

The Application for Permit to Drill is in order for approval.

James F. Sims

cc: Mining Supervisor, SRMA

Conservation Division
P. O. Box 26124
Albuquerque, New Mexico 87125

Walter W. Krug
Wallen Production Company
P. O. Box 1960
Midland, Texas 79701

Dear Mr. Krug:

Your Application for Permit to Drill well No. 1 Bass in the SW¼SW¼ sec. 21, T. 20 S., R. 34 E., Lea County, New Mexico, lease Las Cruces 070315, to a depth of 3650 feet to test the Yates and Seven Rivers formation in the Oil Potash area is hereby approved, as amended by stipulations attached to the application.

One copy of the application is returned herewith. Please notify the District Engineer, Geological Survey, Hobbs, New Mexico, in sufficient time for a representative to witness all cementing operations.

Sincerely yours,

Enclosure

cc: Conservation Manager, Denver
Area Mining Supervisor, Albuquerque (2)
NMOCC, Hobbs (2) (w/2 copies Notice)
Roswell Area Office (2)
Hobbs District Office

EIA NO. 283

APPLICATION FOR PERMIT TO DRILL
CHECK SHEET

Lease No. LC 070315

Walter W. Krug
Operator DBA Walker Prod. Co Expires _____ Prod. X

Well No. 1 Bass [ ] Exploratory Well

Location 330/s - 990/w "M" Sec. 21-20-34 [X] Development Well

APD
~~Data Sheet~~ to BME 3-21-78 Returned 3-27-78 . . . . . [X]

Surface Use to BLM 3-22-78 Returned 4-5-78 . . . . . [X]

Surface ownership Federal Surf. Owner Agree Rec'd — . . . . . [X]

BOND COVERAGE ADEQUATE. . . . . [X]

Lessee Bass Enterprises Prod Co Bond Coverage by 120-2 Lessee NM
Perry R. Bass

EIA COMPLETED . . . . . [ ]

Field Inspection set for _____ Field Insp. Comp. _____
EIA Written _____ EIA Completed _____

WELL LOCATION REQUIREMENTS MET . . . . . [X]

Special Pool Rules [X] State Wide Rules [ ]

DRILLING REQUIREMENTS MET . . . . . [X]

Casing Program ✓ Cementing Program ✓ Mud Program ✓
BOP Program ✓ Mud Monotor Equip. ✓ DPSU Adequate _____
"10-Point" CK Sheet 3-22-78 Surface Use CK Sheet 3-22-78

LEASE EXTENSION BY DRILLING APPLICABLE No . . . . . [X]

Lease extended by prod? _____ End of primary term as defined _____

POTASH AREA REQUIREMENTS MET . . . . . [X]

Well in Secretary's Area Yes Well in R-111-A Area Yes
Does lease have proper Potash Stipulation _____
Mining Supervisor Contacted _____

REMARKS Approval from Potash Company received 4-3-78
Rec'd O.K. Gamma-Ray + Sonic logs to Carey Salado

Std "A" stips + 10 + 11

+ a Gamma-Ray - etc.

1. Geologic name of the surface where the Federal #10 is located is the Quarternary (Alluvium and sand).
2. The estimated tops of the geologic markers are:

A. Rustler (Anhydrite)	= 1350'
B. Top Salt	= 1473'
C. Base of Salt	= 3155'
D. Lime	= 3182'
E. Yates	= 3450'
F. Reef (Seven Rivers)	= 3675'

3. a. Surface Water = 195'
   b. Santa Rosa Water = 835'
   c. Yates Sand Oil = 3450'
   d. Seven River Reef Oil = 3675'
4. Control equipment is a 1500# W.P. control head with double oil saver (if needed) (this will be a cabletool rig).
5. Drilling fluid is fresh water.
6. Logging program will be Gamma Ray-Neutron with CCL.
7. Estimated drilling duration is 60 days.

Walter W. Krug DBA Wallen Production Company

DEVELOPMENT PLAN FOR SURFACE USE

Wallen Federal # 10 Well
990' FWL and 330 FSL
Section 20, T 20 S,
R 34 E, Lea County,
New Mexico

The following discussion answers the items 1 through 12, concerning the above subject well.

1. AERIAL MAP

Plat # 1 is a portion of a USGS topographic map, Lea County, New Mexico, showing existing roads. The location is approximately 26½ miles from Hobbs. The location is along the county road.

2. LOCATION OF EXISTING WELLS

Plat # 2 shows all of the wells and dry holes within a one (1) mile radius of the proposed location.

3. PROPOSED WELL LOCATION

Plat # 3 shows the rig location with North orientation marker.

a. Mat size is 140' x 180'.

b. Surfaced with 8" of compacted, watered and levelled caliche from BLM quarry.

c. Pit is 40' x 60' x 8' deep.

d. Cut and fill isn't necessary, here the location is nearly level and only requires caliche.

e. Entrance road is 380' long and comes off of the county maintained road.

f. SETTING AND ENVIRONMENT

1. Terrain is gently rolling sand (see Plat # 1).

2. Soil is a very sandy clay.

3. Vegetation is scrub oak, mesquite, gramma grass, spanish dagger, general desert weeds and sand burrs.

4. Surface use is for grazing.

5. Other the area is nearly flat semi-arid desert country and is probably considered a low environmental risk area, There should be very little (if any) environmental effect of drilling and producing in this vicinity.

g. Distances to

1. Ponds and streams - there are none within 6 miles.

2. Water wells - none within one mile.

3. Residences and buildings - none within 6 miles.

4. Arroyos, Canyons, etc none within 1½ miles.

h. Well sign there will be a well sign at the entrance of the road.

i. Open Pit will be guarded while drilling, fenced while we are completing the well and then closed in.

. ROADS

Plat # 1 shows all roads within 3 miles or more. Planned entrance is staked and road will be 80' long and 15' wide and will be caliched with 8" mat note Plat # 3. There are no fences, gates or cattle guard.

. TANK BATTERY

Plat # 4 shows the existing Fee tank battery in NW/4 of NW/4, Section 21, T 20 S, R 34 E.

. LEASE PIPELINES

Plat # 4 shows all existing oil pipelines and salt water line and disposal well. This plat also shows the proposed oil flow line from this well if oil is established.

. WASTE DISPOSAL

Well cuttings will be disposed of in slush pit. Barrel trash containers are on location and contents will be burned or buried with a minimum of 23" of dirt cover. Produced water will be disposed of by injecting in our own salt water disposal well.

. WATER SUPPLY

Our water is hauled by commercial haulers.

. ARCHAEOLOGICAL RESOURCES

None in the surrounding area.

0. RESTORATION OF SURFACE

Should the well be productive the pit will be back filled as soon as practical.

1. OPERATORS REPRESENTATIVE

Walter W. Krug
P. O. Box 1960
Midland, Texas 79701

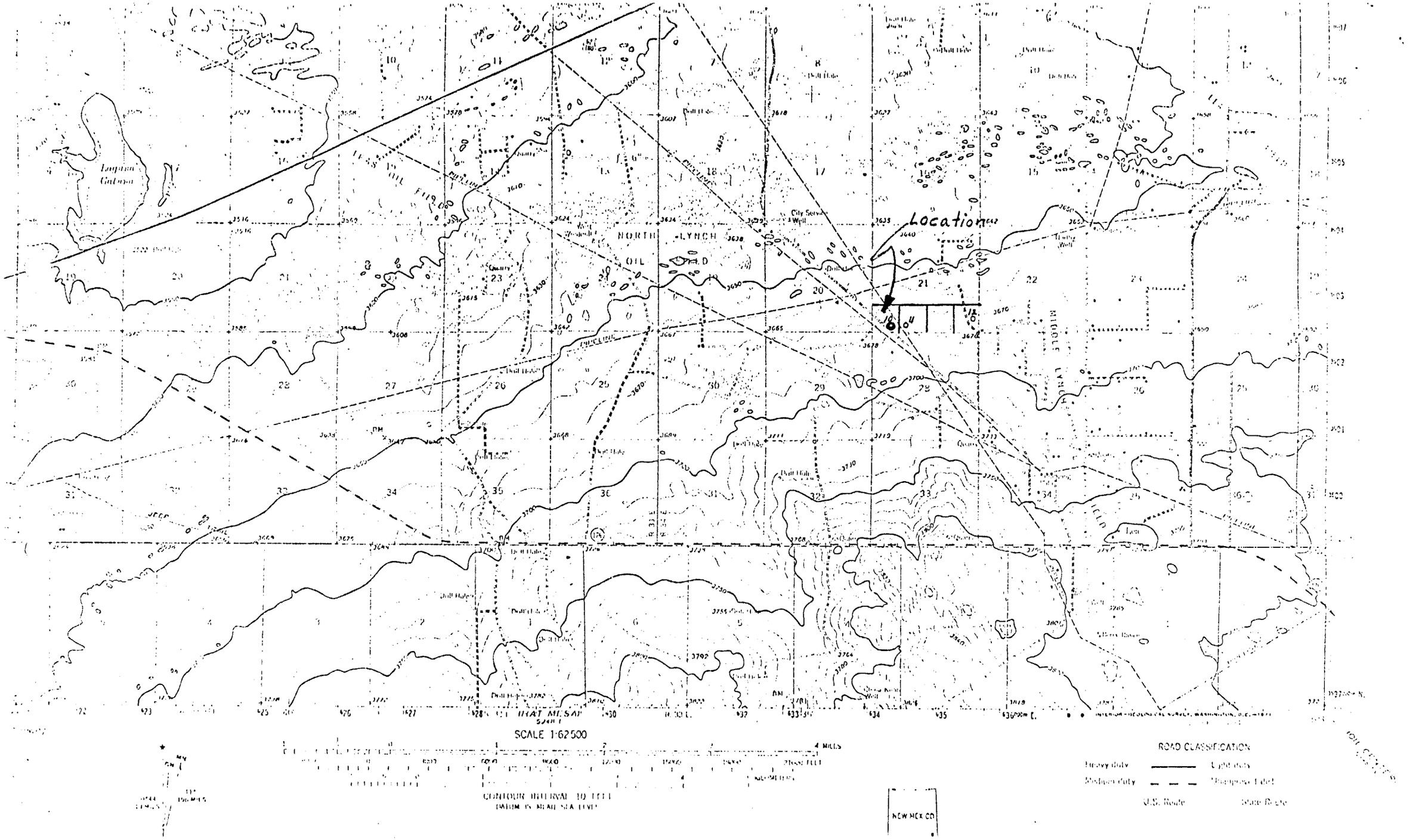
office phone ac 915- 683-2600
ac 915- 683-6526
home phone ac 915- 563-0048

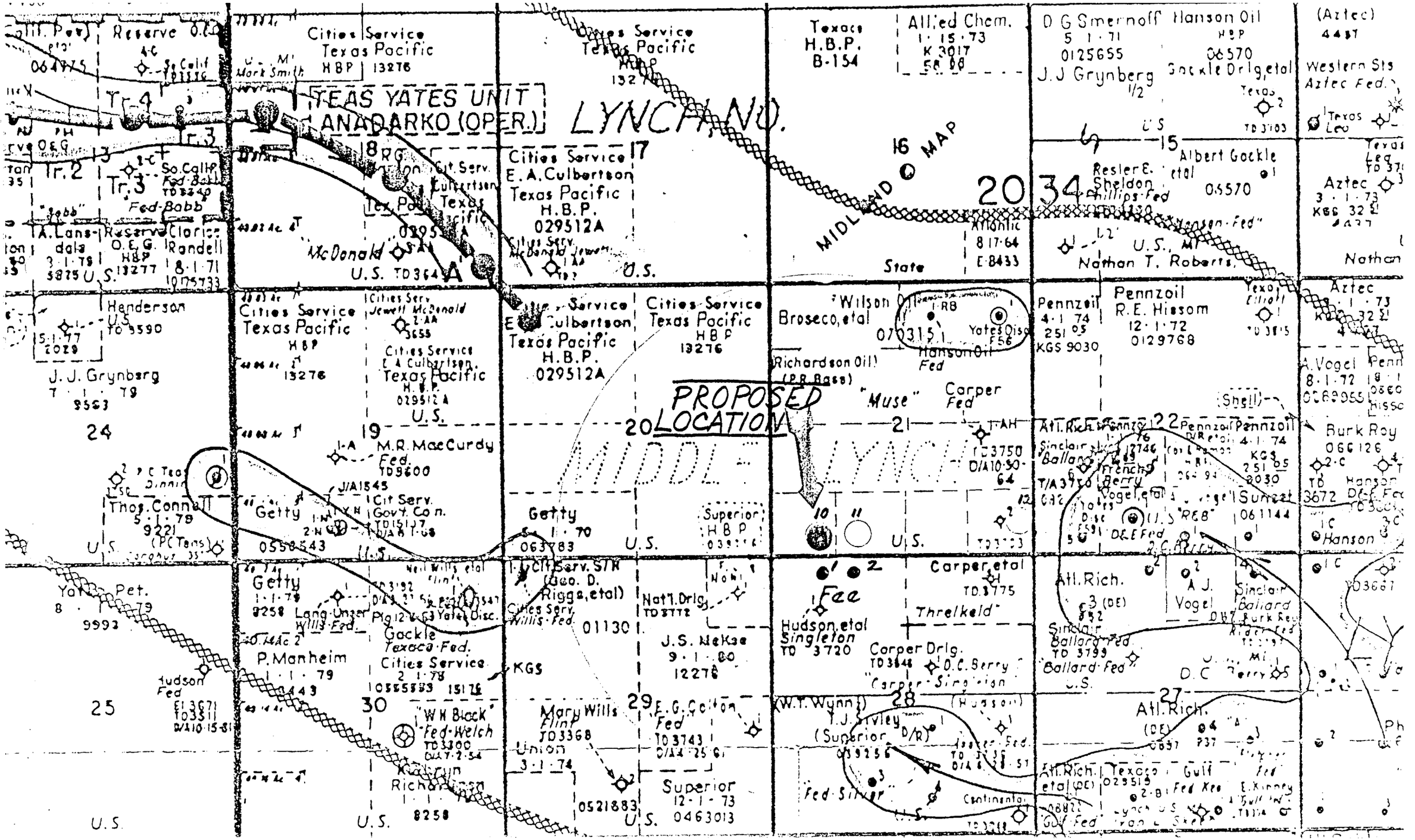
2. CERTIFICATION

I hereby certify that I have inspected the proposed drillsite and access route; that I am familiar with the conditions as they exist. The statements made in this plan are, to the best of my knowledge, true and correct and that the proposed work performed by Wallen Production Company its contractors and sub-contractors will conform to this plan.

March 13, 1978

Walter W. Krug
Engineer and authorized agent

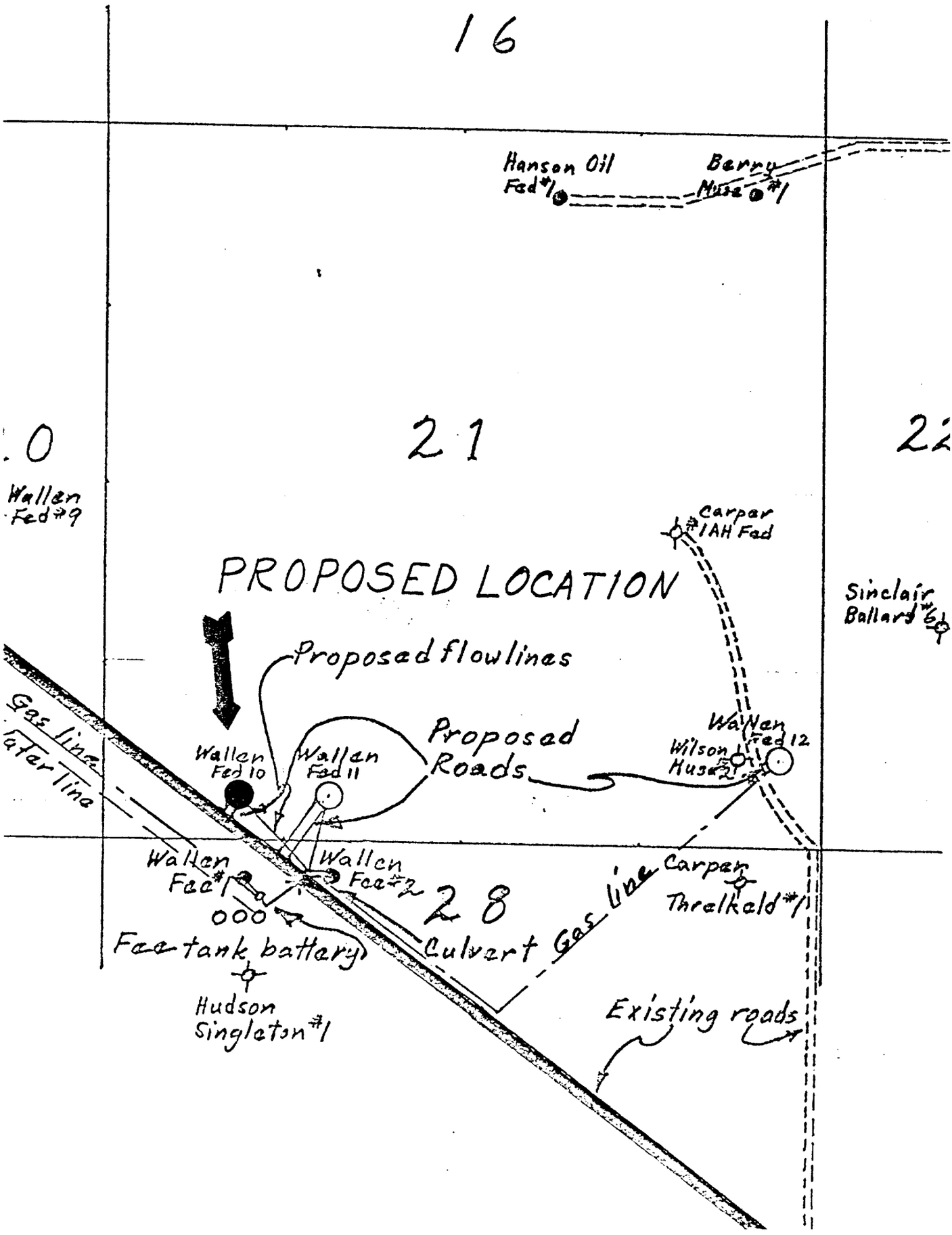

Location
NORTH LYNCH OIL FIELD
Laguna Gatuna
SCALE 1:62500
4 MILES
CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
Heavy duty
Light duty
Medium duty
Unimproved dirt
U.S. Route
State Route
NEW MEX CO

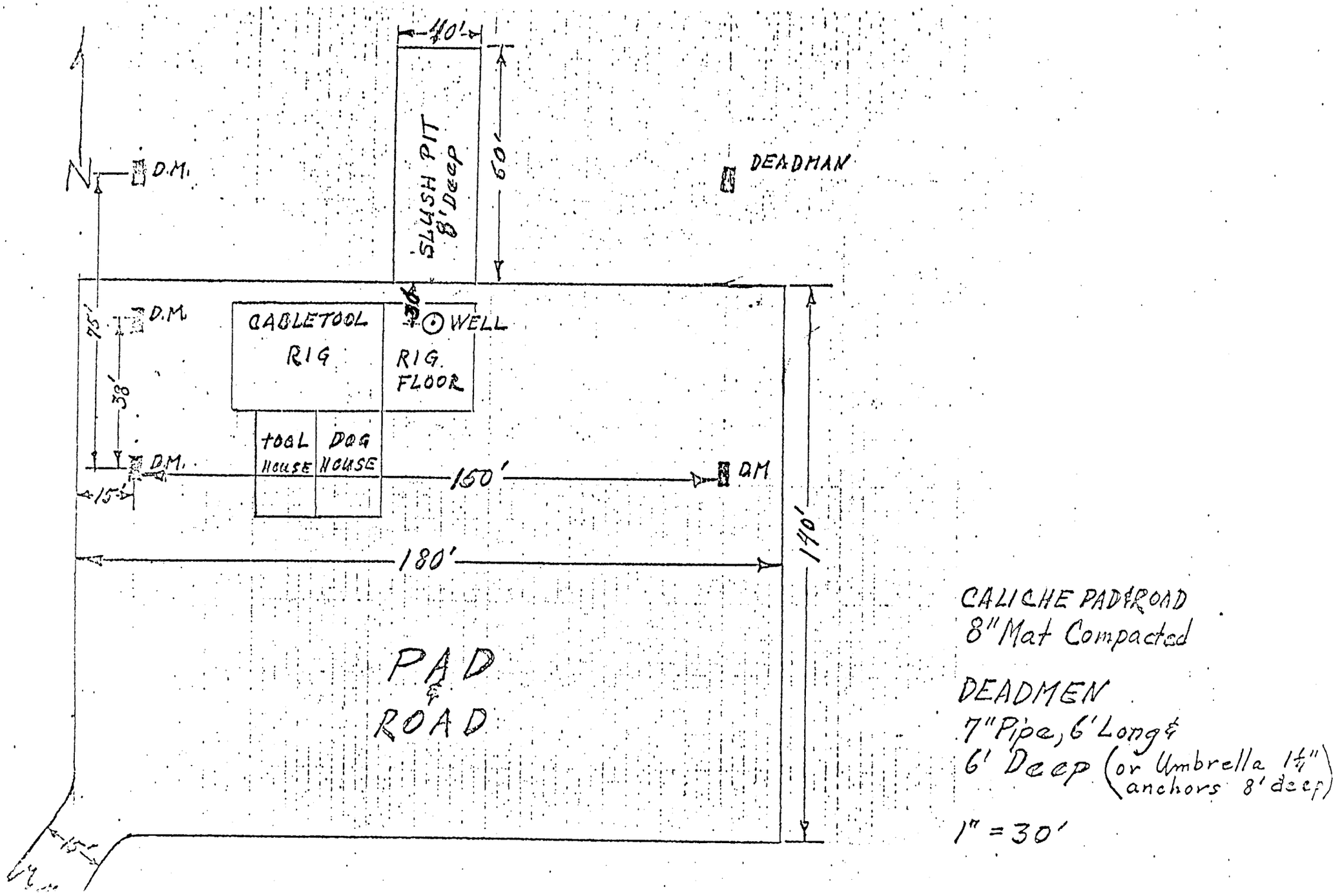

TEAS YATES UNIT
ANADARKO (OPER.)
LYNCH NO.
PROPOSED LOCATION
MIDDLE LYNCH
MIDLAND MAP
Reserve O.&G.
So. Calif. Pet.
Cities Service
Texas Pacific
HBP
13276
Texaco
H.B.P.
B-154
Allied Chem.
1-15-73
K 3017
D G Smernoff
5-1-71
0125655
J.J Grynberg
1/2
Hanson Oil
HBP
06570
Sockle Drlg. etal
Texas
TD 3103
(Aztec)
4457
Western Sts
Aztec Fed.
Albert Gockle
06570
Resler E. Sheldon
Phillips Fed
Nathan T. Roberts
Aztec
3-1-73
KBG 32 ft
Nathan
Tr. 4
Tr. 3
Tr. 2
Tr. 1
A. Lansdale
3-1-79
3875
Reserve O.E.G.
HBP
13277
Clarice Randell
8-1-71
0175733
So. Calif. Fed-Babb
TD 3549
Fed-Babb
McDonald
U.S. TD 3644
Cities Service
E.A. Culbertson
Texas Pacific
H.B.P.
029512A
Atlantic
8-17-64
E-8433
State
Henderson
U.S.
TD 3590
5-1-77
2029
J. J. Grynberg
7-1-79
9563
24
Cities Service
Texas Pacific
HBP
13276
Jewell McDonald
2-AA
3655
Cities Service
E.A. Culbertson
Texas Pacific
H.B.P.
029512A
U.S.
19
M.R. MacCurdy
Fed.
TD 9600
J/A 1545
Cit Serv.
Govt. Com.
TD 9151
D/A 8-1-68
Getty
2-NW
0558543
Cities Service
E.A. Culbertson
Texas Pacific
H.B.P.
029512A
Cities Service
Texas Pacific
HBP
13276
Getty
5-1-70
063783
Superior
H.B.P.
039256
20
Wilson Oil
Broseco, etal
1-RB
07031S1
Yates Disc.
F56
Hanson Oil
Fed
Richardson Oil
(P.B. Bass)
"Muse"
Carper
Fed
T-AH
TD 3750
D/A 10-30-64
2
10
11
12
Pennzoil
4-1-74
251 05
KGS 9030
Pennzoil
R.E. Hissom
12-1-72
0129768
Yates Elliott
TD 3815
Pennzoil
Atl. Rich.
Sinclair
Ballard
Fed
T/A 3750
French
Berry
Vogel, etal
Shell
Pennzoil
4-1-74
KGS
251 05
9030
Sunset
061144
22
Aztec
3-1-73
KBG 32 ft
A. Vogel
8-1-72
0189955
Burk Roy
066126
2-C
TD 3672
Hanson
Yates Pet.
8-1-79
9993
Hudson
Fed
25
EL 3671
TD 3511
D/A 10-15-81
Getty
1-1-79
9258
Lang-Unger
Wills-Fed
P. Manheim
1-1-79
9443
Gockle
Texaco-Fed.
Cities Service
2-1-78
0555583
30
W.H. Block
Fed-Welch
TD 3300
Oct 7-2-54
Kilgrum
Richardson
8258
Cities Serv.
(Geo. D. Rigg, etal)
Cities Serv.
Willis Fed
01130
Nat'l. Drlg.
TD 3772
J.S. McKee
9-1-80
12278
KGS
Mary Wills
Flint
TD 3368
Union
3-1-74
0521883
29
E.G. Colton
Fed
TD 3743
D/A 4-25-61
Superior
12-1-73
0463013
Fee
Hudson, etal
Singleton
TD 3720
Carper, etal
TD 3775
Threlkeld
Carper Drlg.
TD 3648
D.C. Berry
"Carper-Singleton"
28
(W.T. Wynn)
T.J. Sivley
(Superior D/R)
039256
Fed-Silver
Continental
TD 3618
Atl. Rich.
A.J. Vogel
Sinclair
Ballard
Burk Roy
Fed
TD 3799
Ballard-Fed
D.C. Berry
27
Atl. Rich.
(DE)
0657
P37
Atl. Rich. etal
(DE)
Texaco
029515
Gulf
Fed Xee
E. Kinney
Gulf Fed
U.S.
U.S.
U.S.
U.S.
U.S.
U.S.
U.S.
U.S.

WALLEN PRODUCTION CO. - FED #10

SE/4, SW/4, SW/4, Sec. 20, T20S, R34E

LEA COUNTY, NEW MEXICO




140'
SLUSH PIT
8' Deep
60'
D.M.
DEADMAN
75'
D.M.
CABLETOOL
RIG
WELL
RIG.
FLOOR
38'
TOOL
HOUSE
DOG
HOUSE
D.M.
150'
D.M.
15'
180'
140'
PAD
&
ROAD
15'
CALICHE PAD & ROAD
8" Mat Compacted
DEADMEN
7" Pipe, 6' Long &
6' Deep (or Umbrella 1¼"
anchors 8' deep)
1" = 30'

PRE DRILLING INSPECTION

PERATOR Walter Krug dba Krug Prod. WELL NAME No. 1 BASS ~~Federal~~

OCATION SW¼ SW¼ SEC. 21 T. 20S R. 34E

EASE NO. L.C. 070315 SURFACE OWNER FEDERAL

Is Location Under Any Restrictions? YES X NO

Secretary's Potash Area
R-111-A Area

RAVEL LOG FROM POPULATION CENTER: 22.4 miles west of Hobbs on 62-180
4.1 miles south on main lease road

ENGTH OF NEW ROAD 150' WIDTH 12'

URFACING Caliche CUTS OR FILLS None

STANCES TO:

SURFACE WATER None WATER WELLS 1.9 miles northeast

RESIDENCE OR BUILDING 3.5 mi. S.E. PRODUCING WELL 660' South

PIPELINES — FENCES — GATES —

ARROYOS, HILLS, GULLEYS None

ITTING AND ENVIRONMENT:

TOPOGRAPHY flat to gently sloping north

SOIL Sand SURFACE USE Grazing

VEGETATION Shinnery, grass, yucca, mesquite, weeds

RCHEOLOGICAL RESOURCES: None

OTHER: —

RTIES PRESENT: Gary Stephens -- USGS

GNED: Gary Stephens DATE MARCH 23, 1978

U. S. GEOLOGICAL SURVEY
P. O. Box 1157
HOBBS, NEW MEXICO 88240

/ / Exploratory
/X/ DEVELOPMENT

Date 3-22-78

District Manager
Bureau of Land Management
P. O. Box 1397
Roswell, New Mexico 88201

Lease No. L.C.070315

Sec. 21 T. 20 S R. 34 E

Footage 330/S-990/W Test Depth 3650

County Lea State N.M.

TRANSMITTAL OF SURFACE USE PLAN

Operator Wallen Production Co. Well 1 Bass 10 ~~Wallen Federal~~

We do not plan to schedule a formal BLM-GS pre-drilling inspection with the operator on this proposed action, but if you wish that one be made, please advise and we will then schedule a formal inspection.

If the proposed action meets with your approval, please acknowledge in the space below and return the carbon copy to this office, and we will approve the application.

RECEIVED
APR 5 1978
U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

Amanda A. Sapp
Geological Survey

Surface Owner

[X] Federal

[ ] Non-Federal

D. C. Berry Est.

I concur with approval of the Application for Permit to Drill and/or the surface Development and Operation Plan provided the following conditions are included in the approval.

4/3/78
Date

Bureau of Land Management

Conditions: See Attached

Date 11/16/82

BUREAU OF LAND MANAGEMENT
ROSWELL, NEW MEXICO

Lease # L.C. 070315

Operator Wallace Prod. Co.

Well Name 1 Bass

Location S21 T20S R34E
330/S & 990/W

"STANDARD STIPULATIONS FOR ALL DRILLING
IN RELATION TO OIL AND GAS ACTIVITIES
IN THE ROSWELL DISTRICT"

(The following list of 12 stipulations are some of the more commonly used stipulations for oil and gas drilling operations in southeastern New Mexico. The blocks checkmarked designate the stipulations applicable to the particular drilling permit listed above. Special or additional stipulations (if any) are written in under #13)

☒ 1. If, during operations, the operator or any person working in his behalf, discovers any historic or prehistoric ruin, monument or site, or any object of antiquity subject to the Antiquities Act of June 8, 1906, (34 Stat. 225, 16 U.S.C. Secs. 431-433), and 43 CFR Part 3, then work will be suspended and the discovery promptly reported to the District Manager. The Bureau will then take such action as required under the Act and regulations thereunder. When directed by the BLM authorized officer, the operator will obtain, at his expense, a qualified archaeologist to examine and, if necessary, excavate or gather such ruins or objects.

☒ 2. All access roads constructed in conjunction with the drilling permit should be limited to 12 feet in width, excluding turnouts. If well is a producer, all roads will be adequately drained to control runoff and soil erosion. Drainage facilities may include ditches, water bars, culverts and/or any other measure deemed necessary by the BLM authorized officer. The following is a general guide for the spacing of water bars:

% Slope	
less than 2%	.200 ft.
2% to 4%	.100 ft.
4% to 5%	75 ft.
more than 5%	50 ft.

☐ 3. Each existing fence to be crossed by the permittee will be braced and tied off before cutting so as to prevent slacking of the wire. The opening will be protected as necessary during construction to prevent the escape of livestock and upon completion of construction, the fence will be repaired back to the original standard of the existing fence. A cattleguard will be installed in any fence where a road is to be regularly traveled. A twelve foot gate will be installed adjacent to the cattleguard when directed by the BLM authorized officer.

☒ 4. Any "available" topsoil encountered during the construction of the drill site area will be stockpiled. The pit surface will be covered with stockpiled soil following the completion of the drilling operations.

Vegetative materials removed during construction must be disposed of in such a manner that it does not detract from the aesthetics and does not accelerate erosion. When clearing the area of operations of vegetation and other grasses, the vegetation removed will be placed in drainages, washes, gullies and be walked down by crawler type tractor. If no drainages are in the immediate area, the vegetation will be walked down in place.

Any large rocks left as a result of construction activities will not be piled or left in rows, but will be left so they do not detract from the scenic view of the area and do not hinder the movement of livestock or big game animals.

After construction has been completed, the affected area will be left in an aesthetically pleasing condition.

☒ 5. "Caliche" for use in the construction of the drill pad and access road shall be obtained from existing authorized pits, as determined by the responsible BLM representative. No new pits shall be opened without prior approval from the BLM authorized officer.

☒ 6. The "mud pits" shall be well constructed and under no circumstances will they be allowed to leak or be cut to drain. They shall not be located on natural drainages, waste or discharge of any kind will not be allowed to enter any drainage. Any plastic material used to line pits and/or sumps shall be cut off below ground level, as far down as possible, and disposed of before the pits are covered. All unattended pits, containing liquids, will be fenced and the liquid portion allowed to evaporate before the pits are broken.

☐ 7. For the protection of livestock and wildlife all pits containing toxic liquids will be fenced and covered with a fine mesh netting (i.e., Hardware Cloth) with openings being ½ inch or less.

☒ 8. All waste associated with the drilling operation will be (buried within a separate trash pit) ~~(removed and deposited in an approved sanitary landfill~~) within one month after removal of the drilling rig. All garbage and debris left on the site will be buried at least three feet deep and metal containers will be crushed. The permittee will comply with all state laws and regulations pertaining to the disposal of human waste.

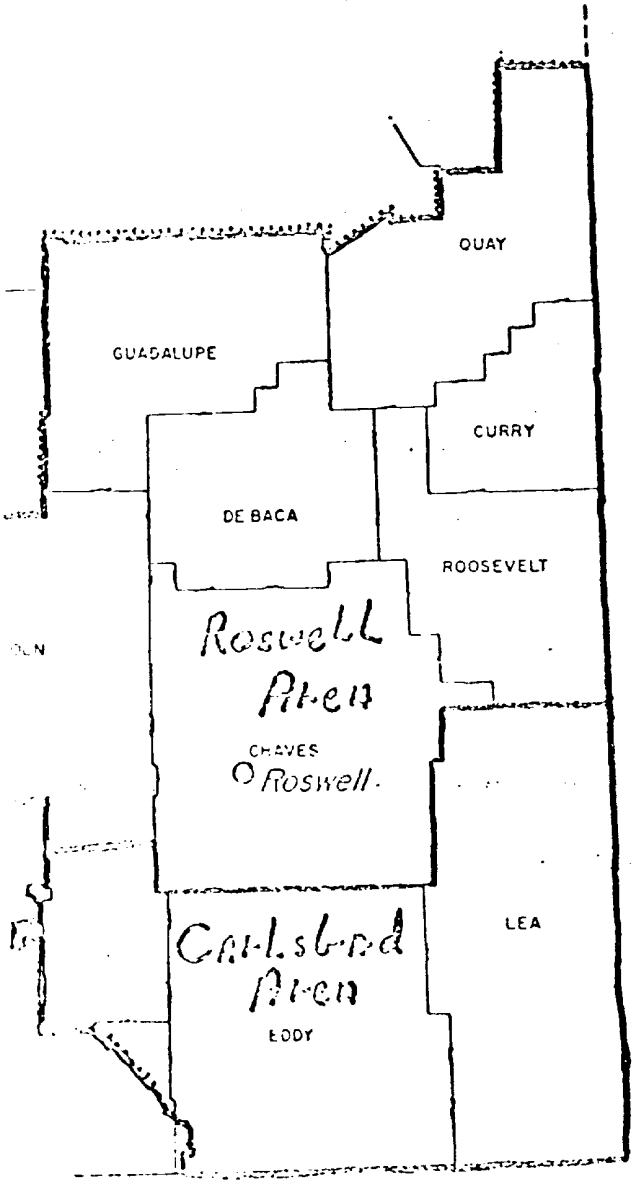
☒ 9. The well site will, during drilling operations and after drilling operation if well is a producer, be maintained and kept clean of all trash and debris which might detract from the surrounding environment. This will be done to the satisfaction of the BLM authorized officer.

☒ 10. In the event the oil or gas test results in a dry hole, the drill pad and access road will be ripped a minimum of 12" in depth. All ripped surfaces are to be protected from vehicular travel by construction of a dead-end ditch and earthen barricade at the entrance to these ripped areas. (Reseeding of the affected areas may be required at the discretion of the BLM authorized officer).

☒ 11. All above ground structures, not subject to applicable safety requirements, shall be painted to blend with the natural surroundings. The paint used will be a flat (non-reflective) or semi-golss (lusterless) color that simulates Federal Standard No. 595A, color 20318 or 30318, or color 26357 or ~~36357~~.

☒ 12. Operator will provide the dirt contractor with a copy of the above stipulations prior to construction of the road, pad or associated developments.

☐ 13. Special Stipulations:



Roswell District Office
1717 W. Second Street
Featherstone Farms Bldg.
P. O. Box 1397
Roswell, New Mexico 88201
Telephone (505) 622-7670

BLM PERSONEL TO BE CONTACTED "if needed

JAMES "SMOKEY" O'CONNOR
DISTRICT MANAGER

CARLSBAD AREA	ROSWELL AREA
GERALD ORR AREA MANAGER	JIM MORRISON AREA MANAGER
MACK WILEMON RØW's	
LLOYD REED DRILLING PERMIT's	TOM HEWITT DRILLING PERMIT's
DAVID CARL MATERIAL SALES	R/W's
MANTON BOTSFORD ARCHEOLOGIST	MATERIAL SALE

P. O. Box 1157
Hobbs, New Mexico 88240

March 22, 1978

Walter W. Krug
DBA Wallen Production Company
P. O. Box 1960
Midland, Texas 79702

Dear Sir:

Reference is made to your applications for permit to drill wells numbered 10, 11 and 12 Wallen Federal, lease L.C. 070315, received in this office on March 21, 1978. The proposed casing programs for wells Nos. 10 and 11 do not meet the requirements of the Oil Conservation Commission of the State of New Mexico Order No. R-111-A pertaining to the Potash-Oil areas of Eddy and Lea Counties, New Mexico. If you desire to utilize other than the specified casing programs in the R-111-A area it will be necessary for you to obtain an exception from the New Mexico Oil Conservation Commission. Well No. 12 is in the horizontal limits of the Middle Lynch Seven Rivers-Yates Pool and the proposed casing proram for this well is satisfactory with Order No. R-1039.

It is also prefered that the well numbers be changed to Nos. 1, 2, and 3 since they are in a different lease from previous Wallen Federal wells. This would also require that the lease name be changed.

Accordingly, approval of your applications for wells Nos. 10 and 11 cannot be given until this matter is resolved.

Sincerely yours,

James F. Sims
District Engineer

AALopez:wok

U. S. Geological Survey

HOBBS DISTRICT

Wallen Production Co. No. 1 Bass SW¼SW¼ sec. 21-20S-34E Lea County, NM
Above Data Required on Well Sign

CONDITIONS OF APPROVAL

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Drilling Operations on Federal Oil and Gas Leases, dated January 1, 1977.

2. Notify this office (telephone (505) 393-3612) when the well is to be spudded and in sufficient time for a representative to witness all cementing operations. Attached are names and telephone numbers of Geological Survey and Bureau of Land Management personnel who are available for consultation during construction, drilling, completion, and rehabilitation activities.

3. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life.

4. Secure prior approval of the District Engineer for variance from the approved drilling program and before commencing plugging operations, plug-back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely.

5. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.

6. Operator will provide the dirt contractor with a copy of the enclosed Bureau of Land Management "Standard Requirements for all Drilling in Relation to Oil and Gas Activities in the Roswell Distrct" prior to commencing construction of road, pad, or other associated developments.

7. In the event the oil or gas test results in a dry hole, the drill pad and access road will be ripped in accordance with "BLM Roswell District's Ripping Recommendations for Caliche or Compacted Drill Pads and Access Roads". (Reseeding of the affected areas may be required at the discretion of the BLM authorized officer).

   All ripped surfaces are to be protected from vehicular travel by constructing a dead-end ditch and earthen barricade at the entrance to these ripped areas. The barricade is to be constructed using spoil material from the ditch and should be of sufficient magnitude to discourage vehicle entry.

8. All above ground structures, not subject to applicable conservation and safety requirements, shall be painted to blend with the natural surroundings. The paint used should be a nonglare, nonreflective, flat, or semi-gloss that simulates Fed. Stand. No. 595, color 30318.

9. A Gamma Ray-Sonic log is required from the base of the Salado formation to the surface in open hole at a logging speed not to exceed 30 feet per minute.

Commodity: Oil & Gas

EA No. Hobbs 283

UNITED STATES DEPARTMENT OF THE INTERIOR
Geological Survey
P.O. Box 1157
Hobbs, New Mexico

USUAL ENVIRONMENTAL ANALYSIS

Date March 23, 1978

Operator Walter Krug dba Wallen Production Company Well Name & No. 1 Bass

Location $SW\frac{1}{4}SW\frac{1}{4}$ Sec. 21 T. 20 S., R. 34 E.

County Lea State N.M. Field Undesignated

Lease No. LC 070315 Well Type Development

Joint Field Inspection Date March 23, 1978

Participants and Organizations:

Gary Stephens - USGS

Prepared by:

Gary Stephens

Previous Related Environmental Analyses:

None

Lease:
LC 070315

No. 1 Bass
330' FSL 990' FWL
Sec. 21, T. 20 S., R. 34 E.
Lea County, New Mexico

USUAL ENVIRONMENTAL IMPACT ANALYSIS

PROPOSED ACTION:

On March 21, 1978, Walter Krug dba Wallen Production Company filed an Application for Permit to Drill well No. 1 Bass, a development oil well to a depth of 3,650 feet to test the Yates and Seven Rivers formations in the SW¼SW¼ sec. 21, T.20 S., R. 34 E., Lea County, New Mexico. The application was technically and administratively complete on March 23, 1978. The proposed well is on Federal land under oil and gas lease LC 070315. The lease is comprised of 640 acres of land. There would be 40 acres dedicated to this well. The surface is managed by the Bureau of Land Management.

Approximately 0.6 acres of surface would be disturbed in the construction of the well pad and reserve pit and 0.1 acres would be disturbed by new road construction. The well pad would be about 140 X 180 feet and necessary access road requirements would be met by building a new 150 foot long road 12 feet wide from the existing access road to the southwest.

A cable tool rig would be used to drill the well. An adequate casing, cementing and mud program is proposed. Details of the drilling program, located in the surface use plan, are on file in the USGS district office in Hobbs. A blowout preventer of the control head type would be used during drilling operations. These programs have been reviewed and as amended are adequate for the proposed well.

The drilling operations would start on approval of application. An estimated 60 days for drilling operations would be required.

Details of surface rehabilitation plans are given in item 10 of the operator's Surface Use Plan.

Written concurrence of these proposed arrangements has been received from the Bureau of Land Management by Gerald Orr.

LOCATION AND NATURAL SETTING:

The proposed wellsite is approximately 27.5 miles southwest of Hobbs, New Mexico, the nearest town. The nearest dwelling, a ranch house, is 3.5 miles southeast. The overall topography is relatively level with an elevation of 3,672 feet ground level at the proposed well site. The soil is of the Pyote-Maljamar association, a fine, duny sand, highly susceptible to erosion, which is underlain by caliche. The surface geology is Quaternary blow sand.

A review of the pertinent geology of the proposed location is given in the enclosed Geologic Report. No geologic hazards are known near the drillsite.

The proposed well is in an area already developed for oil and gas production. The nearest well to the proposed location is a producing oil well 660 feet south in the NW¼NW¼ of section 28. Potash mining is the only other mineral activity in the immediate area. Land use is primarily grazing, wildlife, oil and gas production and occasional hunting in season.

The climate is semi-arid and continental with warm summers, cool dry winters, abundant sunshine and a large range of daily and annual temperature. Temperatures average 79° F in the summer and 38° F in the winter, averaging 61° F annually. Average rainfall amounts to 13 inches with annual lake evaporation amounting to 72 inches. Windstorms occur throughout the year, but are of greatest frequency and intensity during the spring. Wind direction is generally from the southwest averaging 16 miles per hour in the spring and 10 miles per hour in the fall. Air quality in southeast New Mexico is classified by the State as Priority III, which means that standards are met and that measures should be taken to preserve and enhance present air quality.

No surface water exists in the proposed drillsite area. There is no integrated drainage to any river basin outside the area. The nearest water well, a windmill, is 1.9 miles to the northeast of the site. Fresh water may be encountered at shallow depths in sandy zones of the Triassic red beds in quantities sufficient for stock water and domestic use. The proposed wellsite is in the Capitan water basin defined by the State Engineer.

Vegetative cover in the proposed area is generally sparse, consisting of shinoak, mesquite, yucca, grass, weeds. Wildlife is that typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, prairie chicken, dove and quail. Am antelope or deer may on occasion, pass through the area.

No endangered species are known to inhabit the area. There are no known historical, archeological or architectural resources at or near the proposed wellsite, nor are there any established trails, parks, or other formally designated recreational facilities nearby. Grazing is the primary land use.

Access to the wellsite, from Hobbs is proposed via Highway 62-180 west for 27.4 miles. Thence, traveling on the main lease service road south for 4.1 miles to the proposed access road which leads 150 feet northeast to the proposed location.

For further details of the existing environment and various impacts of the oil and gas industry, the BLM Environmental Analysis Record, designated 30-060-4-49, is on file in the U. S. Geological Survey offices in Artesia, Hobbs, Albuquerque, New Mexico, and Durango, Colorado, and in the BLM offices in Roswell and Santa Fe, New Mexico.

EFFECTS ON THE ENVIRONMENT BY THE PROPOSED ACTION:

The access road and well pad would disturb approximately 0.7 acre of land surface. No significant cuts and fills would be necessary. The vegetation would be removed and minor relocation of possible rodent populations in the area would be expected. If productive, the flowlines would run about 1400 feet to the proposed battery location in the NW¼NW¼ section 28.

There are no waterways or drainages to be affected and erosion is not expected to be a factor due to the level topography of the area. Any fresh water aquifers penetrated during drilling operations would be protected by cementing the well casing in the well bore from below such aquifers to the ground surface. Plastic liners would be used in the reserve pits to prevent fluid migration through percolation.

Heavy traffic would be anticipated during the drilling operations phase, increasing the auto exhaust pollutants in the area. Pollution from noise, dust and exhausts from drilling equipment and vehicular traffic would be minor, short term and only in the immediate area. Increased traffic during drilling and development of the proposed well would create potential safety hazards with farm and ranch vehicles. If production facilities are required and installed, minor pollution caused by service vehicles and minor gas venting from storage tanks could occur. However, these minor pollutants would be rapidly dispersed by the prevailing winds. If the project should result in a dry hole, at abandonment, all operations and impacts from vehicular traffic would cease.

The reserve pit would contain all fluids used during operations. Drilling pits would be diked and safety equipment would be utilized to prevent spills. Any liquid or gas spill should have only a local, minor, short term impact on the environment as the terrain is relatively level, sandy and duny in nature. Fire hazards should be largely mitigated by the use of an adequate blowout preventer. Small fires would be confined to the well pad due to the sparsity of surrounding vegetation.

The animals and vegetation of the area would be disturbed for the life of the project. If the project should produce hydrocarbons certain adjustments in habitat occupancy would be expected. At abandonment, normal rehabilitation of the area would be expected with an eventual return to the present status.

Aesthetically, the proposed action would have very minor impact. The drilling rig and production tanks, if the well is completed for production, would be visible to anyone in the area, but would not present a major intrusion.

A trash pit would be utilized for any solid wastes generated at the site, which would then be hauled away to an acceptable sanitary landfill at the completion of the operations. Sewage would be handled according to State Sanitary codes.

If the well is completed for production, additional drilling may take place. Additional land surface would be required for additional wells. Eventual abandonment of the proposed well and subsequent required surface rehabilitation should mitigate most of the adverse effects caused by the proposed action as all the area can be restored. The length of time required for restoration would depend on rainfall amounts received at the proposed location.

The economic impact of a single well is negligible but should this be a discovery of a new hydrocarbon source, our national and local economy would be improved and the potential production added to our petroleum reserves. Drilling activity and producing operations mean drilling and production jobs. The main contributor to the local economy is the oil and gas industry.

ALTERNATIVES TO THE PROPOSED ACTION:

First there is the alternative of denying approval of the proposed action. However, such action would be counter productive to current efforts to increase our oil and gas reserves. Under the lease, the Federal government has an obligation to allow development if the environmental consequences are not irreversible or too severe. The environmental effects of this action would be greatly mitigated by the proposed reclamation plans. In view of this the alternative is rejected.

A second alternative is to select a different wellsite. However, the proposed location is similar to other locations and similar or greater environmental impacts would be produced. Therefore, the alternative of moving the location is rejected.

ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED:

Approximately 0.7 acre of land surface for the wellsite and road will be unavailable for range or wildlife use during drilling and completion operations.

If the well is a producer, the pad area and road would be needed for the life of the well. The improvement of existing roads would be a semi-permanent effect since ranch traffic would continue to utilize some of the access roads. Traffic hazards with ranch vehicles would be present.

Construction and drilling phases would produce dust and exhaust pollutants and increase noise levels. Producing operations would cause minor air pollution in the areas if producing wells and production equipment because of oil evaporation and minor gas venting. Well pumping equipment and tank batteries would be visible from a paved road or highway creating a minor visual impact.

If the well is completed as a producer there would be the extraction of an irreplaceable resource. Further oil and gas development would occur and additional land surface would be needed.

DETERMINATION:

This requested action does not constitute a major Federal Action significantly affecting the environment in the sense of NEPA, Section 102(2) (c).

April 5, 1978
Date

James F. Sims
District Engineer, Hobbs, New Mexico

ADDENDUM:

1. The Geologic Report is enclosed.

2. Concurrence with approval of the Application for Permit to Drill has been received from Gerald Orr of the Bureau of Land Management and is filed in the permanent well file.

REFERENCES:

Agricultural Experiment Station Research Report 178, New Mexico State University, "Soil Associations and Land Classifications for Irrigation, Lea County", plates 7, 12, and 21.

State Bureau of Mines and Mineral Resources, Ground Water Report 6, "Geology and Ground Water Conditions in Southern Lea County, New Mexico", pages 7, 9, 18, 19, 23 and 24 and plate 2.

Hydrologic Investigations Section, Weather Bureau, Washington, D. C., "Average Annual Lake Evaporation in Inches" (period 1946-1955).

Soil Survey, Lea County, New Mexico, U. S. Department of Agriculture Soil Conservation Service, January 1974

USGS, Laguna Gatuna, N. Mex., 15' Topographic Quadrangle 1963 - PR 1972.

U.S. GEOLOGICAL SURVEY, CONSERVATION DIVISION
RESOURCE EVALUATION
ROSWELL, NEW MEXICO 88201

MEMORANDUM

To: District Engineer, HOBBS District

From: Resource Evaluation, SRMA

Subject: Review of Application for Permit to Drill
Lease # LC 070315 Date Received 3/23/78

Well location: 990/W, 330/S Sec. 21 T. 20S., R. 34E.

Well #Wallen Federal #10 Proposed TD: 3,650'

Operator: W.W. Krug DBA Wallen Production Co.

Our records indicate the data reviewed is consistent/~~inconsistent~~ (see below) with the geology of the area. Additional information related to the drill site is noted below.

(1) Fresh water formations:

Santa Rosa Formation and shallower formations.

(2) Other mineral bearing formations:

(3). Known potential geologic hazards:

None anticipated.

(4) Remarks:

Location within Capitan controlled water basin and Secretary's Oil-Potash area. Run open hole gamma-ray and sonic logs to base of Salado Fm.

GEOLOGIST, RLNoble

Date 3/23/78

NOTED

MAR 27 1978

SIMS

AGREEMENT

Noranda Exploration, Inc have no objection to Walter W. Krug,DBA Wallen Production Co's casing program on a well located in 990 FWL and 330 FSL of Section 21, Block 20, T 34 E, Lea County, New Mexico (said well to be 3600 feet plus or minus) using the USGS approved requirements and that Wallen Production Co. will furnish Noranda Exploration, Inc an electric log,gamma ray and neutron run at as low a speed as possible through the salt section, and that Wallen Production Co. will build its brine with KCl through the interval of the 10th ore zone and allow Noranda Exploration Inc's man to study the drill cuttings through that section, if so requested by Noranda.

This is as per the conversation and agreement with James Brewer, Geologist, Noranda Exploration, Inc.

DATED THIS 28 day of March 1978

NORANDA EXPLORATION, INC

By _____

Walter W. Krug,dba Wallen Production Co. does hereby agree by the terms of this consent as outlined above.

WALTER W. KRUG, dba
WALLEN PRODUCTION CO.

By Walter W. Krug