Form 9-331 C
(May 1963)

N.M.O.C.D. COPY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-005-61038

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

# APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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
Read & Stevens, Inc.

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O. C. D.
ARTESIA, OFFICE

3. ADDRESS OF OPERATOR
P. O. Box 1518 Roswell, New Mexico 88201

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
1650' FSL and 660' FEL
At proposed prod. zone
Same

5. LEASE DESIGNATION AND SERIAL NO.
NM 16626

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Harris Federal Com.

9. WELL NO.
6

10. FIELD AND POOL, OR WILDCAT
Buffalo Valley Penn.

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Ut-I
Sec 23, T15S, R27E

12. COUNTY OR PARISH
Chaves

13. STATE
New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 13 miles E. of Lake Arthur, 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' | 440 | 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** |
| None | 9100' | Rotary |

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3625' GR

22. APPROX. DATE WORK WILL START*
July 20, 1981

23. PROPOSED CASING AND CEMENTING PROGRAM

| SIZE OF HOLE | SIZE OF CASING | WEIGHT PER FOOT | SETTING DEPTH | QUANTITY OF CEMENT |
|---|---|---|---|---|
| 17 1/2" | 12 3/4" | 34# | 400' | 400 Sx Class "C" Circulate |
| 11" | 8 5/8" | 24# | 1700' | 200 Sx Class "H" CIRCULATE |
| 7 7/8" | 4 1/2" | 10.5, 11.6# | 9100' | 500 Sx Class "C" |

Mud Program:

0' - 400' Spud mud with Magcobar gel and lime. If seepage is noted, add lost circulation material. If circulation is lost, dry drill to 400'.

400' - 5,200' Fresh water and native mud. Mud wt. 8.4#, Vis. 30-32, WL no control.

5,200' - 8,000' Magcogel and oil type drilling fluid. Mud wt. 8.5# - 8.8#, Vis. 30-32, 3-4% oil, WL no control.

8,000' - 9,100' Fresh water, low solids spersen mud system with CMC, 3 % KCL, starch, Drispak, and salt gel, Mud Wt. 9.0 - 9.5#, Vis. 32-34, WL 10 cc or below, PH 9 - 9.5.

BOP Program: Will use a 5,000 psi Shaffer BOP, see Exhibit "D". At 1700', install and test to 3,000#, pipe rams, blind rams (middle) bag-type preventer and choke manifold. BOP accumulator volume will be sufficient to operate the bag preventer and blind rams with a snap-action through the close, open close sequence.

Gas sales are not dedicated.

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 Wesley K. Smith TITLE Agent for: Read & Stevens, Inc. DATE July 6, 1981

(This space for Federal or State office use)

PERMIT NO. APPROVED APPROVAL DATE

(Orig. Sgd.) GEORGE H. STEWART
APPROVED BY TITLE DATE
JUL 17 1981
CONDITIONS OF APPROVAL, IF ANY:
FOR
JAMES A. GILLHAM
DISTRICT SUPERVISOR

NSL 1385
1-13-81

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JUL 7 1981
U.S. GEOLOGICAL SURVEY

*See Instructions On Reverse Side

N IEXICO OIL CONSERVATION COMMISS

# 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. |
|---|---|---|
| Read & Stevens, Inc. | Harris Fed. Com. | 6 |

| Unit Letter | Section | Township | Range | County |
|---|---|---|---|---|
| I | 23 | 15S | 27E | Chaves |

Actual Footage Location of Well:
1650 feet from the SOUTH line and 660 feet from the EAST line

| Ground Level Elev. | Producing Formation | Pool | Dedicated Acreage: |
|---|---|---|---|
| 3625.0 | Atoka | Buffalo Valley Penn | 320 Acres |

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

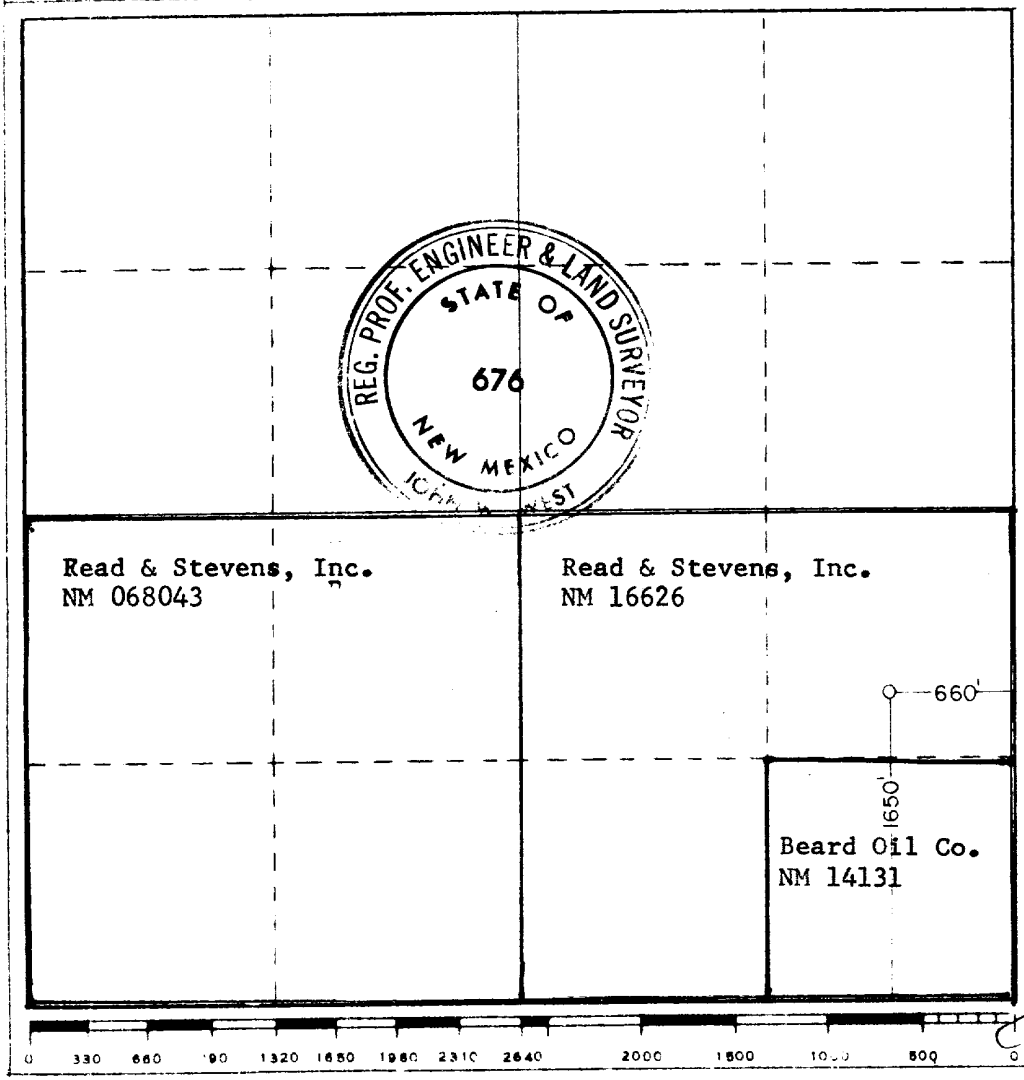
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[x] Yes [ ] No If answer is "yes," type of consolidation Communitization

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.*

George R. Smith

Name: George R. Smith

Position: Agent for:

Company: Read & Stevens, Inc.

Date: July 2, 1981

*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: 6-15-81

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. JOHN W. WEST 676
PATRICK A. ROMERO 6668
Ronald J. Eidson 3239

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

July 13, 1981

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JUL 20 1981

O. C. D.
ARTESIA, OFFICE

Read & Stevens, Inc.
P. O. Box 1518
Roswell, New Mexico 88201

Attention: Bruce Stubbs

Administrative Order NSL-1385

Gentlemen:

Reference is made to your application for approval of a non-standard location for your Harris Federal Well No. 6 to be located 1650 feet from the South line and 660 feet from the East line of Section 23, Township 15 South, Range 27 East, NMPM, Buffalo Valley Pennsylvanian Gas, Chaves County, New Mexico.

By authority granted me under the provisions of Rule 3 of Order No. R-1670, the above-described unorthodox location is hereby approved.

Sincerely,

JOE D. RAMEY,
Director

JDR/RLS/dr

cc: Oil Conservation Division - Artesia
Oil & Gas Engineering Committee - Hobbs
U. S. Geological Survey - Artesia

APPLICATION FOR DRILLING

READ & STEVENS, INC.
Harris Federal Well No. 6
660' FEL & 1650 FSL, Sec. 23, T15S, R27E
Chaves County, New Mexico
Lease No.: NM 16626
(Development Well)

In conjunction with Form 9-331C, Application for Permit to Drill subject well, Read & Stevens, Inc. submits the following items of pertinent information in accordance with USGS requirements:

1. The geologic surface formation is Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

| | | | |
|---|---|---|---|
| Queen | 1077' | Cisco | 7352' |
| San Andres | 1673' | Canyon | 7667' |
| Glorieta | 3228' | Strawn | 8163' |
| Tubb | 4541' | Atoka | 8580' |
| Abo | 5345' | Chester | 8850' |
| Wolfcamp | 6525' | Total Depth | 9100' |

3. The estimated depth at which anticipated water, oil, or gas formations are expected to be encountered:

   Water: Approximately 200 - 400' for surface water.

   Gas: Atoka at approximately 8700'.

   Oil: San Andres at approximately 1680'.

4. Proposed Casing Program: See Form 9-331C.

5. Pressure Control Equipment: See Form 9-331C and Exhibit "D".

6. Mud Program: See Form 9-331C.

7. Auxiliary Equipment: Blowout preventer, gas detector, kelly cock, pit level monitor, flow sensors and stabbing valve.

8. Testing, Logging and Coring Program:

   Drill Stem Tests: One possible in each of the following:

| | |
|---|---|
| Strawn | 8163' - 8263' |
| Atoka | 8580' - 8680' |

   Logging:

| | |
|---|---|
| Gamma Ray | Surface to T. D. |
| FDC/CNL | Int. Csg. to T. D. |
| Dual Ind. Laterolog | Int. Csg. to T. D. |

   Coring: None.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight.

10. Anticipated starting date: July 20, 1981.
    Anticipated completion of drilling operations: Approximately 35 days.

MULTI-POINT SURFACE USE AND OPERATION PLAN

READ & STEVENS, INC.
Harris Federal Well No. 6
660' FEL & 1650' FSL, Sec. 23, T15S, R27E
Chaves County, New Mexico
Lease No.: NM 16626
(Developemnt Well)



This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to discribe the location of the proposed well, the proposed construction activities and operations plan, to be followed in rehabilitating the surface after completion of the operation so that a complete appraisal can be made of the environmental effects associated with the operations.

1. EXISTING ROADS:

   A. Exhibit "A" is a portion of a New Mexico State Highway map showing the well as staked. The well is approximately 13 miles east of Lake Arthur, New Mexico. A portion of the 12 miles of existing access road is paved for nearly two miles with the remainder a well maintained gravel county road and one mile of new oil field access road.

   B. Directions: Travel south from Roswell on Alternate Highway 285 to Lake Arthur, New Mexico. Turn left (east) onto county road 507. There is an old white closed service station on the right side of the highway at the turnoff. Road 507 is paved for 1.5 miles then changes to a well maintained gravel road. Continue east on the gravel road .5 mile turning southeast for a mile crossing the Pecos River. Turn left (east) after crossing the bridge and a cattle guard traveling easterly for approximately 1.8 miles to a "Y" in the road. Take the right hand fork traveling easterly again for approximately 5 miles passing a fence corner post on the right. The road turns southeast at this point and passes "White Lake" on the right side of the road. The lake is dry at this time. Travel .6 mile past the fence corner post. A new access road to Harris Federal Well No. 4 and Harris Federal Com. Well No. 5 turns north from the county road at this point. Follow this access road 1.2 mile north/northeast to Harris Federal Com. Well No. 5. The proposed new access road will originate from the west side of the pad of Well No. 5.

2. PLANNED ACCESS ROAD:

   A. Length and Width: The new access road will be 12 feet wide (20' ROW) and approximately 4,000 feet long, from the point of origin from the northwest corner of the Harris Federal Com. Well No. 5 drill pad to the southeast corner of the drilling pad. The new access road does not follow a straight line, but curves around the terrain. The new access road is labeled and color coded in red on Exhibit "A" and "B" and has been flagged by BLM.

   B. Construction: The new road will be constructed by grading and topping with compacted caliche. The surface will be properly drained.

   C. Turnouts: There will be at least three turnouts, which will increase the road width to 20 feet for passing.

2. PLANNED ACCESS ROAD: cont.....

D. Culverts: None required.

E. Cuts and Fills: The will possibly be some cutting of the road about 2000 feet in as it comes up a rocky ridge.

F. Gates, Cattleguards: None required.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a one to two mile radius are shown on Exhibit "B" and "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

A. There are no production facilities on this portion of the lease at the present time.

B. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with fresh and brine water. The water will be obtained from private or commercial sources and will be transported over the existing and proposed access roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. Caliche for surfacing the road and the well site pad will be obtained from an existing pit located on Federal surface and minerals located in the SE¼ of Sec. 24, T15S, R27E. The top soil from the location will be stockpiled near the location for future rehabilitation use. No surface materials will be disturbed except for those necessary for actual grading and leveling of the drill site and access road.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings will be disposed of in the reserve pits.

B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.

C. All pits will be fenced with normal fencing materials to prevent livestock from entering the area.

D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted to the USGS for approval.

E. Oil produced during operations will be stored in tanks until sold.

7. METHODS OF HANDLING WAST DISPOSAL: Cont.....

F. Current laws and regulations pertaining to the disposal of human waste will be complied with.

G. Trash, waste paper, garbage and junk will be buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by the wind.

H. All trash and debris will be buried or removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELLSITE LAYOUT:

A. Exhibit "D" shows the relative location and dimensions of the well pad, reserve pits, and major rig components. The pad and pit area has been staked and flagged.

B. Mat Size: 250' X 230'.

C. Cut and Fill: The location will require a very slight cut on the north and fill to the south.

D. The surface will topped with compacted caliche and the reserve pit will be plastic lined.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations all equipment and other material not need for operations will be removed. Pits will be filled and location cleaned of all trash and junk to leave the wellsite in an aesthetically pleasing a condition as possible.

B. Any unguarded pits containing fluids will be fenced until they are filled.

C. If the proposed well in non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the United States Geological Survey will be complied with and will be accomplished as expeditiously as possible. All pits will be filled and leveled within 90 days after abandonment.

11. OTHER INFORMATION:

A. Topography: The land surface in the vicinity of the wellsite is the top of a mesa, relatively flat with a 30-40 foot drop to the north/northwest on the north side of the location, from an elevation of 3625 feet.

B. Soil: The topsoil at the wellsite is an alkali clay underlain with limestone and with major outcrops to the west and east of the site. The original location 990' FEL was directly on top of the rock outcrop and too close to the edge of the hill.

11. OTHER INFORMATION: cont.....

C. Flora and Fauna: The vegetative cover consists of very sparse miscellaneous grasses, including Tobosa, Grama, Three-on, also mesquite, yucca, cactus and other miscellaneous desert flowers and weeds. The only wildlife observed were an occasional jackrabbit and cottontail rabbit, but it is likely that other typical semi-arid desert wildlife inhabit the area, which is used for cattle grazing.

D. Ponds and Streams: There are no rivers, streams, lakes or natural ponds in the area.

E. Residences and other Structures: There are no residences or other structures within a mile of the well site except Well No. 5 to the southeast 4,000 feet.

F. Land Use: Cattle grazing.

G. Surface Ownership: The proposed location is on Federal surface and minerals.

H. There is no evidence of any archaeological, historical or cultural sites in the are. An archaeological survey has been conducted by ACA Eastern New Mexico University, Station # 9, Portales, New Mexico 88130, and their report has been submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

A. The field representative responsible for assuring compliance with the approved surface use and operations plan is as follows:

| | |
|---|---|
| Joe Handley | Dan Lough |
| P. O. Box 1135 | 830 W. Gore |
| Lovington, New Mexico 88260 | Lovington, New Mexico 88260 |
| Office Ph: (505) 396-5391 | Office Ph: (505) 396-5391 |
| Home Phone: " 396-5449 | Home Phone: " 396-4371 |

13. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsity and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge true and correct; and that the work associated with the operations proposed herein will be performed by Read & Stevens, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

July 6, 1981

George R. Smith
Agent for:
Read & Stevens, Inc.

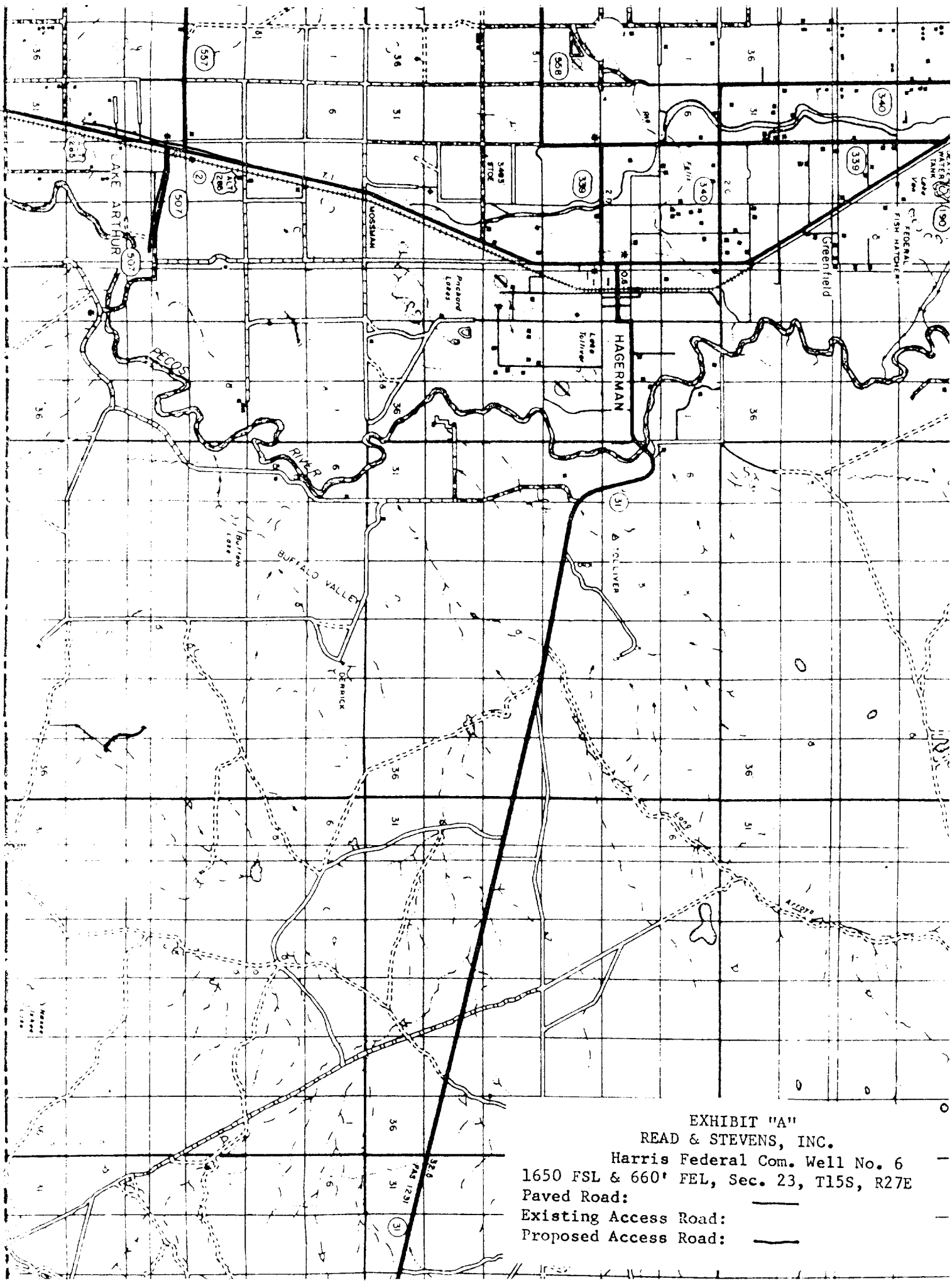
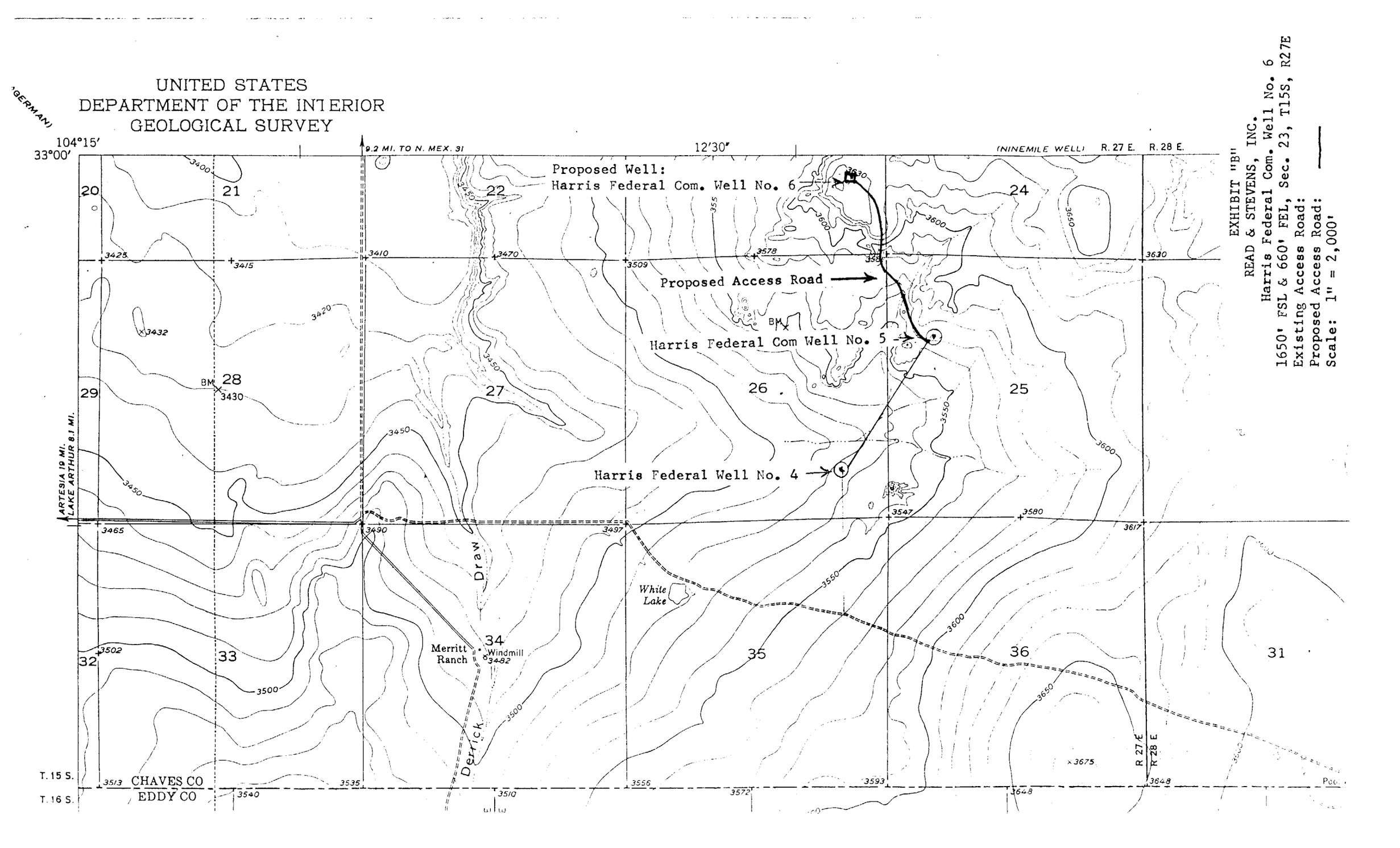



EXHIBIT "A"
READ & STEVENS, INC.
Harris Federal Com. Well No. 6
1650 FSL & 660' FEL, Sec. 23, T15S, R27E
Paved Road: ——
Existing Access Road: —
Proposed Access Road: ——


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
104°15'
33°00'
9.2 MI. TO N. MEX. 31
12'30"
(NINEMILE WELL)
R. 27 E.
R. 28 E.
Proposed Well:
Harris Federal Com. Well No. 6
Proposed Access Road
Harris Federal Com Well No. 5
Harris Federal Well No. 4
ARTESIA 19 MI.
LAKE ARTHUR 8.1 MI.
Draw
White Lake
Merritt Ranch
Windmill
Derrick
CHAVES CO
EDDY CO
T. 15 S.
T. 16 S.
R 27 E
R 28 E
EXHIBIT "B"
READ & STEVENS, INC.
Harris Federal Com. Well No. 6
1650' FSL & 660' FEL, Sec. 23, T15S, R27E
Existing Access Road:
Proposed Access Road:
Scale: 1" = 2,000'

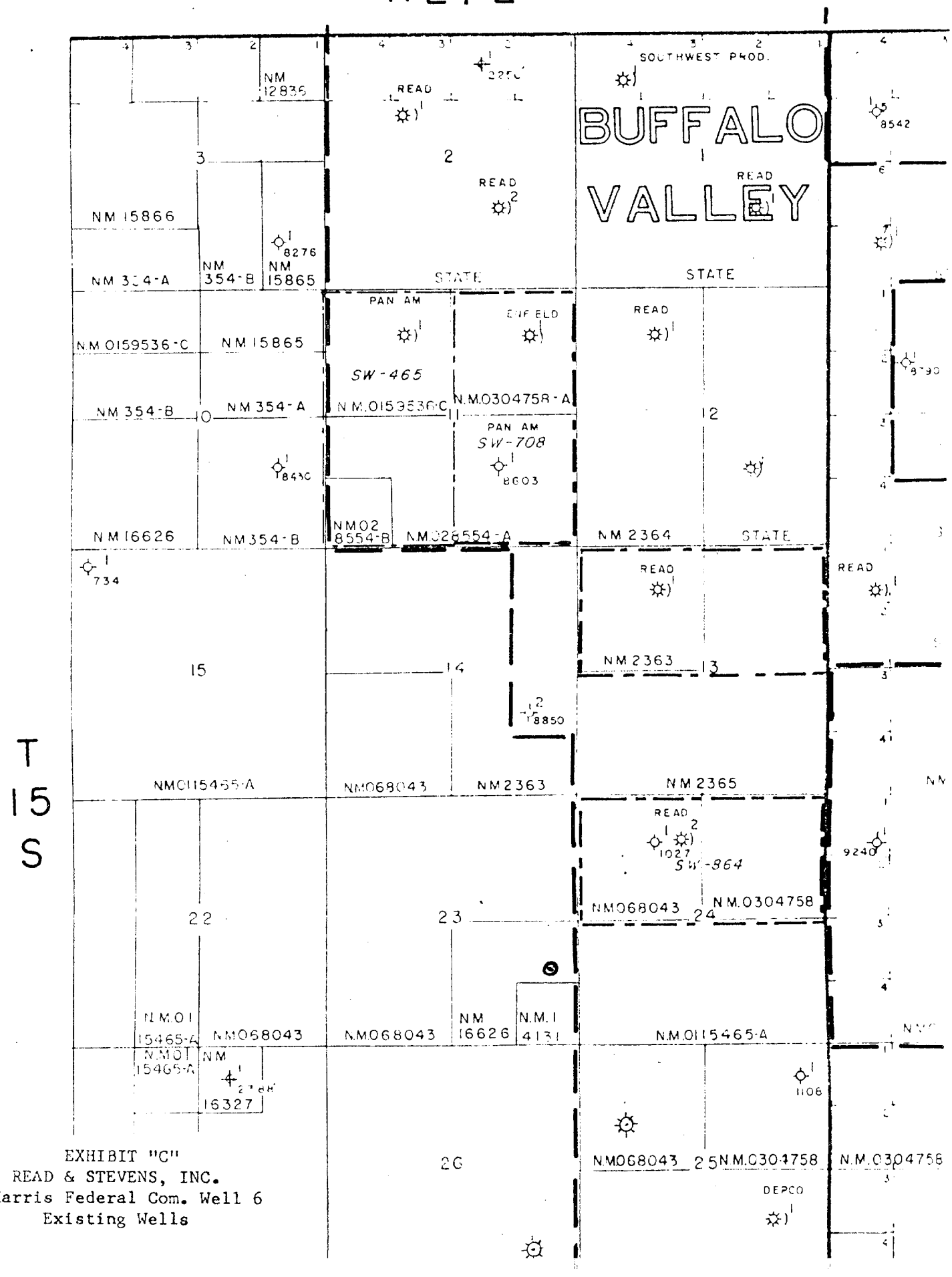
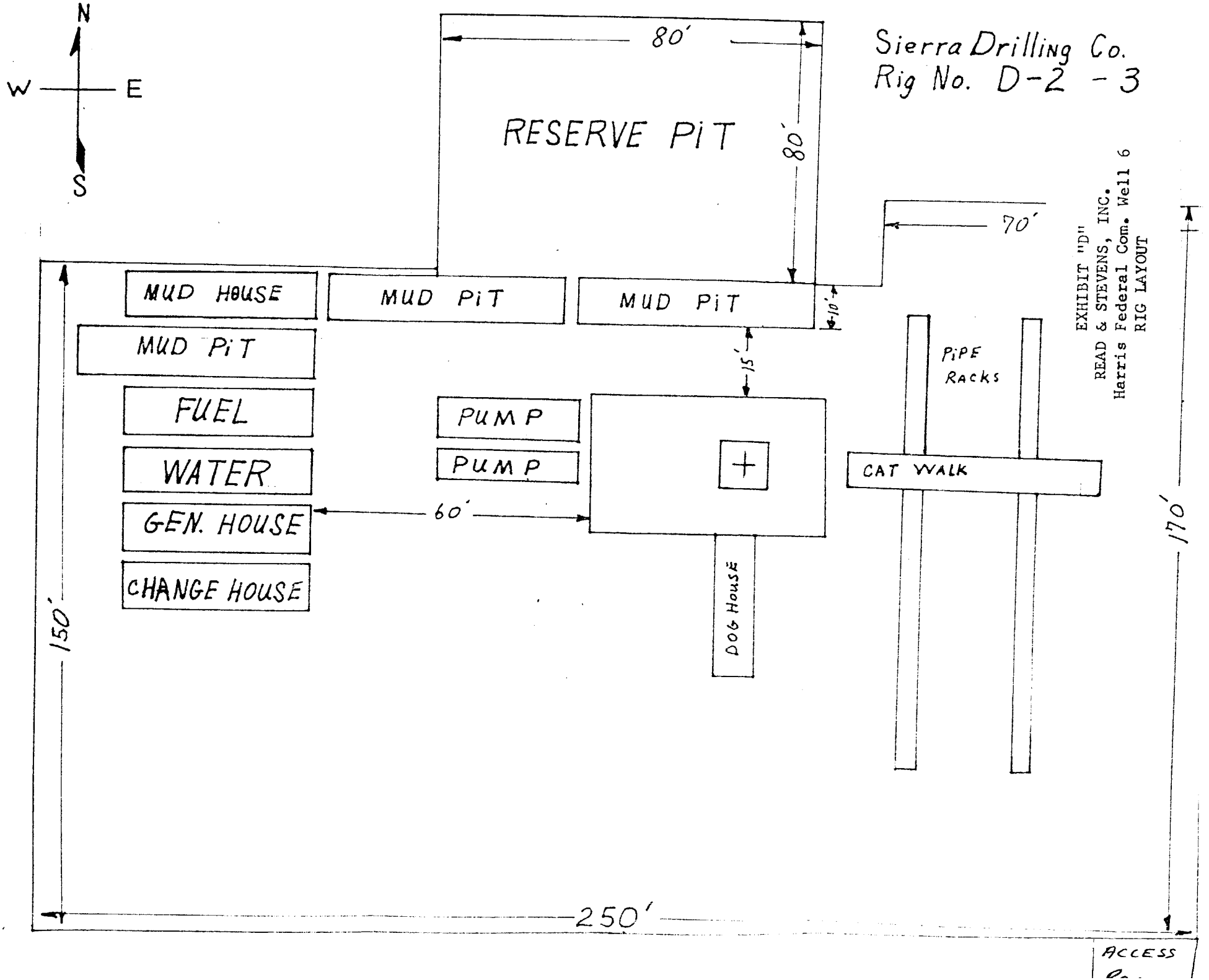



EXHIBIT "C"
READ & STEVENS, INC.
Harris Federal Com. Well 6
Existing Wells


N
W
E
S
80'
RESERVE PIT
80'
Sierra Drilling Co.
Rig No. D-2 - 3
70'
MUD HOUSE
MUD PIT
MUD PIT
MUD PIT
10'
15'
PIPE RACKS
EXHIBIT "D"
READ & STEVENS, INC.
Harris Federal Com. Well 6
RIG LAYOUT
FUEL
PUMP
PUMP
WATER
CAT WALK
60'
GEN. HOUSE
CHANGE HOUSE
DOG HOUSE
150'
170'
250'
ACCESS

SIERRA DRILLING CO. Rig #3

GL to Floor 132"

GL to Bottom or Rotary 116"

This Stack is 110.5"

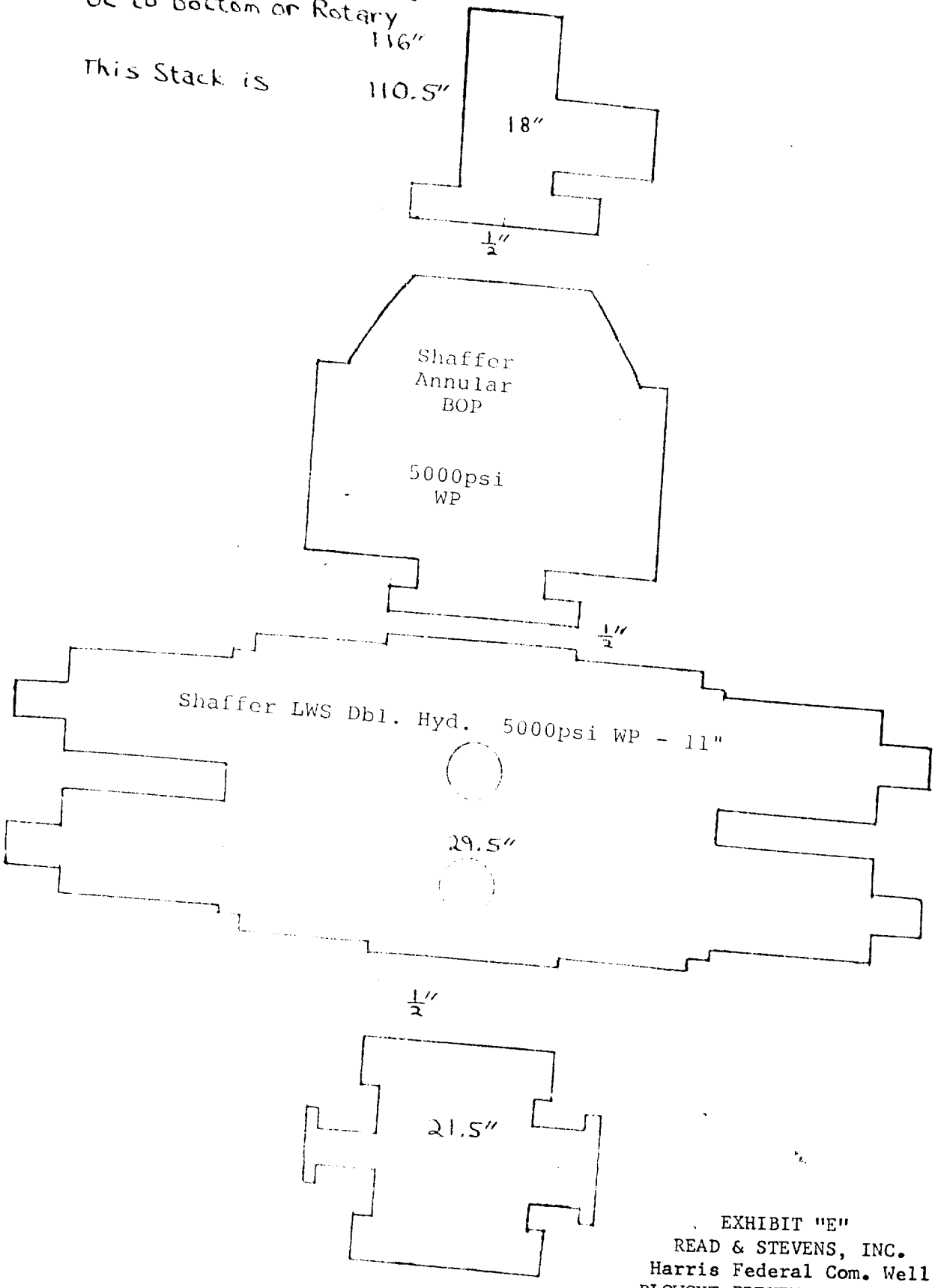



EXHIBIT "E"
READ & STEVENS, INC.
Harris Federal Com. Well No. 6
BLOWOUT PREVENTER SPECIFICATIONS