

Ray Westall

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**APPLICATION FOR PERMIT TO DRILL**

PROPERTY NO. 1864  
 POOL CODE 13390  
 EFF. DATE 10/17/96  
 API NO. 30-025-33627

**N**

DESIGNATION AND SERIAL NO.

**0** NM-86144

IAN, ALLOTTEE OR TRIBE NAME

**1a. TYPE OF WORK**DRILL ☒DEEPEN ☐**b. TYPE OF WELL**OIL  
WELL ☒GAS  
WELL ☐OTHER ☐SINGLE  
ZONE ☒MULTIPLE  
ZONE ☐

AGREEMENT NAME

**8. FARM OR LEASE NAME, WELL NO.**

Gunsmoke Federal #3

**9. API WELL NO.**30-025-33627**10. FIELD AND POOL, OR WILDCAT**

Crazy Horse Delaware

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

Sec 24 T19S-R32E

**12. COUNTY OR PARISH**

Lea

**13. STATE**

New Mexico

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

20 Miles southeast of Loco Hills, New Mexico

**15. DISTANCE FROM PROPOSED**

LOCATION TO NEAREST

PROPERTY OR LEASE LINE, FT. 660'

(Also to nearest drg. 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.1210**19. PROPOSED DEPTH**7800**20. ROTARY OR CABLE TOOLS**

Rotary

**21. ELEVATIONS (Show whether DF, RT, GR, etc.)**3611 GR**APPROX. DATE WORK WILL START**ASAP**23.****PROPOSED CASING AND CEMENTING PROGRAM**

SIZE OF HOLE	GRADE, SIZE OF CASING	WT PER FT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8" H-40	48# ST&C 8RD	500	350 SXS "C" Circulated
12 1/4"	8 5/8" J-55	32# ST&C 8RD	2950	500 SXS "C" Circulated
7 7/8"	5 1/2" J-55	17# LT&C 8RD	7800	700 SXS "H" 2nd stage 500 SXS "C"

ALL CASING WILL BE NEW

CEMENT WILL BE CIRCULATED ON 13 3/8" AND 8 5/8" CASING.

CEMENT QUANTITIES AND ADDITIVES ARE SUBJECT TO CHANGE DUE TO HOLE CONDITIONS.

**PROPOSED MUD PROGRAM**

0-500	FRESH WATER w/ PAPER. MW 8.4 VIS-31
500-2950	BRINE WATER w/PAPER. MW 10.0 VIS 30
2950-7800	CUT BRINE. MW 8.6-8.8, VIS 29-30

MUD PROGRAM SUBJECT TO CHANGE DUE TO HOLE CONDITIONS

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

Randall Harris

TITLE

Geologist

DATE

9/5/96

(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

/s/ Gary Bowers

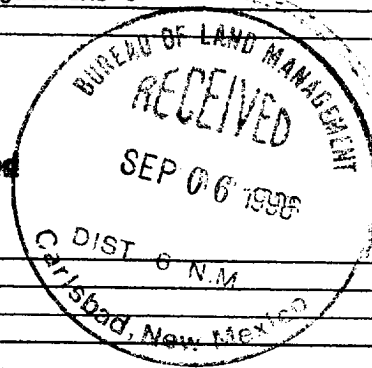
TITLE

Area Manager

DATE

OCT 7 1996

TITLE 18 U.S.C. SECTION 1001, MAKES IT A CRIME FOR ANY PERSONS 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



District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 10, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-33627	Pool Code 13390	Pool Name CRAZY HORSE DRAW Delaware
Property Code 13390	Property Name Gunsmoke Federal	Well Number 3
OGRID No. 18862	Operator Name Ray Westall, Operator	Elevation 3611

<sup>10</sup> Surface Location

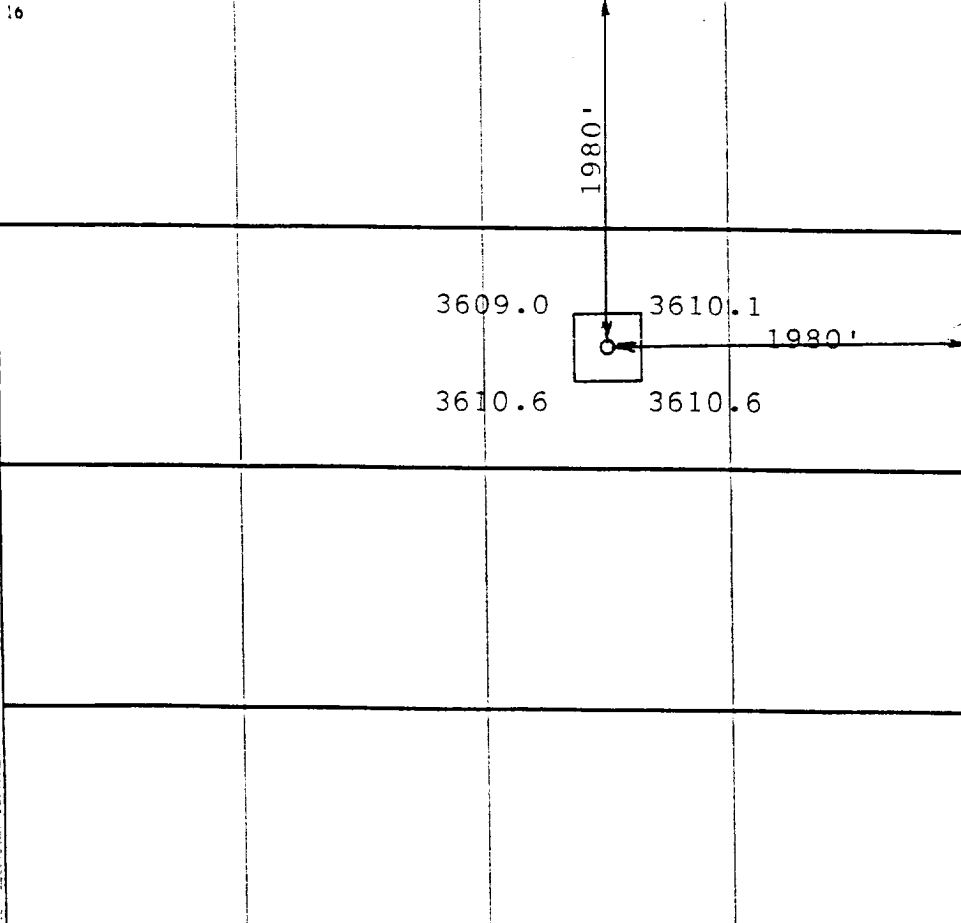

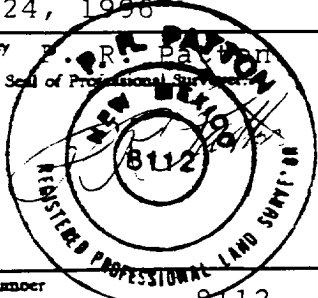
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
G	24	19 S	32 E		1980	North	1980	East	Lea

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County

<sup>12</sup> Dedicated Acres	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<sup>16</sup> 	<sup>17</sup> OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature:  Printed Name: RONALD L. HARRIS Title: GEOLOGIST Date: 9/5/96
	<sup>18</sup> SURVEYOR CERTIFICATION 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 belief.  July 24, 1996 Date of Survey: Signature and Seal of Professional Surveyor:  Certificate Number: 8112

## APPLICATION FOR DRILLING

Ray Westall  
Gunsmoke Federal #3  
1980' FNL & 1980' FEL  
Section 24  
Township 19 South, Range 32 East  
Lea County, New Mexico

In conjunction with Form 3160-3, Application for Permit to Drill, Ray Westall submits the following ten items of pertinent information in accordance with BLM requirements:

1. Geological surface formation:

Quaternary.

2. Estimated tops of geologic markers are as follows:

Yates	3470
Delaware	5800
Bone Springs	7650

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

<u>Water</u>	
Quaternary:	0-180'
<u>Oil and Gas</u>	
Delaware:	5800-7550'

4. Casing program:  
All casing will be new

Hole Size	Interval	Casing
17 1/2"	0-500'	13 3/8" 48# H-40 ST&C
11"	<del>500</del> 0-2950'	8 5/8" 32# J-55 ST&C
7 7/8"	<del>2950</del> 0-TD	5 1/2" 17# J-55 ST&C

*AK*

Cement Program:

13 3/8"	Cemented to surface with 350 sxs "C" with 2% CaCl + 1/4 lb/sk Cellophane Flakes.
8 5/8"	Cemented to surface with 500 sxs "C" with 5 lb/sk NaCl + 1/4 lb/sk Cellophane Flakes + 2% CaCl.
5 1/2"	Cemented to tie back to 8 5/8" casing 1st stage with 700 sxs "H" 2% CaCl, 2nd stage 500 sxs "C" lite 2% CaCl. With DV Tool @ 6500'.

5. Pressure Control Equipment:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a 3M system double ram type (3000 psi WP) preventor. The BOP will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. Prior to drilling out the casing shoe, the BOP will be function tested.

6. Mud Program:

Depth	Type	Weight	Viscosity
0-500'	Fresh Water	8.4	31-33
500-2950	Brine Water	10.0	30
2950-TD	Cut Brine	8.8	29-30

7. Auxiliary Equipment:

A kelly cock will be in the drill string at all times.

8. Logging Program:

No drillstem tests are planned.

DLL-Gr., Caliper TD to Intermediate casing,

CNL/FDC-Gr. and Caliper TD to Intermediate casing

CNL/GR TD to surface.

9. Abnormal Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. Estimated BHP is 3500#, Estimated BHT is 116.F. An H2S Drilling Operations Plan is included. No major loss circulation intervals have been encountered in adjacent wells.

10. Anticipated starting date:

As soon as possible.

Duration:

12 days drilling  
15 days completion

## MULTI-POINT SURFACE USE AND OPERATIONS PLAN

RAY WESTALL  
GUNSMOKE FEDERAL #3

This plan is submitted with form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of surface disturbance involved, and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operation.

1. Existing Roads.

Exhibit A is a portion of a county road map showing the roads in the vicinity of the proposed location.

2. Planned Access Road.

Approximately 1650' of Access road is needed starting on the Gunsmoke Federal #3 Location and going North.

Directions:

Proceed west from Loco Hills to state road 529. Go east approximately 7 miles, turn south on county road 126 for 09 miles, turn east on caliche road 5.0 miles, South 1 mile, west 1/2 mile, south to Gunsmoke Fed. #4. West to Gunsmoke #3, the new road will start and go north 1650' to location.

3. Location of Existing Wells.

Exhibit B is a topo map showing the existing wells and staked locations.

4. Location of Existing/or proposed Facilities:

If productive a 3" SDR 7 poly line will be laid along existing ROW the battery located on the Gunsmoke Federal No.1 location. A 4 phase power line and poles will be routed along the existing ROW parallelling the road.

5. Location and Type of Water Supply.

It is planned to drill the proposed well with fresh and brine water system. The water will be obtained from commercial sources and will be hauled to the location by truck.

6. Source of Construction Materials.  
The location and road will be hauled in from an approved caliche pit.
7. Methods of Handling Waste Disposal.
  - A. Drill cuttings will be disposed of in the reserve pit.
  - B. Drilling fluids will be allowed to evaporate in the reserve pits until the pits are dry.
  - C. Produced water during operations will be stored in reserve pits until dry.
  - D. Oil produced during operations will be stored in tanks until sold.
  - E. Current laws and regulations pertaining to the disposal of human waste will be complied with.
  - F. Trash, waste paper, garbage and junk will be stored in a wire cage preventing blowing or scattering by the wind. After drilling and completion all waste will be removed to an approved site.
8. Ancillary Facilities  
None required.
9. Wellsite Layout.  
Exhibit C shows the relative location and dimensions of the well pad, the reserve pits, a 400' X 400' area has been staked and flagged.
10. Plans For Restoration of The Surface.
  - A. After finishing drilling and completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the wellsite in as aesthetically pleasing a condition as possible.
  - B. Unguarded pits, if any containing fluids will be fenced until they have been filled.
  - C. If the proposed well is non-productive, all rehabilitation and or vegetation requirements of the BLM and USGS 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:

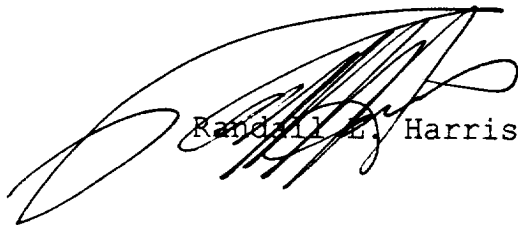
- A. Topography: The land surface in the vicinity of the wellsite is sandy loam soil.
- B. Flora and Fauna: The vegetation cover consists of prairie grass, greasewood and miscellaneous desert growth. No wildlife was observed, but wildlife in the area probably includes those typical of semi-arid desert land. The area is used for cattle grazing.
- C. There are no ponds, lakes or rivers in the area.
- D. There are no inhabited dwellings in the vicinity of the proposed well.
- E. Surface ownership is federal.
- F. Evidence of archeological sites has been reported and previously filed by Archaeological Survey Consultants.

12. Operator's Representative:

Ray Westall  
P.O. Box 4,  
Loco Hills, NM 88255  
(505) 677-2370

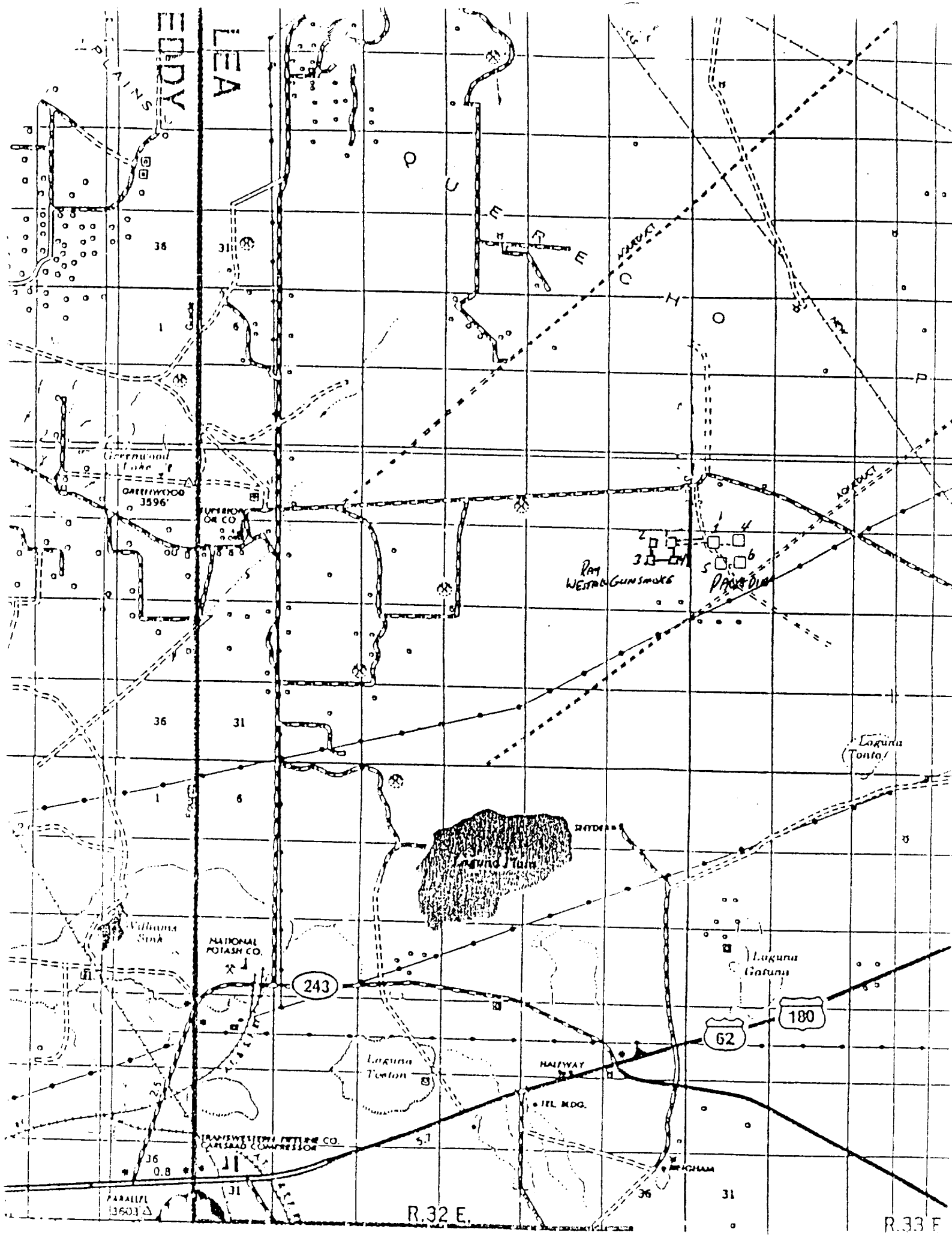
13. Certification:

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



Randall L. Harris





EDDY

LEA

36

31

Greenwood Lake  
GREENWOOD  
3596

OR CO

RAM  
WEST GUN SMOKS

PANORAMA

36

31

1

6

Valley Sink

NATIONAL  
POTASH CO.

243

Laguna Tonto

TRANSWORTH POTASH CO.  
CARLSBAD COMPRESSOR

36

31

PARALLEL  
15603

R.32 E.

HALFWAY

TEL. BLDG.

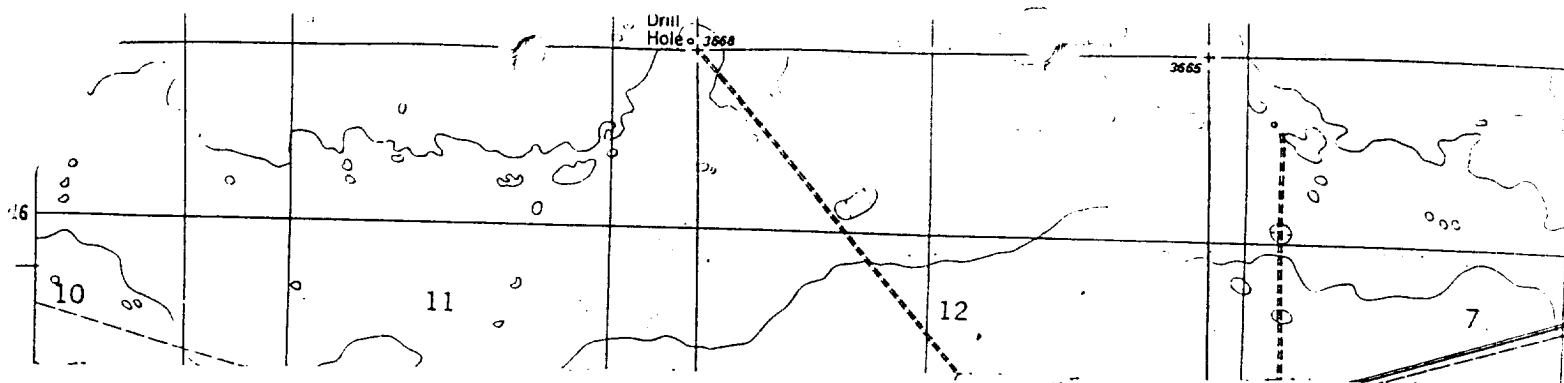
62

180

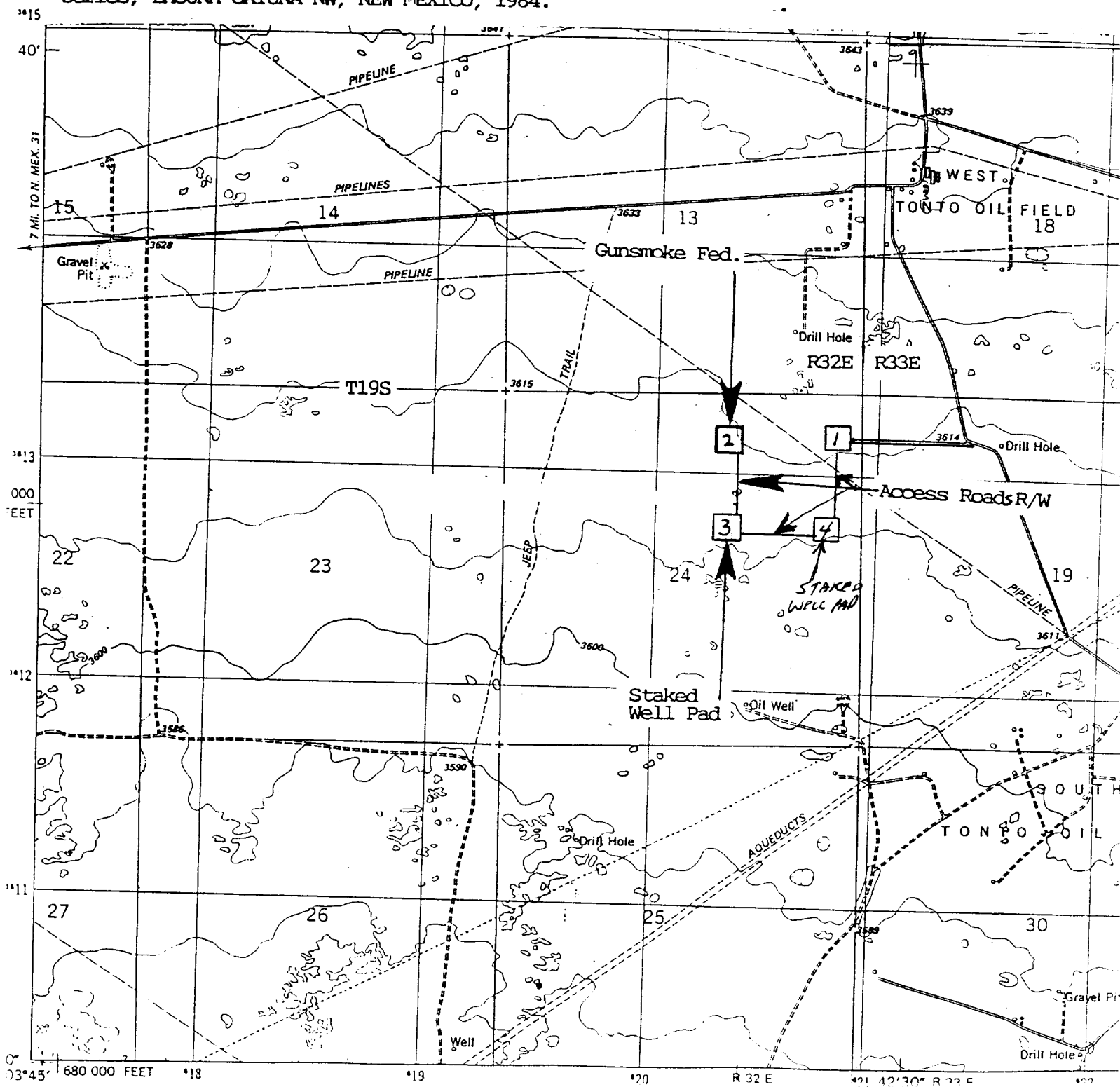
Laguna Gatuna

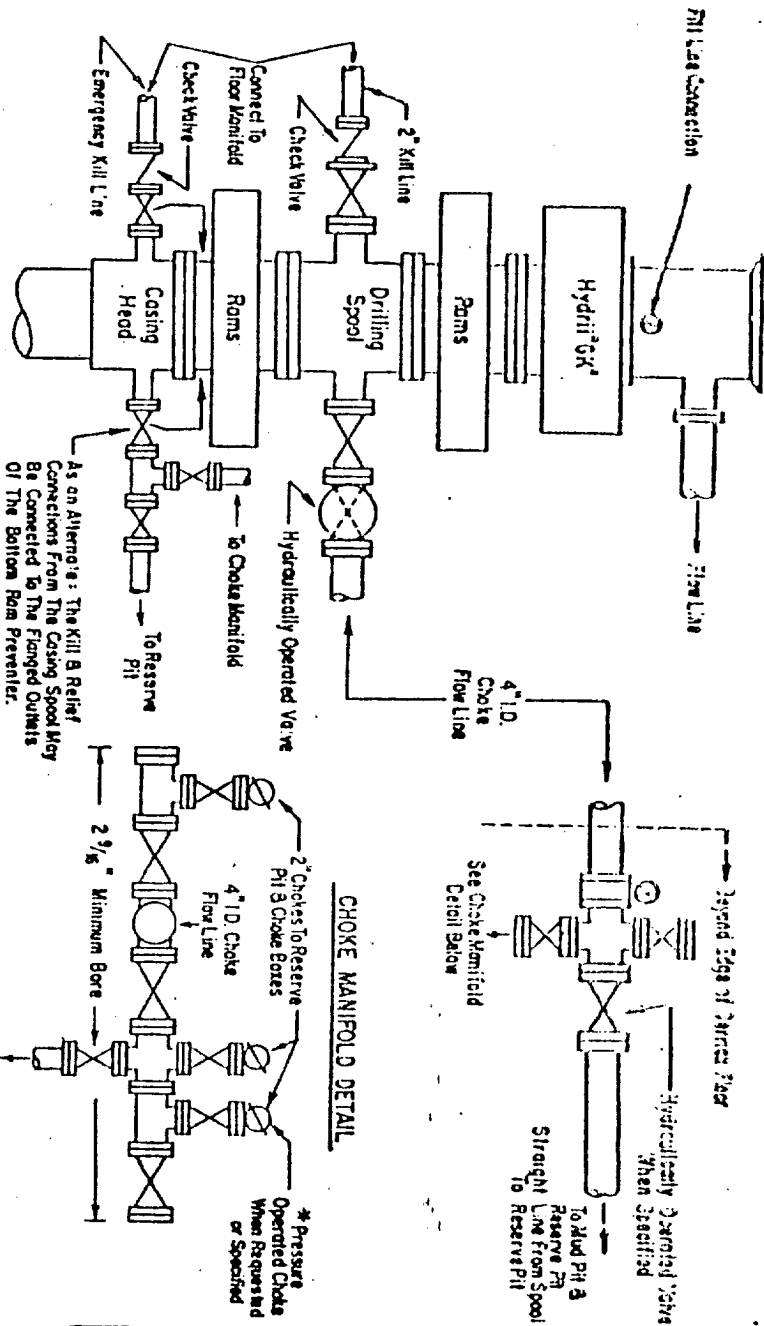
31

R.33 E.



Map showing the location of the Ray Westall Operating, Inc., Gunsmoke Federal Well No. 1 and Access Road R/W. T19S, R32E, Section 24, Lea County, New Mexico [BLM, Roswell District, Carlsbad Resource Area, New Mexico]. Squares show locations of well pads; solid line shows location of access road R/W; U.S.G.S. 7.5 minute series, LAGUNA GATUNA NW, NEW MEXICO, 1984.





# ADDITIONS - DELETIONS - CHANGES SPECIFY

## 3000 PSI WORKING PRESSURE BLOWOUT PREVENTER HOOK-UP

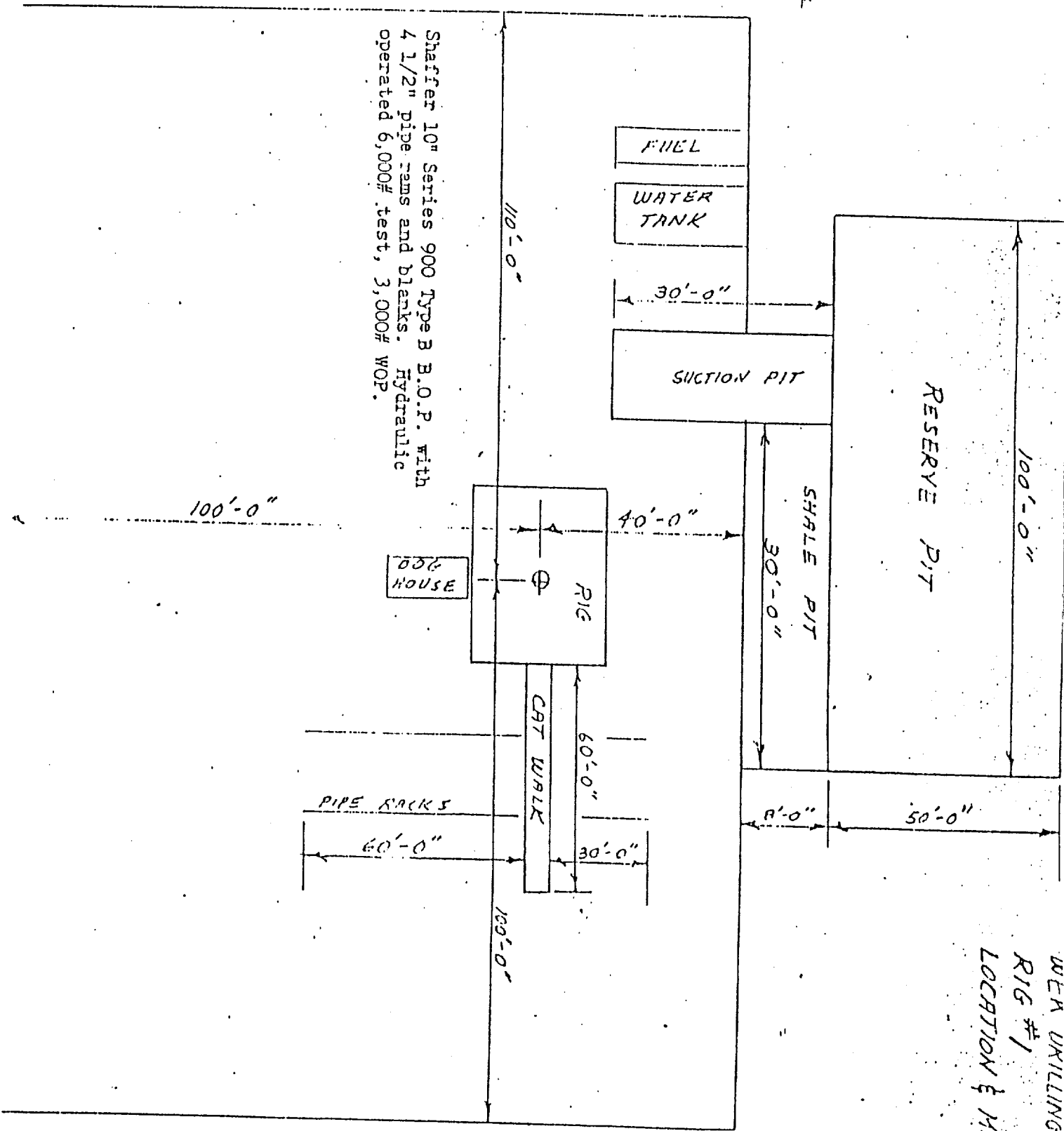
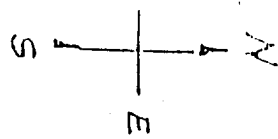
The blowout preventer assembly shall consist of one blind ram preventer and one pipe ram preventer, both hydraulically operated, a Hydraulic "GX" preventer, valves, chokes and connections as illustrated. If a tapered drill string is used, a ram preventer must be provided for each size of drill pipe. Casing and tubing rams to fit the preventer are to be provided as needed. If correct in size, the flanged outlets of the ram preventer may be used for connecting to the 4-inch I.D. choke flow line and kill line, except when air or gas drilling. The substructure height shall be sufficient to install a rotating blowout preventer.

Minimum operating equipment for the preventer and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continuous source of power, capable of fluid changing the total accumulator volume from the nitrogen precharge pressure to its rated pressure within \_\_\_\_\_ minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulator with a precharge of nitrogen of not less than 750 PSI and connected to close all the pressure-operated devices simultaneously within \_\_\_\_\_ percent of the original. (3) When required, an additional source of power, remote and equivalent, is to be available to operate the above pumps; or there shall be additional pumps operated by separate power and equal in performance capabilities.

The closing manifold and remote closing manifold shall have a separate control for each pressure-operated device. Controls are to be labeled, with control handles indicating open and closed positions. A pressure reducer and regulator must be provided for operating the Hydraulic preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. A Gulf Legion No. 38 hydraulic oil, an equivalent or better, is to be used on the fluid to operate the hydraulic equipment.

The choke manifold, choke flow line, and choke lines are to be supported by metal stands and adequately anchored. The choke flow line and choke lines shall be constructed as straight as possible and without sharp bends. Easy and safe access is to be maintained to the choke manifold. All valves are to be selected for operation in the presence of oil, gas, and drilling fluids. The choke flow line valves connected to the drilling spool and all ram type preventers must be equipped with stem extensions, universal joints if needed, and hand wheels which are to extend beyond the edge of the derrick substructure. All other valves are to be equipped with handles.

\* To include derrick floor mounted controls.



Shaffer 10" Series 900 Type B B.O.P. with  
4 1/2" pipe rams and blanks. Hydraulic  
operated 6,000# test, 3,000# WOP.

WEN DRILLING CO., INC.  
RIG #1  
LOCATION & HAD PIT SPEC.

## RAY WESTALL OPERATING

### HYDROGEN SULFIDE DRILLING PLAN

#### 1. HYDROGEN SULFIDE TRAINING

All personnel that are connected with the drilling or completion of a well within a known H<sub>2</sub>S area will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- A. The hazards and characteristics of hydrogen sulfide.
- B. The proper use of personal protective equipment and life support systems.
- C. The proper use of H<sub>2</sub>S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

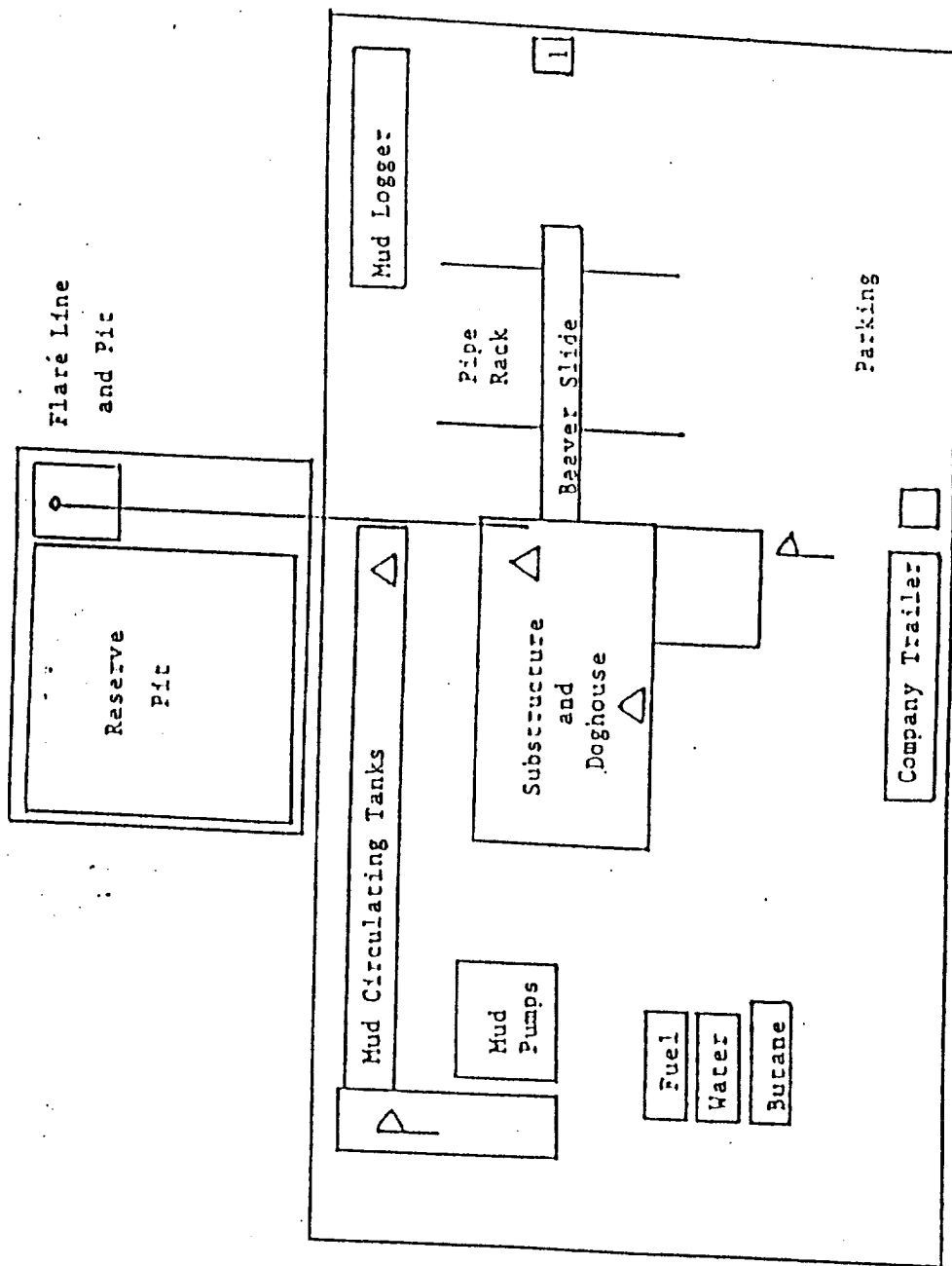
There will be an initial training session just prior to encountering a known or probable H<sub>2</sub>S zone (within 3 days) and weekly H<sub>2</sub>S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H<sub>2</sub>S Drilling Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

#### 2. H<sub>2</sub>S SAFETY EQUIPMENT AND SYSTEMS

All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H<sub>2</sub>S.

- A. Well Control Equipment:
  - a. Choke manifold with a minimum of one remote choke.
  - b. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

- B. Protective equipment for essential personnel:
  - a. Mark II Surviveair 30 minute units located in the dog house and at briefing areas, as indicated on well site diagram.
- C. H2S detection and monitoring equipment:
  - a. Two portable monitors positioned on location for best coverage and response. These units have warning lights and sirens when high levels of H2S is detected.
- D. Visual warning systems:
  - a. Wind direction indicators as shown on well site diagram.
  - b. Caution/Danger signs shall be posted on roads providing direct access to location.
- E. Mud program:
  - a. There is no known high pressure in this drilling area or known high concentrations of H2S that would necessitate any special drilling fluids.
- F. Metallurgy:
  - a. All drill stings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines and valves shall be suitable for H2S service.
- G. Communication:
  - a. Radio communications in company vehicles including cellular telephone and 2-way radio.
- H. Well testing:
  - a. There will be no DST's on this well.



- △ - H2S Monitors with alarms at the bell nipple and shale shaker
- P - Wind Direction Indicators
- - Safe Breathing areas with caution signs and protective breathing equipment min. 150 feet from wellhead, I designates primary area