Form 3160-3 (July 1992)

Ray Westall

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OPER. OGRID NO. 10084
PROPERTY NO. 20131
POOL CODE 13390
EFF. DATE 1/7/97
API NO. 30-025-33769

RCM 12-2-96

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM-12115

6. IF INDIAN, ALLOTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME, WELL NO.: Rawhide Federal #1

9. API WELL NO.:

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

1a. TYPE OF WORK: DRILL [X]

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

2. NAME OF OPERATOR: Ray Westall

3. ADDRESS AND TELEPHONE NO.: P.O. Box 4, Loco Hills, NM 88255 505-677-2370

4. LOCATION OF WELL (REPORT LOCATION CLEARLY AND IN ACCORDANCE WITH ANY STATE REQUIREMENTS)
AT SURFACE: 2310' FNL & 660' FWL
AT PROPOSED PROD. ZONE: Same

Unit E

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. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	160	40

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	7800	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3609 GR.

APPROX. DATE WORK WILL START: ASAP

23. PROPOSED CASING AND CEMENTING PROGRAM

CAPITAN CONTROLLED WATER BASIN

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	2900	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"

WITNESS
WITNESS

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.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

BUREAU OF LAND MANAGEMENT RECEIVED NOV 29 1996 DIST. 6 N.M. Carlsbad, New Mexico

PROPOSED MUD PROGRAM

0-500	FRESH WATER w/ PAPER. MW 8.4 VIS-31
500-2900	BRINE WATER w/PAPER. MW 10.0 VIS 30
2900-7800	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 11/27/96

(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 (ORIG. SGD.) TONY L. FERGUSON TITLE ADM. MINERALS DATE 12/30/96

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

¹ API Number	² Pool Code	³ Pool Name
30-025-33769	13390	Crazy Horse Delaware

⁴ Property Code	⁵ Property Name	⁶ Well Number
20131	Rawhide Federal	1

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
18862	Ray Westall	3609

¹⁰ Surface Location

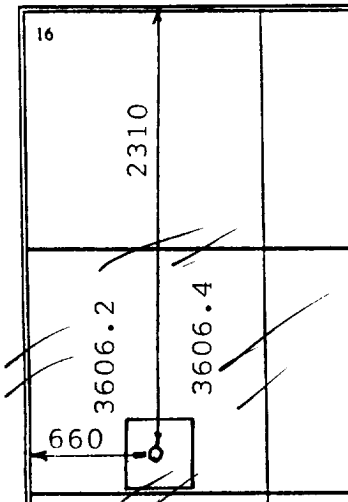
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	24	19 S	32 E		2310	North	660	West	Lea

¹¹ Bottom Hole Location If Different From Surface

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

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
40			

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



¹⁷ 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
Ramona Hara

Title
Geologist

Date
11/27/96

¹⁸ 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.

November 1, 1996
Date of Survey
P. R. Patton
Signature and Seal of Professional Surveyor:

NEW MEXICO 8112 REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate Number 8112

APPLICATION FOR DRILLING

Ray Westall
Rawhide Federal #1
2310' FNL & 660' FWL
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	2960
Delaware	5010
Bone Springs	7700

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

Water	
Quaternary:	0-180'
Oil and Gas	
Delaware:	5900-7550'

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"	500-2900'	8 5/8" 32# J-55 ST&C
7 7/8"	2900-TD	5 1/2" 17# J-55 ST&C

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) whown 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
500-2900	Brine Water	10.0	30
2900-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
RAWHIDE FEDERAL #1

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 1210' of new road will be constructed north from the Samson West Tonto #1 Location.

   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 4.5 miles, South 1.5 mile, west 1.5 miles, to the Samson West Tonto #1 . The new road will start here and go north.

3. Location of Existing Wells.
   Exhibit B is a topo map showing the existing wells.

4. Location of Existing/or proposed Facilities:
   If productive, storage tanks, seperators pump jack ect. will be install on 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.

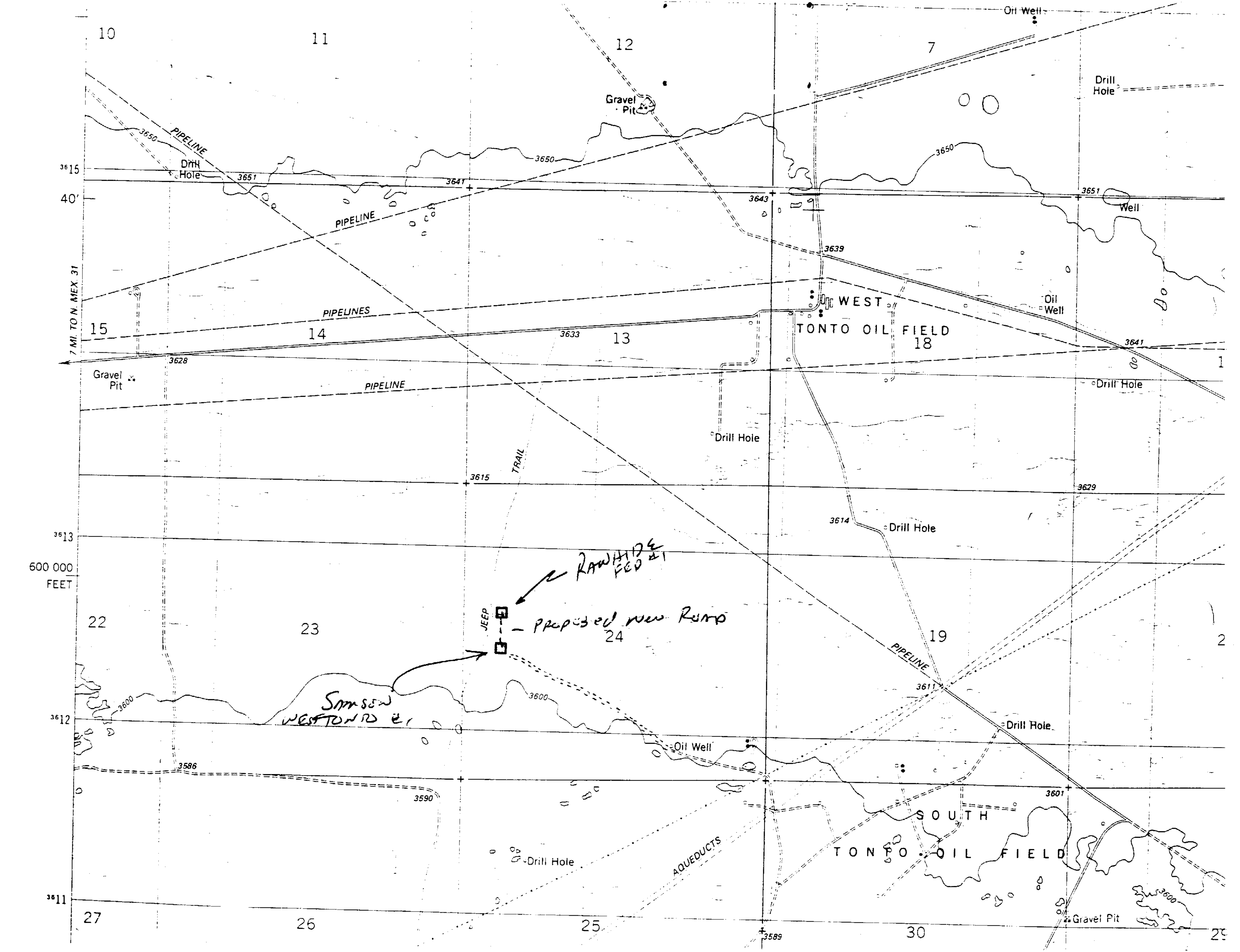
12. Operator's Representative:

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

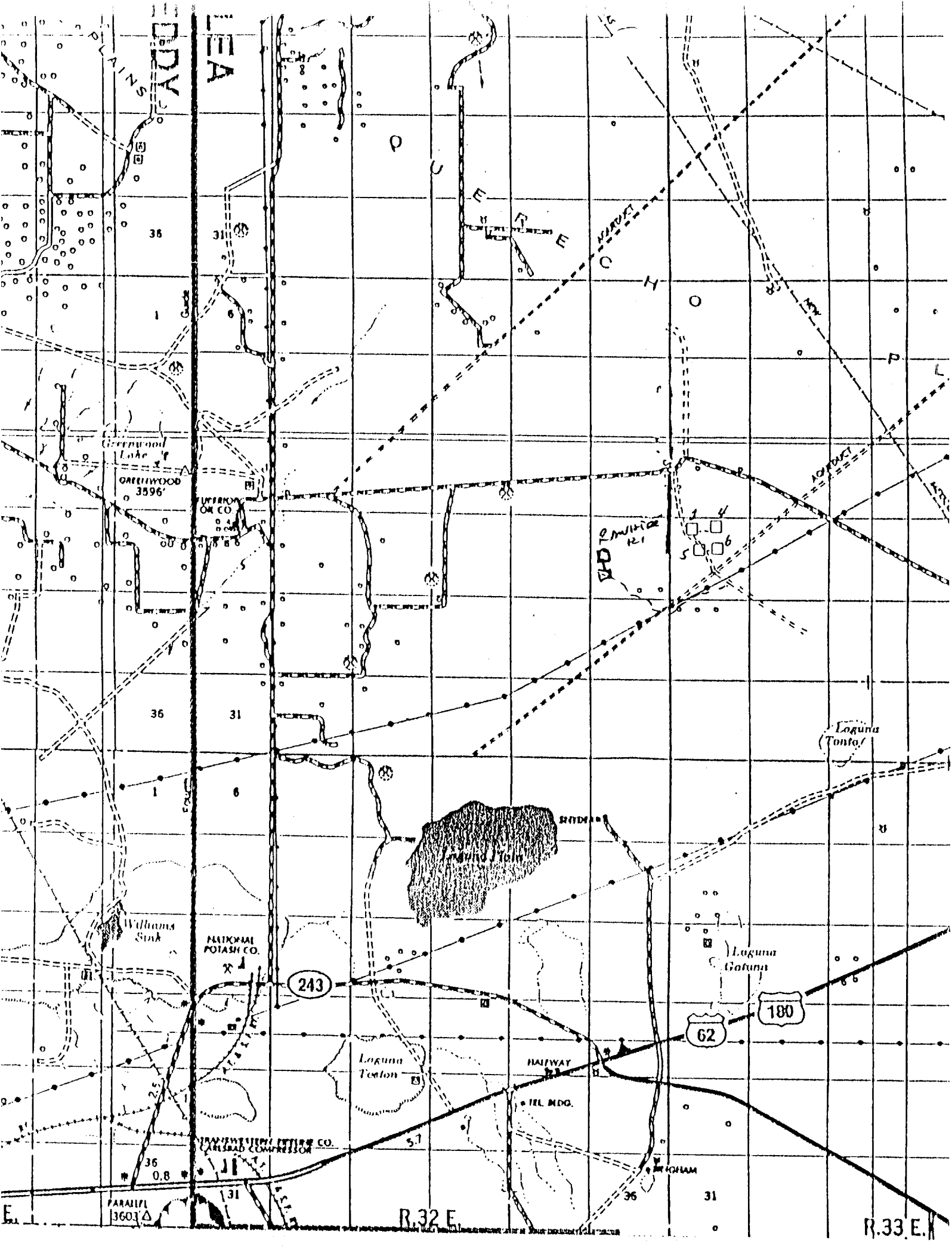
13. Certification:

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.

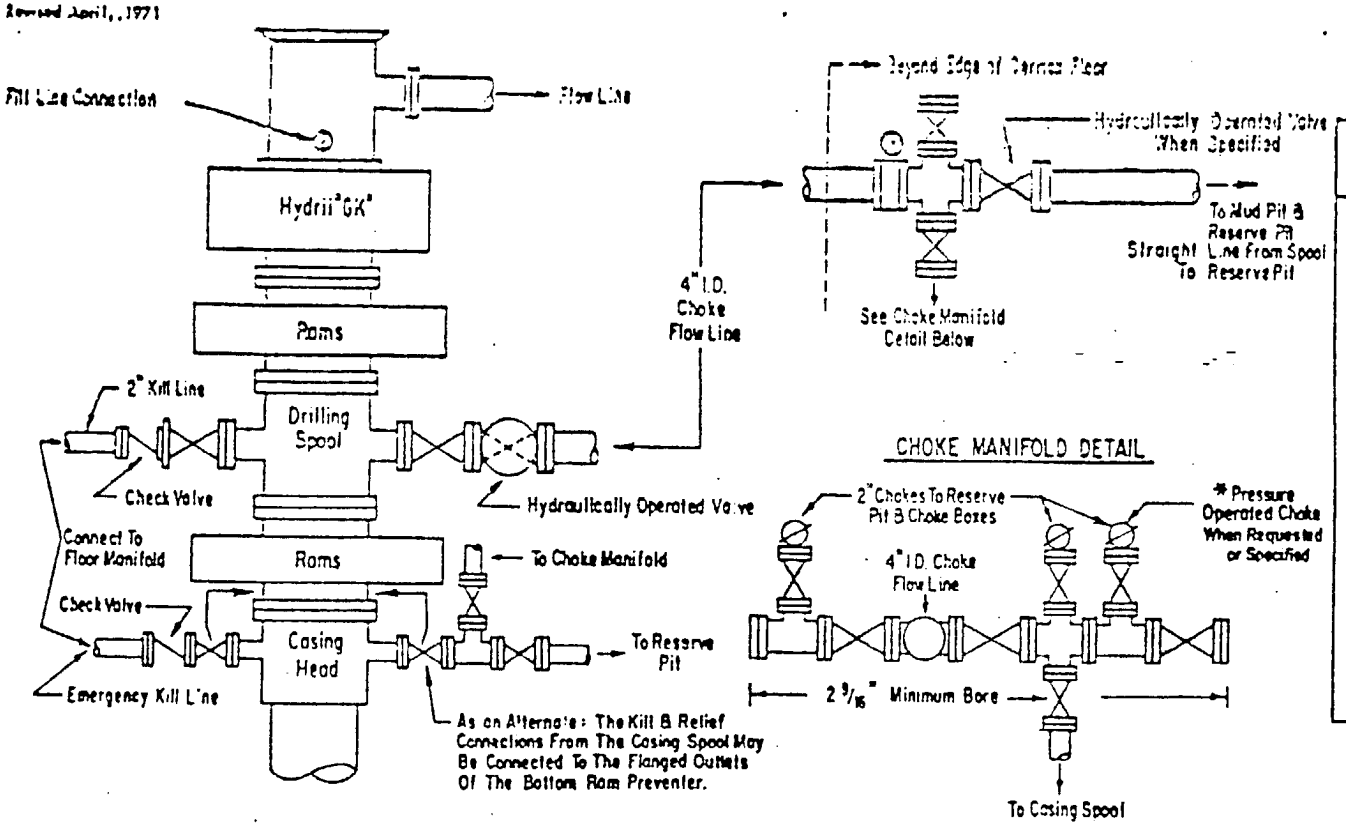
Randall L. Harris



WEST TONTO OIL FIELD
SOUTH TONTO OIL FIELD
RAWHIDE FED #1
PROPOSED NEW ROAD
SAMSON WESTONTO #1
PIPELINE
PIPELINES
AQUEDUCTS
JEEP
TRAIL
Gravel Pit
Drill Hole
Oil Well
Well
7 MI. TO N. MEX. 31
600 000 FEET
3615
3613
3612
3611
40′
10
11
12
7
15
14
13
18
1
22
23
24
19
2
27
26
25
30
29
3650
3651
3641
3643
3639
3633
3628
3615
3629
3614
3611
3601
3600
3586
3590
3589


Greenwood Lake
GREENWOOD 3596'
INTERNATIONAL OIL CO.
Laguna Tonto
Laguna Plata
Williams Sink
NATIONAL POTASH CO.
243
Laguna Gatuna
180
62
Laguna Teston
HALFWAY
TEL. BLDG.
NEW MEXICO POTASH CO.
CARLSBAD COMMISSION
PARALLEL 360'
R.32 E.
R.33 E.

DRAWING NO. 3
Revised April, 1971



CHOKE MANIFOLD DETAIL

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 Hydril "GK" 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 preventers are to be available 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.

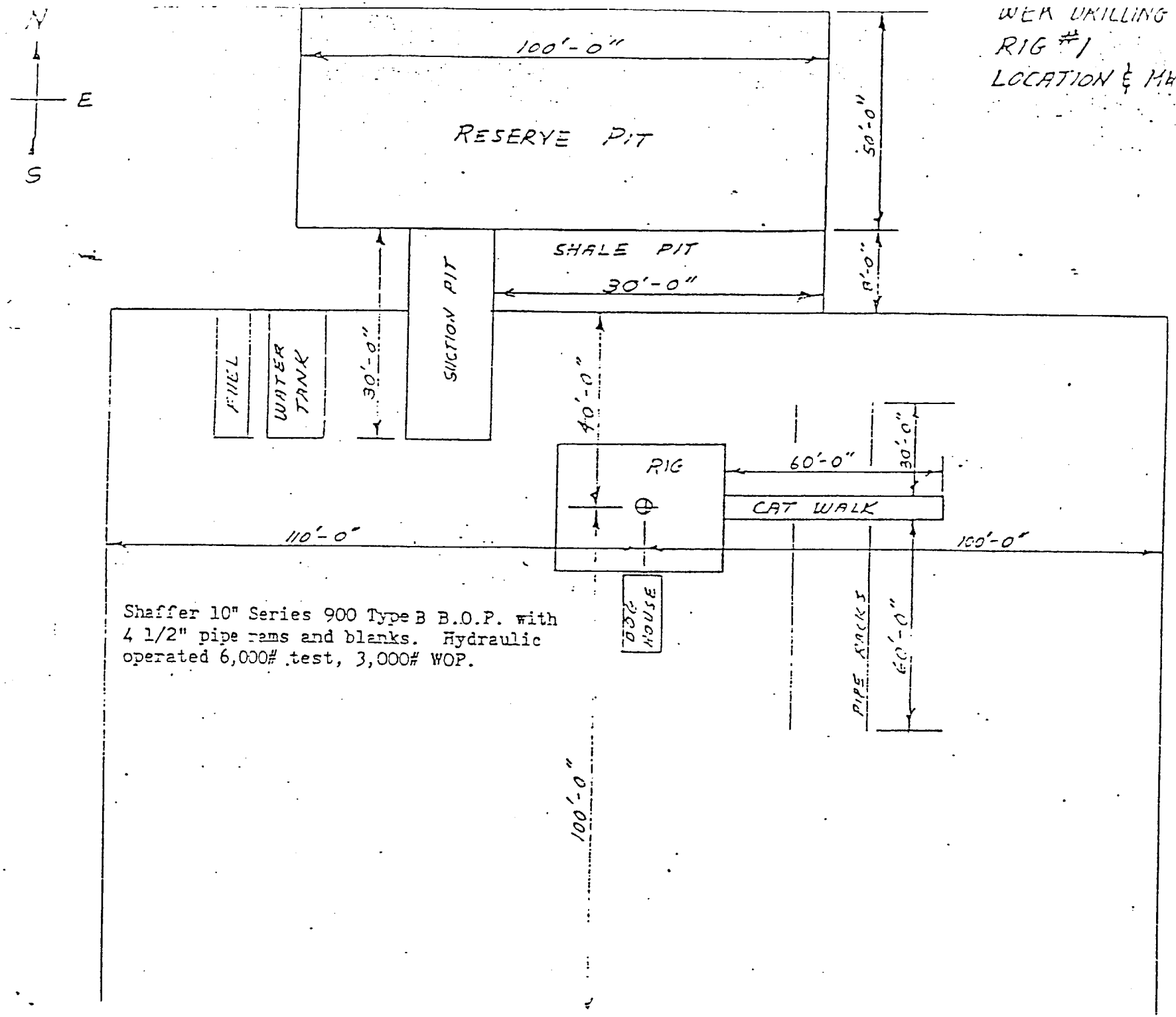
Minimum operating equipment for the preventers and hydraulically operated valves shall be as follows: (1) Multiple pumps, driven by a continuous source of power, capable of fluid charging the total accumulator volume from the nitrogen precharge pressure to its rated pressure within _____ minutes. Also, the pumps are to be connected to the hydraulic operating system which is to be a closed system. (2) Accumulators with a precharge of nitrogen of not less than 750 PSI and connected so as to receive the aforementioned fluid charge. With the charging pumps shut down, the pressurized fluid volume stored in the accumulators must be sufficient to close all the pressure-operated devices simultaneously within _____ seconds; after closure, the remaining accumulator pressure shall be not less than 1000 PSI with the remaining accumulator fluid volume at least _____ percent of the original. (3) When requested, 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 Hydril preventer. When requested, a second pressure reducer shall be available to limit operating fluid pressures to ram preventers. Gulf Legion No.38 hydraulic oil, an equivalent or better, is to be used as 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.

WEK DRILLING CO., INC.
RIG #1
LOCATION & MUD PIT SPEC.



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.

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 H2S 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 H2S 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 H2S zone (within 3 days) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S 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. H2S SAFETY EQUIPMENT AND SYSTEMS

All H2S 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 H2S.

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:

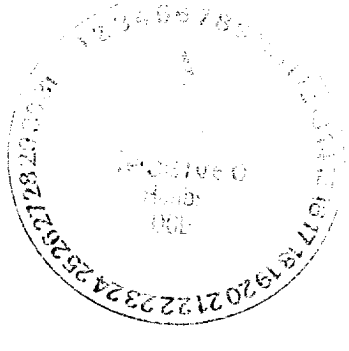
a. All drill stings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines and valves shall be suitable for H2S service.

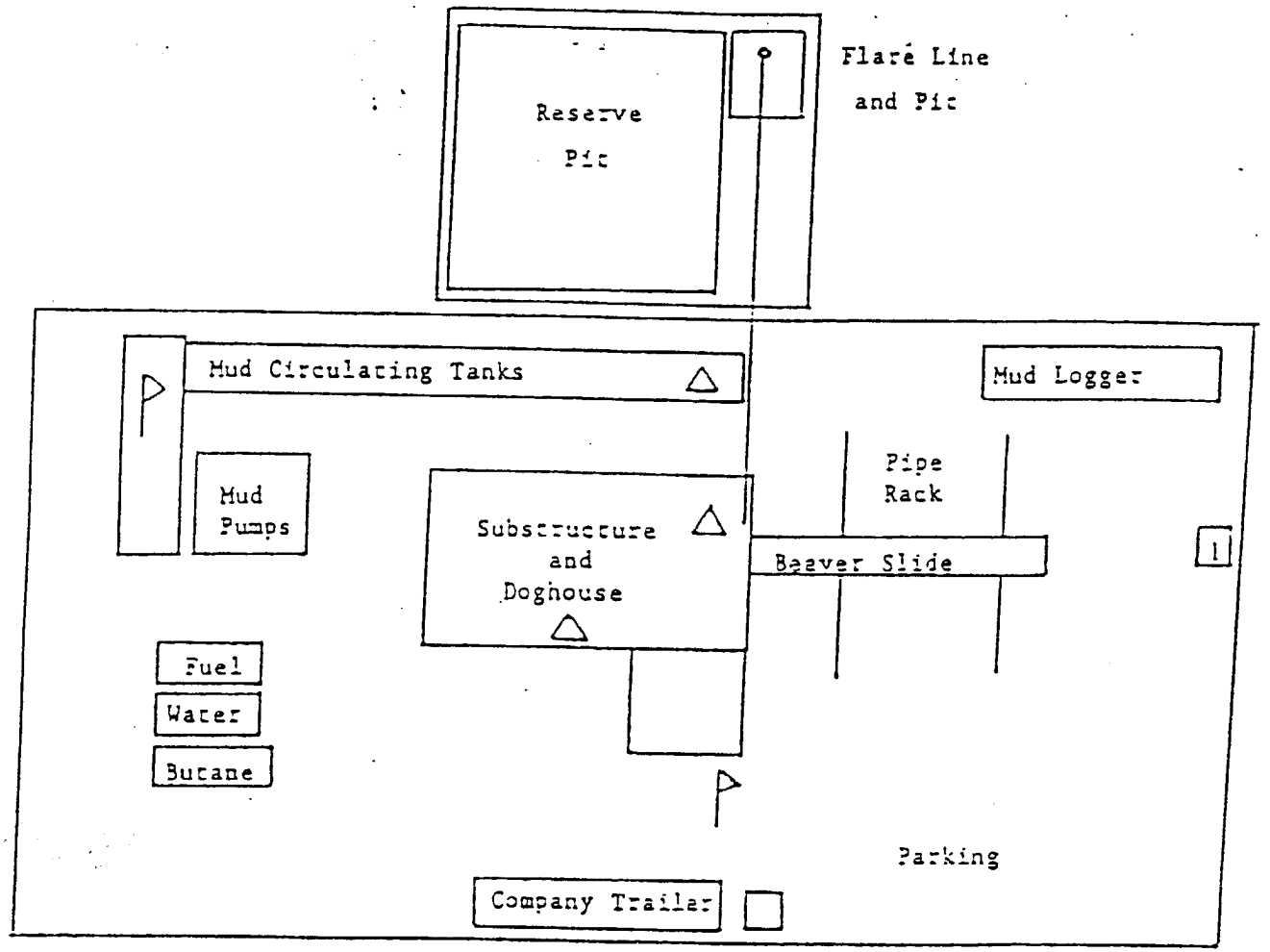
G. Communication:

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

— Wind Direction Indicators

□ — Safe Briefing areas with caution signs and protective breathing equipment Min. 150 feet from wellhead, 1 designates primary area

ELF 6/25/99
ABOVE DATE DOES NOT
INDICATE WHEN
CONFIDENTIAL LOGS
WILL BE RELEASED