

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

W. C. Blanks

3. ADDRESS OF OPERATOR

302 Building of the Southwest, Midland, Texas 79701

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

At surface

1980' FSL and 990' FWL

At proposed prod. zone

Same

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

Approximately 25.1 miles east of Carlsbad, New Mexico

15. DISTANCE FROM PROPOSED*

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

990'

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

None

16. NO. OF ACRES IN LEASE

320

19. PROPOSED DEPTH

13,200'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

320

20. ROTARY OR CABLE TOOLS

Rotary

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

3265.2' GR

22. APPROX. DATE WORK WILL START*

September 28, 1978

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
* 17 1/2"	13-3/8"	48#	450'	500 sx Class C w/2% CaCl-- Circulate
* 12 1/4"	9-5/8"	36#	3600'	435 sx Light tailed in with 200 sx Class C
* 8-3/4"	5 1/2"	** 20# and 17#	13200'	690 sx Class C w/2% CaCl-- 2500 lbs. KCl

* See attached letter dated 8/28/78 from Halliburton, for details.

** 20% N80LT&C to 2400'

17% N80LT&C next 6850'

20% N80LT&C next 3950' to TD

BOF Program: See Exhibit C.

Mud Program: See Recommended Mud Program dated 9/6/78, prepared by NL Baroid (copy attached).

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 Edward N. Lucking TITLE Agent for W. C. Blanks DATE 9/13/78

(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



United States Department of the Interior

GEOLOGICAL SURVEY
P. O. Box 26124
Albuquerque, New Mexico 87125

SEP 27 1978

W. C. Blanks
302 Building of the Southwest
Midland, Texas 79701

W. C. Blanks Agent for
Perry R. Bass
Big Eddy Unit Well No. 67
1980 FSL 990 FWL Sec: 15, T21S, R30E
Eddy County Lease No. NM-055038

Gentlemen:

Above Data Required on Well Sign

Your APPLICATION FOR PERMIT TO DRILL the above-described well to a depth of 13,200 feet to test the Morrow is hereby approved subject to compliance with the OIL AND GAS OPERATING REGULATIONS (30 CFR 221) and the following conditions:

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Oil and Gas Operations on Federal Leases, dated July 1, 1978.
2. Prior to commencing construction of road, pad, or other associated developments, operator will provide the dirt contractor with a copy of the Surface Use Plan and these Conditions of Approval including the attached General Requirements.
3. Submit a Daily Report of Operations from spud date until the well is completed and the Well Completion Report (form 9-330) is filed. The report should be not less than 8" x 5" in size and each page should identify the well.
4. All above-ground structures and equipment shall be painted in accordance with the attached Painting Guidelines. The color used should simulate sandstone brown (Federal Standard Color No. 595A, color 20318 or 30318).
5. Before drilling below the 9-5/8" casing, the blowout preventer assembly will consist of a minimum of one annular type and two ram type preventers.
6. A kelly cock will be installed and maintained in operable conditions.
7. After setting the 9-5/8" casing string and before drilling into the Wolfcamp formation, the blowout preventers and related control equipment shall be pressure tested to rated working pressures by an independent service company. Any equipment failing to test satisfactorily shall be repaired or replaced. This office should be notified in sufficient time for a representative to witness the tests and shall be furnished a copy of the pressure test report.

8. Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be installed and operating before drilling into the Wolfcamp formation and used until production casing is run and cemented. Monitoring equipment shall consist of the following:
- (1) A recording pit level indicator to determine pit volume gains and losses.
 - (2) A mud volume measuring device for accurately determining mud volume necessary to fill the hole on trips.
 - (3) A flow sensor on the flow-line to warn of any abnormal mud returns from the well.
9. Notify the Survey in sufficient time to witness the cementing of the 9-5/8" casing.
10. Cement behind the 13-3/8" and 9-5/8" casing must be circulated.

Sincerely yours,

(ORIG. SGD.) JAMES W. SUTHERLAND

Area Oil and Gas Supervisor

Enclosure

cc:
Regional Manager, Denver
Mining Branch (2)
BLM, Roswell (w/cy Notice)
✓NMOCC, Artesia (2) (w/2 cys Notice)
Artesia
Roswell (w/cy Notice)
Area (potash)
Area (Chrono.)
District (potash)
District (Chrono.)

**N. MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102
Supersedes C-128
Effective 1-1-85

All distances must be from the outer boundaries of the Section.

Operator W. C. BLANKS			Lease Big Eddy Unit			Well No. 67		
Unit Letter L	Section 15	Township 21 SOUTH	Range 30 EAST	County EDDY				
Actual Footage Location of Well: 1980 feet from the SOUTH line and 990 feet from the WEST line								
Ground Level Elev. 3265.2	Producing Formation MORROW		Pool SOUTH MAROON CLIFFS MORROW			Dedicated Acreage: 320 Acres		

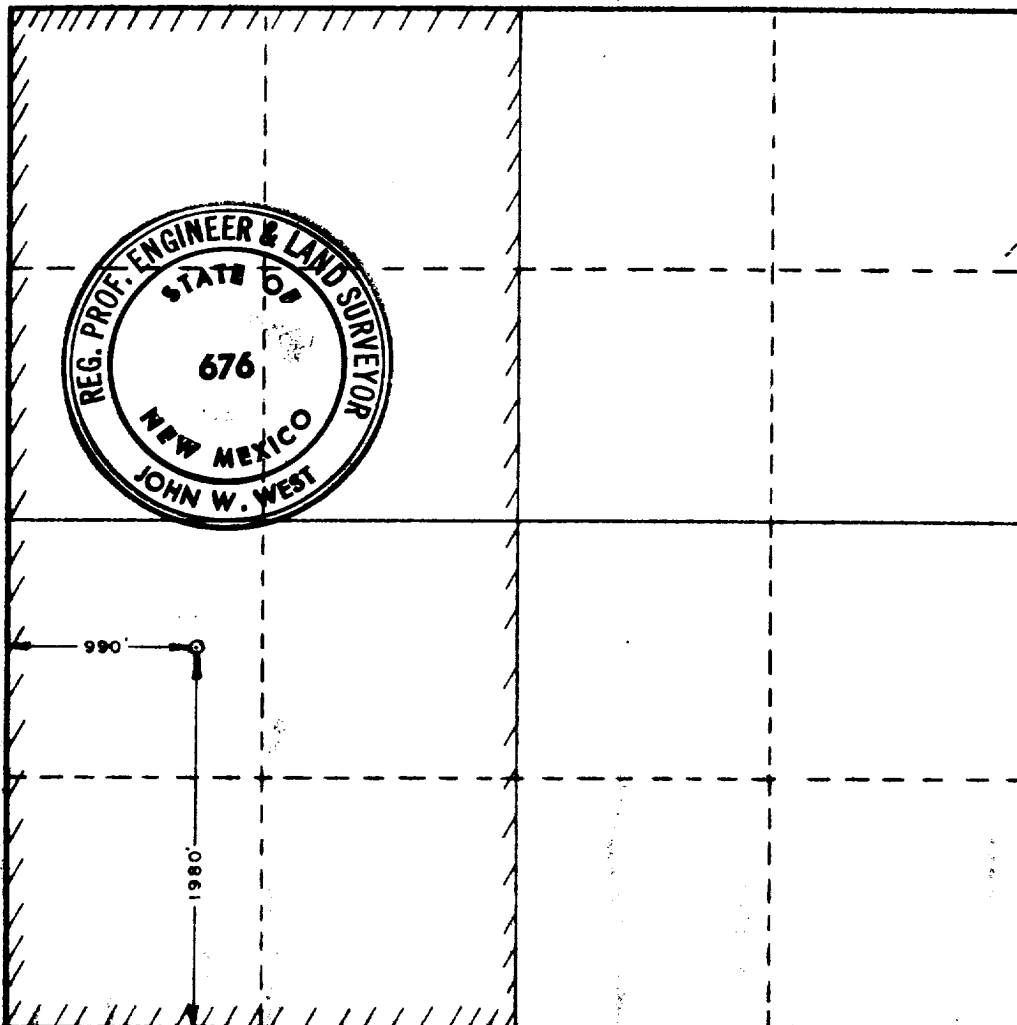
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

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

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.

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ARTESIA, NEW MEXICO



CERTIFICATION

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

Edward N. Lucking

Name

Edward N. Lucking

Position

Agent for

Company

W. C. Blanks

Date

8/30/78

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

AUGUST 18, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. John W. West

676

Donald J. Elders 3239

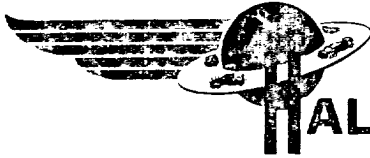
APPLICATION FOR DRILLING

W. C. Blanks
Big Eddy Unit Well No. 67
Section 15-T21S-R30E
Eddy County, New Mexico

In conjunction with Form 9-331C, Application for Permit to Drill subject well, W. C. Blanks submits the following ten items of pertinent information:

1. The geologic surface formation is quaternary alluvium and holson deposits and other surficial deposits.
2. The estimated tops of geologic markers are as follows:

Delaware Sand	3620' (- 355')
Cherry Cn.	5700' (-1435')
Strawn	11680' (-8415')
Upper Morrow	12050' (-8785')
Lower Morrow	12920' (-9655')
3. The depths at which anticipated water, oil or gas formations are expected to be encountered:
Water: Approximately 300 to 500 feet.
Oil or Gas: Morrow - approximately 12050 feet to TD.
4. Proposed casing program: See Form 9-331C and attached letter dated 8/28/78 from Halliburton.
5. Pressure control equipment: See Exhibit C.
6. Mud program: See attached mud program dated 9/6/78, prepared by NL Baroid.
7. Auxiliary equipment: See Exhibit C.
8. Testing, logging and coring programs:
Logging: CDL/GR, BHC AL/GR/C, DIFL, L/L, MLIL-C, CDN.
Coring: SWC - Delaware and Cherry Cn.
DST - Upper and Lower Morrow.
9. No abnormal pressures or temperatures are anticipated.
10. Anticipated starting date: September 28, 1978. Drilling is expected to be completed in approximately 70 days.



HALLIBURTON SERVICES

P. O. BOX 1889, MIDLAND, TEXAS 79702

J. R. (BUDDY) REDDEN, JR.
Sales Manager
Midland Division

August 28, 1978
8-31: 8-311

Procedure Analysis Cementing

For: Mr. Bill Blanks
302 Building of the Southwest
Midland, Texas 79701

Re: Project to be drilled
Sec. 15, 21S, 30E
Eddy County, New Mexico

The purpose of this report is to recommend the equipment and materials for cementing the surface, intermediate and production casings in the referenced well.

Surface Casing: 13 3/8" casing x 17 1/2" hole set at 450'
(With cement circulated. Recommend above annulus
volume plus 100% excess.)

Pump Truck plus mileage \$

500 sacks Class "C" cement,
2% calcium chloride/sk.

(6.3 gals./sk. water
14.8 lbs./gal. density
1.32 cu.ft./sk. yield)

Transportation on cementing materials

Cost Estimate: Truck and Materials \$

Cost Estimate: Casing Equipment \$

One (1) Guide Shoe
One (1) Insert Float Valve
One (1) Centralizer
Two (2) pounds Halliburton Weld "A"
Top Wooden Plug

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Intermediate Casing: 9 5/8" casing x 12 1/4" hole set at 3,600'
(Recommend bringing cement back to base of salt
at approximately 1,800 feet to comply with re-
gulatory bodies. Tentatively, for AFE studies,
we are calculating cement volumes based on above
annulus conditions plus 100% excess.)

Pump Truck plus mileage \$

435 sacks Halliburton "Light" cement,
5 pounds Gilsonite/sk.
1/4 pound Flocele/sk.
(Lead Cement)

(10.9 gals./sk. water
12.29 lbs./gal. density
2.05 cu.ft./sk. yield)

200 sacks Class "C" cement
(Tail-in Cement)

(6.3 gals./sk. water
14.8 lbs./gal. density
1.32 cu.ft./sk. yield)

Transportation on cementing materials

Cost Estimate: Truck and Materials \$

Cost Estimate: Casing Equipment \$

One (1) Guide Shoe
One (1) Float Collar
Three (3) Centralizers
Two (2) pounds Halliburton Weld "A"
Top Rubber Plug

Production Casing: 5 1/2" casing x 8 3/4" hole set at 13,400'
(With cement back to 11,000 feet. Recommend above
annulus volume plus 35% excess for cost studies.
Use caliper volume plus 35% excess on actual job.
Displace cement with 2% KCl water.)

Pump Truck plus mileage \$

690 sacks Class "H" cement,
0.6% Halad-22A/sk.
0.2% CFR-2/sk.
5 lbs. KCl/sk.

(5.2 gals./sk. water
15.80 lbs./gal. density
1.20 cu.ft./sk. yield)

2,500 pounds KCl (15,000 gals. 2% KCl
displacement water)

Transportation on cementing materials

Cost Estimate: Truck and Materials \$

Cost Estimate: Casing Equipment \$

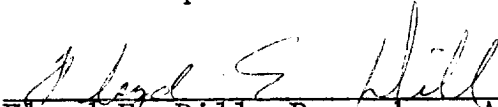
One (1) Differential Fill Float Shoe
One (1) Differential Fill Float Collar
Ten (10) Centralizers
One (1) pound Halliburton Weld "A"
Top Rubber Plug

The prices in this report are estimates only, are based on current published prices, do not include applicable taxes, and are subject to change due to field operations or other factors.

Men and equipment for this service will be coordinated through our Artesia, New Mexico office. Mr. Doug Buford is our Assistant District Superintendent, Area Code 505/746-2757.

We are pleased to have this opportunity to present this proposal for your consideration. If you accept our proposal, all materials and equipment furnished and services performed will be under our General Terms and Conditions and pursuant to our applicable Work Order Contract (whether or not executed by you). Copies of the General Terms and Conditions and applicable Work Order Contract will be furnished on request.

Prepared by:


Floyd E. Dill, Procedure Analyst

FED:ms

cc: E. M. Stanley
D. Buford
P. Carminati



RECOMMENDED MUD PROGRAM

Company W. C. Blanks Date 9-6-78
Well Name and Number Big Eddy Unit #67 Proposed Depth 13,500'
Location Section 15, T-21-S, R-30E County Eddy State New Mexico
Casing: Surf. 13 3/8" @ 450' Inter. 9 5/8" @ 3550' Prod. 5 1/2" @ 13,500'

RECOMMENDED MUD PROPERTIES

TREATMENT

DEPTH FEET	WEIGHT LB GAL	VISCOSITY SEC	FILTRATE ml	
0' - 450'	8.4- 8.6	40-60	N.C.	Spud mud - AQUAGEL-lime for viscosity. HY-SEAL for seepage.
450' - 3550'	10.0	29	N.C.	Drill with brine water. Use HY-SEAL for seepage. Use Caustic for pH 8.5-9.5. COAT 1131 and SURFLO H-35 for corrosion inhibition.
3550' - 8000'	8.4- 8.6	29	N.C.	Drill with fresh water. Use additions of BEN-EX or CON DET to maintain mini- mum solids. Continue Corrosion Program. Caustic 9.5-10.0; HY-SEAL for seepage control.
8000' - 10,500'	8.8- 9.0	29	N.C.	Add brine water (10 ppg) to increase fluid density to 8.8-9.0 ppg. Use HY-SEAL for seepage loss control. Continue Corrosion Program. Caustic for pH 9.5-10.0.
Remarks:				
10,500' - 11,700'	9.5- 9.8	31-32	10-12	Increase fluid density 9.5-9.8 ppg with brine water additions. Add 1/2-3/4 ppb DRISPAC to lower filtrate. Use Caustic for pH control. Continue Corrosion Pro- gram.
11,700' - 13,500'	10.0-11.0	34-36	5-8	Treat hardness with Soda Ash. Lower filtrate with DRISPAC and DEXTRID, add 4% KCL. Raise viscosity with Sea Mud/ ZEOGEL. Increase density above 10.0 ppg as needed with BAROID. Caustic for pH 9.5-10.0.

Estimated cost for mud materials: \$35,000-\$45,000

Recommended Program Based Upon (Without severe loss circulation or pressure
requiring above 10.0#/gallon).

The above recommendations are statements of opinion only, and are made without any warranty of any kind as to performance and without assumption of any liability by NL Industries, Inc., or its agents.

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MULTI-POINT SURFACE USE AND OPERATIONS PLAN

W. C. Blanks
Big Eddy Unit Well No. 67
1980' FSL and 990' FWL
Section 15-T21S-R30E
Eddy County, New Mexico
(Development Well)

This plan is submitted with Form 9-331C, 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 necessary 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 effects associated with the operation.

1. EXISTING ROADS.

A. Exhibit A is a portion of a topographic map of the area surrounding the proposed wellsite, on a scale of approximately one inch to a mile, showing in red the route of existing access roads to the location, from Highway 62, east of Carlsbad, New Mexico. The proposed drilling location is situated at a driving distance of approximately 25.1 miles east of Carlsbad, and can be reached as follows:

- (1) Proceed east from Carlsbad on Highway 62 for a distance of approximately 21.3 miles.
- (2) Turn right (south) on the first oil field road after passing mile-marker no. 57 on Highway 62.
- (3) The distance from this point to the beginning point of the proposed new access road is approximately 3.8 miles. En route, pass an existing caliche pit adjacent to the road, approximately 0.6 miles after leaving Highway 62. There is a cattleguard about 2.5 miles beyond the caliche pit, and the beginning point of the proposed new access road is on the left (east), approximately 0.7 miles beyond the cattleguard.

2. PLANNED ACCESS ROAD.

- A. The proposed new access road is indicated in green in Exhibit A. This road will originate from the existing oil field road at the point indicated in paragraph 1A(3), above. It will lie in a generally south and east direction for a distance of approximately 2400 feet, and will meet the drilling pad at the southeastern edge of the pad.
- B. The route of the proposed new road crosses one shallow draw and one wide, deep draw en route to the drillsite. It is planned to use a 20-foot length of 24" corrugated metal pipe to cross the shallow (3') draw and a 40-foot length of similar 60" pipe to

cross the deep, wide draw (which is about 12'-14' deep and ranges in width from about 20' to about 25'). This plan has already been discussed with the Roswell office of the BLM.

- C. One turnout will be constructed over the length of the proposed new road. No fences are involved and no cattleguards will be necessary.
- D. The new road will have a driving surface width of 12 feet and the surface will be topped with compacted caliche. The center of the road will be crowned, with drainage on both sides.
- E. The entrance to the new road, at the point of departure from the existing oil field road, will be widened to provide enough space for trucks and heavy equipment to enter the new road.
- F. The starting point of the new road is clearly marked by a stake and ribbons, and the route of the road is staked and flagged, and clearly visible from each stake to the next.

3. LOCATION OF EXISTING WELLS.

- A. As indicated in Exhibit B, the nearest production is at 1980' FNL and 660' FEL of adjoining section 16. There is no other production within two miles of the proposed location. An application to drill has been submitted for a proposed well at 1980' FSL and 2130' FNL of section 25.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES.

- A. There are no production facilities on this lease at the present time.
- B. In the event that the well is productive, the necessary production facilities will be installed on the drilling pad. If the well is productive of oil, a gas or diesel self-contained unit will be used to provide the necessary power. No power will be required if the well is productive of gas.

5. LOCATION AND TYPE OF WATER SUPPLY.

- A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from privately owned or commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS.

- A. It is planned to obtain the caliche required for road and drilling pad surfaces from the existing pit, on federally owned surface, adjacent to the existing access road, which was mentioned above in

paragraph 1A(3), or from some other existing pit on federal surface. It will be hauled by truck over the existing and proposed roads described in paragraphs 1 and 2, above.

7. METHODS OF HANDLING WASTE DISPOSAL.

- A. Drill cuttings will be disposed of, in the reserve pits, which will be plastic-lined.
- 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 material 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 a separate disposal application will be submitted to the USGS for approval.
- E. Oil produced during operations will be stored in tanks until sold.
- 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 materials 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 C shows the relative location and dimensions of the well pad and reserve pits.
- B. The ground surface at the wellsite fluctuates gently and unevenly, and some cut and fill will be required in constructing the pad. In comparison with the ground level (3265.2') at the proposed well bore location, the northwest corner of the pad area is approximately 5.1 feet higher, and the other three corners are lower (NW, 3.4 feet; SW, 8.2 feet; and SE, 4.0 feet). The pad area will be leveled, with a covering of six inches of compacted caliche.
- C. The reserve pits will be plastic-lined.
- D. The pad and pit area has been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE.

- A. After finishing drilling and/or completion operations, all equipment and other materials not needed for further operations will be removed. Pits will be filled and the location cleaned of all trash and junk, so as to leave the wellsite in as aesthetically pleasing a condition as possible.
- B. Any unguarded pits 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 the 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. The proposed wellsite is located in an area of low sand dunes, some covered with grass, mesquite, or other ground cover. The location is about a mile south of an outcropping of the "maroon cliffs." The ground elevation, both at the location and over the route of the proposed new road, fluctuates somewhat in gently rolling undulations.
- B. A moderately shallow draw crosses the ground surface at the northwestern edge of the proposed drilling pad, at the location where the reserve pits will be constructed. The path of this draw will be diverted, so as to avoid this area, and the walls of the reserve pits will be reinforced so as to prevent leakage, either into or from the pits.
- C. The topsoil at the wellsite consists generally of soft, sandy loam.
- D. Flora and Fauna: The vegetation cover at the proposed location is moderately heavy for semi-arid desert land, consisting of mesquite, greasewood, cactus, yucca, broomweed, grass, and miscellaneous weeds and flowers. No wildlife was observed, but it is likely that typical semi-arid desert wildlife inhabit the area, which is used for cattle grazing.
- E. There are no ponds, lakes, or flowing streams or rivers in the vicinity of the wellsite, which is located relatively close to potash mining activities in the area.
- F. There are no occupied dwellings or windmills within several miles of the wellsite.
- G. The wellsite is on federally owned surface, with federal ownership of minerals.
- H. There is no evidence of any significant archeological, historical or cultural sites in the area of the proposed location. An archeological survey has been conducted by the Agency for Conservation Archaeology, Eastern New Mexico University, Portales, New Mexico.

W. C. Blanks
Big Eddy Unit #67
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12. OWNER'S REPRESENTATIVE.

The field representative of W. C. Blanks, responsible for assuring compliance with the approved surface use plan, is:

John Elphick
c/o W. C. Blanks
302 Building of the Southwest
Midland, Texas 79701
Phone: 915-683-5169

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 operations proposed herein will be performed by W. C. Blanks and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

9/13/78

Date

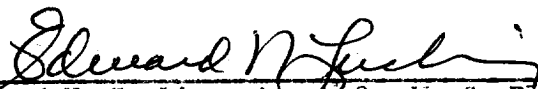

Edward N. Lucking, Agent for W. C. Blanks

EXHIBIT A

W. C. Blanks

Big Eddy Unit Well No. 67

1930' FSL and 990' FUL

Section 15-T21S-R30E

Eddy County, New Mexico

— Existing Road

— Proposed New Access Road

AREA 2

AREA 1

Red Lake

UTAH Wells

DRAWWORKS

Brewster N-75

Drum: 1 1/4" Lebus grooved

Compound: 2-engine oil bath chain drive

Brake: Hydromatic Parkersburg 40"

ENGINES

Two 610-H.P. D379TA Caterpillar Diesel.

DERRICK

Lee C. Moore, 131', 550,000 lb. nominal capacity.

SUBSTRUCTURE

Lee C. Moore, 14 1/2' high, 550,000 lb. nominal capacity.

MUD PUMPS

Pump No. 1: Emsco DB700. 700 H.P. with steel fluid end. 4 3/4" - 7 3/4" liners, 16" stroke. Compound-driven.

Pump No. 2: NAT C-250, 350 H.P. Powered by D353 Caterpillar Diesel.

DRILL STRING

3000' 4 1/2" Grade E, 20 lb.

Tool Joints: 4 1/2" H-90, 6 1/4" OD,

11000' 4 1/2" Grade E, 16.60 lb.

Tool Joints: 4" H-90, 6" OD

Thirty Drilco spiral-grooved 6 1/2" OD, 2 1/4" ID. With 4" H-90 joints.

Other sized drillpipe & drillcollars available.

BLOWOUT PREVENTERS

One Shaffer LWS hydraulic double 10" x 1500 series. One Hydril 10" x 1500 series.

Choke manifold 4" x 1500 series flanged connections. Payne 4 valve accumulator closing unit.

MUD SYSTEM

3 - 30 x 7 1/2 x 6 steel pits, with 700 Bbl. capacity. Complete low pressure circulating system, consisting of four submerged mud guns and two counter sunk jets in each pit. System utilizes a 6 x 8 centrifugal pump, powered by diesel.

EXHIBIT

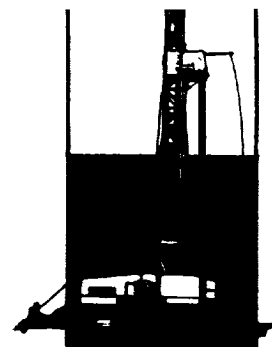
W. C. Drake

Big Eddy Unit Well No.

1980' FSL and 990' FWL

Section 15-T21S-R40E

Eddy County, New Mexico



MORANCO

RIG 7

7,500' - 14,000'

MUD HOUSE

One - 8' x 30' Steel Storage House

COMMUNICATIONS

24-Hour direct telephone interconnection through Hobbs (A.C. 505-397-3291) or Midland - Odessa (A.C. 915-563-0562).

OTHER EQUIPMENT

BLOCKS - Oilwell 350 Ton

HOOK - BJ4300 350 Ton

SWIVEL - NAT N69 350 Ton

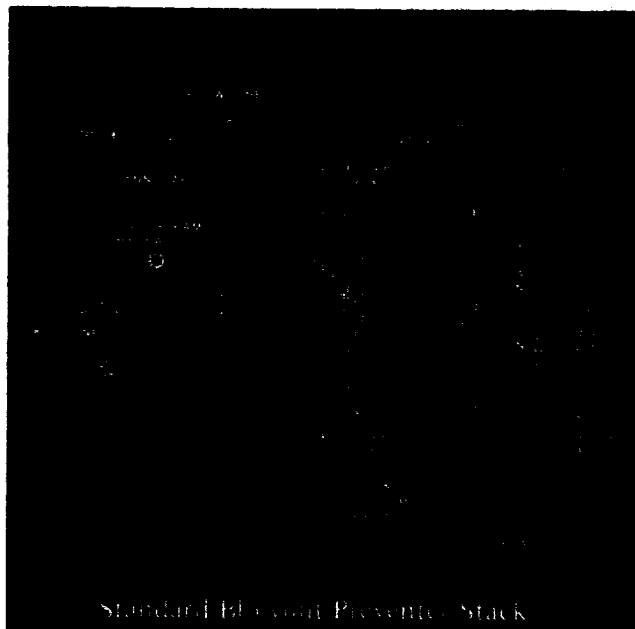
LIGHT PLANTS - One 40 KW and one 20 KW AC generators, powered by diesel engines.

LIGHTS - AC fluorescent or mercury - All vapor proof.

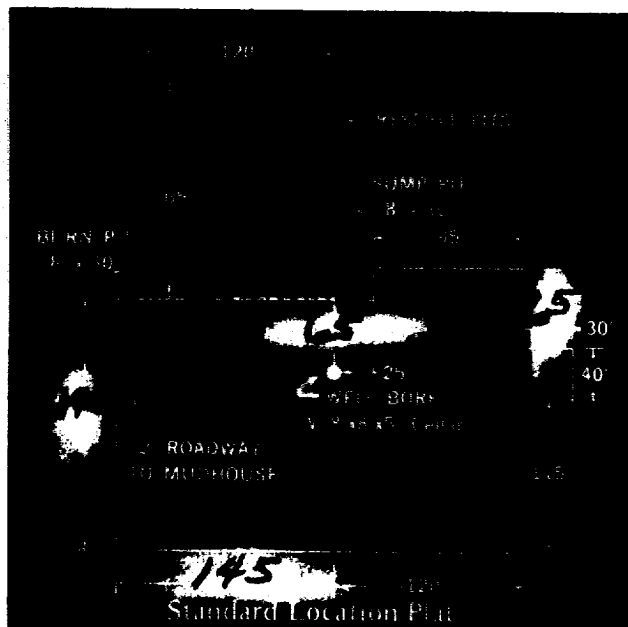
SHALE SHAKER - Link belt, single screen.

FRESH WATER STORAGE - two 500 Bbl., horizontal tanks.

HOUSING - 1 - 8' x 36' airconditioned trailer house, with sleeping and cooking facilities.



Standard Blowout Preventer Stack



Standard Location Plot