STATE OF NEW MEXICO
DEPARTMENT OF ENERGY AND MINERALS
OIL CONSERVATION DIVISION

IN THE MATTER OF:

THE APPLICATION OF DIAMOND SHAMROCK EXPLORATION COMPANY FOR APPROVAL OF AN UNORTHODOX WELL LOCATION, LEA COUNTY, NEW MEXICO.

Case No. 9087

A P P L I C A T I O N

COMES NOW Applicant Diamond Shamrock Exploration Company, by and through its attorneys, Rodey, Dickason, Sloan, Akin & Robb, P.A., and seeks approval to drill deeper its previously approved unorthodox Atoka Gas Well located 660 feet from the south and east lines of Section 34, Township 22 South, Range 34 East, NMPM, Lea County, New Mexico, to test the Morrow Formation, and states:

1. Applicant heretofore proposed to drill a well at the above described location, within the Antelope Ridge Atoka Gas Pool, to test the Wolfcamp, Strawn and Atoka Formations. After hearing, that Application was approved by Order No. R-8331, a copy of which is attached hereto, marked Exhibit "A".

2. Subsequent to the entry of that Order on November 4, 1986, Applicant commenced the drilling of that well at that duly approved unorthodox location; a copy of the application for that well is attached hereto, marked Exhibit "B". That well, known as Diamond Shamrock's Federal No. 2 Well, was spudded, and the drilling thereof is now in progress. Total depth has not yet been reached.

3. Applicant now desires to drill that well deeper to test the Morrow Formation. The reason for such unorthodox location to the requested depth is similarly based upon geologic conditions, and the granting of this Application would likewise be in the best interests of conservation, prevention of waste and protection of correlative rights.

4. The names and addresses of the offsetting operators, all of whom are being sent copies of this Application, are:

BTA
1407 South Pecos
Midland, Texas 79702

Amoco Production Company
501 WestLake Park Boulevard
Houston, Texas 77077

WHEREFORE, Applicant requests that after notice and hearing, this Application be granted and that Diamond Shamrock Exploration Company be granted approval for drilling its well at the unorthodox location heretofore set forth to test the Morrow Formation.

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By_____
Paul A. Cooter
Attorneys for Applicant
Post Office Box 1357
Santa Fe, New Mexico 87504-1357
Telephone: (505) 984-0100

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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
Diamond Shamrock Exploration Company

3. ADDRESS OF OPERATOR
2001 Ross Ave., Ste 1200, LTV Center, Dallas, TX 75201

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

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
20 miles Northwest of Jal, New Mexico

5. LEASE DESIGNATION AND SERIAL NO.
NM #19143

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal

9. WELL NO.
#2-~~19143~~

10. FIELD AND POOL, OR WILDCAT
Antelope Ridge - Atoka

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 34, T22S, R34E

12. COUNTY OR PARISH
Lea

13. STATE
NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
660'

16. NO. OF ACRES IN LEASE
640

17. NO. OF ACRES ASSIGNED TO THIS WELL
320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
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19. PROPOSED DEPTH
12,500'

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
3043 GR

22. APPROX. DATE WORK WILL START*
Upon approval

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#	700'	circulate to surface
12 1/4	9 5/8	36#	4850'	circulate to surface
8 3/4	7	23# & 26#	11,700'	780 sx
6 1/8	5	17.93#	12,500'	circulate to liner top

BOP Program - 5000 psi. Annular w/double ram to 11,700'
10000 psi. Annular w/double ram 11,700-12,500'

APPROVAL OF
OR CERTIF
EQUITABLE

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 [signature] TITLE Senior Drilling Engineer DATE 11-21-86

(This space for Federal or State office use)

PERMIT NO. APPROVAL DATE

APPROVED BY [signature] Actg TITLE DATE 12-2-86
CONDITIONS OF APPROVAL, IF ANY:
CEK #40

Subject to
Like Approval
by State

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person 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.

EXHIBIT "A"

EW MEXICO OIL CONSERVATION COMM ON

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.
DIAMOND SHAMROCK CORP.	FEDERAL	2-19143

Unit Letter	Section	Township	Range	County
P	34	22-S	34-E	LEA

Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3403'		Antelope Ridge - Atoka	320 Acres

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

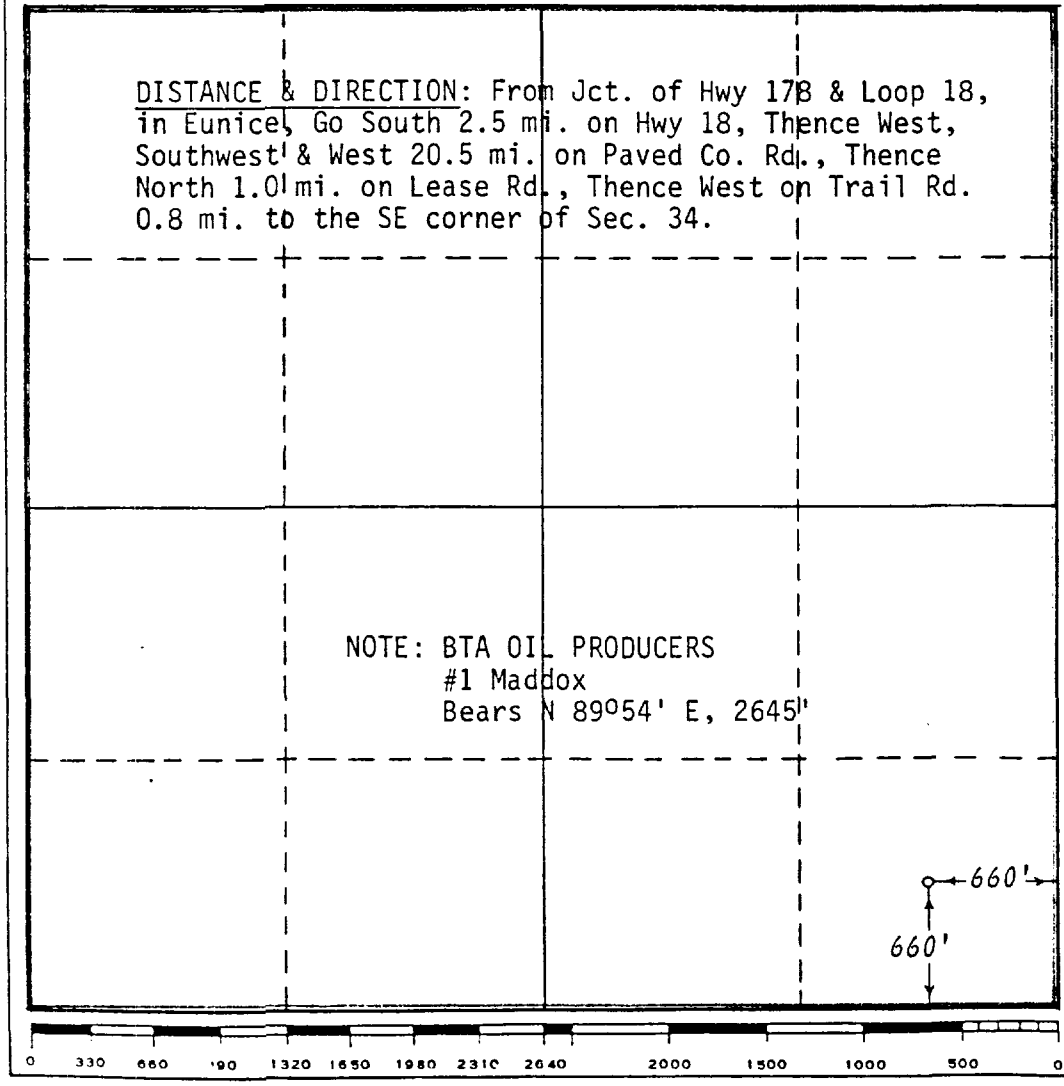
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

☐ 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 Craig Mickleberry
Senior Drilling Engineer
Position
Diamond Shamrock Exploration Company
Company
11-21-86
Date

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
Sept. 13, 1986
Registered Professional Engineer and/or Land Surveyor
Gary D. Boswell
Certificate No.
6689

DRILLING PROGRAM

Federal #2-19143
660 FSL & EL
Section 34-T22S-R34E
Lea County, New Mexico

1. ESTIMATED FORMATION TOPS

FORMATION	DEPTH
T/Delaware Group	5,373'
Cherry Canyon	5,646'
T/Bone Spring	8,461'
Bone Spring 1	8,627'
Bone Spring 2	9,781'
Wolfcamp	10,567'
Strawn	11,825'
Atoka	12,111'
Atoka A. Bank	12,223'
B/Atoka	12,326'
T.D.	12,500'

2. ESTIMATED DEPTH OF WATER, OIL, GAS, OR MINERALS

Gas & Oil: Gas and oil are expeced in the Wolfcamp, Strawn, and/or the Atoka formations.

Water: Ground water is anticipated to approximately 500'. Some brackish water sand could possibly exist below this level, however the hydrostatic head of the drilling fluid will safely contain those waters within their formations.

3. PRESSURE CONTROL EQUIPMENT

A. Refer to Diagrams A-1 & A-2.

B. Minimum pressure ratings on any and all B.O.P. or related control equipment will be 5,000psi to intermediate point. From intermediate point to T.D., minimum ratings will be 10,000 psi.

C. B.O.P. stack will be pressure tested to working pressure of B.O.P. or 80% yield on surface pipe prior to drilling out of surface casing. The stack will then be checked on each trip to insure workability.

D. Hydraulic B.O.P. controls will be located on the accumulator and rig floor. Manual controls will be located on the B.O.P.

4. A. Casing Design:

Casing String	Interval	Section Length	Size OD	WT.	Grade	Type	Cond.
Surface	0'-700'	700'	13 3/8"	48#	H-40	ST&C	New
Intermediate	0'-3,200'	3,200'	9 5/8"	36#	K-55	LT&C	New
	3,200'-4,850'	1,650'	9 5/8"	36#	S-80	LT&C	New
Intermediate	0'-8,800'	8,800'	7"	23#	S-95	LT&C	New
	8,800'-11,700'	2,900'	7"	26#	S-95	LT&C	New
Liner	11,300'-12,500'	1,200'	5"	17.93#	N-80	FL&S	New

B. Cement Program:

	Type and Amount of Cement
Surface	Circulate to surface with Class "C" cement containing 2% calcium chloride, 4% gel. Tail in with Class "C" cement containing 2% calcium chloride.
9 5/8" Intermediate	Circulate to surface. DV tool to be placed at approximately 3800'. Both stages to consist of lightweight cement followed by Class "C" cement.
7" Intermediate	50/50 Pozmix containing 6#/sack salt followed by Class "H" neat cement. Cement to 8000'. Estimated amount 780 sacks. Volume to be determined by open hole caliper.
5" Liner	Cement to liner top with Class "H" cement. Estimated amount 120 sacks. Volume to be determined by open hole caliper.

C. Auxillary Equipment

1. Upper and lower kelly cock.
2. No floats will be used.
3. One full opening stabbing valve on rig floor at all times.

5. THE TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATING FLUID

Low solid nondispersed brine system to 11,700'.

Max Wt	9.8
Vis	48
WL	No control

X C Polymer system from 11,700' to 12,500'

Max Wt	14.5
Vis	50
WL	8-30

Enough weighting materials and chemicals will be kept on location to maintain these mud characteristics.

Monitoring Equipment: Mud pit volume totalizer with return indicator. Mud logging unit from 4,500' to T.D.

6. EVALUATION PROCEDURES

A. Drill Stem Tests: Will be determined by onsite geologist.

B. Coring: Will be determined by onsite geologist.

C. Logging: 5,000'-11,700' - Dual Laterlog, CNL/FDC, Gamma Ray, Caliper
11,700'-12,500' - CNL/LDT, Gamma Ray, Caliper, Dual Induction, Dipmeter.

D. Completion Plan: If hydrocarbons are found, a fracturing procedure may be initiated. If this fracturing procedure is used, the pumping equipment, tanks of combustible fluids, and well head will be a minimum of 75' apart. Fracturing size and type will be determined after evaluation of logs.

7. ABNORMAL DRILLING CONDITIONS

A. Abnormal Pressure: Anticipated thru Strawn and Atoka zones.

B. Abnormal Temperatures: None anticipated

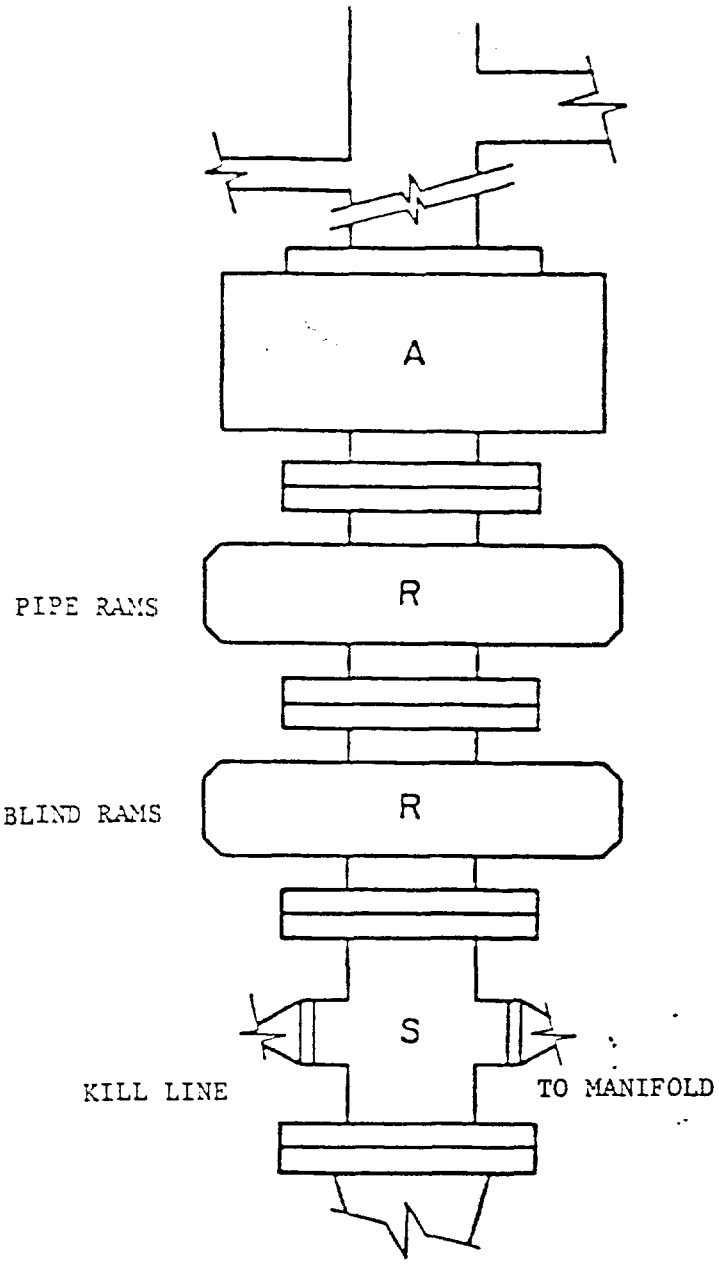
C. Hydrogen Sulfide: None anticipated

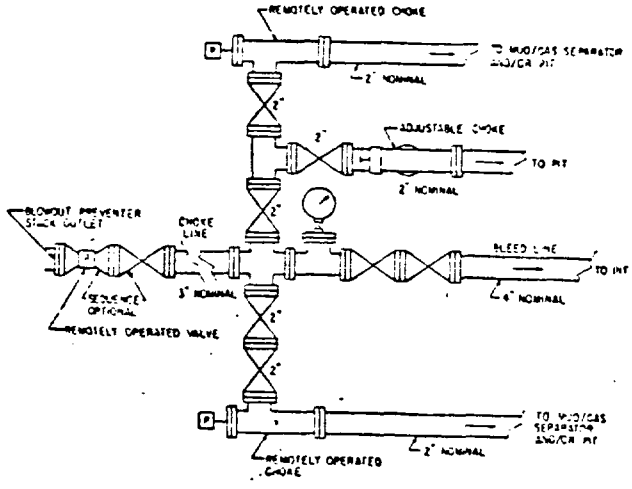
D. Anticipated Bottom Hole Pressure: 8200psi.

8. ANTICIPATED STARTING DATE AND DURATION

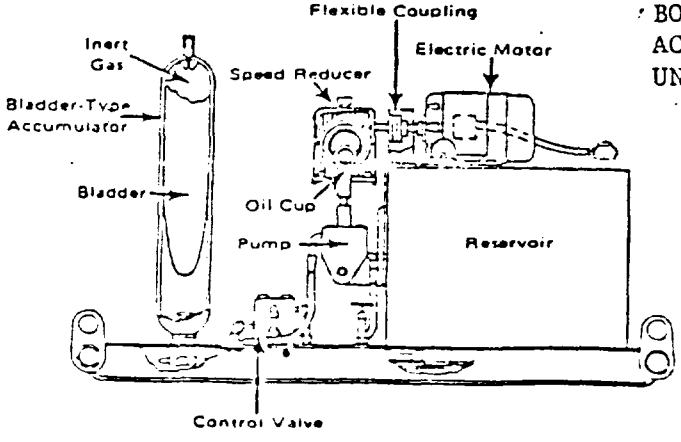
We anticipate commencing operations by Dec. 15, 1986, or as soon as governmental approval is obtained. The anticipated duration of drilling and completion is approximately 4 months.

5. 00# WP BOP
DIAGRAM A-1



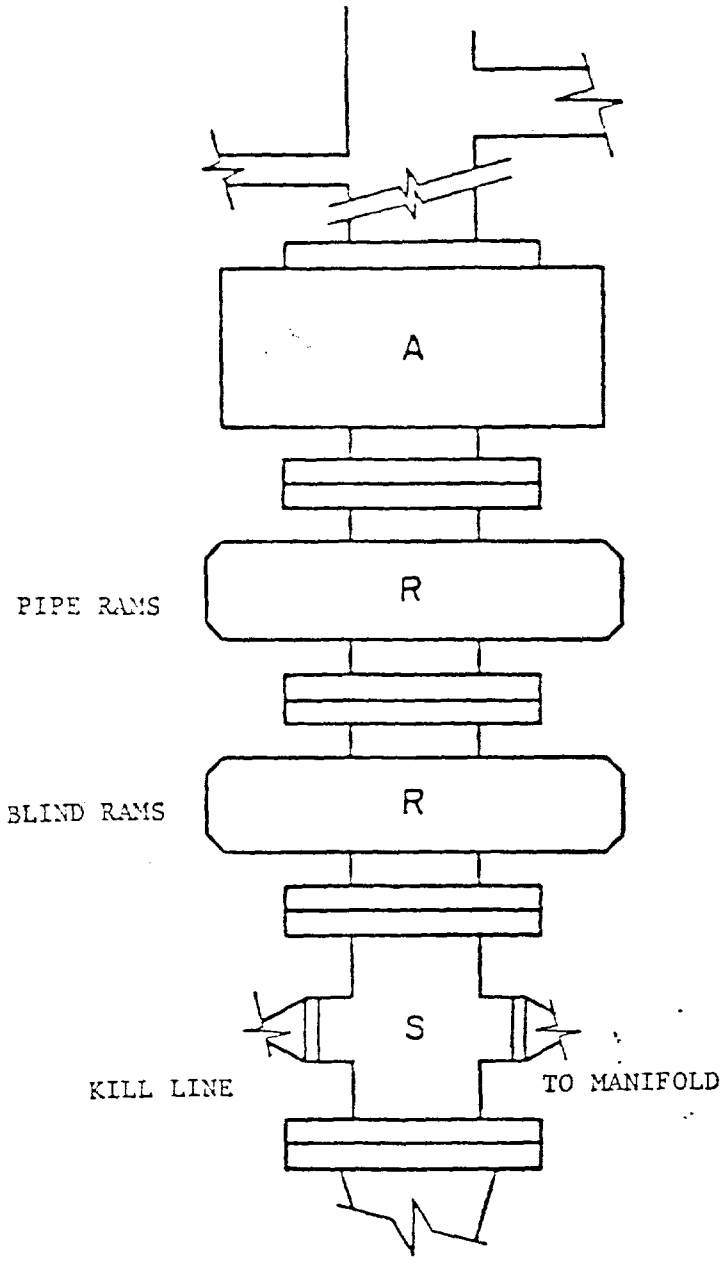


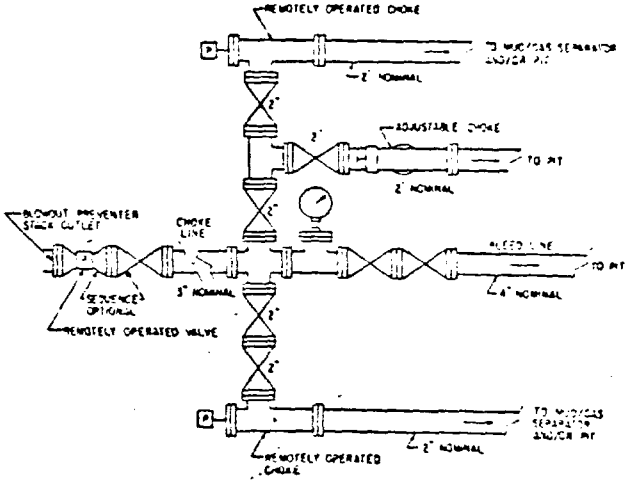
CHOKE MANIFOLD
All Valves to be 5,000 psi



BOP
ACCUMULATOR
UNIT

10 00# WP BOP
DIAGRAM A-2





CHOKE MANIFOLD
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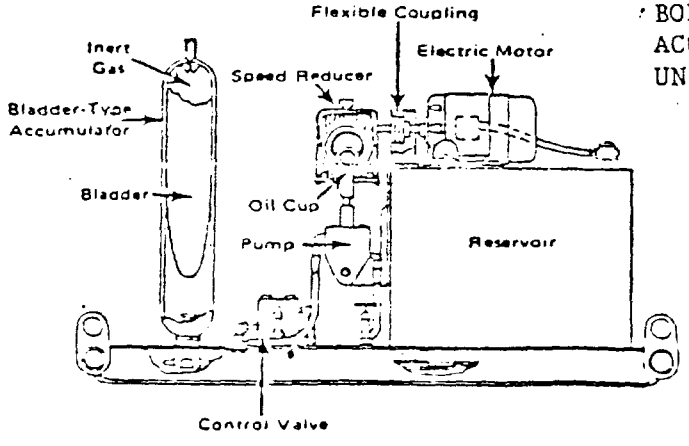
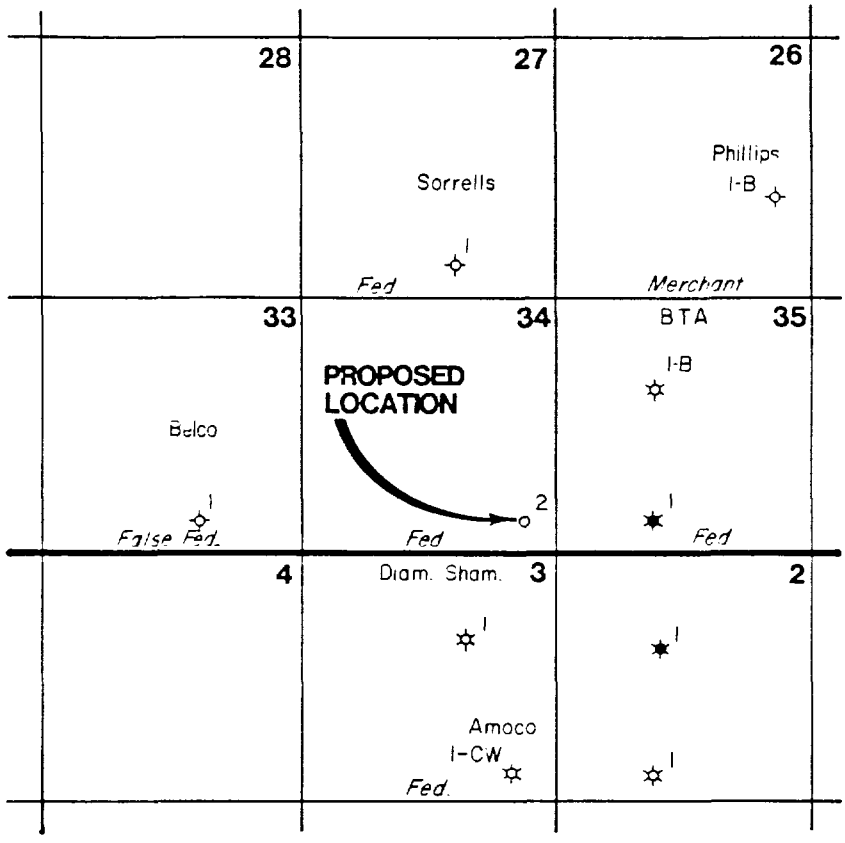


BOP
ACCUMULATOR
UNIT



SCALE: 1"= 4000'

FEDERAL NO. 2-19143

660' FSL & 660' FEL

T22S - R34E

Lea County, New Mexico

GENERAL REQUIREMENTS
FOR
OIL AND GAS OPERATIONS ON FEDERAL LEASES

The General Requirements apply universally to all oil and gas operations on Federal leases in the Roswell District.

Special Stipulations are in addition to the General Requirements and apply specifically to an individual well.

GENERAL

1. A complete copy of the approved Application for Permit to Drill and the accompanying Surface Use and Operations Plan, along with any conditions of approval will be made available to authorized government personnel at the drill site whenever active construction or drilling operations are underway.

2. Full compliance is required with applicable laws and regulations: with the Code of Federal Regulations, CFR 3160, the lease terms, the approved Permit to Drill, the approved Surface Use and Operations Plan, Onshore Oil and Gas Orders, NTL's and with other orders and instructions of the authorized officer.

3. Prior approval is required for variance from the approved Surface Use Plan or drilling program. Similar approval is also required for addition to, or alteration of facilities, and before commencing plugging operations, plug-back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally; but such approval does not waive the written report requirements.

For changes to the Surface Use Plan, Contact the Supervisory, Mineral Resources Specialist.

For changes to the drilling plan, contact the Petroleum Engineer:

Carlsbad Resource Area (505) 887-6544
Roswell Resource Area (505) 624-1790

4. Drilling Deadline: This permit is valid for a period of one year from the date of approval, or until lease expiration or termination, whichever is shorter. If the permit terminates, any surface disturbance created under the application must be rehabilitated in accordance with an approved plan. If construction does not commence within 90 days from the date of approval, the operator must contact the Surface Management Agency prior to beginning construction.

5. Well area and lease premises will be maintained in a workman-like manner with due regard to safety, conservation, and appearance. All waste associated with the drilling operations will be contained and will be buried in a separate netted trash pit, or removed and deposited in an approved sanitary landfill. All garbage and debris that is left on site will be buried at least four feet deep, (metal containers will be crushed). No hazardous wastes may be buried in place. All trash and debris will be buried or removed from the site within 30 days after drilling operations have ceased; and the wellsite will be kept clean and in an aesthetically satisfactory condition for the life of the well.

6. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors.

7. No construction activities such as roads, well sites, tank battery sites, pits, or other work involving surface disturbance will be commenced until a Surface Use and Operations Plan is submitted and approval is obtained in writing.

8. Payment for construction minerals is due within 60 days following construction of the pad and access road.

ON LEASE SURFACE REQUIREMENTS PRIOR TO DRILLING

1. Prior to commencing construction of road, pad, or other associated developments, the operator will provide the dirt contractor with a copy of the Surface Use Plan and the attached conditions of approval.

2. Access Roads:

A. Unless otherwise approved, all access roads constructed and/or maintained in conjunction with the drilling permit (APD), will be limited to a 15-foot-wide driving surface, excluding turn-arounds. Surface disturbance associated with construction and/or use of the road will be limited to 25 feet in width. All roads will be adequately drained to control run-off and soil erosion. Drainage facilities may include, but not limited to, ditches, water bars, culverts, and/or any other measures deemed necessary by the authorized officer of the surface management agency.

B. Caliche, gravel, or other related minerals from new or existing pits on Federal mineral estate will not be taken without prior approval from the appropriate surface managing agency.

C. Confine all vehicles and equipment associated with the drilling, completion, or production phases of this well to the approved road, pad, and other areas herein approved.

D. Upgrade and maintain access roads as necessary to prevent soil erosion and accomodate year-round traffic.

E. 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 the 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. Unless otherwise approved, a cattleguard will be installed and maintained to prevent movement of livestock wherever an access road crosses any fence or gate. A 16-foot gate will be installed adjacent to the cattleguard.

3. Archeological or Historical Sites:

The lessee shall comply with all cultural resource laws and policies. The lessee will immediately report the discovery of any cultural or paleontological resources encountered during dirt work and shall immediately cease operations until advised to recommence work by the authorized officer. Further, the company shall be held responsible for the conduct of its employees and subcontractors while on lease. Any unauthorized collection or disturbance of cultural or paleontological resources by these persons may result in a shutdown order by the authorized officer.

4. Cave Stipulations:

A. No discarded materials or chemicals will be placed, or disposed of, in sinkholes or cave entrances.

B. If, during any construction activities associated with this action, any sinkholes or cave openings are discovered, all construction activities will cease immediately, and the BLM office will be notified.

DRILLING OPERATION REQUIREMENTS

1. Each well will have a well sign in legible condition from spud date to final abandonment. The sign will show the operator's name, lease or unit name, well number, location of the well and the lease serial number.

2. Drilling Pits:

A. Mud pits will be constructed so as not to leak, break, or allow discharge of liquids. Pits are not to be located in natural drainage. If plastic material is used to line pits, the plastic must be removed to below ground level before the pits are covered.

B. All unguarded pits containing liquids will be fenced and any unguarded pit containing oil and/or toxic liquids will be covered with a fine mesh netting to protect wildlife, if necessary.

C. Liquids in pits will be allowed to evaporate, or be properly disposed of before pits are broken. Under no circumstances will pits be allowed to be cut to be drained.

3. After cementing, but before commencing any test, the casing string will stand cemented under pressure until the cement has reached a compressive strength of at least 500 psi at the shoe, in no case will tests be initiated until the cement has been in place at least 8 hours. WOC time will be recorded in the driller's log.

4. All casing strings (except the conductor casing), must be pressure-tested (0.2 psi/foot or 1,000 psi, whichever is greater) prior to drilling the plug but after cementing; test pressures must not exceed the internal yield pressure of the casing. If the pressure declines more than 10 percent in 30 minutes, or if there is other indication of a leak, corrective measures must be taken.

A successful pressure test must be obtained before proceeding to the next step of the drilling program. Test data shall be entered into the daily drillers log.

5. Ram-type preventers and related control equipment must be tested to the rated working pressure of the stack assembly, or to 70 percent of the minimum internal yield pressure of the casing, whichever is less; or to such pressure as the authorized officer may otherwise prescribe. After installation, annular-type preventers must be tested to 50 percent of the rated working pressure; or to such pressure as the authorized officer may otherwise prescribe. Test data will be entered into the daily driller's log.

6. While drill pipe is in use, ram-type blowout preventers shall be actuated to test proper functioning once each trip, but in no event less than once each day. The annular-type blowout preventer shall be actuated on the drill pipe at least once each week.

7. Blowout preventers are to have proper rams for the operations being performed. Casing rams are required when running casing.

8. Blowout preventers are to have handwheels installed where applicable.

9. A choke line and a kill line are to be installed and maintained in good working order. The kill line is not to be used as a fill-up line.

10. The accumulator system will have a pressure capacity to provide for repeated operation of hydraulic preventers.

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

12. On rotary rigs, a drill string safety valve(s) must be maintained in the open position on the rig floor at all times while drilling operations are conducted. Separate valves are required when drilling with a mixed string.

13. On rotary rigs, a kelly cock will be installed and maintained in operable condition.

14. Blowout prevention drills are to be conducted as necessary to assure that equipment is operational and that each crew is properly trained to carry out emergency duties. All BOP tests and drills are to be recorded in the driller's log.

15. The maximum pressure to be allowed on blowout preventers during well control operations is to be posted for each casing string.

16. Quantities of mud materials sufficient to insure well control will be maintained and readily accessible for use at all times.

17. When coming out of the hole with drill pipe, the mud level in the hole will be maintained within 100 feet of the surface.

The volume of mud required to fill the hole will be watched; and at any time at which there is an indication of swabbing, or an influx of formation fluids, proper blowout prevention precautions must be taken. The mud will not be circulated and conditioned except on or near the bottom, unless well conditions prevent the running of the pipe to the bottom.

18. From the time drilling operations are initiated until drilling operations are completed, a member of the drilling crew or the toolpusher will maintain rig floor surveillance at al times, unless the well is secured with blowout preventers or cement plugs.

19. Drill-Stem Tests:

Test intervals and estimated amounts of oil and gas recovered and/or produced during drill-stem tests are to be shown in the driller's log and Sundry Report Form 3160-5.

20. Driller's Log:

A. The following shall be entered in the daily driller's log:

1. Blowout preventer pressure tests, including test pressures and results.

2. Blowout preventer tests for proper functioning.

3. Blowout prevention drills conducted.

4. Casing run, including size, grade, weight and depth set.

5. How pipe was cemented, including amount of cement, type, whether cement circulated, location of cementing tools, etc.

6. Waiting on cement time for each casing string.

7. Casing pressure tests after cementing, including test pressure and results.

21. SAFETY:

A. New employees are to be advised of safety procedures.

B. Safety drills will be conducted on a regular schedule.

C. Hard hats shall be utilized.

D. Rig lighting will be vapor - or explosion-proof.

E. Rig-safety lines will be installed.

22. REMOVAL OF DRILLING RIG:

Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM. ~~The rig must be removed from the drill site within thirty (30) days following completion of drilling. Stacking beyond this date will be done only after prior approval from the Area Manager.~~

23. REPORTS

A. The following reports are to be filed with the appropriate area office within 15 days after the work is completed: original and five copies of Sundry Report, Form 3160-5, giving complete information concerning:

1. Setting of each string of casing. Show size, grade and weight of casing set, size hole, depth set, amount and type of cement used, whether cement was circulated, top of cement behind casing if determined, depth of cementing tools used, casing test methods and results, and date work was done. Show spud date on first report submitted.

2. Intervals tested, perforated, acidized, or fractured, and the results obtained. Show the date work was done.

3. All undesirable events must be reported to the BLM within 24 hours.

WELL COMPLETION

1. 5-DAY PRODUCTION START-UP NOTIFICATION

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c) requires that "no later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or Sundry Notice, Form 3160-5, or orally to be followed by a letter or Sundry Notice, of the date on which such production has begun or resumed."

The date on which production is commenced or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated, or the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated, or the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever occurs first; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated, or the date on which gas is first measured through permanent metering facilities, whichever occurs first.

2. Original and eight copies of Well Completion Report, Form 3160-4, will be sent within 30 days of well completion, even when the well is a dry hole. Show formation tops, drill stem test information, completion data, and production tests. Show all oil and gas zones and important water sands under item 37. Data on water sands should include rate of water inflow or hydrostatic level.

3. Two copies of each electrical and radioactivity log run.

4. WATER DISPOSAL AND PITS:

A. An application for approval of the disposal method for water production and/or pits must be filed with the appropriate BLM area office pursuant to NTL-2B.

5. GAS FLARING:

An application for venting of gas must comply with NTL-4A. Short-term venting and flaring of gas is allowed without prior approval pursuant to NTL-4A, Part III.

6. PAINTING STIPULATIONS:

All above-ground permanent facilities, including, but not limited to, tanks, separators, heater treaters, and piping 4-inches or greater shall be painted Carlsbad Canyon, Munsell Soil, Color-25Y 6/2 (Old designation - Sandstone Brown) within 60 days of installation (unless contrary to State and Federal safety requirements). Any deviations must be authorized in advance by the BLM. Deviations from this color may be required by the authorized officer to fit special situations.

7. A separate report on Form 3160-6 must be filed monthly for each lease, a communitized or unitized area or for each participating area beginning with the month in which operations were first initiated. Such report must include all wells that are not approved as permanently plugged and abandoned. Wells must be identified by Federal or Indian lease number or by State or fee identification as appropriate. Separate lines should be used where necessary to identify leases, participating area, etc.

8. ABANDONMENT:

A. If the well is dry and is to be plugged, approval of the proposed plugging program may be obtained orally. However, oral approval must be confirmed in writing by immediately filing six (6) copies of the Notice of Intention of Abandon on Form 3160-5 with the appropriate BLM area office. The report should show the total depth reached, the reason for plugging, and the proposed intervals by depths, where plugs are to be placed, type of plug, type of plugging mud, etc.

B. Plugging Procedures:

1. Plugging equipment used is to have separate mixing and displacement pumps and a calibrated tank to assure proper displacement of plugs.

2. A proper tank or pit will be used to contain all fluids pumped from the well during plugging operations.

3. All cement plugs are to be placed through tubing (or drill pipe) and shall be a minimum of 25 sacks or 100 feet in length, whichever is greater. The minimum length of plugs for deeper wells is 150 feet in length for depths 5,000' - 10,000' and 200 feet in length for depths below 10,000'.

4. Any cement plug placed when the well is not full of fluid, or when the well may be taking fluid, will be touched after cement has set to verify proper location.

5. Mud must be placed between plugs. Minimum consistency of plugging mud must be that obtained by mixing at the rate of 25 sacks (50 lbs each) of gel per 100 barrels of water.

C. Upon completion of approved plugging, erect a regulation well marker which should not be less than 4 inches in diameter and extend at least 4 feet above general ground level. The top of the marker must be closed or capped. The following minimum information shall be permanently placed on the marker with a plate, cap, or welded bead:

1. Operator
2. Well number and name
3. Section, Township, Range
4. 1/4 1/4 section or footage location from section lines
5. Lease number

If approval is obtained to omit dry hole marker, casings are to be cut off four feet below ground level.

D. Following receipt of "Notice of Intent to Abandon", final BLM requirements for surface reclamation will be specified by the approving BLM office.

E. If the well is not drilled, please notify the BLM so that an official release can be approved.

SPECIAL DRILLING STIPULATIONS

THE FOLLOWING DATA IS REQUIRED ON THE WELL SIGN

OPERATORS NAME DIAMOND SHAMROCK EXPLORATION CO. WELL NO. & NAME Federal No. 2
LOCATION 660 F S L & 660 F E L SEC. 34, T. 22 S., R. 34 E.
LEASE NO. NM-19143 - COUNTY Lea

The special stipulations check marked below are applicable to the above described well and approval of this application to drill is conditioned upon compliance with such stipulations in addition to the General Requirements. The permittee should be familiar with the General Requirements, a copy of which is available from a Bureau of Land Management office. EACH PERMITTEE HAS THE RIGHT OF ADMINISTRATIVE APPEAL TO THESE STIPULATIONS PURSUANT TO TITLE 43 CFR 3165.3 and 3165.4.

I. SPECIAL ENVIRONMENT REQUIREMENTS

[ ] Lesser Prairie Chicken (Stips attached) [ ] San Simon Swale (Stips attched)
[ ] Floodplain (Stips attached) [ ] Other _____

II. ON LEASE - SURFACE REQUIREMENTS PRIOR TO DRILLING

[ ] The BLM will monitor construction of this drill site. Notify the _____ Resource Area Office, BLM at least _____ working days prior to commencing construction at (505)

[4] Roads and the drill pad for this well must be surfaced with 4 inches of compacted Caliche.

[ ] All topsoil and vegetation encountered during the construction of the drill site area will be stockpiled and made available for resurfacing of the disturbed area after completion of the drilling operation. Topsoil on the subject location is approximately _____ inches in depth. Approximately _____ cubic yards of topsoil material will be stockpiled for reclamation.

[ ] Other

III. DRILLING OPERATIONS REQUIREMENTS

The Bureau of Land Management office is to be notified at (505) 393-3612 (Hobbs Office), in sufficient time for a representative to witness:

[4] 1. Spudding [4] 2. Cement casing 13 3/8" inch 9 5/8 inch 7 inch and 5".

[4] 3. BOP tests [ ] Other

IV. CASING

[4] 13 3/8" surface casing should be set 700' and cement circulated to the surface. If cement does not circulate to the surface this BLM office will be notified and a temperature survey or cement bond log will be run to verify the top of the cement. Remedial cementing will be done prior to drilling out of that string.

[4] Minimum required fill of cement behind the 9 5/8" intermediate casing is to CIRCULATE TO SURFACE.

[4] Minimum required fill of cement behind the 5" production casing is to CIRCULATE TO LINER TOP.

7" CSG IS TO BE CEMENTED TO COVER ALL PAY ZONES.

V. PRESSURE CONTROL

[4] Before drilling below the 9 5/8" casing, the blowout preventer assembly will consits of a minimum of:

[4] One Annular Preventer [4] Two RAM-Type Preventers [ ] Other_____

[4] 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 as described in General Requirements. Any equipment failing to test satisfactorily will be repaired or replaced.

[4] The test will be conducted by an independent service company.
[4] The results of the test will be reported to the appropriate BLM office.
[4] The Bureau of Land Management office is to be notified in sufficient time for a representative to witness the test.

[4] Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, will be installed and operating before drilling into the WOLFCAMP Formation, and will be used until production casing is run and cemented. Monitoring equipment will consits of the following:

[4] 1. A recording pit level indicator to determine pit volume gains and losses.
[4] 2. A mud-volume measuring device for accurately determining mud volume necessary to fill the hole on trips.
[4] 3. A flow-sensor on the flow-line to warn of any abnormal mud returns from the well.

[ ] A Hydrogen Sulfide Contingency Plan will be approved by this BLM office before drilling below the _____ Formation. A copy of the plan will be posted at the drilling site.

[ ] Other

VI. WELL COMPLETION REQUIREMENTS

[ ] A Communitization Agreement covering the acreage dedicated to the well must be filed for approval with the Bureau of Land Management. The effective date of the agreement must be prior to any sales.

[4] Surface Restoration: If the well is a producer, the reserve pit(s) will be backfilled when dry, and cut-and-fill slopes will be reduced to a slope of 3:1 or less. All areas of the pad not necessary for production must be re-contoured to resemble the original contours of the surrounding terrian, and topsoil must be re-distributed and re-seeded with a drill equipped with a depth indicator (set at a depth of 1/2 inch) with the following seed mixture, in pounds of Pure Live Side (PLS), per acre.

[ ] A. Seed Mixture 1 (Loamy Sites)
Lehmanns Lovegrass (Eragrostis lehmanniana) 1.0
Side Oats Grama (Bouteloua curtipendula) 5.0
Sand Dropseed (Sporobolus cryptandrus) 1.0

[4] B. Seed Mixture 2 (Sandy Sites)
Sand Dropseed (Sporobolus cryptandrus) 1.0
Sand Lovegrass (Eragrostis trichodes) 1.0
Plains Bristlegrass (Setaria Magrostachya) 2.0

[ ] C. Seed Mixture 3 (Shallow Sites)
Sideoats Grama (Boute curtipendula) 1.0
Lehmann's Lovegrass (Eragrostis lenmanniana) 1.0
or Boer Lovegrass (E. chloromelas)

[ ] D. Seed Mixture 4 ("Gyp" Sites)
Alkali Sacaton (Sporobolus airoides) 1.0
Four-Wing Saltbush (Atriplex canescens) 5.0

Seeding should be done either late in the fall (September 15 - November 15, before freeze up) or early as possible the following spring to take advantage of available ground moisture.

[ ] Other

APPROVAL OF
OR CERTIFY THAT
EQUITABLE TITLE
LEASE
CONDUCT OF

SURFACE USE PROGRAM

Federal #2-19143
SE/SE Section 34-T22S-R34E
Lea County, New Mexico

1. Existing Roads

   A. From Eunice, New Mexico travel 2.5 miles south on Business Highway 18. Turn west on Delaware Basin road and travel 9 miles, turn south and travel 4 miles, turn west and travel 8.5 miles. Turn north onto existing lease road.

   B. Existion roads will be maintained in as good or better condition. Existing lease road will be upgraded if necessary.

2. Access Road

   A. Width: 3754' of new road to be bladed to a width of 16', 5940' of existing road will be upgraded if necessary. Refer to Map B.
   B. Maximum grades:
   C. Turnouts: None
   D. Drainage Design: Minor ditching required for drainage, otherwise only flat blading.
   E. Culverts, major cuts and fills: None
   F. Surfacing material: caliche
   G. Gates, cattleguards, or fence cuts: none

3. Location of Existing Wells
   See attached plat. There are no water, injection or disposal wells within a one mile radius of the proposed location.

4. Location of Existing and/or Proposed Facilities

A. New Facilities

1. Proposed location: Refer to Diagram B. All flowlines will be buried and will be on well site and battery site.
2. Dimension of Facilities: See Diagram C.
3. Area to be used for production will be leveled. Materials to be used for foundation are native soil and crushed rock.
4. Protective Measures: Tank Battery and production unit will be fenced to protect livestock and wildlife.

5. Location and Type of Water Supply

A. Location: Water will be purchased from private supplies in the marketing area.

B. Transportation: will be transported by truck to location and stored in reserve pit and rig pits.

6. Source of Construction Materials

A. Caliche will be used to construct road and location.

B. Surfacing materials will be obtained from private supplies in the marketing area.

C. No additional road is required of Federal or Indian lands for construction materials.

7. Methods of Handling Waste Disposel

A. Cuttings: will be contained in the reserve pit.
B. Drilling Fluids Including any Salts or Chemicals: will be contained in the reserve pit and allowed to evaporate before being covered. The reserve pit will be designed to prevent the collection of surface run off.
C. Produced Fluids: Oil will be put in storage tanks. Formation water will be put in the reserve pit.
D. Sewage will be contained in a portable latrine or bored hole, 6' minimum and a suitable chemical used.
E. Garbage and other waste material will be put in the trash burn pit, which will be enclosed 3/4 top and 4 sides with small mesh wire, and buried with a minimum of 4' dirt when it is no longer in use.
F. Clean up of well site: all debris will be gathered and collected in the trash pit after the drilling rig has moved out. The location will then be releveled prior to moving in a completion rig. Cellar, rathole and mousehole will be filled at this time. Reserve pit will be fenced on three sides during drilling and the fourth side upon release of the drilling rig.

8. Ancillary Facilities

No camps, airstrips or other ancillary facilities required.

9. Wellsite Layout

A. Cross section of drill pad with cuts and fills - refer to Diagrams C and C-1.
B. Location of mud tanks, reserve, burn and trash pits, piperacks, living facilities, and soil material stock piles - refer to Diagrams C & D.
C. Rig orientation, parking areas, and access roads - refer to Diagrams C & D.
D. Steel pits will be utilized to circulate drilling fluids. The reserve pits will be lined with plastic.

10. Plans for Restoration of Surface

A. Backfilling, Leveling, Contouring, and Waste Disposal: Backfilling of the pits will be done when dry. In the event of a dry hole, the location will be contoured to restore the surface to as near its original condition as possible. In the event of production, those areas not needed for operation will be recontoured to support vegetation. Waste material will be put in the trash burn pit.
B. Revegetation and Rehabilitation: Stockpiled top soil stripped from the location will be redistributed after contouring. All areas disturbed by Diamond Shamrock Exploration Company (drilling pad and access road) will be reseeded with a mixture recommended by the surface owner, and/or surface management agency, unless requested otherwise.
C. Pit Maintenance: Pits will remain fenced and be maintained until backfilled.
D. Oil on Pit: Oil on the pit will be removed or overhead flagging installed for the protection of waterfowl.
E. Timetable of Rehabilitation: Rehabilitation will take approximately 5 days, weather conditions permitting.

11. Surface Ownership

Surface ownership: United States Federal Government

12. Other Information

See attached Archaeological Clearance Report

13. Lessee or Operator Representative and Certification

Diamond Shamrock Exploration Company
Craig Mickleberry, 2001 Ross, Suite 1200, Dallas, TX 75201 (214) 979-5009
Rodney Dykes, 2001 Ross, Suite 1200, Dallas, TX 75201 (214) 979-5012
Kent Kirkpatrick, 2001 Ross, Suite 1200, Dallas, TX 75201 (214) 979-5001

I hereby certify that I, or persons under by direct supervision, have inspected the proposed drill site 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 Diamond Shamrock Exploration Company and its contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Date 7/20/82

Craig Mickleberry
Senior Drilling Engineer
U. S. Onshore Division, Southern Region
(214) 979-5009

NMAS
New Mexico Archaeological Services, Inc.

P. O. Box 1341
Carlsbad, New Mexico 88220
(505) 887-7646

17 November 1986

Reconnaissance
Excavation
Analysis
Explanation
Curation

Mr. Craig Mickleberry
Senior Drilling Engineer
DIAMOND SHAMROCK EXPLORATION COMPANY
P.O. Box 400
Amarillo, Texas 79188-0001

Dear Mr. Mickleberry:

Enclosed please find NMAS' Archaeological Clearance Report for DIAMOND SHAMROCK EXPLORATION COMPANY's proposed Federal No.2-19143 and its associated access road in Lea County, New Mexico. Two isolated cultural occurrences (ICO) were recorded during this survey. These remains are attributed to en passant activities, NMAS is suggesting clearance for this project.

If you have any questions pertaining to this report, please call my office. Thank you for asking NMAS to do this survey.

Yours sincerely,

J. Loring Haskell

Dr. J. Loring Haskell
Principal Investigator

Enclosure

cc: Mr. Mark Calamia, BLM, Carlsbad
Mr. Thomas W. Merlan, SHPO, Santa Fe

as

Archaeological Clearance Report

for

DIAMOND SHAMROCK EXPLORATION COMPANY

Federal No. 2-19143

Prepared

By

Dr. J. Loring Haskell

Submitted

By

Dr. J. Loring Haskell
Principal Investigator
New Mexico Archaeological Services, Inc.
Carlsbad, New Mexico

17 November 1986

Permit No. 14-2920-86-C

Report Number: NMAS-1986-8-N

ABSTRACT

New Mexico Archaeological Services, Inc., representing DIAMOND SHAMROCK EXPLORATION COMPANY, Amarillo, undertook a Class III survey of Bureau of Land Management lands scheduled to be impacted by the construction of a drill location and access road. Field work was conducted under partly cloudy conditions with gentle breezes during late morning. The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres). The access road will measure 20 X 3754 ft (actual area surveyed 8.62 acres). Total surveyed acreage 13.06 acres. They will be situated in Section 3, T23S, R34E and Section 34, T22S, R34E, NMPM, Lea County, New Mexico. Two isolated cultural occurrences (ICO) were recorded during this survey. NMAS is suggesting clearance for DIAMOND SHAMROCK EXPLORATION COMPANY's proposed work.

Introduction

On 16 November 1986, New Mexico Archaeological Services, Inc., (NMAS), Carlsbad, undertook for DIAMOND SHAMROCK EXPLORATION COMPANY, Amarillo, an archaeological survey of federal lands administered by the Bureau of Land Management in Lea County, New Mexico. The reconnoitered area will be impacted by the construction of a drill location and its associated access road. This project was advanced by Mr. Craig Mickleberry, Senior Drilling Engineer, DIAMOND SHAMROCK EXPLORATION COMPANY, and administered by Dr. J. Loring Haskell, Principal Investigator, NMAS, Inc. This survey was undertaken by Dr. Haskell. Field work was conducted under partly cloudy conditions with gentle breezes during late morning. Ground visibility ranges between 75 and 85%. Field time 1½ hours.

Survey Technique

For this investigation, DIAMOND SHAMROCK EXPLORATION COMPANY's proposed location was reconnoitered for evidence of man's past activities by walking it in a series of 25 ft wide, close interval (15° or less), zigzag transects. In addition, an added zone extending 20 ft on each side of the staked 400 X 400 ft location, and lying outside the bounds of the proposed work area was reconnoitered by a similar means. The access road was walked in two, 50 ft wide transects. Lathe is considered to be the center of the proposed road. Methodologically, this procedure served to promote optimal conditions for the visual examination of the area to be impacted by construction-related activities.

Federal No. 2-19143

Location

The proposed location will measure 400 X 400 ft (actual area surveyed 4.44 acres) on federal land and will be situated 660 ft from the south line and 660 ft from the east line.

Section 34, T22S, R34E, NMPM, Lea County, NM

Thus it will be situated in the:

SE¼SE¼, Section 34, T22S, R34E, NMPM, Lea County, NM

The associated access road will measure approximately 20 X 3754 ft (actual area surveyed 8.62 acres) and will be situated in the:

SE¼SE¼, Section 34, T22S, R34E, NMPM, Lea County, NM
SW¼SE¼, Section 34, T22S, R34E, NMPM, Lea County, NM
NW¼NE¼, Section 3, T23S, R34E, NMPM, Lea County, NM
SW¼NE¼, Section 3, T23S, R34E, NMPM, Lea County, NM

Map Reference: USGS SAN SIMON SINK QUADRANGLE, 7.5 Minute Series, 1984.

The sites of the proposed access road and location have not been previously impacted by mechanical means.

Terrain

DIAMOND SHAMROCK EXPLORATION's proposed location will be situated on an aeolian-mantled landform which is coextensive with San Simon Swale. Locally, the coeval surface is characterized by a continuous system of low- to mid-sized, coppice dunes and closed, shallow, hemispherically-shaped, deflation basins. An isolated field of semi-stabilized dunes occurs to the north. Surficial deposits are composed of loose, non-calcareous sandy loams and loamy sands. Deeper, better-developed, deflation basins harbor cherty gravels along with some highly weathered

angular caliche gravels and cobbles. Taxonomically, soil individuals fall within the Typic Torripsamment subgroup/Kermit-Berino Series. Nearest potable water supply occurs in the form of seeps and springs near the base of San Simon and Antelope Ridges. Interior portions of San Simon Swale, and its low point, San Simon Sink, are porous in character and hence do not hold runoff. Elevation is approximately 3403 feet.

Floristics

Areal soil individuals are supportive of a scrub, floral community. Major plants of the overstory are Quercus havardii, Artemisia filifolia, and Yucca glauca, along with scattered occurrences of Prosopis julfilora. Principal forbs are Senecio sp., Suaeda sp., Dalea lachnostachys, Euphorbia spp., Gutierrezia sarothrae, Croton sp., Calylophus sp., Hymenoxys sp., Zinnia acerosa, Senecio longilobus, and Penstemon sp., The Gramineae includes Aristida sp., Cenchrus incertus, Muhlenbergia arenaceous, Chloris cuculata, Andropogon spp., Sporobous flexuosus, Muhlenbergia porterii and Trichachne california. Cacti of this association are Opuntia leptocaulis and Opuntia polyacantha.

Cultural Resources

Prefield 13 and 17 November 1986/Mark Calamia and Arita K. Slate, two archaeological sites (Section 3).

NMAS 5744, a small task locus of unknown authorship, hosts a lithic scatter of opaline flint primary- secondary- and tertiary-decortication flakes, one piece of chert angular debris, one tested quartzite core and several pieces each of burned sandstone and caliche.

NM-06-2580, a ceramic and lithic scatter, hosting one metate, one mano, groundstone fragments, brownware potsherds, and chert, quartzite and chalcedony primary- and secondary- decortication flakes.

During the course of this survey, two isolated cultural occurrences (ICO) were recorded.

Isolated Cultural Occurrences (ICO)

ICO 1, consisting of a ground, sandstone metate fragment, one sided and measuring 125 X 110 X 28 mm, is situated in a shallow deflation basin at a point 185 ft west-southwest of the center of the location. There is no evidence of sub-surface remains. Principal plants are shinnery oak, sand sage, yucca and groundsel. It is located in the:

SE¼NW¼SE¼SE¼, Section 34, T22S, R34E, NMPM, Lea County, NM

UTM: Zone 13, N3,579,260; E645,740

Map Reference: USGS SAN SIMON SINK QUADRANGLE, 7.5 Minute Series, 1984.

ICO 2, consisting of one piece of opaline flint, angular debris, 46 X 22 X 10 mm, is situated in a deflation basin at a point 220 ft south-southeast of the center of the location. There is no evidence of sub-surface remains. Chief denizens of associated soils are sand sage, yucca and groundsel. It is located in the:

NW¼SE¼SE¼SE¼, Section 34, T22S, R34E, NMPM, Lea County, NM

UTM: Zone 13, N3,579,245; E645,840

Map Reference: USGS SAN SIMON SINK QUADRANGLE, 7.5 Minute Series, 1984.

Prehistorically, this area was visited on a regular basis by social units engaged in hunting and gathering activities with actual utilization intensifying during Late Eastern Jornada Mogollon times. Occupancy brackets the period from Paleoindian times up to the historic peoples of the nineteenth century A.D.

Recommendations

NMAS recommends clearance for DIAMOND SHAMROCK EXPLORATION COMPANY's proposed Federal No. 2-19143 and its access road and suggests that work-related activities proceed in accordance with company plans (Fig. 1). Clearance, of course, is granted by the Bureau of Land Management. If additional cultural resources are encountered during construction, the BLM and NMAS should be notified immediately. Duned settings are notorious for covering and uncovering cultural properties.

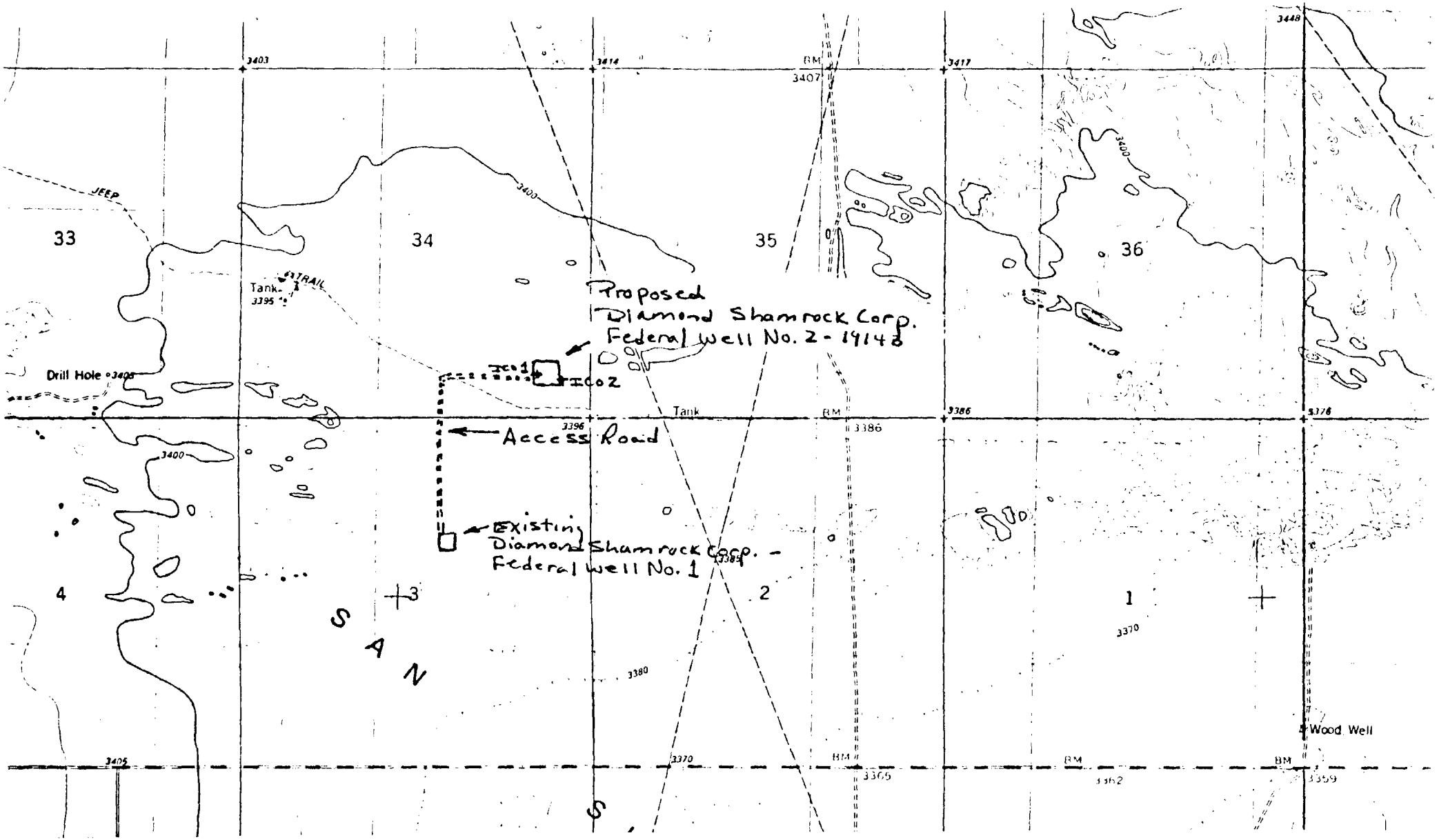


Fig. 1. USGS SAN SIMON SINK QUADRANGLE, 7.5 Minute Series, 1;24,000,1984, showing DIAMOND SHAMROCK EXPLORATION COMPANY's proposed Federal Well No. 2-19143, 660 FSL, 660 FEL, and access road, Section 34, T22S, R34E, and Section 3, T23S, R34E, NMPM, Lea County, New Mexico.

LITHIC DEFINITIONS

CORES: The block or nodules of raw material from which flakes are removed in the manufacture of chipped-stone tools.

UNPREPARED CORE: A core which possesses no systematic shaping of lateral edges and primary flaking is limited to preparation of a striking platform.

PREPARED CORE: A core which displays systematic preparation of the lateral edges.

PRIMARY DECORTICATION FLAKE: A flake struck during the initial shaping of a core which displays cortex over the entire dorsal surface.

SECONDARY DECORTICATION FLAKE: A flake struck during the initial shaping of the core which exhibits cortex over only part of the dorsal surface. An important difference between primary and secondary decortication flakes is that the latter are often utilized as tools themselves in a modified or unmodified state.

TABULAR FLAKE: Flake struck from an unprepared core, exhibiting a quadrilateral cross-section. The dorsal and ventral surfaces of these flakes are flat and parallel.

PARALLEL-SIDED FLAKE: Flake struck from a prepared core; large, thick flakes possessing a triangular cross section.

RECTANGULAR FLAKE: Flake struck from a prepared core exhibiting parallel, or slightly expanding lateral edges in relation to its longitudinal axis. These flakes are generally smaller than Parallel-Sided flakes and are belived to be struck from the edges, toward the center of a pyramidal core.

LAMELLAR FLAKE: Flake struck from a prepared core which exhibits a thinner, more regular shape than the other flakes detached from prepared cores. The symmetry and length-width ratio of Lamellar Flakes cause them to possess traits intermediate between those of flakes and blades. Indeed, they are removed from cores prepared similarly to the ones true blades are struck from, but lack the careful attention to the striking platform necessary to produce such a blade.

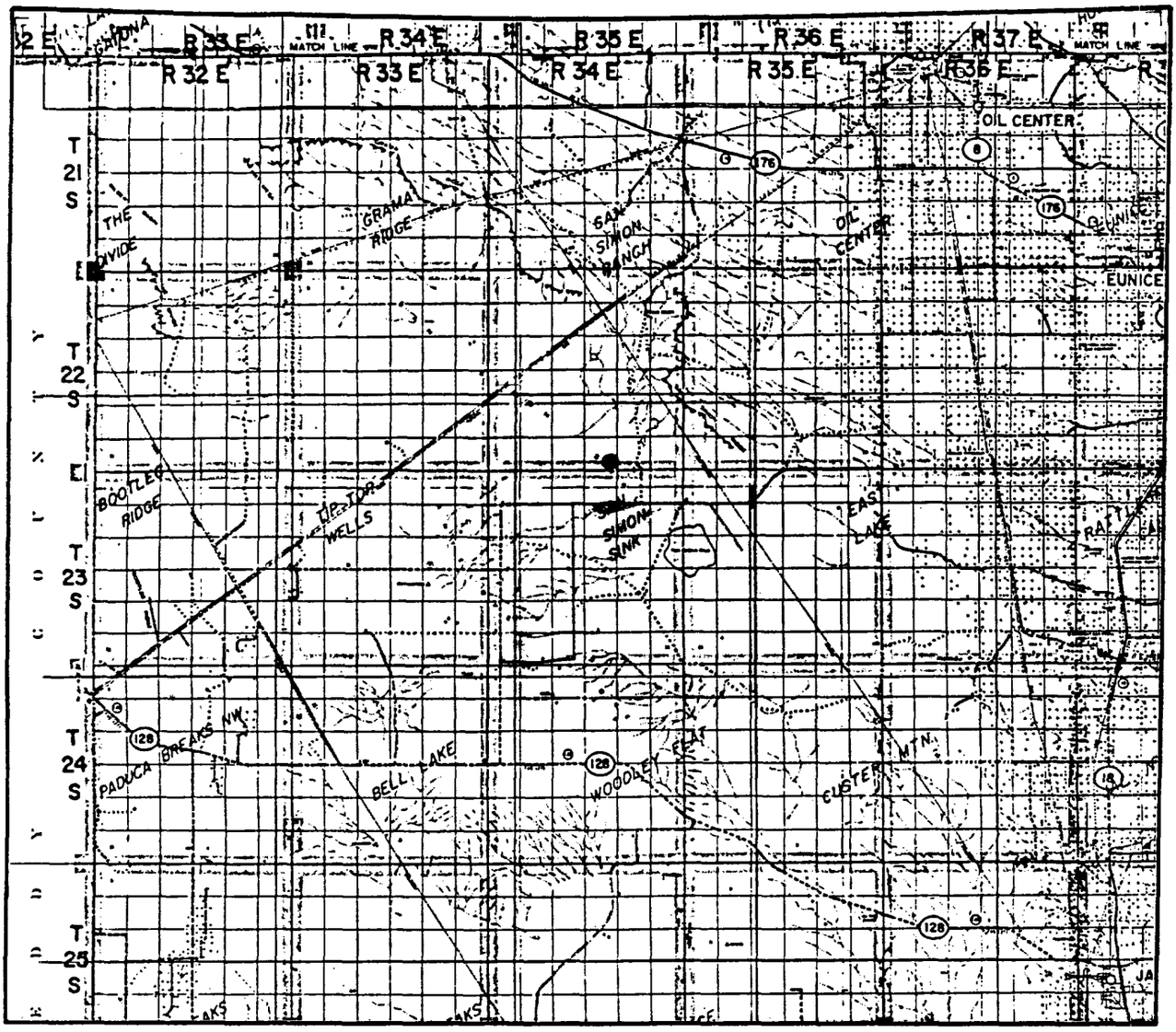
THINNING FLAKE: Flake removed to thin a piece for artifact manufacture.

BLADE: A specialized flake which possesses parallel lateral edges and a length equal to or more than twice the width. Blades are manufactured from carefully prepared

core, utilizing a blade technique which results in a unique pattern of ridges on the dorsal surface.

GRAVER: Chipped stone tool designed to possess a point or spur which is generally assumed to function as an incising implement. Frequently, heavy wear on such a spur is a diagnostic trait of such tools.

VICINITY MAP



SCALE 1" = 5 miles

SEC. 34 BLK. T-22-S TWP. R-34-E

SURVEY _____

COUNTY Lea STATE N.M.

DESCRIPTION 660' FSL & 660' FEL

ELEVATION 3403'

OPERATOR DIAMOND SHAMROCK

LEASE Federal # 2 - 19143

This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us, but its accuracy is not guaranteed.

Review this plat and notify us immediately of any possible discrepancy.

TOPOGRAPHIC LAND SURVEYORS

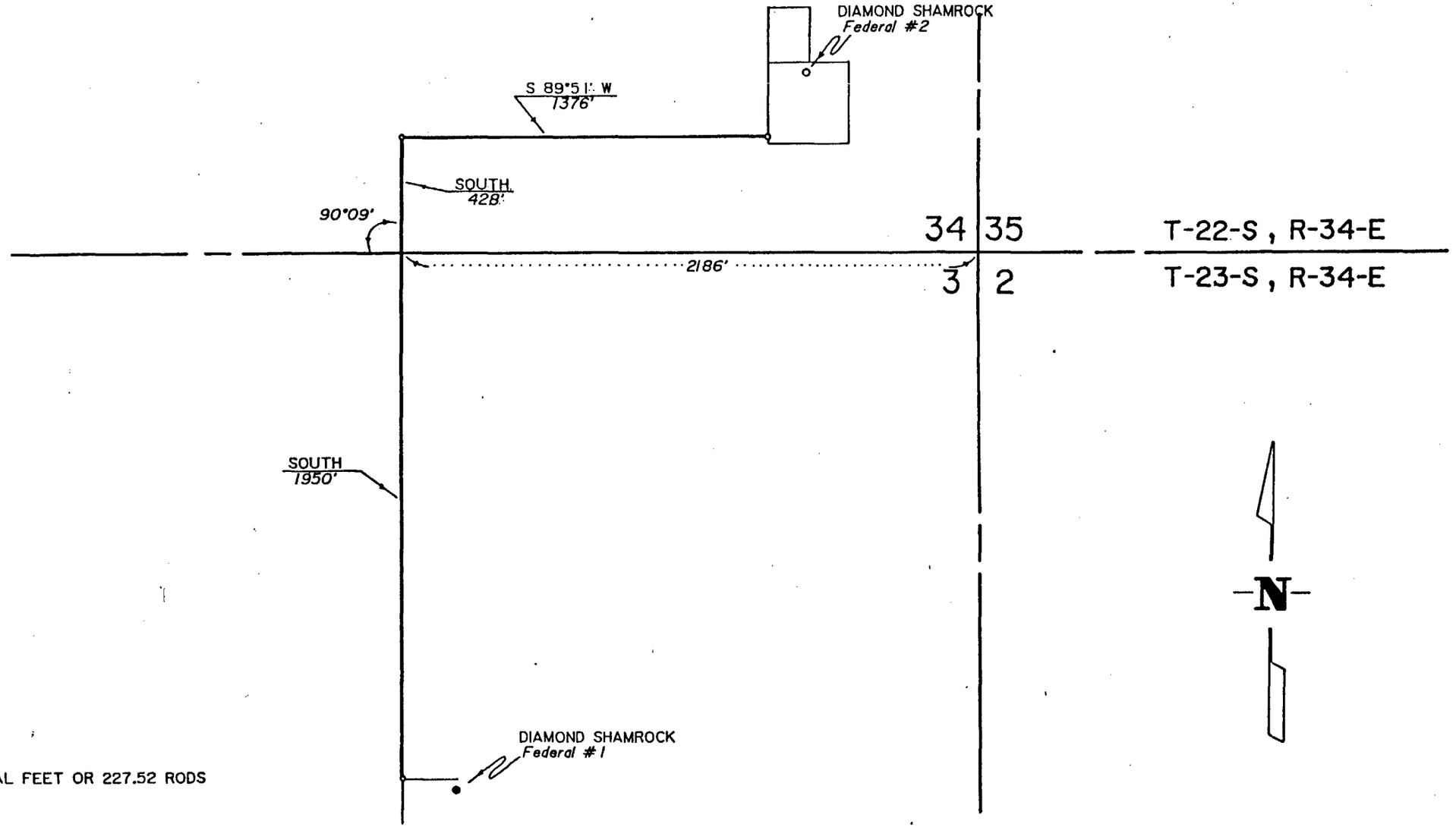
Surveying & Mapping for the Oil & Gas Industry

1305 N. HOBART
PAMPA, TX 79065
(806) 665-7218

910 W. WALL
MIDLAND, TX 79701
(915) 682-1653

215 E. TRAVIS
MARSHALL, TX 75670
(214) 938-9602

MAP B



3754 TOTAL FEET OR 227.52 RODS

STATE OF NEW MEXICO
GARY D. BOSWELL
NO. 6689
REGISTERED LAND SURVEYOR

I, GARY D. BOSWELL, A REGISTERED PUBLIC SURVEYOR AND AN AUTHORIZED AGENT OF TOPOGRAPHIC LAND SURVEYORS, DO HEREBY CERTIFY THAT THE ABOVE DESCRIBED SURVEY WAS STAKED ON THE GROUND AS SHOWN HEREIN.

Gary D. Boswell

REG. NO. 6689

SEPT. 15, 1986

Survey & Mapping By:
TOPOGRAPHIC LAND SURVEYORS
Midland, Texas

Drawn By: R.J.O.

Checked By: D.K.

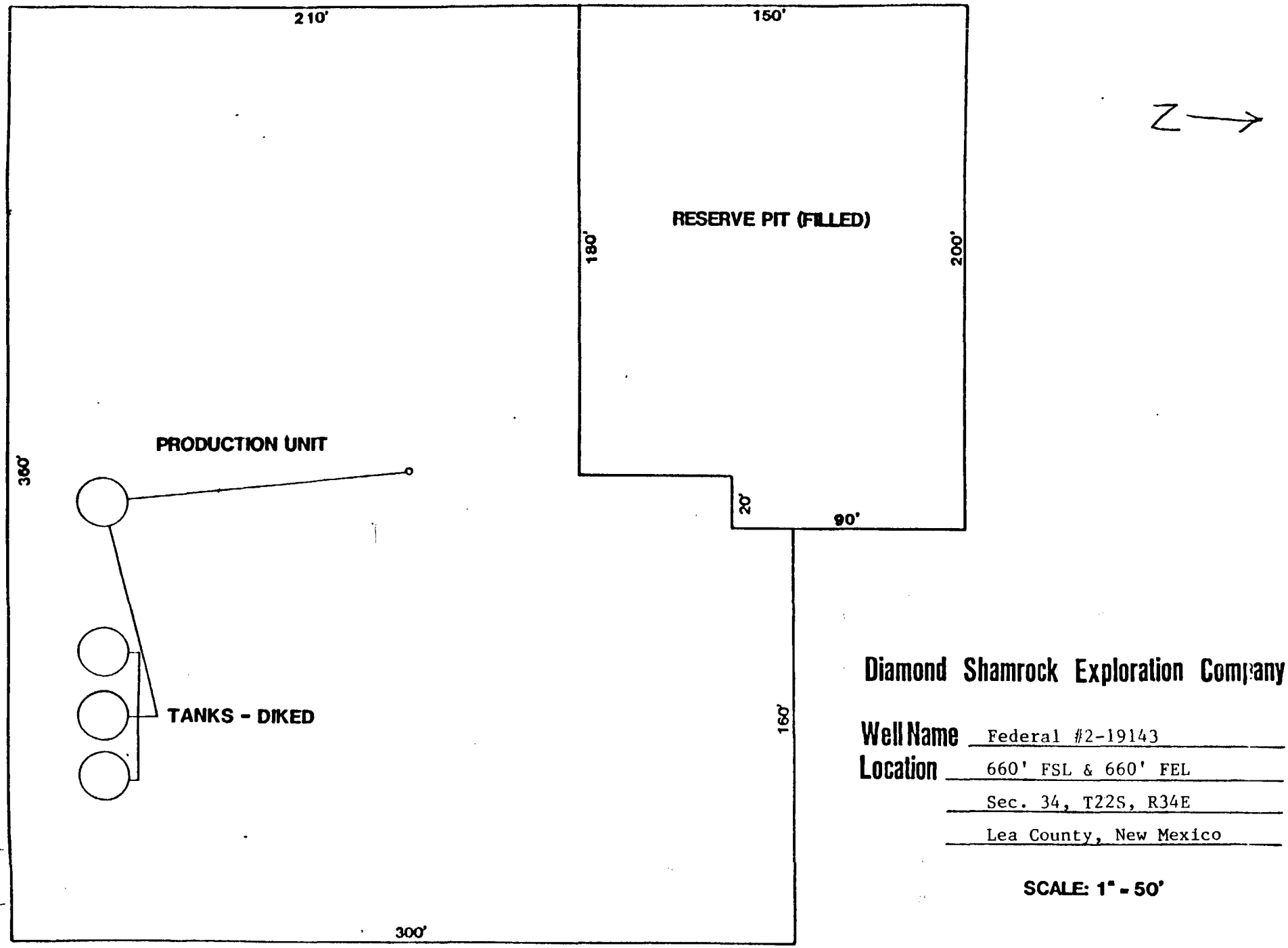
DESCRIPTION | DATE | REVISIONS

DIAMOND SHAMROCK CORP.

STAKE PROPOSED LEASE RD. IN SEC. 34, T-22-S, R-34-E, SEC. 3, T-23-S, R-34-E, LEA COUNTY, NEW MEXICO

SCALE 1"=500' | DATE 9/86 | CARD NO. | FILE NO. 46

DIAGRAM B



Diamond Shamrock Exploration Company

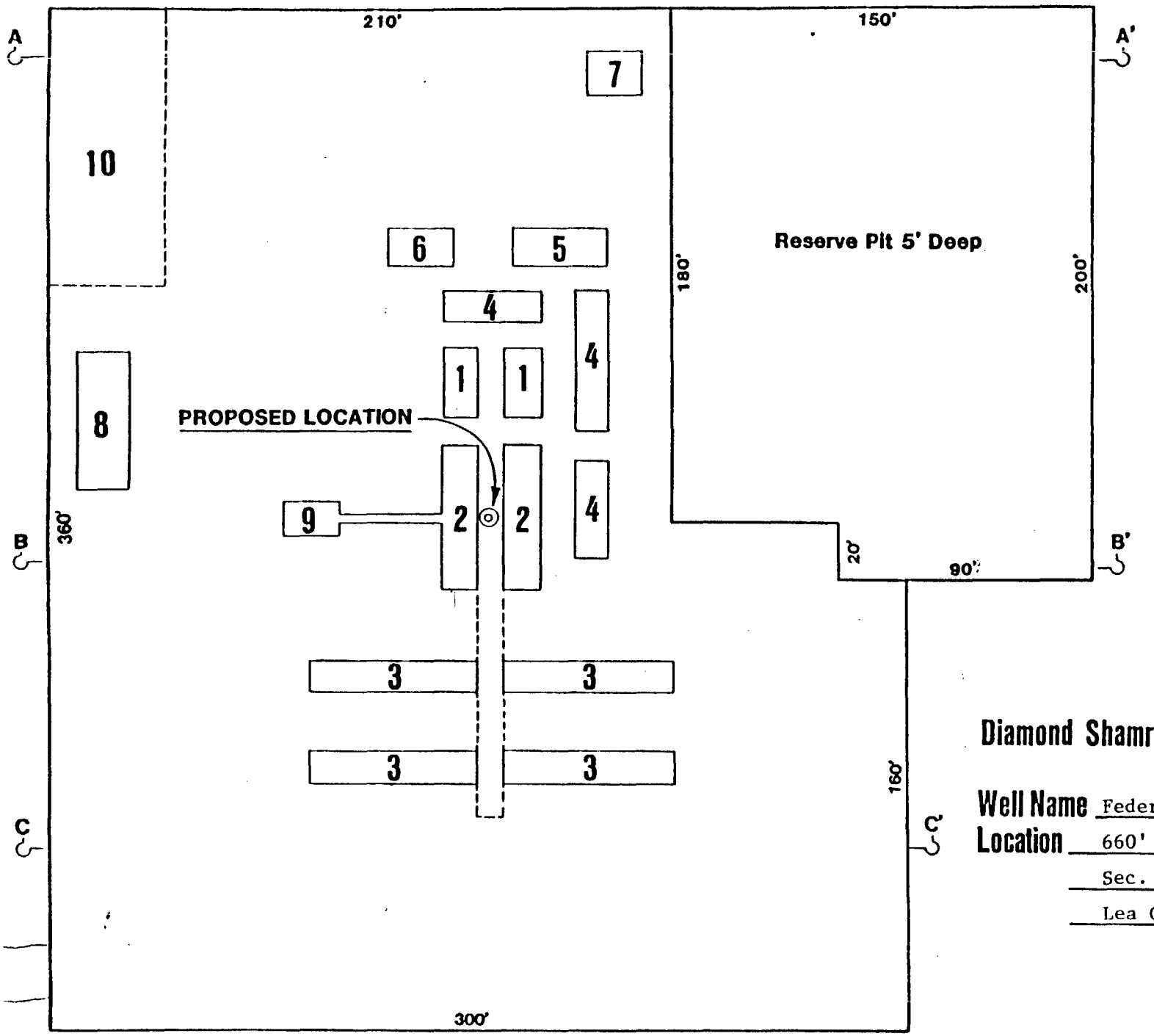
Well Name Federal #2-19143

Location 660' FSL & 660' FEL
Sec. 34, T22S, R34E
Lea County, New Mexico

SCALE: 1" = 50'

LOCATION PLAT

DIAGRAM C



N

KEY

1) Pumps
2) Sub and Water Tanks
3) Pipe Racks
4) Mud Pits
5) Mud Storage
6) Light Plant
7) Burn Pit
8) Trailer
9) Accumulator
10) Parking

Diamond Shamrock Exploration Company

Well Name Federal #2-19143

Location 660' FSL & 660' FEL

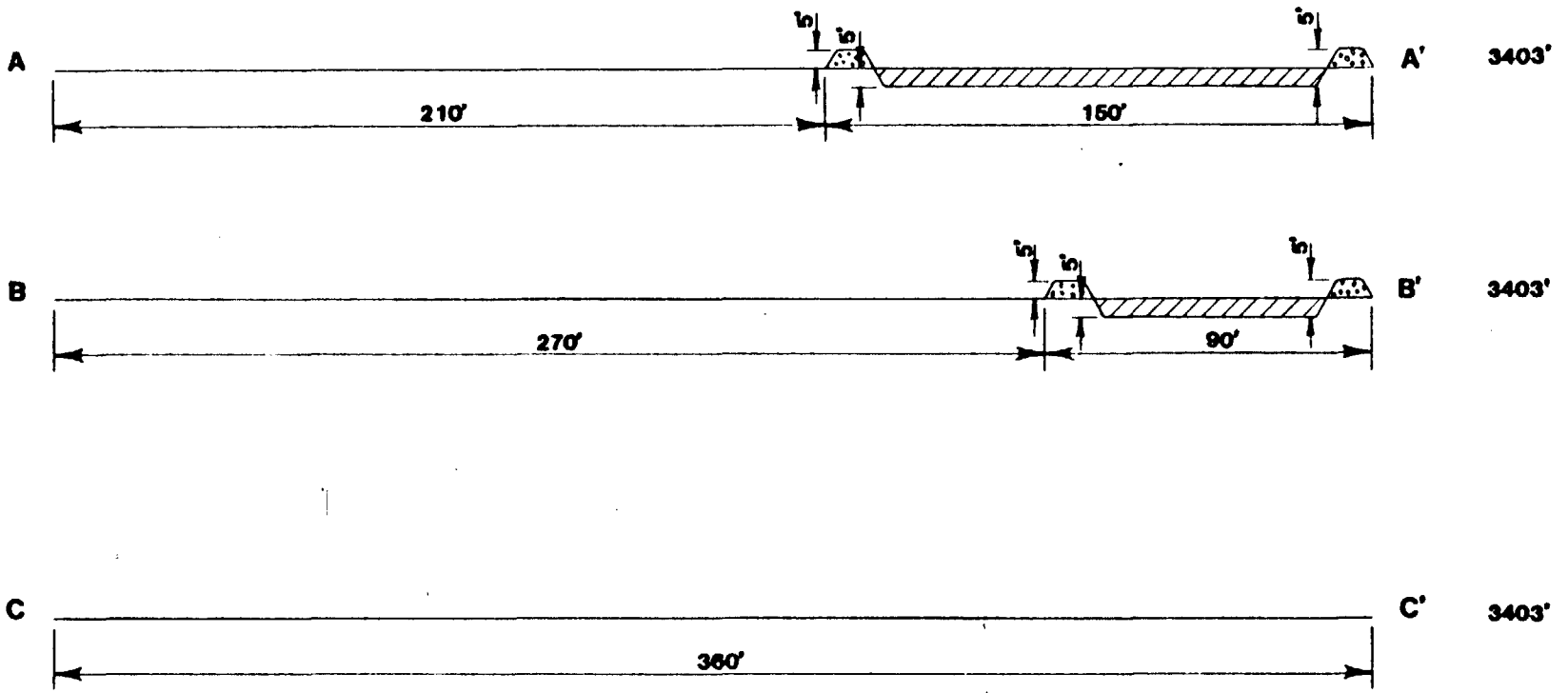
Sec. 34, T22S, R34E

Lea County, New Mexico

SCALE: 1" = 50'

DIAGRAM C-1

CROSS SECTIONS OF CUTS AND FILLS



Federal #2-19143
Lea Co., New Mexico

SCALE: 1" = 50'