

New Mexico Oil Conservation Division, District I

Form 3160-3
(July 1992)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT1625 N. First Drive
Hobbs, NM 88240
SUBMIT HERE
Other side (reverse side)FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☐MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

SDX Resources, Inc.

3. ADDRESS AND TELEPHONE NO

PO Box 5061, Midland, TX 79704

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

At surface 1886' FNL 758' FWL, Unit E

At proposed prod. zone

Same

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

2 miles NE of Jal, NM

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

758'

758'

16. NO. OF ACRES IN LEASE

918

17. NO. OF ACRES ASSIGNED
TO THIS WELL

160

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

1116'

19. PROPOSED DEPTH

3200

20. ROTARY OR CABLE TOOLS

Rotary

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

3237

CAPITAN CONTROLLED WATER BASIN

22. APPROX. DATE WORK WILL START*

10/15/99

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	600'	350 sx
7-7/8"	4-1/2 - 5-1/2"	9.5 - 17#	3200'	400 sx Lite + 200 sx C

WITNESS

Plan to drill 12-1/4" hole to appx 600'. Set 8-5/8" surface csg. Circ Class C cmt. Drill 7-7/8" hole to 3200'. Set 4-1/2" or 5-1/2" csg & circ cmt. Perf Yates gas zone & stimulate as necessary for optimum production.

Specific Program:

- Exhibit #1: BOP Diagram
Exhibit #2: Survey Plat
Exhibit #3: Existing & Proposed Road Map
Exhibit #4: Producing Well Area Map
Exhibit #5: Drill Site Layout

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS

OPER. OGRID NO. 20451
PROPERTY NO. 23990
POOL CODE 79240
EFF. DATE 10-27-99
API NO. 30-025-34744

IN ABOVE SPACE DESCRIBE PROGRAM: If proposal is to deepen, give data on present productive zone and propose deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout p

24.

SIGNED

Bonnie Attwater

TITLE Regulatory Tech.

DATE 09/23/99

(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:

/S/LARRY D. BRAY

Assistant Field Office Manager
Lands and Minerals

APPROVED BY

TITLE

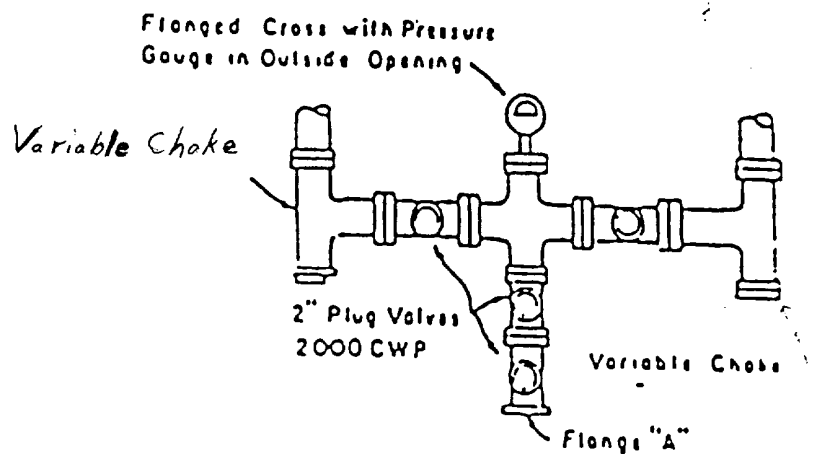
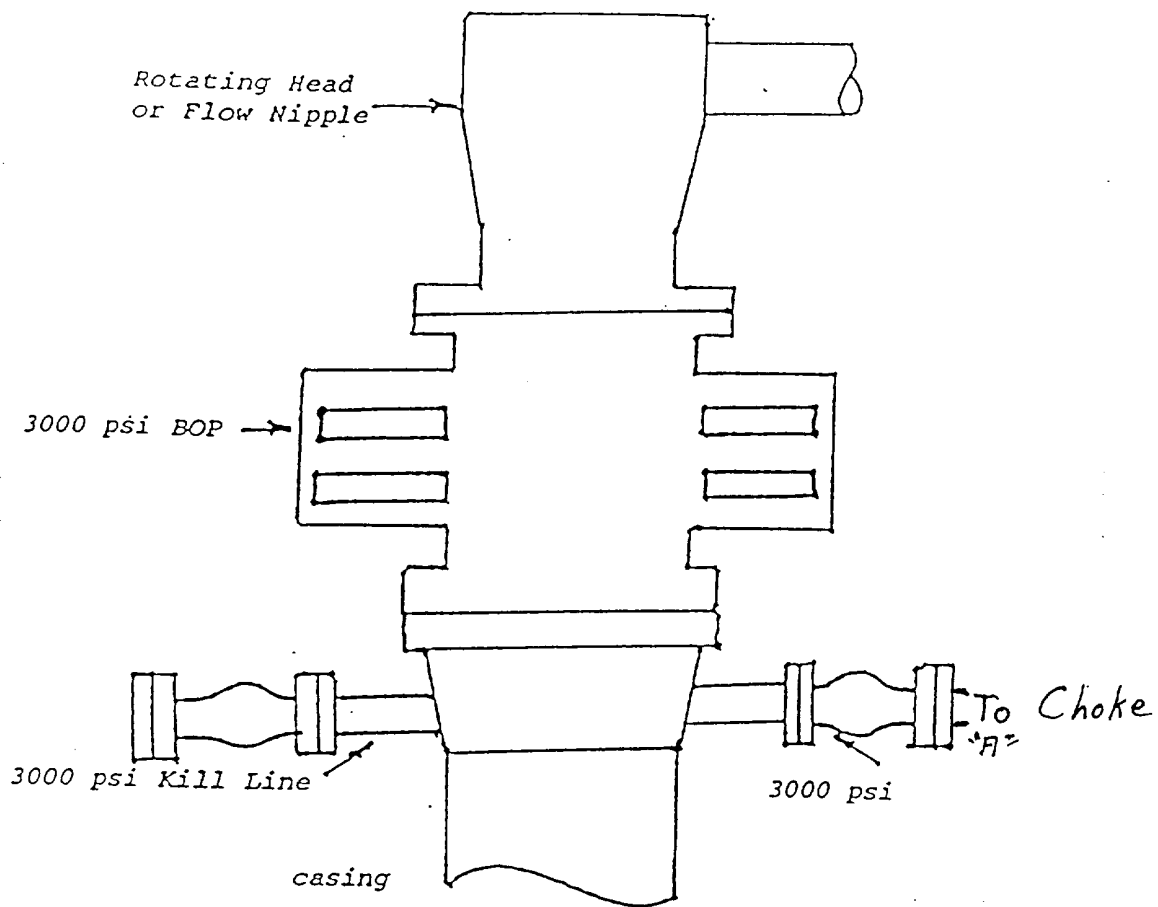
DATE

*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.

1
np

Blow Out Preventor Schematic



PLAN VIEW-CHOKE MANIFOLD

District I

1625 N. French Dr., Hobbs, NM 88240

District II

811 South First, Artesia, NM 88210

District III

1800 Rio Brazos Rd., Artec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural ResourcesOIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505Form C-102
Revised March 17, 1999Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-34744		² Pool Code 79240	³ Pool Name Jalmat Gas Tah-Yts-719VRS
⁴ Property Code 23990	⁵ Property Name WELLS FEDERAL		⁶ Well Number 23
⁷ OGRID No. 020451	⁸ Operator Name SDX RESOURCES, INC.		⁹ Elevation 3237.

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	5	25-S	37-E		1886	NORTH	758	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 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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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

¹⁶ 					¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: Bonnie Atwater Printed Name: Regulatory Tech. Title: 9/23/99 Date:
					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. AUGUST 31, 1999 Date of Survey Signature and Seal of Registered Professional Engineer 5412

NSP-1812

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

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

Now 50X

All distances must be from the outer boundaries of the Section

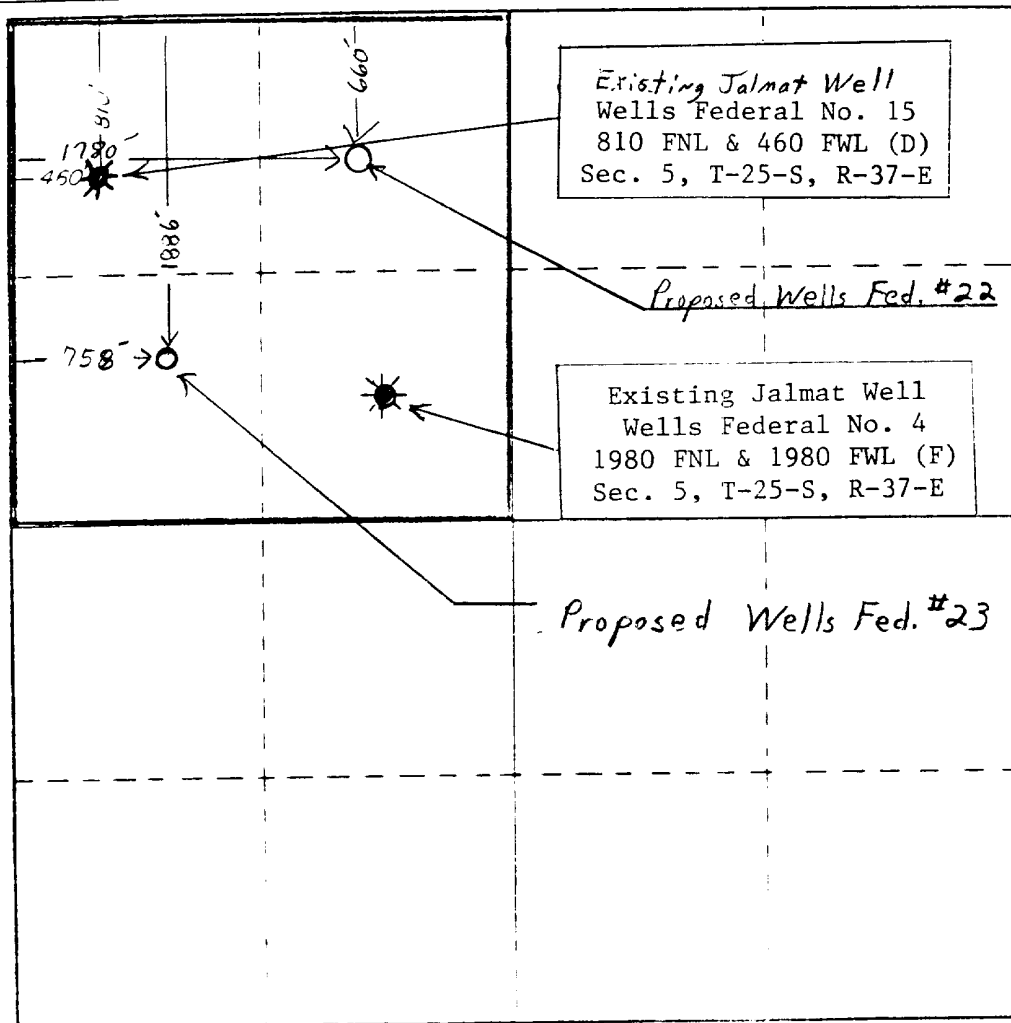
Operator DOYLE HARTMAN		Lease WELLS FEDERAL			Well No. 15
Oil Letter A	Section 5	Township 25S	Range 37E	County LEA	
Approximate Location of Well:					
feet from the NORTH line and		feet from the WEST line			
Ground Level Elev. 5113	Producing Formation YATES-SEVEN RIVERS	Pool JALMAT (GAS)	Dedicated Acreage: 160 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.



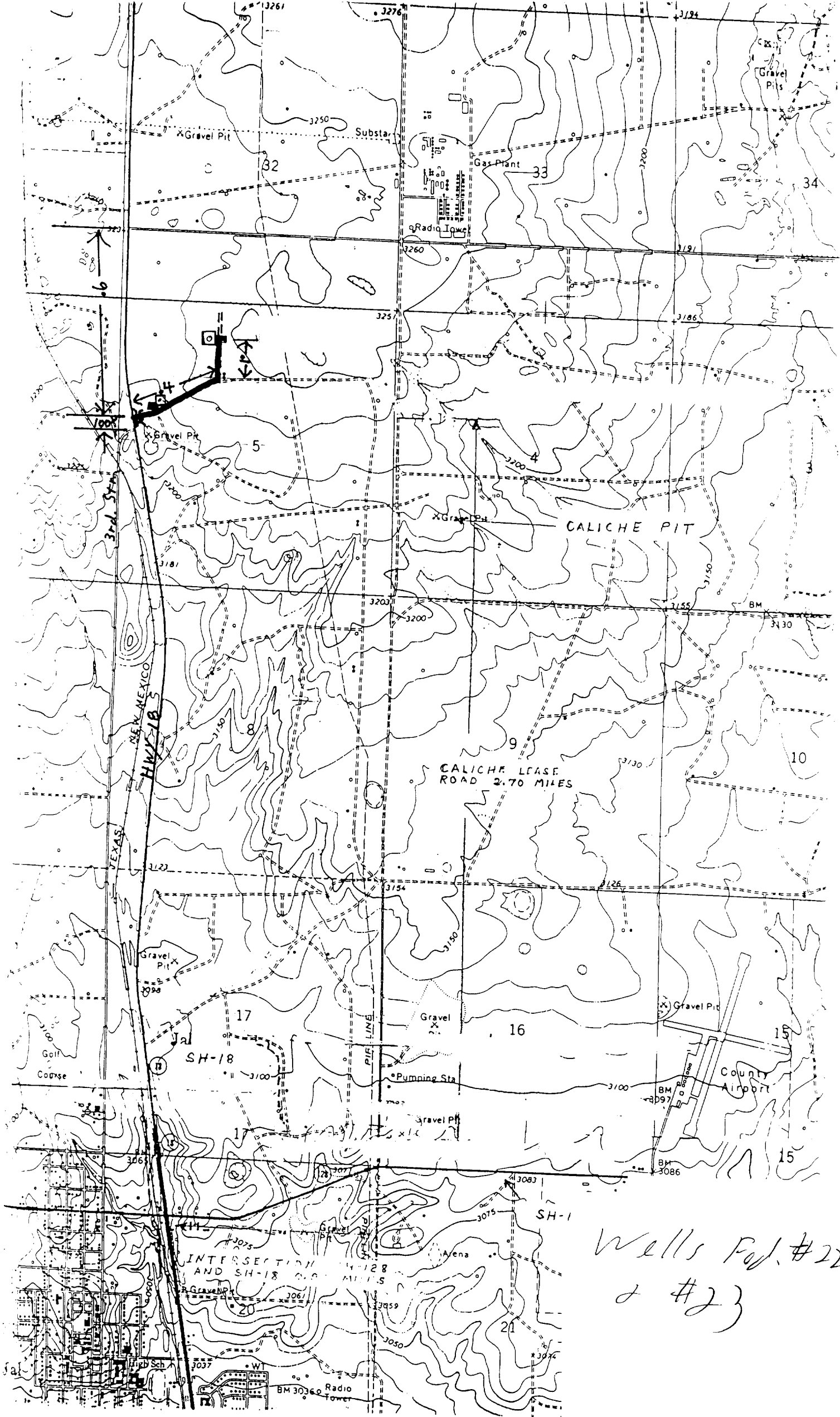
CERTIFICATION

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

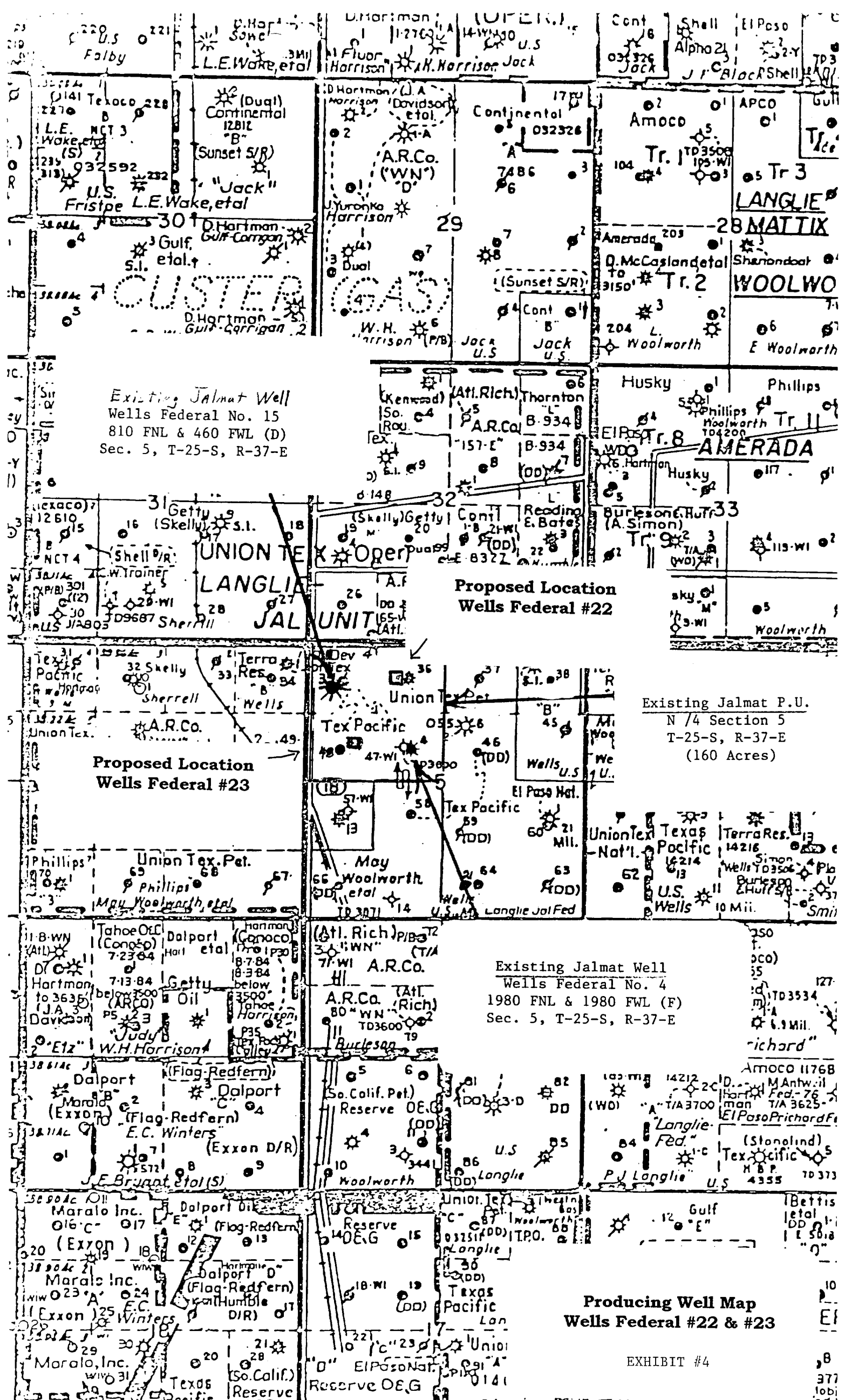
Name
Larry G. Nemy
Position
Engineer
Company
Doyle Hartman
Date
April 25, 1984

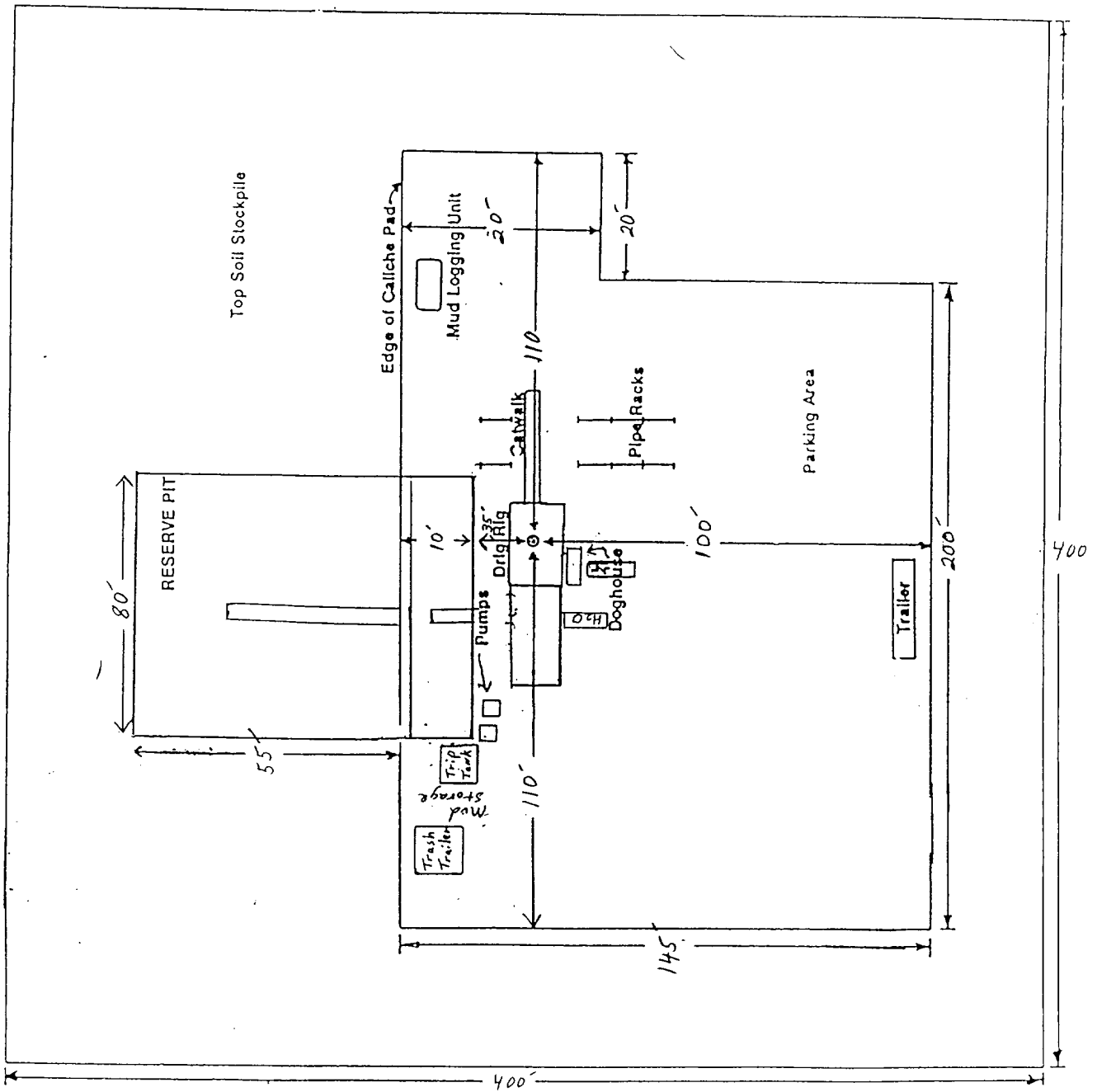
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
4/25/84
Registered Professional Engineer and Land Surveyor
John W. Hilt
Certificate No. 10000 576



Wells Fld #22
& #23





S

SDX RESOURCES, INC.

Wells Federal #23

EXHIBIT #5

SURFACE USE AND OPERATIONS PLAN
SDX RESOURCES, INC.
Wells Federal #23
1886' FNL, 758' FWL
Unit E, Sec. 5, T25S, R37E
Lea Co., NM

1. Existing Roads:

- A. The well site and elevation plat for the proposed well is shown in Exhibit #2. It was staked by Dan Reddy, Carlsbad, New Mexico.
- B. All roads to the location are shown in Exhibit #3. The existing roads are labeled and are adequate for travel during drilling production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the onsite inspection.
- C. Directions to location: From Jal (intersection of Hwy 8 & 128) go appx. 2.75 miles north on Hwy. 18. 100 yards N. of the intersection of 3rd. Str. Turn right thru cattle guard. Turn left and go .1 mile to location on right.
- D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.

2. Proposed Access Road:

Exhibit #3 shows the existing road.

No new road is necessary.

3. Location of Existing Wells:

Exhibit #4 shows all existing wells within a one-mile radius of this well.

4. Location of Existing and/or Proposed Facilities and ROW's:

- A. If the well is productive:
 - 1. The well will be tested and any necessary production facilities (3x10 sep. and A 210 bbl. stock tank will be located on the existing well pad.
 - 2. A gas sales line will be laid to location by the purchaser.
- B. If the well is productive, rehabilitation plans are as follows:
 - 1. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after the well is complete).
 - 2. Topsoil removed from the drill site will be used to recontour the pit area to the original natural level, as nearly as possible, and reseeded as per BLM specifications.

5. Location and Type of Water Supply:

The well will be drilled with a combination brine and fresh water mud systems as outlined in the drilling program. The brine and fresh water will be obtained from commercial water stations in the area and hauled to roads shown in Exhibit #3. No water well will be drilled on the location.

6. Source of Construction Materials:

All caliche required for construction of the drill pad and any new access road will be obtained from the drilling pits and/or on site when possible. Any additional caliche will be obtained from approved caliche pits. All roads and pads will be constructed of 6" rolled and compacted caliche.

7. Methods of Handling Water Disposal:

- A. Drill cuttings not retained for evaluation purposes will be disposed into the reserve pit.
- B. Drilling fluids will be contained in plastic lined pits. The reserve pit will contain any excess drilling fluid or flow from the well during drilling, cementing and completion operations. The reserve pit will be an earthen pit, approximately 80' x 55' x 6' deep and fenced. The reserve pit will be plastic-lined (5-7 mil thickness) to minimize loss of drilling fluids and saturation of the ground with brine water.
- C. Water produced from the well during completion may be disposed into the reserve pit. After the well is permanently placed on production, produced water will be trucked to an approved disposal site.
- D. Garbage and trash produced during drilling or completion operations will be collected in a trash trailer by a contractor. All water and fluids will be disposed of into the reserve pit. Salts and other chemicals produced during drilling or testing will be disposed into the reserve pit. No toxic waste or hazardous chemicals will be produced by this operations.
- E. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned-up within 90 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and kept closed until it has dried. When the reserve pit is dry enough to breakout and fill and as weather permits the unused portion of the well site will be leveled and reseeded as per BLM specifications. Only that part of the pad required for production facilities will be kept in use.

8. Ancillary Facilities:

None

9. Well Site Layout:

- A. The drill pad layout is shown in Exhibit #5. Dimensions of the pad and pits and location of major rig components are shown. Top soil, if available, will be stockpiled per BLM specifications as determined at the on-site inspection. Because the pad is almost level no major cuts will be required.

- B. Exhibit #5 shows the planned orientation for the rig and associated drilling equipment, reserve pit, trash pit, pipe racks, turn-around, parking areas and access road. No permanent living facilities are planned but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.
- C. The reserve pit will be lined with high-quality plastic sheeting (5-7 mil thickness).

10. Plan for Restoration of the Surface:

- A. Upon completion of the proposed operation, if the well is to be abandoned, the pit area, after allowing to dry, will be broken out and leveled. The original top soil will be returned to the entire location which will be leveled and contoured to as nearly the original topography as possible.

All trash and garbage will be hauled away in order to leave the location in an aesthetically pleasing condition. All pits will be filled and the location leveled within 120 days after abandonment.

- B. The disturbed area will be revegetated by reseeding during the proper growing season with a seed mixture of native grasses as recommended by the BLM.
- C. The reserve pit will be fenced prior to and during drilling operations. The fencing will remain in place until the pit area is cleaned-up and leveled. No oil will be left on the surface of the fluid in the pit.
- D. Upon completion of the proposed operations, if the well is completed, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from any area of the original drill site not needed for production operations or facilities will be removed and used for construction of thicker pads. Any additional caliche required for facilities will be obtained from an approved caliche pit. Topsoil removed from the drill site will be used to restore the pit area and any unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

11. Surface Ownership:

Woolworth Trust
P.O. Box 178
Jal, New Mexico 88252

A Surface Use Agreement has been negotiated.

12. Other Information:

- A. The area around the well site is grassland. The vegetation is native scrub grasses with abundant catclaw and mesquite.
- B. There is no permanent or live water in the immediate area.

- C. An archaeological survey has been requested and will be forwarded to the BLM when completed.

13. Lessee's and Operator's Representative:

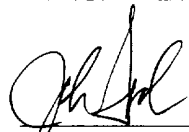
The SDX Resources Inc. representative for assuring compliance with the surface use plan is as follows:

Chuck Morgan
SDX Resources Inc.
PO Box 5061
Midland, TX 79704
915/685-1761 Office
915/685-0533 Fax

Certification:

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

SDX Resources Inc.



John Pool
Vice-President

DRILLING PROGRAM
SDX Resources Inc.
Wells Federal #23
1886' FNL, 758' FWL
Unit E, Sec. 5, T25S, R37E
Lea Co., NM

1. Geologic Name of Surface Formation:

Permian

2. Estimated Tops of Important Geologic Markers:

Top of Salt	1200'
Base of Salt	2700'
Tansill	2700'
Yates	2900'

3. Estimated Depth of Anticipated Fresh Water, Oil or Gas:

Water Sand	200' – 250'	Fresh Water
Tansill	2700'	Oil & Gas
Yates	2900'	Oil & Gas

Fresh water sands will be protected by running 8-5/8" casing to a minimum depth of 600' and circulating cement. All other zones will be isolated by running 4-1/2" or 5-1/2" production casing and circulating cement.

4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>OC Csg</u>	<u>Weight Grade Jt Cond Type</u>
12-1/4"	0 – 600	8-5/8"	24#, J55, New
7-7/8"	0 – TD	4-1/2" – 5-1/2"	9.5# - 17#, J55, Used

Cement Program:

8-5/8" Surface Casing:	Cemented to surface with 250 sx of Class C with 2% CaCl and 1/4#/sx Flocele and 100 sx of Class C with CaCl.
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5-1/2" Production Casing:	Cemented with 200 sx of Class C and 400 sx of Lite C with 3# salt/sx and 1/4#/sx Flocele. This should circulate cement to the surface.
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5. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown in Exhibit #1 will consist of a double ram type preventer (2000 psi WP). Unit will be hydraulically operated. BOP will be nipped up on the 8-5/8" surface csg and used continuously until TD is reached. BOP and accessory equipment will be tested to 1000 psi before drilling out of surface casing. A 2" kill line and a 2" choke line will be included in the drilling spool. Other accessories to the BOP equipment will include a kelly cock.

6. Types and Characteristics of the Proposed Mud System:

The well will be drilled to TD with a combination of fresh water and brine water mud system. The applicable depth and properties of this system are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity (sec)</u>	<u>Waterloss (cc)</u>
0 - 600	Fresh Water (spud)	8.5	40 - 45	N/C
600 - TD	Brine water, SWG, Starch	10.0	30	24

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- A. A kelly cock will be kept in the drill string at all times.
- B. A mud logging unit complete with H₂S detector will be continuously monitoring drilling penetration rate and hydrocarbon shows from 1000' to TD.

8. Logging, Testing and Coring Program:

- A. Drillstem tests will be run on the basis of drilling shows.
- B. The electric logging program will consist of GR-Dual Laterolog and GR-Compensated Neutron-Density from TD to surface casing.
- C. Conventional coring may be performed in select intervals in the Yates formation.
- D. Further testing procedures will be determined after the production casing has been cemented at TD based on drill shows and log evaluation.

9. Abnormal Conditions, Pressures, Temperatures, & Potential Hazards:

No abnormal pressure or temperatures are anticipated. The estimated bottom hole temperature (BHT) at TD is 94° and estimated maximum bottom-hole pressure (BHP) is 1200 psig. No abnormal concentrations of hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. All H₂S operation precautions will be followed (see attached H₂S drilling operations plans). No major loss circulation zones have been reported in offsetting wells.

10. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is May 1, 1999. Once commenced, the drilling operation should be finished in approximately 10 days. If the well is productive, an additional 30 days will be required for completion and testing before a decision is made to install permanent facilities.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

SDX Resources Inc.

Wells Federal #23

1886' FNL, 758' FWL

Sec. 5, T25S, R37E, Unit E

Lea Co., NM

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H₂S).
2. The proper use and maintenance of personal protective equipment and life support system.
3. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial safety session just prior to commencing operations on the well. The initial session shall include a review of the site's specific H₂S Drilling Operations Plan and the Public Protection 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.

II. H₂S SAFETY EQUIPEMNT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500'.

1. Well Control Equipment:
 - A. Annular Preventer to accommodate all pipe sizes with properly sized closing unit.
2. Protective Equipment for Essential Personnel:
 - A. Mark II Surviveair 30-minute units located in the dog house.

3. H2S Detection and Monitoring Equipment:

- A. 1 – portable H2S monitor positioned on location for best coverage and response.
- B. Mud logging trailer shall have H2S monitoring equipment.

4. Visual Warning Systems:

- A. Guy lines will be flagged and a wind sock will be positioned on location.
- B. Caution/Danger signs shall be posted on roads providing direct access to location.

5. Mud Program:

The mud program has been designed to minimize the volume of H2S circulated to the surface. Proper mud weight, safe drilling practices, will minimize hazards when penetrating H2S bearing zones.

6. Metallurgy:

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

7. Communication:

Radio communications in company vehicles including cellular telephone and 2-way radio.

8. Well Testing:

No DST's are planned.

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

SDX Resources Inc.
PO Box 5061
Midland, TX 79704

September 23, 1999

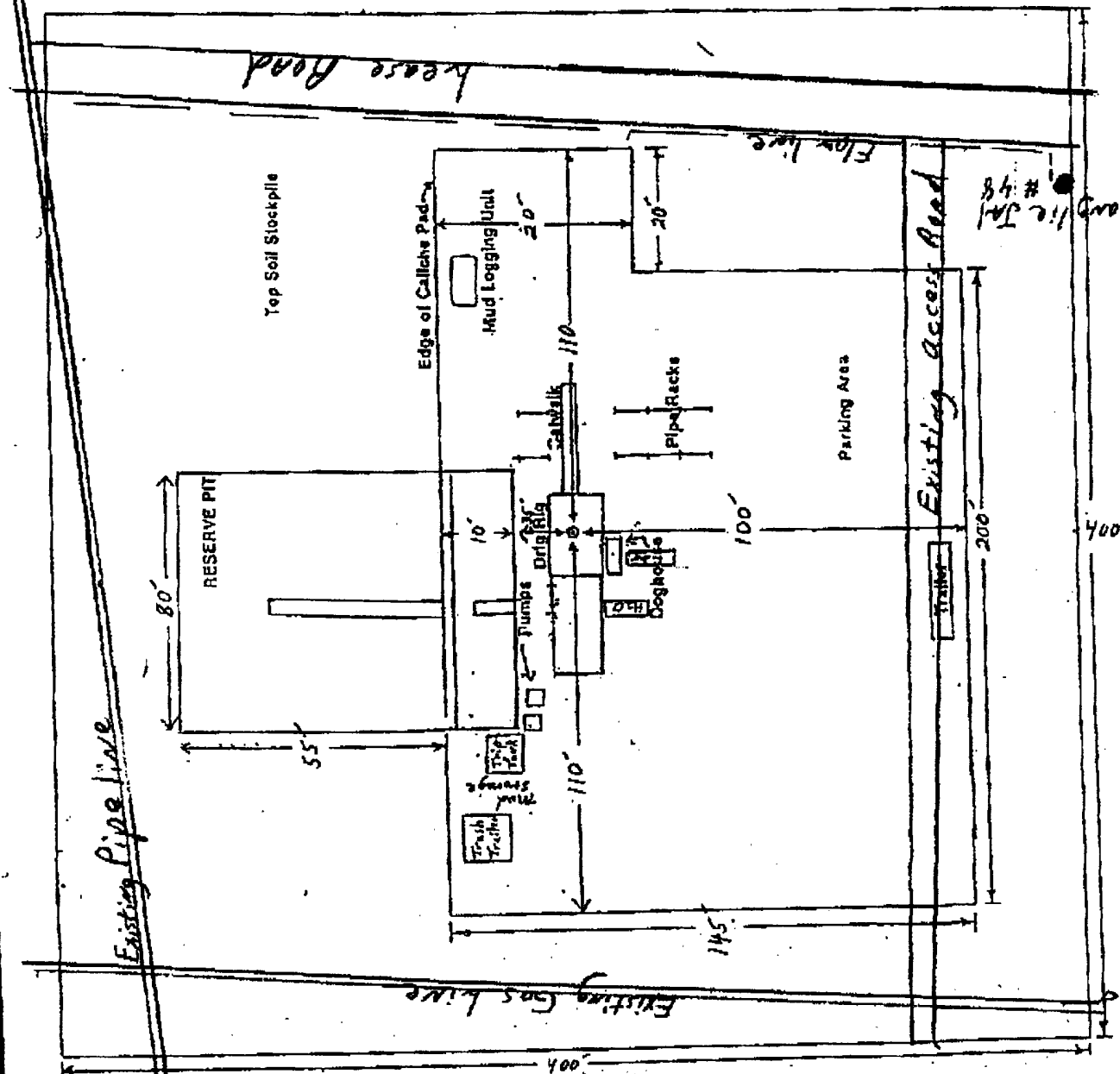
The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No.:	LC-055546
Lease Name:	Wells Federal #23
Legal Description of Land:	Unit E, 1886' FNL 758' FWL Sec. 5, T25S, R37E Lea Co., NM
Formation (s):	Jalmat Gas
Bond Coverage:	Statewide Bond – State of New Mexico
BLM Bond File No.:	NM2307

Authorized Signature:



John Pool
Vice-President



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SDX RESOURCES, INC

Wells Federal #23
1886' FWL 758' FWL
Sec. 5 T25S R37E

EXHIBIT #5