Form 3160-3
(JULY 1989)
(formerly 9-331C)

Oil Conservation Division
1625 French Drive
Hobbs, NM 88240

CONTACT RECEIVING OFFICE FOR NUMBER OF COPIES REQUIRED
(Other instructions on reverse side)

BLM Roswell District
Modified Form No.
NM060-3160-2

API #30-025-02408

Management
Received
MAY 23 2000
Oil Conservation Division
Carlsbad, N.M.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RE Entry 678

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.	NM-0250
6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
7. UNIT AGREEMENT NAME	
8. FARM OR LEASE NAME	K.F. Quail Federal
9. WELL NO.	2
10. FIELD AND POOL, OR WILDCAT	Lea Delaware, N.E.
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA	Sec. 1, T20S-R34E
12. COUNTY OR PARISH	Lea
13. STATE	New Mexico

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

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

2. NAME OF OPERATOR: Armstrong Energy Corporation

3a. Area Code & Phone No.: 505-625-2222

3. ADDRESS OF OPERATOR: P.O. Box 1973, Roswell, New Mexico 88202

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 600' FNL & 600' FWL D
At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 24 miles southwest of Hobbs, New Mexico

15. DISTANCE FROM PROPOSED * LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 600'

16. NO. OF ACRES IN LEASE: 600

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40.0

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED OR APPLIED FOR, ON THIS LEASE, FT.: 4029'

19. PROPOSED DEPTH: 6200'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3695' GR

22. APPROX DATE WORK WILL START*: June 10, 2000

23. PROPOSED CASING AND CEMENTING PROGRAM

HOLE SIZE	CASING SIZE	WEIGHT/FOOT	GRADE	THREAD TYPE	SETTING DEPTH	QUANTITY OF CEMENT
13 3/4"	11 3/4"	42.00	*	*	407	425 sx
10 5/8"	8 5/8"	32.00	*	*	4050	700 sx,
7 7/8"	5 1/2"	17.00	J-55	LT&C	6200	1000 sx., T.O.C. @ surf.

*** Existing Casing**

Armstrong Energy Corporation proposes to drillout to a depth sufficient to test the Delaware formation, 5775-5950'. 5 1/2" casing will be set at 6200' and the Delaware will be production tested. If non-productive, the well will be plugged and abandoned in a manner consistent with Federal Regulations. Specific programs as set out in Onshore Oil and Gas order #1 are outlined in the following attachments:

NMOCD Form C-102 Well Location Plat and Acerage Dedication Plat
Hole Prognosis
Surface Use Plan
H2S Plan
Exhibit "A" Wellbore Diagram
Exhibit "B" Equipment Description
Exhibit "C" Planned Access Roads
Exhibit "D" One Mile Radius Map
Exhibit "E" Drilling Rig Layout Plan
Exhibit "F" Proposed Powerline Right-of-way
Exhibit "G" Proposed Pipeline Right-of-way

OPER. OGRID NO. 1092
PROPERTY NO. 1580
POOL CODE 37584
EFF. DATE 6-26-00
API NO. 30-025-02408

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 depen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventor program, if any.

24

SIGNED [signature] TITLE Consulting Engineer DATE 5/12/2000

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY ACTING ASST. FIELD MANAGER ARMANDO A. LOPEZ TITLE Acting Assistant Field Manager Lands And Minerals DATE JUN 19 2000

CONDITIONS OF APPROVAL, IF ANY:

*See instructions On Reverse Side

APPROVED FOR 1 YEAR

F3160-3.WK1

HOLE PROGNOSIS
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
ARMSTRONG ENERGY CORPORATION
K.F. QUAIL FEDERAL #2 WELL
600' FNL & 600' FWL
SECTION 1-T20S-R34E
LEA COUNTY, NEW MEXICO

In conjunction with Form 3160-3, Application for Permit to Drill, Armstrong Energy Corporation submits the following items in accordance with Onshore Oil and Gas Order Numbers 1 and 2, and all other applicable federal and state regulations.

1. Geologic Name of Surface Formation:

   Quaternary

2. Estimated Tops of Geologic Markers:

Rustler	1750'	Grayburg	4600'
Top of Salado	1780'	San Andres	5040'
Yates	3670'	Delaware	5730'
Seven Rivers	4045'	T.D.	6150'

3. Estimated Depths of Anticipated Fresh Water. Oil or Gas:

Surface	400'	Fresh Water
Delaware	5775' - 5950'	Oil and Gas

No other formations are expected to produce oil, gas or fresh water in measurable quantities. The surface fresh water sands are protected by the existing 11 3/4" casing set at 407' and circulated with cement back to surface. Shallower zones above TD which may contain commercial quantities of oil and/or gas will have cement circulated across the zone, through the 5 1/2" production casing, which will be run at TD.

4. Casing Program:

Hole Size	Interval	OD Csg	Weight, Grade, Jt., Cond. Type
	0- 407'	11 3/4"	Existing Casing*
	0-4050'	8 5/8"	Existing Casing
7 7/8"	0-6150'	5 1/2"	17#, J-55, LT&C, New

*The existing and proposed wellbore configuration is shown in Exhibit "A".

5. Cementing Program:

Surface Casing: 11 3/4" casing is set at 407' and cemented with 425 sacks of cement to bring cement to the surface.

Intermediate Casing: 8 5/8" casing is set at 4050' and cemented with 700 sacks of cement to bring cement to the surface.

Production Casing: 5 1/2" casing will be set at Total Depth. Armstrong proposes to utilize cement in sufficient quantities to circulate cement to surface. The production casing will be cemented with approximately 1000 sacks 50/50 Poz "C" with 5# salt and additives per sack. The longstring cement job will be staged with a D.V. tool placed at +/- 5000'.

6. Minimum Specifications for Pressure Control:

The blowout preventer equipment (BOP) shown on Exhibit "B", will consist of a double ram-type (3000 psi WP) preventer. The BOP unit will be manually operated and the ram-type preventer will be equipped with blind rams on top and 2 7/8" tubing rams on bottom. The BOP will be nipped up on the 8 5/8" intermediate casing and used continuously until TD is reached. The BOP and accessory equipment will be tested to 1000 psi before drilling out of the cement plugs.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily drilling reports. A 2" kill line will be included in the wellhead below the ram-type BOP. Other accessories to the BOP equipment will include a TIW valve.

7. Types and Characteristics of the Proposed Mud System:

0' to 6150' Cut Brine water with starch and gel, with paper and fiber for seepage, will be used for drilling purposes. Anticipated mud properties are as follows: MW 9.0, WL 10 cc, PH 9, Vis 30, CL 70,000.

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.

8. Auxiliary Well Control and Monitoring Equipment:

A. A TIW valve will be kept on the rig floor at all times.

9. Testing, Logging and Coring Program: No testing, logging or coring are planned for this re-entry.

10. Abnormal Conditions. Pressures, Temperatures and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The anticipated bottomhole pressure is 2500 PSI.

Loss of circulation has not been reported in offsetting wells through the uncased interval.

Armstrong has eight (8) producing wells on the adjacent lease in section 2. No hydrogen Sulfide is present in the produced fluids from these wells. However, if Hydrogen Sulfide is encountered, the well can be shut in utilizing the blow out preventer and other equipment to prevent the migration of Hydrogen Sulfide to the surface.

11. Anticipated Starting Date and Duration of Operations: Road and location work will not begin until approval has been received from the BLM. The anticipated starting date is June 10, 2000. Once commenced, the drilling operation should be completed in approximately 5 days. The completion and testing will take an additional 15 days. The results of testing will determine if a permanent production facility will be installed or the well will be plugged and abandoned.

SURFACE USE PLAN
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
ARMSTRONG ENERGY CORPORATION
K.F. QUAIL FEDERAL #2 WELL
600' FNL & 600' FWL
SECTION 1-T20S-R34E
LEA COUNTY, NEW MEXICO

Submitted with Form 3160-3, Application For Permit to Drill covering the above captioned well. The purpose of the plan is to describe the location, the proposed construction activities, the operations, the surface disturbance involved, and the rehabilitation of the surface after completion of said well so that an appraisal can be made of the environment affected by this well.

1. Existing Roads:

   A. The Well Location and Acreage Dedication Plat for the proposed well has been staked by John West Engineering Company, Hobbs, New Mexico and is attached.

   B. All roads to the location are shown in Exhibit "C". The existing roads are illustrated in red and are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling will be done where necessary as determined during the on-site inspection.

   C. Directions to location: From Hobbs, New Mexico, go approximately 24 miles southwest on State Highway 62-180, turn south on Marathon Road 2 miles, west 1/4 mile to location.

   D. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as operations continue on the lease.

2. Proposed Access Road: The existing road, as illustrated in red on Exhibit "C", will be repaired and upgraded from the intersection with Marathon Road to the location, approximately 1/4 mile,.

   A. The average grade will be less than 5%.

   B. One turnout will be necessary.

   C. No culverts, cattleguards, gates, low-water crossings or fence cuts are necessary.

   D. Surfacing material will consist of native caliche. The road and pad will be

surfaced with a minimum of 6" of caliche. Caliche will be obtained from the nearest BLM approved caliche pit. Any additional materials that are required will be purchased from the dirt contractor.

3. Location of Existing Wells: All existing wells within a one mile radius of proposed well are shown on Exhibit "D". A list of the wells is shown on the Attachment to Exhibit "D".

4. Location of Existing and/or Proposed Facilities: In the event the proposed well proves to be productive, Armstrong Energy Corporation will construct a tank battery on the north side of the location. Electric power will be provided from a north-south powerline running parallel to the west section line. The proposed right-of-way is shown in Exhibit "F". A water line and gas line will be run to the West Pearl State #1 battery located in Unit "A" Section 2-T20S-R34E. The proposed right-of-way is shown in Exhibit "G".

5. Location and Type of Water Supply: The well will be drilled with a combination of brine and fresh water mud systems as outlined in the Hole Prognosis. The water will be purchased from commercial water stations in the area and trucked to the location by transport over the existing and proposed access roads as shown on Exhibit "C". No water well will be drilled on the location.

6. Source of Construction Materials: All caliche required for construction of the drill pad and the proposed new access road (approximately 500 cubic yards) will be obtained from a BLM approved caliche pit. All roads and pads will be constructed of 6" rolled and compacted caliche.

7. Methods of Handling Water Disposal:

   A. Drill cuttings will be disposed into the reserve pit.

   B. Drilling fluids will be contained in a steel mud tank. 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 100' x 60' x 4' deep and fenced on three sides prior to drilling. It will be fenced on the fourth side immediately following rig removal. 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. Drilling fluids will be allowed to evaporate in the reserve pits until dry.

   C. Water produced from the well during completion may be disposed into the reserve pit or a steel tank (depending upon rates). After the well is permanently placed on production, produced water will be collected in tanks (fiberglass or steel) until transported via flowline to the West Pearl State

Battery (2A-T20S-R34E) and then to an approved disposal system. Produced oil will be collected in steel tanks until sold.

D. A portable chemical toilet will be provided on the location for human waste during the drilling and completion operations. Compliance with current laws and regulations pertaining to the disposal of human waste will be observed.

E. Garbage and trash produced during drilling or completion operations will be disposed in a separate trash trailer on location. All waste material will be contained to prevent scattering by the wind. All water and fluids will be disposed 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 the operation.

F. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. No adverse materials will be left on the location. The reserve pit will be completely fenced and kept closed until dried. When the reserve pit is dry enough to breakout and fill, and as weather permits, the unused portion of the wellsite will be leveled and reseeded as per BLM specifications. Only that part of the pad required for production facilities will remain in use. In the event of a dry hole, only a dry hole marker will remain.

8. Ancillary Facilities: No airstrip, campsite or other facility will be built as a result of the operations of the proposed well.

9. Well Site Layout:

A. The drill pad layout with elevations, as staked by John West engineering Company, is shown on . Dimensions of the pad, pits and location of major rig components are shown. Since the existing pad is in fairly good condition, no major cuts or expansion will be required.

B. The planned orientation of the rig and associated drilling equipment, reserve pit, pipe racks, turn-around and parking areas, and access road are shown on Exhibit "E". No permanent living facilities are planned, however, a temporary "doghouse" trailer will be on location during drilling and completion operations.

C. The reserve pit will be lined with a high quality plastic sheeting (5-7 mil thickness).

10. Plan for Restoration of the Surface:

A. Upon completion of the proposed operations, should the well be abandoned, the pit area, after allowed to dry, will be broken out and leveled. The location will be leveled and contoured to the original topography as nearly as possible.

All trash, garbage and pit lining will be removed 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. Three sides of the reserve pit will be fenced prior to and during drilling operations. At the time the rig is removed, the reserve pit will be fenced on the rig (fourth) side to prevent livestock or wildlife from being entrapped. The fencing will remain in place until the pit area is cleaned and leveled. No oil will be left on the surface of the fluid in the pit.

D. Upon completion of the proposed operations, should the well be productive, the reserve pit area will be treated as outlined above within the same prescribed time. The caliche from an area of the original drillsite not needed for production operations or facilities will be removed and used for construction of thicker pads or firewalls for the tank battery installation. Any additional caliche required for facilities will be obtained from a BLM approved caliche pit. Topsoil removed from the drillsite will be used to recontour the pit area and unused portions of the drill pad to the original natural level and reseeded as per BLM specifications.

11. Surface Ownership: The wellsite and lease are located entirely on Federal surface.

12. Other Information:

A. The topography around the wellsite is a rolling aeolian dune field with vegetation of mesquite, tree tobacco, narrow-leaf yucca, snakeweed, spectacle pod, chinchweed, shin oak, dune sunflower and assorted grasses/forbs. Wildlife in the area includes those typical of semi arid desert land.

B. The soils are sand over caliche base.

C. There are no permanent or live water in the immediate area.

D. There are no residences and other structures in the area.

E. The land in the area is used primarily for grazing purposes.

F. An archaeological study has been conducted for the location, access road, powerline right-of-way and flowline right-of-way. The report has been submitted separately.

13. Lessee's and Operator's Representative:

TKS Services, L.L.C.
Tommy Scroggin
P. O. Box 660
Artesia, New Mexico 88210
Phone Number: (505) 748-1331-OFFICE
(505) 365-7545-CELLULAR
(505) 748-2118 HOME

14. Certification:

I hereby certify that I, or persons under my direct supervision have inspected the proposed drill site which currently exists; that the statements made in the plan are to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed by Armstrong Energy Corporation and its contractors and sub-contractors in conformity with the plan, and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 USC 1001 for the filing of a false statement.

ARMSTRONG ENERGY CORPORATION

DATE: May 17, 2000

Bruce A. Stubbs, P.E.
Consulting Engineer

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN
FORM 3160-3 APPLICATION FOR PERMIT TO DRILL
ARMSTRONG ENERGY CORPORATION
K.F. QUAIL FEDERAL #2 WELL
600' FNL & 600' FWL
SECTION 1-T20S-R34E
LEA COUNTY, NEW MEXICO

There is a possibility of encountering H_2S while drilling the Yates-Seven Rivers-Queen-San Andres section, from 3670' to 5410'. While the occurrence of H_2S is not expected at the surface, procedures should be in place to safely control any release of H_2S.

1. 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:

A. The hazards and characteristics of hydrogen sulfide (H_2S).

B. The proper use and maintenance of personal protective equipment and life support systems.

C. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

D. The proper techniques for first aid and rescue procedures.

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

A. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

B. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

C. The contents and requirements of H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to drilling out of the cement plugs and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S 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.

2. H_2S Safety Equipment and Systems

Note: All H_2S safety equipment and systems will be installed, tested, and operational before drilling out the cement plugs.

A. Well control equipment

1. Flare line to flare H_2S away from rig.

2. Blind rams and pipe rams to accommodate all pipe sizes.

B. Protective equipment for essential personnel

1. Air packs and related safety equipment should be on stand-by.

C. H_2S detection and monitoring equipment

1. Detectors should be on stand-by.

D. Visual warning systems

1. Wind direction indicator located by the pits, so as to be visible from the rig floor and the pit area.

2. Caution/Danger signs should be available and on stand-by. Proper signs can be obtained from area safety contractors. Bilingual signs should be used on this location.

E. Mud Program

1. The mud program has been designed to maintain sufficient hydrostatic pressure to avoid the entrance of formation fluids into the wellbore. Proper mud weight, safe drilling practices, and mud Ph greater than 9 will minimize hazards when penetrating H_2S bearing zones.

F. Metallurgy

1. Casing will be J-55 grade.

2. All drillpipe, wellheads, kill lines and choke manifolds will be suitable for limited H_2S service.

G. Communication

1. Radio communications or cellular phones will be maintained at the rig site.

H. Action to be taken upon the detection of an H_2S event

1. In the event of any flow to the surface, secure the well, close BOP's.

2. Determine wind direction.

3. Move all personnel to the designated safe briefing area. Account for everyone on location.

4. Determine well status and measure H_2S content.

5. Notify Management and regulatory offices.

6. Determine if the public safety plan should be activated.

7. If assistance is needed and additional equipment is required, notify the safety contractor.

8. No one will be allowed back into the drillsite without a self contained breathing apparatus.

3. Public Safety Plan

A. In the event of the release of a potentially hazardous volume of H_2S the Public Safety Plan will be activated. (100 ppm radius of exposure is larger than the location).

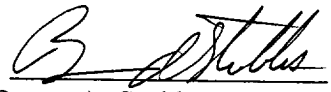
B. There are no buildings or residential structures within a 3000' radius of location. Marathon Road in approximately 1000' feet east of the location. Therefore, the prime concern for public protection will be to keep people from entering the area. Security should be posted on Marathon Road to control access to the area.

C. If additional assistance is needed for control of the area, notify the local sherriff's office and the state police.

4. Authorized Company Representative

The Armstrong Energy Corporation authorized representative is :

TKS Services, L.L.C.
Tommy Scroggin
P. O. Box 660
Artesia, New Mexico 88210
Phone Number: (505) 748-1331-OFFICE
(505) 365-7545-CELLULAR
(505) 748-2118 HOME

Prepared By: 
Bruce A. Stubbs

Date: May 17, 2000

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

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

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-~~02408~~ 31601	37584	Northeast Lea Delaware

Property Code	Property Name	Well Number
001580	KF QUAIL FED.	2

OGRID No.	Operator Name	Elevation
001092	ARMSTRONG ENERGY CORPORATION	3695

Surface Location

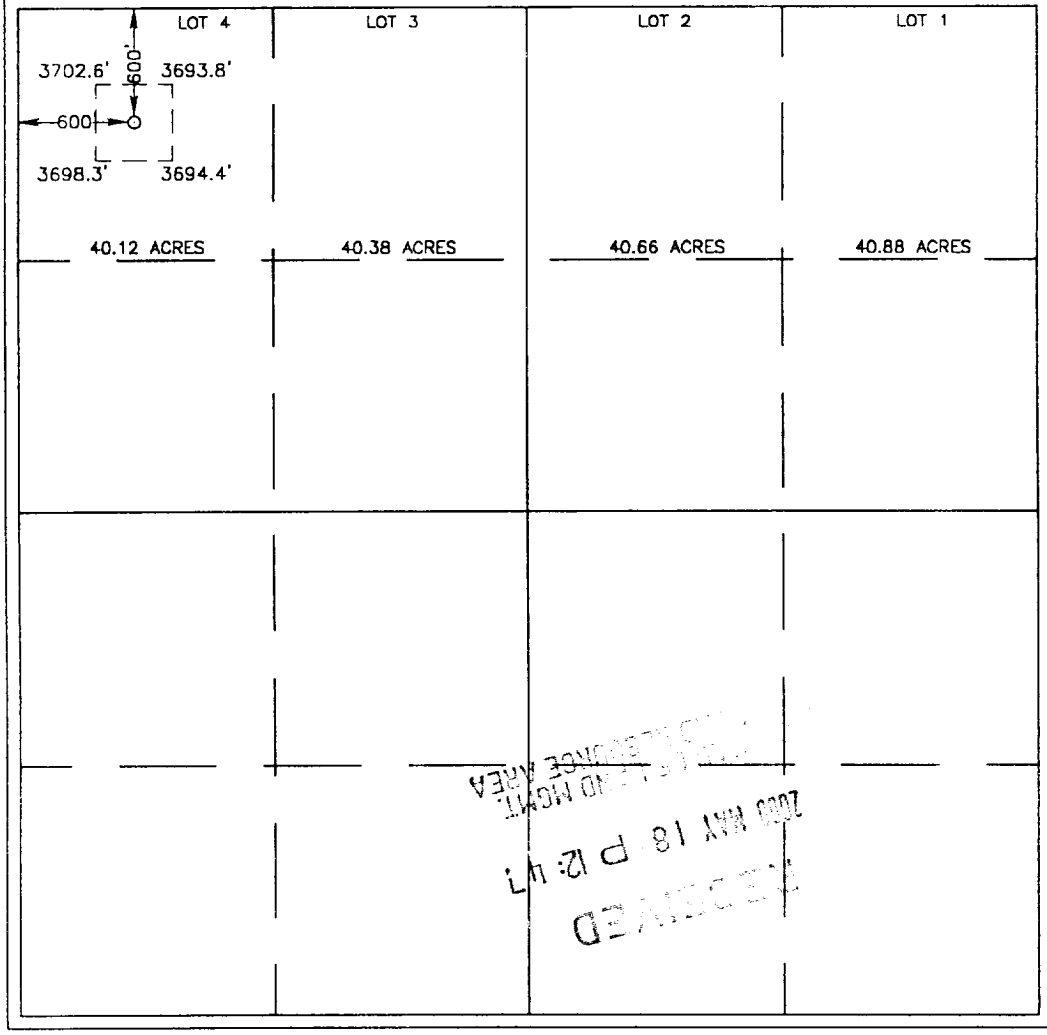
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 4	1	20 S	34 E		600	NORTH	600	WEST	LEA

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
40			

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



OPERATOR CERTIFICATION

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

Signature

Bruce A. Stubbs
Printed Name

Consulting Engineer
Title

5-17-00
Date

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 supervison, and that the same is true and correct to the best of my belief.

MAY 8, 2000
Date Surveyed DC

Signature & Seal of Professional Surveyor

5/16/00

00-11-0586

Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641
MACON McDONALD 12185

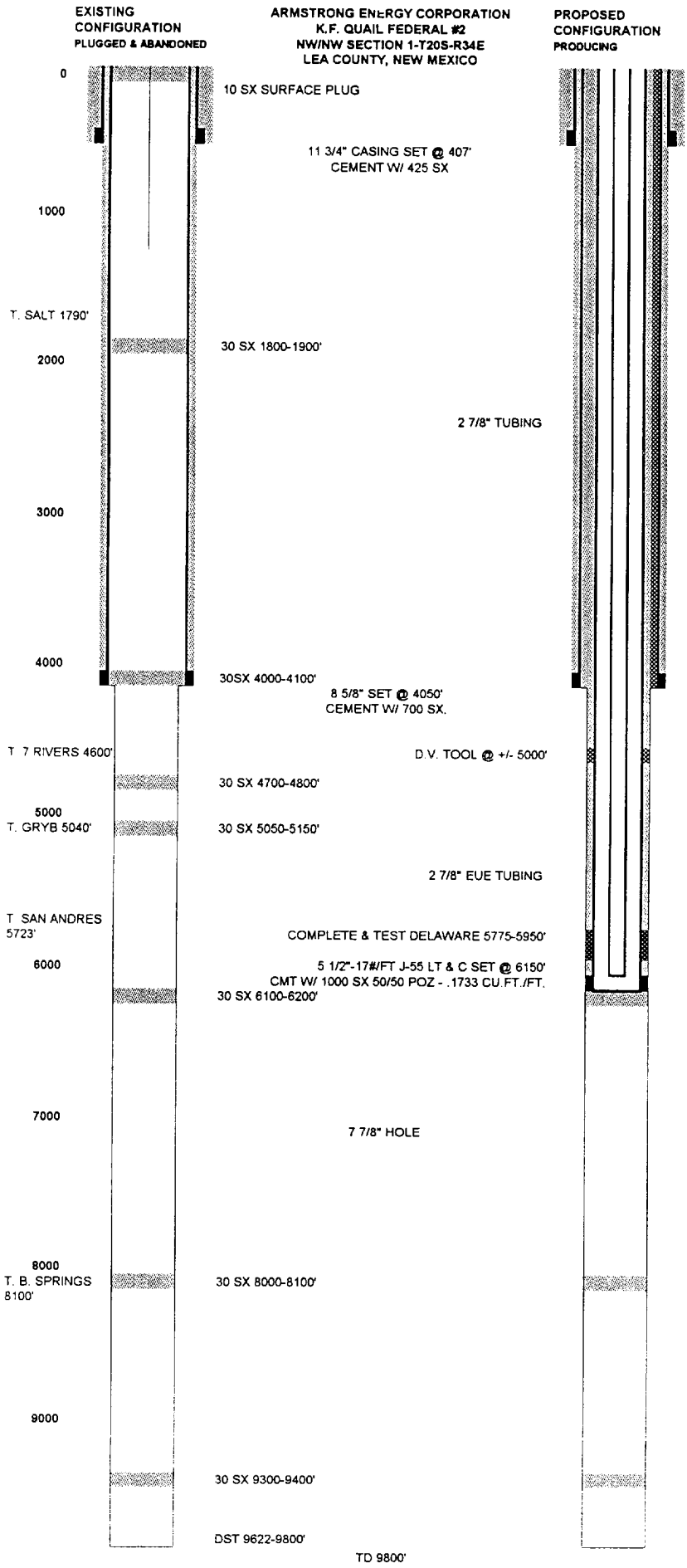
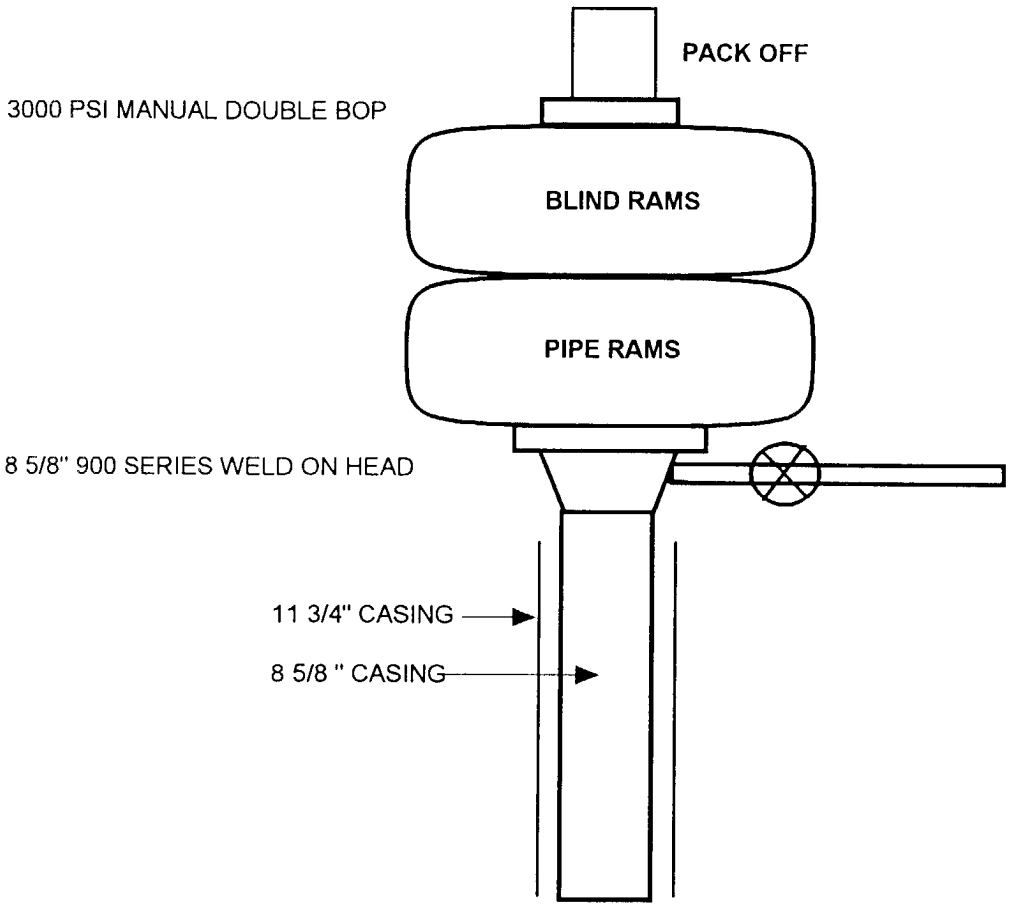

EXISTING
CONFIGURATION
PLUGGED & ABANDONED
ARMSTRONG ENERGY CORPORATION
K.F. QUAIL FEDERAL #2
NW/NW SECTION 1-T20S-R34E
LEA COUNTY, NEW MEXICO
PROPOSED
CONFIGURATION
PRODUCING
0
10 SX SURFACE PLUG
11 3/4" CASING SET @ 407'
CEMENT W/ 425 SX
1000
T. SALT 1790'
30 SX 1800-1900'
2000
2 7/8" TUBING
3000
4000
30SX 4000-4100'
8 5/8" SET @ 4050'
CEMENT W/ 700 SX.
T. 7 RIVERS 4600'
D.V. TOOL @ +/- 5000'
30 SX 4700-4800'
5000
T. GRYB 5040'
30 SX 5050-5150'
2 7/8" EUE TUBING
T. SAN ANDRES
5723'
COMPLETE & TEST DELAWARE 5775-5950'
6000
5 1/2"-17#/FT J-55 LT & C SET @ 6150'
CMT W/ 1000 SX 50/50 POZ - .1733 CU.FT./FT.
30 SX 6100-6200'
7000
7 7/8" HOLE
8000
T. B. SPRINGS
8100'
30 SX 8000-8100'
9000
30 SX 9300-9400'
DST 9622-9800'
TD 9800'

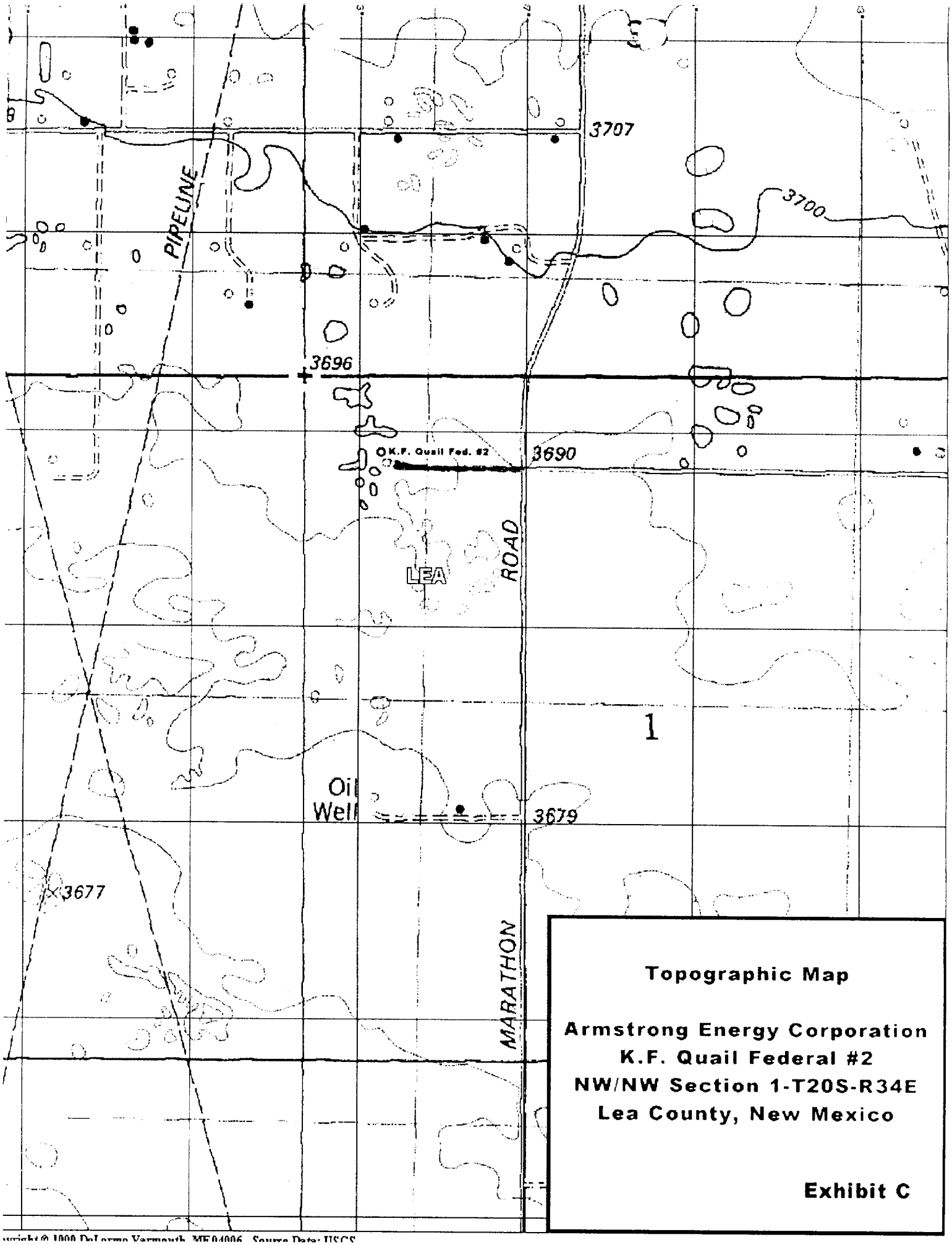
Exhibit A



BOP SCHEMATIC

ARMSTRONG ENERGY CORPORATION
K.F. QUAIL FEDERAL #2
NW/NW SECTION 1-T20S-R34E
EDDY COUNTY, NEW MEXICO

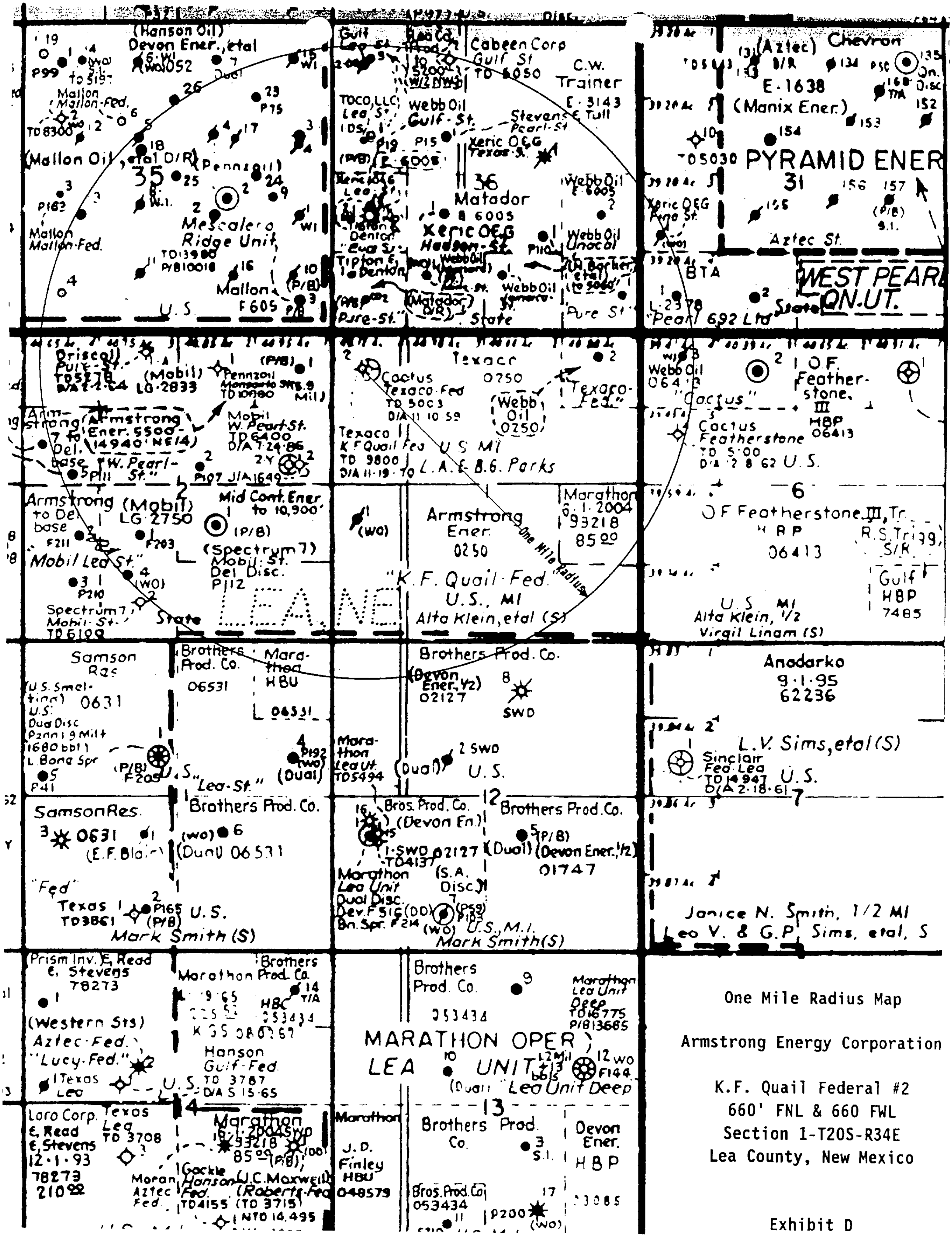
Exhibit B



Topographic Map

Armstrong Energy Corporation
K.F. Quail Federal #2
NW/NW Section 1-T20S-R34E
Lea County, New Mexico

Exhibit C



One Mile Radius Map

Armstrong Energy Corporation

K.F. Quail Federal #2
660' FNL & 660 FWL
Section 1-T20S-R34E
Lea County, New Mexico

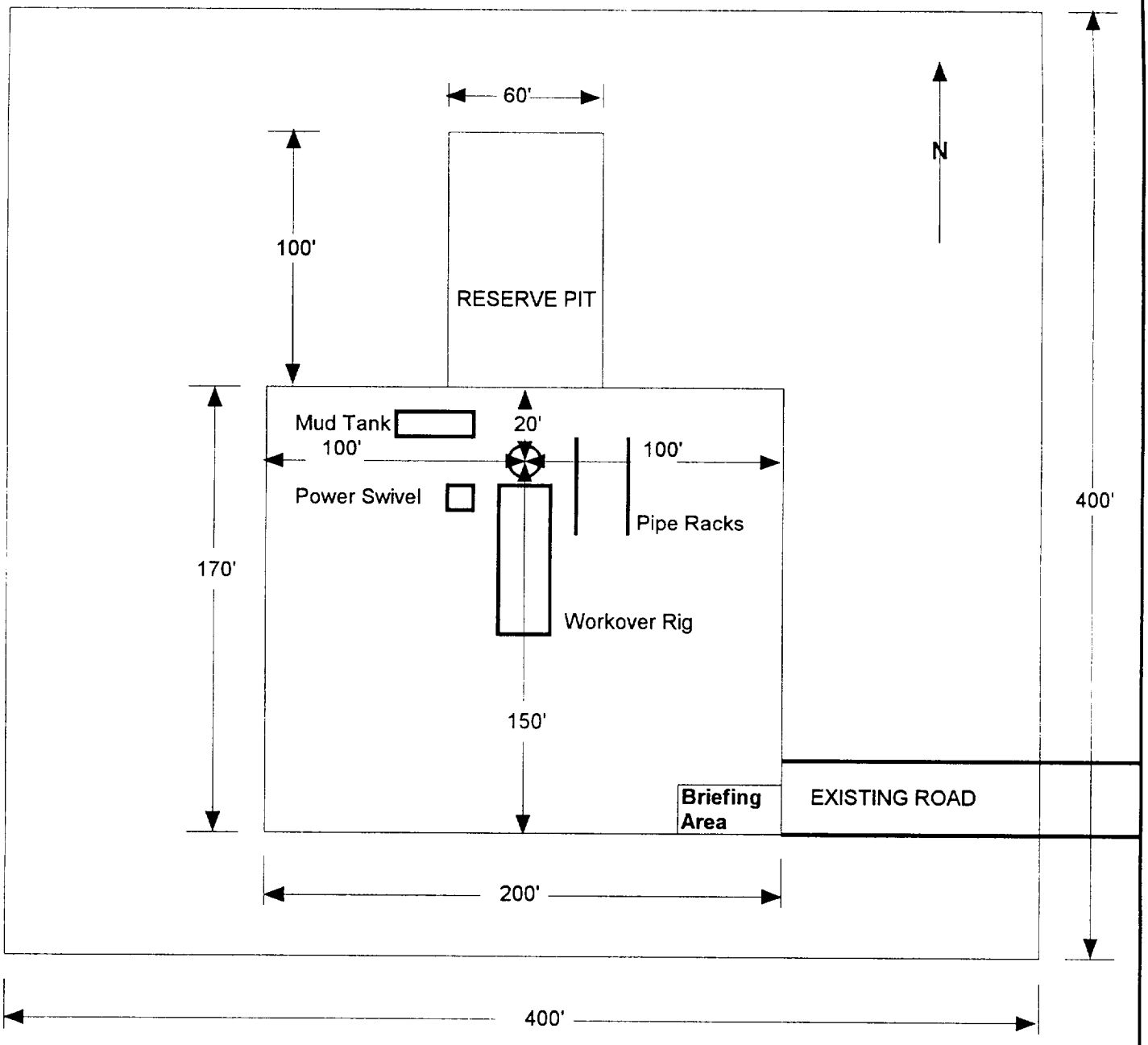
Exhibit D

EXHIBIT D

WELLS WITHIN A ONE MILE RADIUS OF THE K.F. QUAIL FEDERAL #2

Field	Location	Lease	Well	Operator	API #	Status
LEA (BONE SPRINGS) BS	35H 19S 34E	MESCALERO RIDGE UNI	4	PENNZOIL EXPL & PROD CO	300252362900	P&A
LEA (BONE SPRINGS) BS	35J 19S 34E	MESCALERO RIDGE UNI	2	HONDO OIL & GAS CO	300252331900	INA
LEA (BONE SPRINGS) BS	35P 19S 34E	MESCALERO RIDGE UNI	3	PENNZOIL CO INC	300252350300	INA
LEA (BONE SPRINGS) BS	36D 19S 34E	LEA DS STATE	2	CHEVRON U S A INC	300252380800	P&A
LEA (BONE SPRINGS) BS	36E 19S 34E	LEA DS STATE	1	TRAINER C W	300252361100	INA
LEA (BONE SPRINGS) BS	36L 19S 34E	STATE 36	2	MACK ENERGY CORP	300252369000	INA
LEA (BONE SPRINGS) BS	36M 19S 34E	PURE STATE	2	TIPTON & DENTON	300252355000	INA
LEA (BONE SPRINGS) BS	1L 20S 34E	K F QUAIL FEDERAL	1	TEXACO INC	300250240800	INA
LEA (BONE SPRINGS) BS	2A 20S 34E	WEST PEARL STATE	1	ARMSTRONG ENERGY COR	300252858300	INA
LEA (BONE SPRINGS) BS	2B-20S-34E	MONSANTO STATE	1	PENNZOIL UNITED INC.		P&A
LEA (PENN) PN	2A 20S 34E	WEST PEARL STATE CO	1	ARMSTRONG ENERGY COR	300252858300	INA
LEA (SAN ANDRES) SA	36E 19S 34E	LEA DS STATE	1	TOCO LLC	300252361100	ACT
LEA NE (DELAWARE) DL	35D 19S 34	MALLON 35 FEDERAL	1	MALLON OIL CO	300253298300	ACT
LEA NE (DELAWARE) DL	35L 19S 34E	MALLON 35 FEDERAL	3	MALLON OIL CO	300253298500	ACT
LEA NE (DELAWARE) DL	35P 19S 34E	MESCALERO RIDGE UNI	3	MALLON OIL CO	300252350300	ACT
LEA NE (DELAWARE) DL	36M 19S 34E	DELAWARE STATE	1	TIPTON & DENTON	300252355000	ACT
LEA NE (DELAWARE) DL	2N 20S 34E	MOBIL LEA STATE	4	ARMSTRONG ENERGY COR	300253231000	ACT
LEA NE (DELAWARE) DL	2E 20S 34E	MOBIL LEA STATE	5	ARMSTRONG ENERGY COR	300253246600	ACT
LEA NE (DELAWARE) DL	2E 20S 34E	MOBIL LEA STATE	7	ARMSTRONG ENERGY COR	300253291400	ACT
LEA NE (DELAWARE) DL	2A 20S 34E	WEST PEARL STATE	1	ARMSTRONG ENERGY COR	300252858300	ACT
LEA NE (DELAWARE) DL	2G 20S 34E	WEST PEARL STATE	2	ARMSTRONG ENERGY COR	300253184500	ACT
LEA NE (DELAWARE) DL	2J 20S 34E	MOBIL STATE	1	MID CONTINENT ENERGY O	300252920400	ACT
LEA NE (DELAWARE) DL	2K 20S 34E	MOBIL LEA STATE	1	ARMSTRONG ENERGY COR	300253169600	ACT
LEA NE (DELAWARE) DL	2L 20S 34E	MOBIL LEA STATE	2	ARMSTRONG ENERGY COR	300253192800	ACT
LEA NE (DELAWARE) DL	2M 20S 34E	MOBIL LEA STATE	3	ARMSTRONG ENERGY COR	300253210500	ACT
LEA SOUTH (SAN ANDRES) SA	1L 20S 34E	K F QUAIL FEDERAL	1	ARMSTRONG ENERGY COR	300250240800	INA
PEARL (QUEEN) QN	35 19S 34E	MESCALERO RIDGE UNI	23	DEVON ENERGY CORP	300253366000	ACT
PEARL (QUEEN) QN	35H 19S 34E	MESCALERO RIDGE UNI	24	DEVON ENERGY CORP	300253366100	ACT
PEARL (QUEEN) QN	35J 19S 34E	MESCALERO RIDGE UNI	25	DEVON ENERGY CORP	300253416400	ACT
PEARL (QUEEN) QN	35G 19S 34E	MESCALERO RIDGE UNI	26	DEVON ENERGY CORP	300253417600	ACT
PEARL (QUEEN) QN	35A 19S 34E	MESCALERO RIDGE UNI	15	DEVON ENERGY CORP	300252168300	INA
PEARL (QUEEN) QN	35B 19S 34E	MESCALERO RIDGE UNI	7	DEVON ENERGY CORP	300252069400	ACT
PEARL (QUEEN) QN	35C 19S 34E	MESCALERO RIDGE UNI	6	DEVON ENERGY CORP	300252069300	INA
PEARL (QUEEN) QN	35D 19S 34E	MESCALERO RIDGE UNI	14	DEVON ENERGY CORP	300252161300	INA
PEARL (QUEEN) QN	35E 19S 34E	MESCALERO RIDGE UNI	12	DEVON ENERGY CORP	300252126600	INA
PEARL (QUEEN) QN	35F 19S 34E	MESCALERO RIDGE UNI	18	DEVON ENERGY CORP	300252951700	ACT

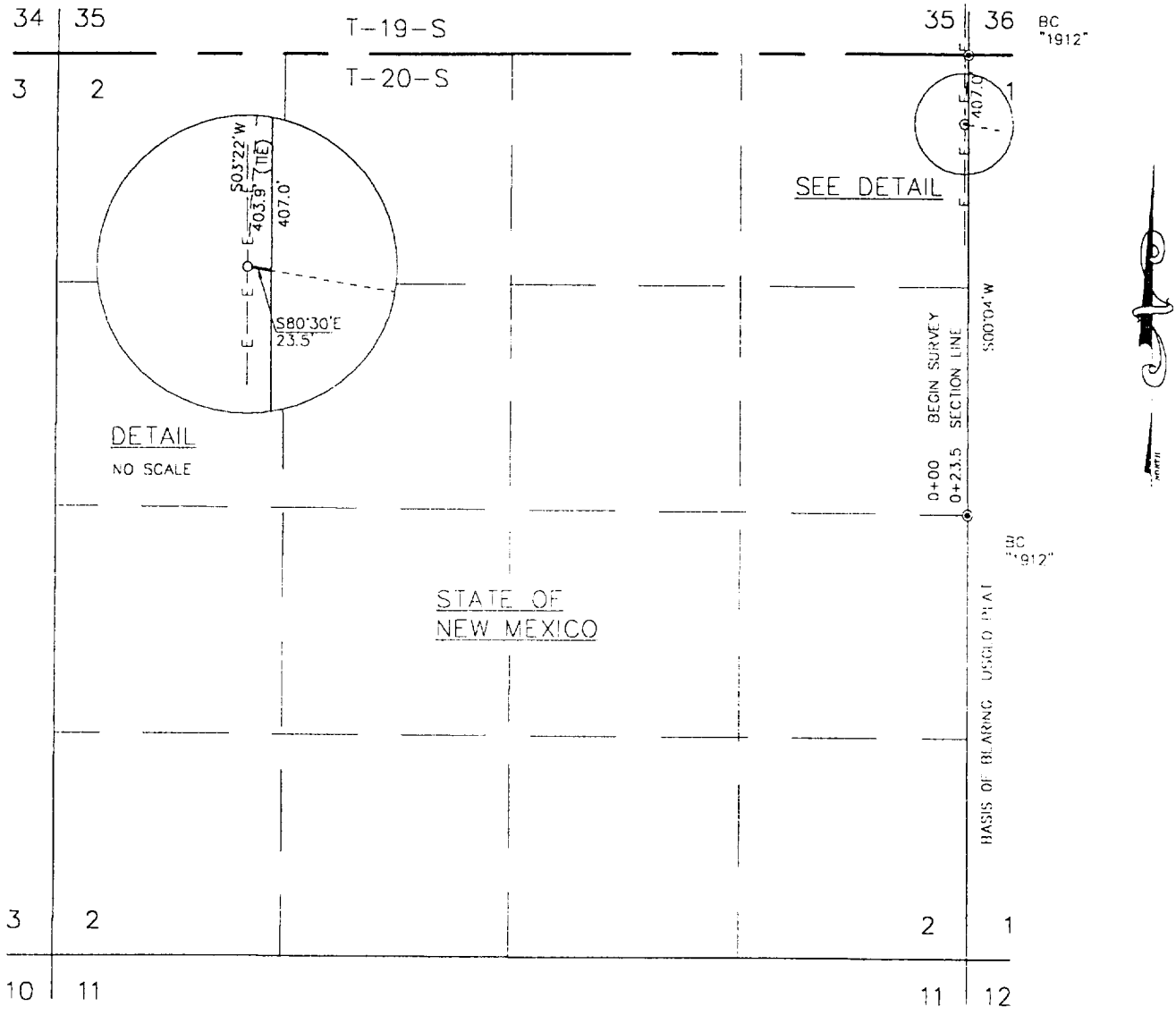
PEARL (QUEEN) QN	35F 19S 34E	MESCALERO RIDGE UNI	5	VASTAR RESOURCES INC	300252107200	P&A
PEARL (QUEEN) QN	35G 19S 34E	MESCALERO RIDGE UNI	4	DEVON ENERGY CORP	300252069200	INA
PEARL (QUEEN) QN	35H 19S 34E	MESCALERO RIDGE UNI	3	DEVON ENERGY CORP	300252069100	ACT
PEARL (QUEEN) QN	35I 19S 34E	MESCALERO RIDGE UNI	1	DEVON ENERGY CORP	300252030200	INA
PEARL (QUEEN) QN	35J 19S 34E	MESCALERO RIDGE UNI	2	DEVON ENERGY CORP	300252056500	ACT
PEARL (QUEEN) QN	35K 19S 34E	MESCALERO RIDGE UNI	8	DEVON ENERGY CORP	300252069500	INA
PEARL (QUEEN) QN	35L 19S 34E	MESCALERO RIDGE UNI	13	DEVON ENERGY CORP	300252126700	ACT
PEARL (QUEEN) QN	35N 19S 34E	MESCALERO RIDGE UNI	11	HANSON OIL CORP	300252146400	INA
PEARL (QUEEN) QN	35O 19S 34E	MESCALERO RIDGE UNI	16	DEVON ENERGY CORP	300252185800	INA
PEARL (QUEEN) QN	35P 19S 34E	MESCALERO RIDGE UNI	10	VASTAR RESOURCES INC	300252126500	INA
PEARL (QUEEN) QN	36D 19S 34	SARAH SUE	3	LEA COUNTY PROD CO LLC	300252175600	ACT
PEARL (QUEEN) QN	36F 19S 34E	PEARL STATE	1	STEVENS & TULL INC	300253293500	INA
PEARL (QUEEN) QN	36D 19S 34E	GULF STATE	3	XERIC OIL & GAS CORP	300252175600	INA
PEARL (QUEEN) QN	36E 19S 34E	GULF STATE	1	MACK ENERGY CORP	300250240500	INA
PEARL (QUEEN) QN	36I 19S 34E	PURE STATE	2	WEBB OIL CO	300252007800	ACT
PEARL (QUEEN) QN	36J 19S 34E	UNOCAL STATE	1	WEBB OIL CO	300253085200	ACT
PEARL (QUEEN) QN	36K 19S 34E	HADSON STATE	1	MACK ENERGY CORP	300250240400	INA
PEARL (QUEEN) QN	36L 19S 34E	LEA K STATE	1	XERIC OIL & GAS CORP	300250240600	P&A
PEARL (QUEEN) QN	36M 19S 34E	PURE STATE	1	TIPTON & DENTON	300252029100	ACT
PEARL (QUEEN) QN	36M 19S 34E	DELAWARE STATE	1	TIPTON & DENTON	300252355000	INA
PEARL (QUEEN) QN	36N 19S 34E	MINERALS STATE	1	WEBB OIL CO	300252128100	ACT
PEARL (QUEEN) QN	36O 19S 34E	JAMAICA STATE	1	WEBB OIL CO	300253101100	ACT
PEARL (QUEEN) QN	36P 19S 34E	PURE STATE	1	WEBB OIL CO	300252009600	ACT
PEARL (QUEEN) QN	1A 20S 34E	TEXACO FEDERAL	2	WEBB OIL CO	300252018900	ACT
PEARL (QUEEN) QN	31I-19S-35E	FINA STATE	1	XERIC OIL & GAS	300253093000	P&A
PEARL (QUEEN) QN	31M-19S-35E	PEARL 692 LTD	1	BTA OIL PRODUCERS	300252309800	ACT
PEARL (QUEEN) QN	6D-20S-35E	FEATHERSTONE FEDER	3	CACTUS DRILLING CO.	300250333400	INA
PEARL (QUEEN) QN	6D-20S-35E	FEATHERSTONE FEDER	4	CACTUS DRILLING CO.		P&A
PEARL (SEVEN RIVERS) SR	35G 19S 34E	MESCALERO RIDGE UNI	17	HANSON OIL CORP	300252185900	INA
PEARL (SEVEN RIVERS) SR	35P 19S 34E	MESCALERO RIDGE UNI	10	DEVON ENERGY CORP	300252126500	INA
PEARL (SEVEN RIVERS) SR	35I 19S 34E	MESCALERO RIDGE UNI	9	DEVON ENERGY CORP	300252126400	ACT
PEARL (SEVEN RIVERS) SR	36G 19S 34E	TEXAS STATE	1	XERIC OIL & GAS CORP	300253116900	P&A
PEARL SOUTH (SEVEN RIVERS	36L 19S 34E	LEA K STATE	1	XERIC OIL & GAS CORP	300250240600	INA
WILDCAT	1D-20S-34E	TEXACO FEDERAL	1	CACTUS DRILLING CO.		P&A
WILDCAT	2C-20S-34E	PURE STATE A	1	J.P. DRISCOLL		P&A
WILDCAT	2N-20S-34E	MOBIL STATE	2	SPECTRUM 7 EXPLORATION		P&A
WILDCAT	35E-19S-34E	MALLON 35 FEDERAL	2	MALLON OIL CO.		P&A
WILDCAT	36C-19S-34E	GULF STATE	2	CABEEN EXPLORATION CORP.		P&A



ARMSTRONG ENERGY CORPORATION
DRILLING RIG LAYOUT PLAN
K.F. QUAIL FEDERAL #2
SECTION 1-T20S-R34E
LEA COUNTY, NEW MEXICO

Exhibit E

Exhibit F



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 2, TOWNSHIP 20 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

BEGINNING AT A POINT IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 2 WHICH LIES S03°22'W, 403.9 FEET FROM A BRASS CAP FOUND FOR THE NORTHEAST CORNER OF SAID SECTION 2; THEN S80°30'E, 23.5 FEET TO A POINT ON THE EAST LINE OF SAID SECTION 2 WHICH LIES S00°04'W, 407.0 FEET FROM SAID NORTHEAST CORNER. SAID STRIP OF LAND BEING 23.5 FEET OR 1.42 RODS IN LENGTH AND CONTAINING 0.016 ACRES AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4 – – 1.42 RODS – – 0.016 ACRES

1000 0 1000 2000 FEET

Scale: 1"=1000'

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

5/11/2000

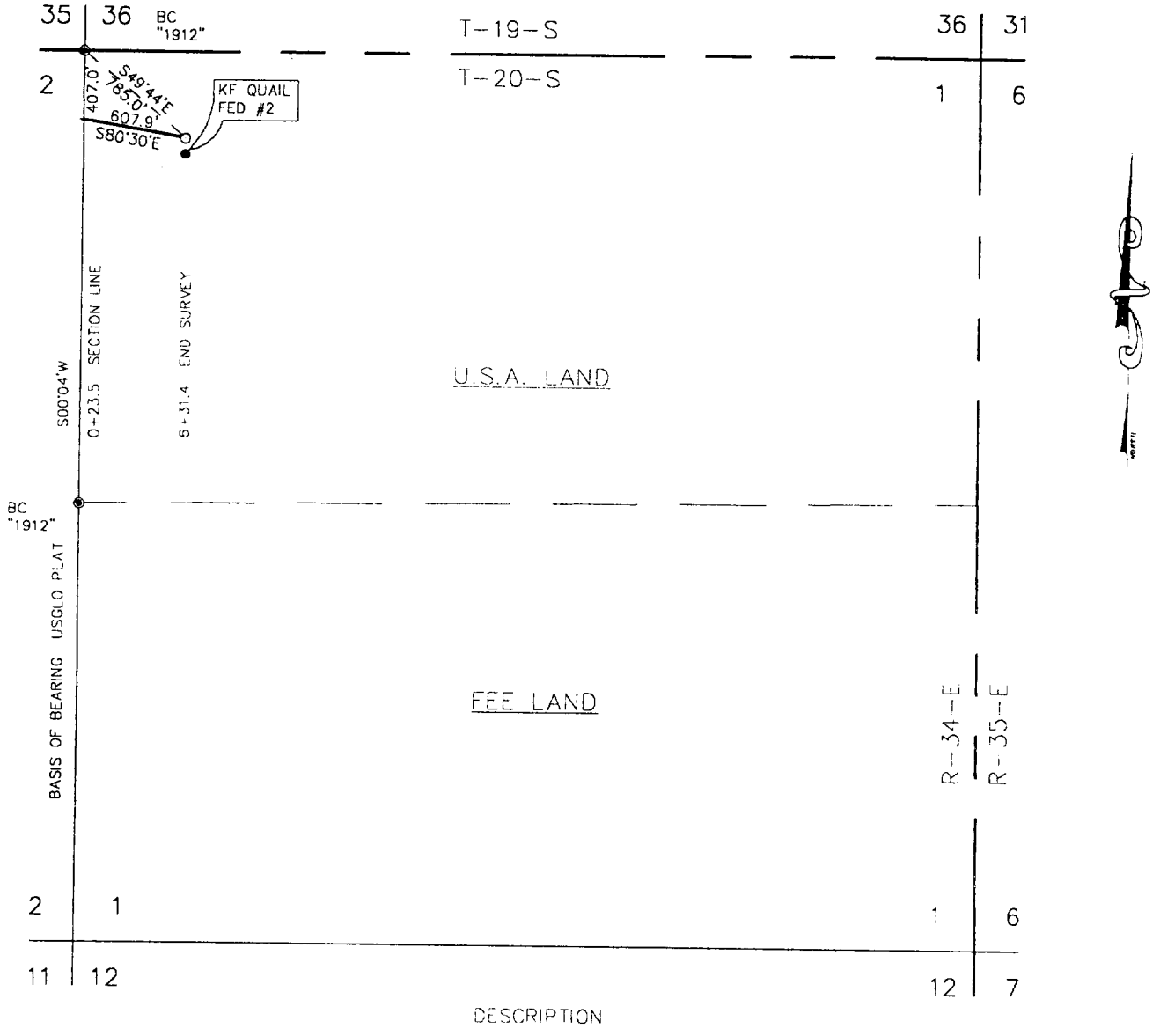
RONALD J. EIDSON, N.M. P.S. No. 3239
GARY G. EIDSON N.M. P.S. No. 12641

JOHN WEST SURVEYING COMPANY
412 N. DAL PASO – HOBBS, NEW MEXICO – 505-393-3117

ARMSTRONG ENERGY CORPORATION

CENTERLINE SURVEY OF AN ELECTRIC LINE CROSSING STATE OF NEW MEXICO LAND IN SECTION 2 TOWNSHIP 20 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 5/8/00		Sheet 1 of 1 Sheets	
W.O. Number: 00-11-0586		Drawn By: D.COLLINS	
Date: 5/11/00	ARMSTRONG	ARMS0586	Scale: 1"=1000'



DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE, 607.9 FEET OR 0.115 MILES IN LENGTH AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE SURVEY.

1000 0 1000 2000 FEET

Scale: 1" = 1000'

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

Gary B. Eidson 5/11/2000

RONALD J. EIDSON, N.M. P.S. No. 3239
GARY G. EIDSON N.M. P.S. No. 12641

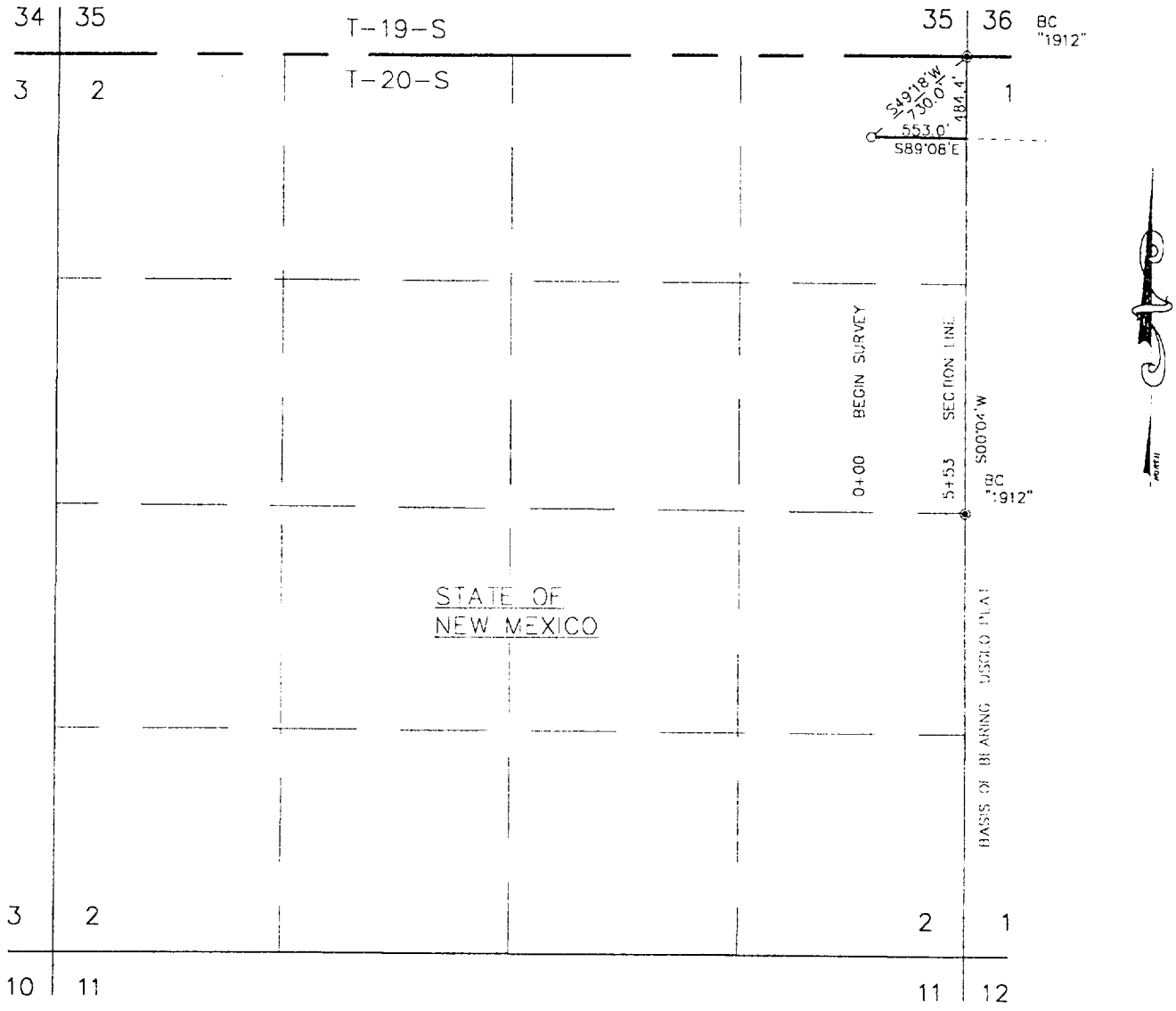
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO – HOBBS, NEW MEXICO – 505-393-3117

ARMSTRONG ENERGY CORPORATION

CENTERLINE SURVEY OF AN ELECTRIC LINE
CROSSING U.S.A. LAND IN
SECTION 1
TOWNSHIP 20 SOUTH,
RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

Survey Date: 5/8/00		Sheet 1 of 1 Sheets	
W.O. Number: 00-11-0586		Drawn By: D.COLLINS	
Date: 5/11/00	ARMSTRONG	ARMS0586	Scale: 1" = 1000'

Exhibit G



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 2, TOWNSHIP 20 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY.

BEGINNING AT A POINT IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 2 WHICH LIES S49°18'W, 730.0 FEET FROM A BRASS CAP FOUND FOR THE NORTHEAST CORNER OF SAID SECTION 2; THEN S89°08'E, 553.0 FEET TO A POINT ON THE EAST LINE OF SAID SECTION 2 WHICH LIES S00°04'W, 484.4 FEET FROM SAID NORTHEAST CORNER. SAID STRIP OF LAND BEING 553.0 FEET OR 33.52 RODS IN LENGTH AND CONTAINING 0.381 ACRES AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4 – – 33.52 RODS – – 0.381 ACRES

1000 0 1000 2000 FEET

Scale: 1"=1000'

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

GARY G. EIDSON NEW MEXICO 12641 REGISTERED PROFESSIONAL LAND SURVEYOR

5/11/2000

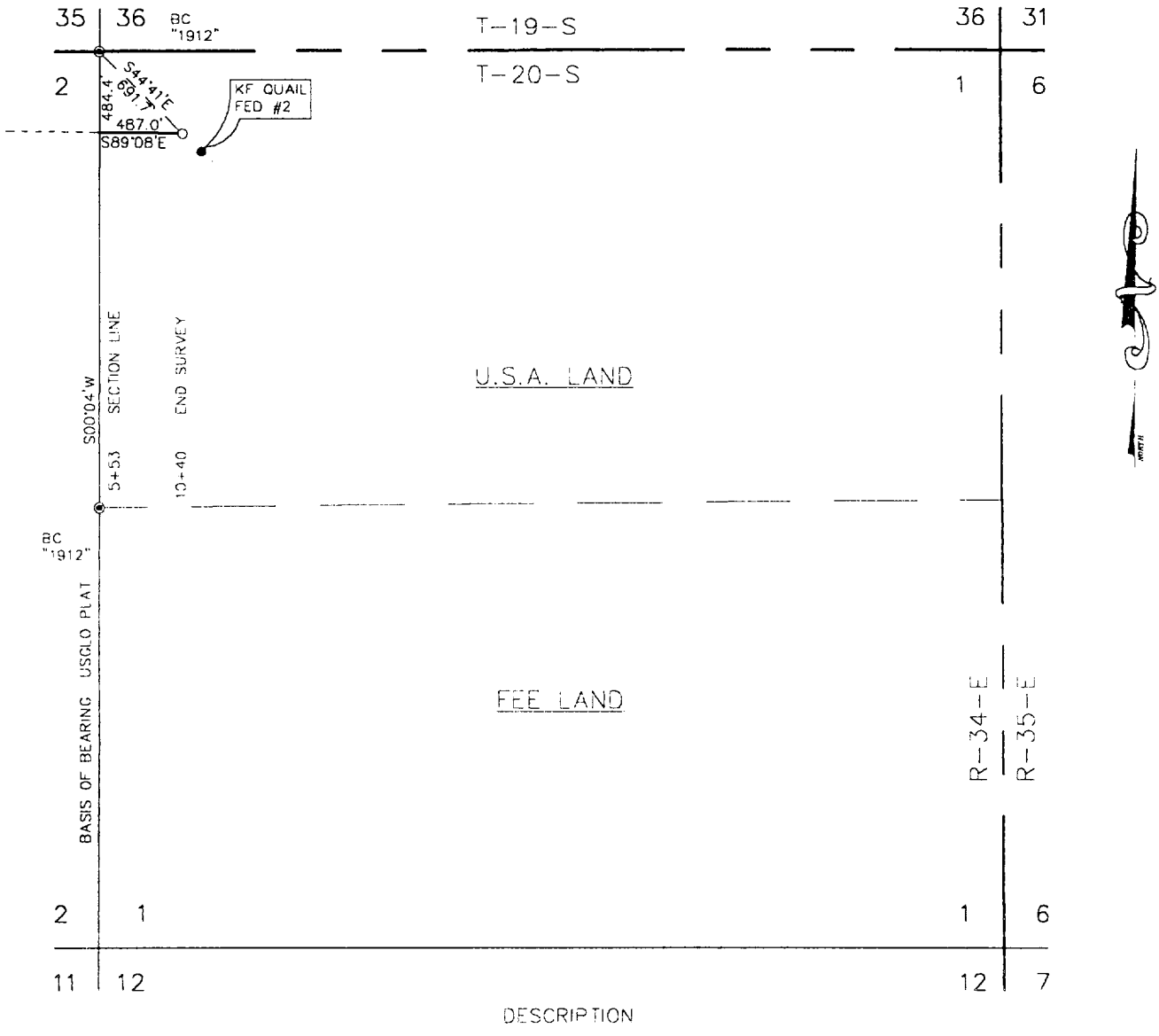
RONALD J. EIDSON, N.M. P.S. No. 3239
GARY G. EIDSON, N.M. P.S. No. 12641

JOHN WEST SURVEYING COMPANY
412 N. DAL PASO – HOBBS, NEW MEXICO – 505-393-3117

ARMSTRONG ENERGY CORPORATION

CENTERLINE SURVEY OF A PIPELINE
CROSSING STATE OF NEW MEXICO LAND IN
SECTION 2
TOWNSHIP 20 SOUTH,
RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

Survey Date: 5/8/00		Sheet 1 of 1 Sheets	
W.O. Number: 00-11-0586		Drawn By: D.COLLINS	
Date: 5/11/00	ARMSTRONG	ARMS0586	Scale: 1"=1000'



DESCRIPTION

A STRIP OF LAND 50.0 FEET WIDE, 487.0 FEET OR 0.092 MILES IN LENGTH AND BEING 25.0 FEET LEFT AND 25.0 FEET RIGHT OF THE ABOVE CENTERLINE SURVEY.

1000 0 1000 2000 FEET

Scale: 1" = 1000'

I HEREBY CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

5/11/2000

RONALD J. EIDSON, N.M. P.S. No. 3239
GARY G. EIDSON N.M. P.S. No. 12641

JOHN WEST SURVEYING COMPANY
412 N. DAL PASO – HOBBS, NEW MEXICO – 505-393-3117

ARMSTRONG ENERGY CORPORATION

CENTERLINE SURVEY OF A PIPELINE
CROSSING U.S.A. LAND IN
SECTION 1
TOWNSHIP 20 SOUTH,
RANGE 34 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO

Survey Date: 5/8/00		Sheet 1 of 1 Sheets	
W.O. Number: 00-11-0586		Drawn By: D.COLLINS	
Date: 5/11/00	ARMSTRONG	ARMS0586	Scale: 1" = 1000'