Form 3160-3 (July 1992)

Management
Received
JUN 14 2000
Carlsbad Field Office
Carlsbad, N.M.

N. M. Oil Cons. Division
811 S 1ST ST
ARTESIA, NM 88210-2834

SUBMIT IN TRIPLICATE (Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NM-14847

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

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

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

8. FARM OR LEASE NAME, WELL NO.: PHILLIPS-19-FEDERAL 5 (26145)

2. NAME OF OPERATOR: Phillips Petroleum Company (17643)

9. API WELL NO.: 30-015-31226

3. ADDRESS AND TELEPHONE NO.: 4001 Penbrook Street Odessa, TX 79762 (915) 368-1488

10. FIELD AND POOL, OR WILDCAT: GRAYBURG-JACKSON (7R-QU-GB-SA)

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 990' FNL & 1650' FEL
At proposed prod. zone: Unit B

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: SEC. 19, T-17-S, R-29-E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 7 MI. W LOCO HILLS, NM

12. COUNTY OR PARISH: EDDY

13. STATE: NM

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 990'

16. NO. OF ACRES IN LEASE: 294.64

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320' from-19-#1&#6

19. PROPOSED DEPTH: 5000'

20. ROTARY OR CABLE TOOLS: ROTARY

21. ELEVATIONS (Show whether DF,RT, GR, etc.): 3671' GL

22. APPROX. DATE WORK WILL START*: UPON APPROVAL

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#	450'	300 SX EST. TOC TO SURF.
7-7/8"	5-1/2"	17#	5000'	1200 SX EST. TOC TO SURF.

Attachments:

- Location & Elevation Plats
- Drilling Program
- Hydrogen Sulfide Drilling Operations Plan
- BOP & Choke Manifold Schematic
- Rig Location Layout
- Proposed Line & Road Diagram
- Surface Use Plan

JUN 2000 RECEIVED OCD - ARTESIA

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposalis to deepen,give dataon presentproductivezone andproposednew productivezone. If proposalis 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 Cuesta A. Daly for: L.M. Sanders TITLE SUPV., REGULATION/PRORATION DATE 06/12/00

(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:

(ORIG. SGD.) ARMANDO A. LOPEZ Acting Assistant Field Manager, Lands And Minerals

APPROVED BY _____ TITLE _____ DATE JUN 28 2000

APPROVED FOR 1 YEAR

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makesit a crime for any personknowinglyand willfullyto make to any departmentor agency of the UnitedStates any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
JUN 13 2000
BLM
ROSWELL, NM

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
30-015-	28509	Grayburg-Jackson (7R-Qu-Gb-SA)

Property Code	Property Name	Well Number
	PHILLIPS -19- FEDERAL	5

OGRID No.	Operator Name	Elevation
017643	PHILLIPS PETROLEUM COMPANY	3671'

Surface Location

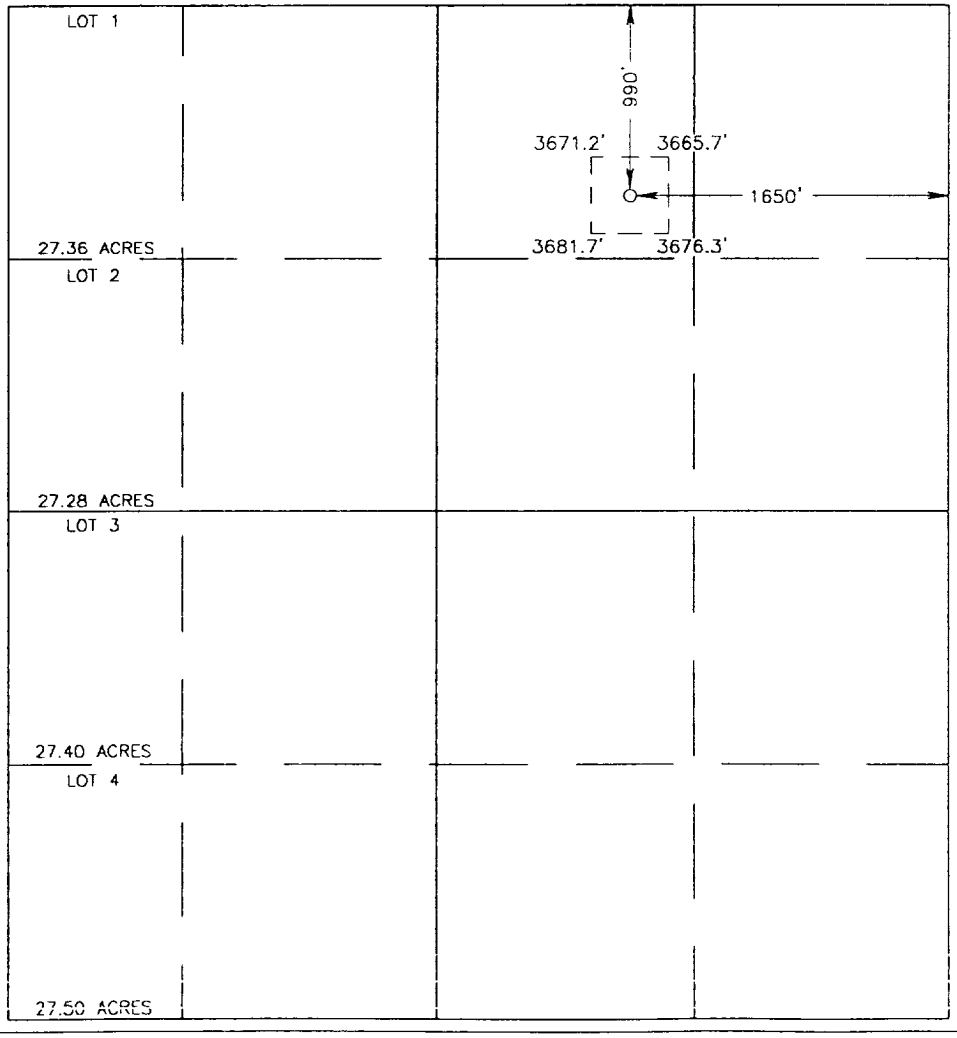
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	19	17 S	29 E		990	NORTH	1650	EAST	EDDY

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

L. M. Sanders
Printed Name

Supv., Regulation/Proration
Title

June 12, 2000
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.

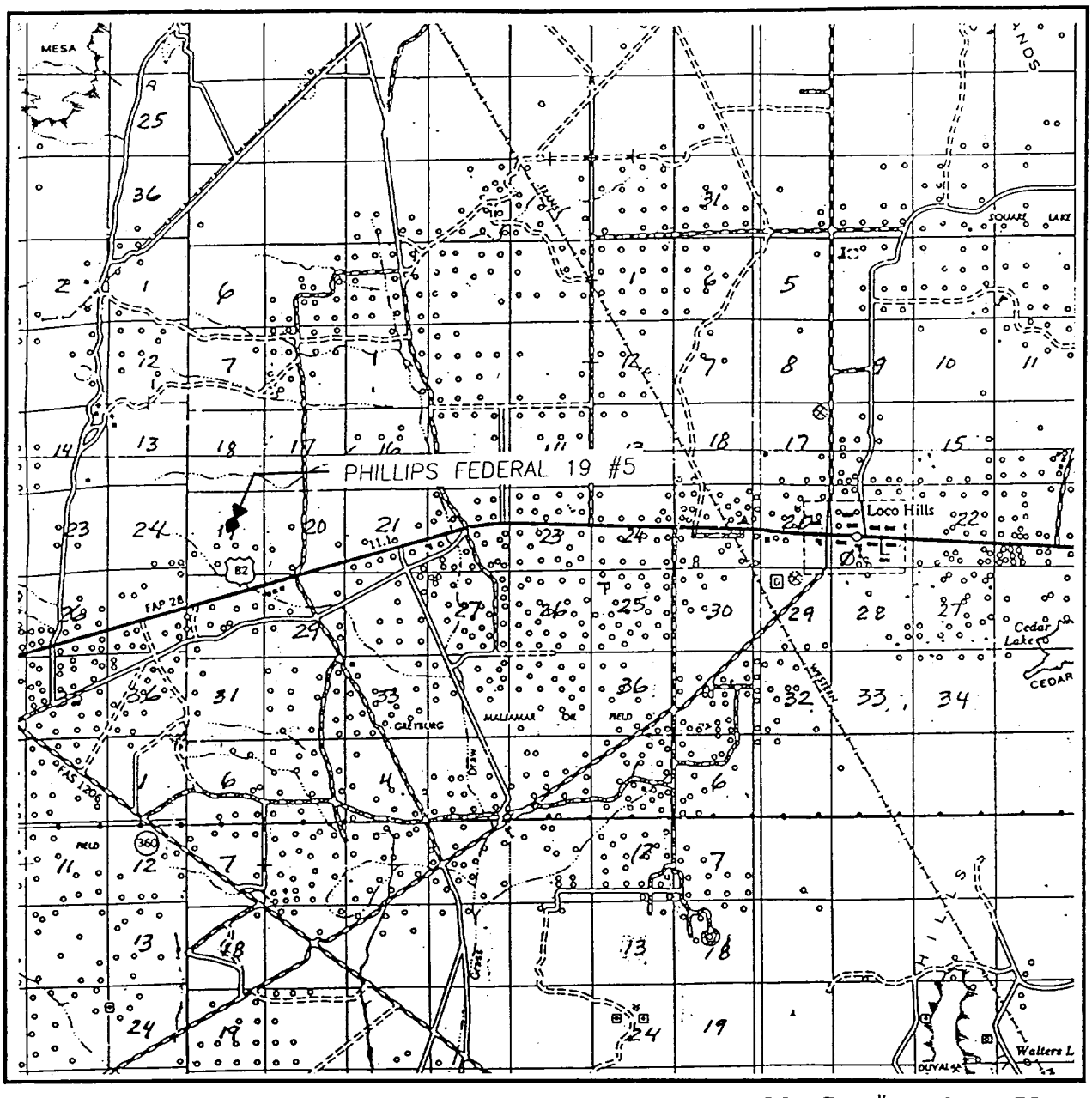
MAY 12, 2000
Date Surveyed DC

Signature & Seal of Professional Surveyor

Ronald J. Eidson 5/16/00
00-11-0571

Certificate No. RONALD J. EIDSON 3239
GARY L. EIDSON 12641
JASON L. McDONALD 12185

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 19 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 990' FNL & 1650' FEL

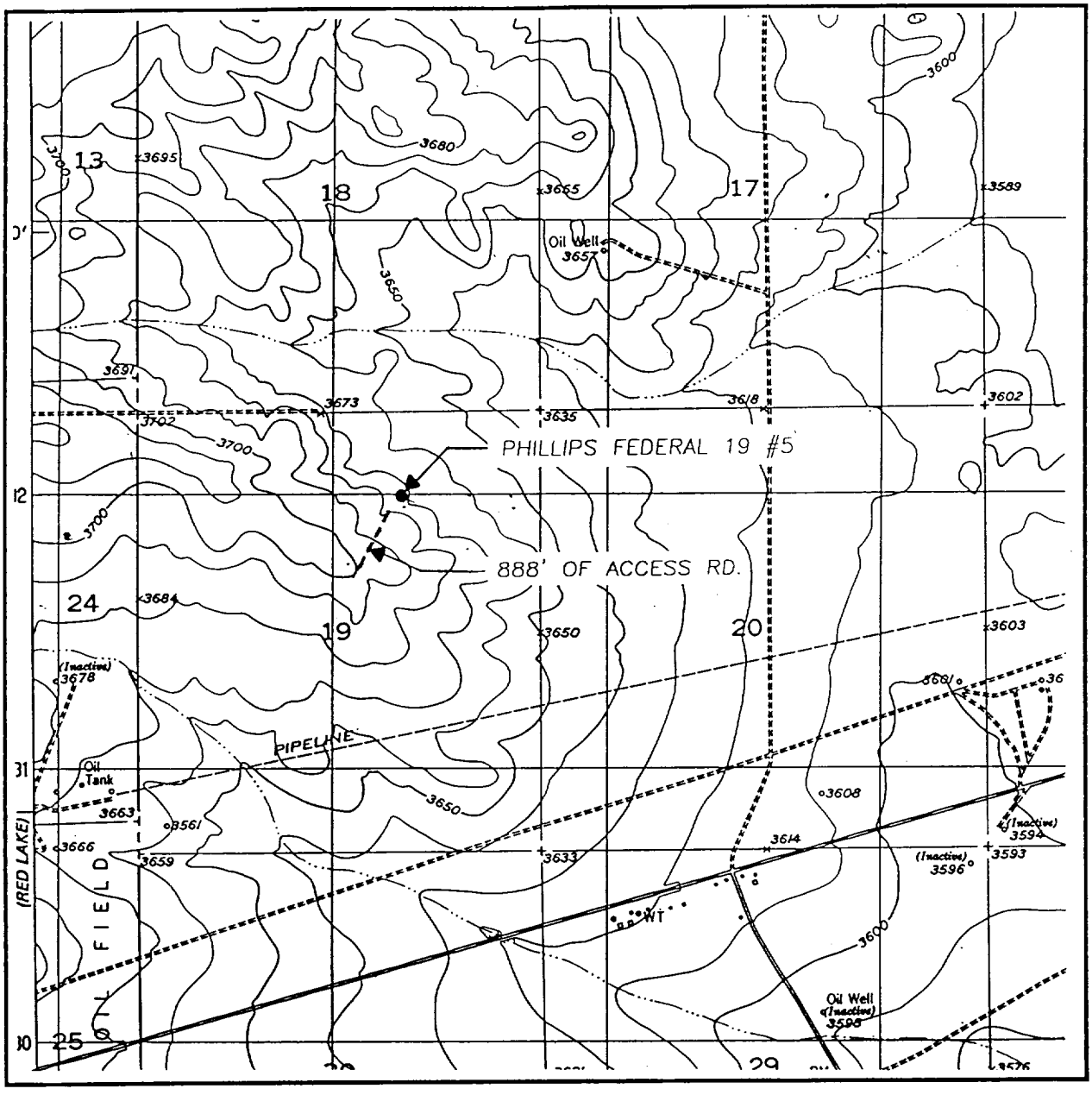
ELEVATION 3671

OPERATOR PHILLIPS PETROLEUM COMPANY

LEASE PHILLIPS FEDERAL 19

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505 393-3117

LOCATION VERIFICATION MAP



NORTH

SCALE: 1" = 2000'

CONTOUR INTERVAL:
RED LAKE SE - 10'

SEC. 19 TWP. 17-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 990' FNL & 1650' FEL

ELEVATION 3671

OPERATOR PHILLIPS PETROLEUM COMPANY

LEASE PHILLIPS FEDERAL 19

U.S.G.S. TOPOGRAPHIC MAP
RED LAKE SE, N.M.

JOHN WEST SURVEYING
HOBBS, NEW MEXICO
(505 393-3117

PHILLIPS PETROLEUM COMPANY
DRILLING PROGRAM

Attached to BLM Form 3160-3

Lease Name: Phillips –19- Federal
Well No.: 5
Location: 990' FNL & 1650' FEL
Sec. 19, T-17-S, R-29-E
Eddy Co., NM

1. Geological name of surface location: Triassic

2. Estimated tops of important geological markers:

Name	Depth
Yates	850'
Seven Rivers	1130'
Queen	1715'
Grayburg	2100'
San Andres	2384'
Glorieta	3840'

3. Estimated depths of anticipated fresh water, oil, and gas:

Formation	Depth	Fresh Water/Oil/Gas
Seven Rivers	1130'	Oil
Queen	1715'	Oil
Grayburg	2100'	Oil
San Andres	2385'	Oil
Glorieta	3840'	Oil

4. CASING PROGRAM

Hole Size	Interval	OD Csg.	Weight, Grade, Type
12-1/4"	450'	8-5/8"	24#, J-55, ST&C
7-7/8"	5000'	5-1/2"	17#, J-55, LT&C

CEMENT PROGRAM

Conductor Casing: N/A

8-5/8" Surface Casing:
300 SX Cl "C" + 2% CaCl2 + ¼#/sx Flocele

5-1/2" Production Casing:
Stage tool @ +/- 2600'. 1st stage 470 sx Ultralite "C" + 5#/sx Kolite + .35% D-65 + .35% D-156 + 2% D-46

2nd Stage:

Lead 560 sx 35/65 POZ "C" + 6% D-20 + 2% CaCl + ¼#/sx cello flakes,
Tail w/170 sx Class "C" Neat Circulate to Surface.

5. Minimum Specifications for Pressure Control:

The blowout preventer equipmetn (BOP) schematic attached will consist of a double ram-type (3000 psi WP) preventer and/or a bag-type (hydril) preventer (3000 psi WP). BOP will be hydraulically operated and the ram-type preventer will be equipped with blind rams and appropriate pipe rams. The BOP will be nippled up on the surface casing and used continuously until TD is reached. All BOP's and accessory equipment will be tested to 1000 psi before drilling out of surface casing. Before drilling out of intermediate casing, the ram-type BOP and accessory equipment will be tested to 3000 psi and the hydril to 50% of rated working pressure (1500 psi). 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 tour sheets. A "2" kill line and 3" choke line will be attached to a drilling spool or BOP side outlets. Other accessories to the BOP equipment will include a kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold with 3000 psi WP rating.

6. Types & Characteristics of the Propsed Mud System:

The well will be drilled to TD with a combination of Fresh Water Gel/Brine System.

The applicable depths and properties of this system are as follows:

Depth	Type	Weight (ppg)	Viscosity (sec)	Waterloss (cc)
500'	FW Gel	8.6-9.0	34-45	N/C
5000'	Brine	9.8-10.1	28-30	N/C

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 full opening drill pipe stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

C. The drilling fluids system will be visually monitored at all times.

D. A mudlogging unit will be continuously monitoring drilling penetration rate and hydrocarbon shows from surface casing to T.D.

E. A fixed electronic H2S monitoring system, including alarms with monitors at the shaker and the bell nipple, will be in operation from surface to TD.

8. Logging, Testing, & Coring Program:

A. Drill stem tests: None anticipated

B. Electronic logging program: DSN, MSFL, DLL, FMI (optional)

C. Coring: None

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

Possible sulfur water flow in the Queen/Grayburg intervals.

10. Anticipated Starting Date & Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. The anticipated spud date is upon approval of APD. Once commenced, the drilling operations should be finished within approximately 10 days. If the well is productive, an additional 10 days will be required for completion and testing.

PHILLIPS PETROLEUM COMPAN

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

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 (H_2S).

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

3. The proper use of H_2S 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 H_2S 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 H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) 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.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

NOTE: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. Well Control Equipment:

   A. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   B. Auxiliary equipment to include: annular preventer and rotating head.

2. Protective Equipment for Essential Personnel:

   Five - 30-minute self-contained breathing apparatuses (Scott).

3. H_2S Detection and Monitoring Equipment:

   A. Fixed electronic monitoring system and alarms with two monitors: one at shaker and one at bell nipple.

4. Visual Warning Systems:

   A. Two windsocks with frames and extension poles.

   B. One entrance sign with flags (with "CAUTION" and present well condition).

   C. Two briefing area signs.

5. Mud Program:

   A. The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

6. Metallurgy:

   A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

7. Communication:

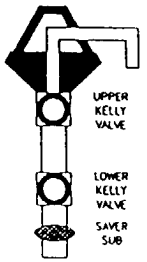
   A. Radio communications in Company vehicles, including cellular telephone and 2-way radio.

   B. Land line (telephone) communications at field office.

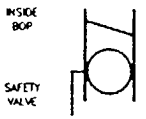
8. Well Testing:

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H_2S environment will use the closed chamber method of testing.

DRILLSTRING CONTROL DEVICES

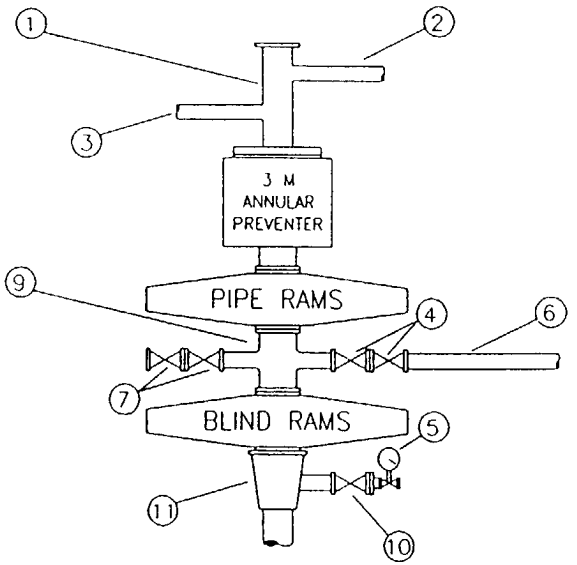


ON DRILL FLOOR



FULL OPENING

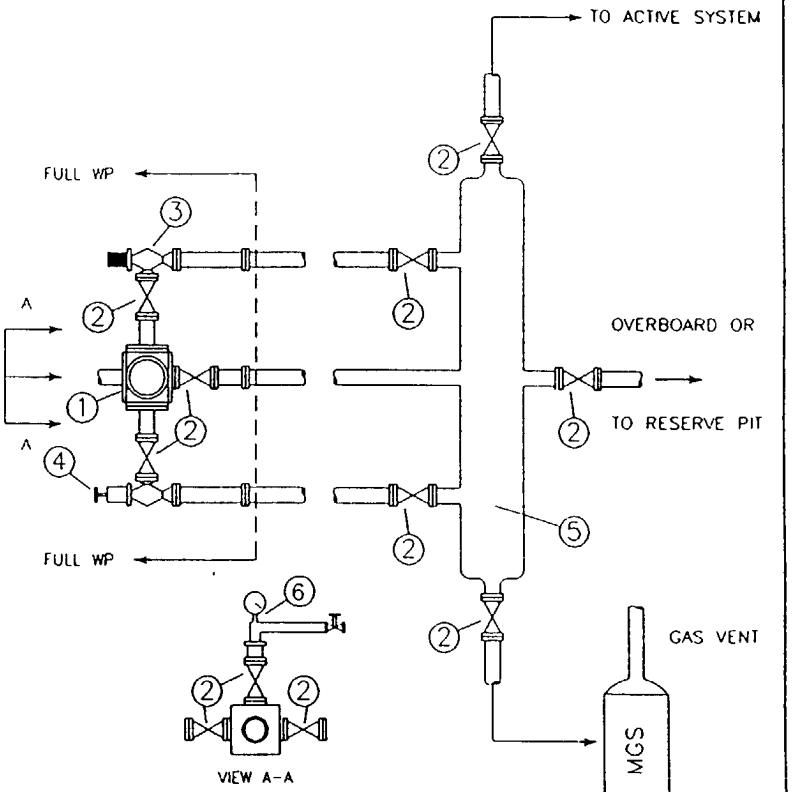
BOP STACK



1 BELL NIPPLE
2 FLOW LINE
3 FILL-UP LINE
4 3" FE PRESSURE-OPERATED CHOKE LINE VALVE
5 PRESSURE GAUGE
6 3" CHOKE LINE TO CHOKE MANIFOLD
7 3" FE GATE OR PLUG VALVES
8 2" KILL LINE
9 DRILLING SPOOL
10 2" SE OR FE GATE VALVE WITH NEEDLE VALVE
11 CASING HEAD HOUSING

CHOKE MANIFOLD

DISCHARGE MANIFOLD OPTIONAL FOR LAND RIGS

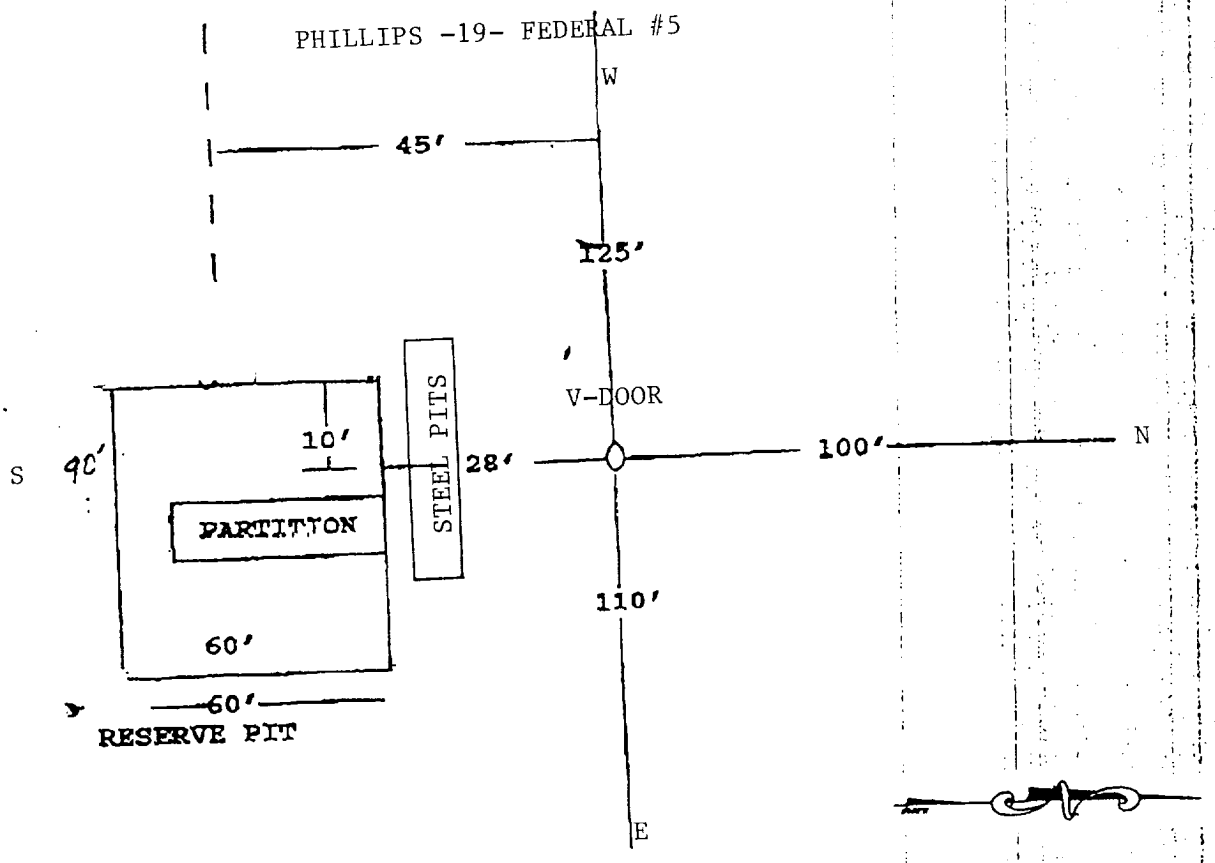


1 CROSS
2 GATE OR PLUG VALVE
3 CHOKE (ADJUSTABLE ONLY)
4 MANUAL ADJUSTABLE CHOKE
5 BUFFER CHANBER/DISCHARGE MANIFOLD
6 NEEDLE VALVE AND PRESSURE GAUGE

Fig. 2.4. Class 2 BOP and Choke Manifold

DRLCTRL.DWG\LWS-7/11/97

KEY ENERGY DRILLING
RIG LOCATION LAYOUT



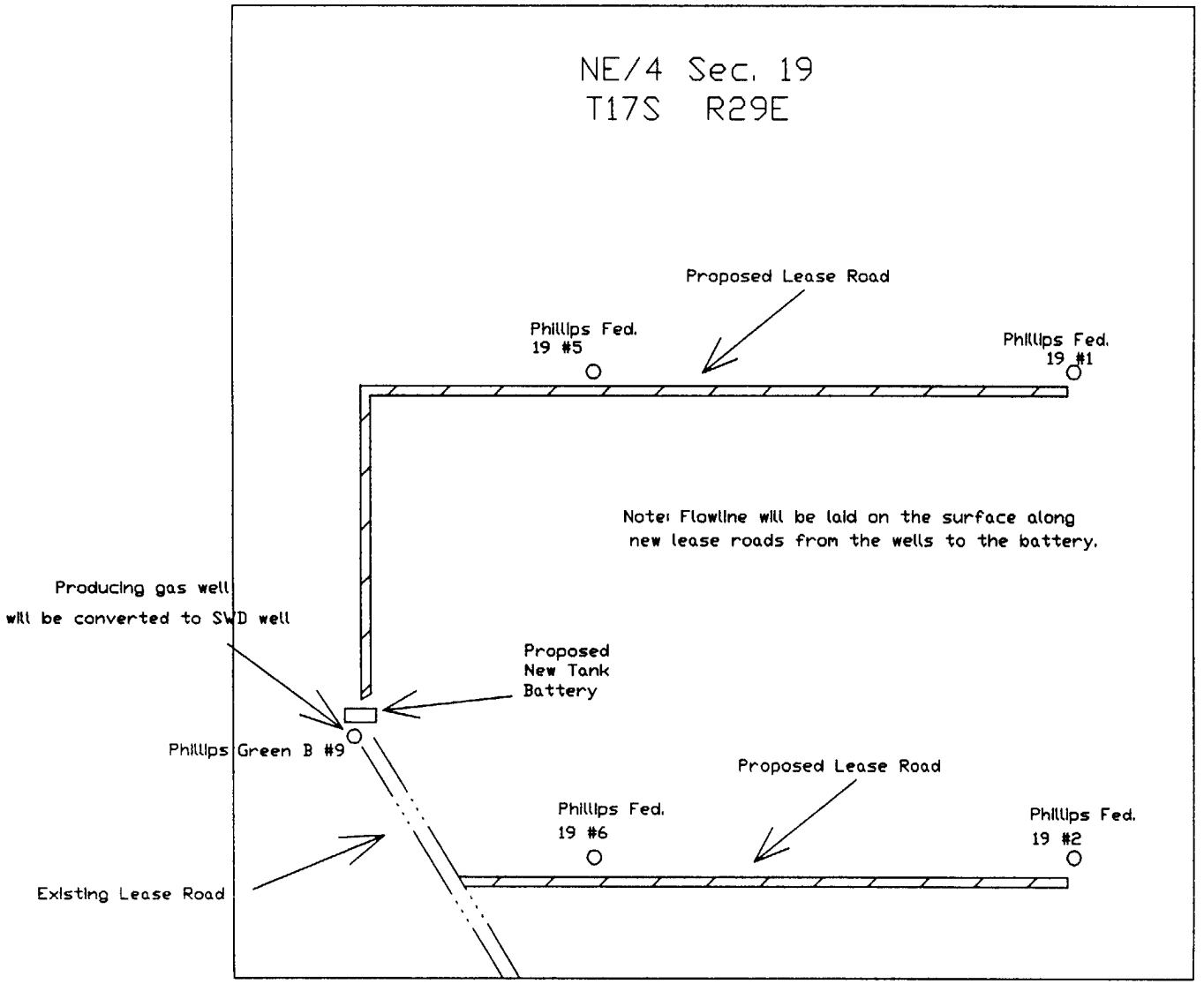
STEEL PITS - Key Energy Drilling steel pits sit flat on the ground. Do not dig down any for our pits.

RESERVE PIT - The reserve pit is usually 90 X 60 with a partition but the size and depth can be adjusted to the depth of the well or location restrictions.

PIPE RACKS - Key Energy Drilling needs 45 foot above the Reserve Pit for pipe racks.

SUMP PIT - Should be set 10 foot back from the front of the reserve pit (not even with the front).

OPTION Pits to East



NO.	REVISION	BY / CHECKED	DATE / APP'D

BLOCK VALVE CLOSED	BLOCK VALVE OPEN	FOR BIDS	
CENTRIFUGAL PUMP	DUMP VALVE	FOR APPR	
CHECK VALVE	BULL PLUG	FOR CONST	
PRESSURE CONTROL VALVE	SWEDGE	UPDATED BY: DGU	
PRESSURE MOTOR VALVE	METER	DRAWN DATE	05/22/00
PRESSURE SAFETY VALVE	SC = SEALED CLOSED	CHECKED	
		APP'D	

PHILLIPS PETROLEUM COMPANY
BARTLESVILLE, OKLAHOMA

LEASE NAME: Phillips Fed. 19
Eddy Co. New Mexico

Proposed Line & Road Diagram

JA NO.	FILE CODE
AFE NO.	SCALE NO
FILE NAME: Fed 19 Line	
DWG NO. 1	

C-ORIGINAL

FORM 2401

PHILLIPS PETROLEUM COMPANY
SURFACE USE PLAN

Attached to Form 3160-3
Lease Name: Phillips -19- Federal
Well No.: #5
Location: 990' FNL & 1650' FEL
Sec. 19, T-17-S, R-29-E

1. **Existing Roads:**

   A. The well site and elevation for the proposed well are shown on the attached plat.

   B. Existing roads are indicated on attached map. Existing roads are adequate for travel during drilling and production operations. Upgrading of the road prior to drilling well will be done when necessary as determined during the onsite inspection.

   C. Directions to location: On Hwy. 82 approximately 6 miles West of Loco Hills, NM, turn North ½ mile on Old Loco Hills Rd., then 1 mile West.

   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 Roads:**

   Attached map indicates the proposed new access road to be constructed. The road will be constructed as follows:

   A. The maximum width of the running surface will be 20'. The road will be crowned and ditched and constructed of 6" rolled and compacted caliche. Ditches will be 3.1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. BLM may specify any additions or changes during the onsite inspection.

   B. The average grade will be less than 1%.

   C. No turnouts are planned.

   D. Culverts, cattle guards, low-water crossings, fence cuts:

   E. Surface material will consist of native caliche. Caliche will be obtained from nearest BLM approved pit. Any additional materials required will be purchased from the dirt contractor.

   F. The proposed access road will be centerline flagged.

3. **Location of Existing Wells:** No existing wells on this lease.

4. **Location of Existing and/or Proposed Facilities:**

   A. **Tank Battery:** To be located at the Phillips Green B #9 location.

   B. **Flowlines:** See attached Property Line & Road Diagram

5. **Location and Type of Water Supply:** To be hauled by contract trucking company

6. **Source of Construction Materials:**

All caliche required for construction of the drill pad and the proposed new access road will be obtained from a BLM approved caliche pit.

7. **Methods of Handling Waste Disposal:**

A. Drill cuttings not retained for evaluation purposes will be disposed of into the reserve pit.

B. Drilling fluids will be contained in steel mud tanks. 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 60'X90'X10' deep and fences 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 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 or steel tank. After the well is permanently placed on production, produced water will be collected in tanks until hauled by transport to an approved disposal system or separate disposal application will be submitted for appropriate approval. 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.

E. Garbage and trash produced during drilling and completion will be put in trash trailer. If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. All waste material will be contained to prevent scattering by the wind. No toxic waste or hazardous chemicals will be produced by this 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 netted and kept closed until it has dried. When the reserve pit it dry enough to break out and fill and, as weather permits, the unused portion of the well site will be leveled and re-seeded as per BLM specifications. Only the part of the pad required for production will be kept in use. In the event of a dry hole, only a dry hole marker will remain.

8. **Ancillary Facilities:**

No airstrip, campsite, or other facilities will be built as a result of the operations of this well.

9. **Well Site Layout:**

A. **Drill pad:** Per attached plat.

B. Attached plat shows planned orientation for the rig and associated drilling equipment, reserve pit, pipe racks, turnaround and 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 a high-quality plastic sheeting.

10. **Plans for Restoration of the Surface:**

A. Upon completion of the proposed operations, if the well is to be abandoned, the caliche will be removed from the location and road and returned to the pit from which it was taken. The pit area, after allowing to dry; will be

broken out and leveled. The original topsoil will be returned to the entire location, which will be leveled and contoured to as nearly to the original topography as possible.

All trash, garbage, and pit lining will be buried or 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 re-vegetated by re-seeding 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 and netted to prevent livestock or wildlife from being entrapped.

The fencing and netting 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. The entire reserve pit will be netted until the fluid has completely evaporated.

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. Topsoil removed from the drill site will be used to re-contour the pit area; any uncased portions of the drill pad to the original natural level and re-seeded as per BLM specifications.

11. Surface Ownership:

The wellsite and lease is located entirely on Federal surface.

12. Other Information:

A. **Terrain:** See Archaeological Report
B. **Soil:** See Archaeological Report
C. **Vegetation:** See Archaeological Report
D. **Surface Use:** See Archaeological Report
E. **Ponds and Streams:** None
F. **Water Wells:** None
G. **Residences and Buildings:** None
H. **Arroyos, Canyons, Etc.:** None
I. **Well Sign:** To be installed at the wellsite
J. **Archaeological Resources:** None reported. Reference archaeological report.

13. Lessee's and Operator's Representative:

The Phillips Petroleum Company representatives responsible for assuring compliance with the Surface Use Plan are:

Louis Robinson
4001 Penbrook St.
Odessa, TX 79762
(915) 368-1556

or

J. B. Morgan
4001 Penbrook St.
Odessa, TX 79762
(915) 368-1262

14. **Certification:**

I hereby certify that I, or persons under my direct supervision, have inspected the 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 Phillips Petroleum Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Cuesta A Due for: L. M. S.

L. M. Sanders
Supervisor, Regulation/Proration
June 12, 2000