Form 3160-5
(December 1989)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires September 10, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT--" for such proposals

SUBMIT IN TRIPLICATE

RECEIVED
DEC -7 1992
OIL CON. DIV.
DIST. 3

5. LEASE DESIGNATION AND SERIAL NO.
SF 078510

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. IF UNIT OR CA, AGREEMENT DESIGNATION

1. TYPE OF WELL ☐ OIL WELL ☒ GAS WELL ☐ OTHER

8. WELL NAME AND NO.
Blanco #2

2. NAME OF OPERATOR
ARCO Oil & Gas Company

9. API WELL NO.
30-045-27523

3. ADDRESS AND TELEPHONE NO.
P.O. Box 1610, Midland, TX 79702 (915) 688-5672

10. FIELD AND POOL, OR EXPLORATORY AREA
Basin Fruitland Coal

4. LOCATION OF WELL (Footage, Sec., T., R., M., or Survey Description)
1095' FNL & 1740' FEL (Unit Letter H)
Section 5-T31N-R8W

11. COUNTY OR PARISH, STATE
San Juan County, NM

12. **CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ NOTICE OF INTENT	☐ ABANDONMENT	☐ CHANGE OF PLANS
☐ SUBSEQUENT REPORT	☐ RECOMPLETION	☐ NEW CONSTRUCTION
☐ FINAL ABANDONMENT NOTICE	☒ PLUGGING BACK	☐ NON-ROUTINE FRACTURING
	☐ CASING REPAIR	☐ WATER SHUT-OFF
	☐ ALTERING CASING	☐ CONVERSION TO INJECTION
	☒ Other Side Track and Open hole complete	

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to set a CIBP at +/-3200', then set a whip-stock assembly at +/-3190', mill a window in the existing 5-1/2" casing and vertically side-track the Fruitland Coal Seams and complete the well open hole using "surge" techniques. Utilizing this side-track method the new wellbore BHL should be within 20'-25' of the existing wellbore.

To perform this work it will be necessary to reopen the old reserve pit and build a blooie line burn pit. Prior to commencing this work a dike will be placed around the old reserve pit and a roustabout crew will be on hand to prevent any old drilling fluids encountered from spilling onto offsite areas.

ARCO also requests that flaring and testing of the well be as authorized by NTL-4A IIIC under initial production tests with a period not exceeding 30 days or the production of 50 MMCF of gas whichever occurs first.

*See attached Drilling and Surface Use Plans for further information.

SEE ATTACHED FOR CONDITIONS OF APPROVAL

RECEIVED
BLM
92 NOV 20 AM 11:49
070 FARMINGTON, N.M.

14. I hereby certify that the foregoing is true and correct

SIGNED Kenny Gosnell TITLE Regulatory Coordinator DATE 11-18-92

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS FOR APPROVAL, IF ANY:

APPROVED
DEC 03 1992
/s/ Duane W. Spencer
AREA MANAGER

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.

* See Instructions on Reverse Side

NMOCD

DRILLING PLAN

Attach to BLM Form 3160-5
ARCO Oil and Gas Company
Well: Blanco #2
Section 5-T31N-R8W
1095' FNL & 1740' FEL
San Juan County, New Mexico

1. **Estimated Tops of Geological Markers**

Ojo Alamo	2010'
Kirtland	2075'
Fruitland	3080'

2. **Estimated Tops of Possible Water, Oil, Gas or Minerals:**

Sands above	2075'-Water
Fruitland	3080'-Gas

3. **Minimum Specifications for Pressure Control**

Interval (TVD)	Pressure Control Equipment
3190'-3430'	2 - 7 1/16" double ram preventers and stripping head (Exhibit 1 & 2).

Shown in Exhibits #1-3 are the BOP stack arrangements, choke manifold arrangements and the BOP specifications, respectively. This BOP stack conforms to API RP-53 (Figure 2.C.2) for a 2000 psi system. Maximum anticipated Fruitland pore pressure is 1500 psi. All ram type preventers and related control equipment will be hydraulically tested at nipple-up, after any use under pressure, and every 30 days, to 2000 psi. In addition, the blind ram will be operationally checked each time pipe is pulled out of the hole. All checks of BOPE will be noted on Daily Drilling Reports. Accessories to BOP equipment will include a kelly cock, floor safety valve, and choke manifold with pressure rating equivalent to the BOP stack.

4. **Existing Casing**

	Hole Size	Interval	Casing Size	Weight & Grade
Surface	12-1/4"	0-502'	8-5/8"	24.0# K-55
Production	7-7/8"	0-3547'	5-1/2"	15.5# K-55

Surface Casing cemented to surface with 325 sx (384 ft^3) of Cl "B" containing 2% $CaCl_2$.
Production casing cemented to surface with 550 sx (990 ft^3) 65/35/6 Cl "B"/Poz/Gel w/ 1/4# CF lead and 200 sx (236 ft^3) Cl "B" neat tail.

5. **Type and Characteristics of Proposed Drilling Fluids**

Depth (TVD)	Mud Type	Weight ppg	Funnel Viscosity
3190-3430'	Water/Air	7.5-8.4	28

7. **Testing, Coring and Logging Program**

A. Drill Stem Testing - None Anticipated

B. Coring - None Anticipated

C. Logging-

Open Hole	Cased Hole
Mud Logger from KOP to TD.	None Anticipated

D. The well is planned to be completed Open-Hole style. The Fruitland will be drilled out through the main coal seam utilizing water as the drill fluid. Should wellbore stability be a problem, a 4" slotted liner will be run to TD with 50' overlap across the 5-1/2" casing. The liner will not be cemented.

8. **Anticipated Abnormal Temperature, Pressure, or Hazards**

The maximum anticipated Fruitland pore pressure is 1500 psi. The Fruitland will be drilled out under balanced approximately 100 psi. A completion rig will be utilized for this operation using the BOP equipment specified in Exhibit #1 & #2. There are no other abnormal pressures, temperatures or potential hazards in the area.

9. **Anticipated Starting Date and Duration of Operations**

Pending favorable weather and permit approval, construction work for this location is planned to begin in December 1992. Construction work will require 2 days, moving-in and rigging-up rotary tools, 1 day, drilling and completion, 19 days. It is planned to spud the well in December 1992.

Exhibit #1
BOP Stack Arrangement
Open-Hole Operations

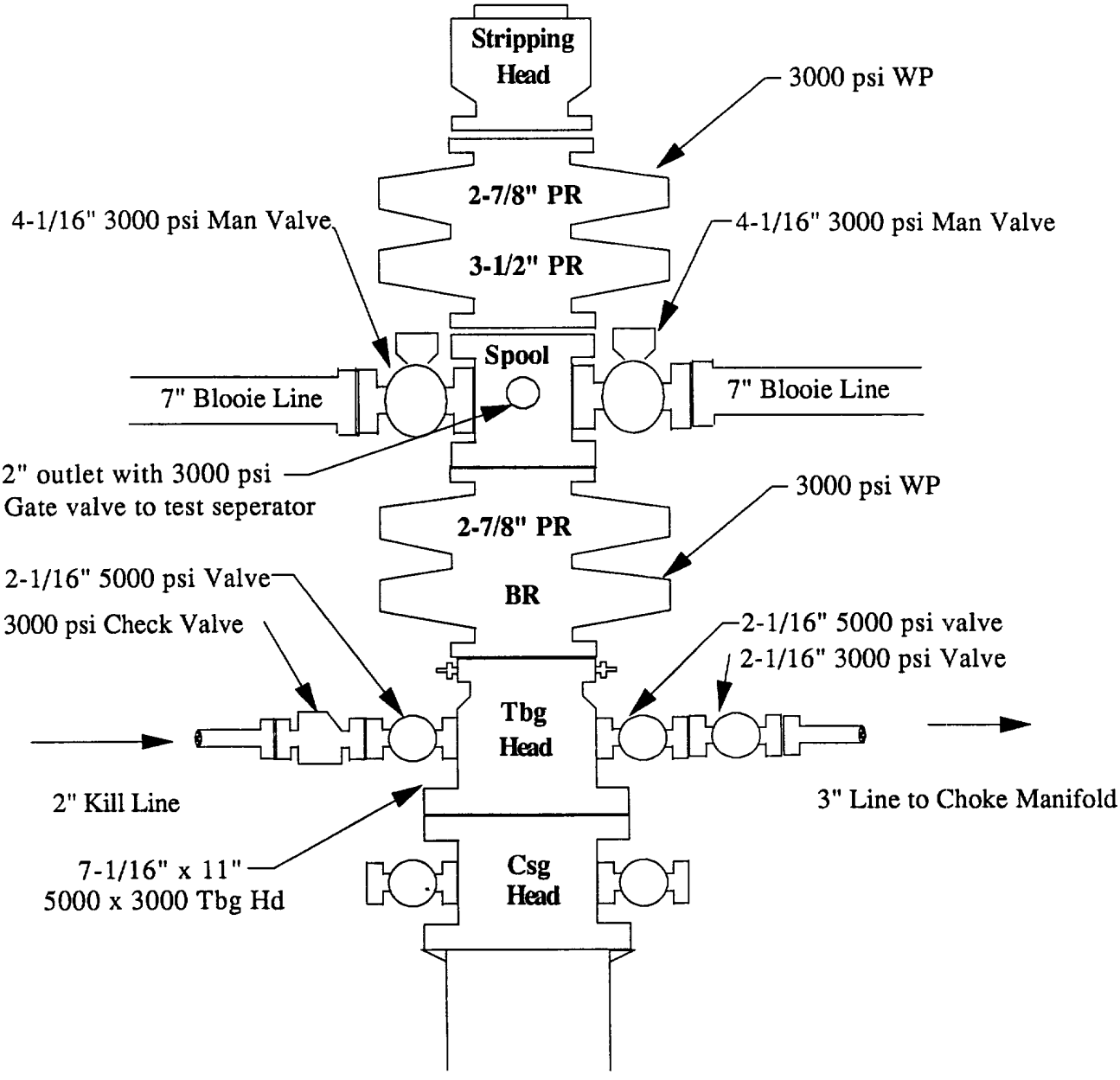
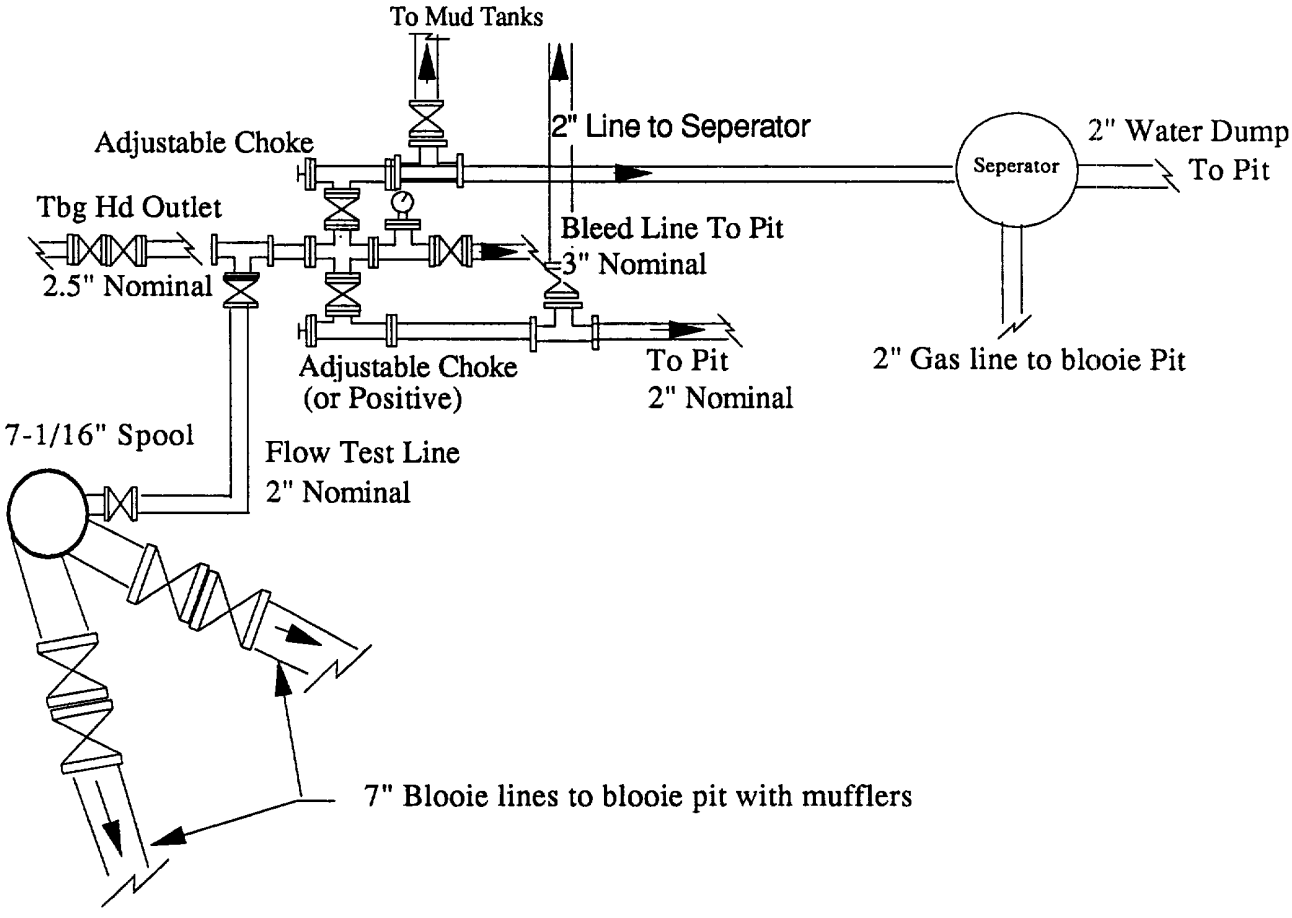


Exhibit #2
Choke Manifold & Accumulator Schematic



All manifold valves to be rated for 3000 psi WP

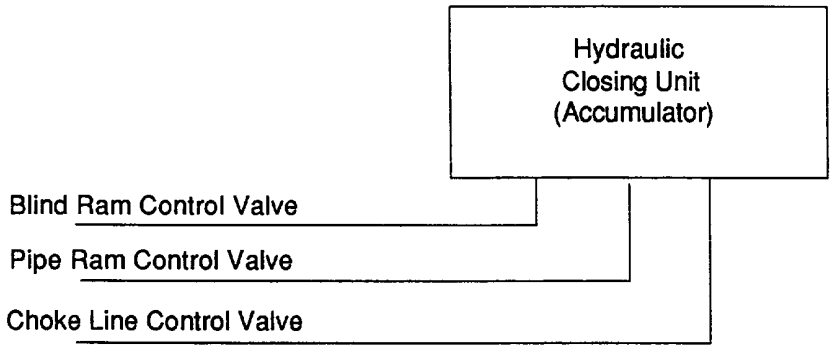


Exhibit #3

Blowout Prevention Equipment Specifications

1. All BOP equipment shall be fluid and/or mechanically operated.
2. BOP's and all fittings will be in good working condition.
3. Equipment through which the bit must pass shall be at least as large as the casing size being drilled
4. The nipple above the BOP shall be at least the same size as the last casing set.
5. The upper kelly cock with handle and lower kelly cock shall be rated at the BOP working pressure.
6. A floor safety valve (full opening) or drill string BOP with appropriate pressure ratings shall be available on the rig floor with connections or subs to fit any tool joint in the string.
7. The minimum size choke line shall be 3 inches nominal diameter, with a minimum size for vent lines downstream of chokes of 2 inches nominal, and vent lines which by-pass shall be a minimum of 3 inches nominal and as straight as possible.
8. All valves, fittings and lines between the closing unit and the blowout preventer stack should be of steel construction with rated working pressure at least equal to working pressure rating of the stack. Lines shall be bundled and protected from damage.
9. Minimum size for kill line is 2 inches nominal.
10. Ram type preventers shall be equipped with extension hand wheels or hydraulic locks.

5. **Location of Existing or Proposed Facilities**

A. Each of the ARCO Oil and Gas wells within a one mile radius of this location is equipped with a production unit for each producing formation. These units are located approximately 100 to 125 feet from the wellhead and are connected to the well with buried gas line(s). The gas gathering company connects at the production unit(s).

B. This well is currently a conventional Fruitland degasification completion. The existing facilities include a 4 tank (300 bbl each) battery with a small drain pit. The production unit is set on concrete piers and is connected to the wellhead with approximately 94' of 3 inch, schedule 40 buried gas line. The buried sales gas line consists of 2 inch, schedule 40. The drain pit included on the well pad is fenced for the protection of livestock and wildlife. Existing facilities will be removed prior to side-track drilling operations. Exhibit 6 shows the approximate layout of existing facilities.

C. Rehabilitation, whether the well is productive or dry, will be made on all unused areas in accordance with BLM stipulations.

6. **Location and Type of Water Supply**

A. The nearest water supply is the Los Pinos River, approximately 4 miles west of this location.

B. All water will be hauled by trucks along the same access road shown in Exhibit 4a.

C. No water wells will be drilled.

D. Reserve pit water may be hauled from select wells for drilling fluid use. The BLM will be notified prior to each occurrence.

7. **Construction Materials**

No materials will be required.

8. **Methods of Handling Waste Disposal**

A. Drill Cuttings will be handled in the reserve pit and buried during reclamation operations. The pit will be fenced on three sides during drilling and the fourth side fenced upon removal of the drilling rig.

B. Garbage and nonflammable waste produced during the drilling or testing will be handled in a trash bin.

C. Toilet facilities will be provided for human waste.

D. Drilling fluids will be handled in the reserve pit.

E. Any fluids produced during drilling or production tests will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in the reserve pit. Any spills of oil, gas, salt water, or other noxious fluids will be cleaned-up and removed. If the well is productive, produced water will be disposed of on site for 90 days. After that time, application will be made for approval of permanent disposal methods.

9. **Ancillary Facilities**

No air strip, camp or other facilities will be built during drilling of this well. However, temporary living quarters for wellsite supervision may be required. No additional surface disturbance will be required.

10. **Wellsite Layout**

A. Original cuts and fill have been drafted to visualize the planned cut across the location and are shown in Exhibit 6.

B. Exhibit 7 is a plan diagram of the proposed rig and equipment, reserve pit, pipe racks and mud tanks. No permanent living facilities are planned.

C. The reserve pit will be lined with an 8-10 mil reinforced liner.

11. **Plans for Reclamation of the Surface**

A. If the well is abandoned, the site will be restored to original condition as much as possible. Before any earthwork to restore the location takes place, the reserve pit will be dry and all trash contained in the pit will be removed. Any dispersal of drilling fluids over the drill site pad will be subject to the approval of the BLM. All disturbed areas will be recontoured to blend as nearly as possible with the surrounding area. If the well is productive, the unused area will be restored as soon as possible.

B. Waste disposal and spoils material will be buried or hauled away immediately to an approved sanitary landfill after drilling is completed.

C. The stockpile of topsoil will be evenly distributed over the disturbed areas.

D. Revegetation will consist of planting mixed grasses as per formula provided by the BLM.

E. The rehabilitation operations will begin upon abandonment of the location, or as seasonal conditions warrant and as recommended by the surface management agency.

12. **Surface Ownership**

The wellsite is located on Federal lands.

13. **Additional Information**

A. Vegetation in this area consists primarily of the following:
Pinon trees, sagebrush, cedar trees, and prickly pear cactus.

B. The nearest dwellings are Abe's Store, Motel, and Boat Marina located approximately 8 miles South of this location.

C. The lands involved are Federal lands in an established gas field. The lands are primarily used for grazing. An archeological survey was conducted on September 1, 1989 and one archaeological site was encountered (Site DCA-89-425), this site is considered a Category I site and its research potential has been exhausted through field documentation. An archaeological report was submitted to the Bureau of Bureau of Land Management on September 22, 1989.

14. **Operator's Representatives**

R. A. Meize
ARCO Oil and Gas Company
P. O. Box 1610
Midland, TX 79702
(915) 688-5567

Certification

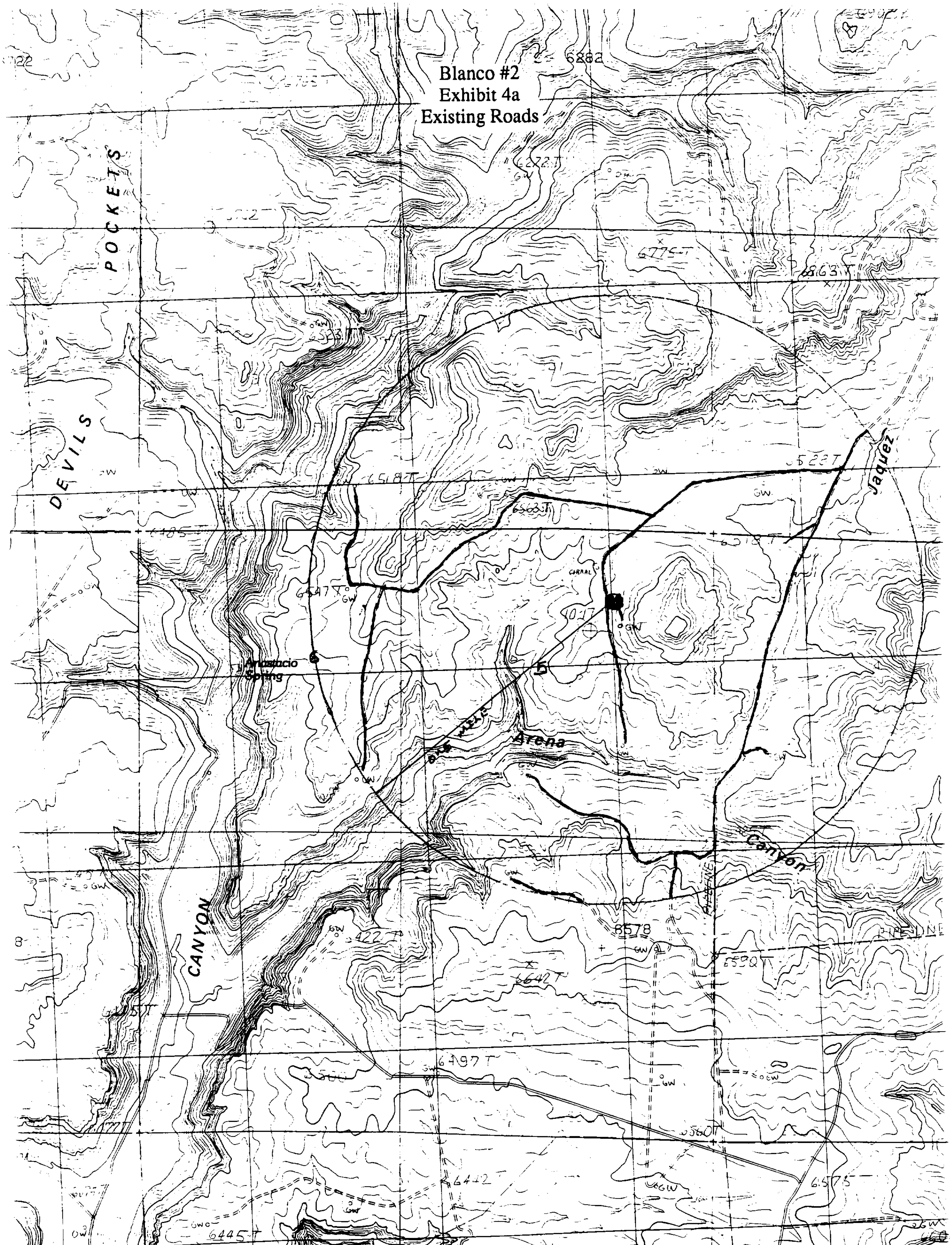
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by ARCO Oil and Gas Company and its contractors and subcontractors 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.

Robert A Meize — 11-17-92

R. A. Meize
Area Drilling Team Leader

Date

Blanco #2
Exhibit 4a
Existing Roads



Blanco #2
Exhibit 4b
Existing Wells

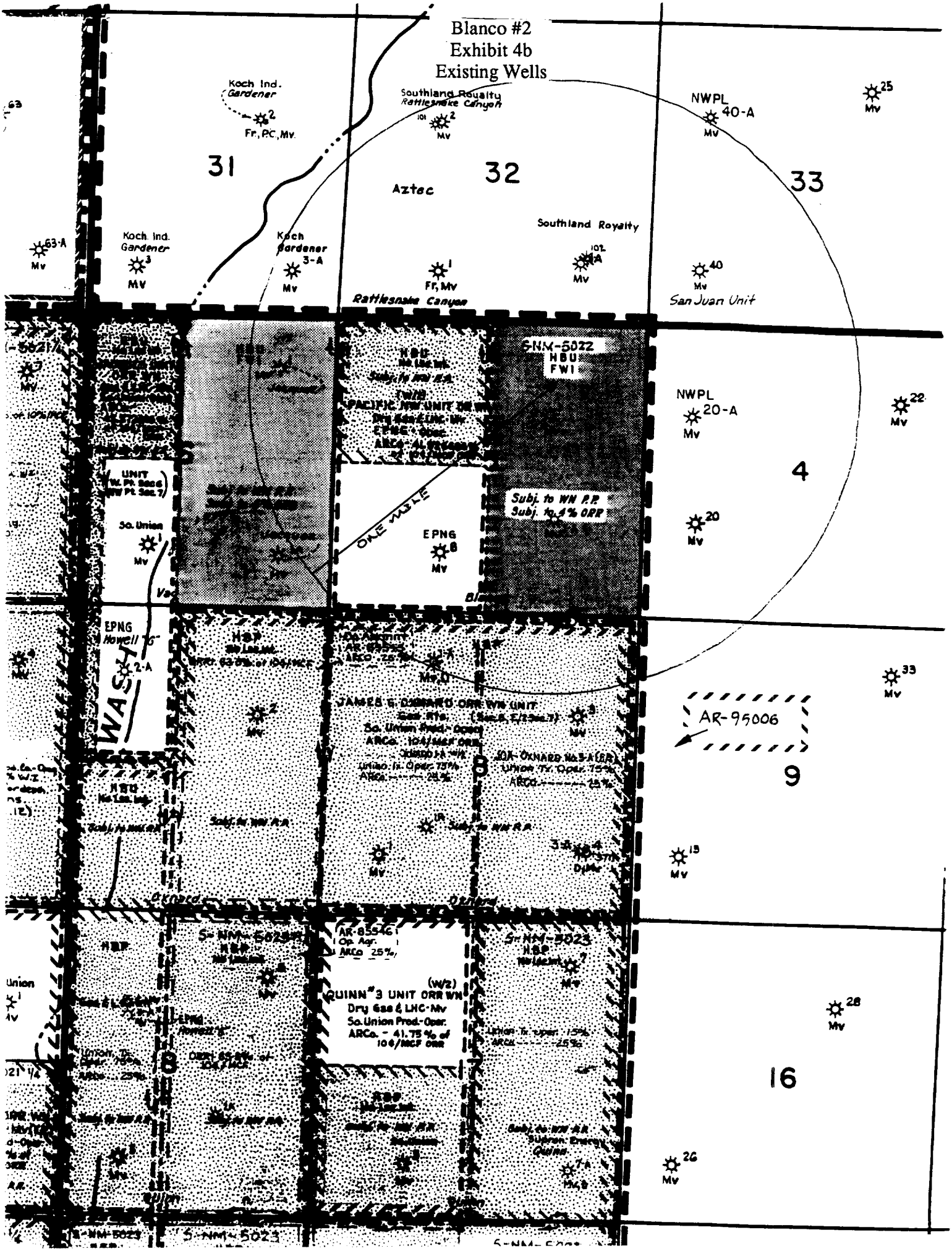


EXHIBIT #5
PROPOSED SURFACE FACILITIES

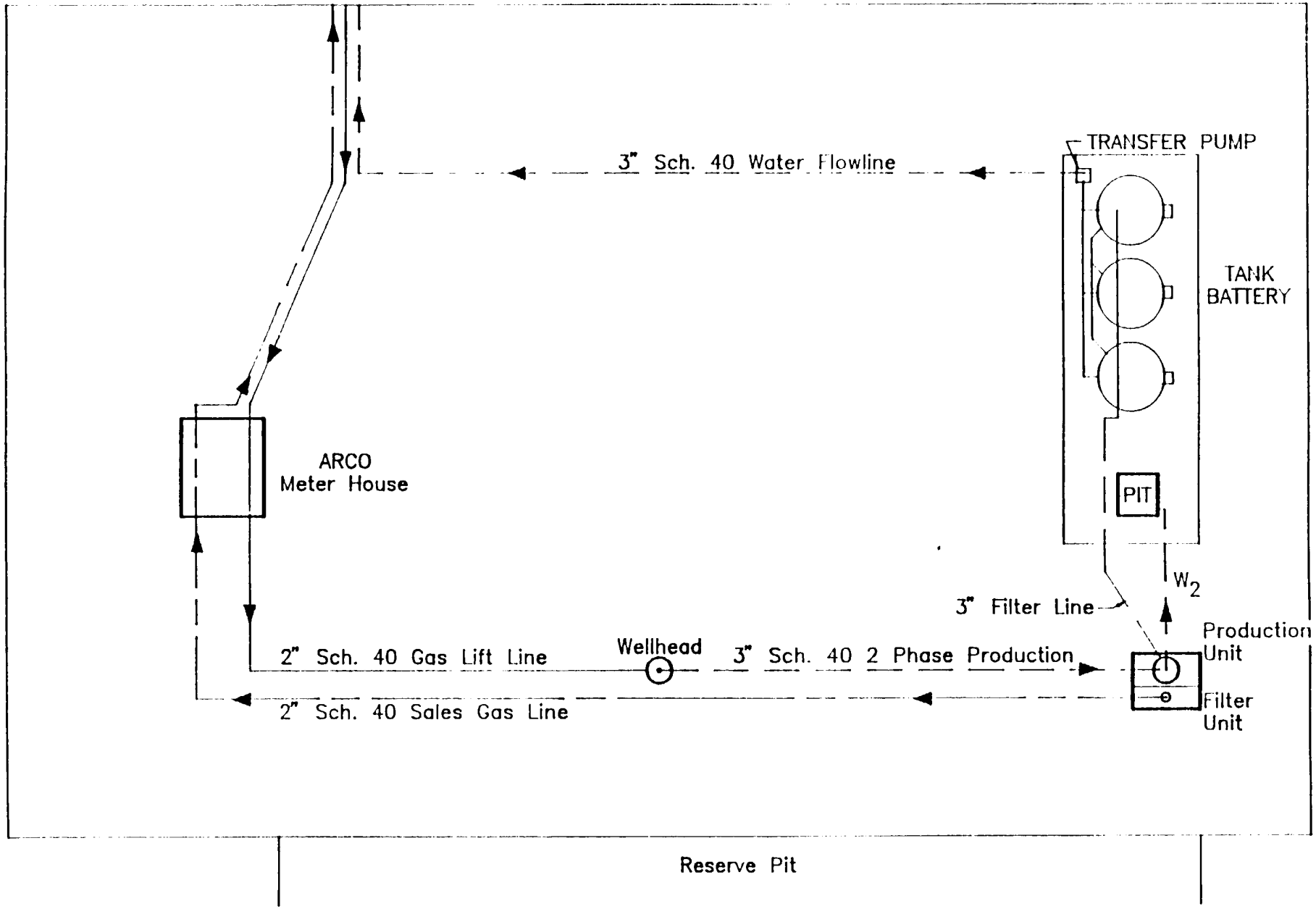
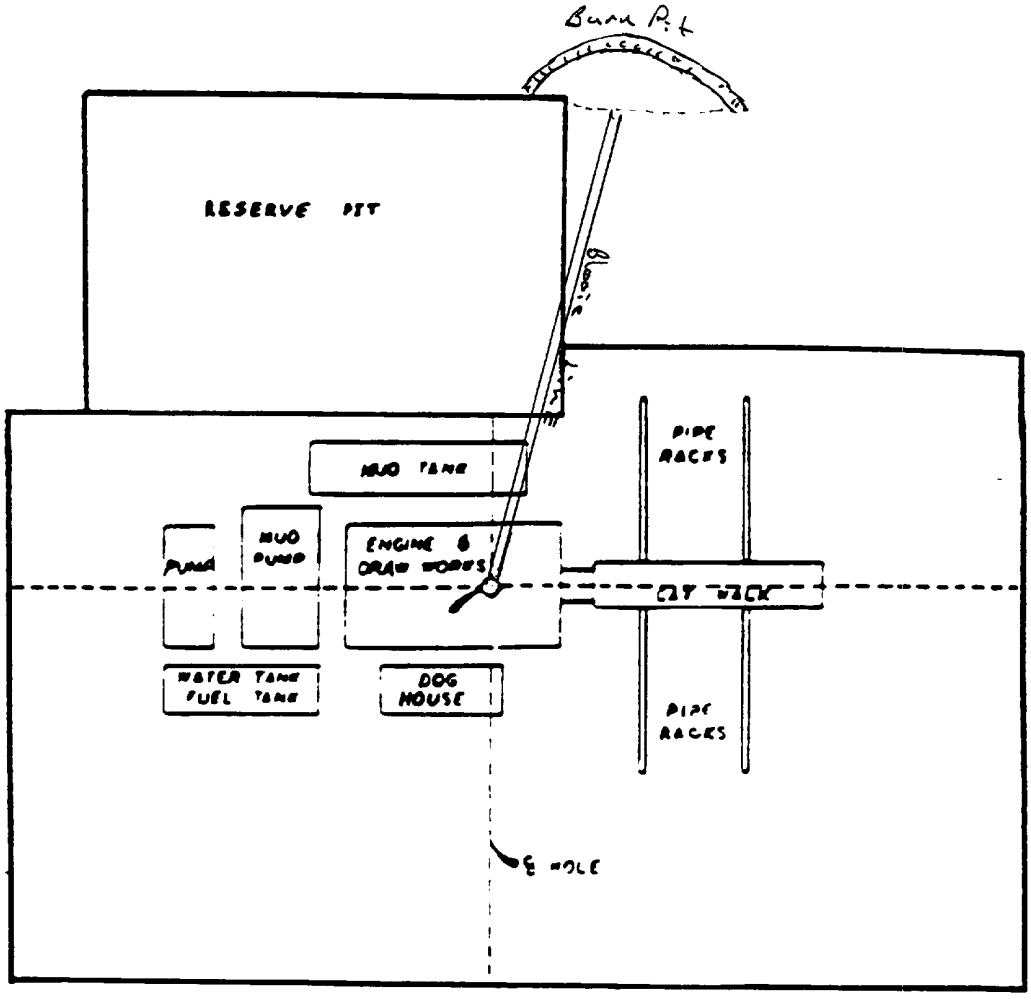


Exhibit #7
Proposed Rig Layout



Proposed Well Pad Blanco No. 2 (Figures 5 and 6)

Legal Description: T31N, R8W, Section 5, 1095' F/NL, 1740' F/EL
SE ¼ NW ¼ NE ¼
NE ¼ SW ¼ NE ¼
N.M.P.M., San Juan County, New Mexico

Map Source: U.S.G.S. 7.5' Anastacio Springs, New Mexico - 1985 provisional edition

Land Jurisdiction: Bureau of Land Management

Project Area: 380' x 365' (well pad with construction zone)

Surveyed Area: 580' x 565' (well pad and construction zone with buffer)
7.52 Acres

Description: The proposed project is located near the base of a prominent butte on top of Pump Mesa. Arena Canyon is located to the south of the project, Jaquez Canyon is to the east, Pump Canyon is across the mesa to the west, and Pump Mesa extends to the north. The proposed well pad is situated on a gentle west-facing slope of the mesa with a hillslope rising to the east of the pad, a low rise to the north, the slope dips to the west and south, and mesa rims and hills are visible to the west and north. Soils are primarily clay loams with some shales on the rise along the north side of the pad. A few sandstone fragments are scattered about and large boulders are present along the slopes to the east and north. Vegetation covers from 60 to 80% of the project area with dense sagebrush dominating the pad area and piñon pine and juniper on the surrounding hills and slopes. An understory of serviceberry, bitterbrush, gambel oak, a variety of perennials, and short grasses is also present. Ground level elevation is 6558 ft above sea level.

Access will be by means of an existing road which extends along the west and south boundaries of the project area.

Cultural Resources: One archaeological site, DCA-89-425, was encountered and recorded during survey of proposed well pad Blanco No. 2 (Figure 7). The site is located on the north side of the well pad and on the west-facing slopes of a prominent butte along the pad's eastern edge. The site is approximately 10 m north of the northwest well pad stake. Soils are red clay loams with sandstone outcrops and fragments found on the hillslopes. Vegetation covers approximately 70% of the area and is dominated by piñon pine, juniper, serviceberry, and sagebrush. Perennials and grasses are also present.

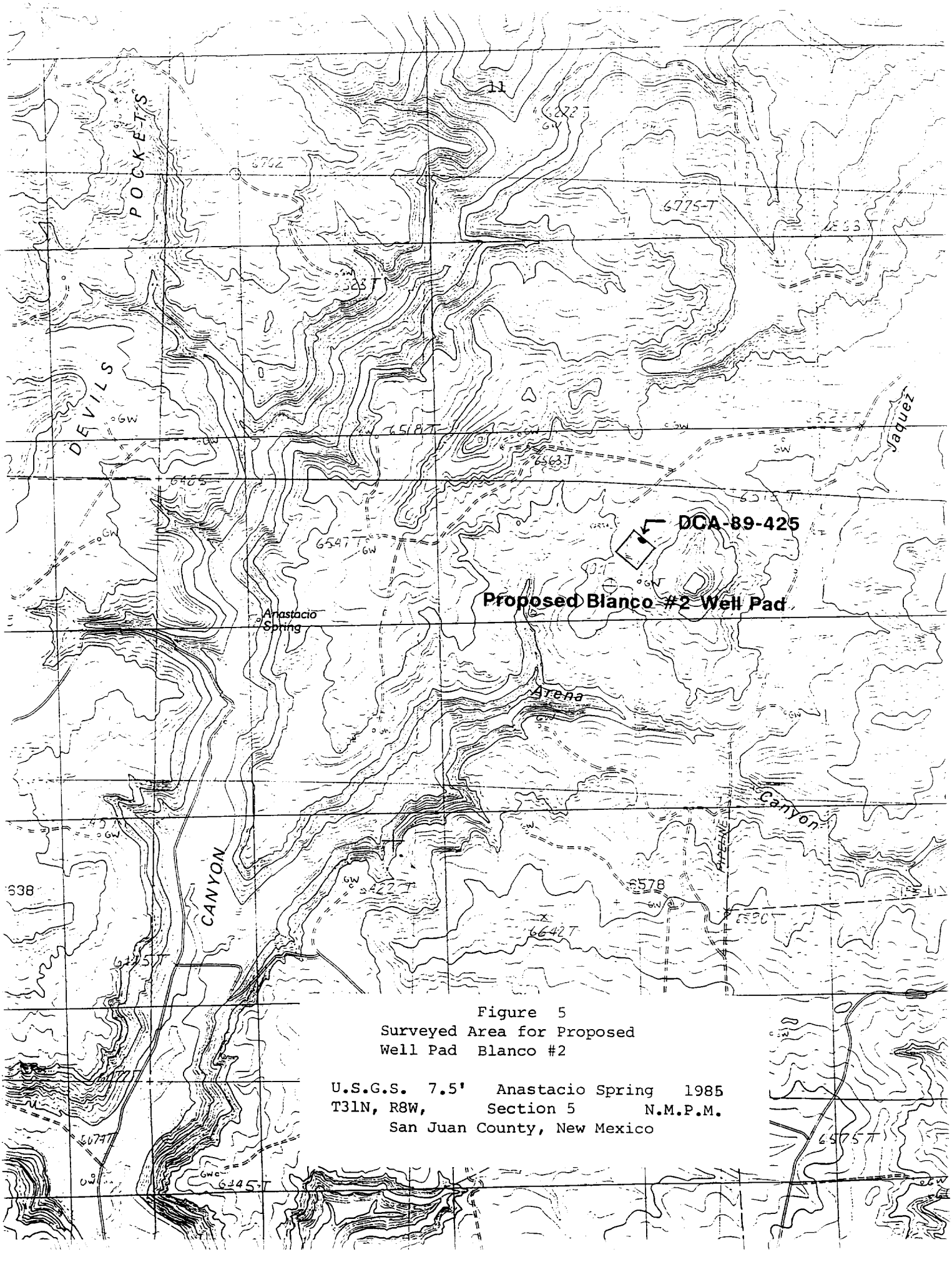


Figure 5
Surveyed Area for Proposed
Well Pad Blanco #2

U.S.G.S. 7.5' Anastacio Spring 1985
T31N, R8W, Section 5 N.M.P.M.
San Juan County, New Mexico

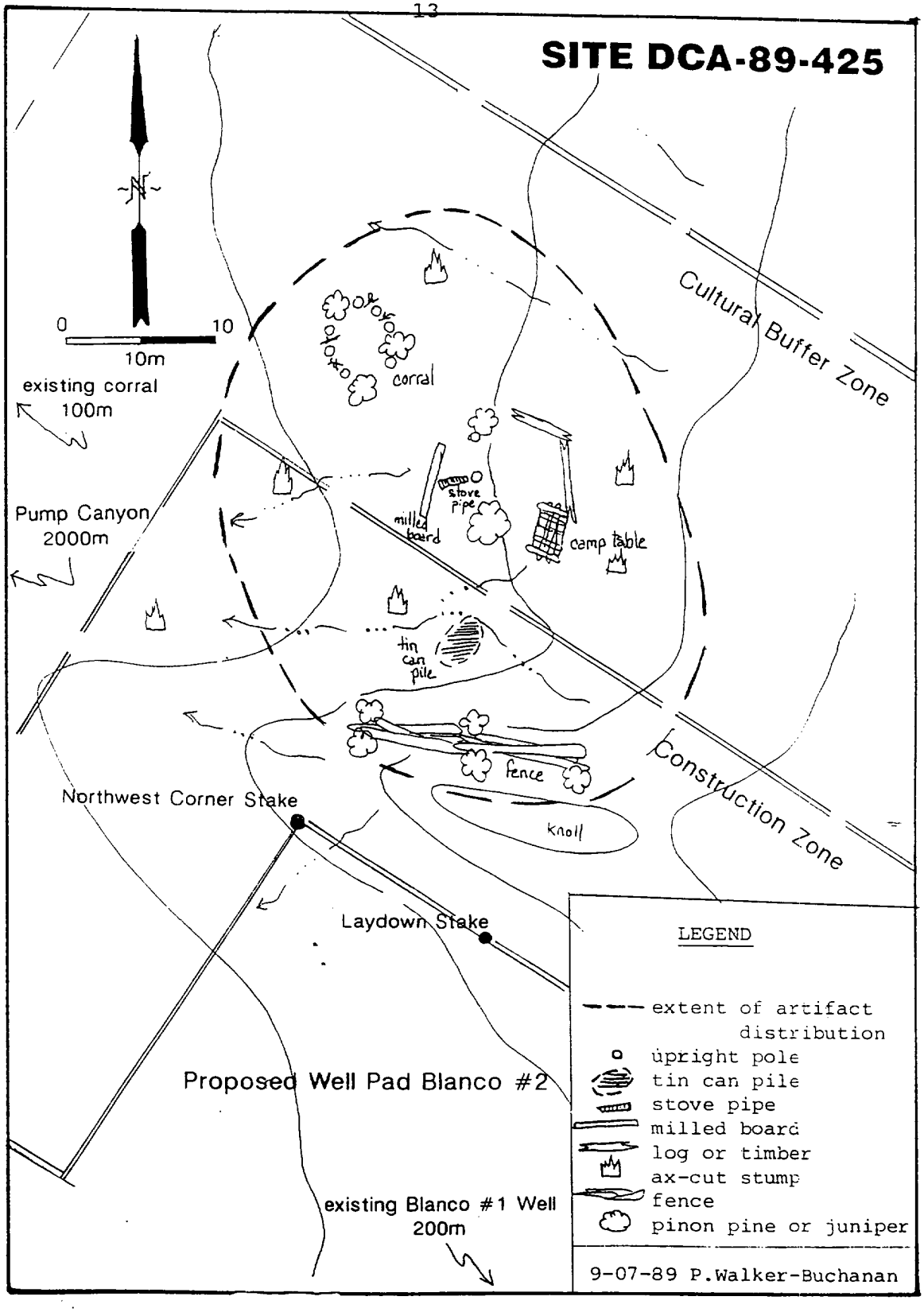

SITE DCA-89-425
0
10
10m
existing corral
100m
Pump Canyon
2000m
corral
Cultural Buffer Zone
stove pipe
milled board
camp table
tin can pile
fence
knoll
Construction Zone
Northwest Corner Stake
Laydown Stake
Proposed Well Pad Blanco #2
existing Blanco #1 Well
200m
LEGEND
extent of artifact distribution
upright pole
tin can pile
stove pipe
milled board
log or timber
ax-cut stump
fence
pinon pine or juniper
9-07-89 P.Walker-Buchanan

Figure 7

The site covers an area 28 x 15 m and consists of a historic camp with a corral, fence, cook table, tin can pile, a stove pipe fragment, and numerous axe- and saw-cut stumps. The site is possibly a sheepherders camp or woodcutting camp. The fence is located nearest to the well pad, approximately 10 m north of the northwest corner stake. The fence consists of two lengths, each constructed of three stacked logs (approximately 12 m in length) and held in place by two living trees, one on each side of the logs. The living trees take the place of staked posts as in the stake and rail type of fencing. The fence is about 25 m in total length and extends in a northwest/southeast direction along the base of a small rise. A tin can trash pile is located about 7 m north of the fence and consists of about 30 tin cans, most of which are condensed milk cans. One baking powder can is also present; although the brand name was not decipherable, the lithographed metal can came into use after World War II (Reher 1977:240). The tin cans have been opened by use of a church key and, therefore, date no earlier than 1935 (Moore and Winter 1980:118). A few pieces of broken clear glass are also present. The tin can pile is about 4 x 2.5 m. An outline of a floor foundation or a wall tent flooring is located about 5 m northeast of the tin can pile. The flooring is 6 x 5 m and consists of a rectangular outline of three vertical posts and a single juniper forming the west side; a decomposing horizontal log forming the north side; a horizontal log and a camp table made of cribbed logs, poles, and juniper bark forming the eastern edge; and the southern side is open. A stove pipe fragment, 60 x 16 cm, and a piece of milled timber are located 1 m outside the west floor edge. The timber is about 2.3 m high and 5 x 10 cm wide. Four round nails have been hammered into the timber. It may represent a wall tent support beam. A small corral enclosure is located 5 m west of the rectangular feature. The corral is made of vertical posts supplemented by brush and standing piñon and juniper trees. The corral is about 7 x 6 m and opens to the southeast. It is constructed in an ovate shape. Surrounding and throughout the site are numerous axe-cut stumps as well as stumps which were felled by a saw. The site may possibly be related to a historic corral which is located about 1000 ft to the northwest. Subsurface cultural deposits are unlikely; therefore, the site is considered eligible for a Category I classification.

Recommendations: Documentation has exhausted the research potential of the Category I site, DCA-89-425. Archaeological clearance is recommended for proposed well pad Blanco No. 2.

BLM CONDITIONS OF APPROVAL

Operator ARCO Oil & Gas Company Well Name 2 Blanco

Legal Location 1095'FNL/1740'FEL Sec. 5 T. 31 N. R. 8 W.

Lease Number SF-078510 Field Inspection Date n/a

The following stipulations will apply to this well unless a particular Surface Managing Agency (SMA) or private surface owner has supplied to BLM and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in the assessments or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity.

An agreement between operator and fee land owner will take precedence over BLM surface stipulations unless (In reference to 43 CFR Part 3160) 1) BLM determines that operator's actions will affect adjacent Federal or Indian surface, or 2) operator does not maintain well area and lease premises in a workmanlike manner with due regard for safety, conservation and appearance, or 3) no such agreement exists, or 4) in the event of well abandonment, minimal Federal restoration requirements will be required.

1. Pits will be fenced during workover operation.

2. All disturbance will be kept on existing pad.