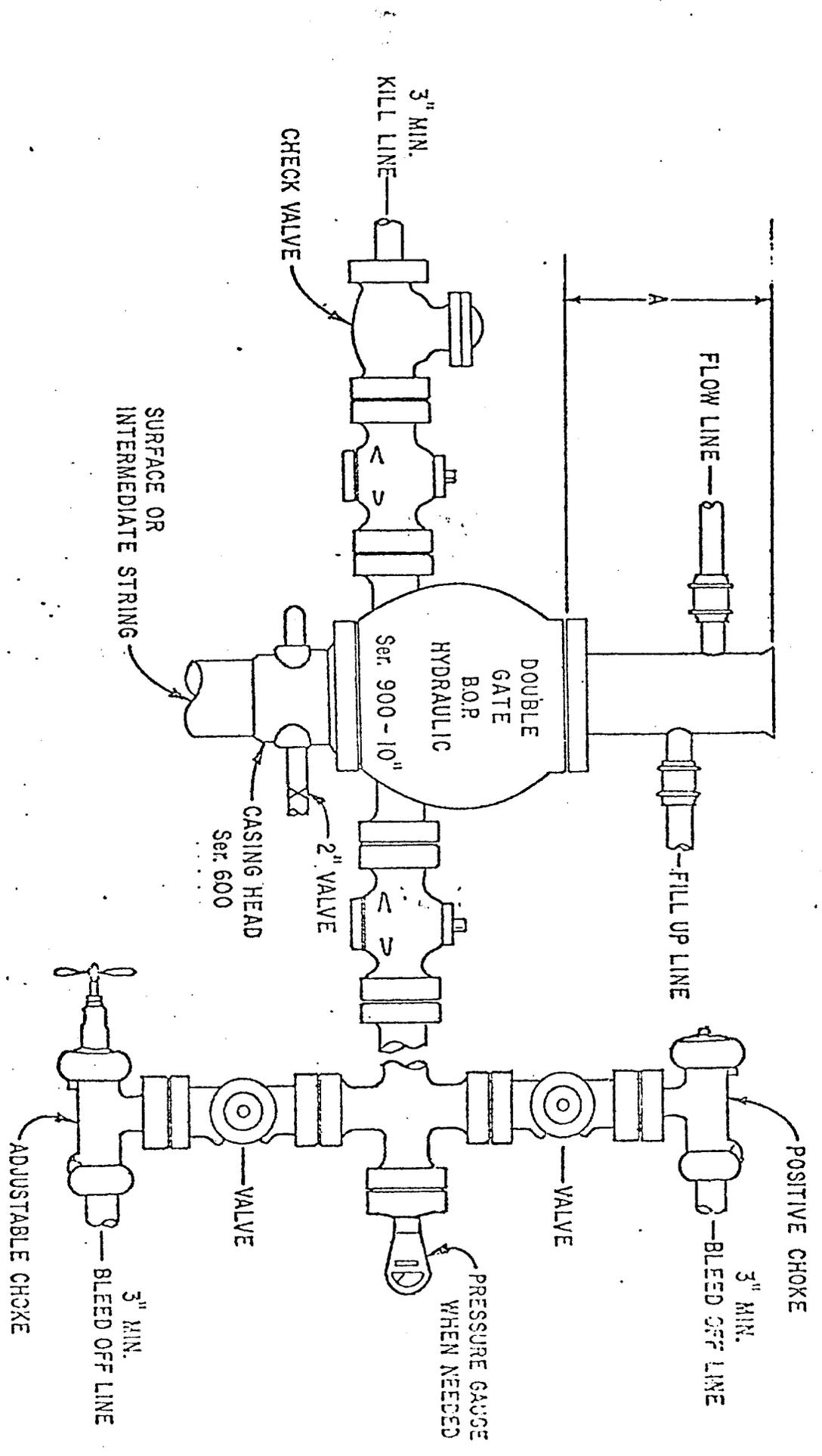


DRILLING PLAN

Blanco Well #1A  
NW SE Section 5-31N-8W  
San Juan County, New Mexico

1. Surface Formation: Tertiary - Wasatch
2. Geologic Markers: Pictured Cliffs: 3305'  
Lewis Shale: 3525'  
Mesaverde  
Cliff House: 4920'  
Menefee: 5305'  
Pt. Lookout: 5570'  
Upper Mancos: 5805'
3. Anticipated Mineral Bearing Formations:  
Pictured Cliffs: 3305'  
Mesaverde  
Cliff House: 4920'  
Menefee: 5305'  
Pt. Lookout: 5570'  
Upper Mancos: 5805'
4. Casing Program: Surface - 250' 9-5/8" OD 36# K55 ST&C New  
Intermediate - 3665' 7" OD 23# K55 ST&C New  
Liner - From 3515' to T.D. 4 1/2" OD 10.5# K55 ST&C New
5. Control Equipment: Blowout Preventer - Ram Type, hydraulic operated  
Rams - Two: One blind ram and one pipe ram.  
Series - 900 (3000#WP, 6000#T)  
Manufacturer - Cameron or Shaffer  
Pressure test @ 1000 psi prior to drilling out of casing string.  
Operational checks to be made daily and on trips.  
Rotating Head - Type 50 shaffer or equivalent.  
Sketch Attached.
6. Drilling Fluid: 0 - 250' Gel and lime to drill surface hole and set casing.  
250'-3665' Gel-Chem to maintain hole and set intermediate casing.  
3665'-T.D. Gas Drill
7. Auxiliary Equipment: Kelly cock  
Sub on floor with full opening valve for use in drill pipe when kelly is not in the string.  
Drill pipe float while gas drilling.
8. Testing, Logging, Coring: At this time no drill stem test or cores are planned.  
Hole conditions or information obtained while drilling may alter these plans.  
  
Logs: Intermediate - IES TD - Surf. Csg. 2" & 5" = 100'  
CNL-FDC/GR TD - 2000' 2" & 5" = 100'  
SW Neutron 2" & 5" = 100'  
Fm. Dens. 2" & 5" = 100'  
2" & 5" = 100'
9. Abnormal Pressures, Temperatures, Potential Hazards: There are no abnormal pressures, temperatures or potential hazards in the area. The maximum anticipated pressure is 1000 psi. Weight material will be maintained on location and BOP will be pressure tested and kept in good working condition.
10. Starting Date - Completion: We are currently utilizing one drilling rig to drill our wells in this area. Depending upon approval of our application for permit to drill and availability of equipment, drilling operations could be commenced approximately November 25, 1978 and the well could be completed about January 5, 1979.



## SURFACE USE AND OPERATIONS PLAN

Blanco Well Number 1A  
NW SE Section 5-31N-8W  
San Juan County, New Mexico

1. Existing Roads: A portion of the Navajo Dam, New Mexico Quadrangle is attached with existing roads colored green. Main access would be from Blanco, New Mexico, approximately 15.5 miles east on State Highway 511 to Navajo Dam. From Navajo Dam proceed approximately 11.5 miles north and northwest on the "Ignacio Highway" to a turn off in the northern part of Section 33-32N-8W. Turn southwest approximately 2.2 miles as shown on the attached map.
2. Planned Access Road: The planned access road will leave the existing road in Section 5-31N-8W and will travel south for approximately 1300'. This planned access road will be about 20' in width (sufficient to handle drilling equipment). No grades are anticipated in excess of 8%. Grading will be kept to a minimum and very little alteration of the natural drainage of the area is expected. There will be no major cuts, fills, culverts, turnouts, gates or cattleguards. The area is a sandy type soil and no special surfacing material will be required.

3. Existing Wells: As shown on the attached map.

Atlantic Richfield Company Jacquez Well #1 NE NE Section 6-31N-8W  
Atlantic Richfield Company Jacquez Well #1A SE SE Section 6-31N-8W  
Atlantic Richfield Company Blanco Well #1 SW NE Section 5-31N-8W

4. Existing and or Proposed Facilities:

Each of the above Jacquez Wells (1 & 1A) is equipped with a Production Unit which is located approximately 100-125' from the well and are connected to the well with a buried gas line. The gas gathering company connects at the Production Unit.

The Blanco Well #1 at the time of this writing is scheduled to be spudded within the next 10-15 days. It is anticipated that the production facilities will be similiar to the above wells.

This well is proposed as a Mesaverde single completion. The anticipated facilities would include one production unit erected on a pad approximately 18' x 24' (incl. small drain pit). The unit will be erected on concrete piers and connected to the well head with buried gas line approximately 125' from the well. The drain pit will be fenced for protection of wildlife and livestock.

The area not required for facilities or operation of the well, will be contoured as near as possible to the original contours and restored as directed by the Bureau of Land Management and the United States Geological Survey.

5. Water Supply: It is anticipated that water will be obtained from Navajo Dam 14 miles south or La Boca 9 miles north. The water will be trucked and no new roads (other than No. 2 above) will be required.
6. Construction Materials: None anticipated.
7. Waste Disposal: Cuttings and drilling fluids will be disposed of in the reserve pit. A trash or burn pit will be used to dispose of trash, garbage, etc. If the reserve pit is sufficiently dry when the well is completed, both the reserve pit and trash pit will be filled upon completion of the well, and the reserve pit will be fenced to be filled when sufficiently dry.

Any produced fluids will be disposed of in the reserve pit. Any oil accumulations on the reserve pit during drilling and completion will be skimmed and disposed of immediately after the completion rig is moved off. Oil produced during completion will be held in a temporary tank for later disposition. Trash and debris cleanup will commence as soon as the completion rig moves out, and final cleaning and contouring will begin as soon as possible.

8. Ancillary Facilities: None are proposed.

SURFACE USE AND OPERATIONS PLAN (Con't.)

Blanco Well No. 1A

9. Well Site Layout: Per the attached sketch. The reserve pit which will be approximately 50' x 125', will be unlined.
10. Restoration of Surface: Upon completion of the well, the drill site will be cleaned, rat and mouse holes filled, and trash pit filled. If sufficiently dry the reserve pit will be filled. If not, any oil accumulation will be removed and the pit fenced for protection of livestock and wildlife. Other than the area needed for operation and production facilities, the site will be contoured as near as possible to its original state. Gas line ditch will be backfilled and the access road graded for proper drainage and minimum surface damage. Reseeding, or any other restoration, will be as specified by the Bureau of Land Management. Any topsoil will be stockpiled for distribution over the disturbed areas upon final grading and for reseeded.
11. Other Information: The area of this location slopes to the southwest. A 4-5' fill is required on the east side and a 6' cut on the north side of the location. Vegetation is Pinon and Cedar Trees, Sage and Oak Brush, Mountain Mahogany, Bitter Brush, Buffalo Grass and very little Cactus. Location is on the crown of a slight ridge that slopes south. Location will lay north 18° east.

The lands involved are Federal lands in a gas field. There is sheep and cattle grazing in the area. To our knowledge there are no archaeological, historical or cultural sites which will be involved, however, an archaeological survey report will be submitted.

With the short period of operations and the restoration of the surface, any disturbance to vegetation and wildlife will be temporary and minimal. It is not anticipated that there will be any substantial impact on the environment.

12. Lessee's or Operator's Representative:

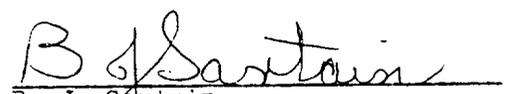
W. A. Walther, Jr.  
Atlantic Richfield Company  
Suite 501, 1860 Lincoln Street  
Denver, Colorado 80295  
Phone: (303) 573-4049  
(303) 798-5729

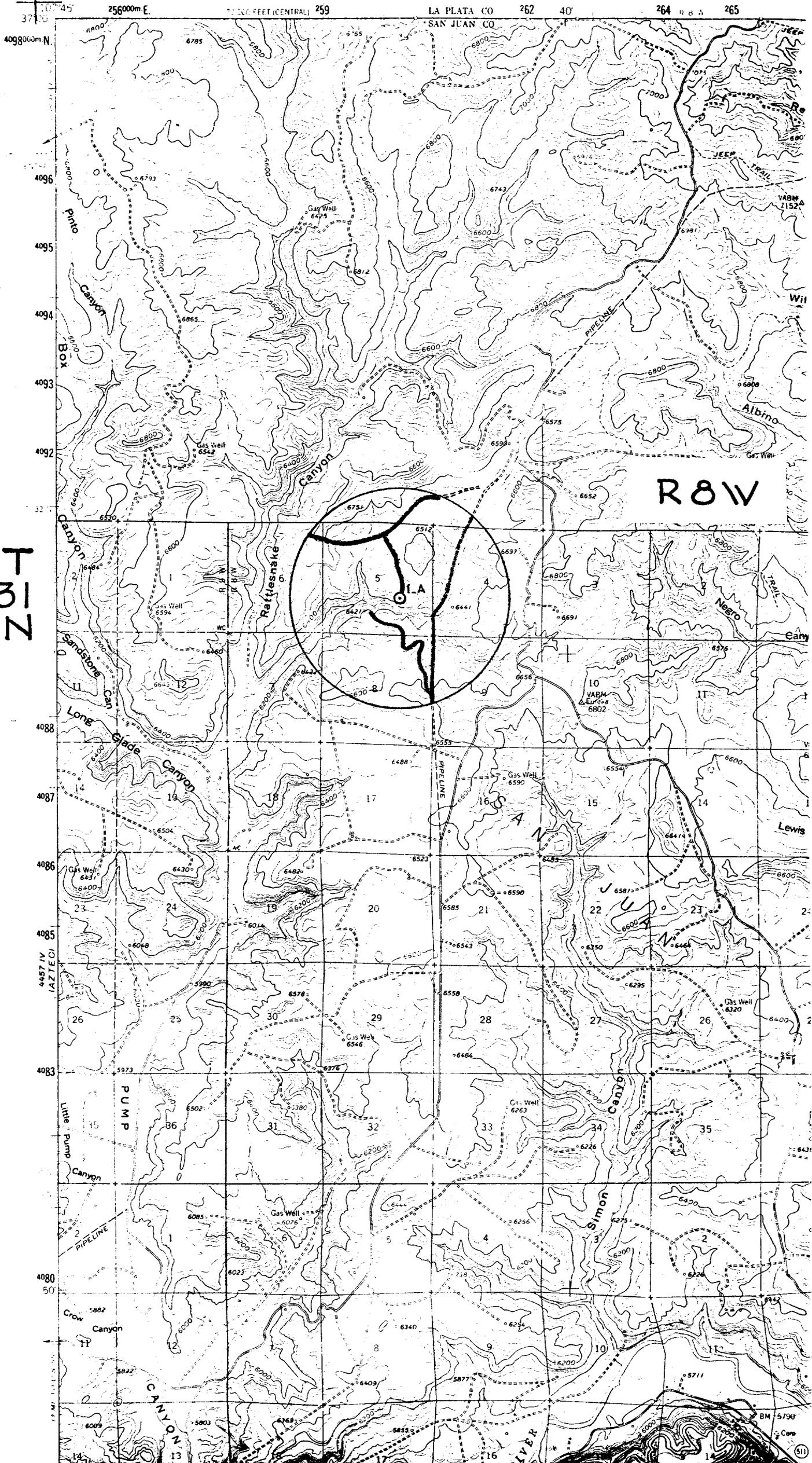
B. J. Sartain  
Atlantic Richfield Company  
Suite 501, 1860 Lincoln Street  
Denver, Colorado 80295  
Phone: (303) 573-4053  
(303) 770-7849

Local Representative: J. E. Taylor  
Atlantic Richfield Company  
P. O. Box 2197  
Farmington, New Mexico 87401  
Phone: (505) 325-7527  
(505) 325-7968

13. 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 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 Atlantic Richfield Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

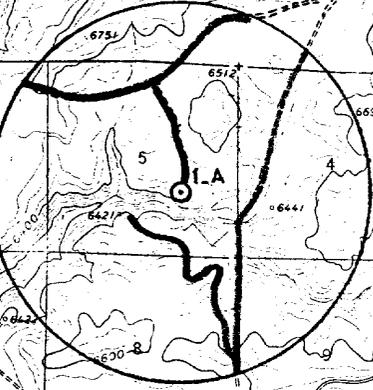
October 24, 1978  
Date

  
B. J. Sartain  
District Drilling Superintendent



131Z

R & W



30

29

28

MESAVERDE PART AREA

31

32

33

Aztec

Koch Ind. Gardener  
Fr. Pt. Mv  
3

Koch Ind. Gardener  
3-A

1  
Fr. Mv  
Rattlesnake Canyon

S-NM-5022  
HBU  
No Lse Int.  
JACQUES UNIT  
ORR WN  
Gas & LHC-Mv  
So. Union Oper.  
ARCo -  
43.372405%  
of 104/MCF ORR  
Subj. to WN P.P.

S-NM-5022  
HBU  
FWI  
Jacquez  
Subj. to WN P.P.  
Subj. to 4% ORR

S-NM-5022  
HBU  
No Lse Int.  
Subj. to WN P.P.  
(w/2)  
PACIFIC NW UNIT OR WN  
Dry Gas & LHC-Mv  
EPNG - Oper.  
ARCo - 41.926686%  
of 104/MCF ORR

S-NM-5022  
HBU  
FWI  
1  
Subj. to WN P.P.  
Subj. to 10% ORR

So. Union  
Mv  
Vaquez

1A  
Jacquez

EPNG  
Mv  
Blanco

1-A

WASH  
S-NM-5022  
HBU  
No Lse Int.  
Subj. to WN P.P.

S-NM-5022  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5022  
HBP  
No Lse Int.  
Subj. to WN P.P.

JAMES G. OXNARD ORR WN UNIT  
Gas Rts (Sec. B, E/2 Sec. 7)  
So. Union Prod - Oper.  
ARCo. 104/MCF ORR

S-NM-5022  
HBU  
No Lse Int.  
Subj. to WN P.P.

S-NM-5022  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5022  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
QUINN'S UNIT  
ORR WN  
Gas & LHC-Mv  
So. Union Oper.  
ARCo -  
104/MCF ORR  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
B  
Mv  
Subj. to WN P.P.

(w/2)  
QUINN'S UNIT ORR WN  
Dry Gas & LHC-Mv  
So. Union Prod - Oper.  
ARCo. - 41.75% of  
104/MCF ORR  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
7  
Mv  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5023  
HBP  
No Lse Int.  
Subj. to WN P.P.  
So. Union  
3  
Mv

S-NM-5023  
HBP  
No Lse Int.  
Subj. to WN P.P.

S-NM-5023  
HBP

S-NM-5023  
HBP

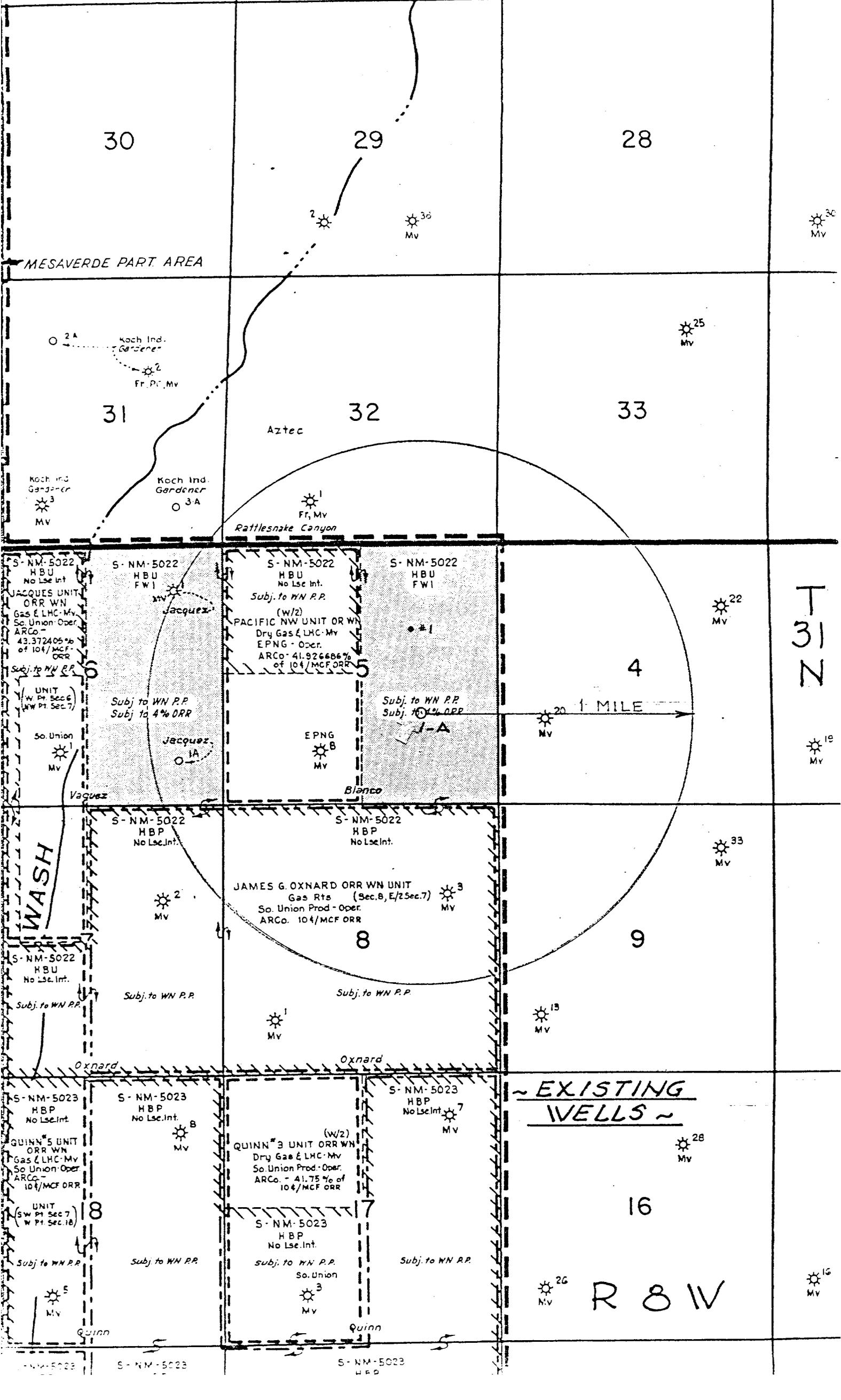
S-NM-5023  
HBP

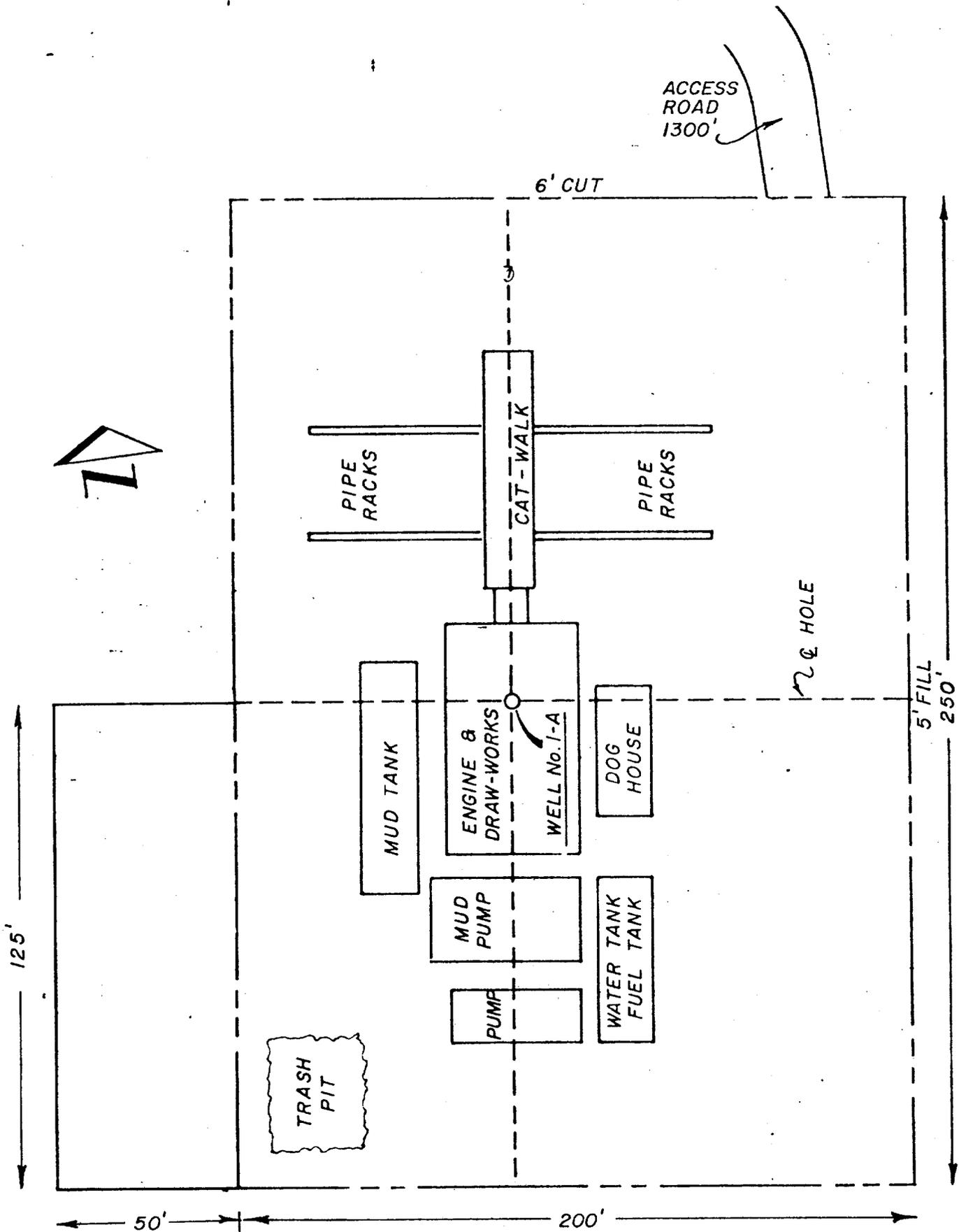
~ EXISTING WELLS ~

16

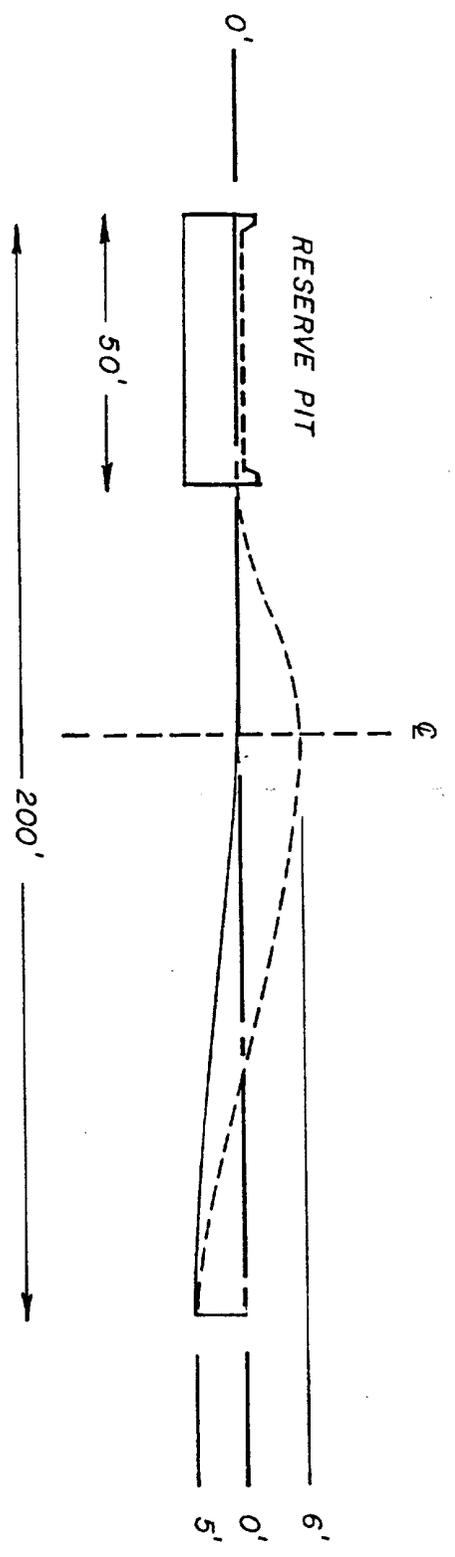
R O W

T  
31  
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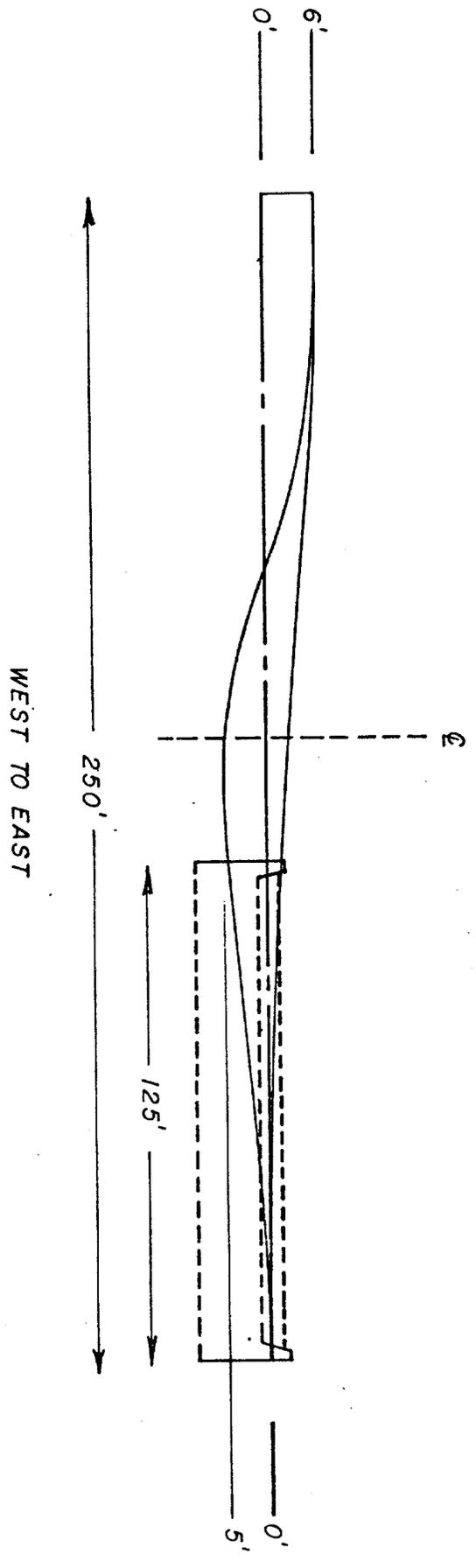




BLANCO NO. 1-A  
 1735' FSL, 1525' FEL, Sec. 5 - T31 N - R8W



SOUTH TO NORTH



WEST TO EAST

BLANCO No. 1-A