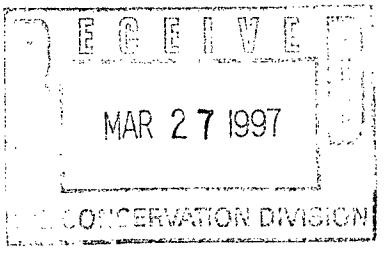
NSL 4/16/97

BURLINGTON RESOURCES

SAN JUAN DIVISION

March 26, 1997



Sent Federal Express

Mr. William LeMay
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: San Juan 28-5 Unit #45M
1450'FNL, 1190'FWL Section 36, T-28-N, R-5-W, Rio Arriba County, New Mexico
API # 30-039-(not yet assigned)

Dear Mr. LeMay:

Burlington Resources is applying for administrative approval of a non-standard location for the above location in the Dakota formation. This well is proposed as a Mesa Verde/Dakota new drill. The acreage proposed for each formation is different as shown on the C102 Well Location and Acreage Dedication Plat. This difference makes it impossible for a standard location for both formations.

The following attachments are for your review:

1. Application for Permit to Drill.

2. Completed C-102 at referenced location.

3. Offset operators/owners plat - Burlington is the offset operator

4. 7.5 minute topographic map showing the orthodox windows, and enlargement of the map to define topographic features.

We appreciate your earliest consideration of this application.

Sincerely,

Peggy Bradfield
Regulatory/Compliance Representative

xc: Bureau of Land Management

3535 East 30th St., 87402-8891, P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work
DRILL

5. Lease Number
SF-079522A
Unit Reporting Number
8910000949A-Dk
89100009490-MV

1b. Type of Well
GAS

6. If Indian, All. or Tribe

2. Operator
BURLINGTON RESOURCES Oil & Gas Company

7. Unit Agreement Name
San Juan 28-5 Unit

3. Address & Phone No. of Operator
PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. Farm or Lease Name
San Juan 28-5 Unit

9. Well Number
45M

4. Location of Well
1450'FNL, 1190'FWL

Latitude 36° 37.3, Longitude 107° 18.9'

10. Field, Pool, Wildcat
Blanco Mesa Verde/
Basin Dakota

11. Sec., Twn, Rge, Mer. (NMPM)
Sec 36,T-28N,R-5-W

API # 30-039-

14. Distance in Miles from Nearest Town
6.5 miles to Gobernador

12. County Rio Arriba **13. State** NM

15. Distance from Proposed Location to Nearest Property or Lease Line
1190'

16. Acres in Lease

17. Acres Assigned to Well
345.39 Dk/ 344.74 MV

18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease
1200'

19. Proposed Depth
8034'

20. Rotary or Cable Tools
Rotary

21. Elevations (DF, FT, GR, Etc.)
6707'GR

22. Approx. Date Work will Start

23. Proposed Casing and Cementing Program
See Operations Plan attached

24. Authorized by: Peggy Bradfield
Regulatory/Compliance Administrator

1-21-97
Date

PERMIT NO. _____ **APPROVAL DATE** _____

APPROVED BY _____ **TITLE** _____ **DATE** _____

Archaeological Report to be submitted
Threatened and Endangered Species Report to be submitted
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-
Revised February 21, 1
Instructions on t
Submit to Appropriate District O
State Lease - 4 Co
Fee Lease - 3 Co

☐ AMENDED REPO

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
30-039-	72319/71599	Blanco Mesaverde/Basin Dakota

⁴ Property Code	⁵ Property Name	⁶ Well Number
7460	San Juan 28-5 Unit	45M

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6707'

¹⁰ Surface Location

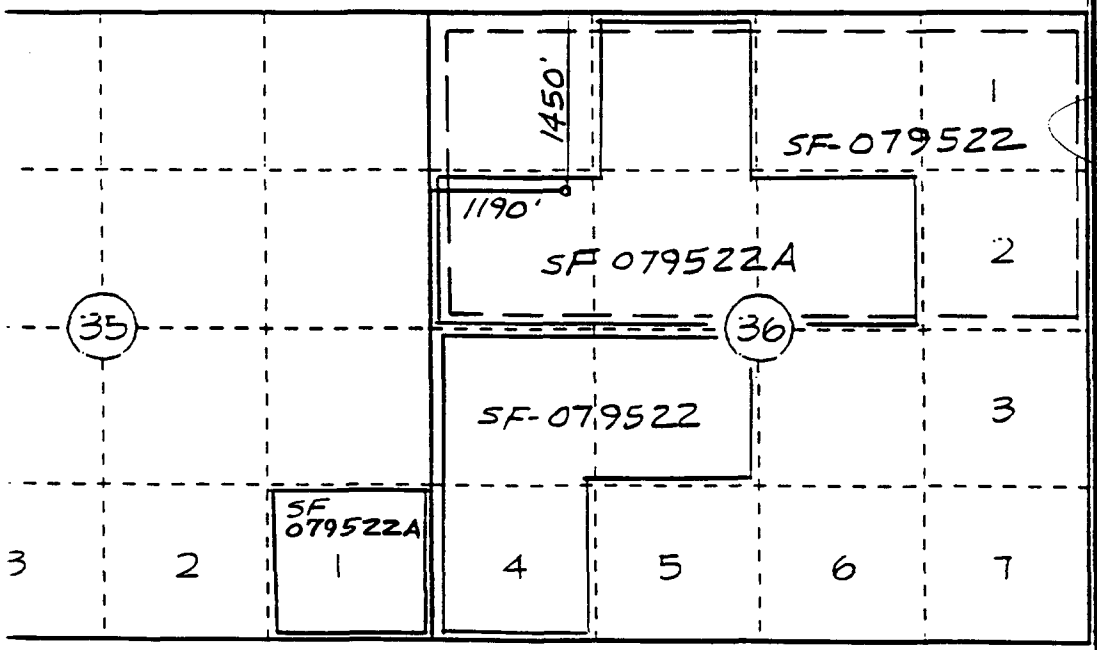
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	36	28-N	5-W		1450	North	1190	West	R.A.

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
MV-N/344.74 DK-W/345.89			

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



¹⁷ OPERATOR CERTIFICATI

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

Peggy Bradfield
Signature

Peggy Bradfield
Printed Name

Regulatory Administrato
Title

1-21-97
Date

¹⁸ SURVEYOR CERTIFICATI

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

10/25/96
Date of Survey

Signature and Seal of Professional Surveyor:

NEAL C. EDWARDS
NEW MEXICO
6857
REGISTERED LAND SURVEYOR

6857
Certificate Number

OPERATIONS PLAN

Well Name: San Juan 28-5 Unit #45M
Location: 1450'FNL, 1190'FWL Sec 36, T-28-N, R-5-W
Rio Arriba County, NM
Latitude 36° 37.3', Longitude 107° 18.9'
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6707'GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	2939'	
Ojo Alamo	2939'	3179'	aquifer
Fruitland	3179'	3594'	gas
Pictured Cliffs	3594'	3684'	gas
Lewis	3684'	4379'	gas
Intermediate TD	**3734'**		
Mesa Verde	4379'	4559'	gas
Chacra	4559'	5269'	
Massive Cliff House	5269'	5419'	gas
Menefee	5419'	5719'	gas
Massive Point Lookout	5719'	6934'	gas
Gallup	6934'	7689'	gas
Greenhorn	7689'	7796'	gas
Graneros	7796'	7894'	gas
Dakota	7894'		gas
TD	**8034'**		

Logging Program:
Cased hole -Gamma Ray/Neutron

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-9.0	40-50	no control
200-3734'	LSND	8.4-9.0	30-60	no control
3734-8034'	Gas	n/a	n/a	n/a

Pit levels will be visually monitored to detect gain or loss of fluid control.

Casing Program (as listed, the equivalent, or better):

Hole Size	Depth Interval	Csg.Size	Wt.	Grade
12 1/4"	0' - 200'	9 5/8"	32.3#	H-40
8 3/4"	0' - 3734'	7"	20.0#	J-55
6 1/4"	3634' - 6855'	4 1/2"	10.5#	J-55
6 1/4"	6855' - 8034'	4 1/2"	11.6#	J-55

Tubing Program:

0' - 8034'	2 3/8"	4.70#	EUE

BOP Specifications, Wellhead and Tests:

Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, rams and casing will be tested to 600 psi for 30 minutes.

Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, rams and casing will be tested to 1500 psi for 30 minutes.

Surface to Total Depth -

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

Completion Operations -

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

Wellhead -

9 5/8" x 7" x 2 3/8" x 3000 psi tree assembly.

General -

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing:

9 5/8" surface casing - cement with 163 sx Class "B" cement with 1/4# flocele/sx and 2% calcium chloride (188 cu.ft. of slurry, 200% excess to circulate to surface). WOC 12 hrs. Test casing to 600 psi for 30 minutes.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

7" intermediate casing -
Lead w/352 sx Class "B" w/3% medisilicate, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/90 sx 50/50 Class "B" Poz w/2% calcium chloride (1124 cu.ft. of slurry, 75% excess to circulate to surface.) WOC minimum of 12 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run during completion operations to determine TOC. Test casing to 1500 psi for 30 minutes.

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every other joint off bottom, to the base of the Ojo Alamo at 3179'. Two turbolating centralizers at the base of the Ojo Alamo at 3179'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Casing -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 115 sx 65/35 Class "B" poz with 6% gel, 5# gilsonite/sx and 1/4# flocele/sx. Tail with 299 sx 50/50 Class "B" Poz with 1/4# flocele/sx, 5# gilsonite/sx, and 0.3% fluid loss additive (610 cu.ft., 35% excess to cement 4 1/2" x 7" overlap). WOC a minimum of 18 hrs prior to completing.

Cement float shoe on bottom with float collar spaced on top of shoe joint.

Note: To facilitate higher hydraulic stimulation completion work, no liner hanger will be used. In its place, a long string of 4 1/2" casing will be run and cemented with a minimum of 100' of cement overlap between the 4 1/2" x 7" casing strings. After completion of the well, a 4 1/2" retrievable bridge plug will be set below the top of cement in the 4 1/2" x 7" overlap. The 4 1/2" casing will then be backed off above the top of cement in the 4 1/2" x 7" overlap and laid down. The liner top can then be pressure tested to ensure a seal between the liner top and the 7" casing has been achieved. The test pressure shall be the maximum anticipated pressure to which the seal will be exposed (700 psi for the Mesa Verde and 2500 psi for the Dakota). The 4 1/2" bridge plug will then be retrieved and the production tubing will be run to produce the well.

- If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydration.
- The pipe will be rotated and/or reciprocated, if hole conditions permit.

Special Drilling Operations (Gas/Mist Drilling):

The following equipment will be operational while gas/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.
- Deduster equipment will be utilized.
- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

Additional Information:

- The Dakota and Mesa Verde formations will be completed and commingled.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	800 psi
Pictured Cliffs	800 psi
Mesa Verde	700 psi
Dakota	2500 psi

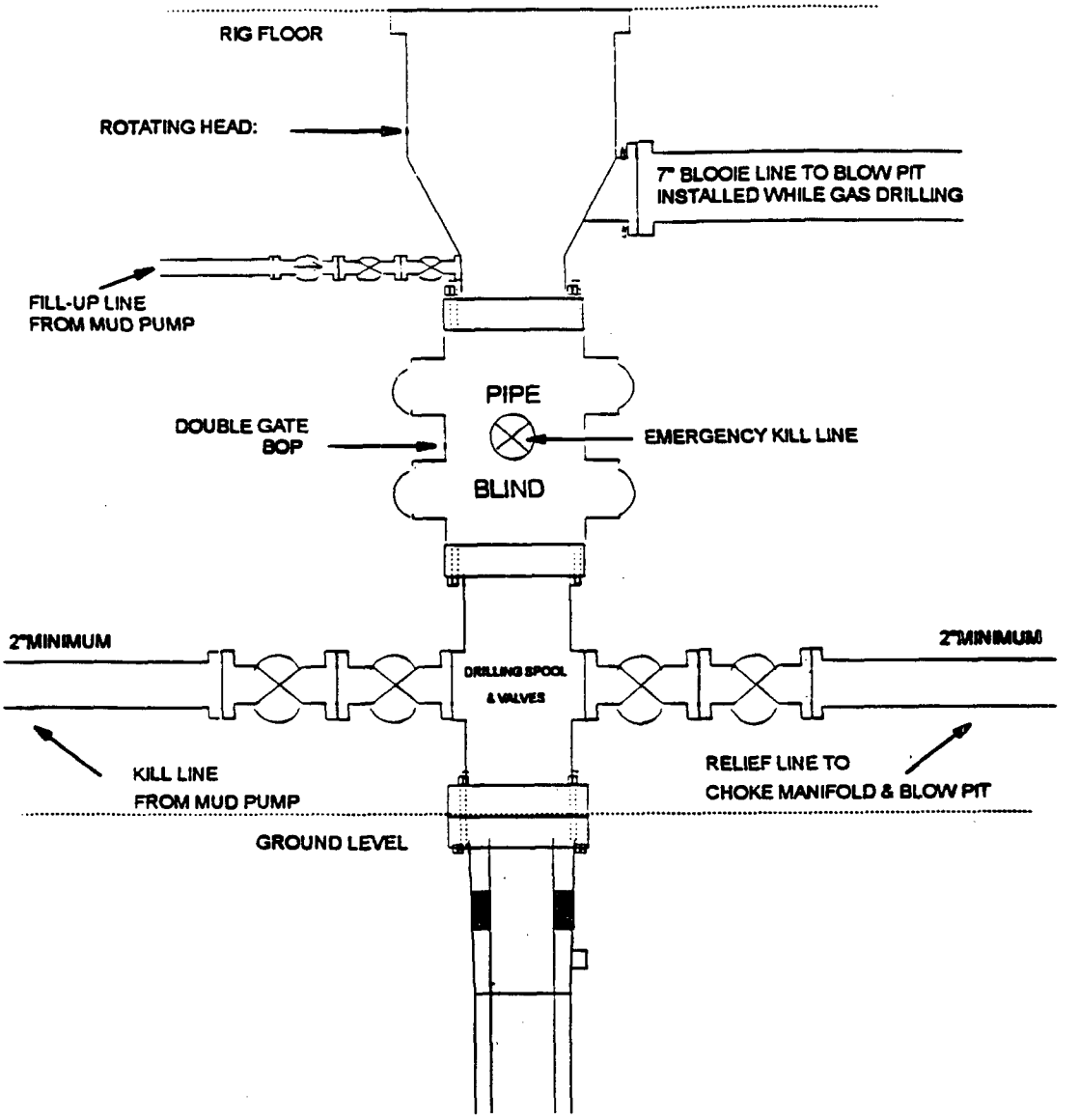
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered.
- The dedication to the Mesa Verde and Dakota in this well is as shown on the C102 plat attached.
- This gas is dedicated.

Drilling Engineer

Date 1/21/97

BURLINGTON RESOURCES

BOP Configuration
2M psi System

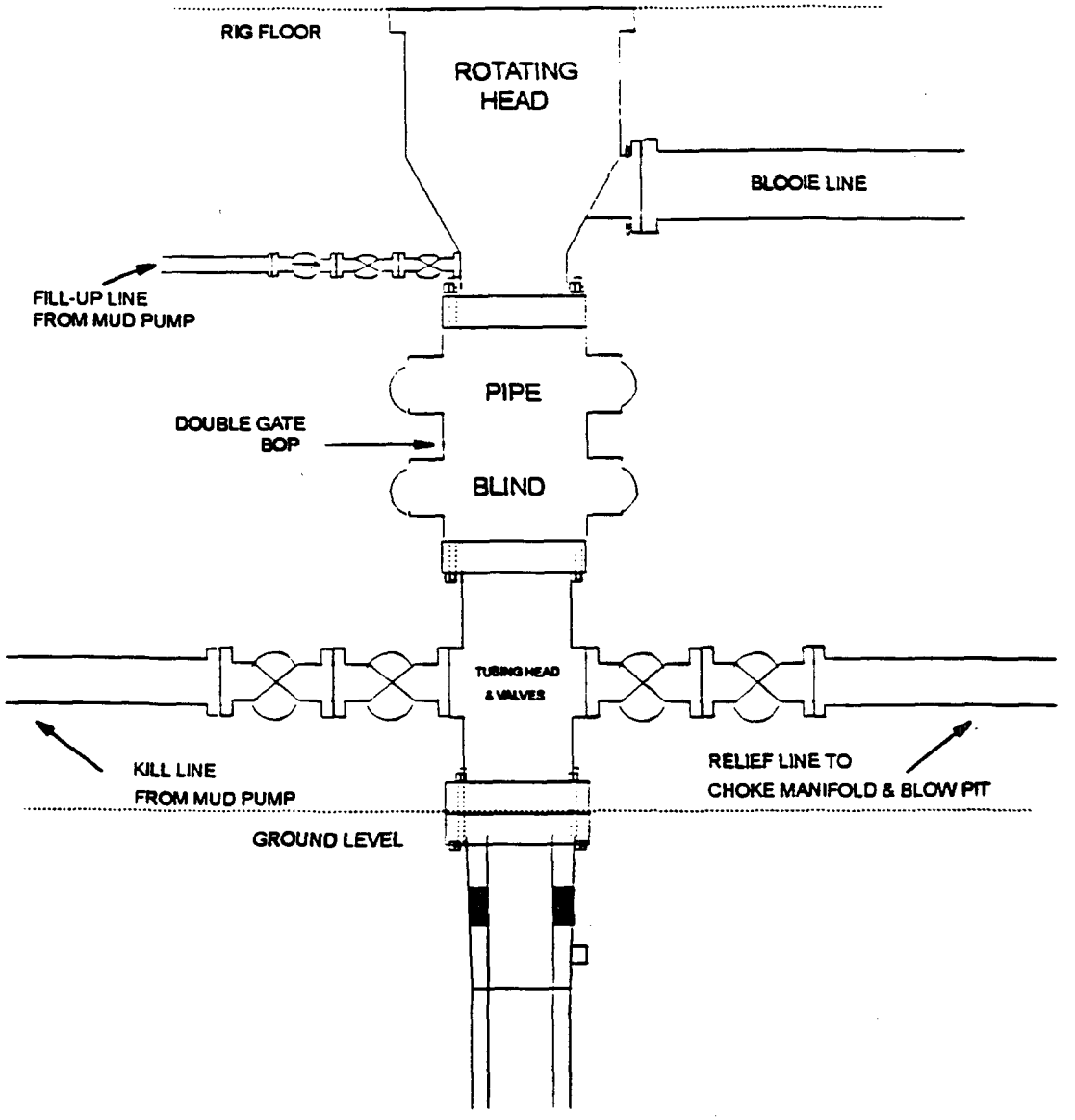


11" Bore, 2000psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A Schaffer Type 50 or equivalent rotating head to be installed on the top of the BOP. All equipment is 2000psi working pressure/or greater.

FIGURE #1

BURLINGTON RESOURCES

BOP Configuration
2M psi System

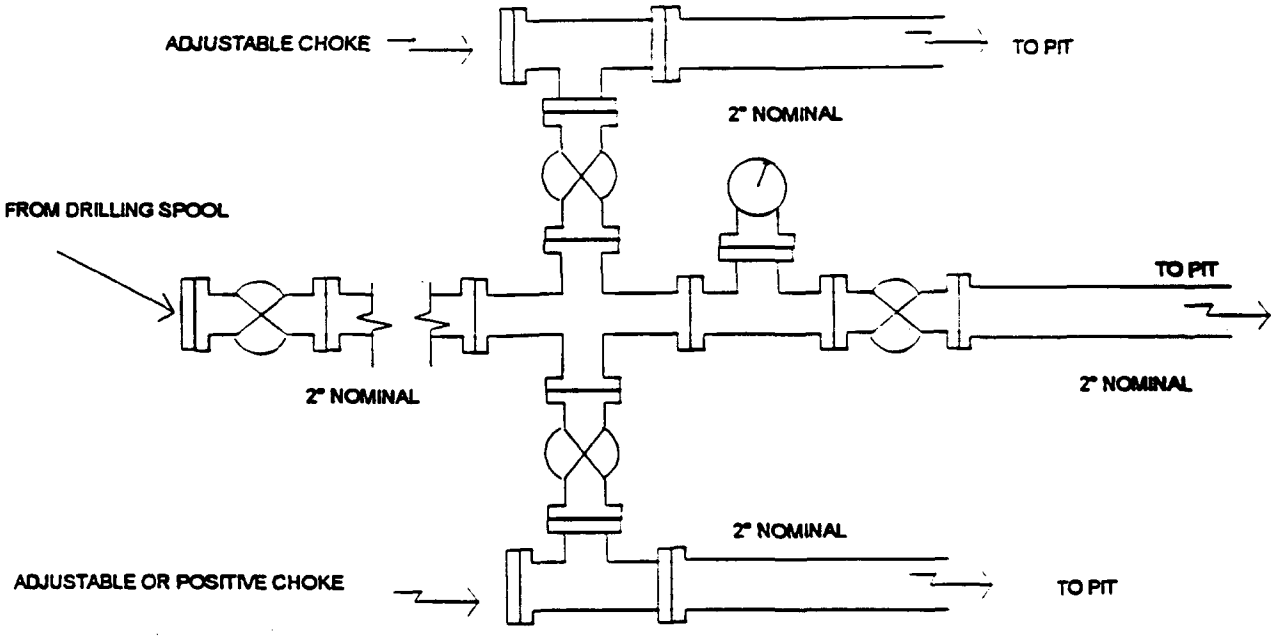


Minimum BOP installation for Completion operations. 7 1/16" Bore (6" Nominal), 2,000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams.

FIGURE #2

BURLINGTON RESOURCES

Choke Manifold Configuration
2M System



Minimum choke manifold installation from surface to Total Depth.
2" minimum, 2000psi working pressure equipment with two chokes.

Figure #3

AMM/06-01-94

BURLINGTON RESOURCES

San Juan 28-5 Unit #45M
Multi-Point Surface Use Plan

1. Existing Roads - Refer to Map No. 1. Existing roads used to access the proposed location will be properly maintained for the duration of the project. Bureau of Land Management right-of-way has been applied for as shown on Map No. 1.

2. Planned Access Road - Refer to Map No. 1. The required new access road is shown on Map No. 1. The gradient, shoulder, crowning and other design elements will meet or exceed those specified by the responsible government agency. The new access road surface will not exceed twenty feet (20') in width. No additional turnarounds or turnouts will be required. Upon completion of the project, the access road will be adequately drained to control soil erosion. Approximately 500' of access road will be constructed. Pipelines are indicated on Map No. 1A.

3. Location of Existing Wells - Refer to Map No. 1A.

4. Location of Existing and/or Proposed Facilities if Well is Productive -

   a. On the Well Pad - Refer to Plat No. 1, anticipated production facilities plat.

   b. Off the Well Pad - Anticipated pipeline facilities as shown on the attached plat from Williams Field Services.

5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained San Juan 27-5 Water Well #1 located NE/4 Section 3, T-27-N, R-5-W, New Mexico

6. Source of Construction Materials - If construction materials are required for the proposed project, such materials will be obtained from a commercial quarry.

7. Methods of Handling Waste Materials - All garbage and trash materials will be removed from the site for proper disposal. A portable toilet will be provided for human waste and serviced in a proper manner. If liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying waste materials into the watershed. Reserve pits will be lined as needed with either 12 mil bio-degradable plastic liner or a bentonite liner. All earthen pits will be so constructed as to prevent leakage from occurring; no earthen pit will be located on natural drainage. Generation of hazardous waste is not anticipated. Federal regulations will be adhered to regarding handling and disposal of such waste if so generated.

8. Ancillary Facilities - None anticipated.

9. Wellsite Layout - Refer to the location diagram and to the wellsite cut and fill diagram (Figure No. 4). The blow pit will be constructed with a 2'/160' grade to allow positive drainage to the reserve pit and prevent standing liquids in the blow pit.

10. Plans for Restoration of the Surface - After completion of the proposed project, the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operations will be performed during the time period set forth by the responsible government agency. The permanent location facilities will be painted as designated by the responsible government agency.

11. Surface Ownership - Richard Arnold

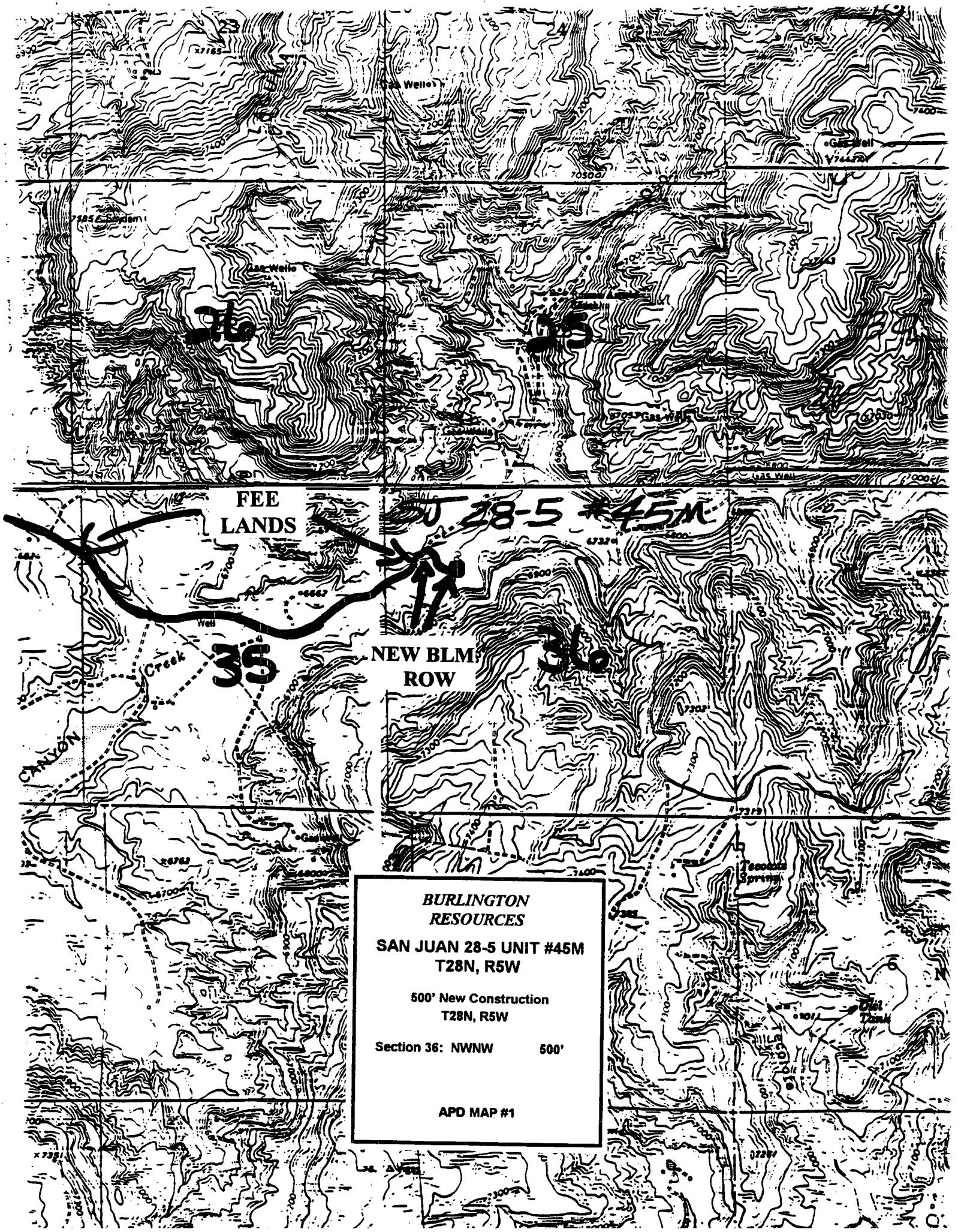
12. Other Information - Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

13. Operator's Representative and Certification - Burlington Resources Oil & Gas Company Regional Drilling Manager, Post Office Box 4289, Farmington, NM 87499, telephone (505) 326-9700. 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 Burlington Resources Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Peggy Bradfield 1-21-97

Regulatory/Compliance Administrator Date

pb



BURLINGTON RESOURCES

SAN JUAN 28-5 UNIT #45M
T28N, R5W

500' New Construction
T28N, R5W

Section 36: NWNW 500'

APD MAP #1

BURLINGTON RESOURCES

SAN JUAN DIVISION

CERTIFIED-RETURN RECEIPT REQUESTED

October 3, 1996

Richard E. Arnold
PO Box 2372
Bloomfield, NM 87413

Dear Mr. Arnold:

This to advise that Burlington Resources Oil & Gas Company, proposes to drill the following well on your property in Rio Arriba County, New Mexico during 1996/97. The well will be staked in the near future in order to get the required clearances from various regulatory agencies. Shown below are the locations we will be looking at for staking. Only one of these will be picked for the future well:

SAN JUAN 28-5 UNIT #45M - SECTION 36, T28N, R5W

SWNW:	Patented Lands, Federal Lease #SF-079522
SENW:	Patented Lands, Federal Lease #SF-079522
NENW:	Patented Lands, Federal Lease #SF-079522
NWNW:	BLM Lands

In view of the fact that the well is on your patented surface, you may wish to accompany our field personnel when they review the location with the Bureau of Land Management and archeologist. A determination regarding the actual location of the well site and access roads will be made at this time. Please let us know by October 21, 1996, if you desire to be present.

Burlington Resources will reasonably maintain access roads and provide adequate drainage. After the well has been completed and tied-in, we will re-shape and re-seed any disturbed areas not required for the well and support facilities used in operating the well. In the event the well is plugged and abandoned, Burlington Resources will re-shape (as possible) to conform to topography and re-seed the road and location under optimum conditions for re-seeding. The road will remain after the well is plugged and abandoned only if you so request in writing.

If you have any questions regarding the location, please contact the undersigned at (505) 326-9759. If you have any additional questions or comments regarding environmental concerns or rehabilitation of the surface, please forward same to the Bureau of Land Management at: 1235 La Plata Highway, Farmington, New Mexico 87401, in the space provided below or call the Fluid Surface Management at (505) 599-8900. Such questions or comments should be received by the BLM on or before November 11, 1996. We will again be in contact with you before the actual drilling of the well on your patented surface.

Respectfully,

for Van Goebel
Senior Landman

VG:mt
feefed.8

Please use this space for comments directed to the Bureau of Land Management.

_____

_____

_____

Signed:_____

Date:_____

3535 East 30th St., 87402-8891. P.O. Box 4289, Farmington, New Mexico 87499-4289. Telephone 505-326-9700. Fax 505-326-9833

P 081 704 495

Receipt for Certified Mail
No Insurance Coverage Provided

Richard E. Arnold
PO Box 2372
Bloomfield, NM 87413

Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	28-5 #45M 10/3/96 VG:MT

PS Form 3800, June 1991

WILLIAMS GAS PROCESSING
ONE OF THE WILLIAMS COMPANIES

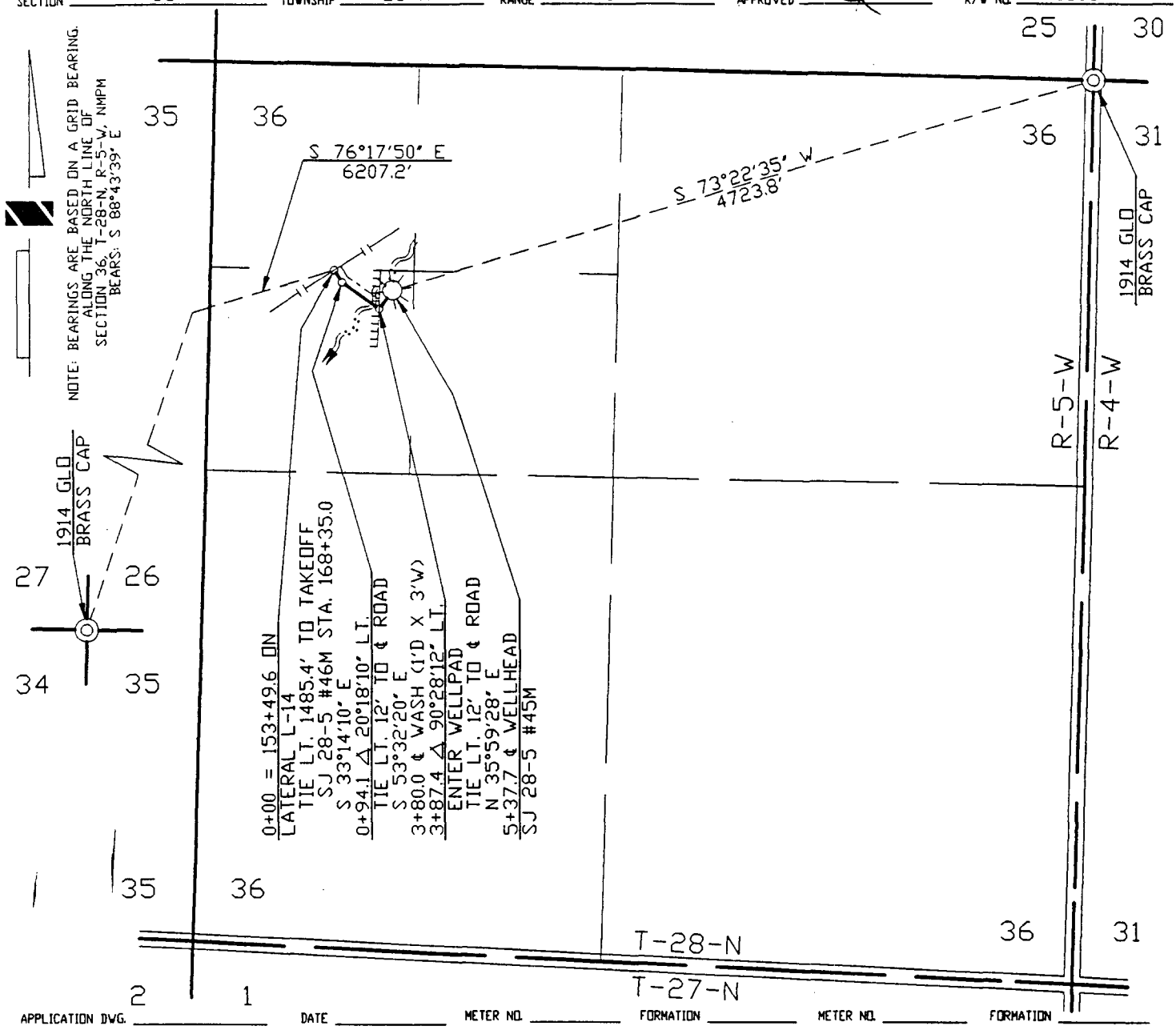
SAN JUAN GATHERING SYSTEM

LINE: BURLINGTON RESOURCES - SJ 28-5 #45M
FROM: 0+00 = 153+49.6 ON LATERAL L-14
(REF. DWG. 14L765.0-1)

COUNTY: RIO ARRIBA STATE: NEW MEXICO
SECTION: 36 TOWNSHIP: 28-N RANGE: 5-W

SCALE: 1"=1000'
DRAWN BY: RSL
CHECKED BY: FB
APPROVED: KWB
APPROVED: CK

DWG. NO. 14L765.0-23-1
DATE: 1/22/97
SURVEYED: 1/9/97
W.O. NO. 13002
R/W NO. 13054



APPLICATION DWG. _____ DATE _____ METER NO. _____ FORMATION _____ METER NO. _____ FORMATION _____

AS-BUILT PIPE DATA

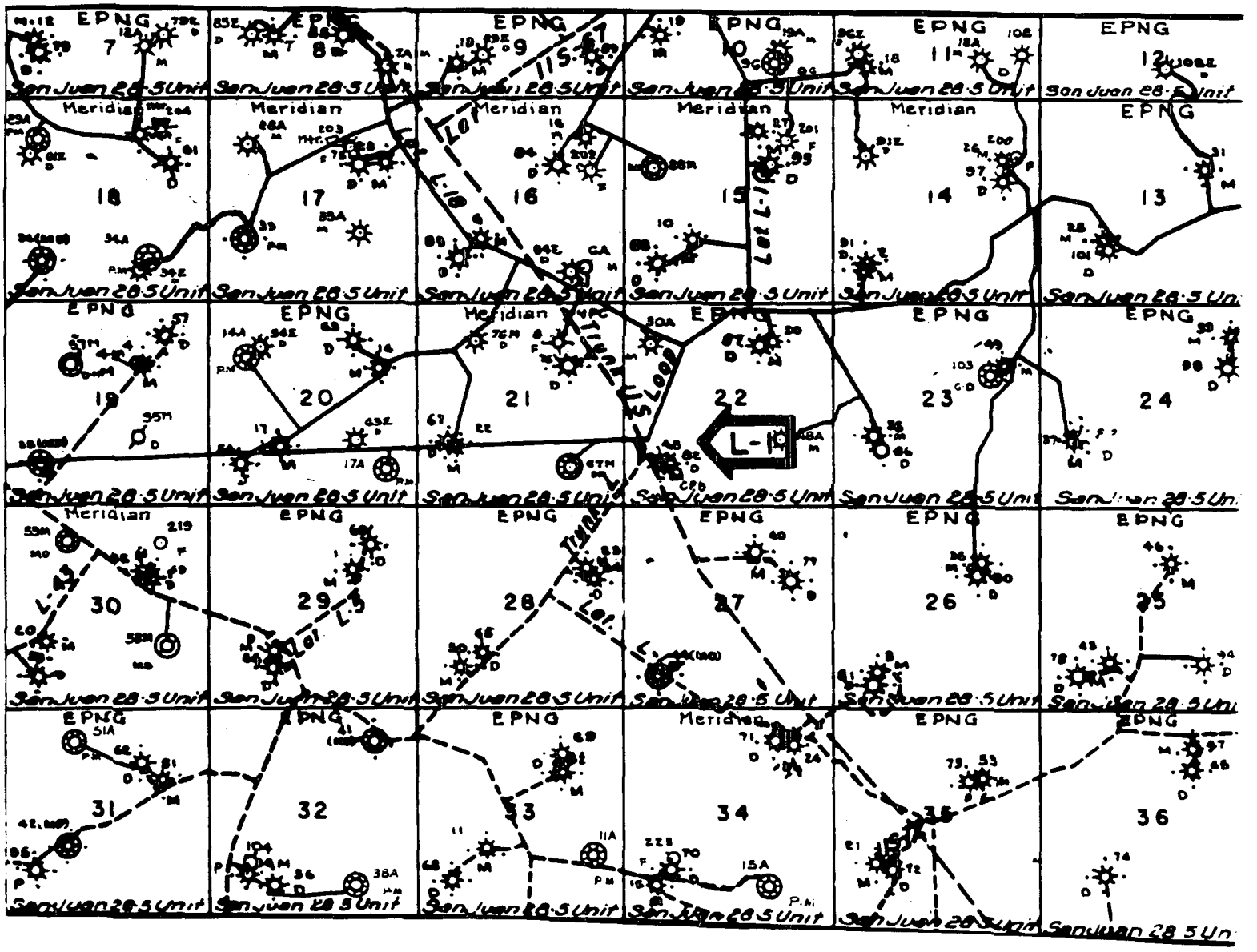
OWNERSHIP

SUBDIVISION	OWNER	LEASE	FEET	MILES	ACRES	RODS
0+00 TO 5+37.7	RICHARD ARNOLD		537.7	0.102	0.741	32.588

NO.	DATE	BY	REVISION DESCRIPTION	APP.	NO.	DATE	BY	REVISION DESCRIPTION	APP.
1	1/22/97	RSL	ISSUED FOR REVIEW	CK					

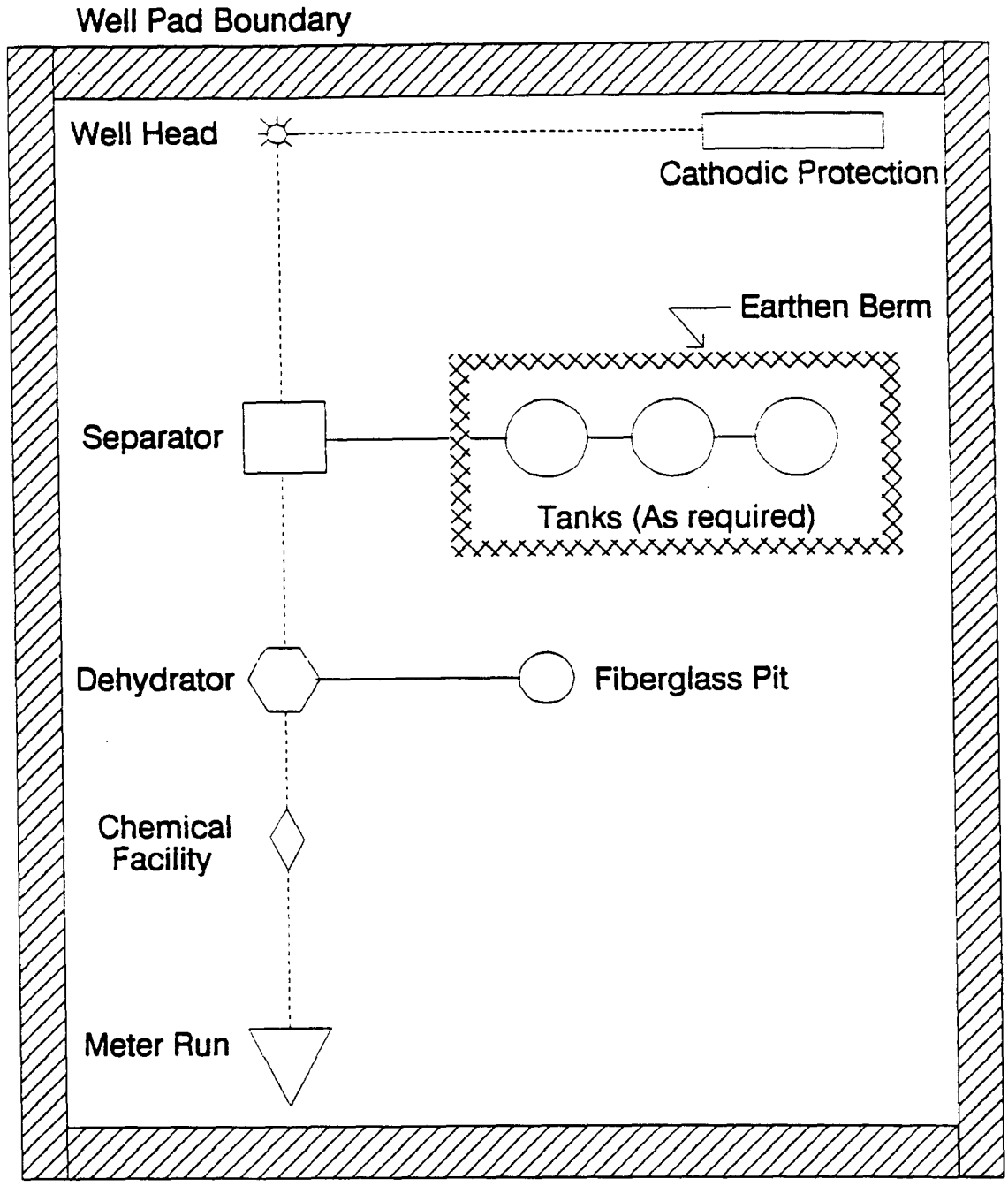
F1645 (11/94)

T:\MAPPING\765\00\000004CN.DW



MERIDIAN OIL INC.
Pipeline Map
T-28-N, R-05-W
San Juan County, New Mexico
San Juan 28-5 Unit #45M
Map 1A

3/91 adw/mjb



PLAT #1

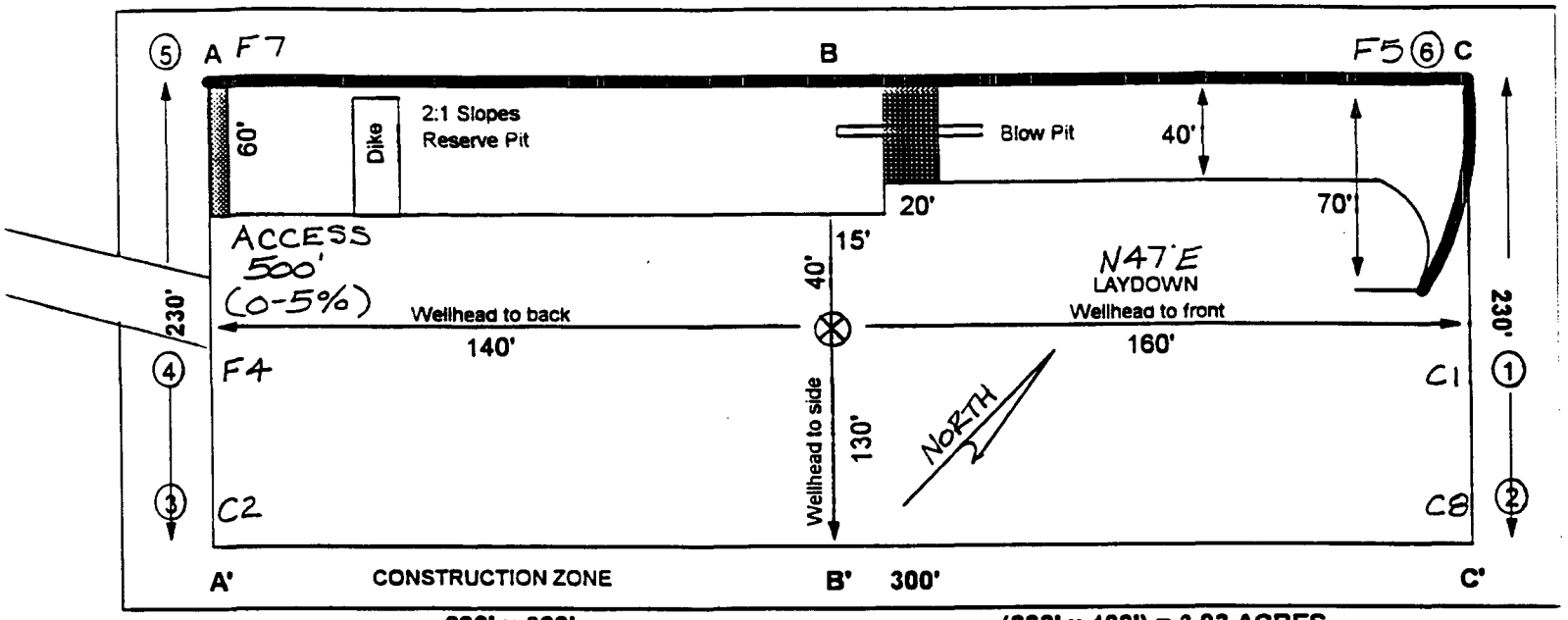
ANTICIPATED PRODUCTION FACILITIES FOR A DAKOTA WELL

SRF 8/91

BURLINGTON RESOURCES

PLAT #1

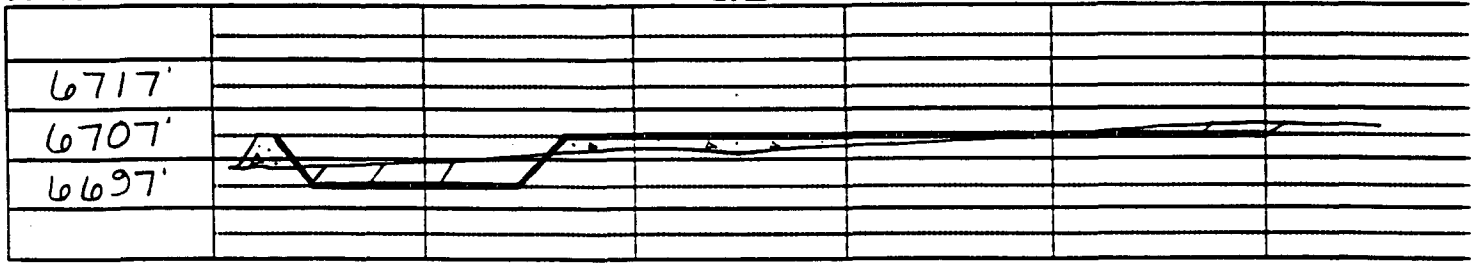
NAME: SAN JUAN 28-5 UNIT #45M
FOOTAGE: 1450 FNL 1120' FWL
SEC 36 TWN 28 N.R 5 W NMPM
CO: RIO ARRIBA ST: NEW MEXICO
ELEVATION: 6707' DATE: 10-25-96



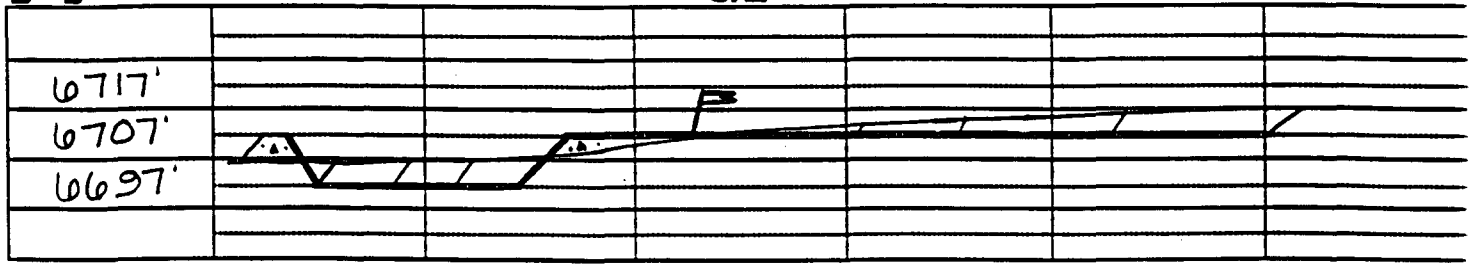
230' x 300' (330' x 400') = 3.03 ACRES

Reserve Pit Dike: to be 8' above Deep side (overflow - 3' wide and 1' above shallow side).
Blow Pit: overflow pipe halfway between top and bottom and to extend over plastic liner and into blow pit.

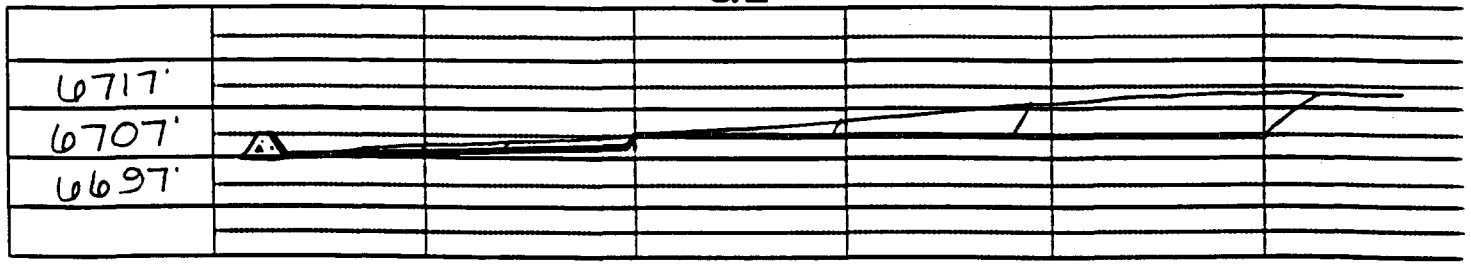
A - A'



B - B'



C - C'



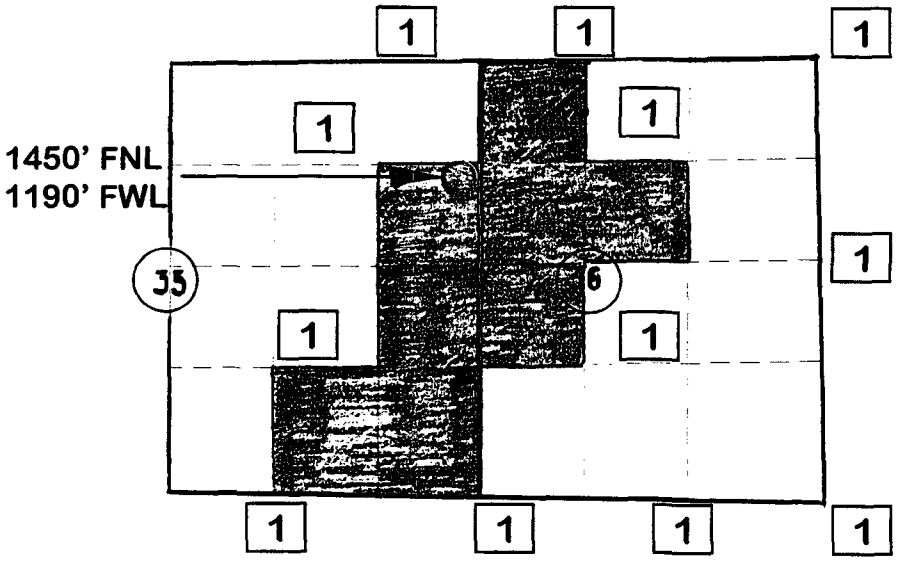
Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cable on well pad and/or access road at least two (2) working days prior to construction.

BURLINGTON RESOURCES OIL AND GAS COMPANY

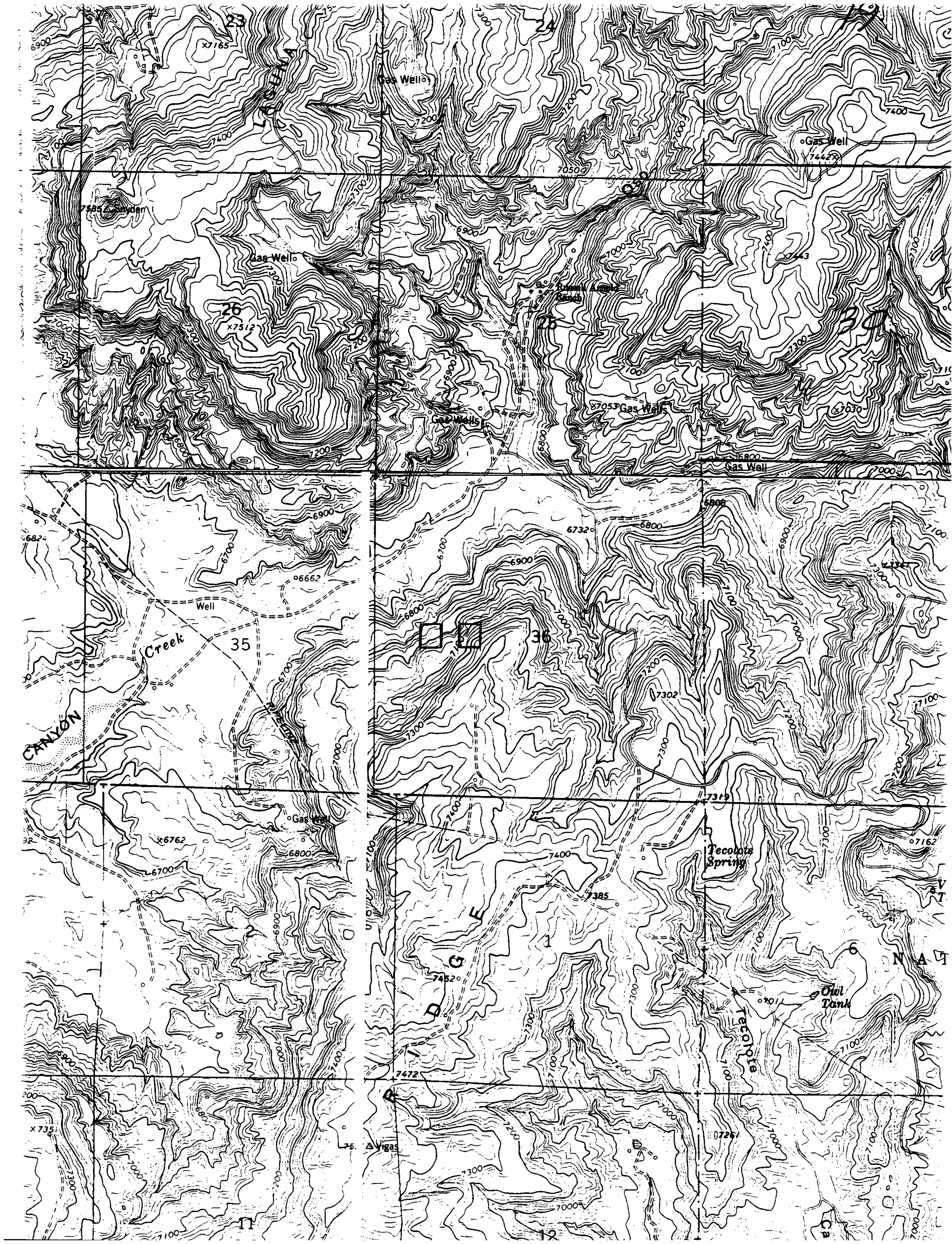
San Juan 28-5 Unit #45M
OFFSET OPERATOR \ OWNER PLAT
Non Standard Location

Dakota Formation Well

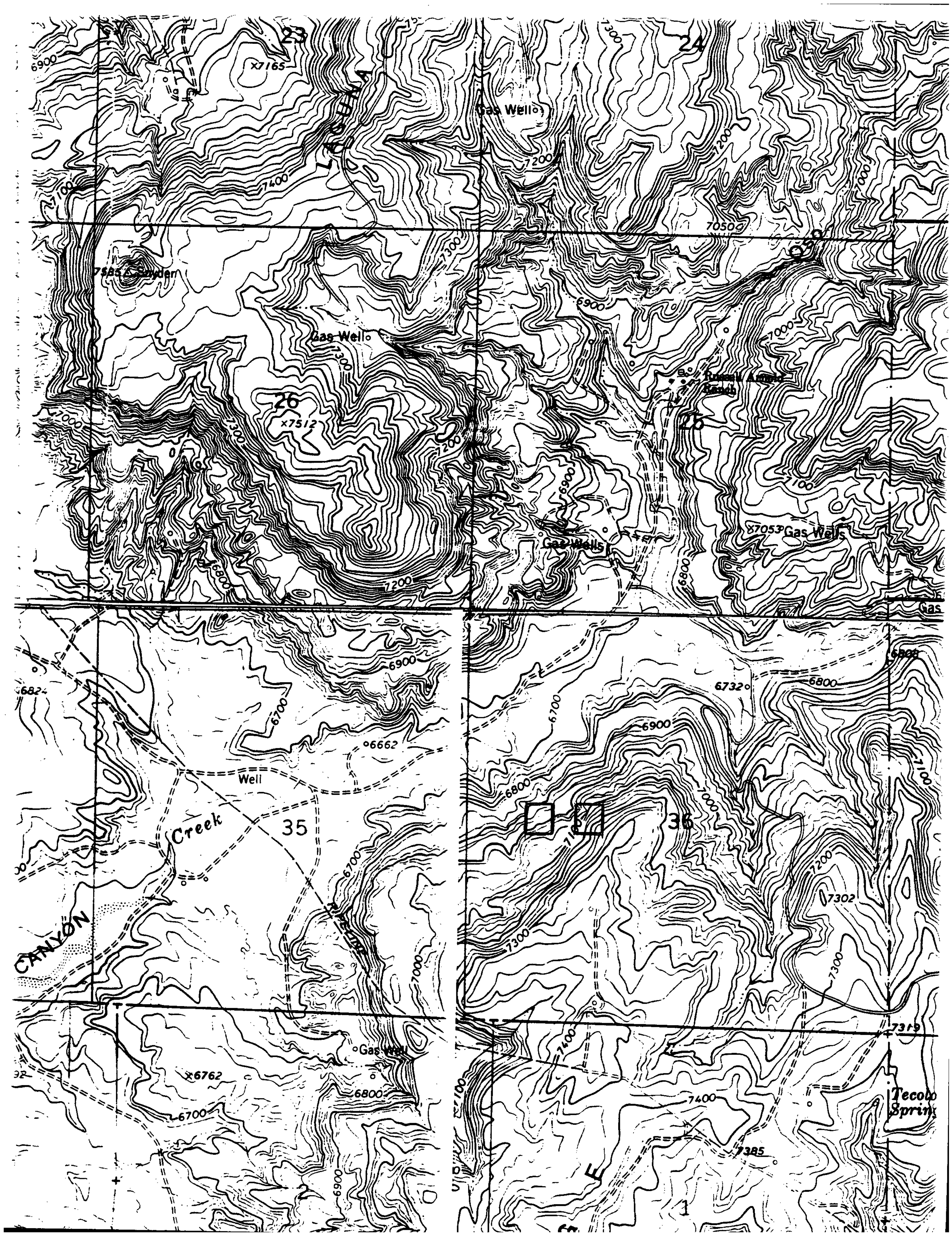
Township 28 North, Range 5 West



1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.



23
24
Gas Well
Gas Well
7442
Snyder
7585
Gas Well
26
x7512
25
x7053 Gas Wells
Gas Wells
x7030
Gas Well
6732
6662
Well
Creek
35
36
CANYON
7302
7319
Gas Well
x6762
Tecolote Spring
7385
1
6
Owl Tank
Tecolote
7452
7472
Vigas
11
12


23
24
x7165
6900
LAGUNA
Gas Well
7200
7400
7100
7050
7585 Snyder
Gas Well
26
x7512
7300
6900
7000
25
x7053 Gas Wells
Gas Wells
6800
6732
6700
6662
Well
Creek
35
36
CANYON
7302
7319
Gas Well
x6762
7400
7385