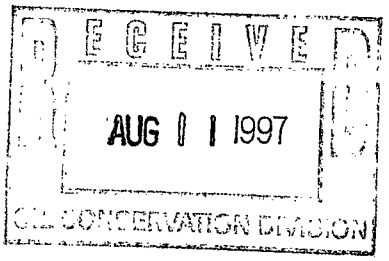
NSL 9/2/97

BURLINGTON RESOURCES

(MV/DK 03)

SAN JUAN DIVISION



August 7, 1997

Sent Federal Express

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

Re: San Juan 28-6 Unit #170M
1915'FSL, 1150'FEL Section 5, T-27-N, R-6-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 both the Mesa Verde and Dakota formations. This application for the referenced location is due to terrain, the presence of archaeology and at the request of the Bureau of Land Management to minimize surface disturbance.

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

Peggy Bradfield
Regulatory/Compliance Administrator

xc: Bureau of Land Management
NMOCD - Aztec District Office

3535 East 30th St., 87402-8801, P.O. Box 4289, Farmington, New Mexico 87499-4289, Telephone 505-326-9700, Fax 505-326-9833

DATE IN	SUSPENSE	ENGINEER	LOGGED	TYPE

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☑ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☑ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE** - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Peggy Bradfield	Peggy Bradfield	Regulatory/Compliance Administrator	
Print or Type Name	Signature	Title	Date

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-079049B
Unit Reporting Number
891001051B - Dk
8910010510 - 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 28-6 Unit

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

(505) 326-9700

8. **Farm or Lease Name**
San Juan 28-6 Unit

9. **Well Number**
170M

4. **Location of Well**
1915'FSL, 1150'FEL

Latitude 36° 36.1, Longitude 107° 29.1

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

11. **Sec., Twn, Rge, Mer. (NMPM)**
Sec 5,T-27-N,R-6-W

API # 30-039-

14. **Distance in Miles from Nearest Town**
7 miles to Gobernador

12. **County** Rio Arriba

13. **State** NM

15. **Distance from Proposed Location to Nearest Property or Lease Line**
1150'

16. **Acres in Lease**

17. **Acres Assigned to Well**
320.88 E/2

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
1500'

19. **Proposed Depth**
7640'

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6473'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

7-11-97
Date

PERMIT NO. _____ **APPROVAL DATE** _____

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

Archaeological Report to be submitted by Arboles Contract Archaeology
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-1
Revised February 21, 19
Instructions on ba
Submit to Appropriate District Offi
State Lease - 4 Cop
Fee Lease - 3 Cop

☐ AMENDED REPOI

WELL LOCATION AND ACREAGE DEDICATION PLAT

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

Property Code	Property Name	Well Number
7462	San Juan 28-6 Unit	170M

OGRID No.	Operator Name	Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6473'

Surface Location

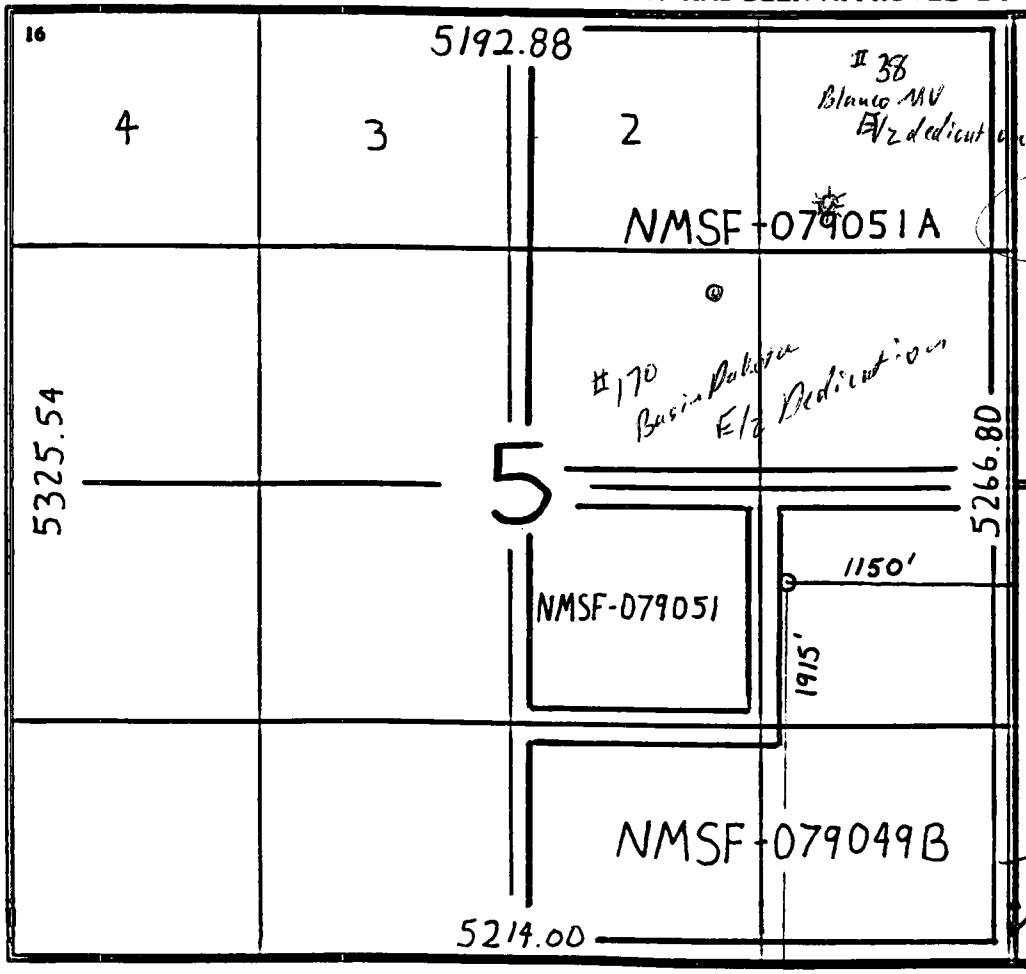
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	5	27-N	6-W		1915	South	1150	East	R.A.

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
MV-E/320.88 DK-E/320.88									

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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 that the information contained herein is true and complete to the best of my knowledge and beli

Peggy Bradfield
Signature

Peggy Bradfield
Printed Name

Regulatory Administrato
Title

7-11-97
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 supervision, and that the same is true and correct to the best of my belief.

6/04/97
Date of Survey

Signature and Seal of Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

6857
Certificate Number

OPERATIONS PLAN

Well Name: San Juan 28-6 Unit #170M
Location: 1915'FSL, 1150'FEL Sec 5, T-27-N, R-6-W
Rio Arriba County, NM
Latitude 36° 36.1, Longitude 107° 29.1
Formation: Blanco Mesa Verde/Basin Dakota
Elevation: 6473'GL

Formation Tops:	***Top***	***Bottom***	***Contents***
Surface	San Jose	2410'	
Ojo Alamo	2410'	2795'	aquifer
Fruitland	2795'	3168'	gas
Pictured Cliffs	3168'	3285'	gas
Lewis	3285'	3636'	gas
Intermediate TD	**3385'**		
Mesa Verde	3636'	4115'	gas
Chacra	4115'	4795'	
Massive Cliff House	4795'	4915'	gas
Menefee	4915'	5355'	gas
Massive Point Lookout	5355'	6548'	gas
Gallup	6548'	7285'	gas
Greenhorn	7285'	7385'	gas
Graneros	7385'	7497'	gas
Dakota	7497'		gas
TD (4 1/2"liner)	**7640'**		

Logging Program:
Cased hole - CBL - TD to 200' above TOC, GR/CNL across MV/Dk

Mud Program:

Interval	Type	Weight	Vis.	Fluid Loss
0- 200'	Spud	8.4-9.0	40-50	no control
200-3385'	LSND	8.4-9.0	30-60	no control
3385-7640'	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#	WC-50
8 3/4"	0' - 3385'	7"	20.0#	J-55
6 1/4"	3285' - 6855'	4 1/2"	10.5#	J-55
6 1/4"	6855' - 7640'	4 1/2"	11.6#	J-55

Tubing Program:

0' - 7640'	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/271 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, 2% gel, 1/2# flocele/sx and 10# gilsonite/sx (890 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 2795'. Two turbolating centralizers at the base of the Ojo Alamo at 2795'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

4 1/2" Production Liner -

Cement to cover minimum of 100' of 4 1/2" x 7" overlap. Lead with 106 sx 65/35 Class "B" poz with 6% gel, 5# gilsonite/sx and 1/4# flocele/sx. Tail with 307 sx 50/50 Class "B" Poz with 2% gel, 1/4# flocele/sx, 5# gilsonite/sx, and 0.4% fluid loss additive (603 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 east half is dedicated to the Mesa Verde and Dakota in this well.
- This gas is dedicated.

Drilling Engineer

7/14/97
Date

BURLINGTON RESOURCES

San Juan 28-6 Unit #170M
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 - None required.

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 Service.

5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained from San Juan 28-6 Water Well located SW/4 Section 23, T-28-N, R-6-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 - Bureau of Land Management

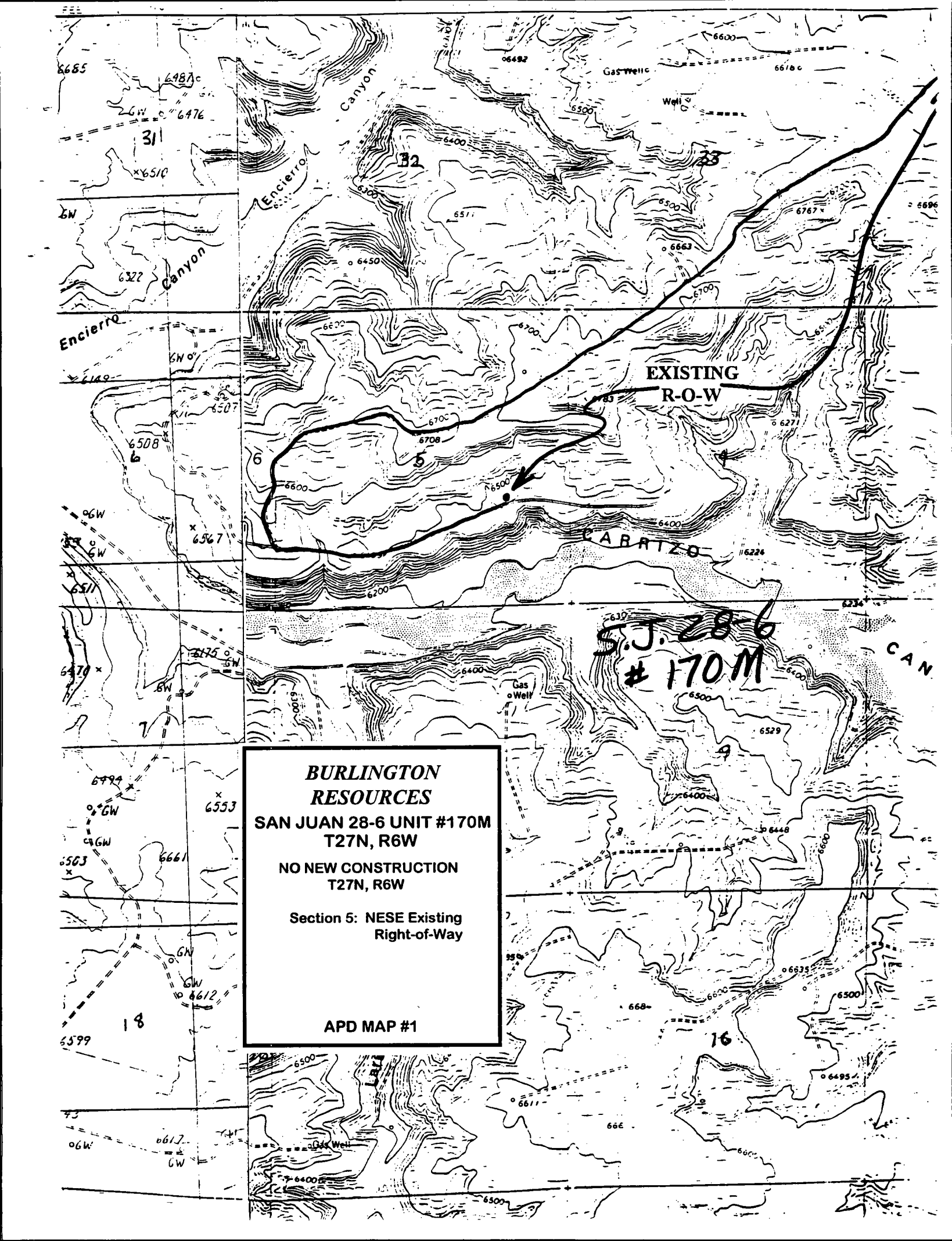
12. Other Information - Environmental stipulations as outlined by the responsible government agency will be adhered to. Refer to the archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.

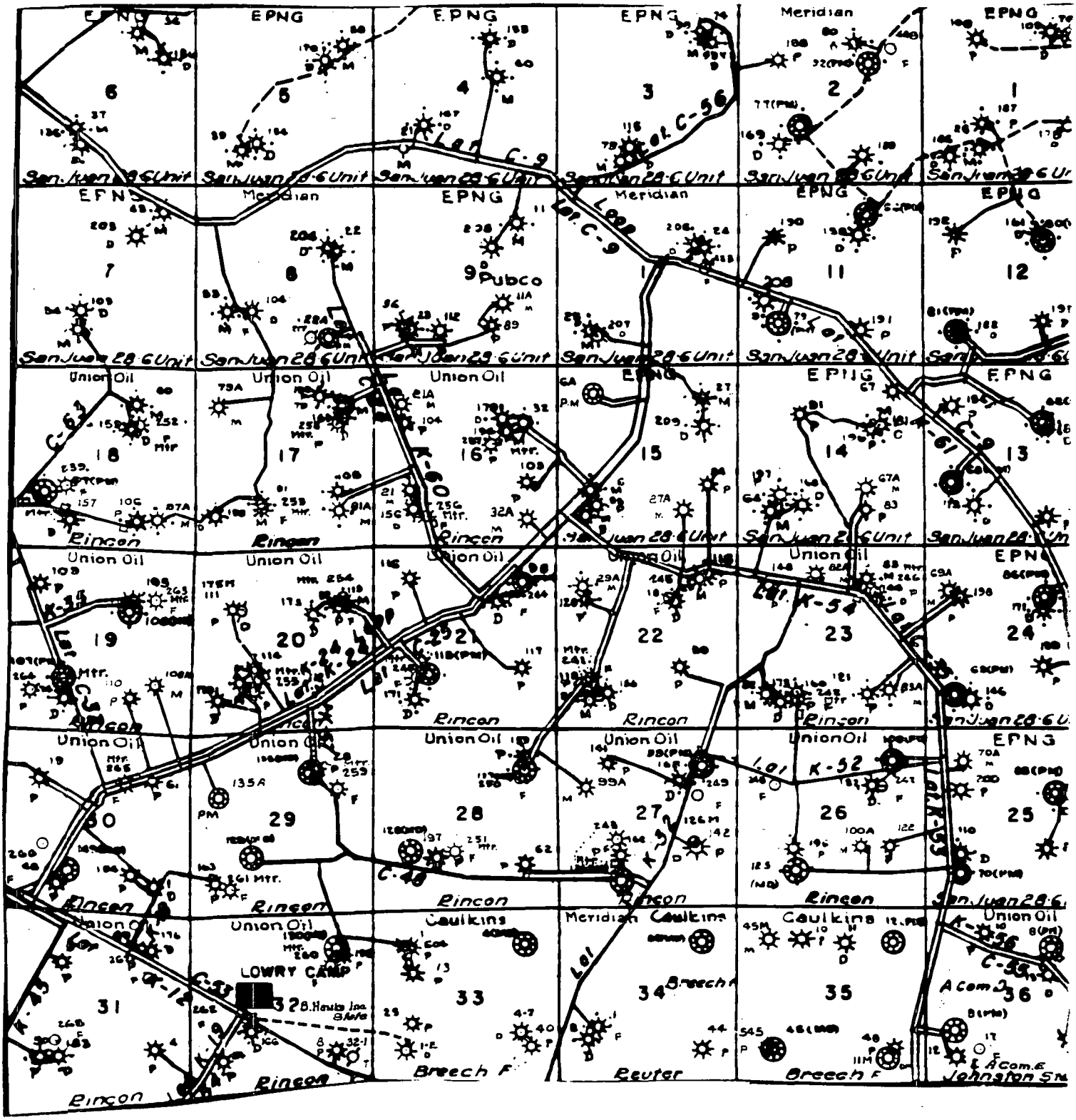
13. Operator's Representative and Certification - Burlington Resources Oil & Gas Company Regional Drilling Manager, Post Office Box 4289, Farmington, NM 87499, telephone (505) 326-9700. I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access 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 7-11-97

Regulatory/Compliance Administrator Date

pb


EXISTING
R-O-W
CABRITO
S.J. 28-6
170M
Encierro
Canyon
Gas Well
Well
BURLINGTON
RESOURCES
SAN JUAN 28-6 UNIT #170M
T27N, R6W
NO NEW CONSTRUCTION
T27N, R6W
Section 5: NESE Existing
Right-of-Way
APD MAP #1



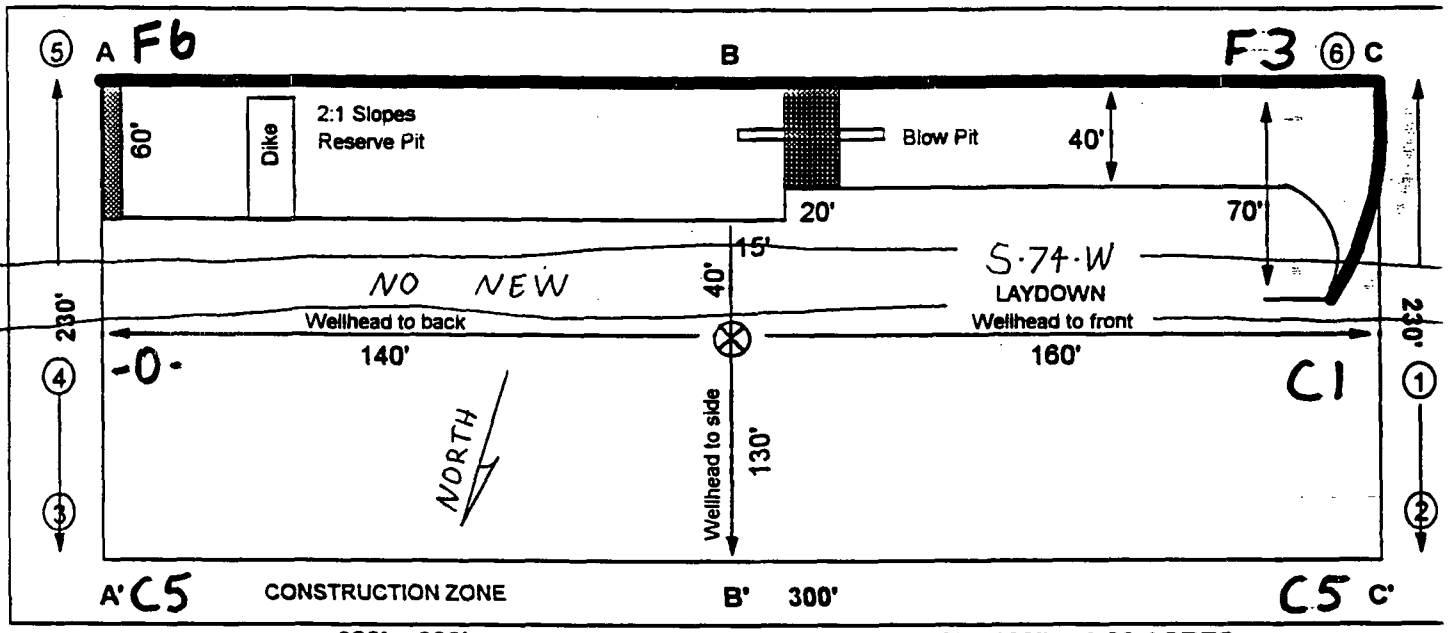
MERIDIAN OIL INC.
Pipeline Map
T-27-N, R-06-W
Rio Arriba County, New Mexico
San Juan 28-6 Unit#170M
Map 1A

3/91 adw/mjb

BURLINGTON RESOURCES

PLAT #1

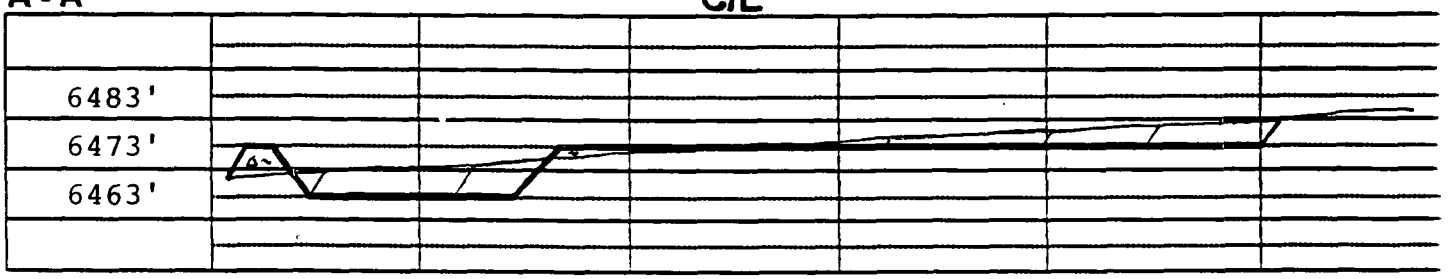
NAME: San Juan 28-6 Unit #170M
FOOTAGE: 1915' FSL, 1150' FEL,
SEC 5 TWN 27 N.R 6 W NMPM
CO: Rio Arriba ST: New Mexico
ELEVATION: 6473' DATE: 6-4-97



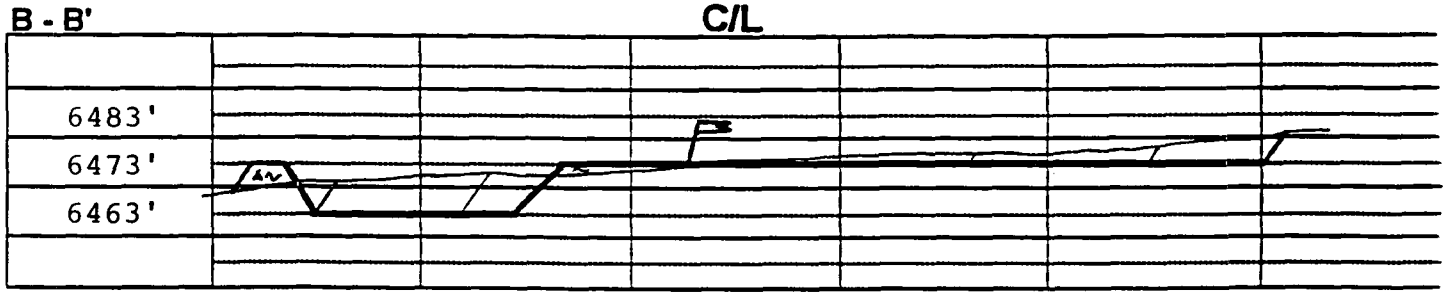
230' x 300' (330' x 400') = 3.03 ACRES

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.

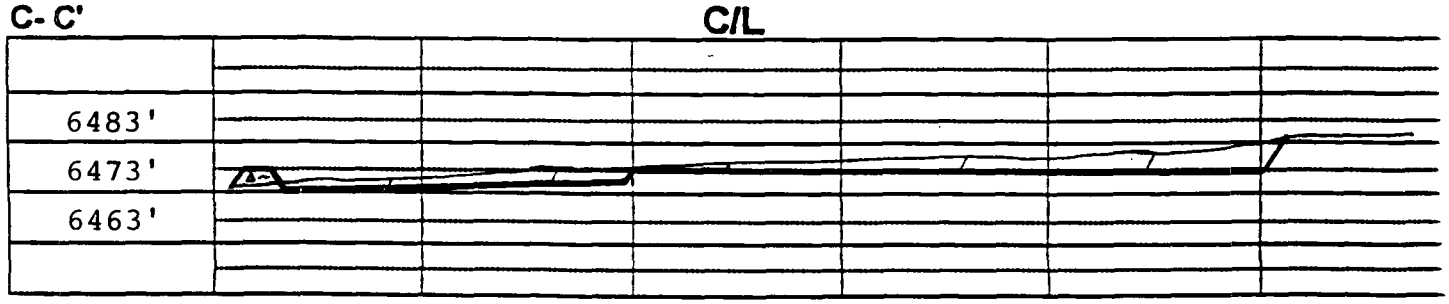
A - A'



B - B'



C- C'



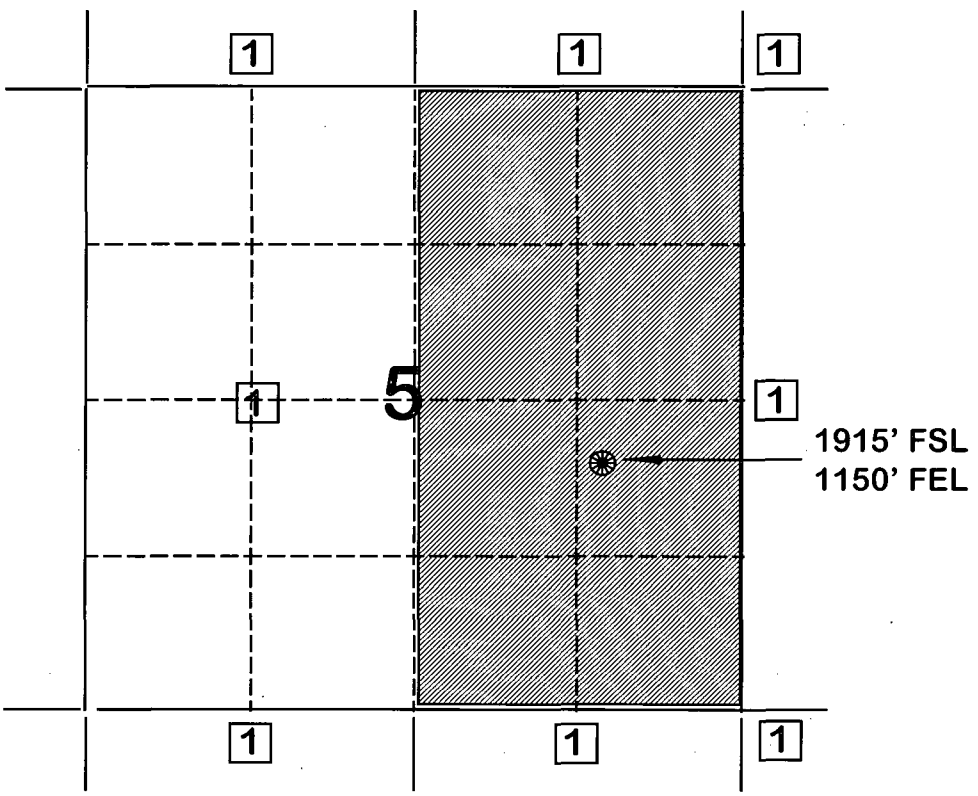
Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cabl on well pad and/or access road at least two (2) working days prior to construction.

BURLINGTON RESOURCES OIL AND GAS COMPANY

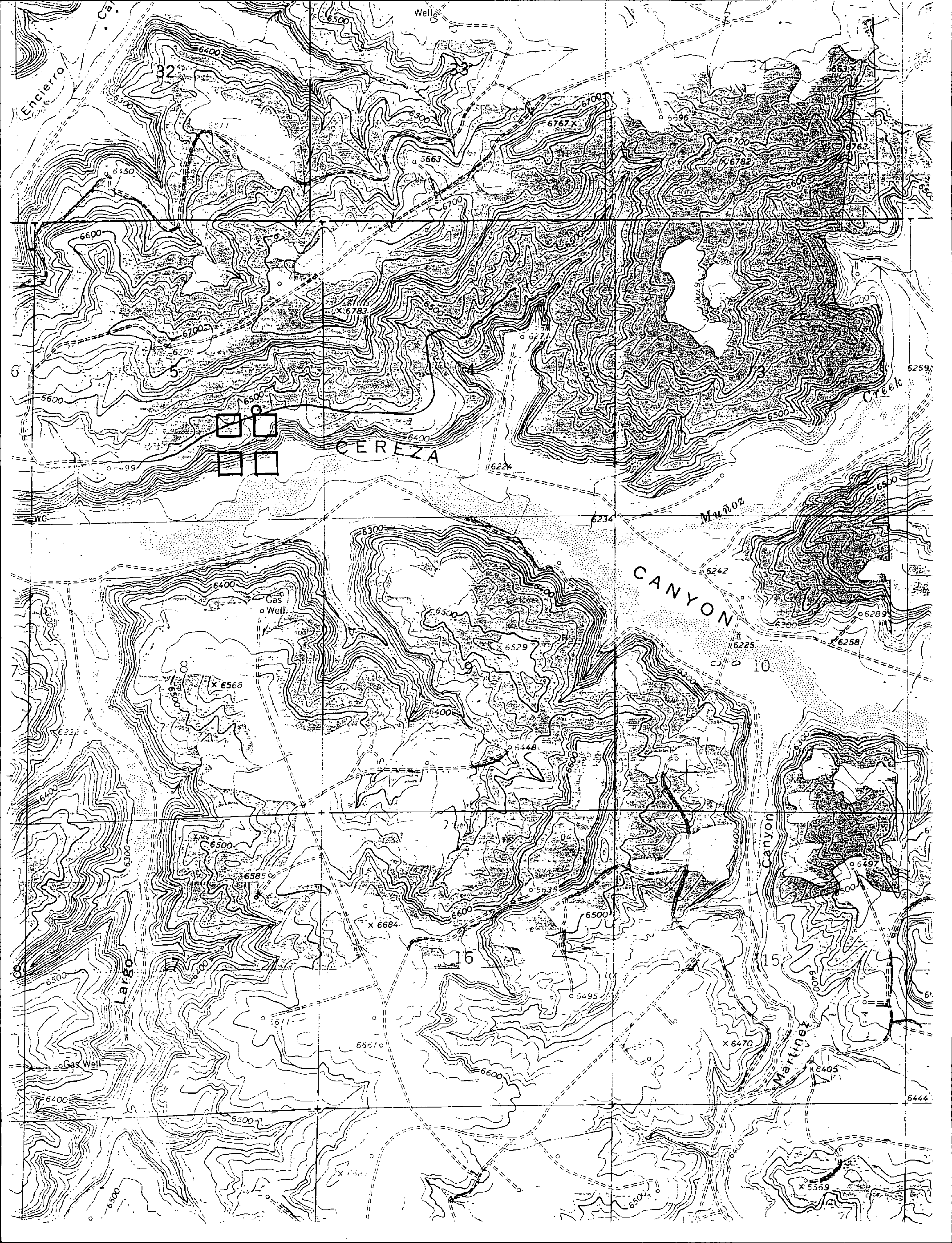
San Juan 28-6 Unit #170M
OFFSET OPERATOR \ OWNER PLAT
Nonstandard Location

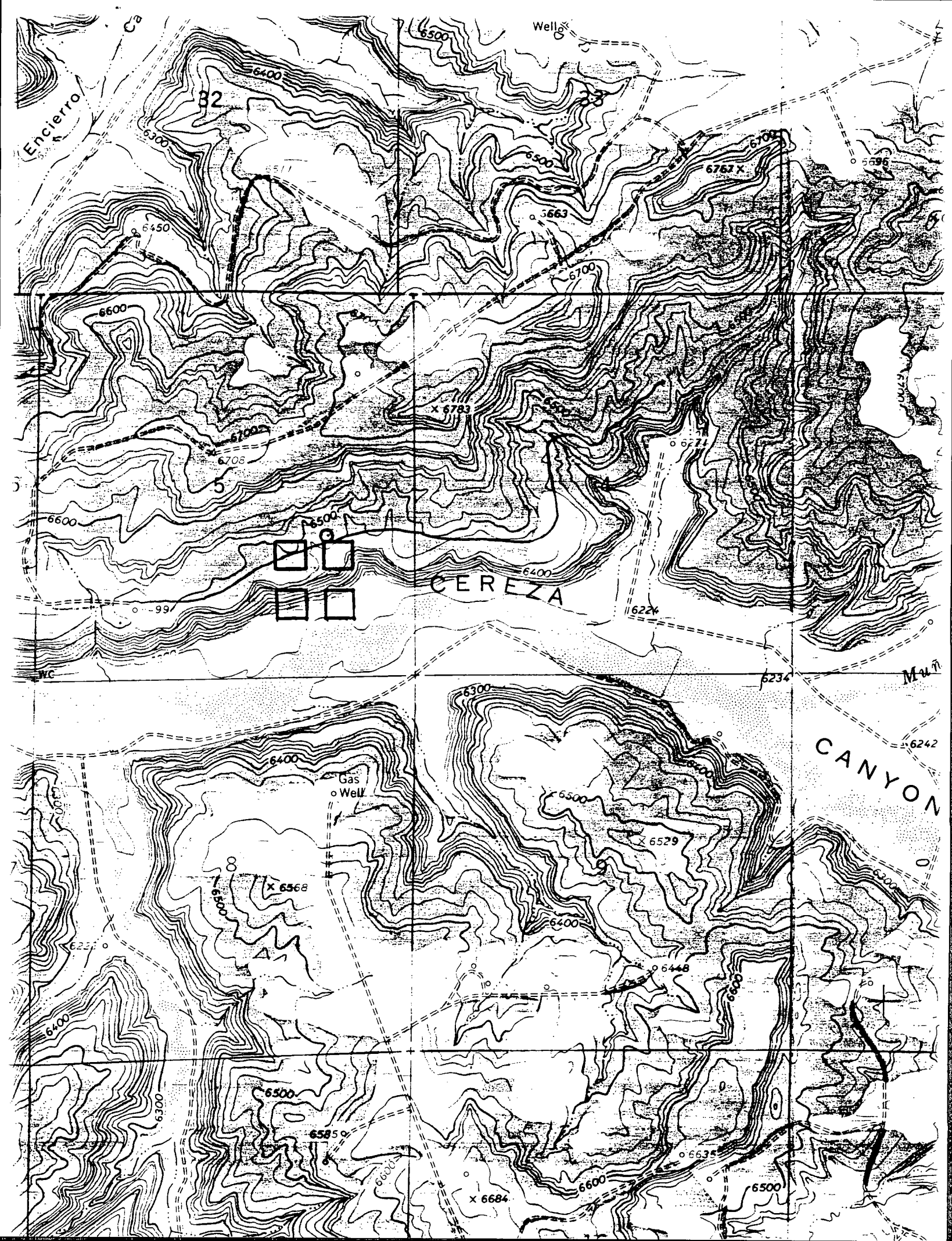
Mesaverde/Dakota Formations Well

Township 27 North, Range 6 West



1) Burlington Resources Oil and Gas Company


Encierro
Well
6500
6400
32
33
34
6300
6700
6767 X
6696
6700
6782
6762
6663
6600
6450
6600
6783
6500
6500
6700
6708
6
5
4
3
6259
Creek
6600
6500
6500
6400
CEREZA
6224
6234
Muñoz
6500
WC
6300
CANYON
6242
6400
Gas Well
6500
6529
6289
6300
6258
6225
7
8
6568
9
10
6400
6448
6600
6300
6400
6500
6585
6635
6600
6684
6500
Canyon
6497
6500
Largo
16
15
8
6500
6495
6470
Martinez
6405
Gas Well
6600
6400
6500
6444
6569
6500


Encierro
Well
32
6400
6300
6500
6700
6767
6596
6663
6450
6600
6783
6708
5
6650
6400
CEREZA
6224
6234
Mu
6242
CANYON
Gas
Well
6529
8
6568
6448
6585
6684
6635

Sec : 05 Twp : 27N Rng : 06W Section Type : **NORMAL**

L **40.00** **Federal owned** **U**	**K** **40.00** **Federal owned** **U**	**J** **40.00** **Federal owned** **U**	**I** **40.00** **Federal owned** **U**
M **40.00** **Federal owned** **U**	**N** **40.00** **Federal owned** **U** **A A**	**O** **40.00** **Federal owned** **U**	**P** **40.00** **Federal owned** **U**

PF01 **HELP** PF02 PF03 **EXIT** PF04 **GoTo** PF05 PF06
PF07 **BKWD** PF08 **FWD** PF09 **PRINT** PF10 **SDIV** PF11 PF12

42
46
88

320.88

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

09/18/97 20:10:37
OGOMES -EMEW
PAGE NO: 1

Sec : 05 Twp : 27N Rng : 06W Section Type : **NORMAL**

4 40.34 Federal owned U	3 40.38 Federal owned U	2 40.42 Federal owned U	1 40.46 Federal owned U A
E 40.00 Federal owned U	F 40.00 Federal owned U	G 40.00 Federal owned U A A	H 40.00 Federal owned U

PF01 **HELP** PF02 PF03 **EXIT** PF04 **GoTo** PF05 PF06
PF07 **BKWD** PF08 **FWD** PF09 **PRINT** PF10 **SDIV** PF11 PF12