



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://nemnrd.state.nm.us/ocd/District III/3district.htm](http://nemnrd.state.nm.us/ocd/District%20III/3district.htm)

GARY E. JOHNSON
GOVERNOR

Jennifer A. Salisbury
CABINET SECRETARY

March 23, 1998

Ms Peggy Bradfield
Burlington Res O&G Co
PO Box 4289
Farmington NM 87499-4289

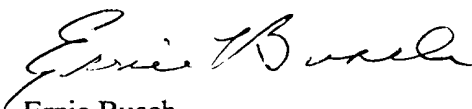
Re: Huerfano Unit #302, C-31-27N-10W, API Not Yet Assigned

Dear Ms Bradfield:

Your application to directionally drill the proposed referenced well at a surface location of 825' FNL, 1520' FWL and a proposed bottom hole location of 1550' FNL, 1450' FEL is hereby approved. If after the well is drilled, the bottom hole location is closer than 790' to the drill tract boundary, this approval will be of no effect.

If you have any questions please contact me.

Yours truly,



Ernie Busch
District Geologist/Deputy O&G Inspector

EB/sh

Xc: Farmington BLM-Duane Spencer
NMOCD(Santa Fe)-Michael Stogner

hrfno 302. dd

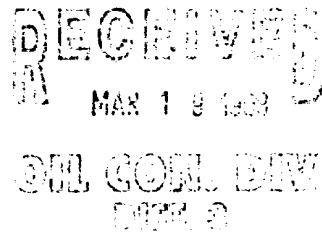
BURLINGTON RESOURCES

SAN JUAN DIVISION

March 16, 1998

Sent Federal Express

Mr. Michael Stogner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505



Re: Huerfano Unit #302
825'FNL, 1520'FWL Section 31, T-27-N, R-10-W, San Juan County, New Mexico
1550'FNL, 1450'FEL Section 31, T-27-N, R-10-W, San Juan County, New Mexico
API # 30-045-(not yet assigned)

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval to directional drill the referenced well to an anticipated non-standard bottom hole location for the Angels Peak Gallup formation. This application is to maximize the extent of the wellbore within the Gallup. The surface location is also non-standard for the Gallup due to terrain as shown on the attached topographic map.

Production from the Angels Peak Gallup pool is to be included in a standard 327.9 gas spacing and proration unit comprising the north half (N/2) of said Section 31.

The following attachments are for your review:

1. Application for Permit to Drill.
2. Completed C-102 showing both surface and anticipated bottom hole locations with windows.
3. Offset operators/owners plat -- Burlington is the offset operator
4. Plan views of the proposed well, well profile data, and proposed data as drilling progresses through the various formations.

We appreciate your earliest consideration of this application.

Sincerely,

A handwritten signature in cursive script, appearing to read "Peggy Bradfield".

Peggy Bradfield
Regulatory/Compliance Administrator

xc: Bureau of Land Management
NMOCD - Aztec District Office



NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

March 18, 1998

Burlington Resources Oil & Gas Company
P. O. Box 4289
Farmington, New Mexico 87499-4289

Attention: Peggy Bradfield

Re: Two applications dated March 16, 1998 for non-standard subsurface producing areas/non-standard bottom-hole locations within the Angles Peak-Gallup Associated Pool for Burlington's proposed Huerfano Unit Well Nos. 299 (to be drilled in the N/2 of Section 15, Township 26 North, Range 9 West, NMPM, San Juan County, New Mexico) and 302 (to be drilled in the N/2 of Section 31, Township 27 North, Range 10 West, NMPM, San Juan County, New Mexico).

Dear Ms. Bradfield:

The subject applications were received by this office on March 17, 1998. My review of these applications indicates that the method to be used on deviating both wells can be quickly administered at the District level, see Division General Rules 111.A(7) and 111.C(1), which rules streamlined the directional drilling procedures. Both these applications will be forwarded to the Aztec District office of the Division for processing.

Should you have any questions or comments concerning this matter, after first consulting Division General Rule 111 and the applicable special pool rules governing the Angles Peak Gallup Associated Pool, please contact any of the following individuals:

Ms. Donna Williams in Midland, Texas with Burlington at (915) 688-6943,
Mr. W. Thomas Kellahin, Burlington's Legal Counsel in Santa Fe at (505) 982-4285, and/or
Mr. Ernie Busch in Aztec at (505) 334-6178.

Thank you.

RECEIVED
MAR 19 1998
OIL CON. DIV.
DIST. 3

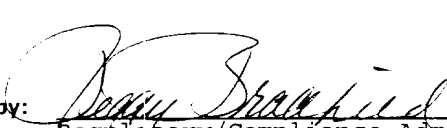
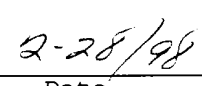
Sincerely,

Michael E. Stogner
Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Aztec
W. Thomas Kellahin - Santa Fe
Ms. Donna Williams, Burlington Resources Oil & Gas Company - Midland, Texas
Alan Alexander, Burlington Resources Oil & Gas Company - Farmington
W. Perry Pearce - Burlington Resources Oil & Gas Company, Santa Fe

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-078422 Unit Reporting Number
1b.	Type of Well GAS	6.	If Indian, All. or Tribe
2.	Operator BURLINGTON RESOURCES Oil & Gas Company	7.	Unit Agreement Name Huerfano Unit
3.	Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8.	Farm or Lease Name Huerfano Unit
		9.	Well Number 302
4.	Location of Well 825' FNL, 1520' FWL - surface 1550' FNL, 1450' FEL - bottomhole Latitude 36° 32.2, Longitude 107° 55.4	10.	Field, Pool, Wildcat Angels Peak Gallup
		11.	Sec., Twn, Rge, Mer. (NMPM) Sec 31, T-27-N, R-10-W API # 30-045-
14.	Distance in Miles from Nearest Town 14 miles to Huerfano	12.	County San Juan
		13.	State NM
15.	Distance from Proposed Location to Nearest Property or Lease Line 825'		
16.	Acres in Lease	17.	Acres Assigned to Well 327.9 N/2
18.	Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease 600'		
19.	Proposed Depth 5562'	20.	Rotary or Cable Tools Rotary
21.	Elevations (DF, FT, GR, Etc.) 6057' GR	22.	Approx. Date Work will Start
23.	Proposed Casing and Cementing Program See Operations Plan attached		
24.	Authorized by:  Regulatory/Compliance Administrator		 Date

PERMIT NO. _____ APPROVAL DATE _____
APPROVED BY _____ TITLE _____ DATE _____

Archaeological Report submitted by Arboles Contract Arch Tech Report #1197 dated 1-16-98
Threatened and Endangered Species Report submitted by Ecosphere

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

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 presentations as to any matter within its jurisdiction.

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

District II
PO Drawer CD, Artesia, NM 88211-0719

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

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number		2 Pool Code		3 Pool Name	
4 Property Code		5 Property Name HUERFANO UNIT			6 Well Number 302
7 GRID No.		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 6057'

10 Surface Location

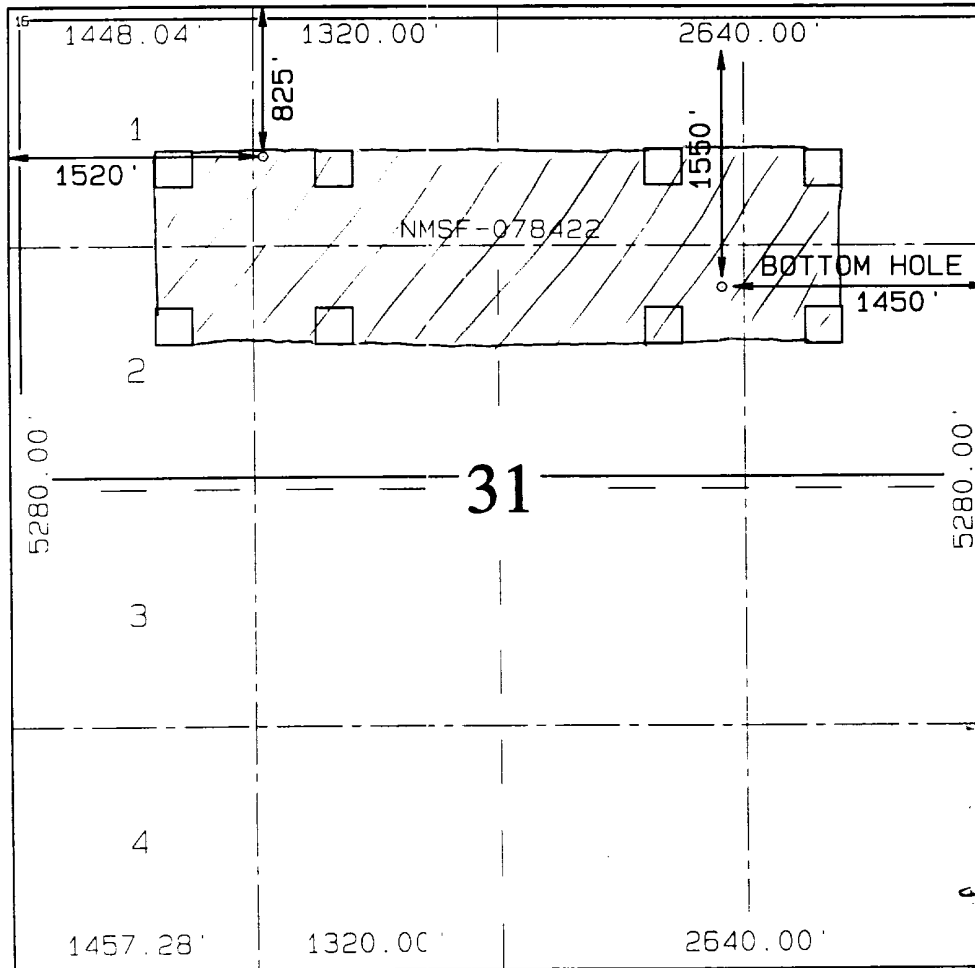
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	31	27N	10W		825	NORTH	1520	WEST	SAN JUAN

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
G	31	27N	10W		1550	NORTH	1450	EAST	SAN JUAN

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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



17 OPERATOR CERTIFICATION

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

Signature

Printed Name

Title

Date

18 SURVEYOR CERTIFICATION

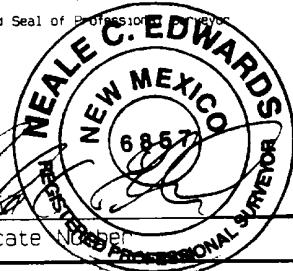
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 19, 1997

Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number



OPERATIONS PLANWell Name: Huerfano Unit #302Location: 825' FNL, 1520' FWL Section 31, T-27-N, R-10-W - surface
1550' FNL, 1450' FEL Section 31, T-27-N, R-10-W - bottom hole
San Juan County, New Mexico
Latitude 36° 32.2, Longitude 107° 55.4Formation: Angels Peak GallupElevation: 6057' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	Nacimiento	659'	aquifer
Ojo Alamo	659'	764'	aquifer
Kirtland	764'	1438'	
Fruitland	1438'	1649'	gas
Pictured Cliffs	1649'	1996'	gas
Lewis	1996'	2532'	gas
Chacra	2532'	3067'	gas
Mesa Verde	3067'	3272'	gas
Menefee	3272'	4045'	gas
Point Lookout	4045'	4490'	gas
Mancos	4490'	5181'	
Niobrara	5181'	5542'	gas
Tocito	5542'		gas
Total Depth	5562'		

Logging Program:Cased hole logging - Gamma Ray Neutron
Coring/DST - noneMud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 320'	Spud	8.4-9.0	40-50	no control
320-5400'TVD 5402'MD	LSND -	8.4-9.0	30-60	no control
5400'TVD-5817'TVD 8127'MD	Gas/Mist	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):

<u>Hole Size</u>	<u>Measured Depth</u>	<u>TVD</u>	<u>Csq.Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	320'	0- 320'	9 5/8"	32.3#	H-40
8 1/2"	5202'	0-5200'	7"	20.0#	J-55
6 1/4"	8000'	5050-5562'	4 1/2"	10.5#	J-55

Tubing Program: 0' - 5562' 2 3/8" 4.7# J-55BOP 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.

BOP Specifications, Wellhead and Tests (cont'd):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 2000 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 drill crew.
- All BOP tests & 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 262 sx Class "B" cement with 1/4# flocele/sx and 3% calcium chloride (301 cu.ft. of slurry, 200% excess to circulate to surface). WOC 8 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/516 sx Class "B" w/3% econolite, 10# gilsonite/sx and 1/2# flocele/sx. Tail w/100 sx 50/50 Class "B" Poz w/2% gel, 2% calcium chloride, 0.5# flocele/sx, and 10# gilsonite/sx (1368 cu.ft. of slurry, 75% excess to circulate to surface.) WOC minimum of 8 hours before drilling out intermediate casing. If cement does not circulate to surface, a CBL will be run 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 764'. Two turbolating centralizers at the base of the Ojo Alamo at 764'. 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 - will be uncemented and every third joint preperforated

Special Drilling Operations (Gas/Mist Drilling):

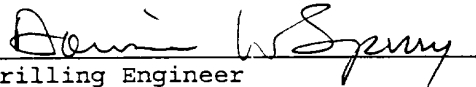
The following equipment will be operational while gas/mist drilling:

- 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.
- 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 Mesa Verde formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	750 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The north half of the section is dedicated to the Mesa Verde.
- This gas is dedicated.


Drilling Engineer

3-9-98
Date

BURLINGTON RESOURCES

Huerfano Unit #302 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 80' 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 El Paso Field Services.
5. Location and Type of Water Supply - Water will be hauled by truck for the proposed project and will be obtained from Rowley #7 bradenhead located in SW/4 Section 7, T-27-N, R-10-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.


Regulatory/Compliance Administrator 2/12/98
Date

BURLINGTON RESOURCES OIL & GAS COMPANY HUERFANO UNIT #302

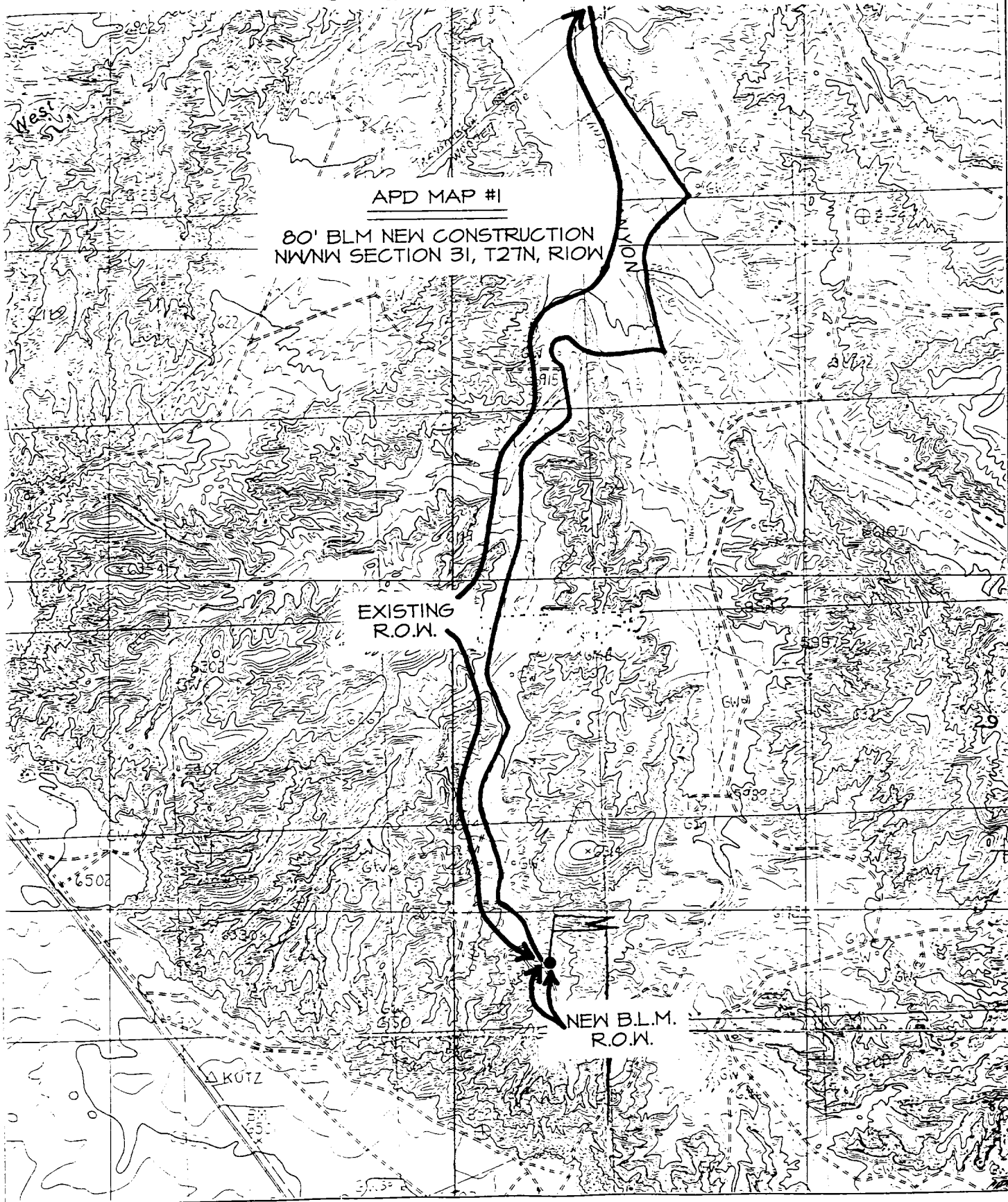
825' FNL 1520' FNL SEC 31, T27N, R10W
SAN JUAN COUNTY, NEW MEXICO

APD MAP #1

80' BLM NEW CONSTRUCTION
NWNW SECTION 31, T27N, R10W

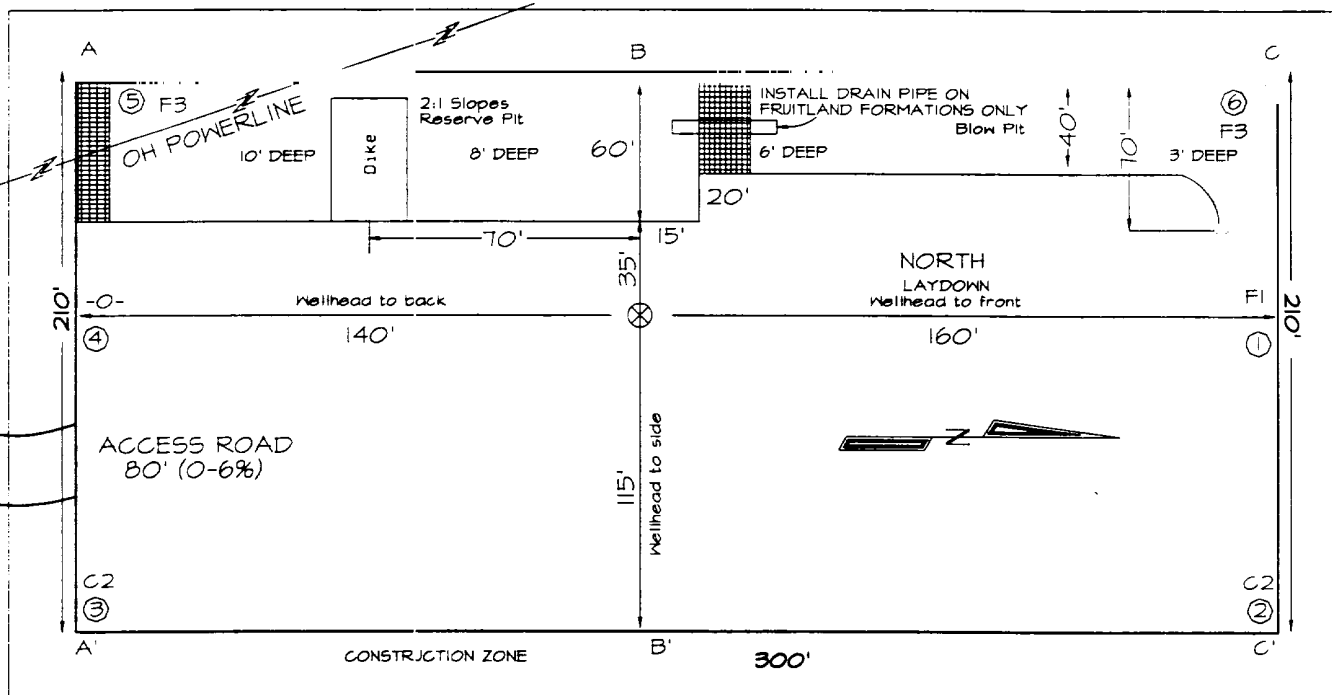
EXISTING
R.O.W.

NEW B.L.M.
R.O.W.



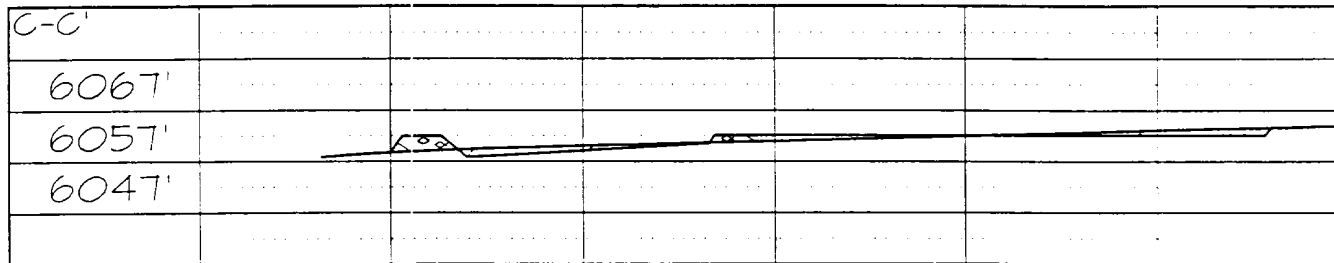
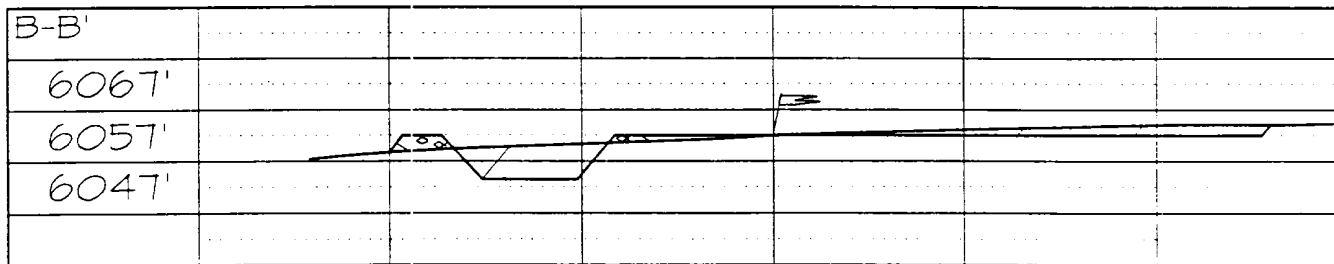
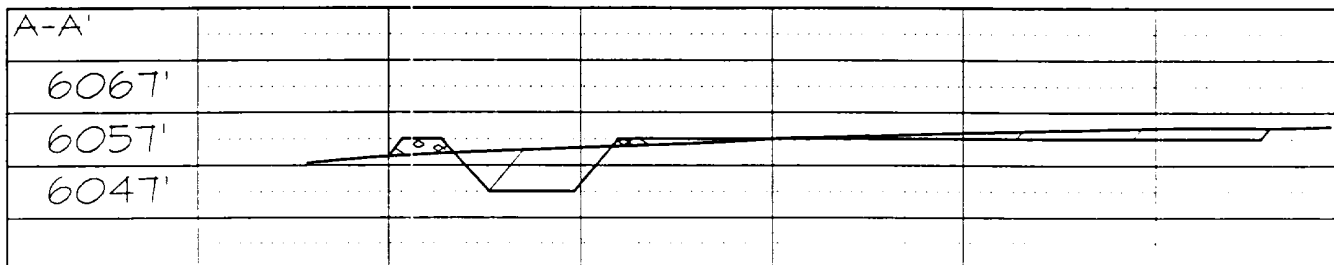
PLAT #1

BURLINGTON RESOURCES OIL & GAS COMPANY
 HUERFANO UNIT #302, 825' FNL & 1520' FWL
 SECTION 31, T27N, R10W, NMPM, SAN JUAN COUNTY, NEW MEXICO
 GROUND ELEVATION: 6057' DATE: NOVEMBER 19, 1997



210' x 300' (310' x 400') = 2.85 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.



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

BURLINGTON RESOURCES OIL AND GAS COMPANY

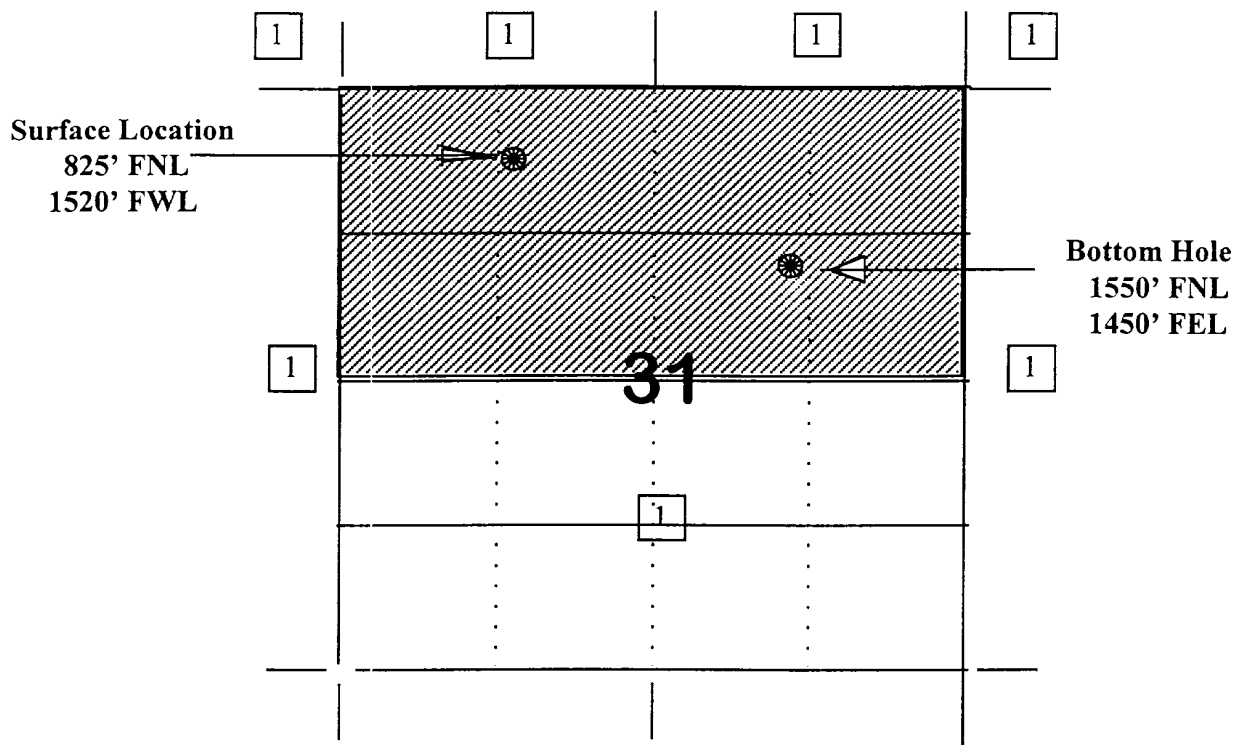
Huerfano Unit #302

OFFSET OPERATOR/OWNER PLAT

Non Standard Location

Angels Peak Gallup Formation Well

Township 27 North, Range 10 West

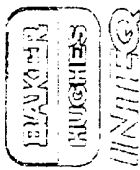


1) Burlington Resources

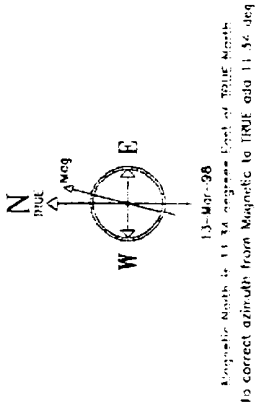
BURLINGTON RESOURCES

Structure : SEC.31-T2/N-R10W Well : HUERFANO UNIT #302
Field : SAN JUAN COUNTY Location : NEW MEXICO

WELL PROFILE DATA



From	MD	inc	Deg	TWD	North	East	V. Sect	Deg/100
Top	0.00	0.00	107.23	0.00	0.00	0.00	0.00	0.00
ROP	4969.04	0.00	107.23	4969.04	0.00	0.00	0.00	0.00
End of Build	5869.04	90.00	107.23	5542.00	-169.70	54.25	572.96	10.00
T.O. & Target Well Brand	7743.55	90.00	107.23	5542.00	7743.95	2338.04	2417.87	0.00



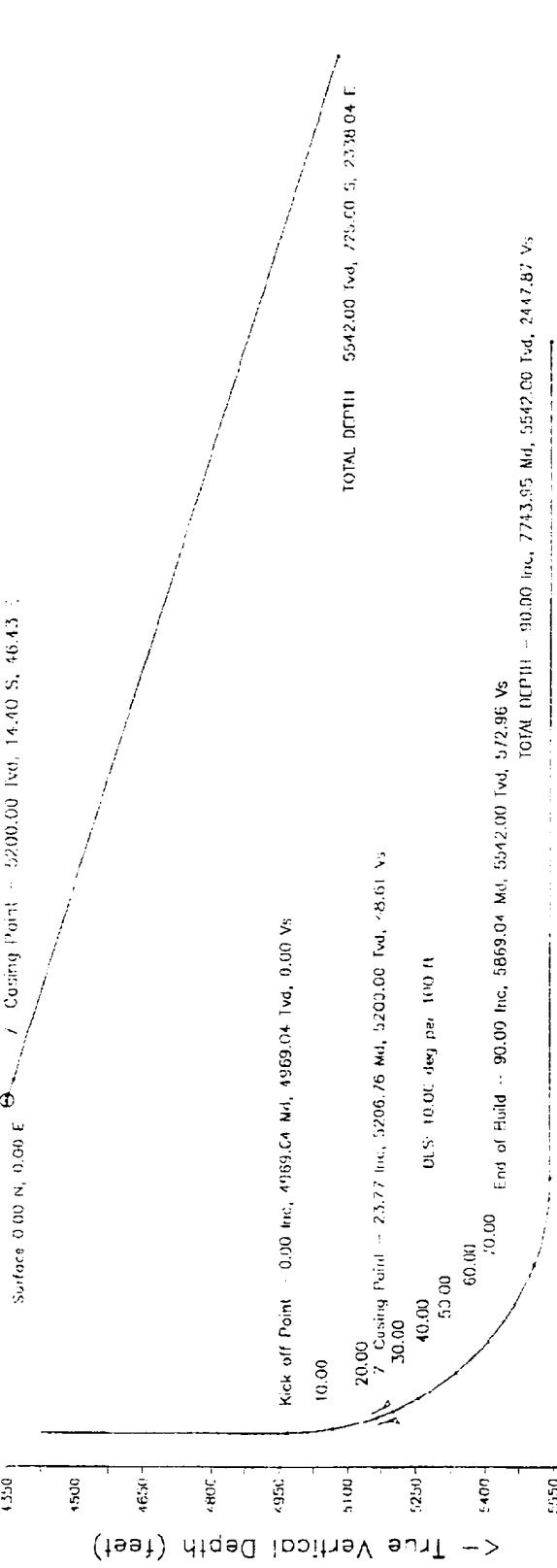
East (feet) ->

0 150 300 450 600 750 900 1050 1200 1350 1500 1650 1800 1950 2100 2250 2400

Surface 0.00 N, 0.00 E / Casing Point - 5200.00 Twd, 14.40 S, 46.43 E

South (feet) ->

0 150 300 450 600 750



Vertical Section (feet) ->

0 150 300 450 600 750 900 1050 1200 1350 1500 1650 1800 1950 2100 2250 2400 2550

Azimuth 107.23 with reference 0.00 N, 0.00 E from SLOT #1

Baker Hughes INTEQ
DRAWN BY: WALLY HOLBROOK
DATE: MAR 13, 1998
TVD REFERENCED RKB
DENVER, COLORADO
PHONE: (303) 534-3223