submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

Sundry Notices and Reports on Wells

98 MAY 29 PM 1:55

070 FARMINGTON, NM

1. **Type of Well**
GAS

5. **Lease Number**
SF-080511

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**

2. **Name of Operator**
BURLINGTON RESOURCES OIL & GAS COMPANY

8. **Well Name & Number**
Lively #21E

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

9. **API Well No.**
30-039-22670

4. **Location of Well, Footage, Sec., T, R, M**
930'FNL, 800'FWL, Sec. 31, T-27-N, R-7-W, NMPM

10. **Field and Pool**
Otero Chacra/
Blanco MV/Basin DK

11. **County and State**
San Juan Co, NM

12. **CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission	Type of Action		
_X_ Notice of Intent	___ Abandonment	___ Change of Plans	
	_X_ Recompletion	___ New Construction	
___ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing	
	___ Casing Repair	___ Water Shut off	
___ Final Abandonment	___ Altering Casing	___ Conversion to Injection	
	___ Other -		

13. **Describe Proposed or Completed Operations**

It is intended to recomplete the subject well in the Chacra and Mesaverde formations according to the attached procedure and wellbore diagram. After recompletion the well will be down hole commingled. A down hole commingle order will be applied for.

RECEIVED
JUN 1 1998
OIL CON. DIV.
DIST. 3

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

Signed Peggy Bradfield (WFPUD) Title Regulatory Administrator Date 5/19/98

no

(This space for Federal or State Office use)

APPROVED BY /S/ Duane W. Spencer Title _____ Date MAY 27 1998

CONDITION OF APPROVAL, if any:

NMOCD

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-102
Revised February
Instructions
Submit to Appropriate District
State Lease -
Fee Lease -

☐ AMENDED R

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹API Number	²Pool Code	³Pool Name
30-039-22670	82329 72319/71599	Otero Chacra (AT) Blanco Mesaverde/Basin Dakota

⁴Property Code	⁵Property Name	⁶Well Nu
	LIVELY	21E

⁷OGRID No.	⁸Operator Name	⁹Elevati
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	599(

¹⁰ Surface Location

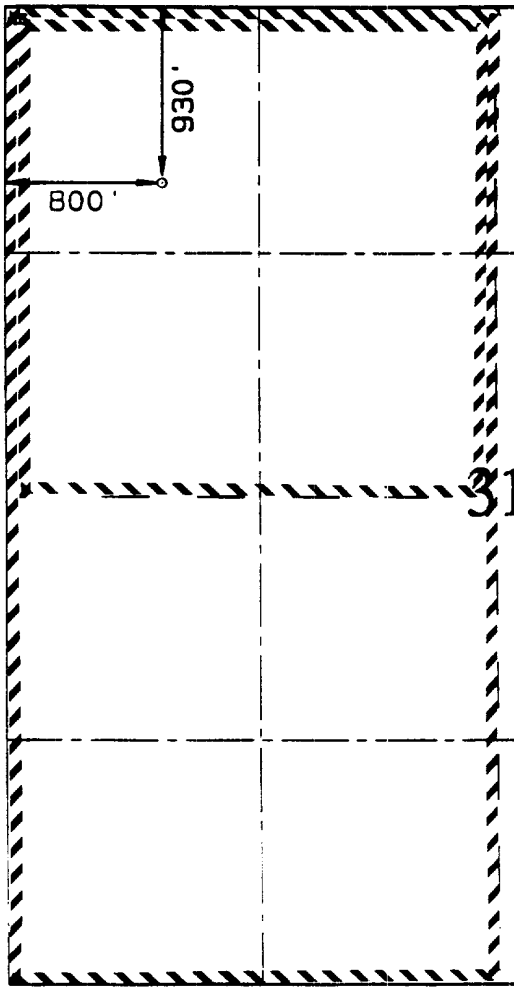
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	
D	31	27N	7W		930	NORTH	800	WEST	AF

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

¹²Dedicated Acres	¹³Joint or Infill	¹⁴Consolidation Code	¹⁵Order No.
Cha-160.6 MV-W/321.60, DK-W/321.60			

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



Not resurveyed, prepared from a plat dated 4-17-80 by Edgar L. Risenhoover.

¹⁷ OPERATOR CERTIFIC

I hereby certify that the information contai
true and complete to the best of my knowlex

Signature

Peggy Bradfield
Printed Name

Regulatory Adminis
Title

5-20-98
Date

¹⁸ SURVEYOR CERTIFIC

I hereby certify that the well location sho
was plotted from field notes of actual surv
or under my supervision, and that the same
correct to the best of my belief.

MAY 18 C. EDWARD
Date of Survey

Signature and Seal of Professional Surveyor

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

Certificate Number

BURLINGTON RESOURCES

Lively #21E

930' FNL, 800' FWL
Unit D, Section 31, T27N, R7W
Rio Arriba County, New Mexico
LAT: 36° 32.05' LONG: 107° 37.35'
Chacra / Blanco Mesaverde / Basin Dakota

Completion Procedure

DIRECTIONS:

Take Hwy. 64 east out of Bloomfield to Cottonwood Canyon. Proceed 1 mile south of Cottonwood Canyon and turn left off of Largo Rd. at the Burroughs Com #1. Proceed ½ mile to wash. Lively #21E is in wash. BR Harrington #2 meter run is on same location.

PROJECT OBJECTIVE:

Recomplete Chacra and Mesaverde Point Lookout and commingle with existing Dakota. The Mesaverde will be completed with a single stage Slickwater frac using 100,000# of 20/40 sand. The Chacra will be complete with a single state 70Q Foam frac using 50,000# of 20/40 sand. A completion rig will be moved in for logging, stimulation and clean out operations. Zones will be cleaned up and a single string of tubing landed.

STIMULATION:

SP/IL run on 7/10/81. GR/CNL run on 7/10/81.

Deliver to location following equipment:

Eleven (11) - 400 bbl Frac Tanks.
4-1/2" Wellhead Isolation Tool (2 jts. of 2-3/8" 4.7# J-55 tubing and 4-1/2" Baker Retrieva-D Lok-Set retrievable casing packer)
Two (2) CIBP's
2000' 2-3/8", 4.7#, J-55, EUE workstring / production tubing
Four (4) 3-1/8" drill collars (if necessary)
3-7/8" bit/mill

Below are materials required for the proposed Two (2) Stage fracture stimulation:

	Chacra	Mesaverde	
		Pt. Lookout	
Fluid Type	25# Linear gel & N2	Slickwater	
Stages	One	One	
Acid Volume 15% HCl	35	35	Bbls
Fluid Volume 2% KCl	238	2542	Bbls
Sand Type	Arizona	Arizona	
Sand Size	20/40 - 50,000	20/40 – 100,000	Lbs.
Additional Materials	290,100 N2 (w/o cooldown)		scf

WELL SITE PREPARATION

1. Hold pre-job meeting with rig supervisor, engineers, frac consultant, wireline company, stimulation company, and other key vendors to review procedure. MIRU completion rig. Place fire and safety equipment in strategic locations. Comply with all BR, BLM, and NMOCD rules and regulations. Record tubing and casing pressures.

2. Kill well w/ 2% KCl down tubing, if necessary. ND wellhead. Replace any failed valves or seals on wellhead. NU BOP's w/ 2-3/8" pipe rams and stripping head.

3. TOH with 6555' of 2-3/8" tubing. Rabbit and strap tubing. Inspect and replace any bad joints.

4. MIRU wireline unit. Under lubricator, RIH with 4-1/2" gauge ring to PBTD of 6680'. POOH.

5. TIH w/ 4-1/2" CIBP on 2-3/8" tubing. Set 4-1/2" CIBP @ 5000' (note: lowest first stage perforation @ 4662'). Load hole with 2% KCl (~80 bbls.). Calculate the displacement required to spot 10 bbls. of 15% HCl across Point Lookout interval (4458'-4662') while loading hole. Double inhibit acid. TOH with 2-3/8" tubing.

6. MIRU wireline unit. Under lubricator, RIH with 4-1/2" gauge ring to PBTD of 5000'. POOH.

7. Pressurize 4-1/2" casing to 1000 psi with rig pump and hold pressure during logging run. Under lubricator, run GR/CBL from CIBP @ 5000' to 200' above top Chacra perforation @ 3136' or 200' above TOC whichever occurs first. If TOC is below 3086' contact production engineer immediately for remedial cementing procedure. POOH.

8. Run fluid tests on water. Filter water based upon stimulation company solids water analysis. Contact Production Engineer and discuss stimulation water source and quality. Inspect wellsite, verify and report wellhead size and pressure rating. Mark location with flagging for tank spotting. Spot Eleven (11) frac tanks and fill w/ 3# biocide/tank & 2% KCl water. Put one load of fresh water in each tank before adding 20% concentrated KCl water. Set location proppant container and fill with sand.

9. TIH with 2-3/8" tubing open ended to 4662'. MIRU stimulation company. Pressure test surface lines to 5100 psi. Pump 10 bbls. of 15% HCl and flush with 2% KCl to bottom of tubing (~18 bbls.). RD stimulation company. POOH with 2-3/8" tubing.

10. TIH with Wellhead Isolation Tool and set packer @ +/-60'. NU stimulation company. Pressure test surface lines to 5100 psi. Pressure test casing and frac valve to 4100 psi. for 15 minutes. Record results. Ensure all personnel are clear of wellhead before pressure testing. Bleed off pressure. ND stimulation company. Unseat packer. POOH.

POINT LOOKOUT PERFORATING AND FRACTURE STIMULATION (1ST STAGE):

11. NU wireline company. Under lubricator, RIH with 3-1/8" HSC casing gun. While holding 2000 psi on casing, select fire perforate Point Lookout with 2 SPF @ 120° phasing, 0.32" diameter, 14.3" penetration, 10 gram charges (Owen, 302) at the following depths:

    Following Point Lookout perforations at **2 spf @ 120° phasing:**

4458	4466	4468	4470	4472	4474	4476	4478	4480	4482
4484	4486	4488	4490	4492	4524	4526	4528	4530	4532
4534	4568	4572	4576	4590	4592	4594	4596	4620	4662

    (60 holes, 204' of gross interval)

    POOH and ND wireline. Inspect casing gun to ensure all perforations fired.

12. TIH with Wellhead Isolation Tool and set packer @ +/-60'. NU stimulation company. Pressure test lines to 5100 psi. Prepare to breakdown perforations. Pump into perforations to establish injection rate at maximum pressure of 4100 psi. Record breakdown pressure, rate and ISIP. If an injection rate cannot be established, RIH w/ 50' acid dump bailer filled with 15% HCl and spot from 4458' – 4508'.

13. Begin balloff. Pump 25 bbls of 15% HCl (Add 2/1000 gallons corrosion inhibitor) and flush with 2% KCl at maximum rate pressure will allow.

    Note: Calculate the number of perforations open once a stabilized rate is achieved during breakdown. If 90% of the perforations calculate to open, pump acid but do not drop balls.

    If no ball sealers are going to be dropped skip to step 17.

14. If less than 90% of the holes calculate to be open, drop a total of 90, 7/8" 1.3 SG RCN ball sealers spaced evenly throughout job. Maximum pressure at balloff is 4100 psi. ND stimulation company. Unseat packer. TOH.

15. NU wireline company. Under lubricator, RIH with 4-1/2" junk basket to recover ball sealers. Run basket by perforations several times to ensure maximum ball recovery. POOH and ND wireline company. Record number of hits and balls recovered.

16. TIH with Wellhead Isolation Tool and set packer @ +/-60'.

17. NU stimulation company. Hold safety meeting. Pressure test surface lines to 5100 psi. Maximum surface treating pressure during frac is 4100 psi. Fracture stimulate Point Lookout interval (NO RA tracer) per attached schedule at 50 BPM rate with 100,000 #'s of 20/40 Arizona sand. (Add 0 to 0.5/1000 gals friction reducer as needed and no surfactant). Quick flush at 2 ppg with 69 bbls of 2% KCl to 100' above top perforation. Cut rate throughout flush as pressure allows. Calculate displacement to spot 10 bbls of 15% HCl across next interval (3136' – 3280'). Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND stimulation company. Leave shut-in for 1 hr to allow sand to settle.

18. Unseat packer. TOH. NU wireline company. Under a lubricator, RIH with 4-1/2", 10.5# CIBP and set at 3380' (note: lowest second stage perforation @ 3280'). POOH and ND wireline.

19. TIH with Wellhead Isolation Tool and set packer @ +/-60'. NU stimulation company. Pressure test surface lines to 5100 psi. Pressure test CIBP to 4100 psi for 15 minutes. Bleed off pressure. ND stimulation company. Unseat packer. TOH.

CHACRA PERFORATING AND FRACTURE STIMULATION (2ND STAGE):

20. NU wireline company. Under packoff, RIH with 3-1/8" HSC casing gun. While holding 2000 psi on casing, select fire perforate Chacra with 1 SPF, 0.32" diameter, 14.3" penetration, 10 gram charges (Owen, 302) at the following depths:

    Following Chacra perforations at **2 spf @ 120°** phasing:

    3136 3138 3140 3142 3144 3274 3276 3278 3280

    (18 holes, 144' of gross interval)

    POOH and ND wireline. Inspect casing gun to ensure all perforations fired.

21. TIH with Wellhead Isolation Tool and set packer @ +/-60'. NU stimulation company. Pressure test lines to 5100 psi. Prepare to breakdown perforations. Pump into perforations to establish injection rate at maximum pressure of 4100 psi. Record breakdown pressure, rate and ISIP. If an injection rate of > 5 BPM can be established, prepare to balloff. If an injection rate cannot be established, RIH w/ 50' acid dump bailer filled with 15% HCl and spot acid from 3230' - 3280'.

22. Begin balloff. Pump 25 bbls of 15% HCl (Add 2/1000 gallons corrosion inhibitor) and flush with 2% KCl at maximum rate pressure will allow.

    Note: Balloff should be achieved on this zone.

23. Drop a total of 36, 7/8" 1.3 SG RCN ball sealers spaced evenly throughout job. Maximum pressure at balloff is 4100 psi. ND stimulation company. Unseat packer. TOH.

24. NU wireline company. Under lubricator, RIH with 4-1/2" junk basket to recover ball sealers. Run basket by perforations several times to ensure maximum ball recovery. POOH and ND wireline company. Record number of hits and balls recovered.

25. TIH with Wellhead Isolation Tool and set packer @ +/-60'. NU stimulation company. Hold safety meeting. Pressure test surface lines to 5100 psi. Maximum surface treating pressure during frac is 4100 psi. Fracture stimulate Chacra interval with radioactive tracer per attached schedule at 35 BPM Foam rate, with 50,000 #'s of 20/40 Arizona sand. Cut gel and foamer when hopper is empty. Quick flush with 47 bbls of 2% KCl to 200' above top perforation. Cut N2 for flush. Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND and release stimulation company.

26. Begin flowback on 0.25" orifice and make choke adjustments as required until well stops flowing.

WELLBORE CLEAN OUT, AND LAND TUBING

27. Unseat packer. TOH. XO to 2-3/8" pipe rams. PU 3-7/8" bit/mill on 2-3/8" tubing. Strap and rabbit tubing. Stage in hole with 3-7/8" bit/mill on 2-3/8" tubing. Clean out to CIBP at 3380' (covering Point Lookout). Obtain 15 min pitot on Chacra zone when water rates are less than 5 BPH and sand volumes are acceptable.

28. Call for test unit/separator and pit to be delivered to location to test Chacra Gas/Oil/Water rates. (Larry Byars @ 326-9865)

29. RU test unit and pit. Flow test Chacra up annulus with 200 psi back pressure on unit. Run a minimum 3 hour test and record results on WIMS report. RD test unit lines but do not RD unit (needed for later test).

30. Drill CIBP at 3380' with 10 – 12 BPH foam mist.

31. Continue to TIH with 3-7/8" bit on tubing and clean out to CIBP set at 5000' (covering Dakota). POOH. TIH w/ 4-1/2" packer and 2-3/8" tubing. Set packer @ 4400'. Obtain 15 min pitot on Pt. Lookout zone when water rates are less than 3 BPH and sand volumes are acceptable.

32. RU test unit and pit. Flow test Point Lookout with 200 psi back pressure on unit. Run a minimum 3 hour test and record results on WIMS report. RD test unit.

33. Unseat packer. POOH. PU 3-7/8" bit/mill on 2-3/8" tubing. Strap and rabbit tubing. TIH with 3-7/8" bit/mill on 2-3/8" tubing. Clean out to CIBP at 5000' (covering Dakota).

34. Drill CIBP at 5000' with 10 – 12 BPH foam mist.

35. Clean out to PBTD of 6680'. Clean up to less than 5 BPH water and trace of sand. Obtain stabilized pitot gauge and record on WIMS report. When water rates are less than 5 BPH and sand volumes are acceptable, TOH & LD bit.

36. TIH with one joint of 2-3/8", 4.7# J-55 tubing with expendable check, SN and the remaining 2-3/8" tubing. Broach tubing while RIH. Check for fill. Clean out to PBTD at 6680'. Land tubing at +/- 6630' or 50' above PBTD.

37. ND BOPs. NU Tree and manifold assembly. Pump off expendable check. Make swab run to kick well off if needed. Obtain stabilized pitot gauges at 15, 30, 45, and 60 min for the entire well. Record on WIMS report. SI well. RD and MOL.

38. MIRU slickline company. Under full lubricator, RIH with Protechnics SpectraScan Tool to 3380' (100' below Chacra zone) and log Chacra zone while POOH. Contact engineer with results.

39. RD slickline company.

Compiled By: Wayne Fletcher
Wayne Fletcher
Production Engineer

Approval: 5/19/98
Regional Engineer

Drilling Superintendent

Engineers:

Wayne Fletcher		**Ken Collins**	
Office	326-9871	Office	326-9718
Home	324-0432	Home	325-9597
Pager	564-1583	Pager	326-7468

Frac Consultants:

Mark Byars		**Mike Martinez**	
Pager	327-8470	Pager	599-7429
Mobile	320-0349	Mobile	320-7473
Home	327-0096	Home	327-6161

Vendors:

	Service Company	**Phone Number**
Cased Hole:	Petro Wireline	326-6669
Stimulation:	Halliburton	325-3575
Frac Valve:	District Tools	
Free Point String Shot:	Wireline Specialties	327-7141
Tracer Survey:	Protechnics	326-7133

BURLINGTON RESOURCES
5/19/98:DLA

PERTINENT DATA SHEET

LIVELY #21E

Location:	930' FNL, 800' FWL Unit D, Section 31, T27N, R7W Rio Arriba County, New Mexico	**DP#:**	43958A (DK) 35706A (MV)	**LAT:** **LONG:**	36° 32.05' 107° 37.35'
Field:	Basin Dakota Blanco Mesaverde Chacra	**Elevation:**	6004' KB	**GWI:**	25% (DK) 100% (MV) 100% (CH)
TD: **PBTD:**	6720' 6680'	**Spud Date:** **Completion Date:**	06/27/81 08/23/81	**NRI:**	21.25% (DK) 85% (MV) 85% (CH)

Casing Record:

Hole Size	Casing Size	Weight & Grade	Depth Set	Sxs Cmt	Cement Top
	8-5/8"		237'	250 sx	
7-7/8"	4-1/2"		6720'	1750 sx	

Tubing Record:

Tubing Size	Weight & Grade	Depth Set	BHA
2-3/8"		6555'	

Formation Tops:

Ojo:	1336'	Lewis:	2246'	Menefee:	3904'
Kirtland:	1479'	Huerfano Bnt.:	2640'	Point Lookout:	4454'
Fruitland:	1861'	Chacra:	3062'	Gallup:	5505'
Pictured Cliffs:	2151'	Cliff House:	3863'	Dakota:	6515'

Logging Record:

SP, IL - 7/10/81- 243'-6710'
GR, CNL - 7/10/81 - 1600'-2410', 2980'-3456', 5970'-6712'

Stimulation:

Dakota:	Perfs: 6568-78', 6614-26', 6650-57', 6663-67'
Mesaverde:	Perfs: 4458-4662' w/ 30 holes
	Frac: 100,000# 20/40 Arizona Sand in Slickwater
Chacra:	Perfs: 3136-3280'
	Frac: 50,000# 20/40 Arizona Sand in 25# Linear gel and N2

Workover History:

No Info

Production History:

Latest Deliverability	17 MCFD	0.2 BOPD
Initial Deliverability	8,764 MCFD (AOF)	SICP = 1900
Cums:	311.3 MMCF	6,008 BO

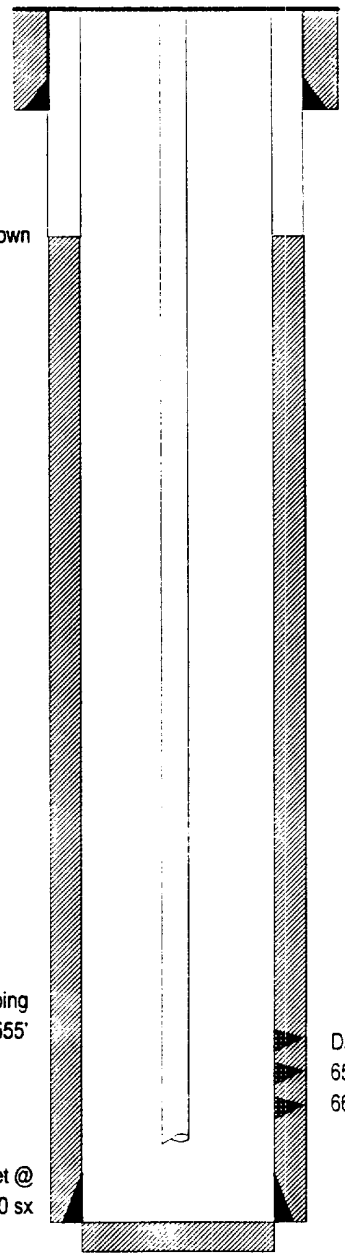
Transporter:

Oil/Condensate: Gas:

LIVELY #21E

Basin Dakota
Unit D, Section 31, T27N, R07W
Rio Arriba County NM
Elevation: 6004' KB
LAT: 36 32.05' / LONG: 107 37.35'
Date Spud: 06/27/81

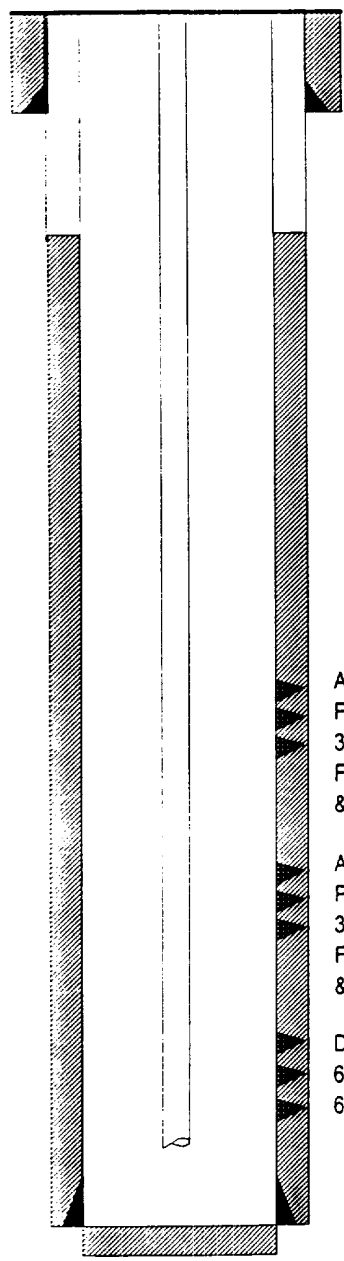
Current



Formation Tops:

Ojo	1336'
Kirtland	1479'
Fruitland	1861'
Pictured Cliffs	2151'
Lewis	2246'
Huerfano Bentonite	2640'
Chacra	3062'
Middle Chacra	3134'
Lower Chacra	3273'
Cliff House	3863'
Menefee	3904'
Point Lookout	4454'
Mancos	4796'
Gallup	5505'
Greenhorn	6398'
Graneros	6457'
Dakota	6515'

Proposed



BURLINGTON RESOURCES
11/12/97: dla