submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

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

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

4. **Location of Well, Footage, Sec., T, R, M**
1910'FSL, 1180'FEL, Sec.6, T-29-N, R-10-W, NMPM

FEB 2001
RECEIVED
OIL CON. DIV
DIST. 3

5. **Lease Number**
NM-03561
6. **If Indian, All. or Tribe Name**
7. **Unit Agreement Name**
8. **Well Name & Number**
Grenier B #5E
9. **API Well No.**
30-045-30086
10. **Field and Pool**
Blanco MV/Basin DK/
Otero Chacra
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 existing Mesaverde/Dakota wellbore to the Chacra formation according to the attached procedure and wellbore diagram. Well will produce as a Chacra only for 90-120 days. NSL order #4540 was received for the Chacra formation.

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

Signed Peggy Cole Title Regulatory Supervisor Date 2/14/01
TLW

(This space for Federal or State Office use)
APPROVED BY _____ Title _____ Date 2/15/01
CONDITION OF APPROVAL, if any:

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 representations as to any matter within its jurisdiction.

NMOCD

DISTRICT I
Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

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

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-	71599 82329/72319/	Basin Dakota Otero Chacra/Blanco Mesaverde/

[4] Property Code	[5] Property Name	[6] Well Number
18532	GRENIER B	5E

[7] OGRID No.	[8] Operator Name	[9] Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	5835'

[10] Surface Location

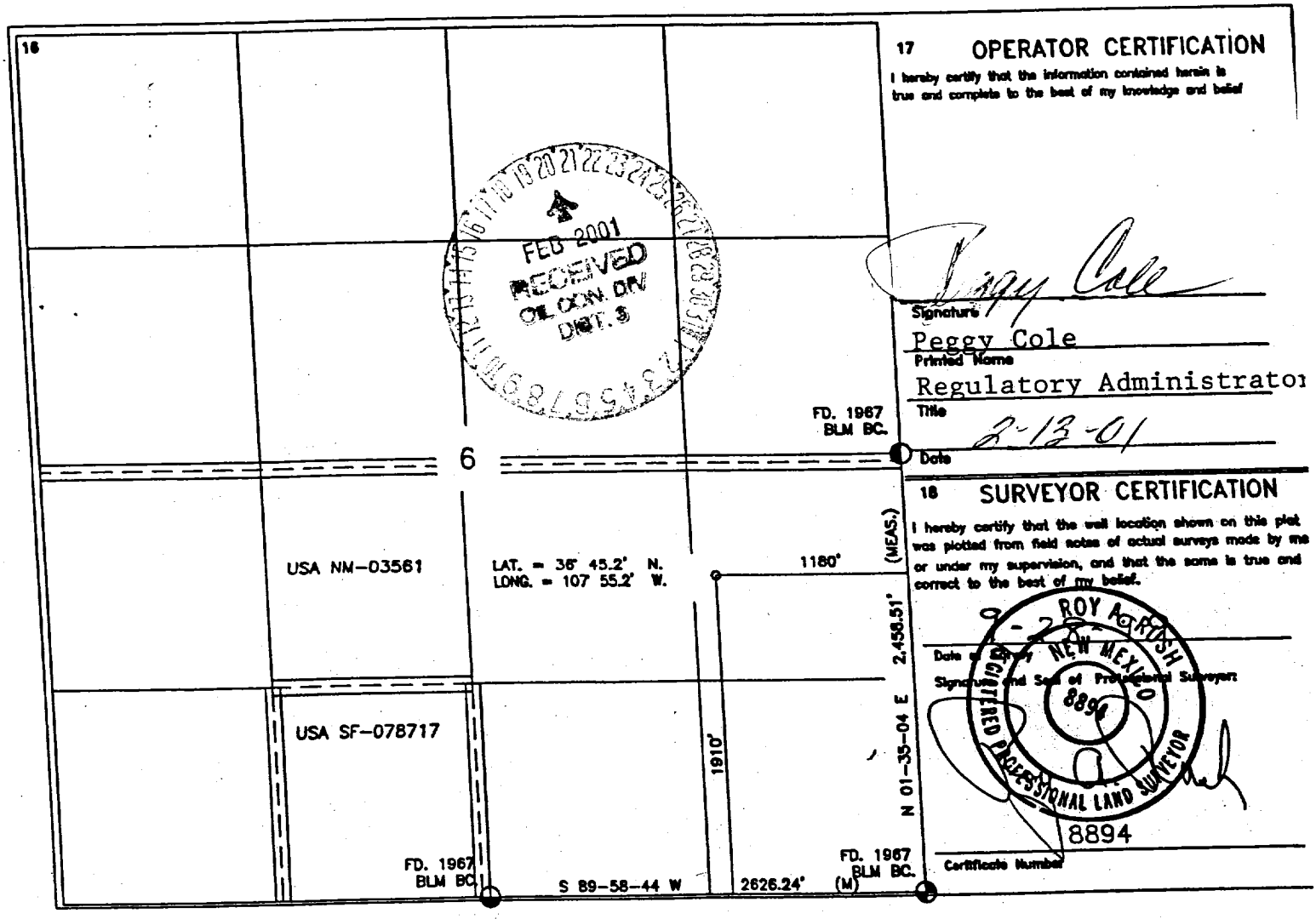
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	6	29-N	10-W		1910	SOUTH	1180	EAST	SAN JUAN

[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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
Cha-148.90, MV-S/281.04, DK-S/312.60			

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

Peggy Cole
Printed Name

Regulatory Administrator
Title

2-13-01
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.

2-2-01
Date of Survey

Signature and Seal of Professional Surveyor:

ROY A. GRITTISH
NEW MEXICO
8894
REGISTERED PROFESSIONAL LAND SURVEYOR

8894
Certificate Number

Grenier B #5E

Lewis Shale Completion (Chacra Recompletion) and Testing Procedure
Unit I, Sec 06, T29N, R10W
San Juan County, New Mexico
Lat: 36° 45.10' / Long: 107° 55.10'

Summary:

The Grenier B #5E was drilled in May of 2000, as both a Mesaverde/Dakota well and a Lewis Shale (Chacra) data well. Whole cores were taken through the Lewis Shale (Chacra) interval to promote greater understanding of the characteristics of the Lewis in this area. Currently, the Mesaverde and Dakota intervals have been completed dualed and are producing. The Lewis (Chacra) is to be tested, perforated, and fracture-stimulated in 1 stage, and will then be flowed Lewis-only for 90-120 days.

Lewis Shale Data Gathering:

The Grenier B #5E is a Lewis Shale data well. The purpose of the SDW's is to gather the necessary data to assist in the evaluation of the Lewis Shale's economic potential in the San Juan Basin. Before the fracture stimulation, nitrogen slug tests will be performed to identify the presence of natural fractures in the Lewis interval, and to calculate permeability, skin factor, and reservoir pressure. Nitrogen stress tests will follow the slug tests, and will be used to determine the magnitude of the stresses within the Lewis. Following the stimulation stage, flowback measurements will be taken to quantify the amount of fracture fluids that have been recovered.

- **COMPLY WITH ALL NMOCD, BLM, AND BR REGULATIONS.**
- **CONDUCT DAILY SAFETY MEETINGS FOR ALL PERSONNEL ON LOCATION.**
- **INSPECT LOCATION AND WELLHEAD, AND INSTALL RIG ANCHORS PRIOR TO RIG MOVE.**
- **CONSTRUCT BLOW PIT.**
- **SET 3 400-BBL FRAC TANKS AND FILL WITH 2% KCL WATER.**

Perforating and Breakdown:

1. MIRU workover unit. Record and report shut-in pressures on casing and bradenhead. Ensure that all safety equipment is strategically located and functioning properly. NU relief line and blow well down to pit. Kill well with 2% KCl water if necessary. ND wellhead and NU BOP with stripping head. Test and record operation of BOP rams.

2. TOOH w/ 1-1/2" IJ 2.76# Mesaverde tubing set at **4717'** and laydown. RU power swivel and break seal bore from seal bore extension in Model D packer. TOOH w/ 1-1/2" IJ 2.76# tubing set @ **6723'** and laydown. Send all the 1-1/2" tubing to the yard.

3. PU and TIH with 5-1/2" Packer plucker and 2-3/8" 4.7# J-55 tubing. Pluck the Model D from **4858'** and TOOH.

4. RU wireline. RIH with 5-1/2" CIBP and set at **3660'**. POOH Load the hole. Pressure test casing to 4000 psi.

5. RIH with 3-3/8 gun loaded with HSC 3375-302 charge (10 gram, 0.33" perf diameter, 15.02" penetration) set for 4 SPF. Correlate to the attached CBL/GR/CCL and shoot four shots at **3637'**. RD wireline.

6. Attempt to break down the squeeze perforations @ **3637'**. If the squeeze perforations hold ~1000 psi at surface (~1000 psi over fracturing pressures), TIH and set CIBP @ **3574'**. TOOH, then go to step #8. If the squeeze perforations break down and an injection rate is established, shutdown pumps.

7. PU and TIH with a cement retainer. Set the retainer @ **3574'**. RU cementers. Sting into the retainer, establish an injection rate and squeeze with 100 sx of Class B Neat cement w/ 2% CaCl. Displace the cement to the retainer, unsting from the retainer and leave ~1/2 BBL on top of the retainer circulate any additional cement out of the hole and TOOH.

8. RIH with 3-3/8 gun loaded with HSC 3375-302 charge (10 gram, 0.33" perf diameter, 15.02" penetration) set for 2 SPF. Correlate to the attached CBL/GR/CCL and shoot two shots at **2825'**. RD wireline.

9. Attempt to break down the squeeze perforations @ **2825'**. If the squeeze perforations hold ~1000 psi at surface (~1000 psi over fracturing pressures), TIH and spot 18 BBLS Acetic Acid from 3574' to above top perf. TOOH, then go to step #13. If the squeeze perforations break down and an injection rate is established, shutdown pumps.

10. PU and TIH with a 5-1/2" packer. Set the packer @ **2610'**. RU cementers. Establish an injection rate and squeeze with 100 sx of Class B Neat cement w/ 2% CaCl. Displace the cement to 150' past the packer until squeeze is obtained. Release the packer and reverse 1.5 volumes of tubing. TOOH and pressure up to 1500 psi. WOC~8 hrs.

11. PU 4-3/4" bit/mill and mill/drill out cement to the plug @ **3574'**. TOOH

12. RU wireline and RIH w/ CBL/GR/CCL. Correlate to attached CBL and log from 3000' – 2550'. POOH. Send log to drilling and the production engineer to verify that there is isolation for the frac.

13. TIH and spot 18 bbls of Acetic acid with 5% NH_4Cl from 3574' to above the top perf @ 2899'. TOOH and stand back 2-3/8" tubing.

Grenier B #5E

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San Juan County, New Mexico
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14. RIH with 4" PPG guns loaded with 41B HJ II charges (22.5 gram, 0.37" perf diameter, 27.56" penetration) set for 1 SPF and 120° phasing, and correlate to CBL/CCL/GR log. Perforate 120 shots in the following Lewis intervals from the top down:

    2899-2909, 2943-53, 2992-3002, 3044-54, 3098-3108, 3162-72, 3250-60, 3318-28, 3348-58, 3380-90, 3436-46, 3507-17

15. RD wireline. PU and TIH with 5-1/2" RBP, on/off tool, and 5-1/2" retrievable packer on 2-3/8" tubing. The following table lists RBP and packer setting depths and the perforation intervals that will be broken down with each setting.

RBP Setting Depth	Packer Setting Depth	Perforation Interval
3560	3460	3507-17
3490	3400	3436-46
3420	3370	3380-90
3370	3335	3348-58
3335	3280	3318-28
3290	3200	3250-60
3210	3120	3162-72
3150	3070	3098-3108
3080	3015	3044-54
3030	2970	2992-3002
2980	2920	2943-53
2930	2880	2899-2909

16. Set RBP at the first RBP setting depth. PUH +/- 10' and set packer, making sure that the interval in between consists of nothing but blank pipe. RU stimulation company and pressure test RBP, packer, and surface lines to **4000** psi. Release packer, and reset at the first packer setting depth. Open the bypass on the packer and circulate the Acetic Acid to the top of the packer. Breakdown perforations and establish an injection rate between 8 and 10 bpm with 150 gals Acetic acid with 5% NH_4Cl*. Breakdown to the **MAXIMUM PRESSURE OF 4000 PSI**. Release packer and RBP. Reset packer and RBP and repeat breakdown procedure for the remaining perforation intervals. When finished, TOOH and LD packer and RBP.

****NOTE: ALL ACID IS TO CONTAIN THE FOLLOWING ADDITIVES PER 1000 GALLONS:**

1000 gallons	10%	Acetic Acid
2 gallons	MSA II	Corrosion Inhibitor
5%	NH_4Cl	Clay Control

Nitrogen Slug and Stress Tests:

17. **NOTE: IT IS VERY IMPORTANT THAT THE HOLE REMAIN DRY DURING THE SLUG AND STRESS TESTS. THE PRESENCE OF LIQUID DURING THE TESTS WILL MAKE THE COLLECTED DATA DIFFICULT, IF NOT IMPOSSIBLE TO ANALYZE.** TIH with 2-3/8" tubing and blow the hole dry with air. SD the air package and allow the well to flow naturally, and then alternate blowing with air and flowing naturally to dry up the interval. Discuss liquid production with Production Engineer/Geologist on location and Drilling Superintendent to determine when clean-up is sufficient. TOOH and stand back 2-3/8" tubing.

18. Measure the total flow rate from the well and report it to Production Engineer/Geologist on location.

19. PU and TIH with Cased-Hole Test Assembly (CHTA) on 2-3/8" tubing. Assembly consists of one MRO pressure gauge seated inside a 10' perforated pup joint, 5-1/2" retrievable packer, seating nipple, and 2-3/8" 4.7# J-55 tubing.

20. PU and TIH with CHTA on 2-3/8" tubing. Set the packer **@3530'**. RU wireline and RIH with SRO (Surface Read Out) gauge to a depth approximately 10' above the seating nipple. RU stimulation company and pump +/- 110°F N_2 down tubing until the pressure at the CHTA is between **1000** and **1500** psig, and without shutting down the N_2 pump, set SRO gauge in seating nipple to hold pressure between packer, gauge, and RBP. Pump approximately **300** psi over the current pressure in tubing to hold SRO gauge in place. Watch SRO gauge readings for a minimum of 10 minutes to ensure that the packer and plug are holding pressure. Bleed down tubing pressure, release SRO gauge, and TOOH with SRO gauge. RD wireline, and then release the packer.

21. PUH and set the packer @ **2840'**. After the packer is set, shut pipe-rams on BOP.

Grenier B #5E

Lewis Shale Completion (Chacra Recompletion) and Testing Procedure
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San Juan County, New Mexico
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22. RU wireline and RIH with SRO gauge to a depth approximately 10' above the seating nipple. **NOTE: IT IS CRITICAL THAT THERE IS NOT ANY LIQUID (BREAKDOWN WATER AND/OR ACID) IN THE TEST INTERVAL DURING THE SLUG TEST. THE PRESENCE OF LIQUID WILL BE MARKED BY A SUDDEN PRESSURE INCREASE ON THE SRO GAUGE AS IT IS RIH. IF LIQUID IS ENCOUNTERED, IT WILL BE NECESSARY TO PULL THE SRO GAUGE, RELEASE THE PACKER, AND BLOW THE INTERVAL DRY.** Report the presence of liquid to the Production Engineer/Geologist on location and the Drilling Superintendent. Allow the SRO gauge temperature to adjust to downhole conditions.

23. RU stimulation company for N_2 injection. Hold pre-job safety meeting. Inject N_2 at **1500** scf/min and +/- 110°F down 2-3/8" 4.7# J-55 tubing. **NOTE: DO NOT EXCEED ESTIMATED FRAC GRADIENT OF 0.45 PSI/FT DURING THE SLUG TESTING. PUMP AT CONSTANT RATE, PRESSURE MAY VARY.** Monitor annulus pressure during injection period for evidence of leaking. Injection time will be approximately 15-30 minutes, or until the frac gradient is in danger of being exceeded.

24. Without shutting down the N_2 pump, set SRO gauge in seating nipple to hold pressure between packer, gauge, and RBP. Pump approximately **300** psi over the current pressure in tubing to hold SRO gauge in place. Monitor pressure falloff for 2 hours. Blow down tubing to release SRO gauge. PUH with SRO gauge to approximately 10' above the seating nipple.

25. Begin the stress test by injecting N_2 at **2500** scf/min and +/- 110°F down 2-3/8" 4.7# J-55 tubing. Continue injecting until the frac gradient is exceeded. This can be observed when the SRO gauge pressure rolls over and remains fairly constant. Record this SRO gauge pressure and report it to the Production Engineer/Geologist on location. After SRO gauge pressure rolls over, continue pumping for an additional 1 to 3 minutes.

26. Without shutting down the N_2 pump, set SRO gauge in seating nipple to hold pressure between packer, gauge, and RBP. Pump approximately **300** psi over the current pressure in tubing to hold SRO gauge in place. Monitor pressure falloff until the fracture closure pressure is observed. Record this pressure and report it to the Production Engineer/Geologist on location. Blow down tubing to release SRO gauge and TOOH. RD wireline.

27. After slug and stress tests are complete, release CHTA and TOOH. Stand back 2-3/8" tubing and LD CHTA.

Hydraulic Fracture Treatment and Flowback:

28. RU wireline and RIH with TAS (formally known as the RTD tool it was sold to North Star, but Protechnics will assist with setting and retrieving). Set the top of the tool in the 5-1/2" casing at **3210'**. **NOTE: THE TAS TOOL WILL REMAIN IN THE HOLE THROUGHOUT THE HYDRAULIC FRACTURE TREATMENT AND FLOWBACK.** RD wireline.

29. RU stimulation company to frac down casing. Hold a pre-job safety meeting with all personnel on location. Pressure test surface lines to **5000** psi. RU Pro-Technics and tag sand with 3 radioactive isotopes. **Pump pad and SD pumps for 10-15 minutes, monitoring pressure (mini-frac test).** After pumping the pad, but before pumping the 1-ppg sand, approximately 3500 gals of pad will have entered the perforations. The necessary volume for a mini-frac test is 3000-4000 gals. Reestablish rate with pad and then start into 1 ppg stage when all equipment is lined out. Fracture stimulate at a constant downhole rate of **40** bpm with 75Q N_2 foamed 20# linear gel and 200,000# 20/40 mesh sand according to the attached frac schedule. Flush to 100' above the top perf with 75Q N_2 foam. **The Frac is to be tagged with 3 radioactive tracers. NOTE: THE MAXIMUM TREATING PRESSURE IS 4000 PSI.**

30. Record ISIP, 5, 10, and 15-minute shut-in pressures. Shut-in frac valve. RD Pro-Technics. RD stimulation company and install flowback line above frac valve. Lay flowback line to dual-choke manifold and 2-phase upright vessel provided by D.C. Production Services. Open well to pit in accordance with the flowback schedule below. **NOTE: DO NOT SHUT WELL IN DURING FLOWBACK.** When schedule dictates a larger choke size, open ball valve upstream of adjustable choke and open adjustable choke on manifold to appropriate size from table and begin flowing through the adjustable choke. Close ball valve upstream of positive flow bean and change out flow bean to next larger size in table. Open ball valve upstream of positive flow bean and begin flowing. Close ball valve upstream of adjustable choke and close adjustable choke. **NOTE: THIS IS A DATA GATHERING WELL, SO PRODUCTION AND RESERVOIR ENGINEER WILL DETERMINE FLOWBACK TIME IN CONJUNCTION WITH DRILLING SUPERINTENDENT. FOLLOW THIS SCHEDULE TO UTILIZE A 24-48 HOUR FLOWBACK. IF WELL BEGINS TO SLUG OR MAKE LARGE AMOUNTS OF SAND TO SURFACE, DROP TO NEXT SMALLER CHOKE SIZE. IF WELL BEGINS TO TAPER OFF IN LIQUID PRODUCTION AND FLOW MOSTLY N_2, CHANGE TO NEXT LARGER CHOKE SIZE BEFORE TIME SCHEDULE DICTATES.**

Grenier B #5E

Lewis Shale Completion (Chacra Recompletion) and Testing Procedure
Unit I, Sec 06, T29N, R10W
San Juan County, New Mexico
Lat: 36° 45.10' / Long: 107° 55.10'

Choke Size	Approximate Flowback Time
10/64"	3 Hours
12/64"	3 Hours
14/64"	3 Hours
16/64"	5 Hours
18/64"	5 Hours
20/64"	5 Hours
22/64"	5 Hours
24/64"	5 Hours
32/64"	5 Hours

31. After flowback ceases and pressures allow, RU wireline and retrieve Pro-Technics TAS tool from **3210'** (well conditions such as sand production may dictate tool retrieval using tubing). RD wireline.

Well Cleanup:

32. PU and TIH with 4-3/4" mill. Clean up the Lewis to plug @ 3574'. When sand and water rates allow take a pitot gauge of the Lewis. TOOH and Laydown mill.

33. Broach in tubing on sandline. TIH w/ one joint of 2-3/8" 4.7# J-55 tubing w/ expendable check, seating nipple, and the remaining 2-3/8" tubing. Land tubing @ ± **3490'**.

34. ND BOP's. NU Tree and manifold assembly. Ensure all connections on wellhead are tight. Pump off expendable check and plug. Flow well to ensure check is pumped off. Make swab run to kick well off if needed. Obtain stabilized pitot gauges at 15, 30, 45, and 60 min for the Lewis. Contact production to place well back on production. RD and MOL.

35. Place well on Lewis-Only (Chacra-Only) flow for 90-120 days.

36. RU Pro-Technics. Run After Frac Log across Lewis (3574' – 2550'). RD Pro-Technics.

Recommended: Michele Quisel 12/19/00
Lewis Team Production Engineer

Approved: for RdC
Lewis Team Leader
19 Dec 2000

Approved: PU Burt 1/12/01
Drilling Superintendent

VENDORS:

Perforating	Schlumberger	(505) 325-5006
Nitrogen for Slug & Stress Tests	Halliburton Energy Services	(505) 324-3500
Breakdown & Fracture Stimulation	Halliburton Energy Services	(505) 324-3500
TAS Tool	North Star	(916) 215-5555
Pressure Gauges (MRO & SRO)	Schlumberger	(505) 325-5006
Packer and RBP	Schlumberger	(505) 325-5006
Cased-Hole Test Assembly	Schlumberger	(505) 325-5006
Composite Cement Retainer	Halliburtion	(505) 324-3500
Flowback Monitoring	D.C. Production Services	(307) 389-8400
Pre-Frac Analysis	Holditch-Reservoir Technologies	(412) 787-5403

PRODUCTION ENGINEERING:

Michele Quisel (Lewis)	Office: 324-6162	Pager: 326-8196	Home: 564-9097

Grenier B #5E

1910' FNL, 1180 FEL
I Sec. 6, T-29N R-10W
San Juan County, New Mexico
KB 5847 GL 5835

LAT: 36 45.10, LONG: 107 55.10'

Current

8-5/8" 24# WC-50
360 sx TOC circ

349'

Tubing:
1-1/2" 2.75# J-55
Set @ **4,717'**

1-1/2" 2.75# J-55
Set @ **6,723'**

DV @ 3,714'

Packer Set @ 4858'

7-7/8" Hole
5-1/2" 17# L-80
DV @ 3,714'
615 sx No Circ
825 sx Circ 135 BBLS

7119'

Formation Tops

Ojo Alamo	0,945'
Kirtland	1,070'
Fruitland Coal	1,876'
Pictured Cliffs	2,213'
Lewis	2,290'
Huer. Bent.	2,878'
Navajo City Chacra	2,880'
Otero Chacra	3,210'
Middle Bench Otero Chacra	3,308'
Upper Cliff House	3,671'
Massive Cliff House	3,780'
Menefee	3,909'
Point Lookout	4,506'
Mancos	4,755'
Greenhorn	6,458'
Dakota	6,660'

Squeeze perfs @ 2825'

Proposed Upper Lewis Perfs:
2899-2909, 2943-53, 2992-3002,
3044-54, 3098-3108, 3162-72
3250-60, 3318-28, 3348-58,
3380-90, 3436-46, 3507-17
200,000# sand and 75Q Foam

Plug @ 3574'

Squeeze perfs @ 3637'
CIBP @ 3660

Menefee:
4,120' - 4,440'
100,000# 20/40 & 105,000 gals Slickwater

Point Lookout:
4,524 - 4,772'
80,000# 20/40 & 88,000 gals Slickwater

Dakota:
6,586' - 6,738'
100,000# 20/40 TLC & 586 bbls 30# LG 70Q foam

Proposed

349'

2-3/8" 4.7#
J-55 Tubing
Set @ ±

7119'

TD = 7,130'
PBTD = 7,044'

12/18/2000 MSQ