submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

2000 JAN 11 PM 1:25

070 FARMINGTON, NM

1. **Type of Well**
GAS

5. **Lease Number**
SF-077651

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

7. **Unit Agreement Name**

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

JAN 2000 RECEIVED OIL CON. DIV. DIST. 3

8. **Well Name & Number**
Richardson #8E

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

9. **API Well No.**
30-045-24019

4. **Location of Well, Footage, Sec., T, R, M**
1590'FNL, 1070'FEL, Sec.10, T-31-N, R-12-W, NMPM

10. **Field and Pool**
Dusenberry Gallup/
Basin Dakota

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
	_X_ Other - temporarily abandon Dakota	

13. **Describe Proposed or Completed Operations**

It is intended to recomplete the subject well to the Gallup formation according to the attached procedure and wellbore diagram. The Dakota formation will be temporarily abandoned with a cast-iron bridge plug for ~~six to nine months~~ while the Gallup is tested.

SI

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

Signed Peggy Cole (BGOpps) Title Regulatory Administrator Date 1/11/00

no

(This space for Federal or State Office use)
APPROVED BY Chip Harraden Title Acting Team Lead Date 1/18/00
CONDITION OF APPROVAL, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

ok sc

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 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
30-045-24019	76180/71599	Dusenberry Gallup/Basin Dakota

⁴ Property Code	⁵ Property Name	⁶ Well Number
7422	Richardson	8E

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
14538	Burlington Resources Oil & Gas Company	6183' GR

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
H	10	31N	12W		1590'	North	1070'	East	SJ

¹¹ Bottom Hole Location If Different From Surface

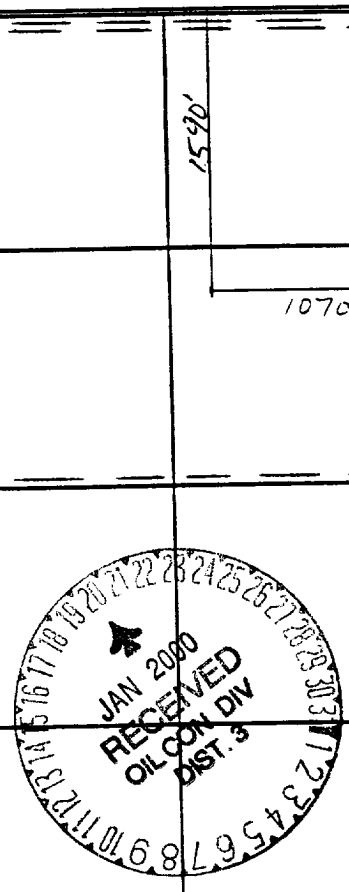
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
Gal-160 DK-E/320			

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

16

Original plat from
Fred B. Kerr Jr. 10-11-79



¹⁷ OPERATOR CERTIFICATION

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

Peggy Cole
Signature

Peggy Cole
Printed Name

Regulatory Administrator
Title

1-11-00
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.

Date of Survey

Signature and Seal of Professional Surveyer:

Certificate Number

Richardson # 8E
Mancos Shale Completion Procedure
Unit H, Sec 10, T31N R12W
San Juan County, NM
Latitude: 36 Deg., 54.96 Min
Longitude: 108 Deg., 4.61 Min.

Summary:
The subject well is a 1980 vintage Dakota making 59 MCFD. The Basin Opportunity Mancos Shale Team completed one interval in the Mancos in the Newberry # 12M. This work was done because of an oil/gas show while drilling through the Mancos. After completion, the well made 50-100 BCD. Currently the Mancos is producing 10-15 Bbls per day. After reprocessing the FMI log, it was found that there was potential pay that was bypassed. While the Richardson # 8E was being drilled, a drilling break and oil show was encountered in the same interval as the Newberry # 12M. The Mancos will be perforated and fracture stimulated in three stages with 220K# of sand in gel. The well will then be cleaned-up, tubing landed in the Mancos and placed on production for 6-9 months to allow for analysis of the zones. Before turning the well over to production, a build up test will be performed and production logs run.

Mancos Shale Data Gathering:
The subject well is one of five Mancos Shale data wells. Additional time will be spent to gather necessary data needed to quantify the significance of the Mancos Shale interval basin wide. Pre-frac injection and breakdown tests will be performed on each interval to characterize natural fracturing and measure fracture pressure throughout the Mancos interval. The well will be flowed back and cleaned up and flow rates will be measured through a 3 phase separator. Separator samples will be taken for recombination and a buildup will be performed after each stage.

- Comply with all NMOCD, BLM and BR regulations. Conduct daily safety meetings for all personnel on location. Notify BR regulatory (Peggy Bradfield 326-9727) and the appropriate Regulatory Agency prior to pumping any cement job and after CBL is run. If an unplanned cement job is required, approval is required before the job can be pumped. If verbal approval is obtained, document the approval in Dims. Allow adequate notice prior to the pump time for the Agency to witness the cementing operation.
- Inspect location and wellhead and install rig anchors prior to rig move.
- Construct blow pit.
- Deliver to location the following equipment:
  - 14 – 400 Bbl frac tanks, fill with 2% KCl
  - 280 ¾" rods, RWAC pump, 22' polished rods
  - 10,000 psi Frac valve

1. MIRU. Record and report SI pressures on tubing, casing, and bradenhead. Blow down casing and tubing. Kill well. ND WH, NU BOP.

2. TOOH with 2-3/8" 4.7# J-55 tubing and standback. Visually inspect tubing, replace any bad joints.

3. TIH with 4-1/2" mechanical set CIBP and packer combination. Set CIBP at 7150'. Set pkr at 7140' and pressure test CIBP to 3800 psi. TOOH.

4. RU wireline company. Perf with 3-1/8" HSC casing gun Owen HSC-3125 301 charges. 2 SPF, 11" DP and 0.34" hole diameter at 7120'. POOH.

5. TIH with 4-1/2" cement retainer on 2-3/8" tbg. Set retainer at 7050'. Sting into retainer. Attempt to establish circulation. Pump 350 sxs 50/50 Pozmix. Sting out of retainer reverse out 2 tubing volumes. TOOH. WOC for 12 hrs.

6. TIH with 3-7/8" bit on 2-3/8" tbg. Drill out cement retainer and cement to 7150'. Pressure test casing and squeeze holes to 1000 psi. TOOH to 7000' and spot 500 gal 15% HCl. TOOH.

7. RU wireline unit. With hole loaded and 1000 psi run CBL from 7120' to 200' above top of good cement. POOH.

Pre-Frac Injection\Stress Testing - 1st Stage

8. NU wireline. Perforate (Top Down in acid) Sanastee interval as follows using select fire HSC guns loaded with Titan 14 gram Prospector charges set at **1 SPF** (Av. perf diameter - 0.30", Av. pen. - 22.2" in concrete). **6730', 6734', 6738', 6742', 6746', 6750', 6820', 6824', 6828', 6832', 6836', 6840', 6970', 6974', 6978', 6982', 6986', 6990' (18 holes total)** ND wireline company.

9. TIH w/ 4-1/2" pkr and RBP combo on 2-3/8" tbg. Set RBP at 7010'. Pick up and set pkr at 7000'. Pressure test RBP to 3800 psi. Release and reset pkr at 6950'.

10. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

11. Bleed off pressure and release packer. Reset RBP at 6860'. PU pkr to 6800'.

12. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

13. Bleed off pressure and release packer. Reset RBP at 6770'. PU pkr to 6710'.

14. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

15. Bleed off pressure and release packer. Lower RBP to 7050'. Blow well dry with air. PU pkr to 6700'. Shut air down and obtain a pitot gauge if the well will flow on its own. Repeat flow and blow periods if the well is making more than 1 BPH water. **It is very important the wellbore be dry of any fluids for the following N_2 slug/stress tests.** Latch on to RBP and TOOH.

16. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tbg. (See attached "Cased-Hole Test Configuration" assembly). Assembly consists of: pressure gauge, 10' perforated pup joint, bridge plug, packer, pressure gauge in carrier, XN seating nipple, and 2-3/8" 4.7# J-55 workstring. The following table lists pkr/bridge plug (injection test assembly) settings and perforation intervals that will be tested. Tie into OH log prior to setting pkr/bridge plug assembly. RU **5000** psi packoff w/ pump-in tee.

Pkr Depth	BP Depth	Perf Interval (Zone)
6710'	**7010'**	**6730'- 6990' (18 perfs)**

NOTE: THE STRESS TESTING WILL FOLLOW THE INJECTION TESTING PRIOR TO MOVING THE TEST ASSEMBLY TO NEXT APPROPRIATE SETTING DEPTH.

17. Attempt to establish a flow rate up the tubing. Measure rate for 30 min. If rate is greater than 100 MCFD, shut in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge. Allow pressure to build up for approximately 2-4 hrs, then proceed to step #19. If flow is less than 100 MCFD, proceed to step #18. Leave annulus open at all times and monitor with Merla Tester.

18. RU stimulation company to inject N_2 down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 6000 psi. **SLUG TEST** - Inject N_2 @ 1500 SCF/min at **2500** psi*. Injection time will be approximately 45 min per setting. Shut-in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge, and observe fall-off on

surface read out gauge in wireline truck for approximately 2 hrs. Flowback N2 to pit. **DO NOT KILL WELL.** Leave annulus open at all times and monitor with Merla Tester.

***NOTE: DO NOT EXCEED FRAC GRADIENT OF 0.60 PSI/FT ON ANY INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

19. **STRESS TEST** – Inject N2 at 1500 scf/min at 2500 psi*, or until pressure exceeds frac gradient. Injection time will be approximately 15 min per setting. Observe pressure break in wireline truck and record results. Flowback N2 to pit. **DO NOT KILL WELL.**

***NOTE: EXCEED FRAC GRADIENT OF AT LEAST 0.60 PSI/FT ON EACH INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

20. **These tests may be pumped at night, using stimulation company's recommended safety precautions.** Unseat test assembly. TOOH.

1st STAGE STIMULATION (SANASTEE)–

21. RU wireline and RIH w/ Protechnics RTD tool. Wireline set top of tool @ +/- **6880'**. This tool will remain in the hole throughout the stimulation and flowback. RD wireline company.

22. TIH with 4-1/2" pkr on 2 jts 2-7/8" 6.5# N80 buttress frac string. Set pkr at 60'.

23. RU stimulation company. Pressure test surface lines to **5000** psi prior to stimulation. **Max surface treating pressure is 4000 psi.** With 8000 gal of the pad fluid, perform a minifrac and step down test. Then fracture stimulate in 1 to 4 ppg stages @ 30 BPM with 25# gel and 60,000# 20/40 **Tempered LC** sand. **Increase rate as pressure allows.** Refer to frac schedule enclosed. Stimulation will be traced with 3 radioactive tracers by Protechnics.

24. Record ISIP, 5, 10 and 15 minute shut-in pressures. Gather and measure remaining tank fluid prior to flowback. Begin flowback when stimulation company is rigged down. Open well to rig tanks through separator, monitor and record fluid recovery. Do not shut well in during flowback. TOOH with 2-7/8" frac string and standback.

25. After well cleans up and pressures allow, RU wireline, RIH, and wireline retrieve RTD tool @ +/- **6880'**. POOH.

26. TIH with 4-1/2" mechanical set CIBP and packer combination. Set CIBP @ +/- **6700'**. Set pkr at 6690'. Pressure test CIBP to 4300 psi. Spot 500 gal 15% HCl. TOOH.

Pre-Frac Injection\Stress Testing – 2nd Stage

27. NU wireline. Perforate (Top Down in acid) Lower Mancos interval as follows using select fire HSC guns loaded with Titan 14 gram Prospector charges set at **1 SPF** (Av. perf diameter - 0.30", Av. pen. -22.2" in concrete). **6260', 6264', 6268', 6272', 6276', 6280', 6340', 6344', 6348', 6352', 6356', 6360', 6620', 6624', 6628', 6632', 6636', 6640' (18 holes total)** ND wireline company.

28. TIH w/ 4-1/2" pkr and RBP combo on 2-3/8" tbg. Set RBP at 6660'. Pick up and set pkr at 6650'. Pressure test RBP to 3800 psi. Release and reset pkr at 6600'.

29. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

30. Bleed off pressure and release packer. Reset RBP at 6380'. PU pkr to 6320'.

31. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

32. Bleed off pressure and release packer. Reset RBP at 6240'. PU pkr to 6300'.

33. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

34. Bleed off pressure and release packer. Lower RBP to 6680'. Blow well dry with air. PU pkr to 6240'. Shut air down and obtain a pitot gauge if the well will flow on its own. Repeat flow and blow periods if the well is making more than 1 BPH water. **It is very important the wellbore be dry of any fluids for the following N_2 slug/stress tests.** Latch on to RBP and TOOH.

35. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tbg. (See attached "Cased-Hole Test Configuration" assembly). Assembly consists of: pressure gauge, 10' perforated pup joint, bridge plug, packer, pressure gauge in carrier, XN seating nipple, and 2-3/8" 4.7# J-55 workstring. The following table lists pkr/bridge plug (injection test assembly) settings and perforation intervals that will be tested. Tie into OH log prior to setting pkr/bridge plug assembly. RU **5000** psi packoff w/ pump-in tee.

Pkr Depth	BP Depth	Perf Interval (Zone)
6600'	**6680'**	**6620'- 6640' (6 perfs)**
6240'	**6380'**	**6260'- 6360' (12 perfs)**

NOTE: THE STRESS TESTING WILL FOLLOW THE INJECTION TESTING PRIOR TO MOVING THE TEST ASSEMBLY TO NEXT APPROPRIATE SETTING DEPTH. THE SETTING DEPTHS FOR THE STRESS TEST ARE IDENTICAL TO THE INJECTION TEST.

36. Attempt to establish a flow rate up the tubing. Measure rate for 30 min. If rate is greater than 100 MCFD, shut in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge. Allow pressure to build up for approximately 2-4 hrs, then proceed to step #38. If flow is less than 100 MCFD, proceed to step #37. Leave annulus open at all times and monitor with Merla Tester.

37. RU stimulation company to inject N_2 down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 6000 psi. **SLUG TEST** - Inject N_2 @ 1500 SCF/min at **2500** psi*. Injection time will be approximately 45 min per setting. Shut-in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge, and observe fall-off on surface read out gauge in wireline truck for approximately 2 hrs. Flowback N2 to pit. **DO NOT KILL WELL.** Leave annulus open at all times and monitor with Merla Tester.

***NOTE: DO NOT EXCEED FRAC GRADIENT OF 0.60 PSI/FT ON ANY INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

38. **STRESS TEST** – Inject N2 at 1500 scf/min at 2500 psi*, or until pressure exceeds frac gradient. Injection time will be approximately 15 min per setting. Observe pressure break in wireline truck and record results. Flowback N2 to pit. **DO NOT KILL WELL.**

***NOTE: EXCEED FRAC GRADIENT OF AT LEAST 0.60 PSI/FT ON EACH INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

39. Follow same procedure listed in step #36, #37, and #38 on each pkr/bridge plug setting (injection test assembly). Unseat injection test assembly on each setting depth listed in table and move uphole at new depth and reset pkr and plug. Flowback to pit before next test.

40. Unseat injection test assembly. TOOH with 2-3/8" 4.7# J-55 workstring and pkr/bridge plug combination. Lay down injection test assembly and stand back 2-3/8" 4.7# J-55 workstring. RD wireline company.

2nd STAGE STIMULATION (LOWER MANCOS)–

41. RU wireline and RIH w/ Protechnics RTD tool. Wireline set top of tool @ +/- **6450'**. This tool will remain in the hole throughout the stimulation and flowback. RD wireline company.

42. TIH with 4-1/2" pkr on 2 jts 2-7/8" 6.5# N80 buttress frac string. Set pkr at 60'.

43. RU stimulation company. Pressure test surface lines to **5000** psi prior to stimulation. **Max surface treating pressure is 4000 psi.** With 8000 gal of the pad fluid, perform a minifrac and step down test. Then fracture stimulate in 1 to 4 ppg stages @ 30 BPM with 25# gel and 60,000# 20/40 **Tempered LC** sand. **Increase rate as pressure allows.** Refer to frac schedule enclosed. Stimulation will be traced with 3 radioactive tracers by Protechnics.

44. Record ISIP, 5, 10 and 15 minute shut-in pressures. Gather and measure remaining tank fluid prior to flowback. Begin flowback when stimulation company is rigged down. Open well to rig tanks through separator, monitor and record fluid recovery. Do not shut well in during flowback. TOOH with 2-7/8" frac string and standback.

45. After well cleans up and pressures allow, RU wireline, RIH, and wireline retrieve RTD tool @ +/- **6450'**. POOH.

46. TIH with 4-1/2" mechanical set CIBP and packer combination. Set CIBP @ +/- **6200'**. Set pkr at 6190'. Pressure test CIBP to 4300 psi. Spot 500 gal 15% HCl. TOOH.

Pre-Frac Injection\Stress Testing – 3rd Stage

47. NU wireline. Perforate (Top Down in acid) Upper Mancos interval as follows using select fire HSC guns loaded with Titan 14 gram Prospector charges set at **1 SPF** (Av. perf diameter - 0.30", Av. pen. -22.2" in concrete). **5930', 5934', 5938', 5942', 5946', 5950', 6020', 6024', 6028', 6032', 6036', 6040', 6100', 6104', 6108', 6112', 6116', 6120' (18 holes total)** ND wireline company.

48. TIH w/ 4-1/2" pkr and RBP combo on 2-3/8" tbg. Set RBP at 6140'. Pick up and set pkr at 6130'. Pressure test RBP to 3800 psi. Release and reset pkr at 6080'.

49. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

50. Bleed off pressure and release packer. Reset RBP at 6060'. PU pkr to 6000'.

51. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

52. Bleed off pressure and release packer. Reset RBP at 5970'. PU pkr to 5910'.

53. RU stimulation company. Pressure test surface lines to 7100 psi. Max surface pressure is 6100 psi. Breakdown Mancos perforations at 6-8 BPM with 15% HCl. Record breakdown pressure and ISIP. RD stimulation company.

54. Bleed off pressure and release packer. Lower RBP to 6160'. Blow well dry with air. PU pkr to 5900'. Shut air down and obtain a pitot gauge if the well will flow on its own. Repeat flow and blow periods if the well is making more than 1 BPH water. **It is very important the wellbore be dry of any fluids for the following N_2 slug/stress tests.** Latch on to RBP and TOOH.

55. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tbg. (See attached "Cased-Hole Test Configuration" assembly). Assembly consists of: pressure gauge, 10' perforated pup joint, bridge plug, packer, pressure gauge in carrier, XN seating nipple, and 2-3/8" 4.7# J-55 workstring. The following table lists pkr/bridge plug (injection test assembly) settings and perforation intervals that will be tested. Tie into OH log prior to setting pkr/bridge plug assembly. RU **5000** psi packoff w/ pump-in tee.

Pkr Depth	BP Depth	Perf Interval (Zone)
5910'	**6140'**	**5930'- 6120' (18 perfs)**

NOTE: THE STRESS TESTING WILL FOLLOW THE INJECTION TESTING PRIOR TO MOVING THE TEST ASSEMBLY TO NEXT APPROPRIATE SETTING DEPTH. THE SETTING DEPTHS FOR THE STRESS TEST ARE IDENTICAL TO THE INJECTION TEST.

56. Attempt to establish a flow rate up the tubing. Measure rate for 30 min. If rate is greater than 100 MCFD, shut in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge. Allow pressure to build up for approximately 2-4 hrs, then proceed to step #58. If flow is less than 100 MCFD, proceed to step #57. Leave annulus open at all times and monitor with Merla Tester.

57. RU stimulation company to inject N_2 down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 6000 psi. **SLUG TEST** - Inject N_2 @ 1500 SCF/min at **2500** psi*. Injection time will be approximately 45 min per setting. Shut-in well by seating the SRO gauge in the XN seating nipple and applying 400 psi differential pressure on top of the SRO gauge, and observe fall-off on surface read out gauge in wireline truck for approximately 2 hrs. Flowback N2 to pit. **DO NOT KILL WELL.** Leave annulus open at all times and monitor with Merla Tester.

***NOTE: DO NOT EXCEED FRAC GRADIENT OF 0.60 PSI/FT ON ANY INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

58. **STRESS TEST** – Inject N2 at 1500 scf/min at 2500 psi*, or until pressure exceeds frac gradient. Injection time will be approximately 15 min per setting. Observe pressure break in wireline truck and record results. Flowback N2 to pit. **DO NOT KILL WELL.**

***NOTE: EXCEED FRAC GRADIENT OF AT LEAST 0.60 PSI/FT ON EACH INTERVAL TESTED. PUMP AT A CONSTANT RATE.**

59. Unseat injection test assembly. TOOH with 2-3/8" 4.7# J-55 workstring and pkr/bridge plug combination. Lay down injection test assembly and stand back 2-3/8" 4.7# J-55 workstring. RD wireline company.

3rd STAGE STIMULATION (UPPER MANCOS)–

60. RU wireline and RIH w/ Protechnics RTD tool. Wireline set top of tool @ +/- **6000'**. This tool will remain in the hole throughout the stimulation and flowback. RD wireline company.

61. TIH with 4-1/2" pkr on 2 jts 2-7/8" 6.5# N80 buttress frac string. Set pkr at 60'.

62. RU stimulation company. Pressure test surface lines to **5000** psi prior to stimulation. **Max surface treating pressure is 4000 psi.** With 8000 gal of the pad fluid, perform a minifrac and step down test. Then fracture stimulate in 1 to 4 ppg stages @ 30 BPM with 25# gel and 100,000# 20/40 **Tempered LC** sand. **Increase rate as pressure allows.** Refer to frac schedule enclosed. Stimulation will be traced with 3 radioactive tracers by Protechnics.

63. Record ISIP, 5, 10 and 15 minute shut-in pressures. Gather and measure remaining tank fluid prior to flowback. Begin flowback when stimulation company is rigged down. Open well to rig tanks through separator, monitor and record fluid recovery. Do not shut well in during flowback. TOOH with 2-7/8" frac string and standback.

64. After well cleans up and pressures allow, RU wireline, RIH, and wireline retrieve RTD tool @ +/- **6000**'. POOH.

65. TIH w/ 3-7/8" bit and 2-3/8" 4.7# J-55 workstring and clean up to CIBP @ +/- **6200**' with foam/mist. Gauge Upper Mancos.

66. Drill up CIBP @ +/- **6200**' w/ foam/mist and CO to CIBP @ **6700**'. Gauge Upper/Lower Mancos.

67. Drill up CIBP @ +/- **6700**' w/ foam/mist and CO to CIBP @ **7150**'. Gauge entire Mancos.

68. RU Protechnics to run after frac log (7150' – 5900').

69. Broach in tubing on sandline. TIH with one joint of 2-3/8", 4.7#, J-55 tubing with purge valve, 1 tail joint, 6' perforated sub, seating nipple, 8 joints of tubing, 2.375" x 4.5" tubing anchor, and the remaining 2-3/8" production tubing. Land tubing @ +/- **6980'**. Kill well.

70. ND BOP. Set tbg anchor. NU wellhead.

71. TIH with pump and rods. Configuration is as follows: 8' sand screen, insert pump 2" x 1.5" x 16' RWAC, max stroke 113", pin size ¾", approximately 280 ¾" rods, 1 4' pony, and 22' of polished rods with liner. Pump is a top hold down pump, supplied by Energy Pump and Supply.

72. RD and MOL.

73. RU construction crew to set up pump jack and space out rods.

Approve: _____
Team Leader

Approve: P.J. Boltz 1/10/00
Drilling Superintendent

Recommend: _____
Production Engineer

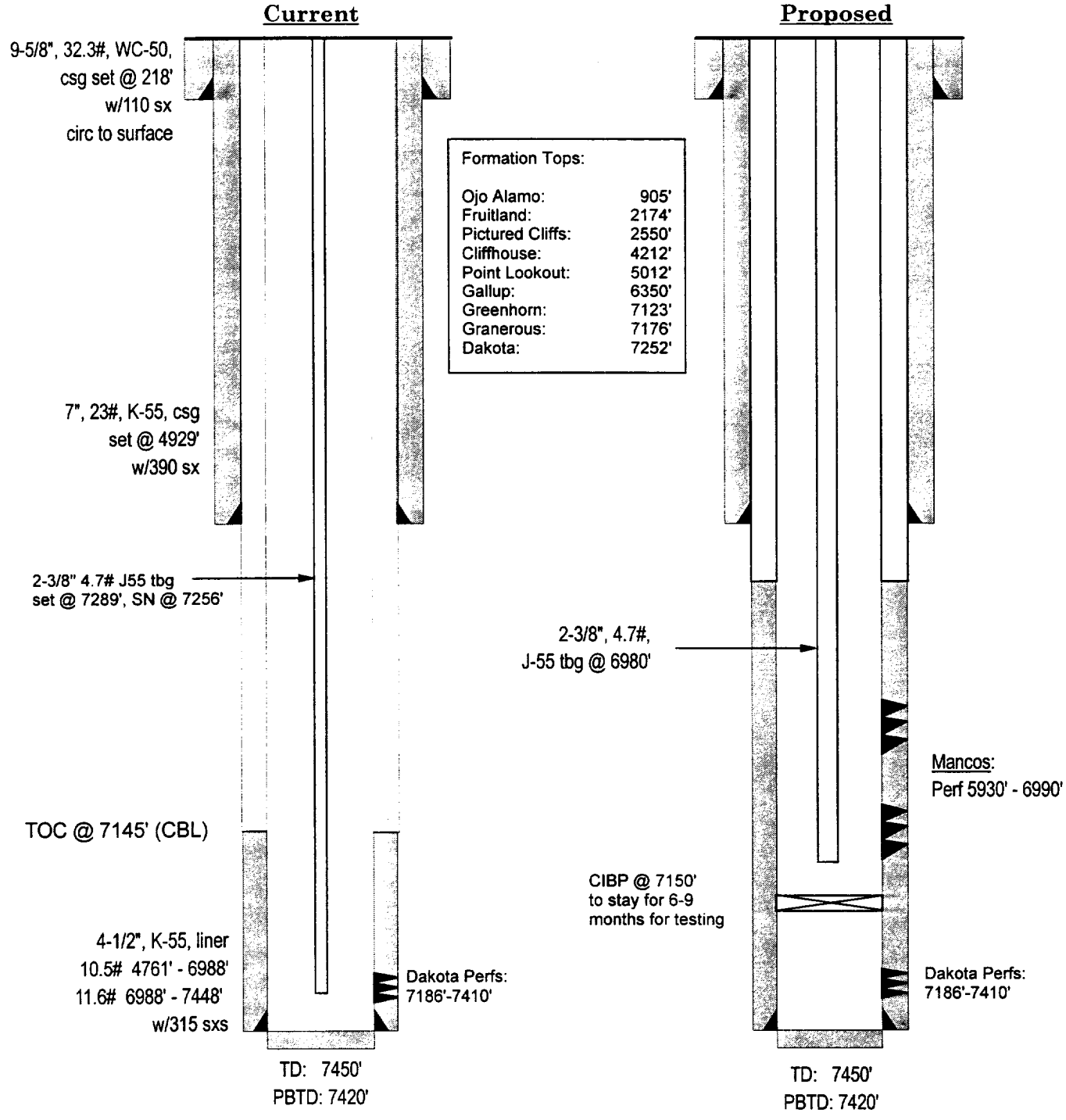
VENDORS:

Cased-hole Test Assembly:	Schlumberger	325-5006
Stimulation:	Dowell	325-5096
Pre-Frac Analysis:	S.A. Holditch & Assoc.	(412) 787-5403

Bobby Goodwin Home 599-0992 Office 326-9713 Pager 564-7096

Richardson # 8E

Basin Dakota
Unit H, Section 10, T31N, R12W
San Juan County, NM
Elevation: 6183' GL, 6195' KB
LAT: 36 54.9' / LONG: 108 4.6'
date spud: 6/7/80



BURLINGTON RESOURCES
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