

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) 326-8700

4. Location of Well, Footage, Sec., T, R, M

1465' FSL, 810' FWL, Sec.14, T-32-N, R-7-W, NMMP

5. Lease Number  
SF-078459B

6. If Indian, All. or  
Tribe Name

7. Unit Agreement Name

Allison Unit

8. Well Name & Number

Allison Unit #31

9. API Well No.

30-045-23296

10. Field and Pool

Wildcat 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

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment

Type of Action

☒ Abandonment

☒ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other -

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut off

☐ Conversion to Injection

13. Describe Proposed or Completed Operations

It is intended to recompleate 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 while the Gallup is tested for six to nine months.

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

Signed Charlie Beecham (BGOpps) Title Regulatory Administrator Date 1/27/00

(This space for Federal or State Office use)

APPROVED BY /s/ Charlie Beecham Title  Date FEB -3 2000

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.

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

API Number 30-045-23296		Pool Code 97007/71599	Pool Name WC 32N07W14H3 Wildcat Gallup/Basin Dakota
Property Code 6784	Property Name Allison Unit		Well Number 31
OGRID No. 14538	Operator Name Burlington Resources Oil & Gas Company		Elevation 6853' GR

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	14	32N	7W		1465'	South	810'	West	SJ

<sup>11</sup> 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

<sup>12</sup> Dedicated Acreage Gal - 160 DK-W/320	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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

<sup>16</sup> 	Original plat from Fred B. Kerr Jr. 10-11-73		<sup>17</sup> 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 1-26-00 Date
<sup>18</sup> 	<sup>18</sup> 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		

**Allison Unit # 31**  
**Mancos (Gallup) Recompletion Procedure**  
**Unit L, Section 14, T32N, R07W**  
**Lat: 36°- 58.61'/Long: 107 °- 32.56'**

**Summary:**

This well is currently completed in the Dakota. It is intended to recomplete the Mancos interval, including several pre-frac slug and stress tests, production test the Mancos only for 6 months, run production logs and pressure build-up tests, and eventually commingle the Mancos/Dakota production. The Mancos will be sand fracture stimulated in two stages using a total of 220,000 lbs 20/40 Tempered LC sand in a 25# Delta Frac gel system.

**Shale Data Gathering:**

In 1998 an intense logging and sidewall coring program was completed in nine "shale data wells". No diagnostic tests were performed on the Mancos Shale intervals in the "shale data wells" due to working interest problems. As a result these tests will be performed on offset Dakota stand alone producers. Additional time will be spent to gather necessary data needed to quantify the significance of the Mancos Shale interval. A pre-frac nitrogen slug test will be performed on each of the two stages to evaluate reservoir potential throughout the Mancos interval. Nitrogen stress testing will follow the pre-frac slug testing on each stage.

1. Inspect location and test rig anchors. Comply with all NMOCD, BLM, Forestry & BR rules and regulations. Dig flowback pit. Haul to location a new or inspected 8200' 2-3/8" 4.7# J-55 production string and 13-400 bbl frac tanks.
2. MIRU. Fill 400 bbl tanks w/ 3# biocide/tank & 2% KCL water. Put one load of fresh water in each tank before adding 20% concentrated KCL water. Run fluid tests on water. Filter water based upon stimulation company water analysis. Record and report SI pressures on tubing, casing and bradenhead. Lay blowdown line. Blow well down and kill with 2% KCL water as necessary. ND WH and NU BOP, offset spool, and offset rams with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line. Redress production wellhead as needed.
3. TOOH with 1-1/2" 2.9 lb/ft J55 Dakota production string set at 8418' and LD. Send string in to be inspected and salvaged, if possible.
4. PU and RIH with a 3-7/8" bit, 4-1/2" casing scraper on 2-3/8" 4.7# J-55 tbg. Clean out to PBTD (~8466') with air/mist. TOOH.
5. TIH with 4-1/2" CIBP and pkr combo on 2-3/8" 4.7# J-55 tubing. Set CIBP at 8250'. Set pkr at 8240'. Pressure test CIBP to 4300 psi. Release pkr and load hole. TOOH.
6. RU wireline company. With hole loaded and 1000 psi, run GR-CBL-CCL from 8200' to 200' above clean top of cement. (Cement top from the temperature survey is at 3600') ND wireline company.
7. TIH with open ended 2-3/8" 4.7# J-55 tubing. In stages, blow casing dry to 8200'. RU stimulation company. Spot 10 bbls 15% HCl across Sanastee perf interval (7990'-8090'). RD stimulation company. TOOH.

Allison Unit # 31  
1999 Mancos (Gallup) Recompletion

8. 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). **7990', 7992', 7994', 7996', 7998', 8000', 8002', 8004', 8006', 8008', 8010', 8070', 8072', 8074', 8076', 8078', 8080', 8082', 8084', 8086', 8088', 8090' (22 holes total)** ND wireline company.
9. TIH with 4-1/2" packer/RBP combo on 2-3/8" 4.7# J-55 tubing. Set RBP at 8110'. PU pkr to 8050'.
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 8040'. PU pkr to 7970'.
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. Lower RBP to 8150'. Blow well dry with air. PU pkr to 7950'. 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<sub>2</sub> slug/stress tests.** Latch on to RBP and TOOH.
14. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tubing. (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 tubing. The following table lists pkr/bridge plug (slug test assembly) settings and perforation intervals that N<sub>2</sub> will be injected. Tie into OH log prior to setting slug test assembly. RU 5000 psi packoff w/pump-in tee.

Test #	Packer Depth	BP Depth	Perf Interval (Zone)
1	7970'	8150'	7990'- 8090' (22 perfs)

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

15. 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 #17. If flow is less than 100 MCFD, proceed to step #16. Leave annulus open at all times and monitor with Merla Tester.
16. RU stimulation company to inject N<sub>2</sub> down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 6000 psi. **SLUG TEST** - Inject N<sub>2</sub> @ 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 N<sub>2</sub> 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.**

17. **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.**

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

**1<sup>st</sup> STAGE STIMULATION (SANASTEE):**

19. RU wireline. Run ProTechnics RTD tool on wireline and set top of tool at 8050'. This tool will remain in the hole throughout the stimulation. POOH. RD wireline company.
20. TIH with 4-1/2" packer on 2 jts of 2-7/8" N80 buttress frac string. Set packer at 60'.
21. RU stimulation company. Pressure test surface lines to 5000 psi. **Maximum surface treating pressure is 4000 psi at 30 BPM.** Perform pump-in test (mini-frac) with 8000 gals of pad volume. Begin injection at 20 BPM and hold until pressure stabilizes. Decrease rate and let pressure stabilize in the same manner at 15, 10, and 5 BPM. Shut down pumps and get an ISIP. Start up and finish pumping pad volume. Fracture stimulate the Lower Mancos with 60,000 lbs 20/40 Tempered LC sand in 25# Delta Frac at **30 BPM. Increase rate as pressure allows.** Tag sand with 3 radioactive isotopes.
22. Record ISIP, 5, 10 and 15 minute shut-in pressures. Shut-in frac valve. RD stimulation company. Install flowback line above frac valve. Flow back to pit. TOOH.
23. After well cleans up and pressures allow, RU wireline and RIH and wireline retrieve RTD tool @ 8050'. POOH.
24. TIH with 4-1/2" CIBP and packer on 2-3/8" 4.7# J-55 tubing. Set CIBP at 7850'. Release from CIBP and PUH with packer. Set packer just above CIBP and pressure test to 3800 psi. Bleed off pressure. Release packer. Blow hole dry of any fluid to 7720'.

**Pre-Frac Slug/Stress Testing – 2<sup>nd</sup> Stage**

25. RU stimulation company. Spot 5 bbls 15% HCl across Lower Mancos perf interval (7560'-7696') at 7700'. RD stimulation company. TOOH.
26. NU wireline. Perforate Lower Mancos interval as follows using select fire HSC guns loaded with Titan Prospector 14 gram charges set at **1 SPF** (Av. perf diameter - 0.30", Av. pen. -22.2" in concrete). **7560', 7563', 7566', 7569', 7572', 7575', 7578', 7581', 7625', 7628', 7631', 7634', 7675', 7678', 7681', 7684', 7687', 7690', 7693', 7696' (20 holes total)** ND wireline company.
27. TIH with 4-1/2" packer/RBP combo on 2-3/8" 4.7# J-55 tubing. Set RBP at ~7710'. PU packer to 7610'.

28. 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.
29. Bleed off pressure and release packer. Reset RBP at 7600'. PU pkr to 7540'.
30. 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.
31. Bleed off pressure and release packer. Reset RBP 7730'. Blow well dry with air. Shut air down and obtain a pitot gauge if the well will flow on its own. Blow well again to ensure there is no fluid in the wellbore. 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<sub>2</sub> slug/stress tests. TOOH w/ pkr and RBP.**
32. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tubing. (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 tubing. The following table lists pkr/bridge plug (slug test assembly) settings and perforation intervals that N<sub>2</sub> will be injected. Tie into OH log prior to setting slug test assembly. **RU 5000 psi packoff w/pump-in tee.**

Test #	Packer Depth	RBP Depth	Perf Interval (Zone)
2	7540'	7720'	7560'- 7696' (20 perfs)

33. 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 hrs, then proceed to step # 35. If flow is less than 100 MCFD, proceed to step # 34. Leave annulus open at all times and monitor with Merla Tester.
34. RU stimulation company to inject N<sub>2</sub> down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 4800 psi. **SLUG TEST** – Inject N<sub>2</sub> @ 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 N<sub>2</sub> to pit before next test. **DO NOT KILL WELL WITH WATER TO MOVE THE TEST ASSEMBLY.** 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.**

35. **STRESS TEST** – Inject N<sub>2</sub> at 1500 scf/min at 3500 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 N<sub>2</sub> to pit before next test. **DO NOT KILL WELL WITH WATER TO MOVE THE TEST ASSEMBLY. Only move test assembly after each slug and stress tests are completed.**

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

36. Flowback N<sub>2</sub> to pit before next test. **TOOH** w/ test assembly.

**2<sup>nd</sup> STAGE STIMULATION (LOWER MANCOS):**

37. RU wireline. Run ProTechnics RTD tool on wireline and set top of tool at 7540'. This tool will remain in the hole throughout the stimulation. POOH. RD wireline company.
38. TIH with 4-1/2" packer on 2 jts of 2-7/8" N80 buttress frac string. Set packer at 60'.
39. RU stimulation company. Pressure test surface lines to 5000 psi. **Maximum surface treating pressure is 4000 psi at 30 BPM.** Perform pump-in test (mini-frac) with 8000 gals of pad volume. Begin injection at 20 BPM and hold until pressure stabilizes. Decrease rate and let pressure stabilize in the same manner at 15, 10, and 5 BPM. Shut down pumps and get an ISIP. Start up and finish pumping pad volume. Fracture stimulate the Lower Mancos with 60,000 lbs 20/40 Tempered LC sand in 25# Delta Frac at **30 BPM. Increase rate as pressure allows.** Tag sand with 3 radioactive isotopes.
40. Record ISIP, 5, 10 and 15 minute shut-in pressures. Shut-in frac valve. RD stimulation company. Install flowback line above frac valve. Flow back to pit. TOOH.
41. After well cleans up and pressures allow, RU wireline and RIH and wireline retrieve RTD tool @ 7540'. POOH.
42. TIH with 4-1/2" CIBP and packer on 2-3/8" 4.7# J-55 tubing. Set CIBP at 7350'. Release from CIBP and PUH with packer. Set packer just above CIBP and pressure test to 3800 psi. Bleed off pressure. Release packer. Blow hole dry of any fluid to 7300'.

**Pre-Frac Slug/Stress Testing – 3<sup>rd</sup> Stage**

43. RU stimulation company. Spot 20 bbls 15% HCl across Upper Mancos perf interval (6670'-7265') at 7300'. RD stimulation company. TOOH.
44. NU wireline. Perforate Upper Mancos interval as follows using select fire HSC guns loaded with Titan Prospector 14 gram charges set at 1 SPF (Av. perf diameter - 0.30", Av. pen. -22.2" in concrete). **6670', 6675', 6680', 6685', 6780', 6785', 6790', 6795', 6800', 6920', 6925', 6930', 6935', 7080', 7085', 7090', 7095', 7150', 7155', 7160', 7165', 7250', 7255', 7260', 7265' (25 holes total)** ND wireline company.
45. TIH with 4-1/2" packer/RBP combo on 2-3/8" 4.7# J-55 tubing. Set RBP at ~7290'. PU packer to 7050'.
46. 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.
47. Bleed off pressure and release packer. Reset RBP at 6950'. PU pkr to 6650'.
48. 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.
49. Bleed off pressure and release packer. Reset RPB 7300'. Blow well dry with air. 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<sub>2</sub> slug/stress tests.** TOOH w/ pkr and RBP.

50. RU wireline company. RU and TIH with "Cased-Hole Test Assembly" on 2-3/8" 4.7# J-55 tubing. (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 tubing. The following table lists pkr/bridge plug (slug test assembly) settings and perforation intervals that N<sub>2</sub> will be injected. Tie into OH log prior to setting slug test assembly. RU 5000 psi packoff w/pump-in tee.

Test #	Packer Depth	RBP Depth	Perf Interval (Zone)
3	7050'	7300'	7080'- 7265' (12 perfs)
4	6530'	6590'	6670'- 6935' (13 perfs)

51. 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 hrs, then proceed to step #53. If flow is less than 100 MCFD, proceed to step #52. Leave annulus open at all times and monitor with Merla Tester.
52. RU stimulation company to inject N<sub>2</sub> down 2-3/8" 4.7# J-55 tubing. Pressure test surface lines to 4800 psi. **SLUG TEST** - Inject N<sub>2</sub> @ 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 N<sub>2</sub> to pit before next test. **DO NOT KILL WELL WITH WATER TO MOVE THE TEST ASSEMBLY.** 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.**

53. **STRESS TEST** – Inject N<sub>2</sub> at 1500 scf/min at 3500 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 N<sub>2</sub> to pit before next test. **DO NOT KILL WELL WITH WATER TO MOVE THE TEST ASSEMBLY. Only move test assembly after each slug and stress tests are completed.**

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

54. Follow the same procedure listed in steps #51, #52, and #53 on each slug test assembly setting. Unseat pkr/bridge plug combination on each setting depth listed in the table and move up hole at new depth and reset pkr and plug. Flowback N<sub>2</sub> to pit before next test. **DO NOT KILL WELL WITH WATER TO MOVE THE TEST ASSEMBLY. TOO H w/ test assembly.**

### **3<sup>rd</sup> STAGE STIMULATION (UPPER MANCOS):**

55. RU wireline. Run ProTechnics RTD tool on wireline and set top of tool at 7020'. This tool will remain in the hole throughout the stimulation. POOH. RD wireline company.
56. TIH with 4-1/2" packer on 2 jts of 2-7/8" N80 buttress frac string. Set packer at 60'.
57. RU stimulation company. Pressure test surface lines to 5000 psi. **Maximum surface treating pressure is 4000 psi at 30 BPM.** Perform pump-in test (mini-frac) with 8000



Allison Unit # 31  
1999 Mancos (Gallup) Recompletion

gals of pad volume. Begin injection at 20 BPM and hold until pressure stabilizes. Decrease rate and let pressure stabilize in the same manner at 15, 10, and 5 BPM. Shut down pumps and get an ISIP. Start up and finish pumping pad volume. Fracture stimulate the Lower Mancos with 100,000 lbs 20/40 Tempered LC sand in 25# Delta Frac at **30 BPM. Increase rate as pressure allows.** Tag sand with 3 radioactive isotopes.

58. Record ISIP, 5, 10 and 15 minute shut-in pressures. Shut-in frac valve. RD stimulation company. Install flowback line above frac valve. Flow back to pit. TOOH.
59. After well cleans up and pressures allow, RU wireline and RIH and wireline retrieve RTD tool @ 7020'. POOH.
60. TIH with 3-7/8" bit on 2-3/8" 4.7# J-55 tubing and clean out to 7350'. Alternate between blow and natural flow stages until water rates are less than 3 BPH. **Take an Upper Mancos pitot gauge.** Drill out CIBP at 7350'. Use a 10-12 BPH mist rate while drilling CIBP.
61. TIH with 3-7/8" bit on 2-3/8" 4.7# J-55 tubing and clean out to 7850'. Alternate between blow and natural flow stages until water rates are less than 3 BPH. **Take an Upper/Lower Mancos pitot gauge.** Drill out CIBP at 7850'. Use a 10-12 BPH mist rate while drilling CIBP.
62. Continue to clean out well to 8250'. Alternate between blow and natural flow stages until water rates are less than 3 BPH. Take a total Mancos pitot gauge. TOOH.
63. TIH with an expendable check, one 2-3/8" joint, standard SN and remaining 2-3/8" tubing. Broach tubing while running in hole. CO with air/mist to PBTD again, if necessary. **Obtain final Mancos pitot gauge.** Land tubing at 8090'. ND BOP. NU WH. Pump off expendable check. RDMO. Contact Production Operations for well tie-in.
64. RU Pro-Technics. Run After-Frac log across Mancos (6600'-8150'). RD Pro-Technics
65. CIBP above the Dakota perms will remain for 6-9 months for accurate testing of the Mancos zone. After this period, post frac injection tests will be performed on the Mancos and production logs will be run. Finally the well will be placed on commingled production.

Recommended:   
Production Engineer

11-23-99

Approved:  11/23/99  
Drilling Superintendent

Approved: \_\_\_\_\_  
Team Leader

VENDORS:

Wireline (Slug, Stress & Perf):	Schlumberger	325-5006
Stimulation:	Halliburton	325-3575
Pre-Frac Analysis:	S.A. Holditch & Associates	(412)-787-5403

Contact:

Bobby Goodwin	326-9713 (work)	599-0992 (home)	564-7096 (pager)
---------------	-----------------	-----------------	------------------

# Allison Unit # 31

Basin Dakota

Unit L, Section 14, T32N, R07W

San Juan County, NM

Elevation: 6853' GL, 6862' KB

LAT: 36° 58.61' / LONG: 107° 32.56'

date spud: 9/17/79

## Current

9-5/8" 32.3#, H-55 csg  
set @ 229' w/190 sx  
cmt circ to surface

TOC @ 2800' (TS)

7" 20#, N55 csg  
set @ 4130', cmt  
with 240 sxs

TOC @ 3600' (TS)

### Formation Tops:

Cliffhouse	@ 5689'
Menefee	@ 5756'
Pt Lookout	@ 6040'
Gallup	@ 7317'
Greenhorn	@ 8154'
Graneros	@ 8200'
Dakota	@ 8334'

4-1/2" K-55/N-80  
10.5# 0' - 6961'  
11.6# 6961' - 8473'  
with 355 sx cmt

DK Perfs:  
8343' - 8463'

TD: 8473'  
PBD: 8466'

## Proposed

2-3/8", 4.7#, J-55 tbg  
set at 8418'

1-1/2", 2.9#, J-55 tbg  
set at 8418'  
SN at 8384'

MANCOS Perfs:  
To be determined  
6670' - 8090'

DK Perfs:  
8343' - 8463'

TD: 8473'  
PBD: 8466'