

submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

2001 MAY -4 PM 1:475.

1. Type of Well
GAS

6. Lease Number
SF-078387
If Indian, All. or
Tribe Name

7. Unit Agreement Name

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

1520' FSL, 1160' FEL, Sec.31, T-31-N, R-8-W, NMPM

8. Well Name & Number
Howell D #5
9. API Well No.
30-045-24143
10. Field and Pool
Basin Dakota/
WC:31N8W1I Mancos
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

Notice of Intent

Abandonment

Change of Plans

Subsequent Report

Recompletion

New Construction

Final Abandonment

Plugging Back

Non-Routine Fracturing

Casing Repair

Water Shut off

Altering Casing

Conversion to Injection

Other -

13. Describe Proposed or Completed Operations

It is intended to recomplate the subject well to the Mancos formation and plug and abandon the Dakota formation according to the attached procedure and wellbore diagram.



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

Signed [Signature] Title Regulatory Supervisor Date 5/3/01
TLW

(This space for Federal or State Office use)
APPROVED BY /s/ Jim Lovato Title _____ Date _____

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.

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 30-045-24143		2 Pool Code 71599/		3 Pool Name Basin Dakota/WC:31N8W31I Mancos	
4 Property Code 7124		5 Property Name Howell D			6 Well Number 5
7 OGRID No. 14538		8 Operator Name Burlington Resources Oil & Gas Company			9 Elevation 6359'GL

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	31	31N	8W		1520	South	1160	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

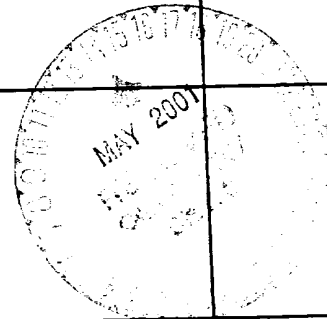
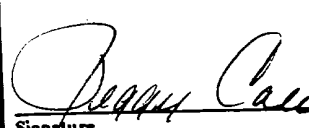
12 Dedicated Acres
 DK:E/320
 MA:SE/160

13 Joint or Infill

14 Consolidation Code

15 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

16 Original plat from Fred B. Kerr Jr. 9-25-79.	31		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 Supervisor Title 5-4-01 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. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number

1160'
1520'

Howell D #5
Mancos Shale Re-completion Procedure
1520' FSL, 1160' FEL
Unit I, Sec. 31 T-31-N, R-08-W
San Juan County, NM

Project Summary:

The Howell D #5 was originally completed in the Dakota formation September of 1980. The current average rate from the Dakota is less than 10 MCFPD. Cumulative production from the Dakota formation is 1327 MMCF.

Re-completion Procedure:

The following procedure details the proposed operations to abandon the current Dakota formation and recomplete the well in four intervals of Mancos shale.

- Comply with all NMOCD, BLM and BR regulations. Conduct daily safety meetings for all personnel on location. **Notify BR regulatory (Peggy Cole 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.
1. MOL, hold safety meeting and RU completion rig. Insure all safety equipment is strategically located and functioning properly. NU relief lines to blow pit. Set frac tanks and fill with 2% KCl water. Blow well down and kill with 2% KCl water as necessary.
 2. ND wellhead. NU BOP, stripper head and blooie line. Test BOP.
 3. TOOH w/ 241 joints of 1-1/2", 2.9#, J-55 tbg set at 7672' and stand back. Inspect tubing and replace as necessary for production string following workover operations.
 4. PU CIBP for 4" Liner (4", 10.46#, N80, FL-4S csg drift – 3.351") on 2-3/8", 4.7#, J-55 work string. TIH and set CIBP at 7500' (Top Dakota Perf at 7536'). Spot 6 sx Class "B" cement on top of CIBP (6sx = 6.59 cf = +100' capacity in 4" liner). TOOH.
 5. PU 3-1/8" casing mill on the 2-3/8", 4.7# J-55 work string. Clean out to new PBSD of ±7400'. Circulate hole clean with 2% KCl.
 6. Pull up to 7269' and spot 5 Bbls of 10% Acetic Acid with 5%NH₄Cl across the proposed Carlile perforation interval (7249' to 7269'). TOOH.
 7. Install MB wellhead isolation tool. Pressure test CIBP, 5-1/2" casing and 4" liner to 4050 psi (~85% of burst for 5-1/2" 15.5# J-55 casing). Bleed off pressure.
 8. NU wireline company. Run GR/CCL Log from 7400' to 6600'. Correlate GR and casing collars with attached correlation log section. ND wireline.

Note: A CBL log run during the Dakota completion operations in 1980 indicates 100% bond over all of the proposed Mancos perforation intervals. A copy of the CBL log is not attached to this procedure to eliminate confusion that could be caused by a slight difference in depth measurement between the attached Correlation log section and the CBL.

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CARLILE:

9. NU wireline company's perforating guns. Correlate depths with attached GR/CCL log section. Perforate **Carlile interval from 7249' to 7269'** at 6 spf with 60 degree phasing (total of 120 holes) using an Owens 2-7/8" TAG-3125-302LD perf gun; 15.0 gram charge; 0.30" Entry hole; 19.46" penetration in concrete (4" Liner, 10.46#, N80, FL-4S csg drift - 3.351"). RD wireline.
10. TIH open ended with 2-3/8" 4.7# J-55 work string to 6800' and displace 2% KCl with 40# Linear Gel. TOOH.
11. RU stimulation company. Hold safety meeting. Pressure test surface lines to 5050 psi. Fracture stimulate the Carlile interval with 35,000 lbs 20/40 Arizona sand in 42,000 gals of 30# cross-linked gel @ 35 BPM. Tag sand with 3 isotopes. **Maximum surface treating pressure is 4050 psi.** Average surface treating pressure is estimated to be 3056 psi @ 35 BPM. The total friction pressure is estimated to be 900 psi. Treat per the following schedule:

Stage	Frac Fluid (gals)	Sand Volume (lbs)
Pad	12,000	
0.5 ppg	7,500	3,750
1.0 ppg	10,000	10,000
1.5 ppg	7,500	11,250
2.0 ppg	5,000	10,000
Flush (50' above top perf)	6,377	
Totals	48,377	35,000

Monitor treatment pressures during job. Cut the crosslinker and reduce gel concentration to 25# per 1000 gal if pressures allow. The 30# cross-linked fluid is designed to overcome the initiation of near wellbore multiple fractures (high net pressure) that have been experienced in past stimulation attempts in the Lower portions of the Mancos Shale. However, recent fluid studies have indicated significantly better residual permeability resulting from lower gel loading and linear gel systems. The ideal situation would be to start the frac with the 30# cross-linked fluid and finish with a 25# liner gel.

Calculate displacement to spot 5 Bbls of 10% Acetic Acid with 5%NH₄C across next interval. Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND stimulation company. **Wait 1 hour to allow sand to settle.**

12. NU wireline company. Under a lubricator, RIH with **Frac Plug** and set at 7150'. POOH and ND wireline.
13. NU stimulation company test surface lines to 5050 psi. Pressure test **Frac Plug** to 4050 psi (85% of burst for 5-1/2" casing). Note: Pressure may bleed slowly past the frac plug during the pressure test. Notify the Drilling Manager or Production Engineer if the pressure bleeds off more than 500 psi during 15 minutes. ND stimulation company.

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JUANA LOPEZ:

14. NU wireline company's lubricator to hold pressure on **Frac Plug**. Correlate depths with attached GR/CCL log section. Perforate the **Juana Lopez interval from 7109' to 7129'** at 6 spf with 60 degree phasing (total of 120 holes) using an Owens 2-7/8" TAG-3125-302LD perf gun; 15.0 gram charge; 0.30" Entry hole; 19.46" penetration in concrete (4" Liner, 10.46#, N80, FL-4S csg drift – 3.351"). RD wireline.
15. RU stimulation company. Hold safety meeting. Pressure test surface lines to 5050 psi. Fracture stimulate the Juana Lopez interval with 35,000 lbs 20/40 Arizona sand in 42,000 gals of 30# cross-linked gel @ 35 BPM. Tag sand with 3 isotopes. **Maximum surface treating pressure is 4050 psi**. Average surface treating pressure is estimated to be 2980 psi @ 35 BPM. The total friction pressure is estimated to be 866 psi. Treat per the following schedule:

Stage	Frac Fluid (gals)	Sand Volume (lbs)
Pad	12,000	
0.5 ppg	7,500	3,750
1.0 ppg	10,000	10,000
1.5 ppg	7,500	11,250
2.0 ppg	5,000	10,000
Flush (50' above top perf)	6,308	
Totals	48,308	35,000

Monitor treatment pressures during job. Cut the crosslinker and reduce gel concentration to 25# per 1000 gal if pressures allow. The 30# cross-linked fluid is designed to overcome the initiation of near wellbore multiple fractures (high net pressure) that have been experienced in past stimulation attempts in the Lower portions of the Mancos Shale. However, recent fluid studies have indicated significantly better residual permeability resulting from lower gel loading and linear gel systems. The ideal situation would be to start the frac with the 30# cross-linked fluid and finish with a 25# liner gel.

Flush with 2% KCl. Calculate displacement to spot 5 Bbls of 10% Acetic Acid with 5%NH₄C across next interval. Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND stimulation company. **Wait 1 hour to allow sand to settle.**

16. NU wireline company. Under a lubricator, RIH with **Frac Plug** and set at 7015'. POOH and ND wireline.
17. NU stimulation company test surface lines to 5050 psi. Pressure test **Frac Plug** to 4050 psi (85% of burst for 5-1/2" casing). Note: Pressure may bleed slowly past the frac plug during the pressure test. Notify the Drilling Manager or Production Engineer if the pressure bleeds off more than 500 psi during 15 minutes.
18. ND stimulation company.

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TOCITO:

19. NU wireline company's lubricator to hold pressure on **Frac Plug**. Correlate depths with attached GR/CCL log section. Perforate the **Tocito interval from 6963' to 6983'** at 6 spf with 60 degree phasing (total of 120 holes) using an Owens 2-7/8" TAG-3125-302LD perf gun; 15.0 gram charge; 0.30" Entry hole; 19.46" penetration in concrete (4" Liner, 10.46#, N80, FL-4S csg drift – 3.351"). RD wireline.
20. RU stimulation company. Hold safety meeting. Pressure test surface lines to 5050 psi. Fracture stimulate the Tocito interval with 45,000 lbs 20/40 Arizona sand in 80,000 gals of slick water (containing 1 gal of surfactant per 1000 gal of slick water). Tag sand with 3 isotopes. Treat @ 45 BPM. **Maximum surface treating pressure is 4050 psi**. Average surface treating pressure is estimated to be 2539 psi @ 45 BPM. The total friction pressure is estimated to be 677 psi. Treat per the following schedule:

Stage	Frac Fluid (gals)	Sand Volume (lbs)
Pad	40,000	
0.5 ppg	10,000	5,000
1.0 ppg	15,000	15,000
1.5 ppg	10,000	15,000
2.0 ppg	5,000	10,000
Flush (50' above top perf)	6,236	
Totals	86,236	45,000

Calculate displacement to spot 5 Bbls of 10% Acetic Acid with 5%NH₄C across next interval. Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND stimulation company. **Wait 1 hour to allow sand to settle.**

21. NU wireline company. Under a lubricator, RIH with **Frac Plug** and set at 6855'. POOH and ND wireline.
22. NU stimulation company test surface lines to 5050 psi. Pressure test **Frac Plug** to 4050 psi (85% of burst for 5-1/2" casing). Note: Pressure may bleed slowly past the frac plug during the pressure test. Notify the Drilling Manager or Production Engineer if the pressure bleeds off more than 500 psi during 15 minutes.
23. ND stimulation company.

UPPER GALLUP:

24. NU wireline company's lubricator to hold pressure on **Frac Plug**. Correlate depths with attached GR/CCL log section. Perforate the **Upper Gallup interval from 6804' to 6824'** at 6 spf with 60 degree phasing (total of 120 holes) using an Owens 2-7/8" TAG-3125-302LD perf gun; 15.0 gram charge; 0.30" Entry hole; 19.46" penetration in concrete (4" Liner, 10.46#, N80, FL-4S csg drift – 3.351"). RD wireline.

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25. RU stimulation company. Hold safety meeting. Pressure test surface lines to 5050 psi. Fracture stimulate the Upper Gallup interval with 45,000 lbs 20/40 Arizona sand in 80,000 gals of slick water (containing 1 gal of surfactant per 1000 gal of slick water). Tag sand with 3 isotopes. Treat @ 45 BPM. **Maximum surface treating pressure is 4050 psi.** Average surface treating pressure is estimated to be 2474 psi @ 45 BPM. The total friction pressure is estimated to be 654 psi

Stage	Frac Fluid (gals)	Sand Volume (lbs)
Pad	40,000	
0.5 ppg	10,000	5,000
1.0 ppg	15,000	15,000
1.5 ppg	10,000	15,000
2.0 ppg	5,000	10,000
Flush (50' above top perf)	6,133	
Totals	86,133	45,000

Cut rate throughout flush as pressure allows. Shut down and record ISIP, 5, 10, 15 min shut-in pressures. ND stimulation company.

26. Flow back through choke manifold & monitor flow. Flow @ 20 bbl/hr. or less, if sand is observed.
27. When pressure allows, TIH w/ 3-1/8" casing mill on 2-3/8", 4.7#, J-55 work string.
28. Drill out **Frac Plugs** @ 6855'; 7015' and 7150'. Clean out to PBTD @ 7400'. It is not necessary to obtain separate pitot gauges for each of the four intervals. Cleaning out to PBTD without gauges for each of the intervals will allow the bottom intervals to start flowing back and will reduce the time frac fluids are on the formation.
29. Once the well has been cleaned out to PBTD, continue to flow and blow well clean. Record estimated load recovery during flow back and clean up operations.
30. Monitor fluid rates until well is sufficiently clean (<5 BWPH). **Obtain a pitot gauge for the combined Mancos intervals.** TOOH.
31. RU wireline company. Run After Frac Tracer Log (Pro-Technics) and Perf Efficiency Log over each of the four Mancos intervals. RD wireline.
32. TIH with an expendable check valve; 1 jt. of 1-1/2", 2.9#, J-55 production tubing; S.N.; and half of the 1-1/2", 2.9#, J-55 production string. Run a broach on sand line to insure the tubing is clear.
33. TIH with remaining 1-1/2" production string and broach this tubing. Replace any bad joints. CO to PBTD with air/mist. PU above perforations. Alternate blow and flow periods, making short trips for clean up as necessary.

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- 34. Land tubing @ $\pm 7260'$. ND BOP & NU wellhead & tree. Pump off check valve. Flow up tubing.
Take final water rates and pitot gauge for gas rates.
- 35. During workover operations the reservoir may be charged with air. As a result of introducing air to the wellbore, excess oxygen levels may be in the reservoir and/or wellbore. Contact the Lease Operator to discuss the need for determining oxygen levels prior to returning the well to production.
- 36. Rig down & release rig.

Approve: *Randy Buckley 4/26/01*
 Team Leader

Approve: *Bruce D. Boyz 4.29.01*
 Drilling Manager

Recommend: *[Signature]*
 Production Engineer

Regulatory: Sundry Notice Required
 Yes
 No

Jenny Cole 5-1-01

Vendors:

Stimulation: No Preference
 Radioactive Tagging: ProTechnics 326-7133

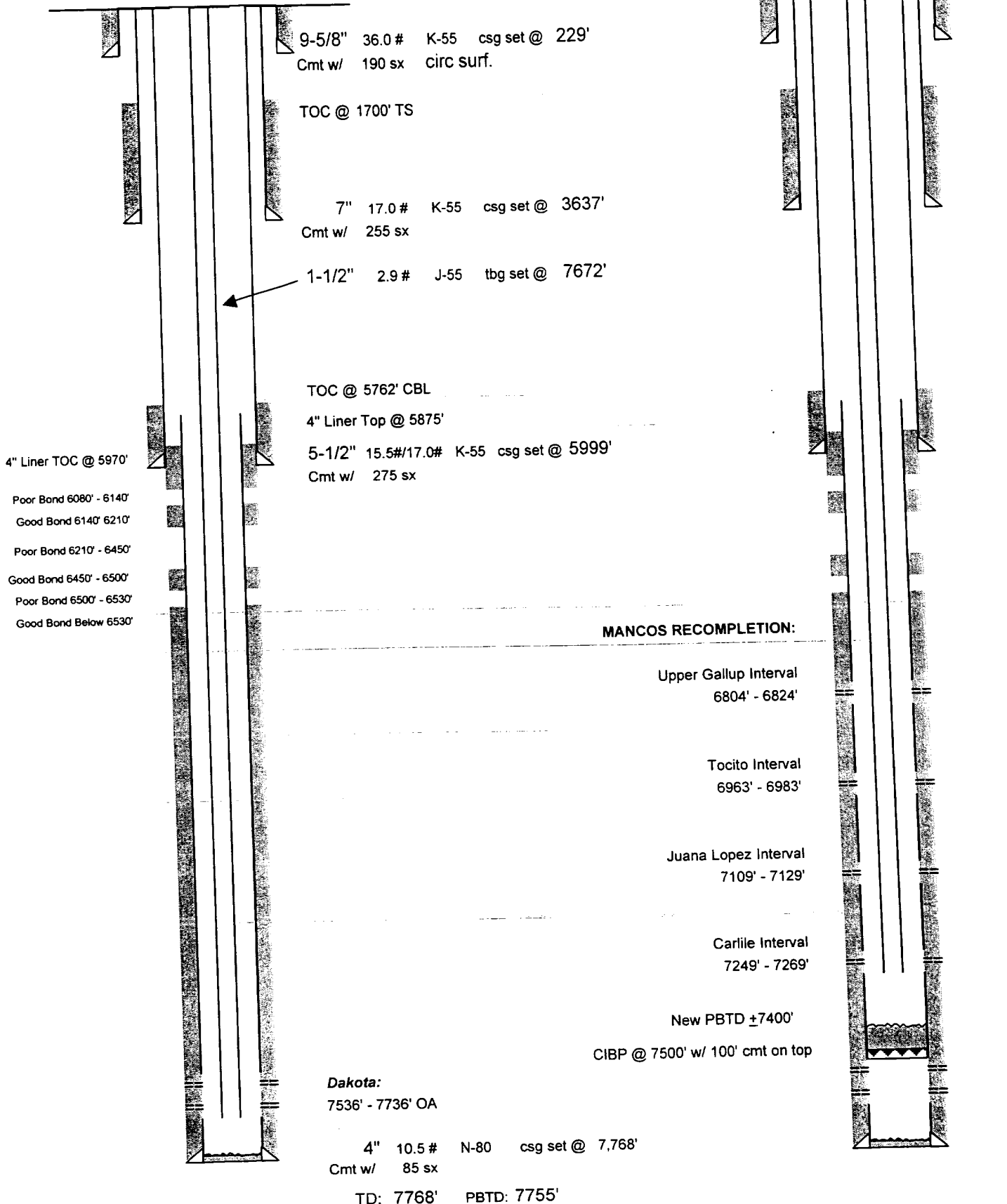
Production Engineer:	Randy Buckley	Office 326-9597	Pager 326-8820	Home 599-8136
Lease Operator:	Rick McDaniel		Cell 320-2549	Pager 326-8777
Specialist:	Wayne Ritter		Cell 320-0436	Pager 324-7225
Forman:	Hans Dube	Office 326-9818	Cell 320-4925	Pager 949-2664

Howell D #5
 Unit I, Sec.31, T-31-N, R-08-W
 San Juan County, New Mexico

Wellbore Diagram

CURRENT WELLBORE

POST-WORK WELLBORE



9-5/8" 36.0 # K-55 csg set @ 229'
 Cmt w/ 190 sx circ surf.

TOC @ 1700' TS

7" 17.0 # K-55 csg set @ 3637'
 Cmt w/ 255 sx

1-1/2" 2.9 # J-55 tbg set @ 7672'

TOC @ 5762' CBL

4" Liner Top @ 5875'

5-1/2" 15.5#/17.0# K-55 csg set @ 5999'
 Cmt w/ 275 sx

4" Liner TOC @ 5970'
 Poor Bond 6080' - 6140'
 Good Bond 6140' - 6210'
 Poor Bond 6210' - 6450'
 Good Bond 6450' - 6500'
 Poor Bond 6500' - 6530'
 Good Bond Below 6530'

MANCOS RECOMPLETION:

Upper Gallup Interval
 6804' - 6824'

Tocito Interval
 6963' - 6983'

Juana Lopez Interval
 7109' - 7129'

Carlile Interval
 7249' - 7269'

New PBTD ±7400'

CIBP @ 7500' w/ 100' cmt on top

Dakota:
 7536' - 7736' OA

4" 10.5 # N-80 csg set @ 7,768'
 Cmt w/ 85 sx

TD: 7768' PBTD: 7755'