

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

1450' FNL, 790' FWL, Sec. 18, T-28-N, R-5-W, NMPM

5. Lease Number

SF-079250

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

San Juan 28-5 Unit

8. Well Name & Number

San Juan 28-5 U #61E

9. API Well No.

30-039-23837

10. Field and Pool

WC: Munoz Canyon Gallup/
Basin Dakota

11. County and State

Rio Arriba 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 add the Gallup formation to the subject well according to the attached procedure and wellbore diagram. A cast iron bridge plug will be set for approximately 90 days for testing purposes. The well will then be down-hole commingled. A down-hole commingle order will be applied for.

RECEIVED
DEC - 8 1997

OIL CON. DIV.
DIST. 3

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

Signed *Donna W. Spruill* (RGOpps) Title Regulatory Administrator Date 12/1/97

(This space for Federal or State Office use)

APPROVED BY *AS/ Donna W. Spruill* Title _____ Date DEC - 4 1997

CONDITION OF APPROVAL, if any:

NMOCN

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

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

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

District III
1000 Rio Brazos Rd., Aztec, NM 87410

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

'API Number 30-039-23837	'Pool Code 96767/71599	'Pool Name WC:Munoz Canyon Gallup/Basin Dakota
'Property Code 7460	'Property Name SAN JUAN 28-5 UNIT	'Well Number 61E
'OGRID No. 14538	'Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY	'Elevation 6713'

10 Surface Location

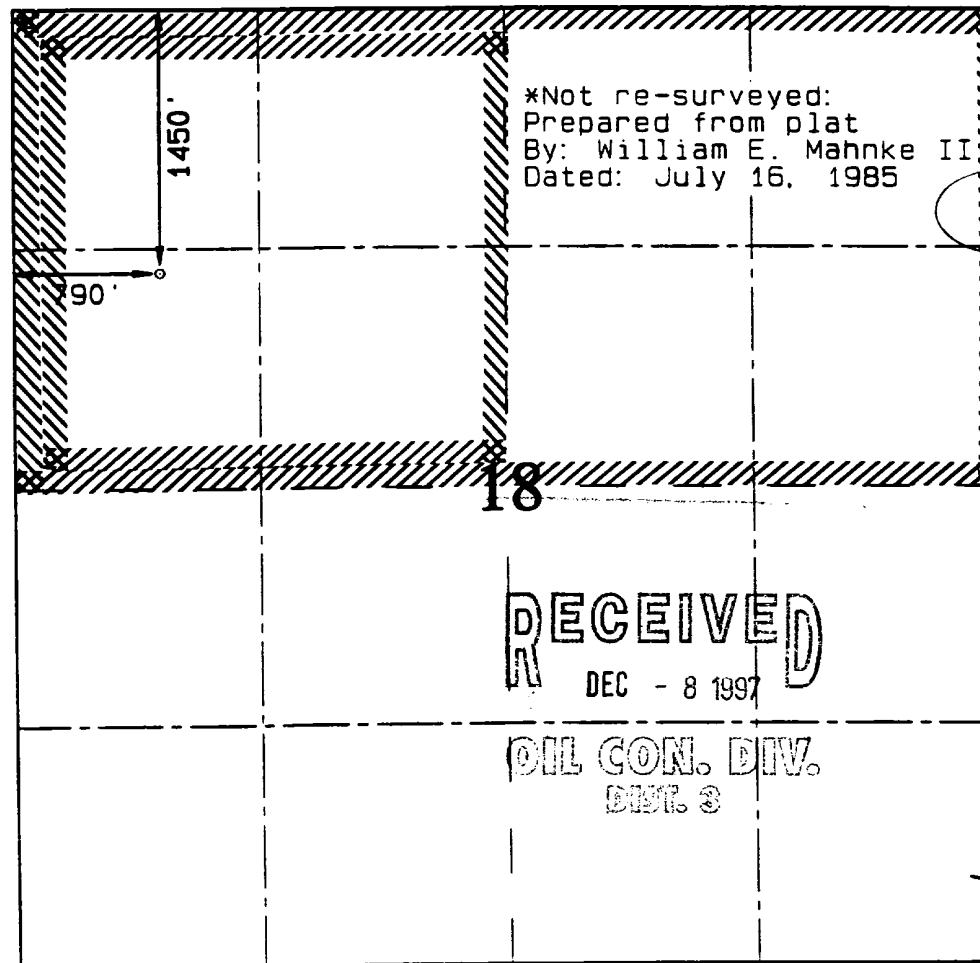
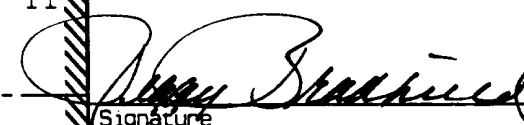

UL or lot no. E	Section 18	Township 28N	Range 5W	Lot Idn	Feet from the 1450	North/South line North	Feet from the 790	East/West line West	County RIO ARriba
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11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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12 Dedicated Acres Gal - 160 DK - N/320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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

	<p>*Not re-surveyed: Prepared from plat By: William E. Mahnke II Dated: July 16, 1985</p>	<p>17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p> Signature Peggy Bradfield Printed Name Regulatory Administrator Title 12-2-97 Date</p>
	<p>18</p> <p>RECEIVED DEC - 8 1997</p> <p>OIL CON. DIV. DIST. 3</p>	<p>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.</p> <p>NOVEMBER 20, 1997 Date of Survey  Signature and Seal NEALE C. EDWARDS NEW MEXICO 6857 6857 Certificate Number</p>

San Juan 28-5 Unit #61E
Burlington Resources Oil & Gas

~~Niobrara Payadd~~ **GALLUP RECOMPLETION**
~~Unit O See 19 T27N R05W Sec 18 T27N R05W~~
Lat: 36° 39' 17"
Long: 107° 23' 46"

-
- Comply with all BLM, NMOCD, & BR rules & regulations.
 - **Always Hold Safety Meetings.** Place fire and safety equipment in strategic locations.
 - Spot and fill 3 frac tanks with 2% KCl water.
 - Use drill gas for all operations.
 - (2) 4-1/2" CIBP required for 4-1/2" 11.6# K-55 pipe.
 - (1) 4-1/2" RBP required for 4-1/2" 11.6# K-55 pipe.
 - (1) 4-1/2" Model 'EA' Retrieivamatic Packer
 - 8200' 2-3/8" 4.7# 8rd EUE workstring
 - 2 joints (+/- 60') 2-7/8" 6.4# N-80 BTC tubing
-

Project Objective: *The well is currently completed in the Basin Dakota (72 MCFD). Cumulative production is 260 MMCF from the Dakota. Gallup/~~Niobrara pay~~ will be ~~edges~~ **RECOMPLETED** and stimulated in three stages with a 70 Quality foam and 30# linear gel frac. The first two stages are to be frac'd on the first day, the second stage will be flowed back overnight. The third stage is to be frac'd on the second day. Nitrogen Foam is to be used to aide the formation in lifting fluids and minimize formation damage due to fluid exposure. Controlled flowback will be used to insure proper proppant placement within the fracture.*

NOTE: Dakota perms open 7879' - 8070'

1. MIRU. Record and report SI pressures on tubing, casing, and bradenhead. Blow down casing and tubing. Kill well w/ 2% KCl. ND WH, NU BOP.
2. TOOH with 1-1/2" 2.9# J-55 tubing from 8033' (238 joints) and LD. Rabbit and strap tubing. Visually inspect tubing, note any scale. Replace any bad tubing.
3. RU wireline unit. Run gauge ring to 7630'. Wireline set 4-1/2" CIBP at 7620' to isolate the Dakota. POOH.
4. PU 4-1/2" retrievable packer with 2 joints of 2-7/8" BTC tubing. Set packer at 60'.
5. Pressure test 4-1/2" casing to 3800 psi for 10 minutes. If casing fails, TIH with 4-1/2" packer and hunt hole(s). Engineering will provide squeeze design if required. TOOH

First Stage: (First Day)

6. Spot 350 gallons 15% Acetic acid (w/ 2 gal/1000 corrosion inhibitor) at 7500'. TOOH, standing 2-3/8" back. (If separate trip is required, skip spotting acid.)
7. RU wireline under packoff. Perforate first stage (top-down if in acid) at the following depths with a 3-1/8" HSC gun w/ Owen 3125306P 12g charges (0.29" hole, 12" penetration), 1 SPF @ 180 degree phasing.

7325', 7332', 7339', 7346', 7355', 7363', 7370', 7377', 7384', 7391', 7398', 7405', 7415',
 7422', 7429', 7435', 7455', 7463', 7469', 7475', 7482', 7530', 7535', 7540', 7545', 7550',
 7555', 7560', 7565', 7570'
 (30 total holes, 245' gross interval)

8. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Break down first stage w/ 1000 gallons 15% **Acetic acid** (w/ 2 gal/1000 corrosion inhibitor) and 60 7/8" 1.3 s.g. ball sealers. Release pressure, RD stimulation company. TOOH. RU wireline unit. Run junk basket and recover balls. Record number of hits. RD wireline unit.

9. RU flowback equipment so that flowback can commence within 30 min after shutdown

10. Set packer at 60'. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Fracture stimulate the first stage w/ 92,000# 20/40 Arizona sand in 32,055 gal 70 Quality foam with 30# Linear gel. See attached frac schedule for details. (1 *frac tank needed*)

Stage	Foam Volume (gals)	Gel Volume (gals)	Sand Volume (lbs)
Pad	4,000	1,200	0
2.0 ppg	3,000	900	6,000
3.0 ppg	4,000	1,200	12,000
4.0 ppg	6,000	1,800	24,000
5.0 ppg	10,000	3,000	50,000
Flush	5,055	1,517	0
Totals	32,055	9,617	92,000

11. Treat frac fluid with the following additives per 1000 gallons:

* 6.75 gal	(Guar Slurried Gel)
* 5.0 gal F-52.1	(Foamer mix on the fly)
* 1.0#	(Enzyme Breaker mix on the fly)
* 1.0#	(Oxidator Breaker mix on the fly)
* 2.0 gal L55	(Clay Control)
* 0.38#	(Bacteriacide mix on the fly)
* 0.4 mCi Ir-192	(Radioactive tracer)
* 0.3 mCi Sb-124	(Radioactive tracer)
* 0.3 mCi Sc-46	(Radioactive tracer)

12. Shut well in after frac and record ISIP. RD stimulation company. Install flowback line above frac valve. Wait for 30 min before comencing flowback. Open well to pit, starting with a 10/64" choke. If choke plugs off, shut well in and remove obstruction from choke and return to flowback. Continue increasing choke size and cleaning well until fluid production falls off. Take pitot gauges when possible.

13. RD flowback equipment. TOOH.

14. RU wireline unit. Wireline set 4-1/2" CIBP at 7310' to isolate the first stage from the second. POOH. RD wireline unit.

15. Set packer at 60'. RU stimulation company. Pressure test CIBP to 3800 psi. RD stimulation company. TOOH.

Second Stage: (First Day)

16. RU wireline under packoff. Perforate second stage at the following depths with a 3-1/8" HSC gun w/ Owen 3125306P 12g charges (0.29" hole, 12" penetration), 1 SPF @ 180 degree phasing.

**7175', 7180', 7185', 7190', 7195', 7200', 7205', 7210', 7215', 7220', 7225', 7230', 7235',
 7240', 7245', 7250', 7255', 7260', 7265', 7270', 7275'**
(21 total holes, 100' gross interval)

17. Set packer at 60'. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Break down second stage w/ 1000 gallons 15% **Acetic acid** (w/ 2 gal/1000 corrosion inhibitor) and 52 7/8" 1.3 s.g. ball sealers. Release pressure, RD stimulation company. TOOH. RU wireline unit. Run junk basket and recover balls. Record number of hits. RD wireline unit.

18. RU flowback equipment so that flowback can commence within 30 min after shutdown

19. Set packer at 60'. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Fracture stimulate the first stage w/ 97,000# 20/40 Arizona sand in 32,858 gal 70 Quality foam with 30# Linear gel. See attached frac schedule for details. (1 frac tank needed)

Stage	Foam Volume (gals)	Gel Volume (gals)	Sand Volume (lbs)
Pad	3,000	900	0
2.0 ppg	4,000	1,200	8,000
3.0 ppg	5,000	1,500	15,000
4.0 ppg	6,000	1,800	24,000
5.0 ppg	10,000	3,000	50,000
Flush	4,858	1,457	0
Totals	32,858	9,857	97,000

Treat frac fluid with the following additives per 1000 gallons:

- * 6.75 gal (Guar Slurried Gel)
- * 5.0 gal F-52.1 (Foamer mix on the fly)
- * 1.0# (Enzyme Breaker mix on the fly)
- * 1.0# (Oxidator Breaker mix on the fly)
- * 2.0 gal L55 (Clay Control)
- * 0.38# (Bacteriacide mix on the fly)
- * 0.4 mCi Ir-192 (Radioactive tracer)
- * 0.3 mCi Sb-124 (Radioactive tracer)
- * 0.3 mCi Sc-46 (Radioactive tracer)

20. Shut well in after frac and record ISIP. RD stimulation company. Install flowback line above frac valve. Wait for 30 min before comencing flowback. Open well to pit, starting with a 10/64" choke. If minimal sand is being produced, change to a larger choke size (16/64"). If choke plugs off, shut well in and remove obstruction from choke and return to flowback. Continue increasing choke size and cleaning well up overnight. Take pitot gauges when possible.

21. RD flowback equipment. TOOH.

22. RU wireline unit. Wireline set 4-1/2" CIBP at 7160' to isolate the second stage from the third. POOH. RD wireline unit.

23. Set packer at 60'. RU stimulation company. Pressure test CIBP to 3800 psi. RD stimulation company. TOOH.

Third Stage: (Second Day)

24. RU wireline under packoff. Perforate third stage at the following depths with a 3-1/8" HSC gun w/ Owen 3125306P 12g charges (0.29" hole, 12" penetration), 1 SPF @ 180 degree phasing.

6850', 6860', 6870', 6880', 6890', 6900', 6915', 6920', 6925', 6930', 6935', 6940', 6945',
6950', 6955', 6960', 6965', 6975', 6985', 7000', 7030', 7035', 7040', 7070', 7080', 7090',
7100', 7110'

(28 total holes, 260' gross interval)

25. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Break down second stage w/ 1000 gallons 15% **Acetic acid** (w/ 2 gal/1000 corrosion inhibitor) and 54 7/8" 1.3 s.g. ball sealers. Release pressure, RD stimulation company. TOOH. RU wireline unit. Run junk basket and recover balls. Record number of hits. RD wireline unit.

26. RU flowback equipment so that flowback can commence within 30 min after shutdown

27. Set packer at 60'. RU stimulation company. Pressure test surface lines to 4800 psi. **Max surface pressure = 3800 psi.** Fracture stimulate the first stage w/ 95,000# 20/40 Arizona sand in 32,748 gal 70 Quality foam with 30# Linear gel. See attached frac schedule for details. (1 *frac tank needed*)

	Foam Volume	Gel Volume	Sand Volume
<u>Stage</u>	<u>(gals)</u>	<u>(gals)</u>	<u>(lbs)</u>
Pad	4,000	1,200	0
2.0 ppg	3,000	900	6,000
3.0 ppg	5,000	1,500	15,000
4.0 ppg	6,000	1,800	24,000
5.0 ppg	10,000	3,000	50,000
Flush	4,748	1,424	0
Totals	32,748	9,824	95,000

Treat frac fluid with the following additives per 1000 gallons:

* 6.75 gal	(Guar Slurried Gel)
* 5.0 gal F-52.1	(Foamer mix on the fly)
* 1.0#	(Enzyme Breaker mix on the fly)
* 1.0#	(Oxidator Breaker mix on the fly)
* 2.0 gal L55	(Clay Control)
* 0.38#	(Bacteriacide mix on the fly)
* 0.4 mCi Ir-192	(Radioactive tracer)
* 0.3 mCi Sb-124	(Radioactive tracer)
* 0.3 mCi Sc-46	(Radioactive tracer)

28. Shut well in after frac and record ISIP. RD stimulation company. Install flowback line above frac valve. Wait for 30 min before comencing flowback. Open well to pit, starting with a 10/64" choke. If minimal sand is being produced, change to a larger choke size (16/64"). If choke plugs off, shut well in and remove obstruction from choke and return to flowback. Continue increasing choke size and cleaning well up until fluid returns are negligible. Take pitot gauges when possible.

29. RD flowback equipment. TOOH.

30. TIH w/ 3-7/8" bit on 2-3/8" tubing and clean out to CIBP at 7160'. Drill up CIBP, clean out to 7310'. Drill up CIBP, clean out to 7620'. Clean up to minimal water and trace to no sand. Obtain pitot gauge on Gallup.

32. ~~Drill up CIBP at 7620', clean out to PSTD at 8007'. Clean up to minimal and trace to no sand. Obtain pitot gauge. TOOH.~~ CIBP WILL REMAIN FOR 3 MONTHS FOR PRODUCTION TEST

31. RU wireline unit. Run afterfrac and perf efficiency logs.

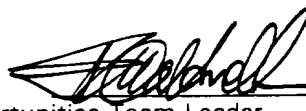
33. Prepare to run production tubing string as follows: expendable check, one joint 1-1/2" tubing, 1.78" seating nipple, and remaining tubing. Land tubing @ ~~8030'~~ 7550'.

34. ND BOP, NU WH. Pump off expendable check and flow well up tubing to ensure check pumped off. Obtain final pitot gauge. RD & release rig to next location.

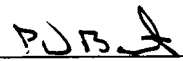
Recommended:
Production Engineer


11-10-97

Concur:
Basin Opportunities Team Leader


11/10/97

Approved:
Drilling Superintendent


11/10/97

Vendors:

Wireline	Basin	327-5244
Stimulation	Dowell	325-5096
RA Tagging	Pro-Technics	326-7133

Production Engineer: **Bobby Goodwin**
326-9713-work
564-7096-pager
599-0992-home

Pertinent Data Sheet - San Juan 28-5 Unit # 61E

E 18 T28N R05W

Location: 1450' FNL & 790' FWL, Unit E, Section 18, T28N, R05W, Rio Arriba County, New Mexico

Field: Basin Dakota

Elevation: 6713' GL
6728' KB

TD: 8094'
PBTD: 8087'

Spud Date: 9/19/85

Dakota
~~Niobrara~~
Gallup

Lease#: SF-079392

DP #: 54346A

GWl: 69.61% **NRI:** 58.90%

GWl: 100.0% **NRI:** 82.50%

Prop#: 007970400

Casing Record:

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Cement (Top)</u>
12-1/4"	9-5/8"	32.3# K-55	223'	125 sx	Circ Cmt
8-3/4"	7"	20.0# K-55	3978'	225 sx	2500'
6-1/4"	4-1/2"	11.6# N-80	8094'	355 sx	3300'

Tubing Record:

1-1/2"	2.9# J-55	8033'	259 Jts
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Formation Tops:

Ojo Alamo:	2854'	Point Lookout	5800'
Kirtland Shale:	3026'	Mancos	6300'
Fruitland:	3384'	Gallup	6892'
Pictured Cliffs:	3628'	Greenhorn	7772'
Chacra	4600'	Graneros	7823'
Mesaverde	5409'	Dakota	7952'
Menefee	5488'		

Logging Record: Gamma-Ray Log, Induction Log, Density-Nuetron Log, Temperature Survey Log

Stimulation: Perfed Dakota w/1 spf @ 7879', 7883', 7920', 7924', 7966', 7969', 7972', 7975', 7978', 7981', 8012', 8017', 8043', 8046', 8055', 8058', 8061', 8064', 8067', 8070'. Total 20 holes. Fraced w/128,000# 20/40 Arizona sand in 118,248 gal 50# guar gum and slickwater pad and flush.

Workover History: In Jan '96 it was determined that the tubing had developed a hole, tubing was pulled and bad joints were replaced. Well was then returned to production. The well has also been checked twice for sand fill. In March '95, TIH with tbg and tag 180' of fill, CO to TD. In March '96, TIH with tbg and CO 44' fill.

Production History: Dakota in this well has an EUR of 633 MMCF with remaining reserves of 373 MMCF. The well is producing at 72 MCFD.

Pipeline: El Paso Natural Gas - Gas
Giant - Oil/ Condensate

San Juan 28-5 Unit #61E

Basin Dakota/ ~~Niobrara Payadd~~ **GALLUP**
 Unit E, Section 18, T28N, R05W
 Rio Arriba County, NM
 Elevation: *6713' GL
 LAT: 36 39' 52"
 LONG: 107 24' 22"
 date spud: 09-19-85

RECOMPLETION

Current

Proposed

Formation Tops	
Ojo Alamo	@ 2854'
Kirtland	@ 3026'
Fruitland	@ 3384'
Pictured Cliffs	@ 3628'
Chacra	@ 4600'
Mesaverde	@ 5409'
Menefee	@ 5488'
Pt. Lookout	@ 5800'
Mancos	@ 6300'
Gallup	@ 6892'
Greenhorn	@ 7772'
Graneros	@ 7823'
Dakota	@ 7952'

9-5/8" 32.3# K-55
 csg set @ 225'
 w/125 sx
 circ to surface

7" 20# K-55 csg
 set @ 3856'
 w/205 sx

1-1/2", 2.9" J-55
 tubing landed
 @ 8033'

4-1/2" 11.6# N-80
 csg set @ 8094'
 w/355 sx

TD: 8094'
 PBTD: 8087'

Perfs: 7879'-8070', 20 Holes
 w/1 SPZ. 128,000# 20/40 sand,
 118,248 gal wtr w/ 50# J-18 (Guar Gum)
 per 1000 gal

1 3/4" TGG
 LANDED @
 7550

Niobrara Payadd
 Perfs: 6935'-7145' and
 7175'-7300' and 7325
 - 7570', 83 holes,
 284,000# sand,
 70 Quality Foam

CIDP SET
 AT 7620'

TD: 8094'
 PBTD: 8087'