

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Cons.
P.O. Box 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires July 31, 1996

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other Instructions on reverse side

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

BURLINGTON RESOURCES OIL AND GAS COMPANY

3a. Address

P. O. Box 51810, Midland, TX 79710-1810

3b. Phone No. (include area code)

915-688-6906

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

K, 1830' FSL & 1980' FWL,
SEC. 4, T24S, R34E

5. Lease Serial No.

NM 16139

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.

Pitchfork "4" Federal #2

9. API Well No.

30-025-30331

10. Field and Pool, or Exploratory Area

Pitchfork Ranch Wolfcamp
Pitchfork Ranch Strawn

11. County or Parish, State

Lea Co., NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	Sidetrack/Directional
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Described Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompletes horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Proposed Procedure: Sidetrack/Directional Hole from existing vertical well. Will set CIBP @13,900' w/25 sxs "C" on top.

- Gyro survey has been run to determine actual bottom hole location. Copy of Gyro is attached. Set Whipstock and cut window in 7" csg @ +/-12,705' MD.
- Drill 6" Hole, build @ 8 degrees/100' to final angle 27.9 degrees along 0 degrees azimuth. Continue drilling tangent section to total depth of 13,922' MD, 13,805' TVD.
- Run 4-1/2", 15.1#, S-95, STL Liner & cmt. See the attached drilling plan.

**SUBJECT TO
LIKE APPROVAL
BY STATE**

See sundry dated 12-3-97 requesting approval to downhole commingle the Pitchfork Ranch Wolfcamp & Pitchfork Ranch Strawn Pools.

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

Name (Printed/Typed) Maria L. Perez

Title Regulatory Representative

Signature

Date 1-5-98

Approved by

Title

Date

(ORIG. SGD.) DAVID R. GLASS

PETROLEUM ENGINEER

JAN 07 1998

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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 statement or representations as to any matter within its jurisdiction.

(Instructions on reverse)

OPERATORS NAME:	Burlington Resources Oil & Gas Company
LEASE NAME AND WELL NO.:	Pitchfork "4" Federal #2
LOCATION:	K, 1830' FSL & 1980' FWL, Sec. 4, T24S, R34E
FIELD NAME:	Pitchfork Ranch Wolfcamp and Pitchfork Ranch Strawn
COUNTY:	Lea County, New Mexico
LEASE NUMBER:	NM 16139
	API# 30-025-30331

The following information is to supplement BLM form 3160-5 Application for permit to sidetrack & drill a directional hole from an existing vertical well in accordance with Onshore Oil and Gas Order No. 1:

9 - POINT DRILLING PLAN FOR PROPOSED SIDETRACK/DIRECTIONAL FROM AN EXISTING VERTICAL WELL

1. Name and tops of important geologic formation/marker horizons for existing vertical hole.

	<u>DEPTH</u>
Redbeds	Surface
Salt	1060'
Anhydrite	5020'
Delaware	5200'
Bone Springs	9400'
Wolfcamp	12,700'
Strawn	13,700'
Atoka	13,950'

2. Depths at which the top and bottom of formations potentially containing usable water, oil, gas, or prospectively valuable deposits of other minerals are expected to be encountered and the operator's plans for protecting such resources.

Wolfcamp	12,700'
Strawn	13,700'

3. The operator's minimum specifications for Blowout Preventer (BOP) and related equipment to be used and schematic diagrams thereof showing sizes, pressure ratings, and the testing procedures and testing frequency. BOP and BOP - related equipment (BOPE) schematics shall include schematics of choke manifold equipment. Accumulator systems and remote controls shall be utilized.

NU 7-1/16" 10M psi WP BOP's including annular w/rotating head (API RP53 fig 2.C.9 RSRAG). Test ram BOP's and choke manifold to 250 psi and 10,000 psi, test annular BOP to 250 psi and 3,500 psi utilizing a test plug and an independent tester.

4. The proposed casing program including size, grade, weights, type of thread and coupling, and the setting depth of each string and its condition (new or acceptably reconditioned). For exploratory wells, or for wells as otherwise specified by the authorized officer, the operator shall include the minimum design factors for tensions, burst, and collapse that are incorporated into the casing design. In cases where tapered casing strings are utilized, the operator shall also include and/or setting depths of each portion.

EXISTING CASING:

17 1/2" hole, **13 3/8"**, 48#, H-40 csg set @ 620'

12 1/4" hole, **9 5/8"**, 40#, K-55 & S80 csg set @ 5150'

7-7/8" hole, **7"**, 29 & 32#, LTC csg set @13,300'

PROPOSED SIDETRACK/LINER:

6" hole: KOP @ +/-12,705', Target Azimuth 0 Degrees. Build to Final Inclination of 27.9 Degrees, Drill Tangent Section to Total Depth of 13,922' MD, 13,805' TVD

Liner: **4-1/2"** 15.1# S-95 STL 12,500' - TD.

5. The amount and type(s) of cement, including anticipated additives to be used in setting each casing string, shall be described. If stage cementing techniques are to be employed, the setting depth of the stage collars and amount and type of cement, including additives, and preflush amounts to be used in each stage, shall be given. The expected linear fill-up of each cemented string, or each stage when utilizing stage-cementing techniques, shall also be given.

EXISTING CEMENT

- a. 17-1/2" Hole **13 3/8"** csg: Cmt'd w/650 sxs Class "C". Cmt circulated to surface.
- b. 12-1/4" Hole, **9 5/8"** csg: Cmt'd: w/1900 sxs Class "C" Cmt, tailed w/300 sxs Class "C". Cmt circ'd to surface.

- c. 7-7/8" hole, 7" csg: Cmtd w/1500 sxs Class "H",
tailed w/250 sxs Class "H". TOC @5300' by Temperature Survey.

PROPOSED CEMENT

- d. 6" Hole, 4-1/2" Liner. Cmt w/125 sxs Class "H", Circ Cement to
top of Liner @ +/- 12,500'.
6. The anticipated characteristics, additives, use, and testing of drilling mud to be employed, along with the types and quantities of mud products to be maintained, shall be given. When air or gas drilling is proposed, the operator shall submit the following specific information:

Mud Program for Sidetrack Portion of Hole :

12,750' - TD: Brine/XCD/Barite, 10.0 ppg - 13.5 ppg (Weighted Water Base)

7. The anticipated testing, logging, and coring procedures to be used, including drill stem testing procedures, equipment, and safety measures.
- a. DST Program: None
 - b. Core: None
 - c. Mud Logging: 12,705' to TD
 - d. Logs to be run: None
8. The expected bottom-hole pressure and any anticipated abnormal pressures, temperatures or potential hazards that are expected to be encountered, such as lost circulation zones and hydrogen sulfide. The operator's plans for mitigating such hazards shall be discussed. Should the potential to encounter hydrogen sulfide exist, the mitigation procedures shall comply with the provisions of Onshore Oil and Gas Order No. 6.

Potential for abnormal pressure exists from the top of the Wolfcamp to TD. Bottom hole pressures at TD is estimated at 9350 psi. Bottom hole temperature 180 F. There is no anticipated Hydrogen Sulfide in this known drilling area. No abnormal pressures are anticipated.

9. Any other facets of the proposed operation which the operator wishes for BLM to consider in reviewing the application.

Anticipated time expected to do this work is 20 days.

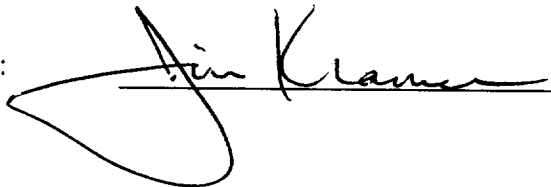
OPERATORS CERTIFICATION

I hereby certify that I, **Jim Kramer, Senior Staff Drilling Engineer**, under my direct supervision, have inspected the proposed drill site and access route that I am familiar with the conditions that currently exist; that the statements made in the APD package are, to the best of my knowledge, true and correct, and that the work associated with operations proposed herein will be performed by **not yet determined** contractors and subcontractors in conformity with this APD package and the terms and conditions under which it is approved. I also certify responsibility for the operations conducted on that portion of the leased lands associated with this application, with bond coverage being provided under BLM **statewide** bond. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

DATE: 1-5-98

NAME AND TITLE: Jim Kramer, Senior Staff Drilling Engineer

SIGNATURE:

A handwritten signature in black ink, appearing to read "Jim Kramer", is written over a horizontal line. The signature is stylized with a large, sweeping initial "J" and a long, horizontal stroke at the end.

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 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 30-025-30331	² Pool Code 82950	³ Pool Name Pitchfork Ranch Wolfcamp
⁴ Property Code 014332	⁵ Property Name Pitchfork "4" Federal	⁶ Well Number 2
⁷ OGRID No. 26485	⁸ Operator Name Burlington Resources Oil & Gas Company	⁹ Elevation 3361'

¹⁰ Surface Location									
UL or lot no. K	Section 4	Township 25S	Range 34E	Lot. Idn	Feet from the 1830'	North/South Line South	Feet from the 1980'	East/West line West	County Lea

¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. K	Section 4	Township 25S	Range 34E	Lot. Idn	Feet from the 2206'	North/South Line South	Feet from the 2052'	East/West line West	County Lea

¹² Dedicated Acres 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

Robert E. Landreth Oil & Gas Exploration

4

320 ACRE
HORIZONTAL PROJECT AREA BOUNDARY
W/PRODUCING WINDOW

MINIMUM SETBACK DISTANCE BY FIELD RULES
(660' Side Boundary & 1650' End Boundary),
SWR 111

SL: SURFACE LOCATION
PKOP: PROPOSED KICKOFF POINT
PTL: PROPOSED TERMINUS LOCATION

¹⁷ OPERATOR CERTIFICATION

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

Maria L. Perez
Signature
Maria Perez
Printed Name
Regulatory Representative
Title
1/6/98
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

Burlington Resources Oil & Gas Co.

2052'

1980'

2052'

1650' Setback

PTL

#2

PKOP

1717'

1830'

2206'

PROPOSED
UNORTHODOX
BOTTOM HOLE
LOCATION

660' Setback

660' Setback

1650' Setback

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PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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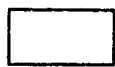
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Robert E. Landreth Oil & Gas Exploration

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W/PRODUCING WINDOW



MINIMUM SETBACK DISTANCE BY FIELD RULES
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PKOP: PROPOSED KICKOFF POINT
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Maria L. Perez
Signature
Maria Perez
Printed Name
Regulatory Representative
Title
1/6/98
Date

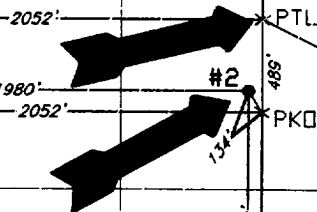
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Date of Survey
Signature and Seal of Professional Surveyer:

Certificate Number

Burlington Resources Oil & Gas Co.



PROPOSED
UNORTHODOX
BOTTOM HOLE
LOCATION

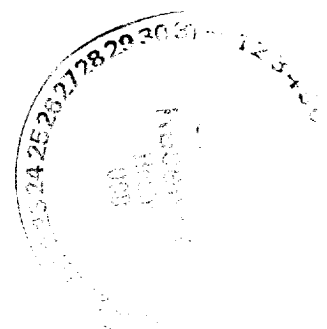
PHOENIX MULTI-SHOT
P.O. BOX 4357
CORPUS CHRISTI, TEXAS 78469

(512) 883-7263
(800) 880-SHOT

BURLINGTON RESOURCES
PITCHFORK "4" FEDERAL, WELL #1
LEA COUNTY, NEW MEXICO
RIG: JSI MAST UNIT
JOB NUMBER: 777051 05/28/97 T.JALLAD
DECLINATION: 8.8 DEGREES EAST (TRUE)

Minimum Curvature Calculations

MEASURED Depth Feet	B O R E - H O L E		TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S		VERTICAL SECTION Feet	C L O S U R E S		DLS Deg/100'
	Incl. D M	Direction D M		North/South Feet	East/West Feet		Distance Feet	Direction D M	
0.00	0 0	N 0 0 E	0.00	0.00	0.00	0.00	0.00	N 0 0 E	0.00
200.00	0 41	N 81 24 E	199.99	.18 N	1.19 E	.18	1.21	N81 24E	.34
400.00	1 15	S 84 29 E	399.97	.15 N	4.55 E	.15	4.55	N88 7E	.30
600.00	1 1	S 70 24 E	599.93	.66 S	8.40 E	-.66	8.43	S85 32E	.18
800.00	1 15	S 72 30 E	799.89	1.91 S	12.16 E	-1.91	12.31	S81 4E	.12
1000.00	0 36	S 39 26 E	999.86	3.37 S	14.90 E	-3.37	15.28	S77 14E	.41
1200.00	0 56	S 72 14 E	1199.84	4.68 S	17.12 E	-4.68	17.74	S74 43E	.27
1400.00	0 59	N 51 21 E	1399.82	4.11 S	20.00 E	-4.11	20.41	S78 24E	.45
1600.00	0 30	N 23 20 E	1599.80	2.22 S	21.68 E	-2.22	21.80	S84 9E	.29
1800.00	0 51	N 83 13 E	1799.79	1.23 S	23.53 E	-1.23	23.56	S87 1E	.37
2000.00	0 45	S 88 30 E	1999.77	1.08 S	26.34 E	-1.08	26.37	S87 39E	.08
2200.00	1 3	N 73 27 E	2199.75	.59 S	29.44 E	-.59	29.45	S88 51E	.21
2400.00	0 36	N 27 29 E	2399.73	.88 N	31.71 E	.88	31.72	N88 24E	.39
2600.00	1 24	N 56 48 E	2599.70	3.16 N	34.24 E	3.16	34.39	N84 43E	.46
2800.00	1 50	N 50 24 E	2799.61	6.55 N	38.76 E	6.55	39.31	N80 25E	.24



BURLINGTON RESOURCES
PITCHFORK "4" FEDERAL, WELL #1
LEA COUNTY, NEW MEXICO

Page 2

MEASURED Depth Feet	B O R E - H O L E		TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S		VERTICAL SECTION Feet	C L O S U R E S		DLS Deg/100'
	Incl. D M	Direction D M		North/South	East/West		Distance Feet	Direction D M	
3000.00	1 52	N 78 9 E	2999.51	9.26 N	44.43 E	9.26	45.39	N78 13E	.44
3200.00	2 29	N 79 36 E	3199.37	10.71 N	51.88 E	10.71	52.98	N78 20E	.31
3400.00	3 30	N 73 2 E	3399.09	13.28 N	61.98 E	13.28	63.38	N77 54E	.54
3600.00	2 47	N 68 56 E	3598.79	16.80 N	72.34 E	16.80	74.27	N76 55E	.38
3800.00	2 42	N 79 23 E	3798.57	19.41 N	81.50 E	19.41	83.78	N76 36E	.25
4000.00	1 41	S 58 33 E	3998.43	18.74 N	88.64 E	18.74	90.60	N78 3E	.92
4200.00	1 51	N 83 29 E	4198.34	17.57 N	94.39 E	17.57	96.01	N79 27E	.58
4400.00	1 43	N 85 38 E	4398.24	18.17 N	100.60 E	18.17	102.23	N79 46E	.08
4600.00	2 50	N 89 47 E	4598.08	18.42 N	108.55 E	18.42	110.10	N80 22E	.57
4800.00	2 44	S 81 54 E	4797.85	17.76 N	118.22 E	17.76	119.55	N81 27E	.21
5000.00	3 36	S 83 13 E	4997.54	16.35 N	129.17 E	16.35	130.20	N82 47E	.44
5200.00	1 47	S 66 8 E	5197.31	14.35 N	138.26 E	14.35	139.01	N84 4E	.98
5400.00	0 43	S 31 51 E	5397.26	12.02 N	141.78 E	12.02	142.29	N85 9E	.63
5600.00	0 27	S 12 29 E	5597.25	10.18 N	142.62 E	10.18	142.98	N85 55E	.17
5800.00	0 22	S 62 11 E	5797.25	9.11 N	143.36 E	9.11	143.65	N86 22E	.18
6000.00	0 24	S 25 41 E	5997.24	8.17 N	144.24 E	8.17	144.47	N86 45E	.12
6200.00	0 45	S 27 49 W	6197.23	6.35 N	143.93 E	6.35	144.07	N87 28E	.31
6400.00	0 37	N 89 20 W	6397.22	5.19 N	142.23 E	5.19	142.32	N87 54E	.37
6600.00	0 36	N 83 29 W	6597.21	5.32 N	140.11 E	5.32	140.21	N87 49E	.03
6800.00	0 50	S 58 40 W	6797.20	4.69 N	137.83 E	4.69	137.91	N88 3E	.26
7000.00	0 42	S 26 39 W	6997.18	2.83 N	136.04 E	2.83	136.07	N88 48E	.22
7200.00	0 39	S 41 3 W	7197.17	.85 N	134.72 E	.85	134.73	N89 38E	.09
7400.00	0 47	S 48 20 W	7397.15	.94 S	132.94 E	-.94	132.94	S89 36E	.08
7600.00	1 6	S 34 55 W	7597.12	3.44 S	130.80 E	-3.44	130.84	S88 29E	.19
7800.00	1 34	S 54 20 W	7797.07	6.63 S	127.46 E	-6.63	127.64	S87 1E	.32

BURLINGTON RESOURCES
PITCHFORK "4" FEDERAL, WELL #1
LEA COUNTY, NEW MEXICO

Page 3

MEASURED Depth Feet	B O R E - H O L E		TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S		VERTICAL SECTION Feet	C L O S U R E S		DLS Deg/100'
	Incl. D M	Direction D M		North/South	East/West Feet		Distance Feet	Direction D M	
8000.00	1 18	S 19 49 W	7997.01	10.36 S	124.47 E	-10.36	124.90	S85 14E	.44
8200.00	0 58	S 0 20 W	8196.97	14.19 S	123.69 E	-14.19	124.50	S83 27E	.25
8400.00	1 10	S 30 9 W	8396.94	17.65 S	122.65 E	-17.65	123.92	S81 49E	.29
8600.00	0 44	S 32 22 E	8596.91	20.49 S	122.31 E	-20.49	124.01	S80 29E	.53
8800.00	0 45	S 7 2 W	8796.90	22.88 S	122.83 E	-22.88	124.94	S79 27E	.25
9000.00	0 39	S 15 47 W	8996.88	25.29 S	122.36 E	-25.29	124.95	S78 19E	.08
9200.00	0 50	S 39 32 W	9196.87	27.50 S	121.13 E	-27.50	124.21	S77 12E	.18
9400.00	0 40	S 52 7 W	9396.85	29.33 S	119.28 E	-29.33	122.84	S76 11E	.11
9600.00	1 36	S 86 20 W	9596.81	30.23 S	115.56 E	-30.23	119.44	S75 20E	.56
9800.00	2 25	S 89 43 W	9796.68	30.43 S	108.53 E	-30.43	112.71	S74 20E	.41
10000.00	1 54	N 84 35 W	9996.54	30.14 S	101.01 E	-30.14	105.41	S73 23E	.28
10200.00	0 51	S 68 38 W	10196.48	30.36 S	96.32 E	-30.36	101.00	S72 30E	.60
10400.00	0 53	S 61 44 W	10396.46	31.64 S	93.57 E	-31.64	98.78	S71 19E	.06
10600.00	1 45	N 21 11 W	10596.42	29.51 S	91.10 E	-29.51	95.76	S72 3E	1.03
10800.00	2 0	N 37 33 W	10796.31	23.87 S	87.85 E	-23.87	91.03	S74 48E	.29
11000.00	2 30	N 29 26 W	10996.16	17.27 S	83.56 E	-17.27	85.32	S78 19E	.30
11200.00	3 3	N 15 45 W	11195.92	8.34 S	79.96 E	-8.34	80.39	S84 3E	.43
11400.00	2 49	N 25 45 W	11395.66	1.21 N	76.38 E	1.21	76.39	N89 5E	.28
11600.00	2 2	N 45 10 W	11595.48	8.15 N	71.71 E	8.15	72.18	N83 31E	.56
11800.00	0 56	N 62 17 W	11795.42	11.42 N	67.75 E	11.42	68.71	N80 26E	.59
12000.00	1 13	N 57 0 W	11995.38	13.33 N	64.53 E	13.33	65.89	N78 19E	.15
12200.00	2 18	N 61 55 W	12195.28	16.38 N	59.20 E	16.38	61.43	N74 32E	.55
12400.00	2 5	N 51 6 W	12395.14	20.56 N	52.82 E	20.56	56.68	N68 44E	.23
12600.00	2 5	N 38 24 W	12595.00	25.71 N	47.72 E	25.71	54.21	N61 41E	.23
12800.00	1 5	N 15 17 W	12794.93	30.40 N	44.95 E	30.40	54.27	N55 55E	.58

BURLINGTON RESOURCES
PITCHFORK "4" FEDERAL, WELL #1
LEA COUNTY, NEW MEXICO

MEASURED Depth Feet	B O R E - H O L E		TRUE Vertical Depth Feet	R E C T A N G U L A R C O O R D I N A T E S		VERTICAL SECTION Feet	C L O S U R E S		DLS Deg/100'
	Incl. D M	Direction D M		North/South Feet	East/West Feet		Distance Feet	Direction D M	
13000.00	1 14	N 41 9 W	12994.89	33.85 N	43.04 E	33.85	54.76	N51 48E	.27
13200.00	1 31	N 6 0 W	13194.83	38.11 N	41.35 E	38.11	56.23	N47 20E	.44
13400.00	1 49	N 13 24 W	13394.75	43.83 N	40.33 E	43.83	59.57	N42 37E	.18
13600.00	2 2	N 10 44 W	13594.63	50.42 N	38.93 E	50.42	63.70	N37 40E	.12
13800.00	1 51	N 12 23 W	13794.52	57.09 N	37.57 E	57.09	68.34	N33 21E	.09

Final Station Closure Distance: 68.34 Feet; Direction: N 33 21 E

