NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

December 1, 1999

Burlington Resources Oil and Gas Company
P. O. Box 4289
Farmington, New Mexico 87499-4289

Attention: Peggy Bradfield Cole

Re: ***Administrative application for an exception to Rule 7 of the "Special Rules and Regulations for the Basin-Fruitland Coal (Gas) Pool," as promulgated by Division Order No. R-8768, as amended, under the expanded provisions of Division Rule 104.F (2), revised by Division Order No. R-11231, issued by the New Mexico Oil Conservation Commission in Case No. 12119 on August 12, 1999: for Burlington Resources Oil and Gas Company's proposed Huerfanito Unit Com. Well No. 174 (API No. 30-045-29885), to be drilled at an off-pattern unorthodox coal gas well location 920 feet from the South line and 840 feet from the East line (Unit P) of Section 24, Township 27 North, Range 9 West, NMPM, San Juan County, New Mexico.***

Dear Ms. Cole:

It appears that your application is incomplete with respect to notice, the rules for unorthodox location applications were recently changed by the aforementioned Division Order No. R-11231 and by Division Order No. R-11205, issued by the New Mexico Oil Conservation Commission in Case No. 12177 (see copies attached).

I am therefore returning this application so that notification can be verified as being correct. Thank you.

Sincerely,

Michael E. Stogner
Chief Hearing Officer/Engineer

cc: New Mexico Oil Conservation Division - Aztec
U. S. Bureau of Land Management - Farmington
Kathy Valdes, NMOCD – Santa Fe
W. Thomas Kellahin, Legal Counsel for Burlington Resources Oil and Gas Company - Santa Fe
Ms. Lori Wrotenbery, Director NMOCD - Santa Fe

DATE IN 11/17/99	SUSPENSE 12/7/99	ENGINEER MS	LOGGED KN	TYPE NSL

ABOVE THIS LINE FOR DIVISION USE ONLY

NOV 17 1999

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]
[DD-Directional Drilling] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling

☒ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **INFORMATION / DATA SUBMITTED IS COMPLETE** - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Peggy Bradfield	Peggy Bradfield	Regulatory/Compliance Administrator	
Print or Type Name	Signature	Title	Date

BURLINGTON RESOURCES

SAN JUAN DIVISION

Sent Federal Express November 16, 1999

Mr. Michael Stogner
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Huerfanito Unit Com #174
920'FSL, 840'FEL Section 24, T-27-N, R-9-W, San Juan County
30-045-29885

Dear Mr. Stogner:

Burlington Resources is applying for administrative approval of a gas well location in the Basin Fruitland Coal pool. This location is considered off-pattern for the Fruitland Coal pursuant to Order R-8768, Rule 7. This application for the referenced location is that the proposed location offers the best possible location based on geology for an economically successful well by ensuring optimum recovery and minimal hydrocarbon waste, and will allow for maximum coal development in this section (see attached geological explanation, map and logs).

Production from the Fruitland Coal pool is to be included in a 320 acre gas spacing and proration unit in Section 24 comprising of the south-half (S/2) of Section 24.

The following attachments are for your review:

- Application for Permit to Drill
- Completed C-102 at referenced location.
- Offset operators/owners plat – Burlington is the offset operator/lease owner
- Geologic explanation, map and logs

We appreciate your earliest consideration of this application.

Sincerely,

Peggy Bradfield Cole
Regulatory/Compliance Administrator

Xc: Bureau of Land Management
NMOCD – Aztec Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED BLM
99 MAR 23 PM 1:10
070 FARMINGTON, NM

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. **Type of Work**
DRILL

5. **Lease Number**
NO - G-0651-1131
Unit Reporting Number

1b. **Type of Well**
GAS

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

2. **Operator**
BURLINGTON RESOURCES Oil & Gas Company

7. **Unit Agreement Name**
Huerfanito Unit Com

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499

(505) 326-9700

8. **Farm or Lease Name**
Huerfanito Unit Com

9. **Well Number**
#174

4. **Location of Well**
920' FSL, 840' FEL

Latitude 36° 33.4, Longitude 107° 44.0

10. **Field, Pool, Wildcat**
Basin Fruitland Coal

11. **Sec., Twn, Rge, Mer. (NMPM)**
Sec.24, T-27-N, R-9-W

API # 30-045-29885

14. **Distance in Miles from Nearest Town**
9 miles to Huerfano Trading Post

12. **County**
San Juan

13. **State**
NM

15. **Distance from Proposed Location to Nearest Property or Lease Line**
840'

16. **Acres in Lease**

17. **Acres Assigned to Well**
320.00

18. **Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease**
500'

19. **Proposed Depth**
2125'

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

20. **Rotary or Cable Tools**
Rotary

21. **Elevations (DF, FT, GR, Etc.)**
6030' GR

22. **Approx. Date Work will Start**

23. **Proposed Casing and Cementing Program**
See Operations Plan attached

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

24. **Authorized by:** Regulatory/Compliance Administrator — 3.9.99 Date

PERMIT NO.

APPROVAL DATE NOV 03 1999

APPROVED BY — **TITLE** Acting Team Lead — **DATE** 11/3/99

Archaeological Report to be submitted
Threatened and Endangered Species Report to be submitted
NOTE: This format is issued in lieu of U.S. BLM Form 3160-3
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 presentations as to any matter within its jurisdiction.

OPERATOR

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

RECEIVED
BLM
99 MAR 23 PM 1:10
070 FARMINGTON, NM

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-	71629	Basin Fruitland Coal

4 Property Code	5 Property Name	6 Well Number
7138	HUERFANITO UNIT COM	174

7 OGRID No.	8 Operator Name	9 Elevation
14538	BURLINGTON RESOURCES OIL & GAS COMPANY	6030'

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
P	24	27N	9W		920	SOUTH	840	EAST	SAN JUAN

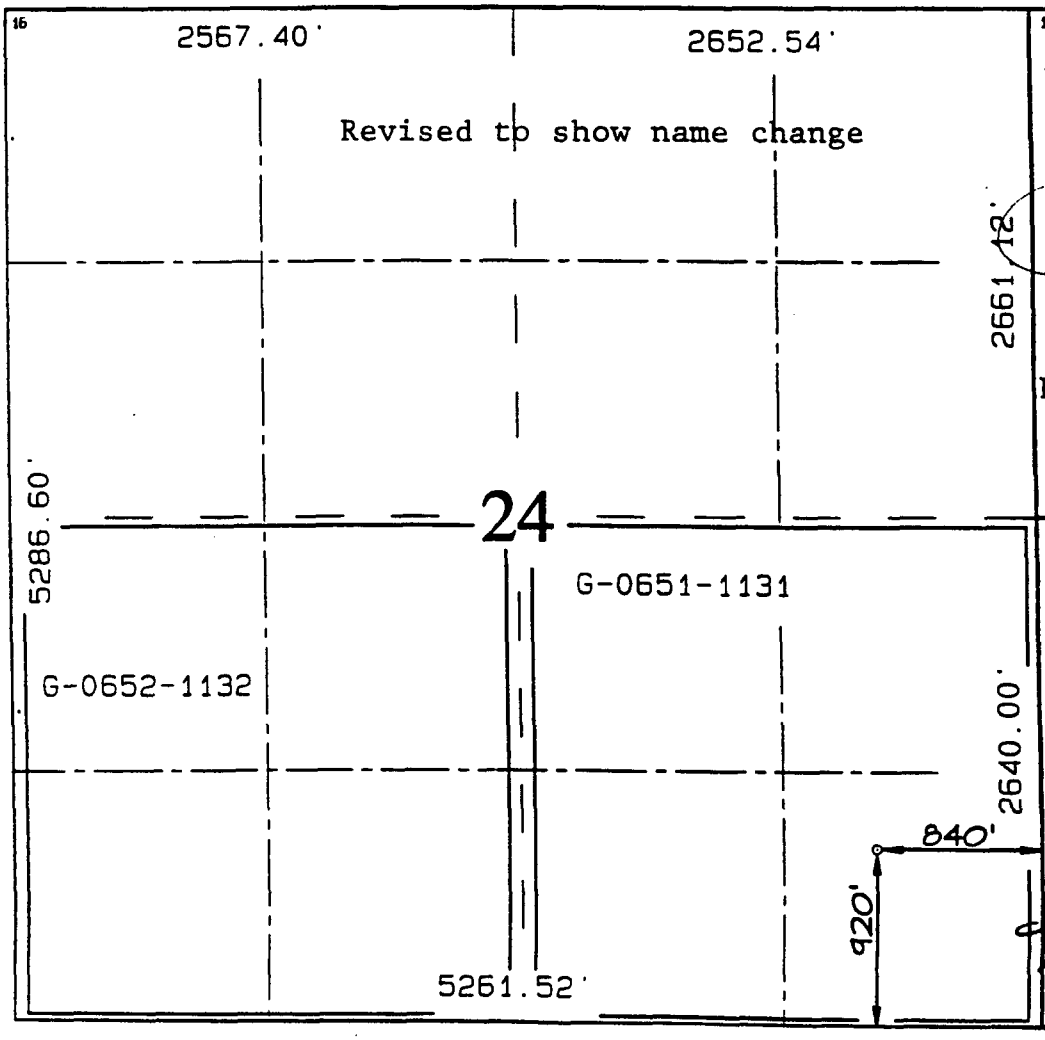
11 Bottom Hole Location If Different From Surface

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	13 Joint or Infill	14 Consolidation Code	15 Order No.
S/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



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 Bradfield
Printed Name

Regulatory Administrator
Title

3-9-99
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.

Revised 10/27/98

AUGUST 25, 1998
Date of Survey

Signature and Seal of Professional Surveyor

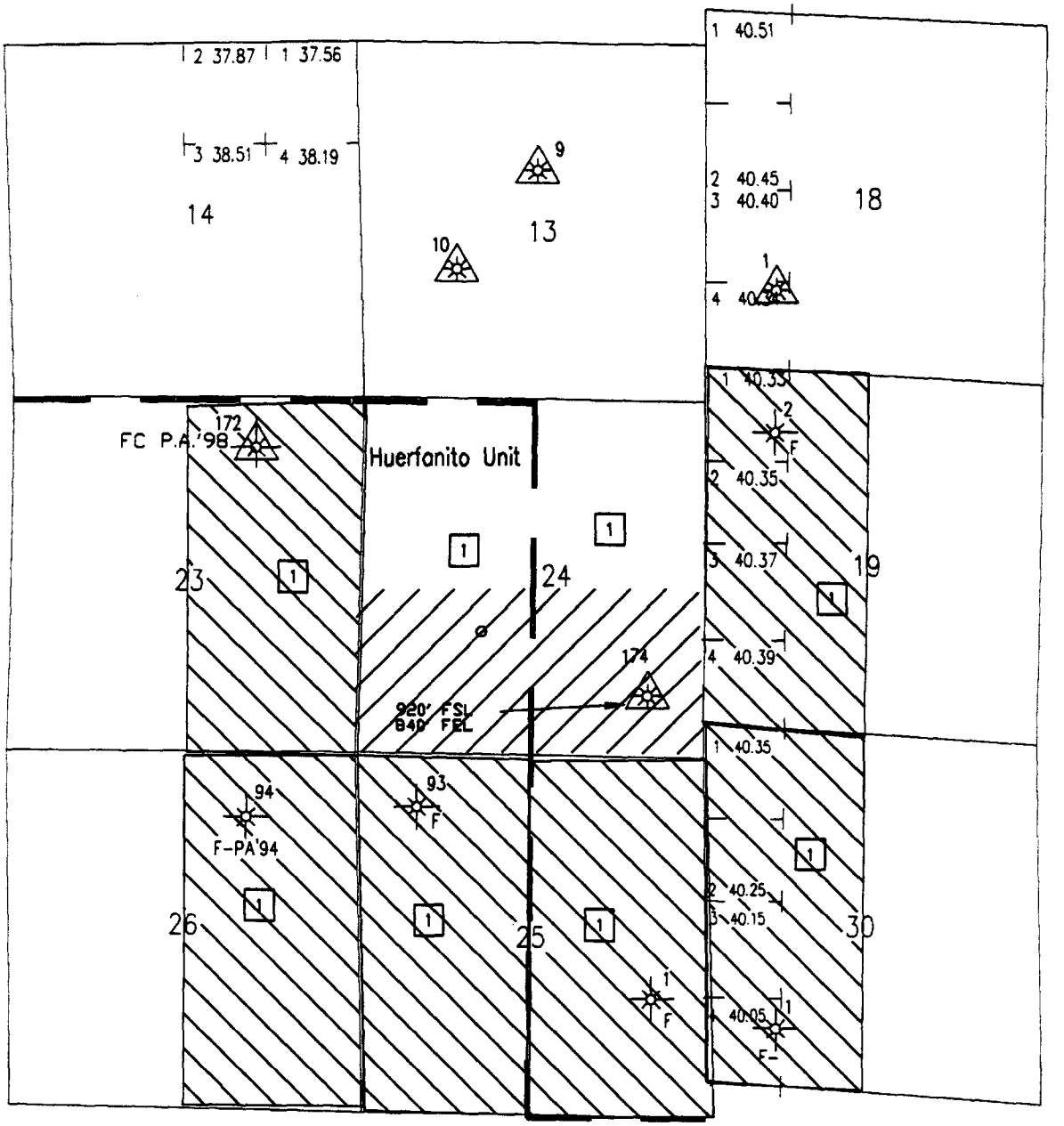
NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED PROFESSIONAL SURVEYOR

6857
Certificate Number

BURLINGTON RESOURCES OIL AND GAS COMPANY

Huerfanito Unit Com #174
Section 24, T-27-N, R-9-W

OFFSET OPERATOR/OWNER PLAT
Off Pattern Location
Basin Fruitland Coal Formation Well



[1] Burlington Resources

Huerfanito Unit Outline

Proposed Well

Offset Operator

Geological Discussion for Huerfanito Unit Com #174 (SE/4 24-27N-9W)

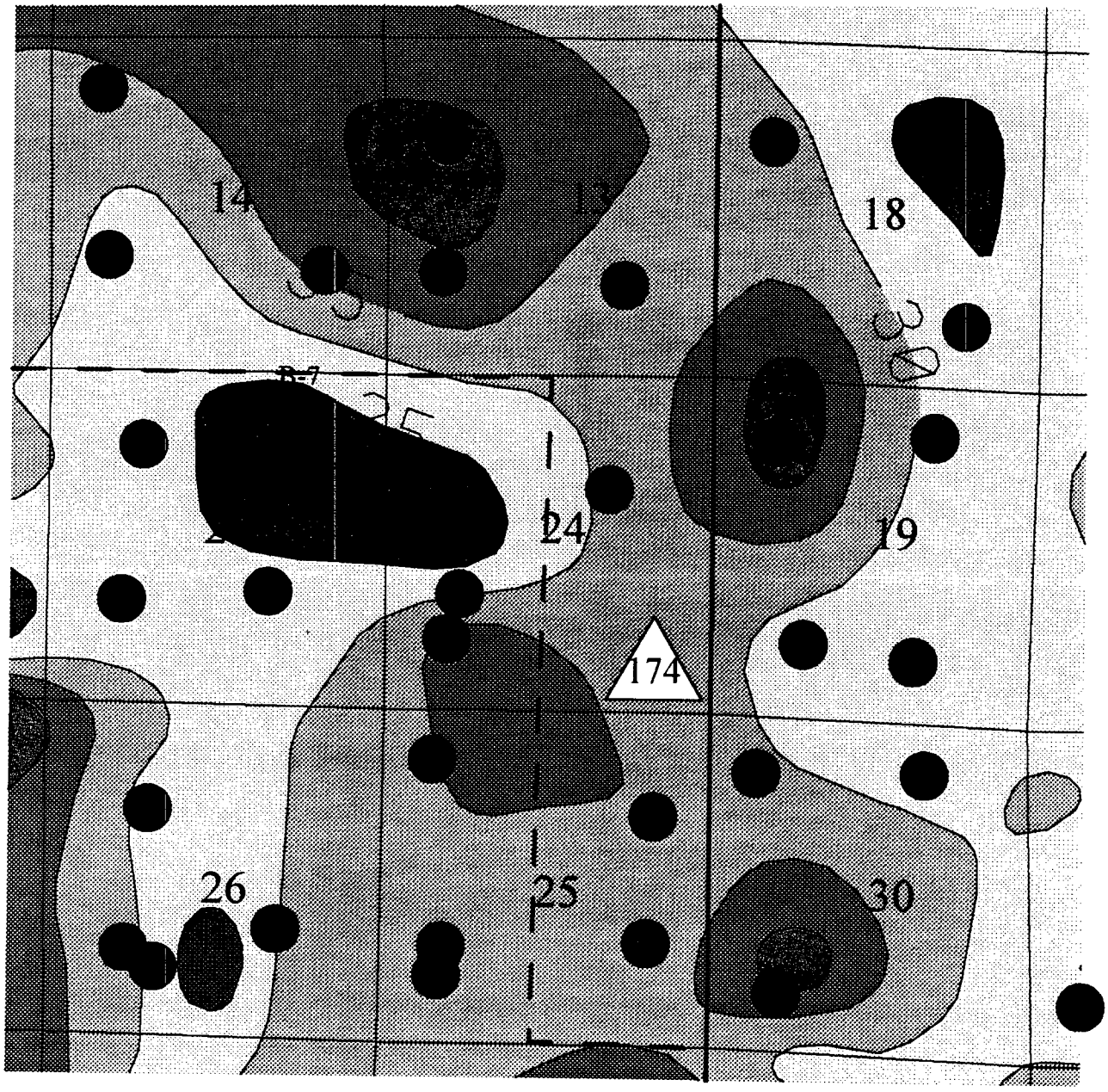
A study published by the Bureau of Economic Geology in Austin, Texas documents the framework for a depositional model of the Fruitland Coal primarily based on stratigraphic correlations across the prolific coal production. This model and a working understanding of depositional influences on production was used in an additional more detailed stratigraphic study (where the major correlated coal seams were further subdivided into smaller components and geographically expanded) contracted by Burlington Resources in 1997. This investigation provides the detail necessary for understanding individual coal seam contributions to production, identifying flow boundaries within the formation, and improved understanding of the complex stratigraphic relationships between coal beds and fluvial systems. Today the model continues to be used and expanded across the basin and identifies eleven main coal packages.

The depositional model that best fits the data calls for development of a Fruitland alluvial plain on top of abandoned shore face deposits. When hydrodynamic conditions were adequate swamps occupied the flood basins between active streams. Episodically, fluvial activity increased abruptly, perhaps due to source-area uplift. Some of the fluvial onslaughts may have been preceded by volcanic ash falls (bentonites). During peaks of fluvial activity the perennial streams avulsed and additional channel belts tracked across former peat environments. Peat may have been eroded in the process. Sand body development was accommodated by compaction of underlying peat. As fluvial activity diminished, peat environments reoccupied the flood basins of perennial streams. Streams generally reoccupied their original perennial positions when peat formation resumed. Abandoned channel belts became platforms for new peat formation. Due to low compaction of the sand bodies, channel belt thicks became slightly mounded and were the last areas to be reoccupied by swamps. This resulted in laterally thinner coal beds over these areas.

Fluvial systems associated with Fruitland peat environments were through going to an active marine shore face and presence of dip-elongate fluvial sand bodies affected a dip-elongate depositional grain (thickness variation) on superjacent coal units. Absence along dip aligned trends of otherwise widespread coeval coal records the location of a Fruitland perennial stream. However, the well log data does not allow absolute certainty as to the exact fluvial process responsible for the absence of coal (non-deposition or erosion). Either way, the result is probably the same from a hydrologic standpoint. Coal-barren areas interrupt the lateral continuity of individual coal beds.

The area surrounding the proposed well (see attached net coal thickness map for the basal coal) is an ideal example of the patterns and relationships discussed above. The well log from the Navajo Indian #B-7 (NW19-27N-8W), which is along trend to the northeast, is an example of a coal section which has minimal interference from fluvial systems. The majority of the 81' of coal (using a 2.0 grams/cc cut-off) is contained in a compact interval of less than 100' of section. Just the main basal coal has 36' of virtually unbroken coal. Additionally, there is good development of a coal below the main basal. Contrarily, the J.C. Gordon "D" #4E (NE23-27N-10W) demonstrates the influence of fluvial processes. Here the basal is only 25' thick, and has been separated from the majority of the remaining coal by a 70' section of sand and shale. There is no coal development below the main basal. The #4E is located within an interpreted fluvial system and may in fact represent the confluence a two different systems, and is representative of what can be found towards the northwest of the section containing the proposed well. The proposed location within the drill block is ideally situated to be as far from the fluvial influence as possible. This will allow for maximum coal development in the form of both thickness and quality. Quality here will not be impacted by the over bank flood deposits which both split the coal and introduce impurities which would decrease permeability and reduce matrix shrinkage which is believed to be a major driving force behind coal production. In short, the proposed location geologically offers the best possible location for an economically successful well by ensuring optimum recovery and minimal hydrocarbon waste.

T27N-R9W T27N-R8W



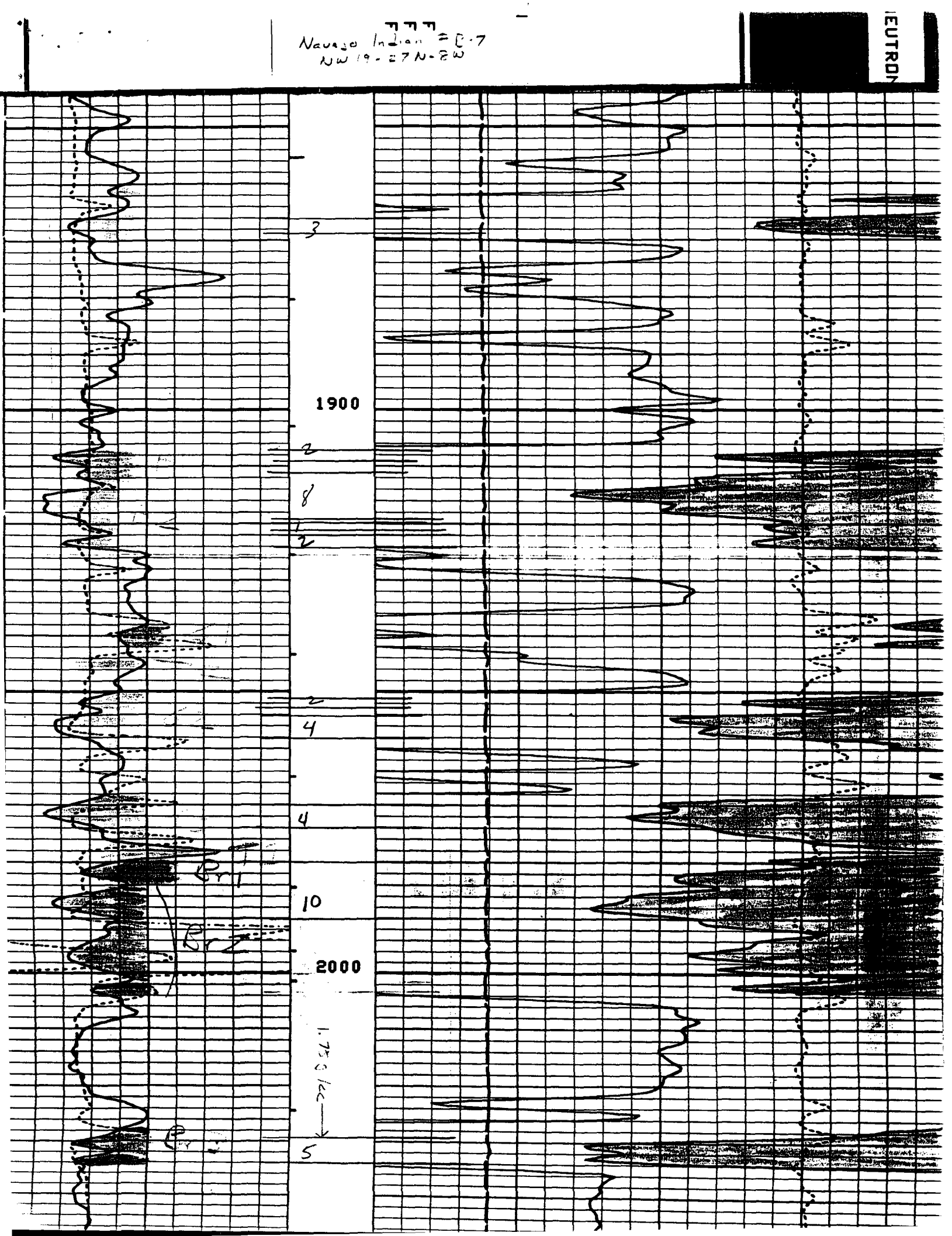
Huerfanito Unit Com #174
(SE/4 SE/4 Section 24–T27N–R9W)

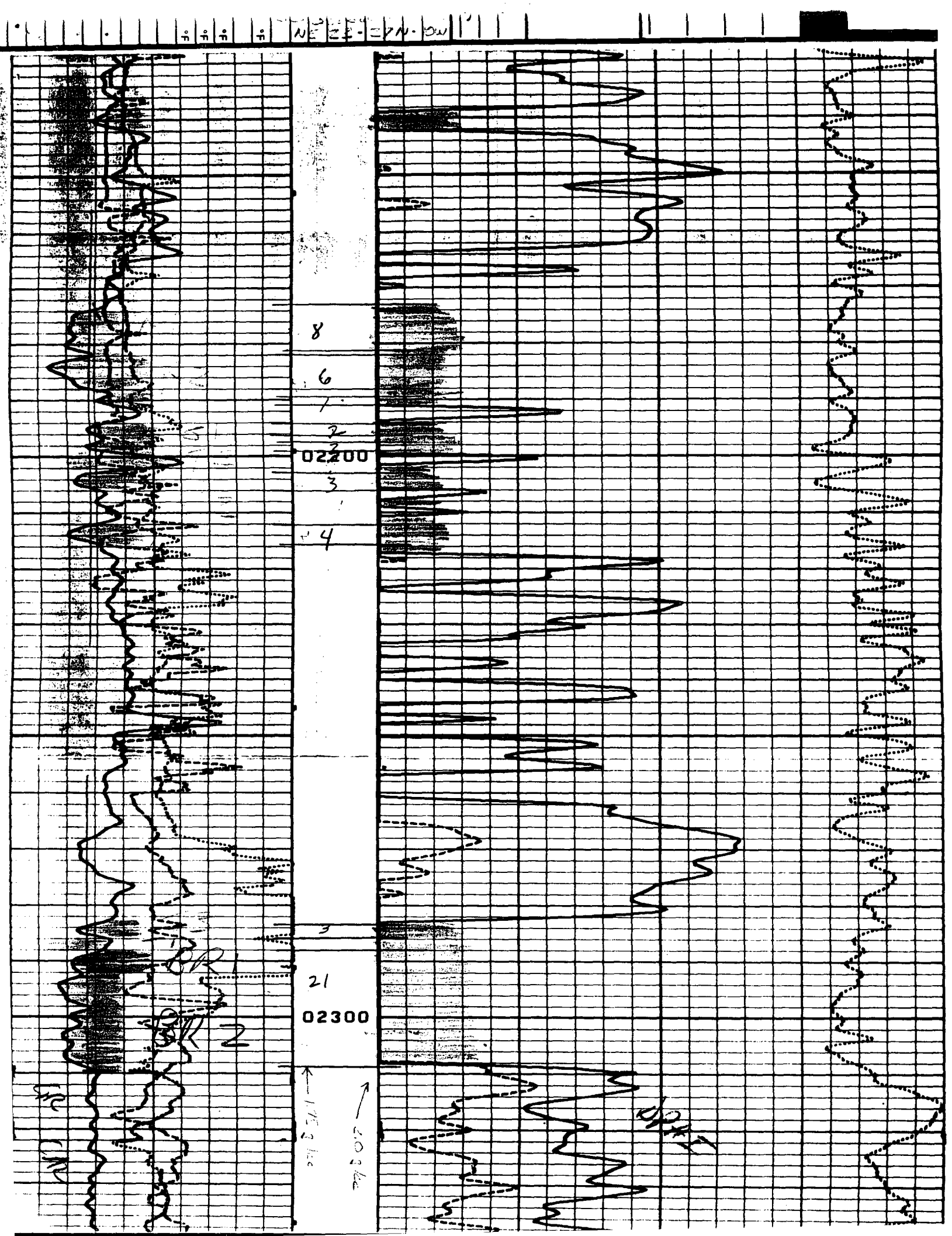
NET FRUITLAND COAL THICKNESS

5' Contour interval - blues are thin - reds are thick

Navajo Indian = D-7
NW 19-27N-2W

NEUTRON

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