

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

5. Lease Designation and Serial No.

SF - 078387 - A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

KERNAGHAN B

5

9. API Well No.

3004527338

10. Field and Pool, or Exploratory Area

BASIN FRUITLAND COAL

11. County or Parish, State

San Juan

New Mexico

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

AMOCO PRODUCTION COMPANY

Attention:

Nancy I. Whitaker

3. Address and Telephone No.

P.O. BOX 800 DENVER, COLORADO 80201

303-830-5039

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

1210 FNL

1115 FEL

Sec. 28 T 31N R 8W

UNIT A

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

TYPE OF SUBMISSION

TYPE OF ACTION

- ☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other C/O DEEPEN RAT HOLE

- ☒ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

AMOCO PRODUCTION COMPANY REQUESTS PERMISSION TO DEEPEN THE RATHOLE AND RUN A PERFORATED LINER ABOVE WELL ACCORDING TO THE ATTACHED PROCEDURES.

FOR TECHNICAL INFORMATION CONTACT MIKE KUTAS 303-830-5159.

THIS NOI REPLACES THE ONE FILED ON 10-10-96 AND APPROVED ON 10-22-96.

Maximum total Depth- 3201'

RECEIVED
APR 11 1997

OIL CON. DIV.
DIST. 3

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

Signed

Nancy I. Whitaker

Title

Staff Assistant

Date

03-25-1997

(This space for Federal or State office use)

Approved by

/s/ Duane W. Spencer

Title

Date

APR - 9 1997

Conditions 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.

* See Instructions on Reverse Side

NMOCOD

SJOET Well Work Procedure

Kernaghan B 5

Version: #1
Date: March 25, 1997
Budget: Well Repair
Work Type: Deepen/ c/o /run-perf liner

Objectives:

1. C/O TBG head, C/O fill, deepen for rat hole
 2. Run and perf liner; Replace 4 1/2" TBG w/ 2 7/8" TBG
 3. Place well back on production
-

Pertinent Information:

Location:	1210'FNLx1115' FEL; Sect 28A-T31N-R08W	Horizon:	FT
County:	San Juan	API #:	30-045-27338
State:	New Mexico	Engr:	Kutas
Lease:	BLM; SF-078387-A	Phone:	H--(303)840-3700
Well Flac:	70303801		W-(303)830-5159
			P--(303)553-6334

Economic Information:

APC WI:	50%	Prod. Before Repair:	5700MCFD
Estimated Cost:	\$90,000	Anticipated Prod.:	6800MCFD
Payout:	2.5 Months		
Max Cost -12 Mo. P.O.	\$487M		
PV15:			
Max Cost PV15:			

Note: Economics will be run on all projects that have a payout exceeding ONE year.

Formation Tops: (Estimated formation tops)

Nacimiento:		Mesaverde:	
Ojo Alamo:		Point Lookout:	
Kirtland Shale:		Mancos Shale:	
Fruitland:	2961-3184'	Gallup:	
Pictured Cliffs:	3209' (Est'd Kernaghan LS 2A)	Graneros:	
Cliff House:		Dakota:	
		Morrison:	

Bradenhead Test Information:

Test Date: 5/96 **Tubing:** 143 **Casing:** 143 **BH:** 0 psi

Time	BH	CSG	INT	CSG
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5 min

10 min

15 min

Comments:

Kernaghan B 5
Orig. Comp. 7/89
TD = 3186', PBTD = 3186'
Page 2 of 2

Kernaghan B 5:

Current wellbore info: 7" CSA 2997', OH at 2997-3186', 4 1/2" TSA 2972', Fill at 3105'KB
Current flow info: 5800 MCFD, FTP=77 psi, FCP=82 psi, LP=78 psi; Producing tubing and casing; Well has original TBG head and is currently producing through only one 2 1/8" CSG valve (1.5" ID).
General observations:

1. Well is experiencing loading problems
2. Well was cavitated in 8/89, recavitated in 3/94, and underreamed in 3/94.
3. Ledge and sloughing problems were encountered both times at approx. 3090'
4. Well has not responded to lateral compression as anticipated

Short term plans: 1. Replace WH, C/O, deepen, run and perf liner; replace tubing
Long term plans: 1. Place on artificial lift (if needed); Rathole will be added for gas separation.

1. MIRURT
2. ND tree, rig up BOP's w/cavitation capability, complete with venturies on blooie lines. Test BOE. Set plug in F-nipple in 4 1/2" TBG (2.75" F-nipple sa 1 jt off btm, at approx. 2927'). TOH and lay down 4 1/2" tubing
3. Set wireline EZSV in 7" at 2950'. Load csg and pressure test. NDBOE and change out TBG head to allow hanging 2 7/8" TBG (w/full opening 3 1/8" casing valves). NUBOE and test
4. Pick up 4.750" drill collars and 3.500" drill pipe with 6.250" bit, blow hole dry, drill up EZSV, clean out fill from 3,105' to total depth (3186') using air and foam. Drill out to a total depth of 3209'. C/O and stabilize hole as quickly as possible to allow running liner (after reaching TD, trip out to casing shoe and wait for 4-6 hours and check to determine amount of fill and how difficult it is to clean up.
5. Run a blank 5.500" flush joint liner (Hydril 511) from TD back to approx. 2,850'. Install a tricone bit on bottom with a float immediately above bit and a Baker Model SLR-P Liner Hanger Packer. Strip in hole and drill to bottom with power swivel if necessary. Hang liner, lay down drill pipe
6. RU HES, run GR-CCL to identify correct coal seam depths; TIH and perforate liner as follows:

<u>COAL ZONES</u>		<u>PERFORATIONS</u>		
Ignacio	3,046 to 3,064'	3,046 to 3,064'	4 jspf	72 holes
Cottonwood	3,094 to 3,112'	3,094 to 3,112'	4 jspf	72 holes
Cahn	3,156 to 3,184'	3,156 to 3,184'	4 jspf	112 holes
		Total		256 holes

7. Pick up and run 2 7/8" TBG as follows:
 - 1) 10' 2 7/8" tbg sub
 - 2) 10' 2 7/8" tbg sub, w/ 5/8" hole in middle
 - 3) 2 7/8" std. SN (2.280" ID) with retrievable plug in place
 - 4) remainder 2 7/8" TBG (All TBG: 6.4# J55)

Land bottom of TBG at approximately 3179-84' (approx. 5' above bottom perf). Pull retrievable plug. RDMODU. Turn well over to production. Note: bring well on slowly, well may need swabbing in order to RTP.

Dependent on speed of hole stabilization, I estimate this procedure to require approximately 4-5 days and to cost approximately \$90,000 (see attached AFE form).

If problems are encountered, please contact:

Mike Kutas

(W) (303) 830-5159
(H) (303) 840-3700
(P) (303) 553-6334

Repair Well Cost Detail

Property - KERNAGHAN /B/, Well# 005A28

SAN JUAN County, NM

Property FLAC - 698862

Well FLAC - 703038

Operating Field - BLANCO-MESAVERDE

Amoco Production Company

Ownership Code: 00

Intangibles	
-----	-----
Rig Cost	\$45,000
Equipment Rental	\$0
Circulating Media	\$0
Cement and Service	\$0
Packers and Equipment	\$0
Perforate, Log, Wireline	\$7,000
Stimulation	\$0
Labor	\$6,000
Special Equipment	\$0
Fishing	\$0
Other Intangibles	\$9,100
-----	-----
Total Intangibles	\$67,100

Tangibles	
-----	-----
Casing	\$11,600
Tubing	\$7,800
Wellhead	\$8,500
Other	\$0
-----	-----
Total Tangibles	\$27,900

	Net	Gross
-----	-----	-----
Total This Request	\$47,500	\$95,000
Previous Estimate	\$0	\$0
Total to Date Estimate	\$47,500	\$95,000

Amoco Production Company

ENGINEERING CHART

Sheet No _____ Of _____

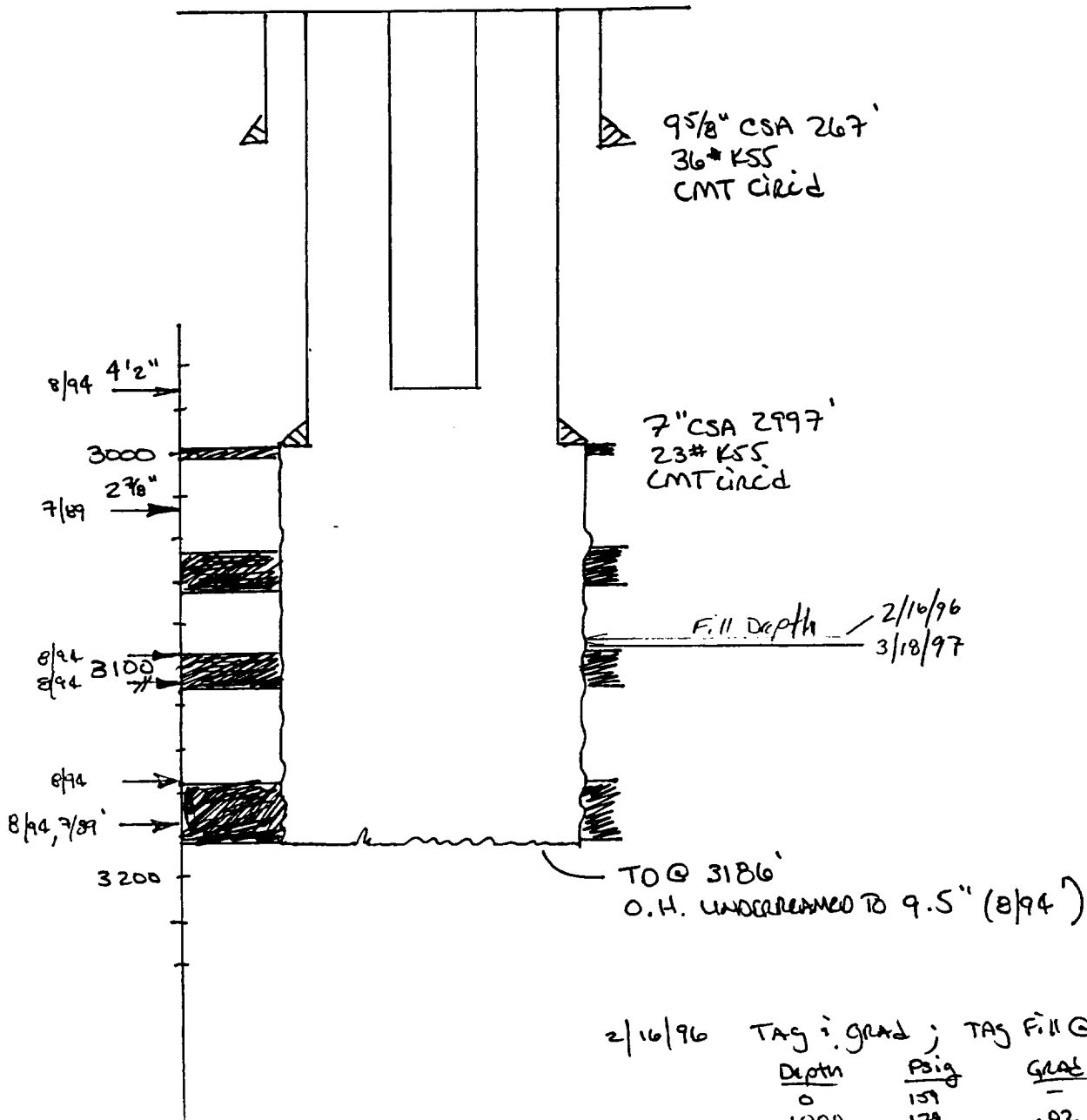
File _____

Appn _____

Date 2-27-97

By _____

SUBJECT KERNAGHAN B S



2/16/96 TAG i. grad ; TAG Fill @ 3086'

Depth	Psig	Grad
0	157	—
1000	179	.02
2000	196	.017
2950	211	.016
3080	213	.015

Amoco Production Company

ENGINEERING CHART

Sheet No _____ Of _____

Appn _____

Date 2-27-97

By GMK

SUBJECT KERNAGHAN B 5

SPUD: 6-6-89

9 5/8" CSA 267', 36# K55, CMT CIRCD

RREL: 6-9-89

7" CSA 297', 23# K55, CMT CIRCD

7-10-89 - MIAUSU

- | | INTERVAL | Depth | Shows/FLARE |
|--|-------------|------------|-------------|
| - PU: TTH w/ BIT, DP: DC; D.O. TO 3162' | 4' stringer | @ CSF shoe | 1920m/24' |
| - Flow Test: 3/4" ch, SIS BWPD, 250 mcf, 228 psi; TO @ 3186' | IGNACIO | 3046-64' | 2800m/24' |
| SIP = 820 psi 2 1/4 hrs; Tag: c/o 18' Fill - HEAVY COAL RETURNS | LOTANWOOD | 3094-3112' | 4800m/15' |
| RTWS; Flow Test: 3/4" ch, 23-65 psi, 686 BWPD, 470 mcf CAHW | | 3156-84' | 4800m/15' |
| - 8 HR SIP = 1130 psi; CST #1 x 5, 1350 - 1720 psi - HEAVY COAL RETURNS; Flow Test: 3/4" ch, 24-70 psi, 686 BWPD, 500 mcf; Tag: c/o 10' Fill | | | |
| - 6 HR SIP = 1130 psi; CST #2 x 6, 1420 - 1720 psi - Tag: c/o 12', 10', 5', 8' Fill - HEAVY COAL RETURNS | | | |
| Flow Test: 3/4" ch, 75-100 psi, 858 mcf | | | |
| - 6 HR SIP = 1180 psi; CST #3 x 5, 1240 - 1460 psi, HEAVY COAL RETURNS; Tag: c/o 42', 8-10', R:R | | | |
| Flow Test: 3/4" ch, 94-120 mcf, 400 BWPD, 100 - 130 psi | | | |
| - 6 HR SIP = 1280 psi; CST #4 x 7, 1200 - 1460 psi, HEAVY COAL + SOME SHALE RETURNS; Tag: c/o 5', R:R | | | |
| Flow Test: 3/4" ch, 110 psi, 297 - 1160 psi, 600 BWPD | | | |
| - 5 1/2 HR SIP = 1260 psi; Tag: c/o 10' Fill, R:R ON BTM, BTM 6' torquing up - HEAVY COAL RETURNS | | | |
| Flow Test: 3/4", 90 - 140 psi, DM - 177 BWPD | | | |
| - Flow Test THRU SEP: 170 psi, 3/4" ch, 839 mcf, 556 BWPD; Tag: c/o 10' Fill - MINUTE | | | |
| - R:R, c/o 5' Fill; SIP = 1400 psi, 10 HRS | | | |
| - SNUB DOH w/ DP, RUN 5.5" 32#/ft P 110 PEAR CSG; 5.95 shoe, 4 fts (146.79') PEAR CSG, 3 fts DON-PEAR CSG (99.03'), LHM-RHR HANGER ARE; TAG FILL @ 3181' | | | |
| SET HANGER PACKER @ 2926' | | | |
| - TOH x LD D.P.; 3u 2 7/8" Tag: Fluted mill, TAG TOL @ 2926', mill out PORT Plugs from 3032-38', well unloaded, 25' FLARE, lay AMTS w/te, FLARE 15 - 40' ↓ ↑ mill out to 3102' | | | |
| - Finish milling @ 3176'; Plugs ARE @ 3176' (PBD); TOH, RUN 2 7/8" Tag; 6.4" JST TSA 3028': 1/2 mule 1 1/2" BAKER 2.25" PROFILE Nipple, w/ BLANK PLUG | | | |
| - RREL 7/22/89 | | | |

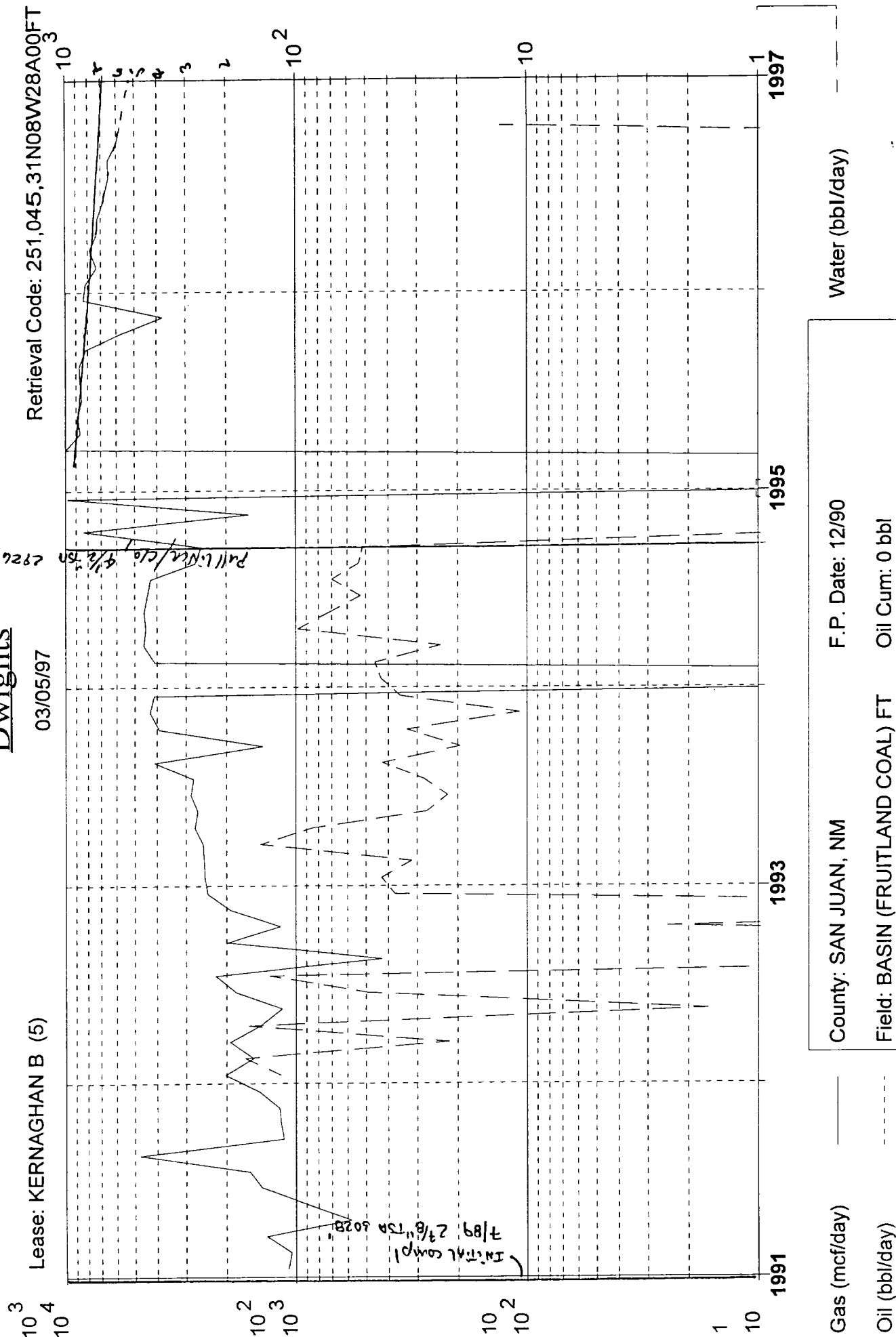
- 8/22/94 - MIAUSU, TOH: 10 TBG; SET CIBP @ 2890'; TTH x DP: DC: BIT, D/O CSFP
- TTH x Mill: mill up LINER PICK HANGER, TOH w/ LINER* (NO RATS ON THIS PART OF WORK)
- ~~CST X 10~~ TTH x UNDEREARM HOLE FROM 3000-3186 TO 9.5", R:R ON BTM
- CST X 10, 620-740 psi; Fill @ 76', 76', 92', 11', 71', 30', 30' OFF BTM
- UNLOADING LARGE AMTS COAL - BRIDGE @ 3110'; Short trip, Flow 4 hrs, Tag: c/o 10' Fill; TOH x LD DP: DC: BIT; SNUB IN HOLE w/ 4.5" 10.5" J55 TBG, TSA 2972'; 2.75" F-Nipple @ 2926.93' - 1 ft OFF BTM
- RREL: 9/22/94

Dwights

Lease: KERNAGHAN B (5)

03/05/97

Retrieval Code: 251,045,31N08W28A00FT



Gas (mcf/day)

Oil (bbl/day)

Water (bbl/day)

County: SAN JUAN, NM F.P. Date: 12/90

Field: BASIN (FRUITLAND COAL) FT Oil Cum: 0 bbl

Reservoir: FRUITLAND COAL Gas Cum: 8348 mmcf

Operator: AMOCO PRODUCTION CO Location: 28A 31N 8W

Kernaghan B 5

