Form 3160-5
(June 1990)

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-078387A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Kernaghan B #8

2. Name of Operator
AMOCO PRODUCTION COMPANY

Attention:
Pat Archuleta

9. API Well No.
3004527351

3. Address and Telephone No.
P.O. BOX 800 DENVER, COLORADO 80201

(303) 830-5217

10. Field and Pool, or Exploratory Area
Basin Fruitland Coal

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1140' FSL 1700' FWL Sec. 33 T 31N R 8W

11. County or Parish, State
SAN JUAN NEW MEXICO

RECEIVED
OCT 16 1998
OIL CON. DIV.
DIST. 3

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

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other C//O Perf Liner	☐ 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 request permission to clean out, run and perf liner on this well per the attached procedures.

If you have any technical quetions contact Mike Kutas at (303) 830-5159.

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

Signed Pat Archuleta Title Staff Assistant Date 10-08-1998

(This space for Federal or State office use)

Approved by Chip Hunaden Title acting Team Lead Date 10/14/98
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, ficticious, or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instructions on Reverse Side

NMOCD

Current wellbore info: 7" CSA 3052', OH at 3052-3235', 2 7/8" TSA 3216', Fill at approx. 3200'
Current flow info: 0 MCFD, FTP=33 psi, FCP=37 psi, LP=34 psi; Well dead...can't build pressure
General observations:
1. Well is experiencing loading/fill problems
2. Attempts to beam lift well recently failed due to coal production
3. Well currently dead...will not build pressure

Short term plans:
1. C/O and underream coals
2. Run and perf liner (if needed)
3. Place on artificial lift; back on production

1. MIRURT
2. ND tree, rig up BOP's w/cavitation capability, complete with venturies on blooie lines. Test BOE. Set plug in 2.25" F-nipple in 2 7/8" TBG. TOH w/ tubing
3. Pick up 4.750" drill collars and 3.500" drill pipe with 6.250" bit, clean out fill from to total depth (3235') using air and foam.
4. TOH, LD bit, pick up 6"x12"x24" Harvest tool company "cavern tool" underreamer; Underream each coal seam to 24" (see table below for coal depths). C/O and stibilize hole as quickly as possible (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. PU and run a blank 5.500" flush joint liner (Hydril 511) from TD back to approx. 3,000'. 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:

COAL ZONES		PERFORATIONS		
Ignacio	3,070 to 3,092'	3,070 to 3,092'	4 jspf	88 holes
Cottonwood	3,143 to 3,160'	3,355 to 3,374'	4 jspf	68 holes
Cahn	3,200 to 3,224'	3,200 to 3,224'	4 jspf	96 holes
		Total		**252 holes**

5. Pick up and run 2 7/8"TBG as follows:
1) 2x10' 2 7/8" TBG subs (total 20')
2) 2 7/8" std. SN (2.280" ID) with lock collar and plug in place
4) remainder 2 7/8" TBG (All TBG: 6.4# J55 EUE FBN)

Land bottom of TBG at approximately 3210-15'. Pull retrievable plug. RDMODU.
6. MIRUSU; PU and run rods and pump; pressure test pump; RDMOSU. **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 5-6 days and to cost approximately $130,000 (see attached AFE form).

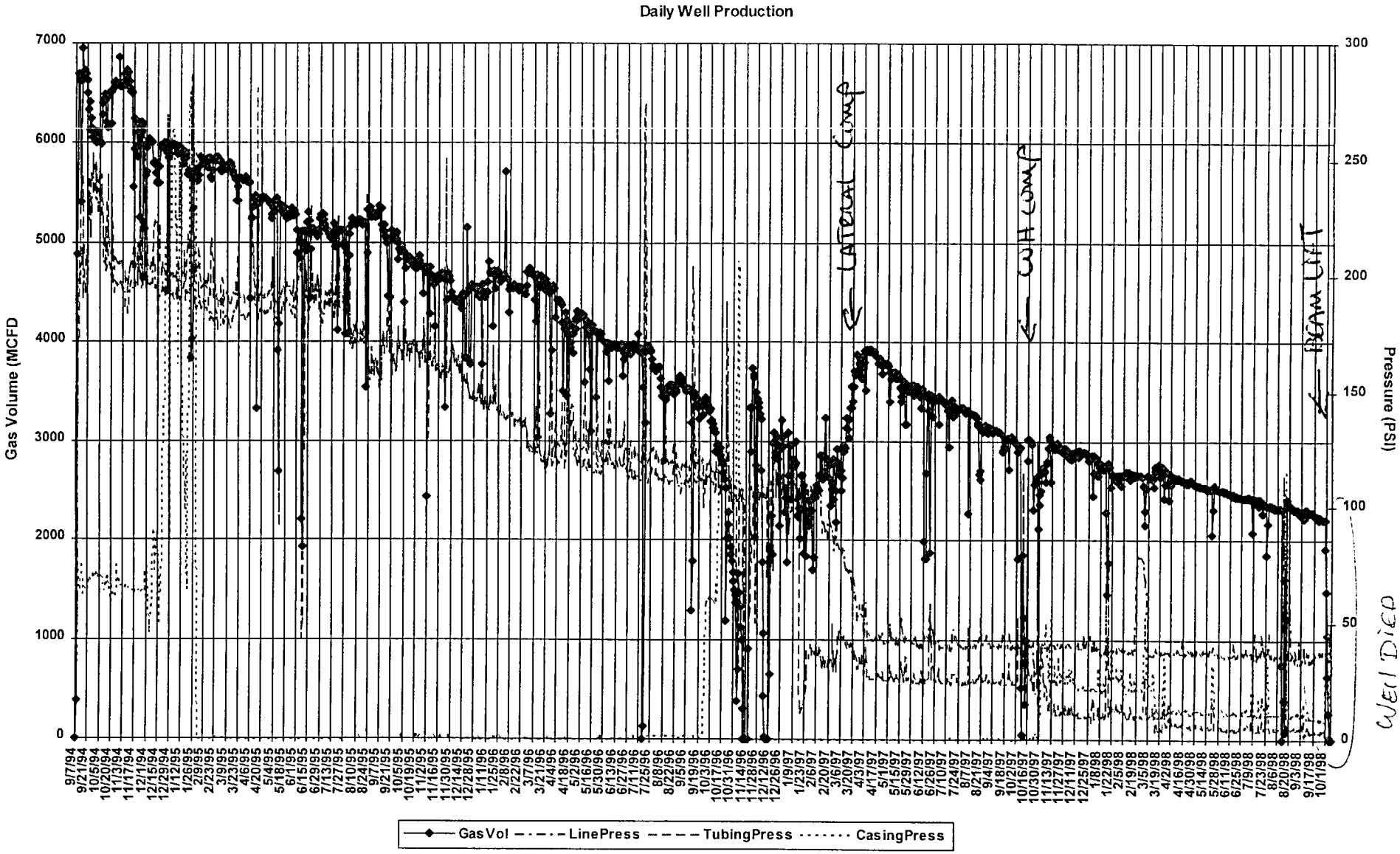
If problems are encountered, please contact:

Mike Kutas

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

Cost Estimate:		
	Rig	$ 45,000
	Pits	$ 5,000
	W.L.	$ 3,500
	Haul/Trk	$ 2,500
	Bits	$ 2,000
	UR	$ 8,000
	Air	$ 12,000
	Labor	$ 2,500
	Liner	$ 5,000
	Hanger	$ 8,500
	Rentals	$ 7,000
	Perfs	$ 7,500
	Misc	$ 21,500
	Total	$130,000

Wellname: **KERNAGHAN B 008 #A-FT** Flacwell: **70304101** API: **300452735100** Amoco - OIDB/Synergy Data

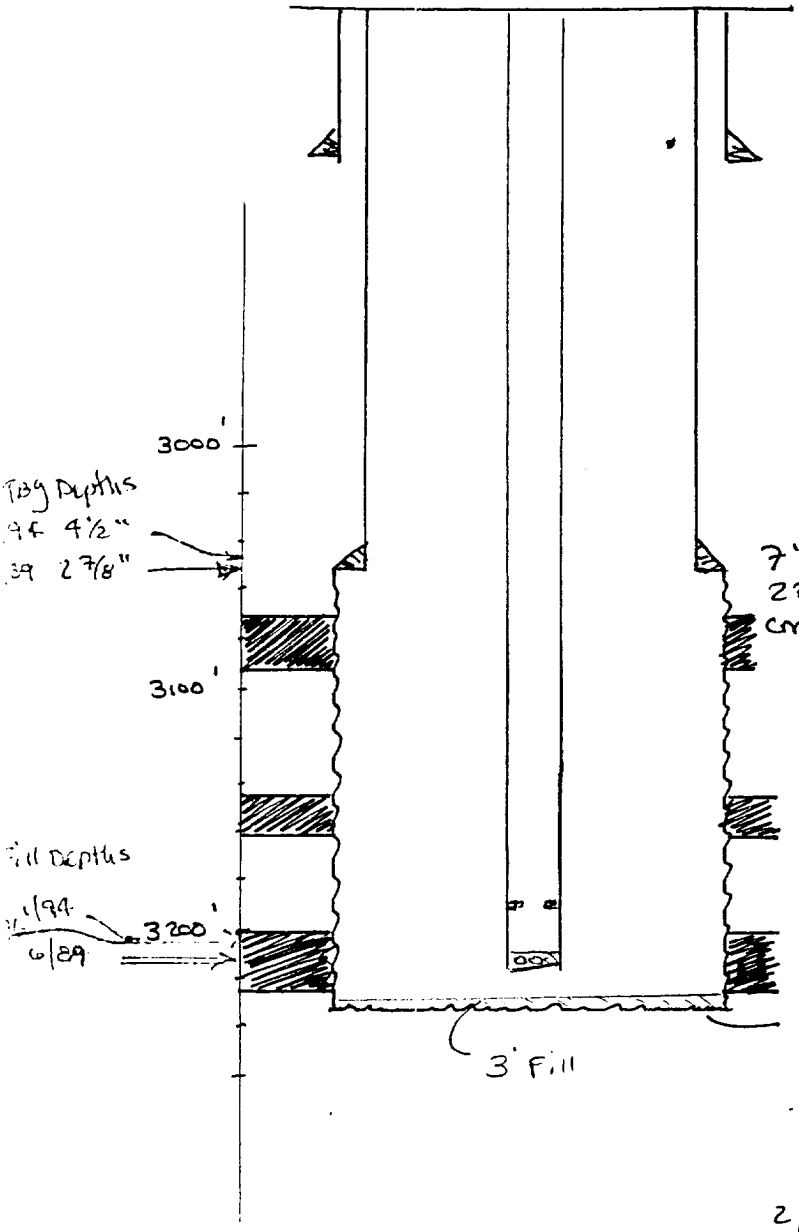


Amoco Production Company

ENGINEERING CHART

Sheet No ____ Of ____
File ____
Appn ____
Date 2-18-97
By GMK

SUBJECT KERNAGHAN B 8



6/97
2 7/8" TSA 3216' (6.4# J55)
Blind mule, 4' perf sub, 1 jt tbg,
2.25" F. nipple @ 3180'

2/17/96 Tag; GRad; Tag Fill @ 3190'

Depth	psig	GRAd
0	139	~~.005~~
1000	147	.006
2000	158	.011
3000	171	.018
3180	175	.022

SUBJECT KERNAGHAN B 8

9 5/8" CSA 277' 36# K55 CMT Circ'd SPud : 6/2/89

7" CSA 3052' 23# K55 CMT Circ'd RREL : 6/5/89

6/22/89 MIRUSU, TIH

	COAL	GAS U	Depth
	Fg	1920	3070-92'
	CW	↓	3143-60'
	CRN/F	↓	3200-3224'

- DRL OUT TO CW @ 3160'
- DRL OUT TO 3235', Log Olt. W/GR
  FLOW WELL, 10-12' FLARE + WATER SLUGS
  TAG FILL @ 3211', SIWOH 4 HRS SIP = 820psi ; FLOW 28 Psi, 3/4" ch, 208 MCFD, 1308
- C/O 24' FILL, CST #1 x 4, 1300 PSI, TAG x C/O FILL @ 3230'-5'
  FLOW TEST, 5 HRS, 85 - 119 psi, 3/4" ch, 1232 → 1726 MCFD, 130 - 157 BWPD
- SI, 4.75 HRS, PRS = 1160 psi ; CST # 2 x 4, CIRC, CST 4 MORE TIMES
  TAG FILL @ 3217', C/O 18' ; FLOW TEST, 5 HRS, 3/4" ch, 180-210 psi, 2610-3045 MCFD, 0-17 BW
- CST # 3, 1300 psi, C/O 21', FLOW TEST, " ", 150-280psi, 2175-4060 MCFD, 0-M
- CST # 4, 1300 psi, C/O 20', FLOW TEST, 5.5", ", 150-295psi, 2175-4278 MCFD, 0-M
- C/O 8' FILL, PREP TO SNUB DRILL PIPE
- SNUB IN HOLE WITH LINER, 5 JTS (172') 5.5", 23# P-110, 8 HPF + 3 JTS (121') NON-Perf + TIH JGS RHR HANGER PKR ; TAG @ 3224' (couldn't circ) PU TO 3222', SET HANGER @ 2925'
  TIH W/ 2 7/8" TBG x MILL
- MILL OUT PORT PLUGS FROM 3057' to 3229' (?) TOP PLUG - 50' FLARE, STEAD 2-3" WATER
  STRIP IN HOLE W/ 2 7/8" TBG, (6.4# J55), EXP. CHECK, 1 JT, MODEL F SN - 2.25" ID
  FCP = 400 psi, 3/4" ch W/WATER MIST TSA 3055'
- PUMP OUT PLUG W/WTR, RREL 8/3/89 SITP/CP = 1200/1200 psi

1/6/94 - MIRUSU

- SET PLUG IN SN, PULL TBG, PU 6 1/4" MILL, BIT SUB, DC's, 3.5" DP
- MILL OUT HANGER, ATTEMPT TO FISH - NO RECOVERY
- REC ALL OF LINER, SET CIBP, TEST BOPS, STACK, ETC
- DRILL OUT CIBP, TIH TO 3220', UNLOADING WATER ; SMALL AMTS COAL
- CST # 1 x 4, 520 psi - WTR ; COAL RTSN
- FLOW TEST, 3/4" ch, 221 psi, 5.2 MMCFD, TAG FILL @ 3205', C/O TO 3235'
  UNDERREAM HOLE TO 9.5" FROM 3057 to 3235 Ft., U.R. ARMS STUCK
- POH - LEFT 1/2 ARM OF U.R. IN HOLE, C/O 3143-3236' - NO BRIDGES - 3' FILL
- CST # 2 x 6, 440psi HEAVY COAL ; WTR RETURNS
- FLOW TEST, 3/4" ch, ~300 psi, 4.4 MMCFD ; CST # 3 x 5 450 psi, HEAVY COAL
- TAG FILL @ 3219', C/O TO 3235', CST # 4 x 4, 520 psi HEAVY COAL ; WTR RETURNS
- FLOW TEST; 3/4" ch, 320 psi, 4.6 MMCFD, C/O 1' FILL, FLOW TEST: 3/4" ch, 312 psi, 4.52
  CST # 5 x 3 - 505 psi Lt COAL ; WTR RETURNS

SUBJECT KERNAGHAN B 8

- CST #6 x 5, 490 psi, VERY LITTLE COAL TO SURF, FLOW TEST, 3/4"ch, 4640 MCFD
- CST #7 x 9, 490 psi, TAG 15' FILL @ 3220', C/O
- FLOW TEST; 3/4"ch 350 psi, 5075 MCFD; C/O 6' FILL @ 3229'
  CST #8 x 3, 490 psi REC GAS, WTR, SMALL AMT COAL FINES
- CST #9 x 9, 490 psi, " " "
  FLOW TEST, 3/4"ch, 371 psi, 5439 MCFD; C/O 4' FILL @ 3231'
- CST #10 x 12
- FLOW TEST 5039 MCFD, TAG FILL @ 3231', C/O
- RUN 4½" TBG, TSA 3047' MULE SHOE ON BTM, 2.75" PROF NIP @ 3000'
- RREL 1/26/94

11/11/96 - MIRUSU
- PULL x LD 4½" TBG, SET CIBP TO NU NEW TBG HEAD
- D.O. CIBP, TAG FILL @ 3206'
- C/O TO 3235' - HEAVY COAL RTNS
- FLOW TEST, 1 HR, 150-230 psi, 2465 - ____ MCFD
- TAG 5' FILL, C/O FROM 3221 - 3235'
- CST #1 x 4, 230 psi (FP 170 TP) REC GAS, BLACK WTR, FINE COAL
- TAG 2' FILL, C/O TO 3235'
- FLW TEST 2.5 HRS, 3/4"ch, 170 psi, 2465 MCFD
- CST #2 x (?), 230 psi, REC WTR, FINE COAL, ONLY GAS ON LAST TWO SURGES
- TAG 3' FILL, C/O TO 3235'
- FLW TEST 2 HRS, 90 - 160 psi, 3/4"ch
- TAG 3' FILL, TOH
- RUN 2⅞" TBG, TSA 3203', MULE SHOE ON BTM, 4' PERF SUB, 1 JT TBG
  2.25" F NIPPLE (@ 3166')
- RREL 11/17/96
- PULL BLANK PLUG