STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 9102
Order No. R-8409

THE APPLICATION OF THE OIL CONSERVATION
DIVISION UPON ITS OWN MOTION FOR AN
ORDER CREATING, ASSIGNING A DISCOVERY
ALLOWABLE, AND EXTENDING CERTAIN POOLS
IN EDDY AND LEA COUNTIES, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on March 4, 1987, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 7th day of March, 1987, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Wolfcamp formation, said pool to bear the designation of Southwest Austin-Wolfcamp Pool. Said Southwest Austin-Wolfcamp Pool was discovered by the Harvey E. Yates Company Goodrich Com Well No. 1 located in Unit F of Section 11, Township 15 South, Range 35 East, NMPM. It was completed in the Wolfcamp formation on November 26, 1986. The top of the perforations is at 10,298 feet.

(3) There is need for the creation of a new pool in Lea County, New Mexico, for the production of oil from the Wolfcamp formation, said pool to bear the designation of North Hume-Wolfcamp Pool. Further, the discovery well for said North Hume-Wolfcamp Pool, the Santa Fe Energy Operating Partners, L.P. N. H. 5 Federal Well No. 1 located in Unit G of Section 5, Township 16 South, Range 34 East, NMPM, is entitled to

and should receive a bonus discovery allowable in the amount of 30,165 barrels to be assigned over a two-year period. Said discovery well was completed in the Wolfcamp formation on January 8, 1987. The top of the perforations is at 10,176 feet.

(4) There is need for certain extensions to the North Air Strip-Bone Spring Pool, the Central Corbin-Queen Pool, the West Grama Ridge-Bone Spring Pool, the West Knowles-Drinkard Pool, the Northeast Lovington-Pennsylvanian Pool, the East Mason-Delaware Pool, the Querecho Plains-Upper Bone Spring Pool, the South Sand Dunes-Bone Spring Pool, the North Sanmal-Pennsylvanian Pool, the Shipp-Strawn Pool, and the Vacuum-Strawn Pool in Lea County, New Mexico, and the Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Eddy and Lea Counties, New Mexico.

IT IS THEREFORE ORDERED THAT:

(a) A new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production is hereby created and designated as the Southwest Austin-Wolfcamp Pool, consisting of the following described area:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM
Section 11: NW/4

(b) A new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production is hereby created and designated as the North Hume-Wolfcamp Pool, consisting of the following described area:

TOWNSHIP 16 SOUTH, RANGE 34 EAST, NMPM
Section 5: Lots 1, 2, 7, and 8

Further, the discovery well for said North Hume-Wolfcamp Pool, the Santa Fe Energy Operating Partners L.P. N. H. 5 Federal Well No. 1 located in Unit G of Section 5, Township 16 South, Range 34 East, NMPM, is hereby assigned a bonus discovery allowable of 30,165 barrels to be produced over a two-year period.

(c) The North Air Strip-Bone Spring Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 14: NW/4

(d) The Central Corbin-Queen Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 18 SOUTH, RANGE 33 EAST, NMPM
Section 3: NW/4

(e) The West Grama Ridge-Bone Spring Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 22 SOUTH, RANGE 34 EAST, NMPM
Section 5: S/2

(f) The West Knowles-Drinkard Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 33: W/2

(g) The Northeast Lovington-Pennsylvanian Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 16: SE/4

(h) The East Mason-Delaware Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 26 SOUTH, RANGE 32 EAST, NMPM
Section 19: SE/4

(i) The Querecho Plains-Upper Bone Spring Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 23: NW/4

(j) The South Sand Dunes-Bone Spring Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 23 SOUTH, RANGE 32 EAST, NMPM
Section 29: SW/4
Section 30: SE/4
Section 32: N/2

(k) The North Sanmal-Pennsylvanian Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 16 SOUTH, RANGE 33 EAST, NMPM
Section 8: N/2 and SE/4

(l) The Shipp-Strawn Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
Section 3: NW/4

(m) The Shugart Yates-Seven Rivers-Queen-Grayburg Pool in Eddy and Lea Counties, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 18: SW/4

(n) The Vacuum-Strawn Pool in Lea County, New Mexico, as heretofore classified, defined, and described, is hereby extended to include therein:

TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 13: N/2

IT IS FURTHER ORDERED THAT:

(1) Pursuant to Section 70-2-18, NMSA 1978, contained in Chapter 271, Laws of 1969, any well which, by virtue of any of the above pool extensions, is subject to pool rules providing for spacing or proration units larger than the one which is presently dedicated thereto, shall have 60 days from the effective date of this order in which to file new Forms C-102 dedicating a standard unit for the pool to said well, or to obtain a non-standard unit approved by the Division. Pending such compliance, the well shall receive a maximum allowable in the same proportion to a standard allowable for the pool that the acreage dedicated to the well bears to a standard unit for the pool. Failure to file Form C-102 dedicating a standard unit to the well or to obtain a non-standard unit approved by the Division shall subject the well to cancellation of allowable.

(2) The effective date of this order and all creations, assignments of discovery allowable, and extensions included herein shall be April 1, 1987.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

fd/

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

Oil Conservation Division
Energy and Mineral Department
P. O. Box 1980
Hobbs, New Mexico 88240

Re: Completion Forms
N. H. 5 Fed No. 1
Undesignated Wolfcamp

Gentlemen:

We request a discovery allowable, the creation of a new pool, and advice on the procedure to establish 80 acre proration units.

Enclosed please find applicable copies of:

1. Form 9-330 (Well Completion Report) with attached DST summaries
2. Form C-102 Acreage and Dedication Plat
3. Inclination Report
4. Electric Logs of Subject Well
5. Electric Logs of Nearby Wells
6. Form C-109 Application for Discovery Allowable and Creation of New Pool
7. Map of the area showing all wells within a 2 mile radius.
8. Related available pressure data on the perforated interval.
9. Copy of notification letters to offset operators within a one mile radius.

Because of no Wolfcamp production within a two mile radius, we called the district OCD office to request advice on the applicability of some of Rule 1123 requirements for supporting data. The district suggested that what we are submitting now might suffice as support for Form C-109. We have no seismic interpretation at this time.

Also, we have indicated a 40 acre proration unit on Form C-102 per statewide rules, however we have looked at eight Wolfcamp pools within a twenty mile radius and they are spaced on 80 acres. We have no production history yet on our well to support a position for 80 acre units, however the continuity of the porosity, the depth, and analogy to offset Wolfcamp pools would indicate 80 acres is adequate. Would you please advise us as to the procedural steps required to establish 80 acre field rules?

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

We request that all information submitted to you be held as confidential to the extent permitted by law.

If further information is required, please call myself or Ms. Billie Hood. Thank you.

Sincerely,

SANTA FE ENERGY OPERATING PARTNERS, LP
By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Walker, Dist. Prod. Engr.

AJW:sll-962

Encls.

cc: Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501
w/attachments

Form 9-330
(Rev. 5-63)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: NM 57535

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other

b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: N. H. 5 Federal

2. NAME OF OPERATOR: Santa Fe Energy Operating Partners, L.P.

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: 500 W. Illinois, Suite 500, Midland, TX 79701

10. FIELD AND POOL, OR WILDCAT: (New Field) Wolfcamp

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 2466' FNL & 1980' FEL of Sec. 5
At top prod. interval reported below: Same
At total depth: Same

North Hume Wolfcamp R-3407

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 5, 16S, 34E

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
N/A	10-2-86	Lea	NM

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
10-16-86	12-2-86	1-8-87	4143.5' GL	

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
13,337'	10,945'	N/A	→	All	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 10,176-10,192' Wolfcamp

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual induction, Borehole Compensated Sonic, Compensated Neutron

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8	68 & 54.5	455	17 1/2	475 sx Cl C	N/A
8 5/8	24 & 28	4543	11	1300 sx Lite 750 Cl C	N/A
5 1/2	20 & 23	11,232	7 7/8	975 sx Cl H	N/A

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 7/8	10,117	10,117

31. PERFORATION RECORD (*Interval, size and number*)
11,043-11,101'- 1 JSPF 66 holes P&A
CIBP @ 10,980'
10,176-10,192'- 2 JSPF

PLUG BACK INFORMATION ON BACK (3330-11820)

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
11,043-11,101	Acdz w/6000 gal 15% NEFE HCl
" "	CIBP @ 10,980 w/35' cmt on top
10,176-10,192	Acdz w/1600 gal 15% NEFE HCl

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
1-8-87	Flow	SI

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
1-12-86	13	18/64		363	325	5	895

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
750	Pkr		670	600	9	36

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented

TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Logs, deviation tests, C102

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Billie Wood TITLE Sr. Prod. Clerk DATE 1-20-87

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement"*: Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

Note: Per BLM Insructions, 12-6-86, set 4 cmt plugs: #1 - 35 sx Cl H @ 13,330-13,250'
#2 - 25 sx Cl H @ 12,902-12,802'
#3 - 25 sx Cl H @ 12,110-12,010'
#4 -113 sx Cl H @ 11,450-11,120'

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
	5061	5181	DST #1 (10-30-86)
	12745	12777	DST #2 (11-26-86)
	13036	13053	DST #3 (11-29-86)
	11052	11238	DST #4 (12-8-86) pkr failed
	11033	11238	DST #5 (12-9-86) pkr failed
	11002	11126	DST #6 (12-11-86) pkr failed
	10092	10200	DST #7 (12-12-86)
			See attached sheet for DST test results.

38. GEOLOGIC MARKERS

NAME	TOP MEAS. DEPTH	TOP TRUE VERT. DEPTH
Penrose	3960	
Tubb	7265	
Wolfcamp	9656	
Cisco	11043	
Strawn	12060	
Atoka Ls.	12401	
Morrow	12860	
Chester	13250	

N. H. 5 Federal No. 1
NM 57535
Lea County, NM

DST #1, 5061-5181'

		TOP	BOTTOM
		5054	5061
IH		2267	
IF	5 min	40-40 very week blow	
ISI	60 min	1135	
FF	30 min	27-27 no blow	
FSI	4 hrs	1638	
FH		2267	

Fluid Rec: 3' drlg mud, 2400 cc drlg mud in sample chamber & 3 psi. No gas to surface, no hydrocarbons.

DST #2, 12,745-12,777'

IH		5984
IF	6 min	364-401
ISI	45 min	5948
FF	60 min	475-987
FSI	53 min	5948
FH		5984

Rec: 1140' saltwater in DP.
Sample chamber had 200 psi, 2500 cc saltwater
Chls 26000 ppm

DST #3, 13,036-053'

IH		5984
IF	6 min	2653-3861
ISI	150 min	6116
FF	72 min	2580-859
FSI	127 min	6424
FH		6112

Temp: 184°
Rec: 980' wtr blanket, 1554' gas cut drlg mud
Sample chamber contents: 0.31 cu.ft. gas, 2000 cc wtr, 15000 ppm chls, 500 psi

DST #7, 10,097-10,200'

IH		5084
IF	5 min	658
ISI	20 min	791-3793
2nd Flow	30 min	760-896
2nd SI	60 min	896-3800
3rd Flow	60 min	949-1217
3rd SI	180 min	1217-3806
FH		4950

Temp: 140°
Ran 1297' fresh wtr cushion
Rec: 2675 total fluid rec - - - - - - - 34.73 bbls
1297' slight oil & mud - - - - - - 18.42 bbls
70' slight oil cut drlg fluid- - .99 bbls
1308' oil & heavy gas cut - - - - 15.32 bbls

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
SANTA FE ENERGY OPERATING PARTNERS L.P.	NH 5 FEDERAL	1

Unit Letter	Section	Township	Range	County
G	5	16 SOUTH	34 EAST	LEA

Actual Footage Location of Well: 2466 feet from the NORTH line and 1980 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4143.5	Wolfcamp	Undes	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

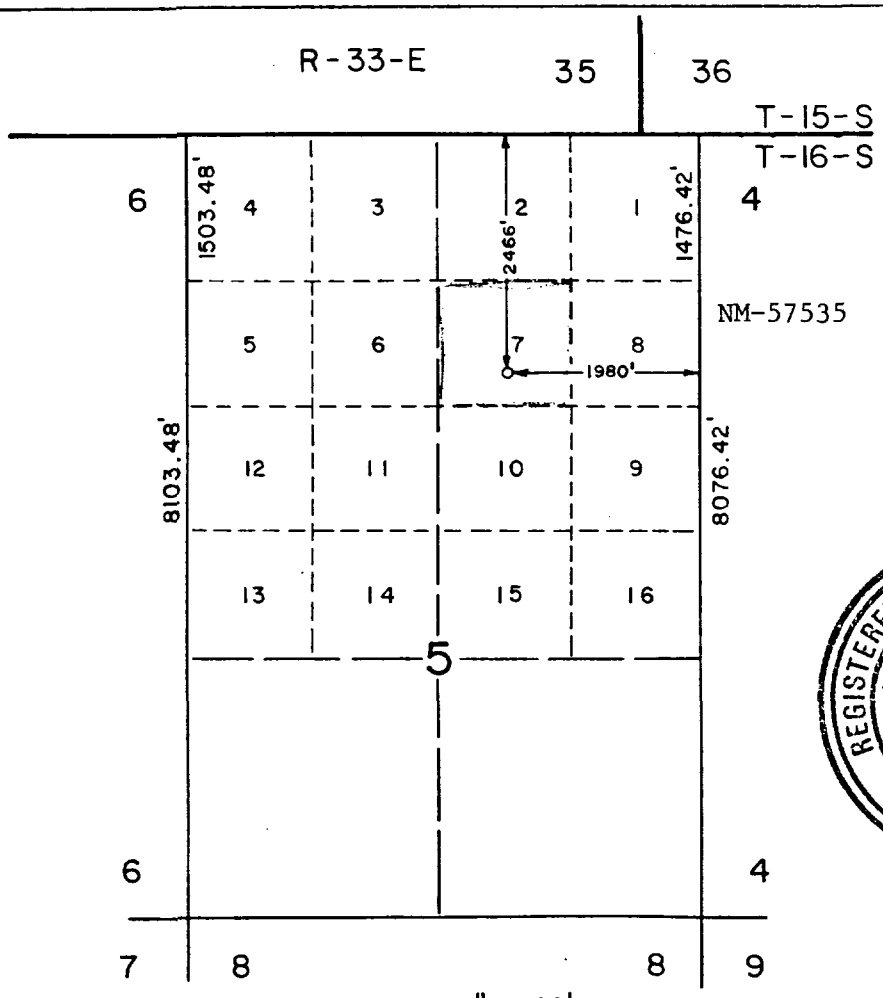
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☒ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Anthony J. Welker

Position: District Production Engineer

Company: Santa Fe Energy Operating Partners, L.P.

Date: 1-30-87

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 knowledge and belief.

REGISTERED PROFESSIONAL ENGINEER AND LAND SURVEYOR NO. 676 NEW MEXICO JOHN W. WEST

Date Surveyed: SEPTEMBER 15, 1986

Registered Professional Engineer and/or Land Surveyor

Certificate No. JOHN W. WEST 676

Ronald J. Eidson 3239

WELL NAME AND NUMBER Rig#7 N.H. Federal No. 1

LOCATION Section 5, T16S, R34E, Lea County
(Give Unit, Section, Township and Range)

OPERATOR Santa Fe

DRILLING CONTRACTOR McVay Drilling Company

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the follwing results:

Degrees @ Depth		Degrees @ Depth		Degrees @ Depth	
1	455	1/4	7,677	2	12,777
1	758	3/4	7,997	1	13,053
1/2	1,254	1	8,508	1¼	13,337
3/4	1,747	2	9,004		
3/4	2,242	1-3/4	9,096		
1/2	2,741	3	9,257		
1/4	3,231	2-3/4	9,307		
1/2	3,755	2-3/4	9,460		
1/2	4,249	2	9,618		
1/2	4,543	1½	9,901		
3/4	5,048	2	10,368		
1/4	5,576	1-3/4	10,511		
1/2	6,013	2	10,993		
3/4	6,666	1	11,307		
3/4	7,154	1	11,800		
		1½	12,307		

Drilling Contractor McVay Drilling Company

By: [signature]

Subscribed and sworn to before me this 29th day of December, 1986

[signature]
Notary Public

My Commision Expires: December 27, 1987 Lea County New Mexico

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-109
Revised 10-1-78

APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 509. If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator	Address
Santa Fe Energy Operating Partners, L.P.	500 W. Illinois, Suite 500, Midland, TX 79701

Lease Name	Well No.	County
N. H. 5 Federal	1	Lea

Well Location

Unit Letter G ; 2466 Feet from The North Line and 1980 Feet

From the East Line of Section 5 , Township 16S , Range 34E , NMPM

Suggested Pool Names *(List in order of preference)*

1. North Hume Wolfcamp 2. Solley Wolfcamp 3. Conrack Wolfcamp

Name of Producing Formation	Perforations	Date of Filing Form C-104
Wolfcamp	10,176-10,192	1-12-87

Was "Affidavit of Discovery" Previously Filed For This Well in this Pool?	If Yes, Give Date of Filing	Date Well was Spudded	Date Compl. Ready to Prod.
No	--	10-16-86	1-8-86

Total Depth	Plugged Back Depth	Depth Casing Shoe	Tubing Depth	Elevation *(Gr., DF, RKB, RT, etc.)*
13,337'	10,945'	11,232'	10,117'	4143.5' GL

Oil Well Potential *(Test to be taken only after all load oil has been recovered)*

670 Bbls. Oil Per Day Based On 363 Bbls In 13 Hours; 9 Bbls Water Per Day Based On 5 Bbls In 13 Hours; Gas Production During Test: 325 MCF; Gas-Oil Ratio: 895 Method Of Producing: Flow Chk. Size 18/64

NEAREST PRODUCTION TO THIS DISCOVERY *(Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation):*

Pool Name	Name of Producing Formation	Top of Pay	Bottom of Pay	Currently Producing?
Hume	Devonian	13,988'	14,010'	Yes

Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool	Vertical Distance from Subject Discovery Zone to Producing Interval this Pool
14 3 miles to the south	3792'

NEAREST COMPARABLE PRODUCTION *(Includes past and present oil or gas production from this pay or formation only):*

Pool Name	Top of Pay	Bottom of Pay	Currently Producing?
Kemnitz	10,451'	10,473'	Yes

Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool: 2.45 miles to the south

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well?	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County
No	

Is the Subject Well Multiple Completion?	Is Discovery Allowable Requested for other Zone(s)?	If Yes, Name all Such Formations
No	No	

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL *(Attach additional sheet if necessary)*

NAME	ADDRESS
Cal-Mon Oil Company	Box 2066, Midland, TX 79702
Chevron USA, Inc.	15 Smith Road, Midland, TX 79705
Exxon Company USA	615 West Missouri, Midland, TX 79702
Kaiser-Francis Oil Co.	P. O. Box 21468, Tulsa, OK 74121
Texaco, Inc.	500 N. Loraine, Midland, TX 79701
Mewbourne Oil Company	400 W. Illinois, Suite 1270, Midland, TX 79701
The Louisiana Land & Exploration Co.	225 Baronne Street, Suite 1200, New Orleans, LA 70112

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Division of such intent in writing within ten days after receiving a copy of this application.

Remarks:

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Division have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.

Anthony L. Welker District Production Engineer 1-30-87

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Mewborune Oil Co.
400 West Illinois
Suite 1270
Midland, TX 79701

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

This is to advise that we are filing an application for a discovery allowable and creation of a new pool with the Oil Conservation Division per the attached Form C109. You are an operator within a one mile radius of the subject well.

Yours truly,

SANTA FE ENERGY OPERATING PARTNER, LP
By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Welker, Dist. Prod. Engr.

AJW:s11-964

cc: OCD
P. O. Box 1980
Hobbs, NM 88240

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

The Louisiana Land & Exploration Co.
225 Baronne Street
Suite 1200
New Orleans, LA 70112

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

This is to advise that we are filing an application for a discovery allowable and creation of a new pool with the Oil Conservation Division per the attached Form C109. You are an operator within a one mile radius of the subject well.

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By _____
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Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Texaco, Inc.
500 North Loraine
Midland, TX 79701

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

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as Managing General Partner

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Hobbs, NM 88240

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500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Kaiser-Francis Oil Company
P. O. Box 21468
Tulsa, OK 74121

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

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Yours truly,

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By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Welker, Dist. Prod. Engr.

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Hobbs, NM 88240

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

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Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Exxon Company, USA
615 West Missouri
Midland, TX 79702

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

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Yours truly,

SANTA FE ENERGY OPERATING PARTNER, LP
By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Welker, Dist. Prod. Engr.

AJW:s11-964

cc: OCD
P. O. Box 1980
Hobbs, NM 88240

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Chevron USA, Inc.
15 Smith Road
Midland, TX 79705

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

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Yours truly,

SANTA FE ENERGY OPERATING PARTNER, LP
By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Welker, Dist. Prod. Engr.

AJW:s11-964

cc: OCD
P. O. Box 1980
Hobbs, NM 88240

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

Santa Fe Energy Operating Partners, L.P.

Santa Fe Pacific Exploration Company
Managing General Partner

January 30, 1987

CERTIFIED - RETURN RECEIPT REQUESTED

Cal-Mon Oil Company
Box 2066
Midland, TX 79702

Re: N. H. 5 Fed No. 1
G-5-16S-34E NMPM
Lea County, NM

Gentlemen:

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Yours truly,

SANTA FE ENERGY OPERATING PARTNER, LP
By Santa Fe Pacific Exploration Company
as Managing General Partner

By _____
Anthony J. Welker, Dist. Prod. Engr.

AJW:s11-964

cc: OCD
P. O. Box 1980
Hobbs, NM 88240

Permian Basin District
500 W. Illinois
Suite 500
Midland, Texas 79701
915/687-3551

REPORT NO. 00250F DST 7
PAGE NO. 1

TEST DATE: 11-Dec-1986

WELL PERFORMANCE TESTING™ REPORT

A Production System Analysis (NODAL™)
Based On Model Verified™ Interpretation

FLOPETROL JOHNSTON
Schlumberger

Company: SANTA FE ENERGY COMPANY

Well: NH "5" FEDERAL #1

TEST IDENTIFICATION

Test Type	L.Inf J-300/Tel
Test No.	Seven
Formation	Wolfcamp
Test Interval (ft)	10090 to 10200
Reference Depth	Kelly Bushing

WELL LOCATION

Field	N.Hume Prospect
County	Lea
State	New Mexico
Sec/Twn/Rng	5/ 16s/ 34e
Elevation (ft)	4159

HOLE CONDITIONS

Total Depth (MD/TVD) (ft)	11238
Hole Size (in)	7 7/8
Casing/Liner I.D. (in)	--
Perf'd Interval/Net Pay (ft)	-- / 8
Shot Density/Diameter (in)	--

MUD PROPERTIES

Mud Type	Gel
Mud Weight (lb/gal)	9.5
Mud Resistivity (ohm.m)	n/a
Filtrate Resistivity (ohm.m)	--
Filtrate Chlorides (ppm)	2,000

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi)	5084
Gas Cushion Type	None
Surface Pressure (psi)	--
Liquid Cushion Type	Fresh Water
Cushion Length (ft)	1297

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in)	n/a / 3.83
Collar Length (ft)/I.D. (in)	n/a / 2.25
Packer Depths (ft)	10092, 10200
Bottomhole Choke Size (in)	1.0
Gauge Depth (ft)/Type	10076 / J-300

NET PIPE RECOVERY

Volume	Fluid Type	Properties
1297 feet	Cushion	Slight oil/mud cut
		Rw 4.6 @ 70 800 PPM
70 feet	Mud, slight	oil cut 2,000 PPM
1308 feet	Mud heavily	oil and gas cut
		Rw 1.4 @ 66 1800 PPM

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
2.87 scf	Gas	
1200 cc	Oil	45 API at 42 F
200 cc	Water	Rw 0.29 at 64 F
		19,000 PPM
Pressure: 800	GOR: 380	GLR: 326

INTERPRETATION RESULTS

Model of Behavior	Homogeneous
Fluid Type Used for Analysis	Liquid
Reservoir Pressure (psi)	3816
Transmissibility (md.ft/cp)	947.88
Effective Permeability (md)	90.05
Skin Factor/Damage Ratio	49.90 / 8.38
Storativity Ratio	
Interporosity Flow Coeff.	
Distance to an Anomaly (ft)	
Radius of Investigation (ft)	378
Potentiometric Surface (ft)	2894

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)	42 (est)
Basic Solids (%)	
Gas Gravity	0.65 (est)
Water Cut (%)	14 (sampler)
Viscosity (cp)	0.76
Total Compressibility (1/psi)	1.6 E-05
Porosity (%)	8
Reservoir Temperature (F)	141
Form.Vol.Factor (bbl/STB)	1.14

PRODUCTION RATE DURING TEST: 270 Bbls/day

COMMENTS:

The results of the interpretation indicate that the well is in a homogeneous system with good effective permeability and severe apparent wellbore damage at the time and conditions of the test. The buildups may have been affected by a constant pressure boundary (as indicated by the tendency of the curves to flatten), this would make the calculated permeability optimistic and the skin number/damage ratio pessimistic.

This is preliminary report that does not include the surface pressure data collected during the test.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH 943-3234 OR 563-1040

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 1206111
TO: Mr. Mike Burton
400 West Illinois, Suite 900, Midland, TX
SAMPLE RECEIVED 12-12-86
RESULTS REPORTED 12-15-86

COMPANY Santa Fe Energy Company LEASE N.H. "J" Federal #1
FIELD OR POOL Wildcat
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Recovered water - top of recovery. 12-11-86
NO. 2 Recovered water - middle of recovery. 12-11-86
NO. 3 Recovered water - sampler. 12-11-86
NO. 4 Recovered water - bottom of recovery. 12-11-86
REMARKS: DST #7 - Wolfcamp - Samples submitted by Baker

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0031	1.0118	1.0292	
pH When Sampled				
pH When Received	9.77	12.31	9.28	
Bicarbonate as HCO_3	205	1,586	159	
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	30	40	2,975	
Calcium as Ca	4	6	1,140	
Magnesium as Mg	5	5	30	
Sodium and/or Potassium	832	4,683	12,434	
Sulfate as SO_4	550	4,659	5,888	
Chloride as Cl	270	1,190	16,760	2,876
Iron as Fe	0.40	0.40	0.80	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	1,886	13,579	26,484	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	3.70	0.570	0.233	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Carbonate, as CO_3	120	1,440	72	

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The above results show some significant changes in the water at the sampler, but we are not confident that this is the result of any natural connate water as the high pH and ratios of salts suggest that this is possibly a light-weight commercial brine.

Note: Insufficient water in sample from bottom of recovery to make any other determination.

Form No. 3

By _____
Waylan C. Martin, M.A.

****
* WELL TEST DATA PRINTOUT *
****

FIELD REPORT # : 00250F

COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1

INSTRUMENT # : 1343
CAPACITY [PSI] : 10000.
DEPTH [FT] : 10076.0
PORT OPENING : INSIDE

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	3:51:30	11-DC	HYDROSTATIC MUD	1116.50	5084.3	139.1
2	4:34:30	11-DC	START FLOW	1159.50	657.5	138.8
3	4:37: 0	11-DC	END FLOW & START SHUT-IN	1162.00	791.1	138.8
4	4:57: 0	11-DC	END SHUT-IN	1182.00	3792.6	138.8
5	4:59: 0	11-DC	START FLOW	1184.00	759.6	138.7
6	5:27: 0	11-DC	END FLOW & START SHUT-IN	1212.00	896.3	138.9
7	6:26:30	11-DC	END SHUT-IN	1271.50	3799.8	141.2
8	6:29: 0	11-DC	START FLOW	1274.00	948.8	141.0
9	7:27:30	11-DC	END FLOW & START SHUT-IN	1332.50	1216.9	140.8
10	10:26:30	11-DC	END SHUT-IN	1511.50	3806.1	141.1
11	11: 3:30	11-DC	HYDROSTATIC MUD	1548.50	4950.1	141.1

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	1159.50	1162.00	2.50	657.5	791.1
2	1184.00	1212.00	28.00	759.6	896.3
3	1274.00	1332.50	58.50	948.8	1216.9

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	1162.00	1182.00	20.00	791.1	3792.6	791.1	2.50
2	1212.00	1271.50	59.50	896.3	3799.8	896.3	30.50
3	1332.50	1511.50	179.00	1216.9	3806.1	1216.9	89.00

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
4:34:30	11-DC	1159.50	0.00	138.8	657.5
4:37: 0	11-DC	1162.00	2.50	138.8	791.1

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 791.1
PRODUCING TIME [MIN] = 2.50

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
4:37: 0	11-DC	1162.00	0.00	138.8	791.1	0.0	
4:38: 0	11-DC	1163.00	1.00	138.7	917.4	126.3	0.544
4:39: 0	11-DC	1164.00	2.00	138.7	1417.9	626.8	0.352
4:40: 0	11-DC	1165.00	3.00	138.7	2166.1	1375.0	0.263
4:41: 0	11-DC	1166.00	4.00	138.7	3172.0	2380.9	0.211
4:42: 0	11-DC	1167.00	5.00	138.6	3617.3	2826.1	0.176
4:43: 0	11-DC	1168.00	6.00	138.6	3719.7	2928.5	0.151
4:44: 0	11-DC	1169.00	7.00	138.6	3713.8	2922.6	0.133
4:45: 0	11-DC	1170.00	8.00	138.6	3758.5	2967.4	0.118
4:46: 0	11-DC	1171.00	9.00	138.6	3771.4	2980.3	0.106
4:47: 0	11-DC	1172.00	10.00	138.6	3778.2	2987.1	0.097
4:49: 0	11-DC	1174.00	12.00	138.6	3784.1	2993.0	0.082
4:51: 0	11-DC	1176.00	14.00	138.7	3787.3	2996.2	0.071
4:53: 0	11-DC	1178.00	16.00	138.7	3789.7	2998.6	0.063
4:55: 0	11-DC	1180.00	18.00	138.7	3791.4	3000.3	0.056
4:57: 0	11-DC	1182.00	20.00	138.8	3792.6	3001.5	0.051

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
4:59: 0	11-DC	1184.00	0.00	138.7	759.6
5: 4: 0	11-DC	1189.00	5.00	138.5	739.0
5: 9: 0	11-DC	1194.00	10.00	138.3	794.5
5:14: 0	11-DC	1199.00	15.00	138.4	824.6
5:19: 0	11-DC	1204.00	20.00	138.6	851.3
5:24: 0	11-DC	1209.00	25.00	138.8	878.4
5:27: 0	11-DC	1212.00	28.00	138.9	896.3

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 896.3
PRODUCING TIME [MIN] = 30.50

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
5:27: 0	11-DC	1212.00	0.00	138.9	896.3	0.0	
5:28: 0	11-DC	1213.00	1.00	139.0	934.4	38.1	1.498
5:29: 0	11-DC	1214.00	2.00	139.1	1054.5	158.1	1.211
5:30: 0	11-DC	1215.00	3.00	139.1	1183.8	287.4	1.048
5:31: 0	11-DC	1216.00	4.00	139.2	1326.7	430.3	0.936
5:32: 0	11-DC	1217.00	5.00	139.2	1489.5	593.2	0.851
5:33: 0	11-DC	1218.00	6.00	139.3	1681.8	785.5	0.784
5:34: 0	11-DC	1219.00	7.00	139.4	1931.4	1035.1	0.729
5:35: 0	11-DC	1220.00	8.00	139.5	2269.7	1373.3	0.682
5:36: 0	11-DC	1221.00	9.00	139.6	2723.8	1827.4	0.642
5:37: 0	11-DC	1222.00	10.00	139.7	3185.1	2288.7	0.607
5:39: 0	11-DC	1224.00	12.00	140.0	3599.9	2703.5	0.549
5:41: 0	11-DC	1226.00	14.00	140.2	3700.0	2803.6	0.502
5:43: 0	11-DC	1228.00	16.00	140.5	3735.4	2839.0	0.463
5:45: 0	11-DC	1230.00	18.00	140.7	3752.8	2856.5	0.430
5:47: 0	11-DC	1232.00	20.00	140.9	3763.4	2867.1	0.402
5:49: 0	11-DC	1234.00	22.00	141.1	3770.8	2874.4	0.378
5:51: 0	11-DC	1236.00	24.00	141.2	3776.2	2879.8	0.356
5:53: 0	11-DC	1238.00	26.00	141.3	3780.2	2883.9	0.337
5:55: 0	11-DC	1240.00	28.00	141.4	3783.5	2887.1	0.320
5:57: 0	11-DC	1242.00	30.00	141.4	3786.1	2889.8	0.305
6: 2: 0	11-DC	1247.00	35.00	141.4	3791.0	2894.6	0.272
6: 7: 0	11-DC	1252.00	40.00	141.4	3794.0	2897.6	0.246
6:12: 0	11-DC	1257.00	45.00	141.4	3796.1	2899.7	0.225
6:17: 0	11-DC	1262.00	50.00	141.3	3797.8	2901.5	0.207
6:22: 0	11-DC	1267.00	55.00	141.3	3799.0	2902.7	0.192
6:26:30	11-DC	1271.50	59.50	141.2	3799.8	2903.5	0.180

TEST PHASE : FLOW PERIOD # 3

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
6:29: 0	11-DC	1274.00	0.00	141.0	948.8
6:34: 0	11-DC	1279.00	5.00	139.8	980.4
6:39: 0	11-DC	1284.00	10.00	139.1	1001.5
6:44: 0	11-DC	1289.00	15.00	139.0	1023.9
6:49: 0	11-DC	1294.00	20.00	139.2	1045.9
6:54: 0	11-DC	1299.00	25.00	139.4	1067.3
6:59: 0	11-DC	1304.00	30.00	139.6	1091.0
7: 4: 0	11-DC	1309.00	35.00	139.9	1112.0
7: 9: 0	11-DC	1314.00	40.00	140.1	1133.1
7:14: 0	11-DC	1319.00	45.00	140.3	1154.4
7:19: 0	11-DC	1324.00	50.00	140.5	1174.2

TEST PHASE : FLOW PERIOD # 3

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
7:24: 0	11-DC	1329.00	55.00	140.6	1200.5
7:27:30	11-DC	1332.50	58.50	140.8	1216.9

TEST PHASE : SHUTIN PERIOD # 3
FINAL FLOW PRESSURE [PSIA] = 1216.9
PRODUCING TIME [MIN] = 89.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:27:30	11-DC	1332.50	0.00	140.8	1216.9	0.0	
7:28:30	11-DC	1333.50	1.00	140.8	1271.5	54.5	1.954
7:29:30	11-DC	1334.50	2.00	140.8	1451.1	234.2	1.658
7:30:30	11-DC	1335.50	3.00	140.9	1674.9	457.9	1.487
7:31:30	11-DC	1336.50	4.00	140.9	1996.1	779.1	1.366
7:32:30	11-DC	1337.50	5.00	141.0	2456.9	1240.0	1.274
7:33:30	11-DC	1338.50	6.00	141.1	2980.7	1763.7	1.200
7:34:30	11-DC	1339.50	7.00	141.2	3386.3	2169.4	1.137
7:35:30	11-DC	1340.50	8.00	141.3	3581.1	2364.1	1.084
7:36:30	11-DC	1341.50	9.00	141.5	3664.5	2447.5	1.037
7:37:30	11-DC	1342.50	10.00	141.6	3704.2	2487.3	0.996
7:39:30	11-DC	1344.50	12.00	141.9	3738.8	2521.9	0.925
7:41:30	11-DC	1346.50	14.00	142.1	3754.1	2537.1	0.867
7:43:30	11-DC	1348.50	16.00	142.3	3762.8	2545.9	0.817
7:45:30	11-DC	1350.50	18.00	142.4	3768.8	2551.9	0.774
7:47:30	11-DC	1352.50	20.00	142.6	3773.3	2556.3	0.736
7:49:30	11-DC	1354.50	22.00	142.6	3776.8	2559.8	0.703
7:51:30	11-DC	1356.50	24.00	142.7	3779.7	2562.7	0.673
7:53:30	11-DC	1358.50	26.00	142.7	3782.0	2565.1	0.646
7:55:30	11-DC	1360.50	28.00	142.7	3783.9	2566.9	0.621
7:57:30	11-DC	1362.50	30.00	142.7	3785.5	2568.6	0.598
8: 2:30	11-DC	1367.50	35.00	142.7	3787.4	2570.4	0.549
8: 7:30	11-DC	1372.50	40.00	142.6	3789.6	2572.7	0.509
8:12:30	11-DC	1377.50	45.00	142.5	3791.9	2575.0	0.474
8:17:30	11-DC	1382.50	50.00	142.4	3793.8	2576.8	0.444
8:22:30	11-DC	1387.50	55.00	142.3	3795.3	2578.3	0.418
8:27:30	11-DC	1392.50	60.00	142.2	3796.7	2579.7	0.395
8:32:30	11-DC	1397.50	65.00	142.1	3797.7	2580.8	0.375
8:37:30	11-DC	1402.50	70.00	142.0	3798.4	2581.4	0.356
8:42:30	11-DC	1407.50	75.00	141.9	3799.4	2582.4	0.340
8:47:30	11-DC	1412.50	80.00	141.8	3799.4	2582.4	0.325
8:52:30	11-DC	1417.50	85.00	141.8	3799.7	2582.7	0.311
8:57:30	11-DC	1422.50	90.00	141.7	3800.8	2583.9	0.299
9: 2:30	11-DC	1427.50	95.00	141.6	3801.7	2584.7	0.287
9: 7:30	11-DC	1432.50	100.00	141.6	3802.2	2585.3	0.276
9:12:30	11-DC	1437.50	105.00	141.6	3802.7	2585.7	0.267

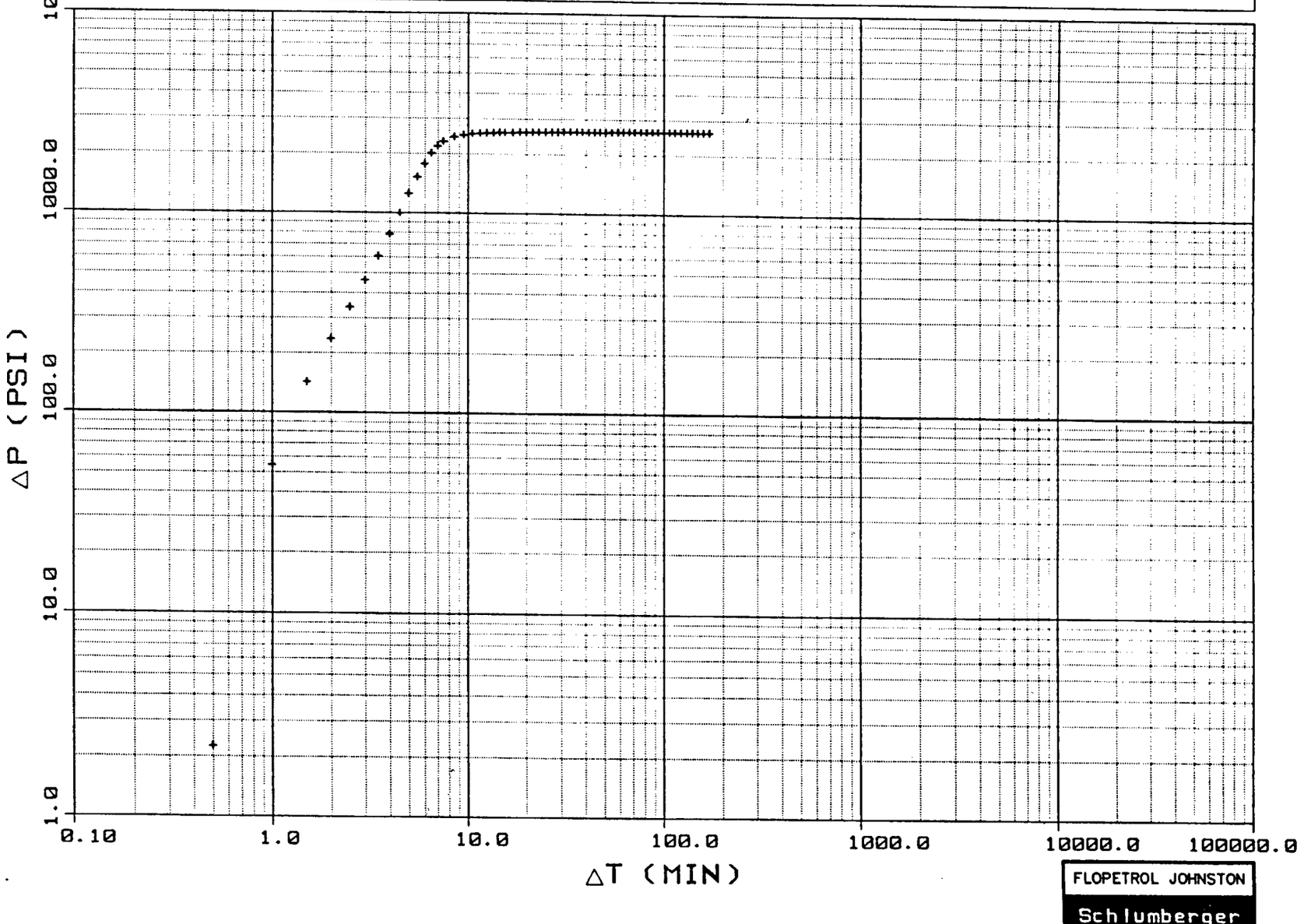
TEST PHASE : SHUTIN PERIOD # 3
FINAL FLOW PRESSURE [PSIA] = 1216.9
PRODUCING TIME [MIN] = 89.00

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:17:30	11-DC	1442.50	110.00	141.5	3803.1	2586.1	0.257
9:22:30	11-DC	1447.50	115.00	141.4	3803.3	2586.4	0.249
9:27:30	11-DC	1452.50	120.00	141.4	3803.7	2586.8	0.241
9:32:30	11-DC	1457.50	125.00	141.4	3804.0	2587.1	0.234
9:37:30	11-DC	1462.50	130.00	141.3	3804.3	2587.3	0.227
9:42:30	11-DC	1467.50	135.00	141.3	3804.5	2587.6	0.220
9:47:30	11-DC	1472.50	140.00	141.3	3804.6	2587.7	0.214
9:52:30	11-DC	1477.50	145.00	141.3	3804.7	2587.7	0.208
9:57:30	11-DC	1482.50	150.00	141.2	3805.1	2588.1	0.202
10: 2:30	11-DC	1487.50	155.00	141.2	3805.3	2588.4	0.197
10: 7:30	11-DC	1492.50	160.00	141.2	3805.5	2588.6	0.192
10:12:30	11-DC	1497.50	165.00	141.2	3805.7	2588.7	0.187
10:17:30	11-DC	1502.50	170.00	141.1	3805.8	2588.9	0.183
10:22:30	11-DC	1507.50	175.00	141.1	3806.0	2589.0	0.179
10:26:30	11-DC	1511.50	179.00	141.1	3806.1	2589.1	0.175

LOG LOG PLOT

COMPANY : SANTA FE ENERGY
WELL : NH S FEDERAL #1
FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343

SHUTIN #3 :
FINAL FLOW PRESSURE (PWF): 1216.95 PSIA
PLOT ELAPSED TIME RANGE: 1333.0 TO 1511.5 MIN
PLOT ΔT TIME RANGE: 0.5 TO 179.0 MIN

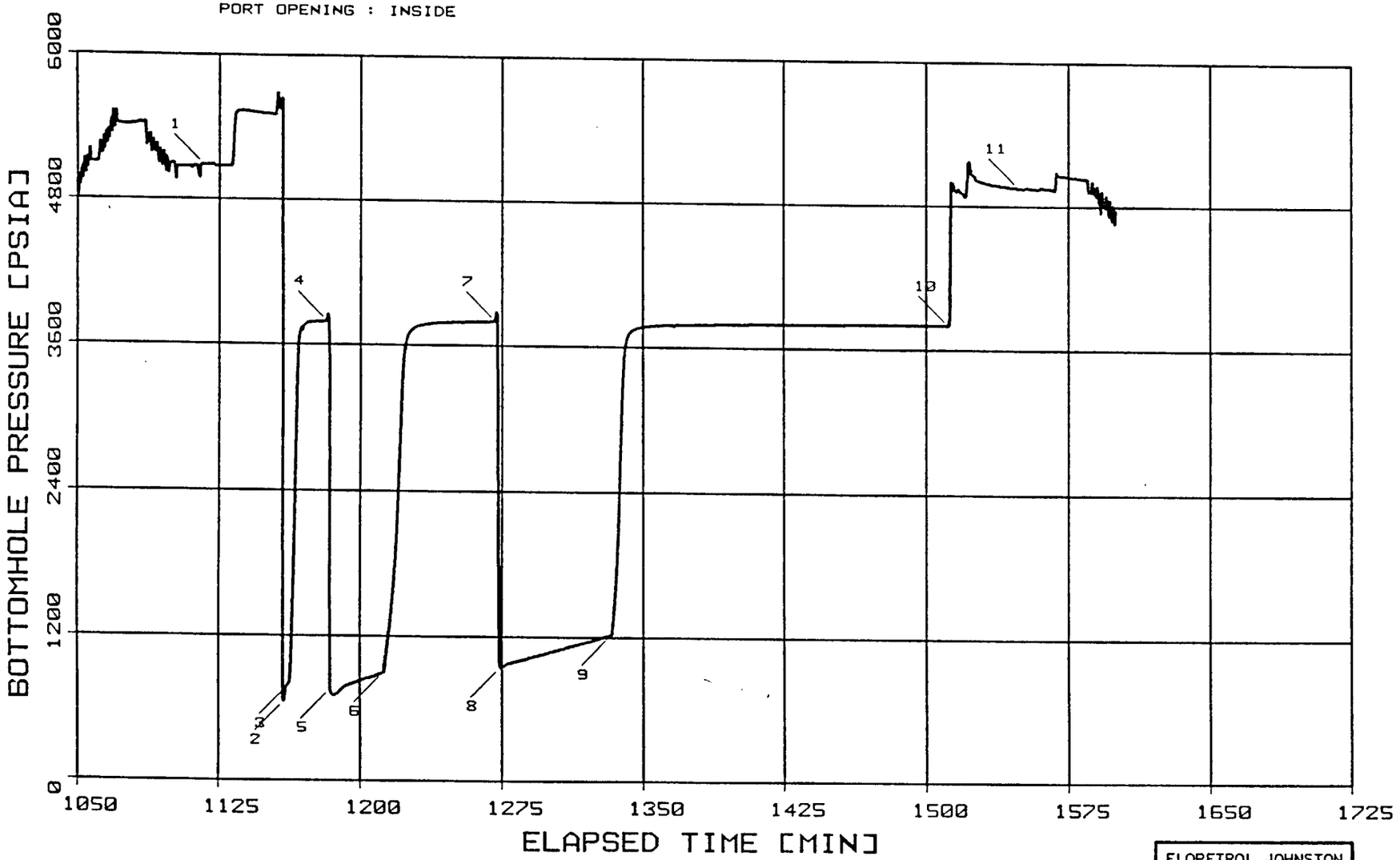


FLOPETROL JOHNSTON
Schlumberger

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343
DEPTH : 10076 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1

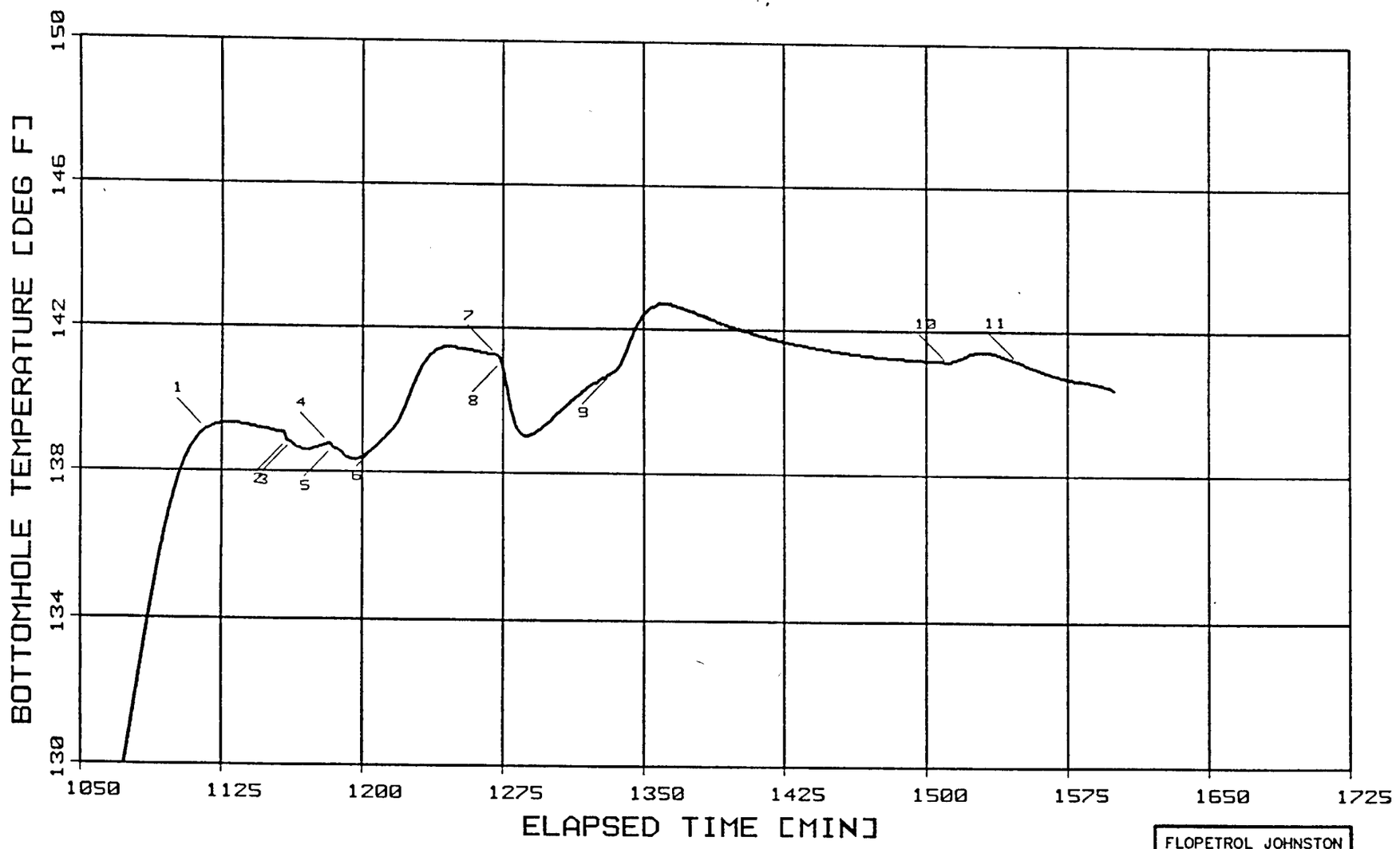


FLOPETROL JOHNSTON

BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343
DEPTH : 10076 FT

COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1

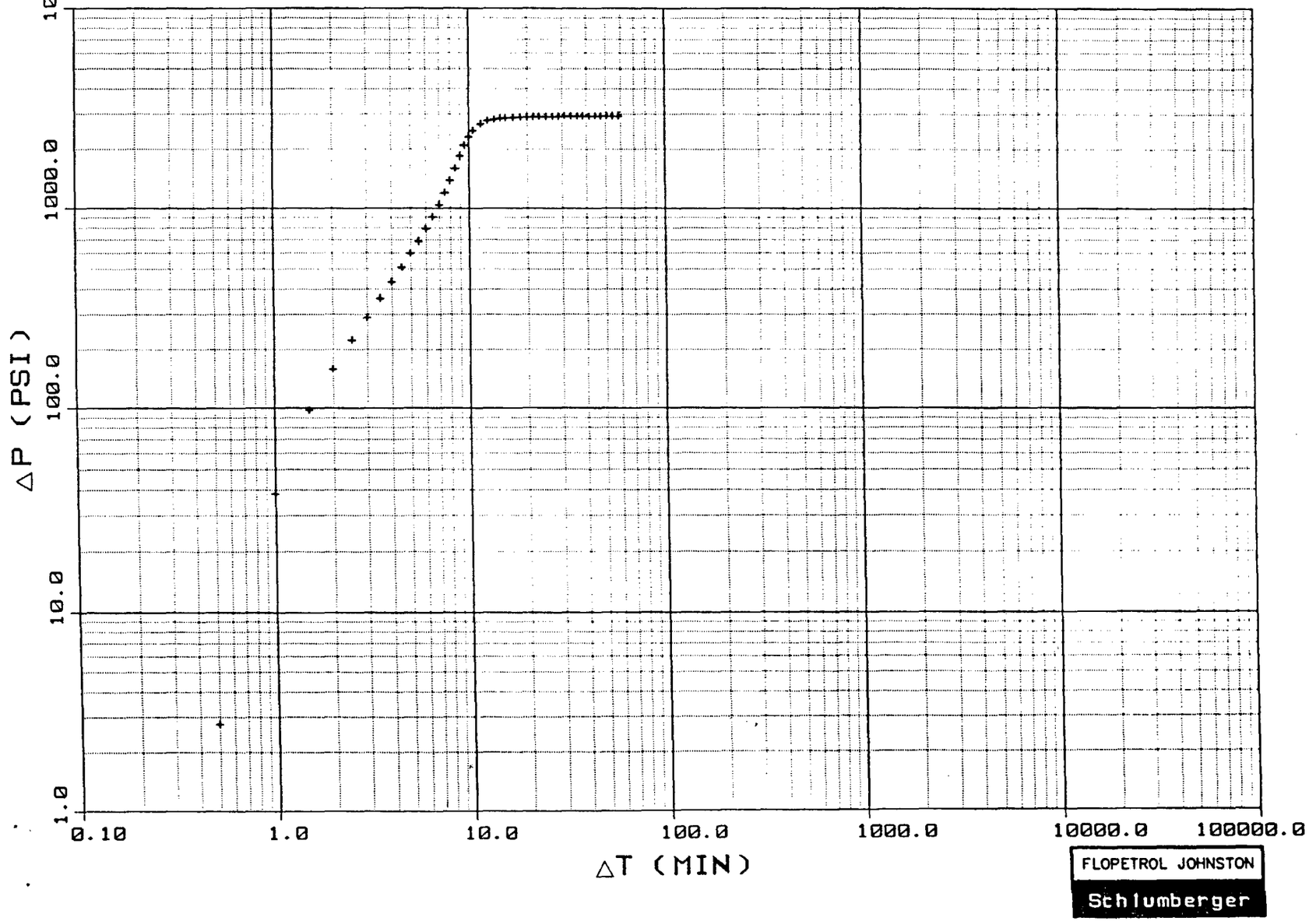


FLOPETROL JOHNSTON

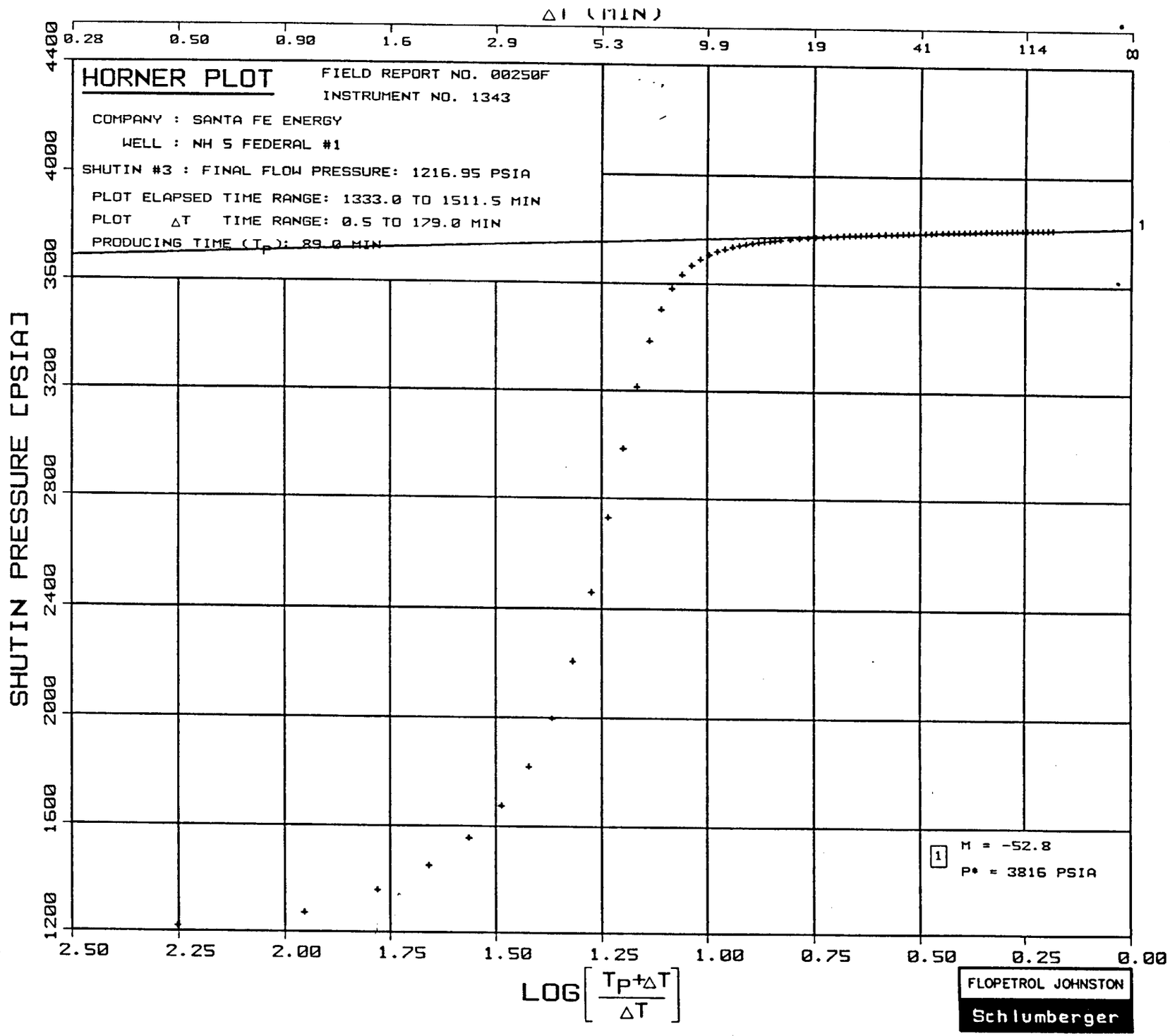
LOG LOG PLOT

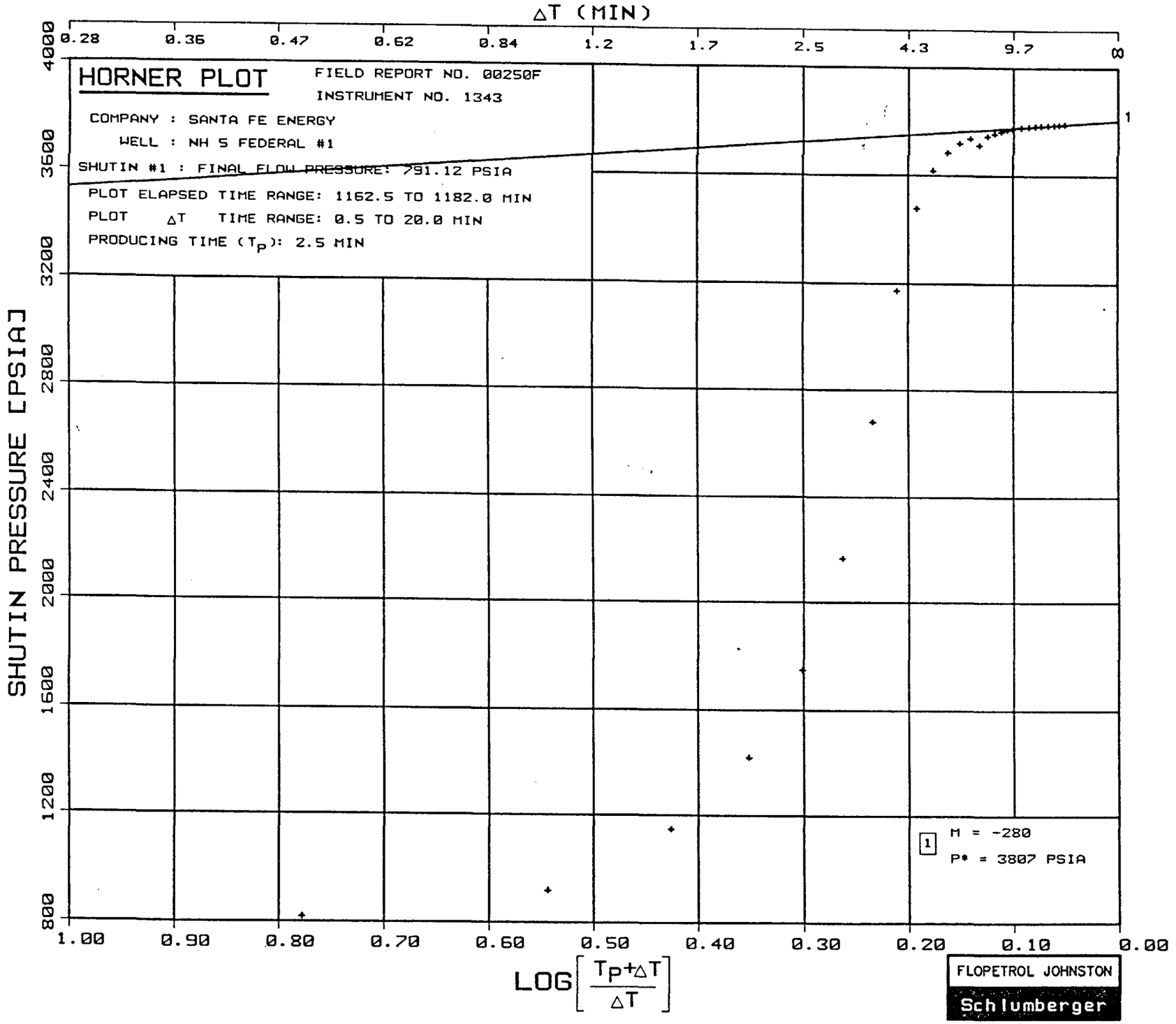
COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1
FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343

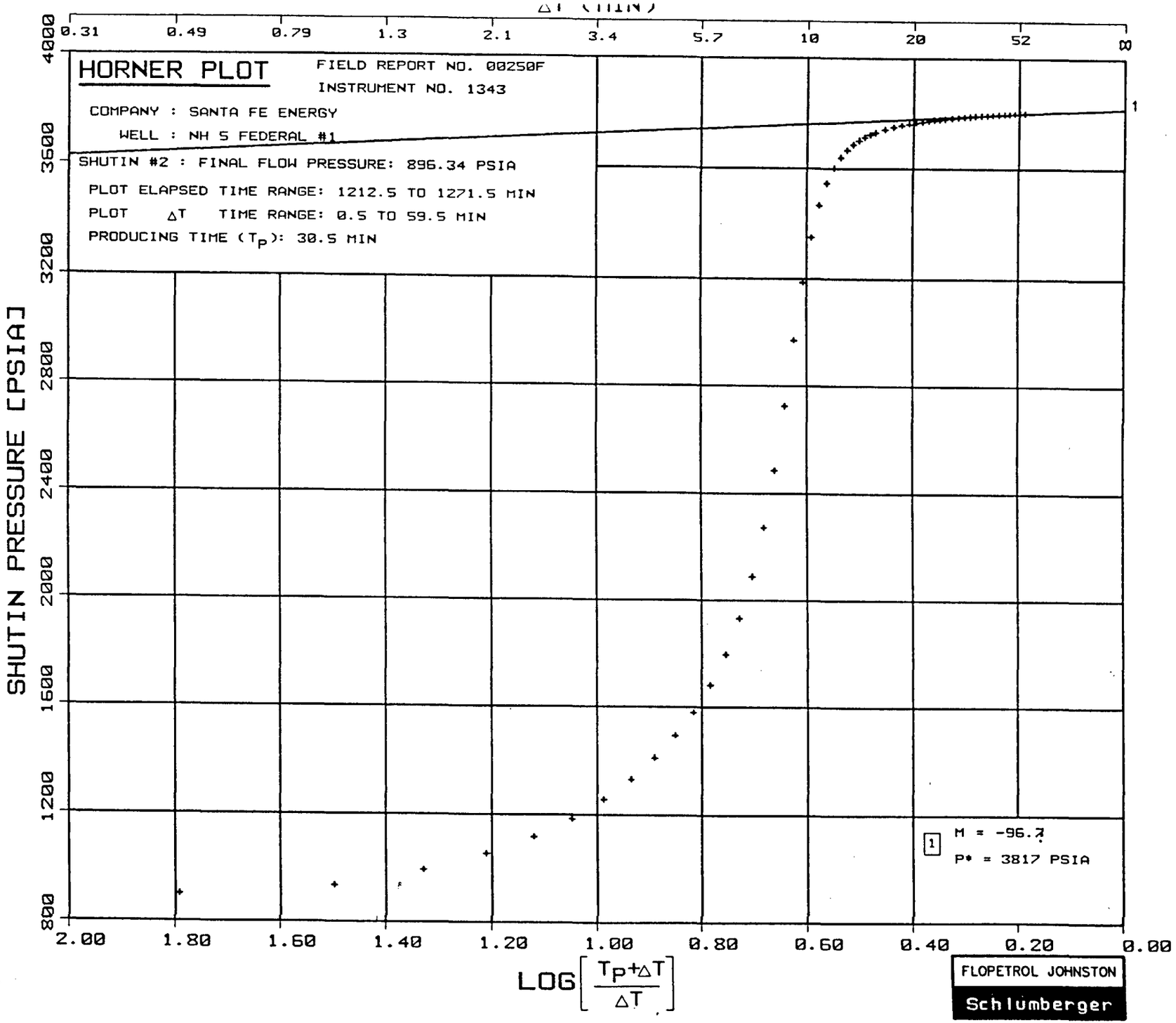
SHUTIN #2 :
FINAL FLOW PRESSURE (PWF): 896.34 PSIA
PLOT ELAPSED TIME RANGE: 1212.5 TO 1272.0 MIN
PLOT ΔT TIME RANGE: 0.5 TO 60.0 MIN



FLOPETROL JOHNSTON
Schlumberger


HORNER PLOT
FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343
COMPANY : SANTA FE ENERGY
WELL : NH S FEDERAL #1
SHUTIN #3 : FINAL FLOW PRESSURE: 1216.95 PSIA
PLOT ELAPSED TIME RANGE: 1333.0 TO 1511.5 MIN
PLOT ΔT TIME RANGE: 0.5 TO 179.0 MIN
PRODUCING TIME (T_p): 89.0 MIN
Δt (MIN)
0.28 0.50 0.90 1.6 2.9 5.3 9.9 19 41 114 ∞
SHUTIN PRESSURE [PSIA]
4400 4000 3600 3200 2800 2400 2000 1600 1200
2.50 2.25 2.00 1.75 1.50 1.25 1.00 0.75 0.50 0.25 0.00
$\text{LOG}\left[\frac{T_p+\Delta T}{\Delta T}\right]$
1
M = -52.8
P* = 3816 PSIA
FLOPETROL JOHNSTON
Schlumberger


ΔT (MIN)
0.28
0.36
0.47
0.62
0.84
1.2
1.7
2.5
4.3
9.7
∞
HORNER PLOT
FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343
COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1
SHUTIN #1 : FINAL FLOW PRESSURE: 791.12 PSIA
PLOT ELAPSED TIME RANGE: 1162.5 TO 1182.0 MIN
PLOT ΔT TIME RANGE: 0.5 TO 20.0 MIN
PRODUCING TIME (Tp): 2.5 MIN
SHUTIN PRESSURE [PSIA]
4000
3600
3200
2800
2400
2000
1600
1200
800
1
1 M = -280
P* = 3807 PSIA
1.00
0.90
0.80
0.70
0.60
0.50
0.40
0.30
0.20
0.10
0.00
LOG [Tp+ΔT / ΔT]
FLOPETROL JOHNSTON
Schlumberger


HORNER PLOT
FIELD REPORT NO. 00250F
INSTRUMENT NO. 1343
COMPANY : SANTA FE ENERGY
WELL : NH 5 FEDERAL #1
SHUTIN #2 : FINAL FLOW PRESSURE: 896.34 PSIA
PLOT ELAPSED TIME RANGE: 1212.5 TO 1271.5 MIN
PLOT ΔT TIME RANGE: 0.5 TO 59.5 MIN
PRODUCING TIME (T_p): 30.5 MIN
ΔT (MIN)
0.31
0.49
0.79
1.3
2.1
3.4
5.7
10
20
52
∞
SHUTIN PRESSURE [PSIA]
4000
3600
3200
2800
2400
2000
1600
1200
800
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
LOG[(Tp+ΔT)/ΔT]
1
M = -96.7
P* = 3817 PSIA
FLOPETROL JOHNSTON
Schlumberger

Form No. 1233

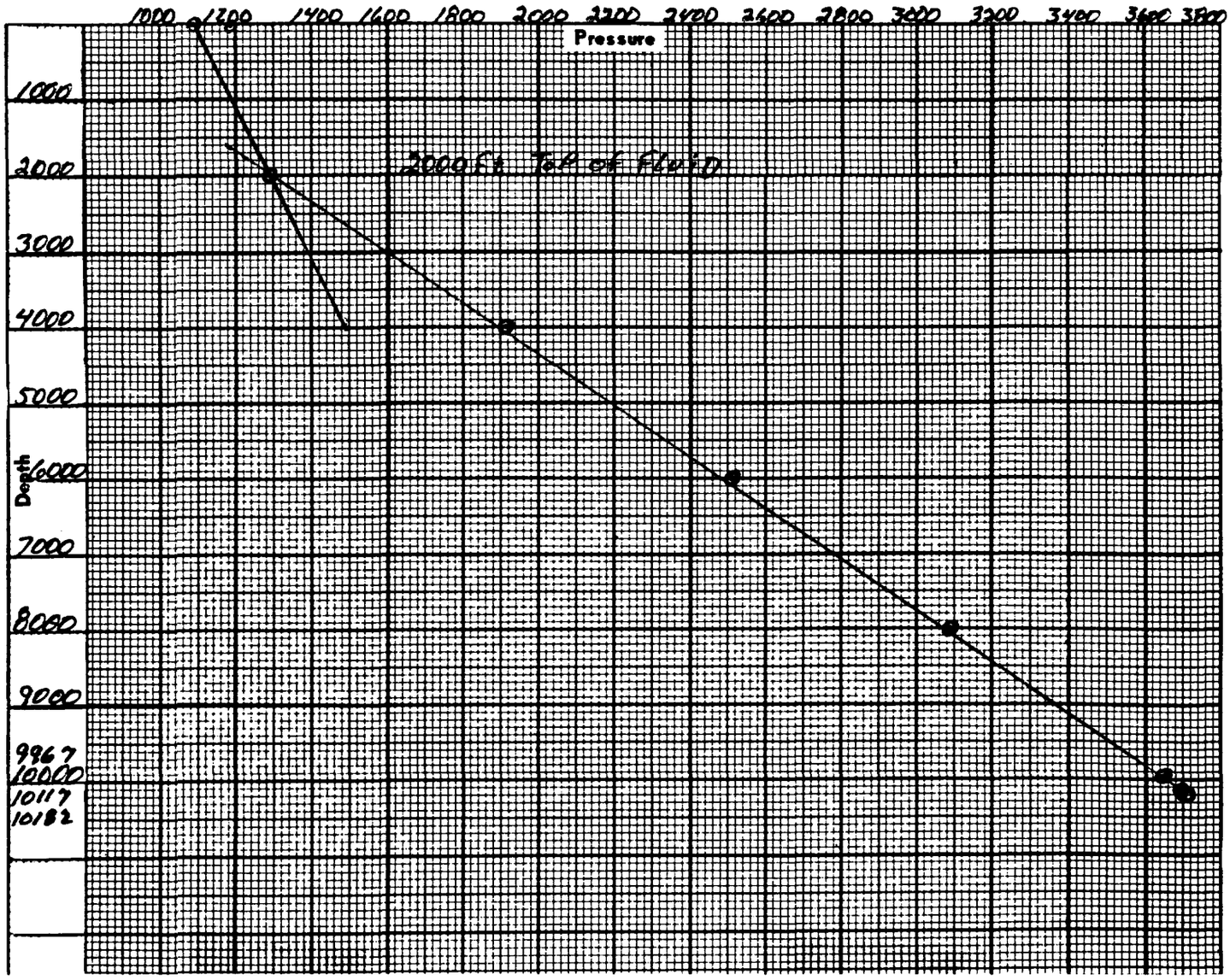
BENNETT-GATHET WIRE LINE SERVICE
P. O. BOX 787
ARTESIA, NEW MEXICO 88210
Phone (505) 746-3281

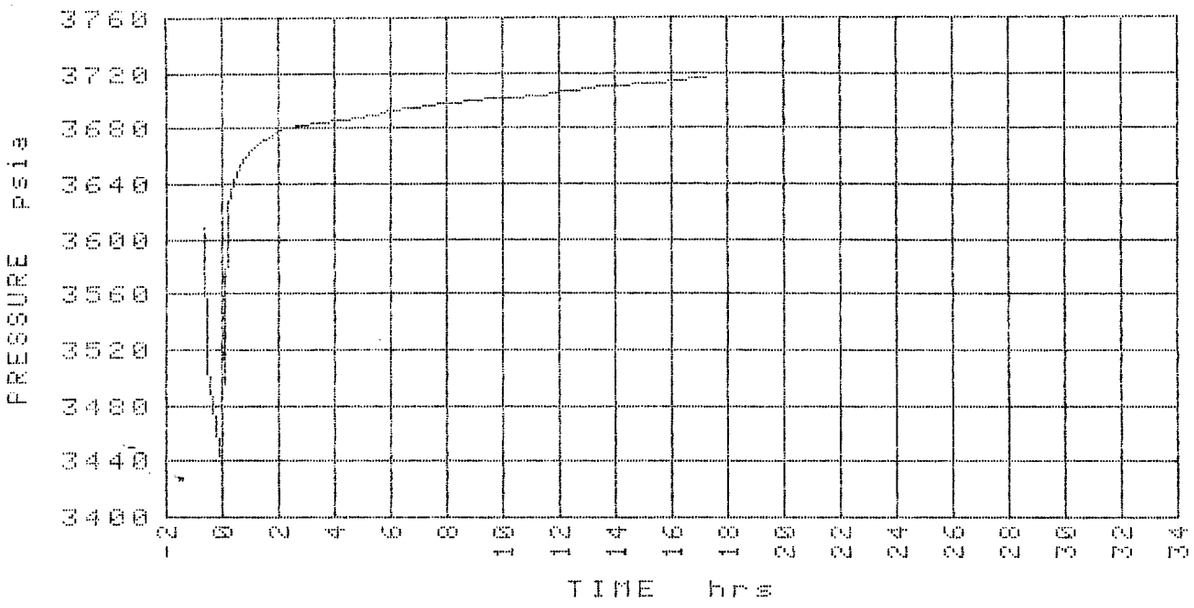
BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR SANTA FE ENERGY
LEASE NH5 FEDERAL
WELL NO. #1
POOL _____ **FORMATION** WOLFCAMP
DATE 1-12-87 **TIME** 0834
CO. MAN TOMMY FOLSOM
STATUS SHUT IN **TEST DEPTH** 10117 FT
TIME S.I. 1330 HRS **LAST TEST DATE** _____
1-11-87 **BHP LAST TEST** _____
TUB. PRES. 1093.2 **BHP CHANGE** _____
CAS. PRES. _____ **FLUID TOP** 2000 FT
DATUM PLANE _____ **WATER TOP** _____
DATUM PSIA 3716.2 **RUN BY** TONY COLLINS
TEMP 254° **CLOCK #** 17015
PRESSURE RANGE 0-8100#
ELEMENT NO. RPG3#9526

DEPTH	PSIA PRESSURE	LB/100 FT GRADIENT
0	1093.2	
2000	1293.2	10.0
4000	1914.2	31.0
6000	2511.2	29.8
8000	3091.2	29.0
9967	3655.2	29.0
10117	3696.2	27.3
10182	3716.2	30.7

10182 FEET IS EXTRAPOLATED
PERFS: 10176 TO 10192 FEET
LENGTH OF TIME WELL SHUT IN'
19 HRS. & 4 MIN.





COMPANY: SANTA FE ENERGY
LEASE: N M S FEDERAL
FIELD:
COUNTY: LEA
STATUS: BOTTOM HOLE PRESSURE BUILD UP TEST
PERFORATIONS FROM: 10176 ft
DEPTH: 10117 ft

CONTACT: TOMMY FOLSOM
WELL: #1
ZONE: WOLFCAMP
STATE: NEW MEXICO
OPERATOR: TONY COLLINS
TO: 10192 ft
TEMPERATURE: 254'F

ELEMENT# RPG3#18323
CLOCK# 28660
ELEMENT# RPG3#9526
CLOCK# 27193

ELEMENT RANGE: 8575 psig
CLOCK RANGE: 120 hrs
ELEMENT RANGE: 8100 psig
CLOCK RANGE: 72 hrs

START CLOCK	01/11/87	10:45:00	990 psig
SET ELEMENT	01/11/87	12:53:00	992 psig
WELL SHUT IN	01/11/87	13:30:00	780 psig
TEST ENDED	01/12/87	08:34:00	1080 psig

GAIN= 1
FILE: 131-NM5:0701

BIAS= 20 psi
BAROMETRIC PRESSURE= 13.2 psia

BENNETT-CATHEY WIRE LINE SERVICE
PHONE (505) 748-3354
ARTESIA, NEW MEXICO, 88210

PRESSURE TRANSIENT TEST DATA

COMPANY: SANTA FE ENERGY
LEASE: N H 5 FEDERAL
FIELD:
COUNTY: LEA
STATUS: BOTTOM HOLE PRESSURE BUILD UP TEST

CONTACT: TOMMY FOLSOM
WELL: #1
ZONE: WOLFCAMP
STATE: NEW MEXICO
OPERATOR: TONY COLLINS

PERFORATIONS FROM: 10,176.0'
DEPTH: 10,117.0'
TO: 10,192.0'
TEMPERATURE: 254.0'F

ELEMENT: RPG3#18323
CLOCK: 28660
ELEMENT: RPG3#9526
CLOCK: 27193

RANGE: 8575 psig
RANGE: 120 hrs
RANGE: 8100 psig
RANGE: 72 hrs

SURFACE PRESSURE MEASUREMENTS

EVENT	DATE	TIME	DEAD WEIGHT PRESSURE
START CLOCK	01/11/87	10:45:00	990.0 psig
SET ELEMENT	01/11/87	12:53:00	992.0 psig
WELL SHUT IN	01/11/87	13:30:00	780.0 psig
TEST ENDED	01/12/87	08:34:00	1,080.0 psig

SUBSURFACE PRESSURE MEASUREMENTS

DATE	TIME	t hrs	GAUGE PRESSURE psig	ABSOLUTE PRESSURE psia	RESERVOIR PRESSURE psia
01/11/87	12:50:15	-.662	3,575.8	3,589.0	3,609.0
01/11/87	13:00:00	-.500	3,473.9	3,487.1	3,507.1
01/11/87	13:15:00	-.250	3,432.4	3,445.6	3,465.6
01/11/87	13:30:00	0.000	3,401.6	3,414.8	3,434.8
01/11/87	13:35:00	.083	3,522.8	3,536.0	3,556.0
01/11/87	13:40:00	.167	3,569.4	3,582.6	3,602.6
01/11/87	13:45:00	.250	3,588.6	3,601.8	3,621.8
01/11/87	13:50:00	.333	3,600.8	3,614.0	3,634.0
01/11/87	13:55:00	.417	3,608.4	3,621.6	3,641.6
01/11/87	14:00:00	.500	3,615.7	3,628.9	3,648.9
01/11/87	14:05:00	.583	3,618.6	3,631.8	3,651.8
01/11/87	14:10:00	.667	3,621.3	3,634.5	3,654.5
01/11/87	14:15:00	.750	3,624.1	3,637.3	3,657.3
01/11/87	14:20:00	.833	3,625.8	3,639.0	3,659.0
01/11/87	14:25:00	.917	3,627.6	3,640.8	3,660.8
01/11/87	14:30:00	1.000	3,629.3	3,642.5	3,662.5
01/11/87	14:35:00	1.083	3,631.1	3,644.3	3,664.3
01/11/87	14:40:00	1.167	3,632.9	3,646.1	3,666.1
01/11/87	14:45:00	1.250	3,634.6	3,647.8	3,667.8
01/11/87	14:50:00	1.333	3,636.2	3,649.4	3,669.4
01/11/87	14:55:00	1.417	3,637.1	3,650.3	3,670.3
01/11/87	15:00:00	1.500	3,638.1	3,651.3	3,671.3

BENNETT-CATHEY WIRE LINE SERVICE
PHONE (505) 748-3354
ARTESIA, NEW MEXICO, 88210

PRESSURE TRANSIENT TEST DATA

SUBSURFACE PRESSURE MEASUREMENTS

DATE	TIME	t hrs	GAUGE PRESSURE psig	ABSOLUTE PRESSURE psia	RESERVOIR PRESSURE psia
01/11/87	15:05:00	1.583	3,639.1	3,652.3	3,672.3
01/11/87	15:10:00	1.667	3,640.1	3,653.3	3,673.3
01/11/87	15:15:00	1.750	3,641.0	3,654.2	3,674.2
01/11/87	15:20:00	1.833	3,642.0	3,655.2	3,675.2
01/11/87	15:25:00	1.917	3,643.0	3,656.2	3,676.2
01/11/87	15:30:00	2.000	3,644.0	3,657.2	3,677.2
01/11/87	15:45:00	2.250	3,646.6	3,659.8	3,679.8
01/11/87	16:00:00	2.500	3,647.5	3,660.7	3,680.7
01/11/87	16:15:00	2.750	3,648.3	3,661.5	3,681.5
01/11/87	16:30:00	3.000	3,649.2	3,662.4	3,682.4
01/11/87	16:45:00	3.250	3,650.0	3,663.2	3,683.2
01/11/87	17:00:00	3.500	3,650.8	3,664.0	3,684.0
01/11/87	17:15:00	3.750	3,651.4	3,664.6	3,684.6
01/11/87	17:30:00	4.000	3,652.0	3,665.2	3,685.2
01/11/87	17:45:00	4.250	3,652.6	3,665.8	3,685.8
01/11/87	18:00:00	4.500	3,653.2	3,666.4	3,686.4
01/11/87	18:15:00	4.750	3,653.8	3,667.0	3,687.0
01/11/87	18:30:00	5.000	3,654.9	3,668.1	3,688.1
01/11/87	18:45:00	5.250	3,655.9	3,669.1	3,689.1
01/11/87	19:00:00	5.500	3,657.0	3,670.2	3,690.2
01/11/87	19:15:00	5.750	3,658.1	3,671.3	3,691.3
01/11/87	19:30:00	6.000	3,659.1	3,672.3	3,692.3
01/11/87	19:45:00	6.250	3,659.9	3,673.1	3,693.1
01/11/87	20:00:00	6.500	3,660.7	3,673.9	3,693.9
01/11/87	20:15:00	6.750	3,661.5	3,674.7	3,694.7
01/11/87	20:30:00	7.000	3,662.3	3,675.5	3,695.5
01/11/87	20:45:00	7.250	3,663.1	3,676.3	3,696.3
01/11/87	21:00:00	7.500	3,663.8	3,677.0	3,697.0
01/11/87	21:15:00	7.750	3,664.4	3,677.6	3,697.6
01/11/87	21:30:00	8.000	3,664.9	3,678.1	3,698.1
01/11/87	21:45:00	8.250	3,665.4	3,678.6	3,698.6
01/11/87	22:00:00	8.500	3,665.9	3,679.1	3,699.1
01/11/87	22:15:00	8.750	3,666.4	3,679.6	3,699.6
01/11/87	22:30:00	9.000	3,666.9	3,680.1	3,700.1
01/11/87	22:45:00	9.250	3,667.4	3,680.6	3,700.6
01/11/87	23:00:00	9.500	3,667.9	3,681.1	3,701.1
01/11/87	23:15:00	9.750	3,668.2	3,681.4	3,701.4
01/11/87	23:30:00	10.000	3,668.5	3,681.7	3,701.7
01/11/87	23:45:00	10.250	3,668.8	3,682.0	3,702.0
01/12/87	00:00:00	10.500	3,669.1	3,682.3	3,702.3
01/12/87	00:15:00	10.750	3,669.4	3,682.6	3,702.6
01/12/87	00:30:00	11.000	3,669.7	3,682.9	3,702.9
01/12/87	00:45:00	11.250	3,670.0	3,683.2	3,703.2
01/12/87	01:00:00	11.500	3,670.6	3,683.8	3,703.8
01/12/87	01:15:00	11.750	3,671.4	3,684.6	3,704.6
01/12/87	01:30:00	12.000	3,672.2	3,685.4	3,705.4

BENNETT-CATHEY WIRE LINE SERVICE
PHONE (505) 748-3354
ARTESIA, NEW MEXICO, 88210

PRESSURE TRANSIENT TEST DATA

SUBSURFACE PRESSURE MEASUREMENTS

DATE	TIME	t hrs	GAUGE PRESSURE psig	ABSOLUTE PRESSURE psia	RESERVOIR PRESSURE psia
01/12/87	01:45:00	12.250	3,673.1	3,686.3	3,706.3
01/12/87	02:00:00	12.500	3,673.9	3,687.1	3,707.1
01/12/87	02:15:00	12.750	3,674.7	3,687.9	3,707.9
01/12/87	02:30:00	13.000	3,675.5	3,688.7	3,708.7
01/12/87	02:45:00	13.250	3,676.3	3,689.5	3,709.5
01/12/87	03:00:00	13.500	3,676.9	3,690.1	3,710.1
01/12/87	03:15:00	13.750	3,677.2	3,690.4	3,710.4
01/12/87	03:30:00	14.000	3,677.5	3,690.7	3,710.7
01/12/87	03:45:00	14.250	3,677.8	3,691.0	3,711.0
01/12/87	04:00:00	14.500	3,678.1	3,691.3	3,711.3
01/12/87	04:15:00	14.750	3,678.5	3,691.7	3,711.7
01/12/87	04:30:00	15.000	3,678.8	3,692.0	3,712.0
01/12/87	04:45:00	15.250	3,679.1	3,692.3	3,712.3
01/12/87	05:00:00	15.500	3,679.4	3,692.6	3,712.6
01/12/87	05:15:00	15.750	3,679.8	3,693.0	3,713.0
01/12/87	05:30:00	16.000	3,680.3	3,693.5	3,713.5
01/12/87	05:45:00	16.250	3,680.9	3,694.1	3,714.1
01/12/87	06:00:00	16.500	3,681.5	3,694.7	3,714.7
01/12/87	06:15:00	16.750	3,682.1	3,695.3	3,715.3
01/12/87	06:30:00	17.000	3,682.7	3,695.9	3,715.9
01/12/87	06:45:00	17.250	3,683.3	3,696.5	3,716.5
01/12/87	06:45:30	17.258	3,683.3	3,696.5	3,716.5

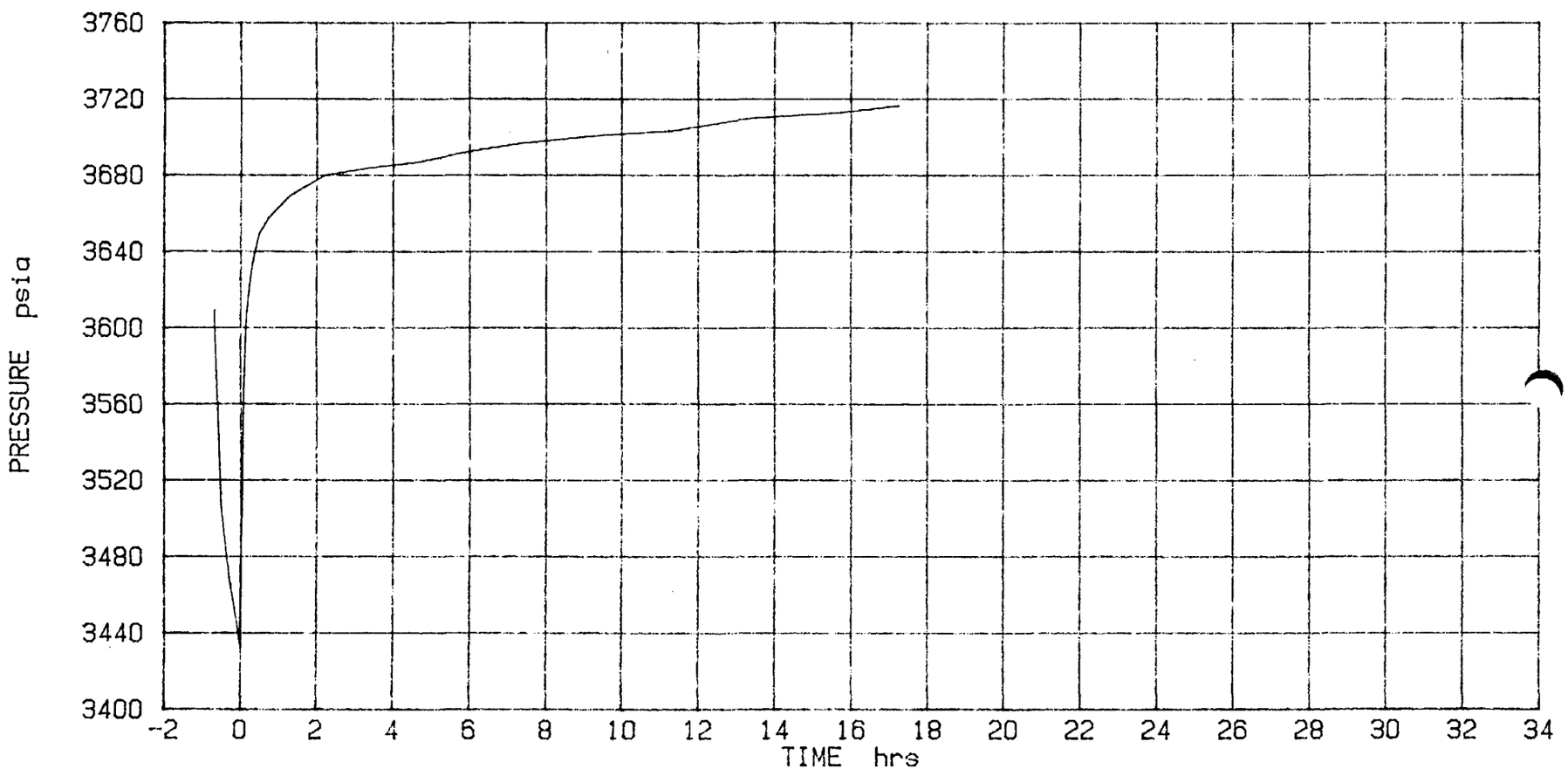
TEST DATE: 01/11/87 TO 01/12/87
TEST DEPTH: 10117 ft
ELEMENT NO: RPG3#9526
RANGE: 8100 psig
CLOCK: 27193
RANGE: 72 hrs
OPERATOR: TONY COLLINS

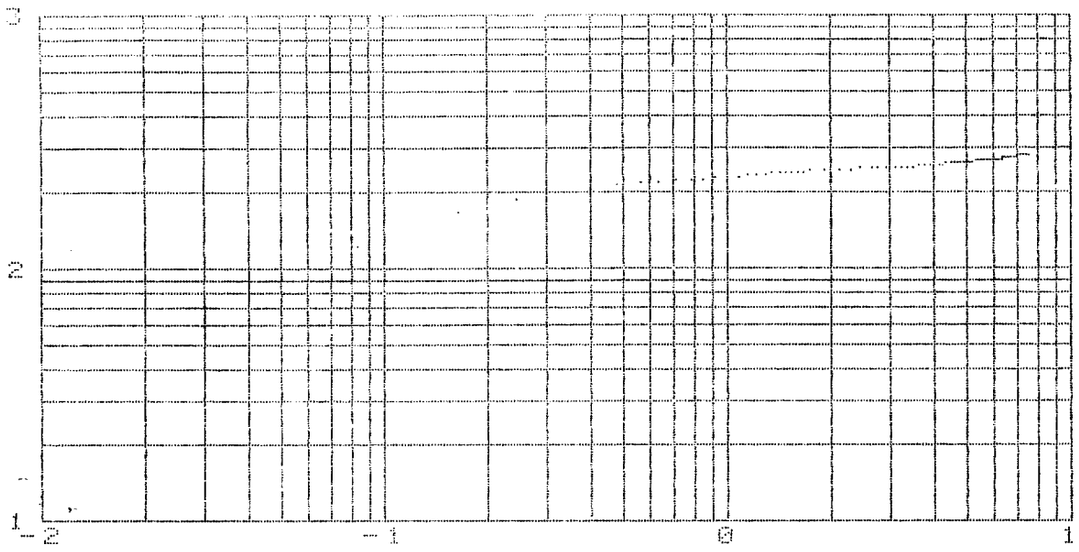
TOMMY FOLSOM

SANTA FE ENERGY

N H 5 FEDERAL #1

BENNETT-CATHEY WIRE LINE SERVICE
Box 787 Artesia, N. M. 88210 (505) 748-3354





COMPANY: SANTA FE ENERGY
LEASE: N H 5 FEDERAL
FIELD:
COUNTY: LEA
STATUS: BOTTOM HOLE PRESSURE BUILD UP TEST

CONTACT: TOMMY FOLSOM
WELL: #1
ZONE: WOLFCAMP
STATE: NEW MEXICO
OPERATOR: TONY COLLINS

PERFORATIONS FROM: 10176 ft
DEPTH: 10117 ft

TO: 10192 ft
TEMPERATURE: 254'F

ELEMENT# RPG3#18323
CLOCK# 28660
ELEMENT# RPG3#9526
CLOCK# 27193

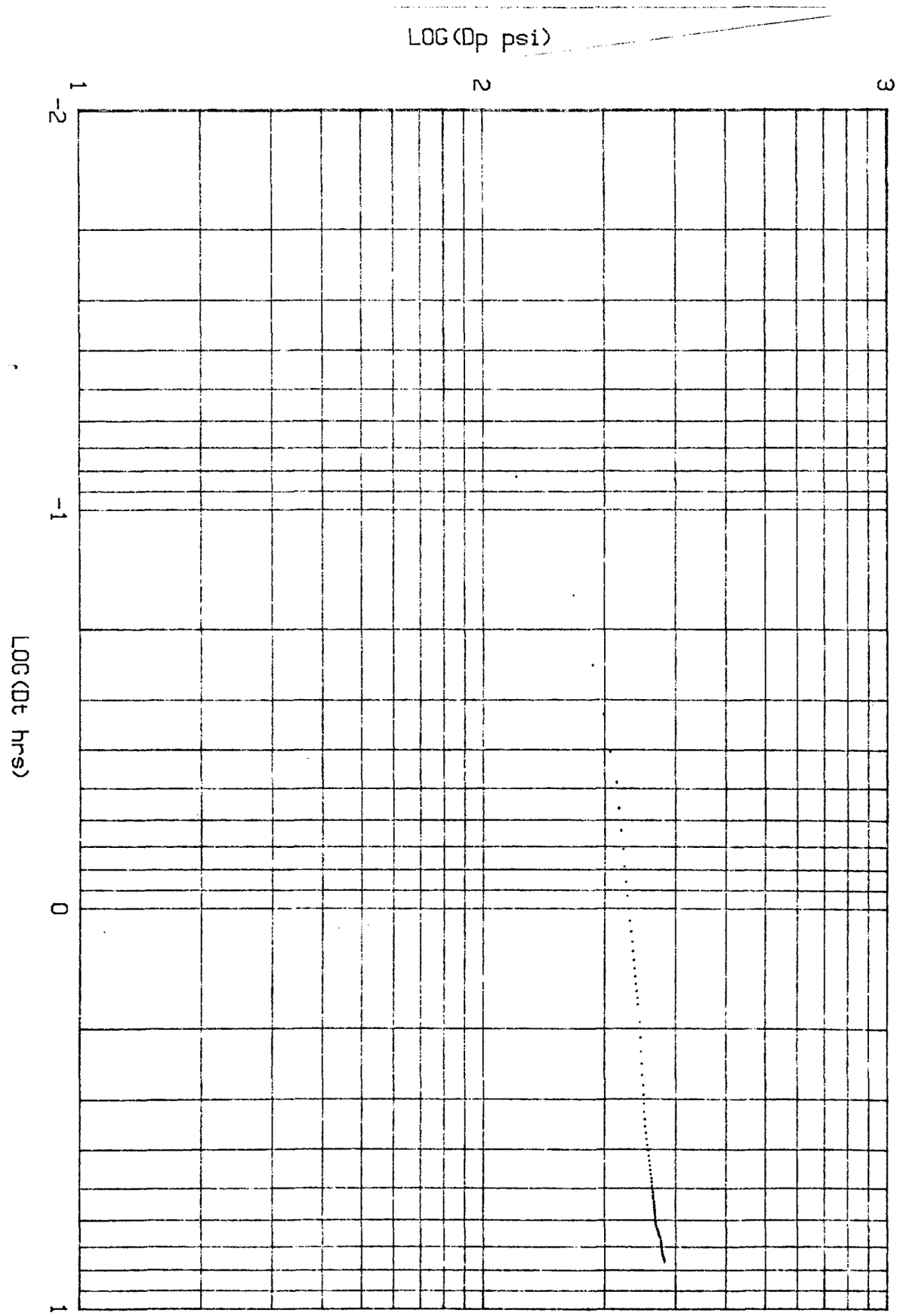
RANGE: 8575 psi
RANGE: 120 hrs
RANGE: 8100 psi
RANGE: 72 hrs

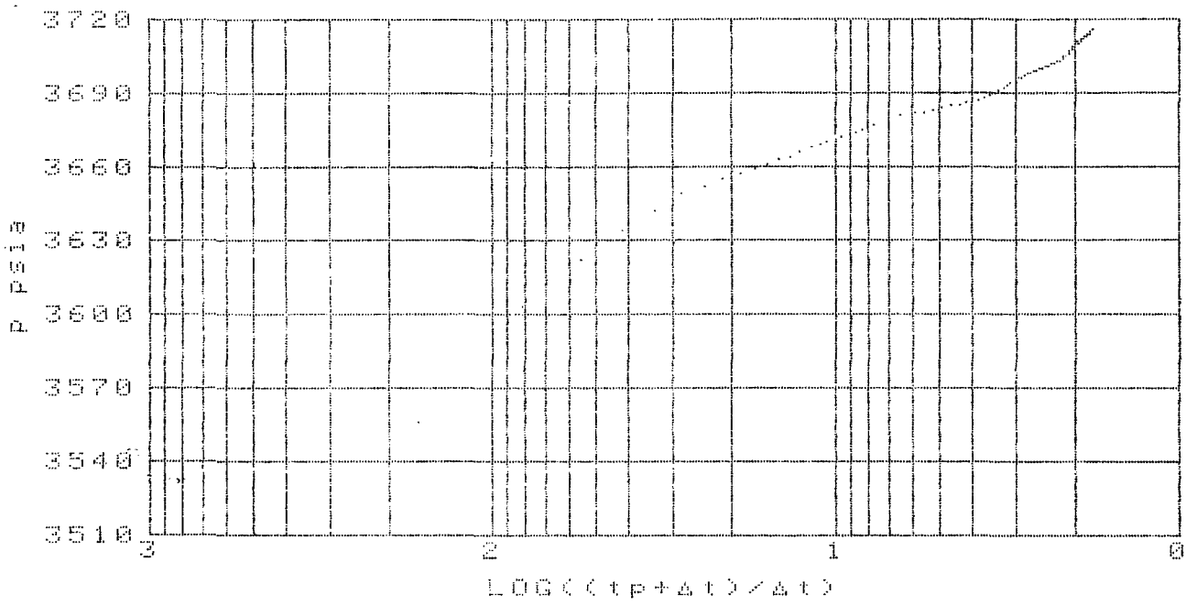
START CLOCK	01/11/87	10:45:00	990 psig
SET ELEMENT	01/11/87	12:53:00	992 psig
WELL SHUT IN	01/11/87	13:30:00	780 psig
TEST ENDED	01/12/87	08:34:00	1080 psig

FILE: 131-NH5:D701
24C/qB= 0 hrs/psi
Gain= 1
tsi= 0 hrs
tp= 13.5 hrs
Dt/tD= 1 hrs

pA= 13.2 psia
Bias= 20 psi
pwf= 3434.6248 psia
dps= 0 psi
Dp/pD= 1 psi

N H 5 FEDER _ #1 01/11/87





COMPANY: SANTA FE ENERGY
LEASE: N H 5 FEDERAL
FIELD:
COUNTY: LEA
STATUS: BOTTOM HOLE PRESSURE BUILD UP TEST

CONTACT: TOMMY FOLSOM
WELL: #1
ZONE: WOLFCAMP
STATE: NEW MEXICO
OPERATOR: TONY COLLINS

PERFORATIONS FROM: 10176 ft
DEPTH: 10117 ft

TO: 10192 ft
TEMPERATURE: 254'F

ELEMENT# RPG3#18323
CLOCK# 28660
ELEMENT# RPG3#9526
CLOCK# 27193

RANGE: 8575 psi
RANGE: 120 hrs
RANGE: 8100 psi
RANGE: 72 hrs

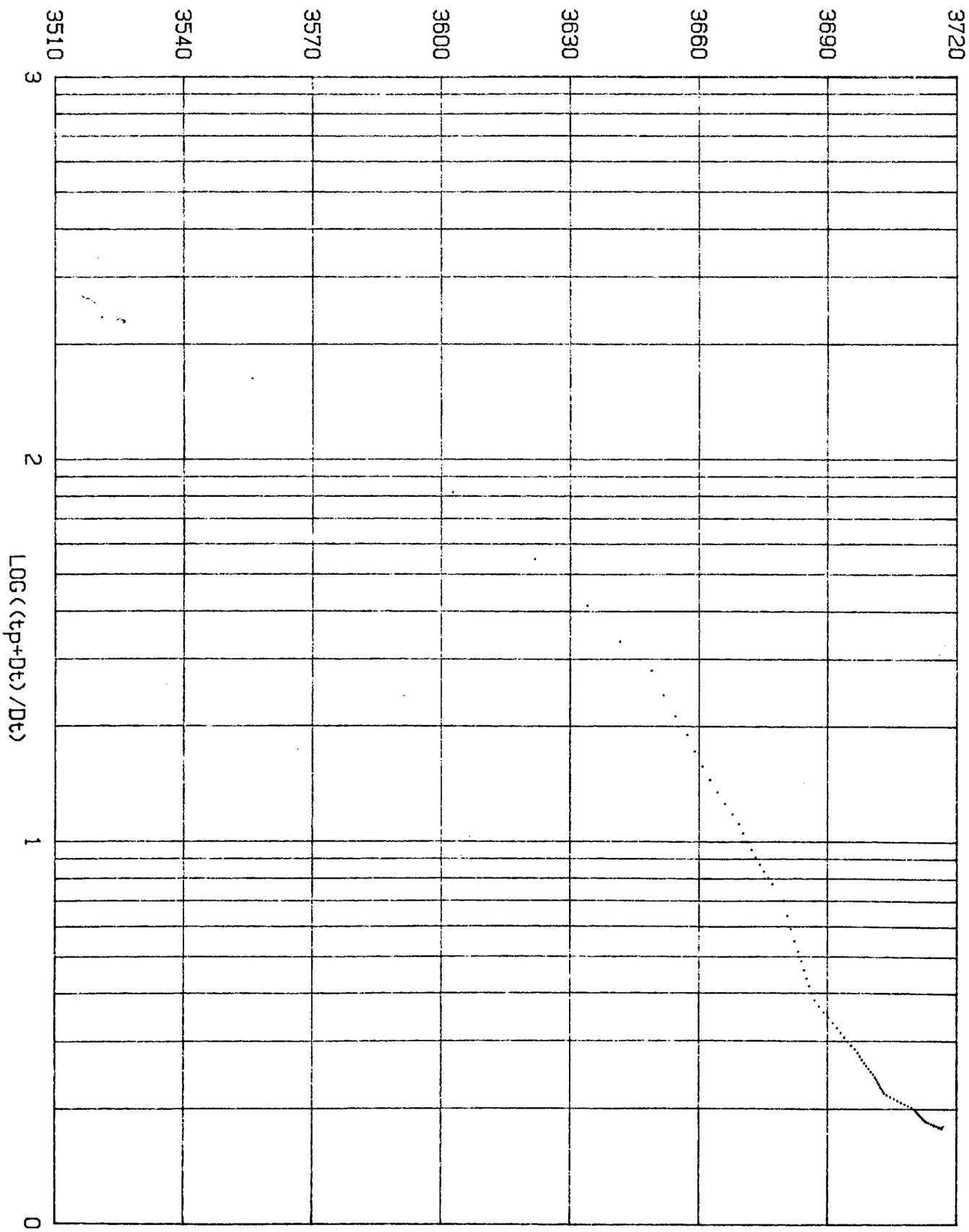
START CLOCK	01/11/87	10:45:00	990 psig
SET ELEMENT	01/11/87	12:53:00	992 psig
WELL SHUT IN	01/11/87	13:30:00	760 psig
TEST ENDED	01/12/87	08:34:00	1080 psig

FILE: 131-NH5:D701
24C/q8= 0 hrs/psi
Gain= 1
tsi= 0 hrs
tp= 13.5 hrs
m= 0 psi/cycle

pA= 13.2 psia
Bias= 20 psi
pwf= 3434.8248 psia
dps= 0 psi
p*= 0 psia

N H 5 FEDERAL #1

01/11/87



COMPANY	LEASE NAME	WELL#	EQUIPMENT	DATE MO/DAY/YR	
SANTA FE ENERGY	NH5 FEDERAL	#1	3/4 MM BTU UNIT	1-10-87	

FIELD	FORMATION	SEC/TWP/RGE	COUNTY	STATE	REPORT TIME & #
	WOLFCAMP		LEA	NM	

TEST BY	TYPE TEST	COMPANY REP	METER RUN	TAPS	PROVER	TANK SIZE
RICK & LARRY	FLOW TEST	TOMMY FOLSOM	3"	FLNG		500 FRAC

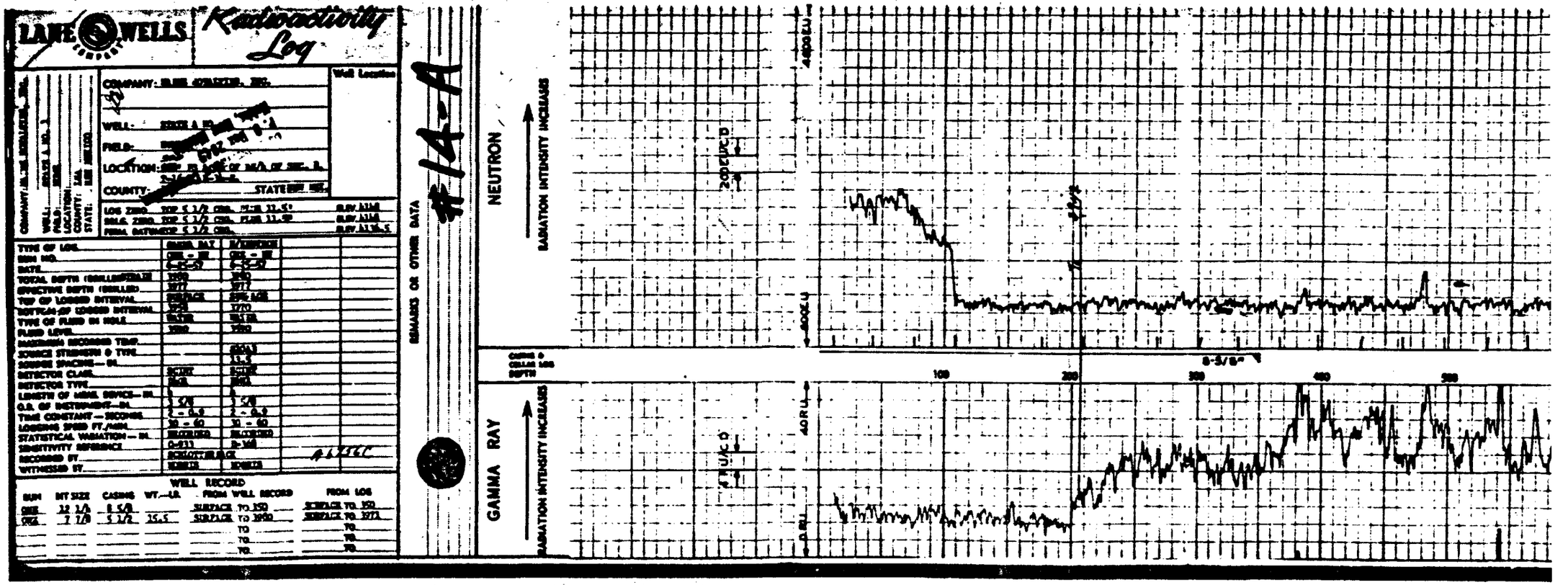
TIME / DATE	ELAP HR	TBG. PRES	CSG. PRES	W/H TEMP	METER OR PROVER PRES	METER OR PROVER DIFF	METER OR PROVER TEMP	CHOKE ORIF	MCFD SCF	TOTAL FLUID TOP	TOTAL FLUID BBLS	WATER CUT	WATER BBLS	H2O P/H	OIL P/H	ACCUM H2O	ACCUM OIL
1-10-87 1800	0	757								2'10'	109	0	0			0	109
1900	1	755						18/64 1.375		3'2"	127	0	0	0	18	0	127
2000	2	752								3'10"	165	2"	2	2	48	2	165
2100	3	750			90	20			506	4'3"	190	2"	2	0	25	2	190
2200	4	750			90	28			598	4'9"	219	2"	2	0	29	2	219
2300	5	750			90	28		18/64	598	5'2"	245	2"	2	0	26	2	245
2400	6	750			90	26			577	5'8"	275	2"	2	0	30	2	275
0100	7	752			100	25			592	6'1"	301	2"	2	0	36	2	301
0200	8	750			100	27			615	6'6"½	327	2"	2	0	36	2	327
0300	9	748			90	32		18/64	640	7'2"	364	2"	2	0	37	2	364
0400	10	742			100	28			627	7'7"	387	2"	2	0	23	2	387
0500	11	742			100	28			627	8'2"	418,	2"	2	0	31	2	418
0600	12	740			95	32			655	8'8"	442	2"	2	0	24	2	442
0700	13	740			100	27		18/64	616	9'2"	463	3"	3	1	20	3	462
0730	13 ½	925	SHUT IN AT 0700 HRS.														
0800	14	950															
0830	14½	964															
0900	15	972															

COMPANY	LEASE NAME	WELL#	EQUIPMENT	DATE MO/DAY/YR	
SANTA FEENERGY	NH5 FEDERAL	#1	3/4 MM BTU UNIT		

FIELD	FORMATION	SEC/TWP/RGE	COUNTY	STATE	REPORT TIME & #
	WOLFCAMP		LEA	NM	

TEST BY	TYPE TEST	COMPANY REP	METER RUN	TAPS	PROVER	TANK SIZE
RICK & LARRY	FLOW TEST	TOMMY FOLSOM	3"	FLG		500 FRAC

TIME / DATE	ELAP HR	TBG. PRES	CSG. PRES	W/H TEMP	METER OR PROVER PRES	METER OR PROVER DIFF	METER OR PROVER TEMP	CHOKE ORIF	MCFD SCF	TOTAL FLUID TOP	TOTAL FLUID BBLS	WATER CUT	WATER BBLS	H2O P/H	OIL P/H	ACCUM H2O	ACCUM OIL
0930	15½	982															
1000	16	986															
1030	16½	990															
1100	17	992															
1130	17½	992															
1200	18	RIG UP TO RUN BOMBS								9'3"	467	3"	3	0	4	3	467
1230	18½	954															
1300	19	START 30 MIN FLOW DOWN FOR BUILD UP															
1330	19½	780			100	16			474	9'7"	479	3"	3	0	12	3	479
	?	SHUT IN FOR BUILD UP TEST AT 1330 HRS.															


LANE WELLS
Radioactivity Log
COMPANY: BLUE ATLANTIC, INC.
WELL: STATE A NO. 1
FIELD:
LOCATION:
COUNTY:
STATE:
Well Location
REMARKS OR OTHER DATA
#14-A
NEUTRON
RADIATION INTENSITY INCREASES
GAMMA RAY
RADIATION INTENSITY INCREASES
100
200
300
400
500
8-5/8"
WELL RECORD
FROM WELL RECORD
FROM LOG

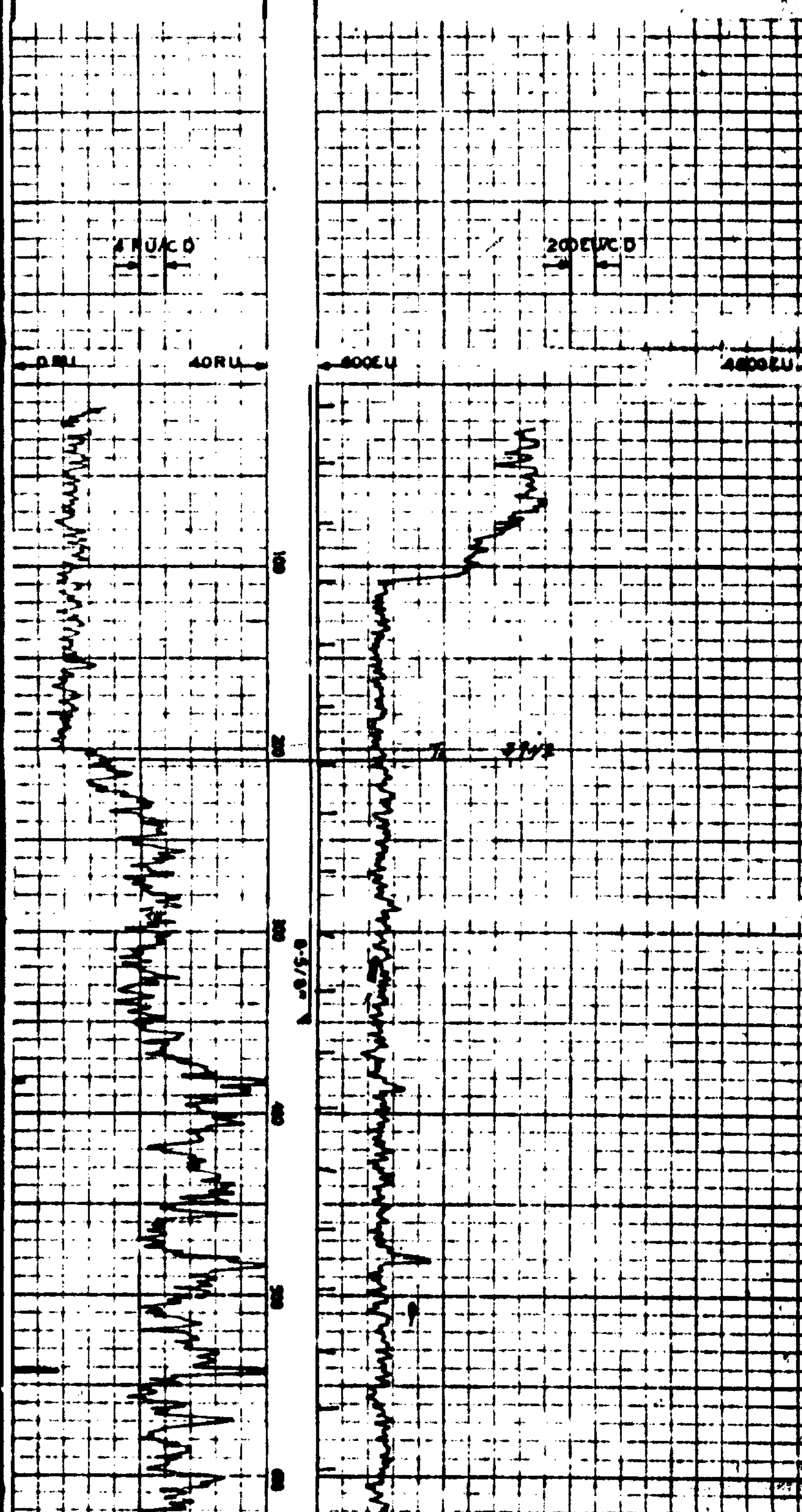
LANE WELLS Radioactivity Log

COMPANY:
WELL: STATE A NO. 1
FIELD:
LOCATION:
COUNTY: LEA
STATE: NEW MEXICO

REMARKS OR OTHER DATA

#14-A

GAMMA RAY	GAMMA & COLLAR LOG DEPTHS	NEUTRON
RADIATION INTENSITY INCREASES		RADIATION INTENSITY INCREASES



Lane-Wells Radioactivity Log

REMARKS OR OTHER DATA

#14-A

GAMMA RAY	NEUTRON
RADIATION INTENSITY INCREASES	RADIATION INTENSITY INCREASES