ORIGINAL

FORM MUST BE TYPED

SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 5135
Name: John O. Farmer, Inc.
Address P.O. Box 352
City/State/Zip Russell, KS 67665

Purchaser:

Operator Contact Person: Martin K. Dubois
Phone (913) 483-3144

Contractor: Name: Mallard JV, Inc.
License: 4958
Wellsite Geologist: John O. Farmer IV

Designate Type of Completion
X New Well ____ Re-Entry ____ Workover

____ Oil ____ SWD ____ SIOW ____ Temp. Abd.
____ Gas ____ ENHR ____ SIGW
X Dry ____ Other (Core, WSW, Expl., Cathodic, etc.)

If Workover/Re-Entry: old well info. as follows:

Operator:
Well Name:
Comp. Date ____ Old Total Depth ____

____ Deepening ____ Re-perf. ____ Conv. to Inj/SWD
____ Plug Back ____ PBTD
____ Commingled Docket No. ____
____ Dual Completion Docket No. ____
____ Other (SWD or Inj?) Docket No. ____

12-14-95 Spud Date
12-23-95 Date Reached TD
Completion Date

API NO. 15- 109-20,606-00-00

County Logan

____ - SE - SE - NE Sec. 6 Twp. 13S Rge. 33 E X W

2310 Feet from S (N) (circle one) Line of Section
330 Feet from (E) W (circle one) Line of Section
Footages Calculated from Nearest Outside Section Corner:
(NE) SE NW or SW (circle one)

Lease Name Nau Well # 1
Field Name Logansport NW
Producing Formation

Elevation: Ground 3044' KB 3049'
Total Depth 4653' PBTD

Amount of Surface Pipe Set and Cemented at 257 Feet

Multiple Stage Cementing Collar Used? ____ Yes X No
If yes, show depth set ____ Feet

If Alternate II completion, cement circulated from ____
feet depth to ____ w/ ____ sx cmt.

Drilling Fluid Management Plan D & A 4-3-96 KR
(Data must be collected from the Reserve Pit)

Chloride content 23,000 ppm Fluid volume 1,800 bbls
Dewatering method used evaporation

Location of fluid disposal if hauled offsite:
(not hauled)
Operator Name

Lease Name License No.

____ Quarter Sec. ____ Twp. ____ S Rng. ____ E/W

County Docket No.

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be atached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature John O. Farmer III

Title President Date 1-3-96

Subscribed and sworn to before me this 3rd day of January, 19 96.

Notary Public Margaret A. Schulte
Margaret A. Schulte

Date Commission Expires

NOTARY PUBLIC - State of Kansas
MARGARET A. SCHULTE
My Appt. Exp. 1-27-97

STATE CORPORATION COMMISSION RECEIVED
JAN 04 1996
1-2-96
CONSERVATION DIVISION WICHITA, KANSAS

K.C.C. OFFICE USE ONLY
____ Letter of Confidentiality Attached
C ✓ Wireline Log Received
C ✓ Geologist Report Received
Distribution
✓ KCC ____ SWD/Rep ____ NGPA
____ KGS ____ Plug ____ Other (Specify)

Form ACO-1 (7-91)

ORIGINAL

SIDE TWO

Operator Name John O. Farmer, Inc. Lease Name Nau Well # 1

Sec. 6 Twp. 13S Rge. 33 ☐ East ☒ West

County Logan

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken (Attach Additional Sheets.) ☒ Yes ☐ No

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

Electric Log Run (Submit Copy.) ☒ Yes ☐ No

List All E.Logs Run:

Dual Induction Log
Compensated Density/Neutron Log

☒ Log ☐ Sample

Formation (Top), Depth and Datums

Name	Top	Datum
Base/Anhydrite	2512'	(+537)
Heebner	3916'	(-867)
Lansing	3968'	(-919)
Stark	4210'	(-1161)
Base/KC	4292'	(-1243)
Pawnee	4410'	(-1361)
Fort Scott	4466'	(-1417)
Cherokee	4494'	(-1445)
Johnson	4540'	(-1491)
Mississippi	4626'	(-1577)
L.T.D.	4654'	(-1605)

CASING RECORD ☐ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12-1/4"	8-5/8"		257'	60/40 Pozmix	160	3% C.C., 2% gel

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top	Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
___ Perforate					
___ Protect Casing					
___ Plug Back TD					
___ Plug Off Zone					

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

TUBING RECORD Size Set At Packer At Liner Run ☐ Yes ☐ No

Date of First, Resumed Production, SWD or Inj. Producing Method ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas:

☐ Vented ☐ Sold ☐ Used on Lease
(If vented, submit ACO-18.)

METHOD OF COMPLETION

☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled

☐ Other (Specify) _____

Production Interval

_____

_____

ORIGINAL

MALLARD JV, Inc.
DRILLING CONTRACTORS
P. O. BOX 1009
MCPHERSON, KS 67460 316-241-4640

Drillers Log

OPERATOR: **John O. Farmer, Inc.**
P. O. Box 352
Russell, KS 67665

WELL: **Nau #1**

API #: 15-109-206060000

LOCATION: SE SE NE
2310' FNL, 330' FEL
Section 6, Township 13 S, Range 33 W
Logan County, Kansas

COMMENCED: December 14, 1995

COMPLETED: December 24, 1995

TOTAL DEPTH: 4653'

ELEVATION: 3044' GL, 3049' KB

STATUS: Dry and Abandoned - Mississippi Formation

SPUD: 6:48 pm 12/14/95
SIZE HOLE DRILLED: 12-1/4" x 259'
SURFACE CASING SIZE: **8-5/8"** x 250.65' (6 jts.)
SET AT: **257'**
CEMENT: **160 sacks** 60/40 Pozmix, 2% gel, 3% cc

SIZE HOLE DRILLED: 7-7/8" x 4653'
PLUGGED HOLE WITH: **200 sacks** 60/40 Pozmix, 6% gel, 1/4# floseal per sack as follows:
25 sx @ 2540'
100 sx @ 1440'
40 sx @ 310'
10 sx @ 40'
15 sx rathole,
10 sx mousehole
P. D.: 7:00 am 12/24/95

DRILL STEM TESTS: 5
ELECTRIC LOG: Yes

ALLIED CEMENTING CO., INC. 3802

MIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: OAKLEY, KS

DATE 12-14-95	SEC. 6	TWP. 13S	RANGE 33W	CALLED OUT	ON LOCATION 10:00PM	JOB START 2:00AM	JOB FINISH 2:30AM
LEASE NAU	WELL # 1		LOCATION MONUMENT 11S - WEST SIDE			COUNTY LOGAN	STATE KS

OLD OR (NEW) (Circle one)

ORIGINAL

CONTRACTOR MALLARD DRLG.
TYPE OF JOB SURFACE
HOLE SIZE 12¼ T.D. 259'
CASING SIZE 8 5/8" DEPTH 257'
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX MINIMUM
MEAS. LINE SHOE JOINT
CEMENT LEFT IN CSG. 15'
PERFS.

OWNER SAME

CEMENT

AMOUNT ORDERED 160 SKS 60/40/2 3%CC 2% GEL

COMMON	96 SKS	@ 7.20	691.20
POZMIX	64 SKS	@ 3.15	201.60
GEL	3 SKS	@ 9.50	28.50
CHLORIDE	5 SKS	@ 28.00	140.00
		@	
		@	
		@	
		@	
		@	
HANDLING	160 SKS	@ 1.05	168.00
MILEAGE	4¢ per sk/mile		128.00
		TOTAL	1,357.30

EQUIPMENT

PUMP TRUCK # 300 CEMENTER
HELPER TERRY
BULK TRUCK # 305 DRIVER DEAN
BULK TRUCK # DRIVER

REMARKS:

DISPLACEMENT 15½ BBL.

CEMENT IN CELLAR

SERVICE

DEPTH OF JOB	257'		
PUMP TRUCK CHARGE			445.00
EXTRA FOOTAGE		@	
MILEAGE	20 miles	@ 2.35	47.00
PLUG 8 5/8 SURFACE	1	@	45.00
		@	
		@	
		TOTAL	537.00

CHARGE TO: J. OHN O. FARMER
STREET PO Box 352
CITY Russell STATE Kan ZIP 67665

FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	

TAX
TOTAL CHARGE
DISCOUNT IF PAID IN 30 DAYS

To Allied Cementing Co., Inc.
You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read & understand the "TERMS AND CONDITIONS" listed on the reverse side.

SIGNATURE

JOB SUMMARY

HALLIBURTON DIVISION: MID CONTINENT
HALLIBURTON LOCATION: HAYS, KS
BILLED ON TICKET NO.: 915076

WELL DATA

SEC. 6 TWP. 13S RNG. 33W COUNTY LOGAN STATE KS

TYPE
FROM TO
BPD. WATER BPD. GAS MCFD
BPD. WATER BPD. GAS MCFD
MUD TYPE MUD WT.
SET AT
PRESSURE
TOTAL DEPTH

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING			8 5/8	KB	257	
LINER						
TUBING						
OPEN HOLE			7 7/8	257	4653	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

ORIGINAL

JOB DATA

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE 12-24	DATE 12-24	DATE 12-24	DATE 12-24
TIME 0005	TIME 0345	TIME 0445	TIME 0900

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG WOOD - 8 5/8	1	HOWCO
HEAD		
PACKER		
OTHER		

PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
	PICK-UP	
W. WILSON B9377	39604	HAYS, KS
	COMBO	
D. ASH E1609	53293	"
	BULK	
N. KORBE	3260	"

MATERIALS

TREAT. FLUID DENSITY LB/GAL. °API
DISPL. FLUID DENSITY LB/GAL. °API
PROP. TYPE SIZE LB.
PROP. TYPE SIZE LB.
ACID TYPE GAL. %
ACID TYPE GAL. %
ACID TYPE GAL. %
SURFACTANT TYPE GAL. IN
NE AGENT TYPE GAL. IN
FLUID LOSS ADD. TYPE GAL.-LB. IN
GELLING AGENT TYPE GAL.-LB. IN
FRIC. RED. AGENT TYPE GAL.-LB. IN
BREAKER TYPE GAL.-LB. IN
BLOCKING AGENT TYPE GAL.-LB.
PERFPAC BALLS TYPE QTY.
OTHER
OTHER

DEPARTMENT CEMENT
DESCRIPTION OF JOB PTA
BALANCE SPOT CEMENT PLUGS IN WELL

JOB DONE THRU: TUBING X CASING ☐ ANNULUS ☐ TBG./ANN. ☐

CUSTOMER REPRESENTATIVE X
HALLIBURTON OPERATOR Wayne Wilson
COPIES REQUESTED

CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	200	40% POZ 60% 60		B	6% GEL, 1/4 # FLOCELE P/SK	1.63	12.6

SUMMARY

PRESSURES IN PSI

CIRCULATING DISPLACEMENT
BREAKDOWN MAXIMUM
AVERAGE FRACTURE GRADIENT
SHUT-IN: INSTANT 5-MIN 15-MIN.

HYDRAULIC HORSEPOWER

ORDERED AVAILABLE USED

AVERAGE RATES IN BPM

TREATING DISPL. OVERALL

CEMENT LEFT IN PIPE

FEET REASON

VOLUMES

PRESLUSH: BBL.-GAL. TYPE
LOAD & BKDN: BBL.-GAL. PAD: BBL.-GAL
TREATMENT: BBL.-GAL. DISPL: BBL.-GAL
CEMENT SLURRY: BBL. GAL. 59.5
TOTAL VOLUME: BBL.-GAL.

RECEIVED
STATE CORPORATION COMMISSION
JAN 04 1996
CONSERVATION DIVISION

REMARKS

SEE JOB LOG
THANK YOU

CUSTOMER

CUSTOMER: JOHN O FARMER
LEASE: NAY
WELL NO.: 1
JOB TYPE: PTA
DATE: 12-24-95

FORM 2025-R4

HALLIBURTON

DATE	PAGE NO.
12-24-95	1

WELL NO.	LEASE	JOB TYPE	TICKET NO.
1	NAU	PTA	915096

TIME	RATE (BPM)	VOLUME (BBL)(GAL)	PUMPS T	PUMPS C	PRESSURE(PSI) TUBING	PRESSURE(PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
0005							CALLED OUT ORIGINAL
0345							ON LOCATION - BALANCE CEMENT PLUGS
NONE 0445		7.4	✓				1ST PLUG @ 2540' 25 SKS
0535		29.7	✓				2ND PLUG @ 1440' 100 SKS
0630		11.9	✓				3RD PLUG @ 310' 40 SKS
0645		3	✓				4TH PLUG @ 40' 10 SKS - WOOD PLUG
0650		4 1/2	✓				5TH PLUG @ 15 SKS RATHOLE
0700		3	✓				6TH PLUG @ 10 SKS MOUSEHOLE
							WASH-UP
							RACK-UP
0800							JOB COMPLETE
							THANK YOU WAYNE, DAVE NICK
							PUMP TIME - 1/2 HOUR

RECEIVED
STATE CORPORATION COMMISSION
JAN 04 1996
CONSERVATION DIVISION

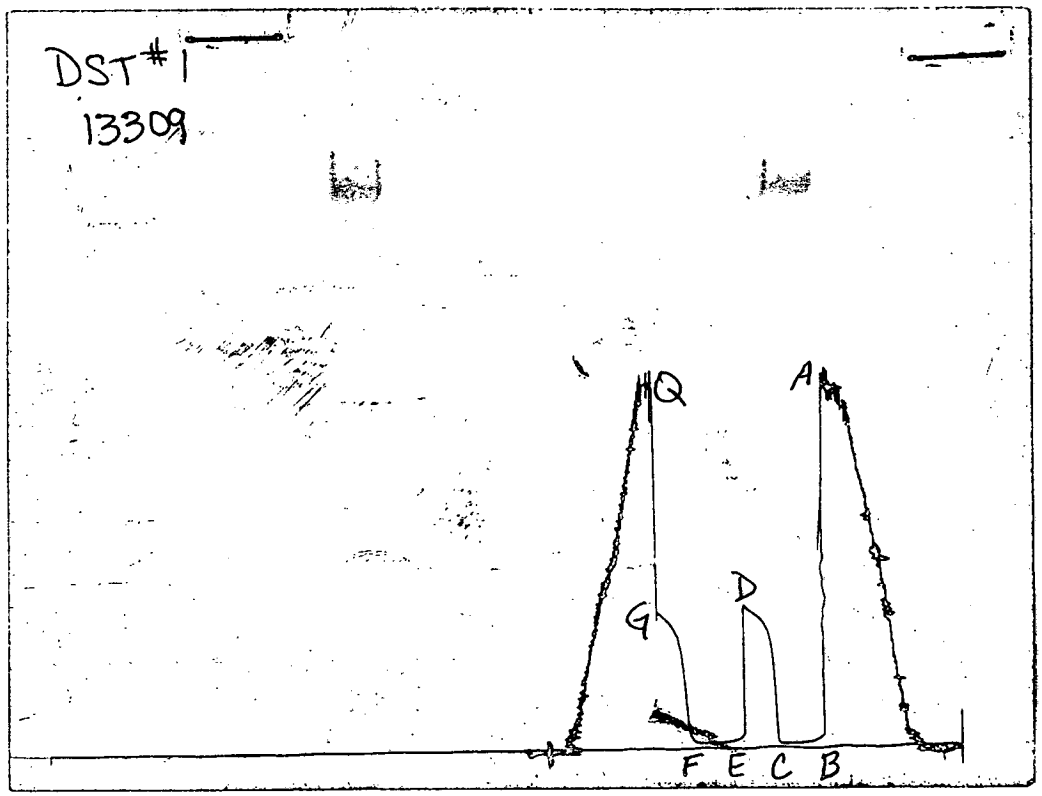
CUSTOMER

ORIGINAL

Well Name:	NAU #1				
Company :	J. O. FARMER INC				
Location - Sec:	6	**Twp:**	13S	**Rge:**	33W
County:	LOGAN	**State:**	KS		
Date:	12/23/95				

15-109-20606

CHART PAGE



This is an actual photograph of recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : J. O. Farmer Inc. DATE 12-20-95
WELL NAME: NAU #1 KB 3049.00 ft TICKET NO: 8827 DST #2
LOCATION : 6-13S-33W, Logan Cty KS GR 3044.00 ft FORMATION: Lansing "E'
INTERVAL : 4038.00 To 4058.00 ft TD 4058.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	45	Rec.	13339	13339	2346		
SI	45	Range(Psi)	4025.0	4025.0	4995.0	0.0	0.0
SF	45	Clock(hrs)	AK-1	AK-1	Alpin		
FS	45	Depth(ft)	4055.0	4055.0	4040.0	0.0	0.0

TIME DATA----------
PF Fr. 0243 to 0328 hr
IS Fr. 0328 to 0413 hr
SF Fr. 0413 to 0458 hr
FS Fr. 0458 to 0543 hr

	Field	1	2	3	4
A. Init Hydro	1922.0	1963.0	1978.0	0.0	0.0
B. First Flow	20.0	2.0	22.0	0.0	0.0
B1. Final Flow	20.0	2.0	33.0	0.0	0.0
C. In Shut-in	1070.0	1060.0	1140.0	0.0	0.0
D. Init Flow	20.0	8.0	35.0	0.0	0.0
E. Final Flow	20.0	8.0	48.0	0.0	0.0
F. Fl Shut-in	1000.0	990.0	1072.0	0.0	0.0
G. Final Hydro	1912.0	1889.0	1931.0	0.0	0.0
Inside/Outside	O	O	I		

T STARTED 0104 hr
T ON BOTM 0241 hr
T OPEN 0243 hr
T PULLED 0543 hr
T OUT 0730 hr

RECOVERY
Tot Fluid 61.00 ft of 61.00 ft in DC and 0.00 ft in DP
1.00 ft of Free Oil - 100% oil
60.00 ft of Oily water cut mud - 2% oil, 8% water, 90%mud

TOOL DATA----------

Tool Wt.	1800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	80000.00 lbs
Initial Str Wt	62000.00 lbs
Unseated Str Wt	62000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	250.00 ft
D.P. Length	3794.00 ft

RW 1.1 @ 55 F
SALINITY 7000.00 P.P.M. A.P.I. Gravity 36.00

MUD DATA----------

Mud Type	Chemical
Weight	9.10 lb/c
Vis.	47.00 S/L
W.L.	8.80 in3
F.C.	0.00 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	106.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	N
Tool Chased	N
Tester	Rod Steinbrink
Co. Rep.	J.O.Farmer IV
Contr.	Mallard
Rig #	#1
Unit #	
Pump T.	

BLOW DESCRIPTION

Initial Flow -
Surface blow built to .5", stayed steady throughout

Initial Shutin -
No blow

Final Flow -
No return blow

Final Shutin -
No blow

SAMPLES:
SENT TO:

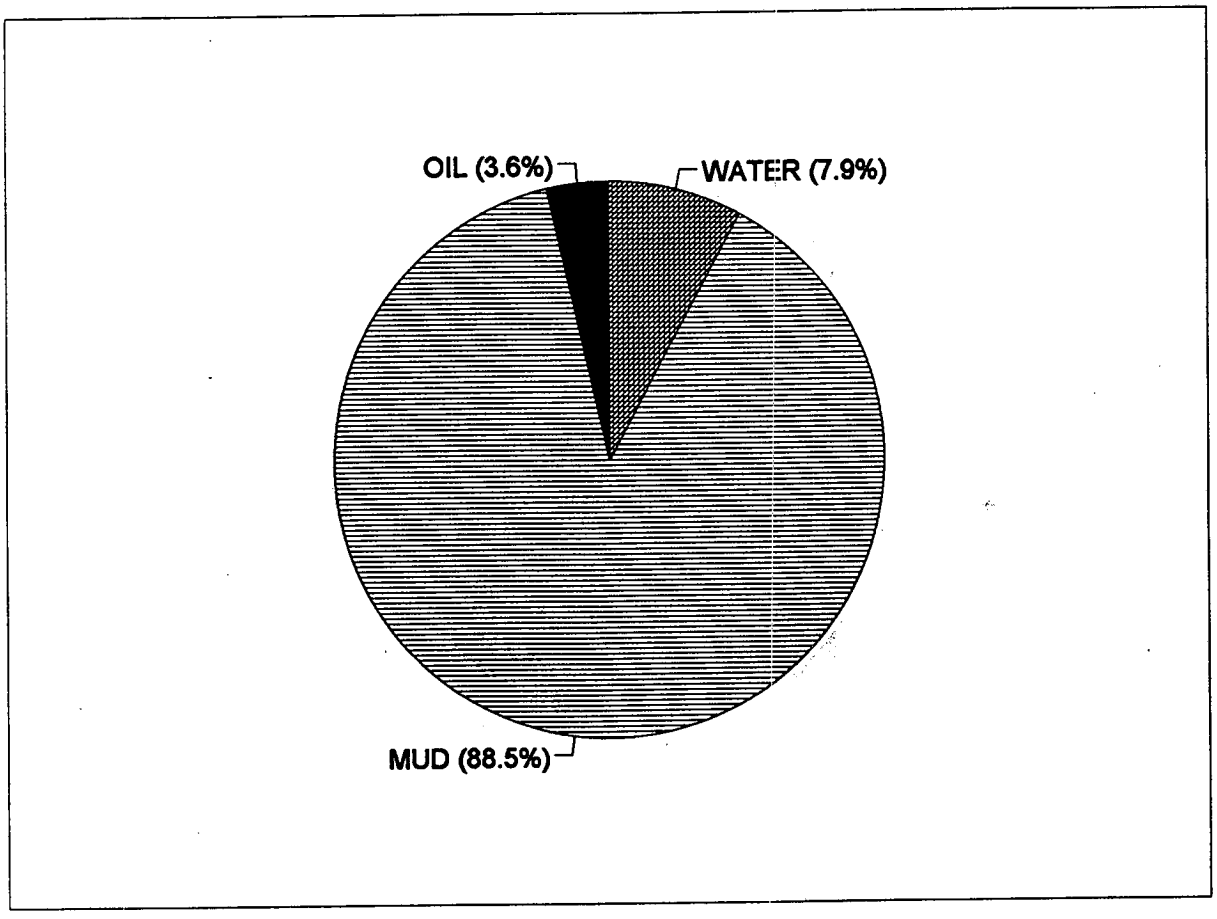
Test Successful: Y

CALCULATED RECOVERY ANALYSIS - DRILL COLLARS

DST # 2 TICKET # 8827

AMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
1	1		0	100	1		0		0
2	60		0	2	1.2	8	4.8	90	54
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
OTAL	61	0.00	0	3.61	2.2	7.87	4.8	88.52459	54

			HRS OPE	BBL/DAY
3L OIL=	0.010758	*	1.50	0.172128
3L WAT	0.023472	*		0.375552
3L MUD	0.26406			
3L GAS	0			



TRILOBITE TESTING L.L.C.

ORIGINAL

OPERATOR : J. O. Farmer Inc DATE 12/19/95
WELL NAME: NAU #1 KB 3049.00 ft TICKET NO: 8826 DST #1
LOCATION : 6-13S-33W, Logan Cty KS GR 3044.00 ft FORMATION: Lansing "D"
INTERVAL : 4016.00 To 4040.00 ft TD 4040.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	13309	13309	2346		
SI 30	Range(Psi)	4700.0	4700.0	4995.0	0.0	0.0
SF 30	Clock(hrs)	AK-1	AK-1	Alpin		
FS 30	Depth(ft)	4035.0	4035.0	4018.0	0.0	0.0

TIME DATA----------
PF Fr. 1240 to 1310 hr
IS Fr. 1310 to 1340 hr
SF Fr. 1340 to 1410 hr
FS Fr. 1410 to 1440 hr

	Field	1	2	3	4
A. Init Hydro	2253.0	2251.0	0.0	0.0	0.0
B. First Flow	23.0	50.0	0.0	0.0	0.0
B1. Final Flow	23.0	42.0	0.0	0.0	0.0
C. In Shut-in	877.0	885.0	0.0	0.0	0.0
D. Init Flow	35.0	55.0	0.0	0.0	0.0
E. Final Flow	35.0	50.0	0.0	0.0	0.0
F. Fl Shut-in	830.0	849.0	0.0	0.0	0.0
G. Final Hydro	2230.0	2239.0	0.0	0.0	0.0
Inside/Outside	O	O	I		

T STARTED 1107 hr
T ON BOTM 1237 hr
T OPEN 1240 hr
T PULLED 1440 hr
T OUT 1615 hr

RECOVERY
Tot Fluid 10.00 ft of 10.00 ft in DC and 0.00 ft in DP
4.00 ft of Free oil - 100% oil
6.00 ft of Oil cut mud - 5% oil, 95% mud

TOOL DATA----------

Tool Wt.	0.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	0.00 lbs
Initial Str Wt	0.00 lbs
Unseated Str Wt	0.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	250.00 ft
D.P. Length	3760.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 38.00

MUD DATA----------

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	47.00 S/L
W.L.	8.80 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	120.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Rod Steinbrink
Co. Rep.	J O Farmer IV
Contr.	Mallard
Rig #	1
Unit #	
Pump T.	

BLOW DESCRIPTION

Initial Flow -
Weak surface blow, steady throughout

Final Flow -
No return blow

SAMPLES:
SENT TO:

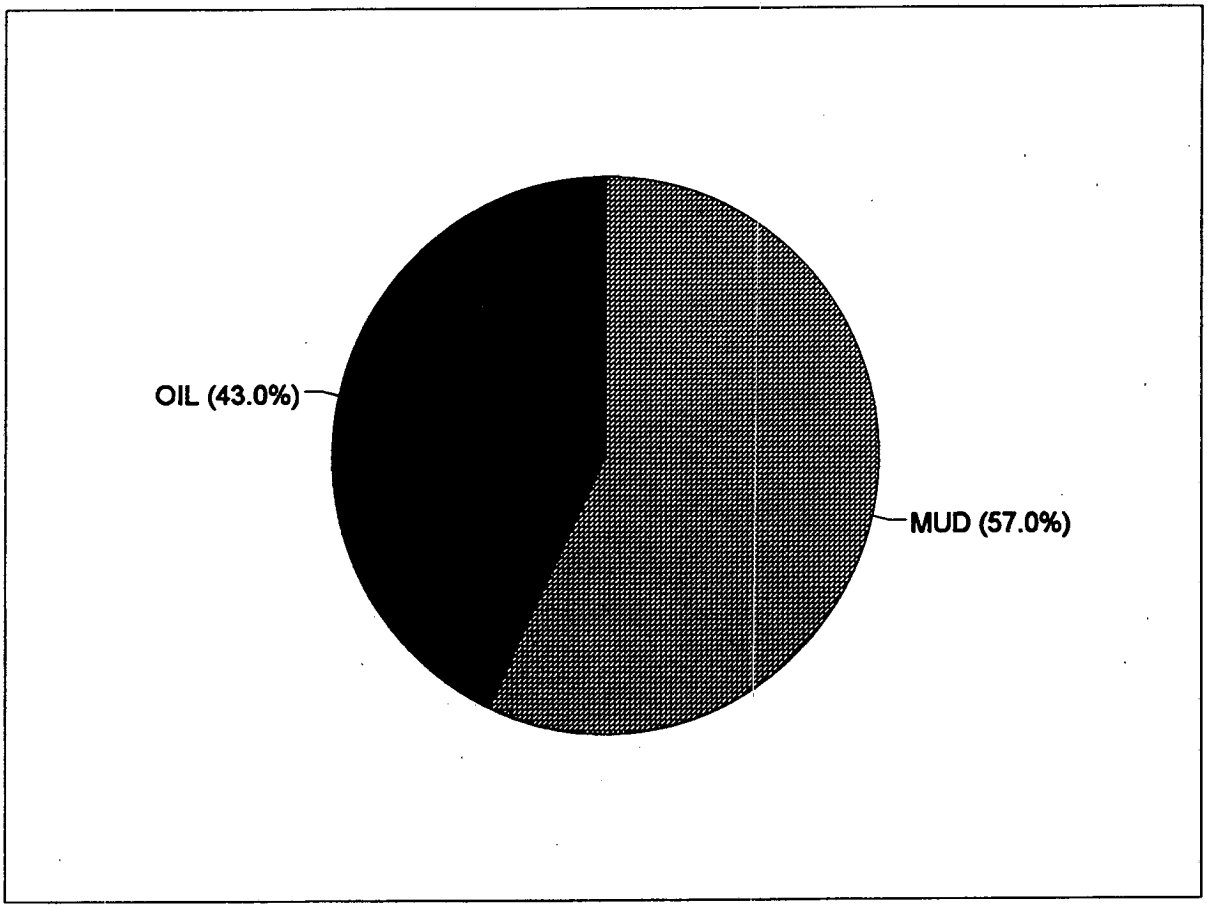
Test Successful: Y

CALCULATED RECOVERY ANALYSIS - DRILL COLLARS

DST # 1 TICKET # 8826

SAMPLE #	TOTAL FEET	GAS %	GAS FEET	OIL %	OIL FEET	WATER %	WATER FEET	MUD %	MUD FEET
1	4		0	100	4		0		0
2	6		0	5	0.3		0	95	5.7
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
TOTAL	10	0.00	0	43.00	4.3	0.00	0	57	5.7

			HRS OPE	BBL/DAY
BBL OIL=	0.021027	*	1.00	0.504648
BBL WAT	0	*		0
BBL MUD	0.027873			
BBL GAS	0			

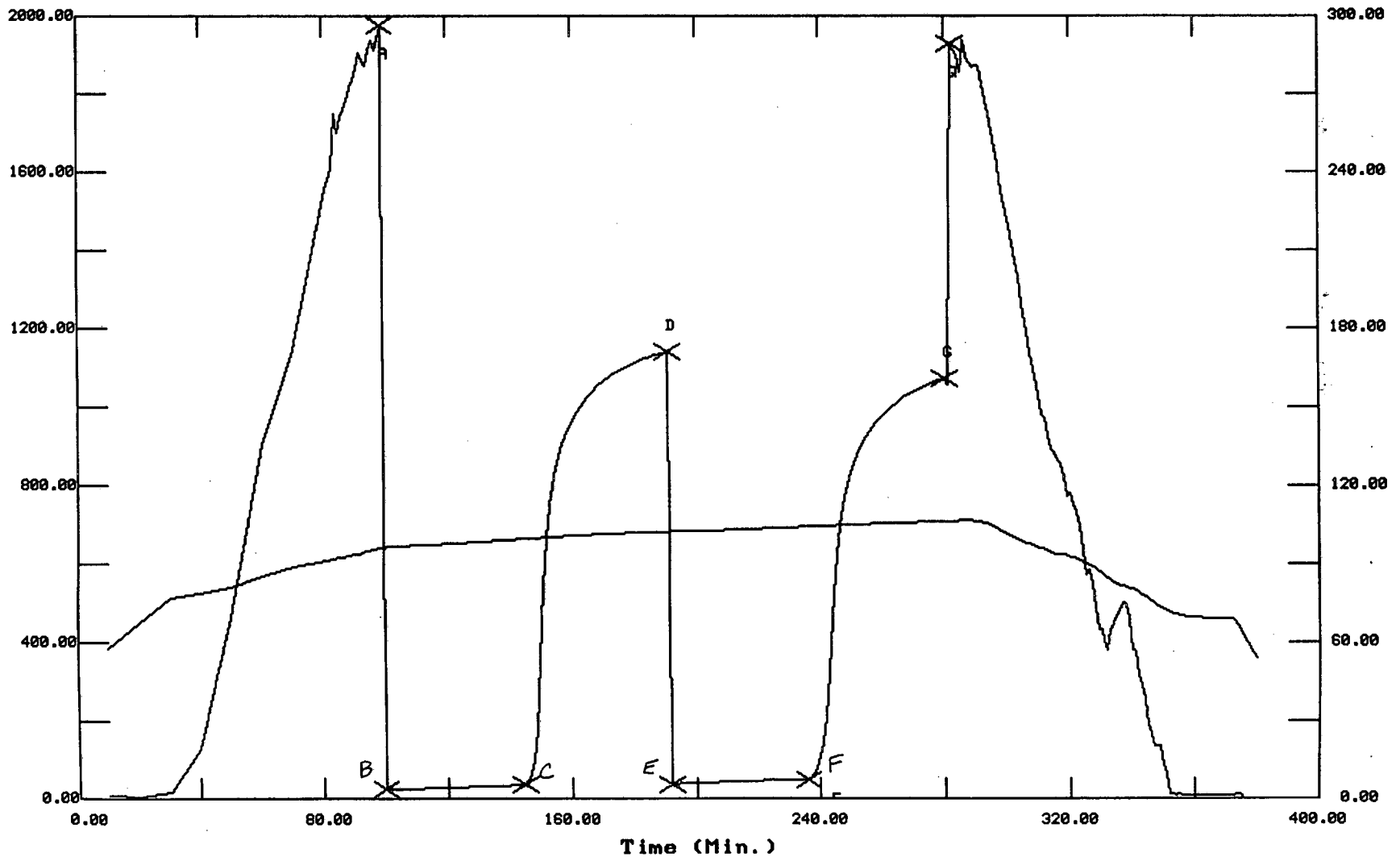


TEST HISTORY

8827 DST #2 NAU #1 J.O.Farmer Inc.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	1977.50
B:	0.00	21.56
C:	45.00	33.31
D:	46.00	1140.07
E:	0.00	35.41
F:	44.00	48.42
G:	44.00	1072.00
Q:	0.00	1930.83



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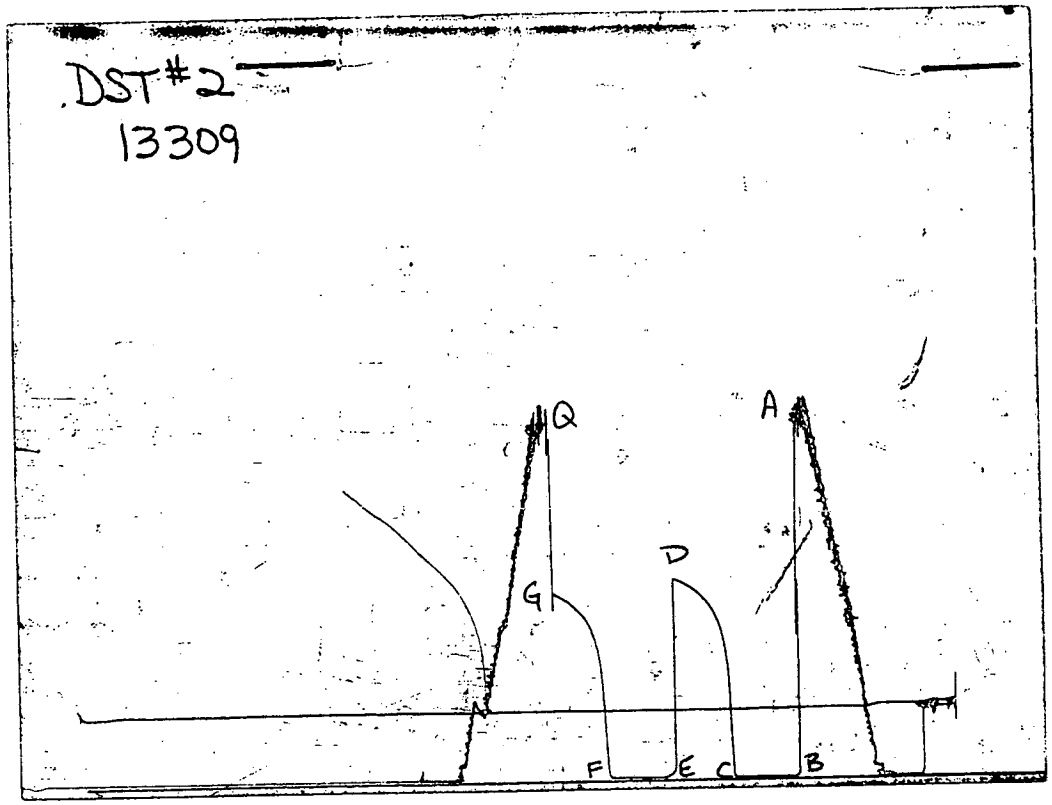

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ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8827 DST #2 NAU #1 J.O.Farmer Inc.

DATE: 12/20/95 TIME: 01:06:11

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
****** Initial Hydro.	99.00	1977.5	0.0	95.98		
****** Start Flow 1	0.00	21.6	0.0	96.19		
	1.00	20.5	-1.1	96.34		
	2.00	20.8	-0.8	96.43		
	3.00	20.8	-0.8	96.50		
	4.00	20.9	-0.7	96.57		
	5.00	21.1	-0.5	96.60		
	6.00	21.6	0.1	96.66		
	7.00	21.8	0.3	96.69		
	8.00	22.1	0.5	96.74		
	9.00	22.7	1.1	96.81		
	10.00	23.1	1.5	96.86		
	11.00	23.7	2.1	96.92		
	12.00	24.2	2.6	96.97		
	13.00	24.8	3.2	97.04		
	14.00	25.0	3.4	97.11		
	15.00	25.2	3.6	97.17		
	16.00	25.4	3.9	97.23		
	17.00	25.6	4.0	97.31		
	18.00	25.5	3.9	97.38		
	19.00	25.8	4.2	97.45		
	20.00	25.8	4.3	97.52		
	21.00	26.2	4.6	97.63		
	22.00	26.6	5.0	97.67		
	23.00	26.9	5.4	97.73		
	24.00	27.5	6.0	97.83		
	25.00	27.8	6.2	97.89		
	26.00	28.2	6.6	97.96		
	27.00	28.7	7.1	98.04		
	28.00	29.0	7.5	98.12		
	29.00	29.9	8.3	98.19		
	30.00	30.3	8.7	98.28		
	31.00	30.3	8.7	98.36		
	32.00	30.5	8.9	98.43		
	33.00	30.9	9.3	98.50		
	34.00	31.5	9.9	98.58		
	35.00	31.7	10.2	98.65		
	36.00	31.7	10.2	98.74		
	37.00	32.0	10.4	98.82		
	38.00	32.2	10.7	98.88		
	39.00	32.3	10.7	98.95		
	40.00	32.3	10.7	99.01		
	41.00	32.6	11.0	99.09		
	42.00	32.7	11.2	99.19		
	43.00	33.0	11.4	99.26		
	44.00	33.3	11.7	99.33		
****** End Flow 1	45.00	33.3	11.7	99.42		
****** Start Shutin 1	0.00	33.3	0.0	99.42	0.0000	0.001
	1.00	44.8	11.5	99.48	46.0000	0.002
	2.00	62.8	29.5	99.56	23.5000	0.004
	3.00	97.7	64.4	99.65	16.0000	0.01

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8827 DST #2 NAU #1 J.O.Farmer Inc.

DATE: 12/20/95 TIME: 01:06:11

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	4.00	178.3	144.9	99.68	12.2500	0.032
	5.00	350.7	317.4	99.77	10.0000	0.123
	6.00	540.2	506.8	99.85	8.5000	0.292
	7.00	665.4	632.1	99.94	7.4286	0.443
	8.00	745.6	712.3	100.01	6.6250	0.556
	9.00	801.3	768.0	100.11	6.0000	0.642
	10.00	843.0	809.7	100.20	5.5000	0.711
	11.00	875.8	842.5	100.30	5.0909	0.767
	12.00	902.6	869.2	100.37	4.7500	0.815
	13.00	925.1	891.8	100.45	4.4615	0.856
	14.00	944.5	911.2	100.54	4.2143	0.892
	15.00	961.4	928.1	100.62	4.0000	0.924
	16.00	976.2	942.9	100.70	3.8125	0.953
	17.00	989.6	956.3	100.77	3.6471	0.979
	18.00	1001.6	968.3	100.80	3.5000	1.003
	19.00	1012.2	978.9	100.81	3.3684	1.025
	20.00	1022.2	988.9	100.86	3.2500	1.045
	21.00	1031.3	998.0	100.93	3.1429	1.064
	22.00	1039.6	1006.3	101.00	3.0455	1.081
	23.00	1047.2	1013.9	101.06	2.9565	1.097
	24.00	1054.5	1021.1	101.13	2.8750	1.112
	25.00	1061.1	1027.8	101.19	2.8000	1.126
	26.00	1067.4	1034.1	101.24	2.7308	1.139
	27.00	1073.2	1039.9	101.30	2.6667	1.152
	28.00	1078.5	1045.2	101.35	2.6071	1.163
	29.00	1083.6	1050.3	101.39	2.5517	1.174
	30.00	1088.5	1055.1	101.45	2.5000	1.185
	31.00	1093.1	1059.8	101.50	2.4516	1.195
	32.00	1097.3	1064.0	101.55	2.4062	1.204
	33.00	1101.4	1068.1	101.60	2.3636	1.213
	34.00	1105.3	1072.0	101.65	2.3235	1.222
	35.00	1108.9	1075.6	101.70	2.2857	1.230
	36.00	1112.4	1079.1	101.77	2.2500	1.237
	37.00	1115.8	1082.5	101.81	2.2162	1.245
	38.00	1119.0	1085.7	101.82	2.1842	1.252
	39.00	1122.0	1088.7	101.87	2.1538	1.259
	40.00	1125.0	1091.6	101.91	2.1250	1.266
	41.00	1127.7	1094.4	101.96	2.0976	1.272
	42.00	1130.3	1097.0	102.00	2.0714	1.278
	43.00	1132.9	1099.6	102.05	2.0465	1.284
	44.00	1135.5	1102.1	102.09	2.0227	1.289
	45.00	1137.8	1104.5	102.14	2.0000	1.295
****** End Shut-in 1	46.00	1140.1	1106.8	102.18	1.9783	1.300
****** Start Flow 2	0.00	35.4	0.0	102.22		
	1.00	36.2	0.8	102.24		
	2.00	36.2	0.8	102.26		
	3.00	36.6	1.2	102.27		
	4.00	37.0	1.6	102.29		
	5.00	37.3	1.9	102.31		
	6.00	37.7	2.3	102.34		
	7.00	38.0	2.6	102.36		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8827 DST #2 NAU #1 J.O.Farmer Inc.

DATE: 12/20/95 TIME: 01:06:11

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	8.00	38.3	2.9	102.40		
	9.00	38.7	3.3	102.44		
	10.00	39.0	3.6	102.48		
	11.00	39.3	3.9	102.52		
	12.00	39.5	4.1	102.57		
	13.00	39.9	4.4	102.60		
	14.00	40.1	4.7	102.65		
	15.00	40.4	5.0	102.69		
	16.00	40.6	5.2	102.75		
	17.00	40.9	5.5	102.78		
	18.00	41.2	5.8	102.84		
	19.00	41.5	6.0	102.89		
	20.00	41.7	6.3	102.94		
	21.00	42.0	6.6	102.99		
	22.00	42.2	6.8	103.04		
	23.00	42.5	7.1	103.11		
	24.00	42.8	7.4	103.15		
	25.00	43.0	7.6	103.16		
	26.00	43.3	7.9	103.23		
	27.00	43.6	8.2	103.27		
	28.00	43.9	8.5	103.32		
	29.00	44.1	8.7	103.37		
	30.00	44.6	9.1	103.42		
	31.00	44.9	9.5	103.47		
	32.00	45.1	9.7	103.51		
	33.00	45.3	9.9	103.57		
	34.00	45.4	10	103.62		
	35.00	45.7	10.3	103.67		
	36.00	46.0	10.6	103.72		
	37.00	46.4	11.0	103.76		
	38.00	46.6	11.2	103.81		
	39.00	46.9	11.5	103.86		
	40.00	47.2	11.8	103.92		
	41.00	47.5	12.1	103.97		
	42.00	47.7	12.3	104.01		
	43.00	48.2	12.8	104.07		
****** End Flow 2	44.00	48.4	13.0	104.11		
****** Start Shutin 2	0.00	48.4	0.0	104.11	0.0000	0.002
	1.00	51.9	3.4	104.17	90.0000	0.003
	2.00	63.5	15.1	104.21	45.5000	0.004
	3.00	80.0	31.6	104.26	30.6667	0.006
	4.00	104.6	56.1	104.31	23.2500	0.011
	5.00	143.7	95.3	104.35	18.8000	0.021
	6.00	211.8	163.4	104.39	15.8333	0.045
	7.00	323.0	274.6	104.44	13.7143	0.104
	8.00	459.5	411.1	104.50	12.1250	0.211
	9.00	577.2	528.7	104.57	10.8889	0.333
	10.00	662.6	614.2	104.63	9.9000	0.439
	11.00	723.9	675.5	104.69	9.0909	0.524
	12.00	769.5	721.1	104.76	8.4167	0.592
	13.00	804.9	756.5	104.82	7.8462	0.648

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8827 DST #2 NAU #1 J.O.Farmer Inc.

DATE: 12/20/95 TIME: 01:06:11

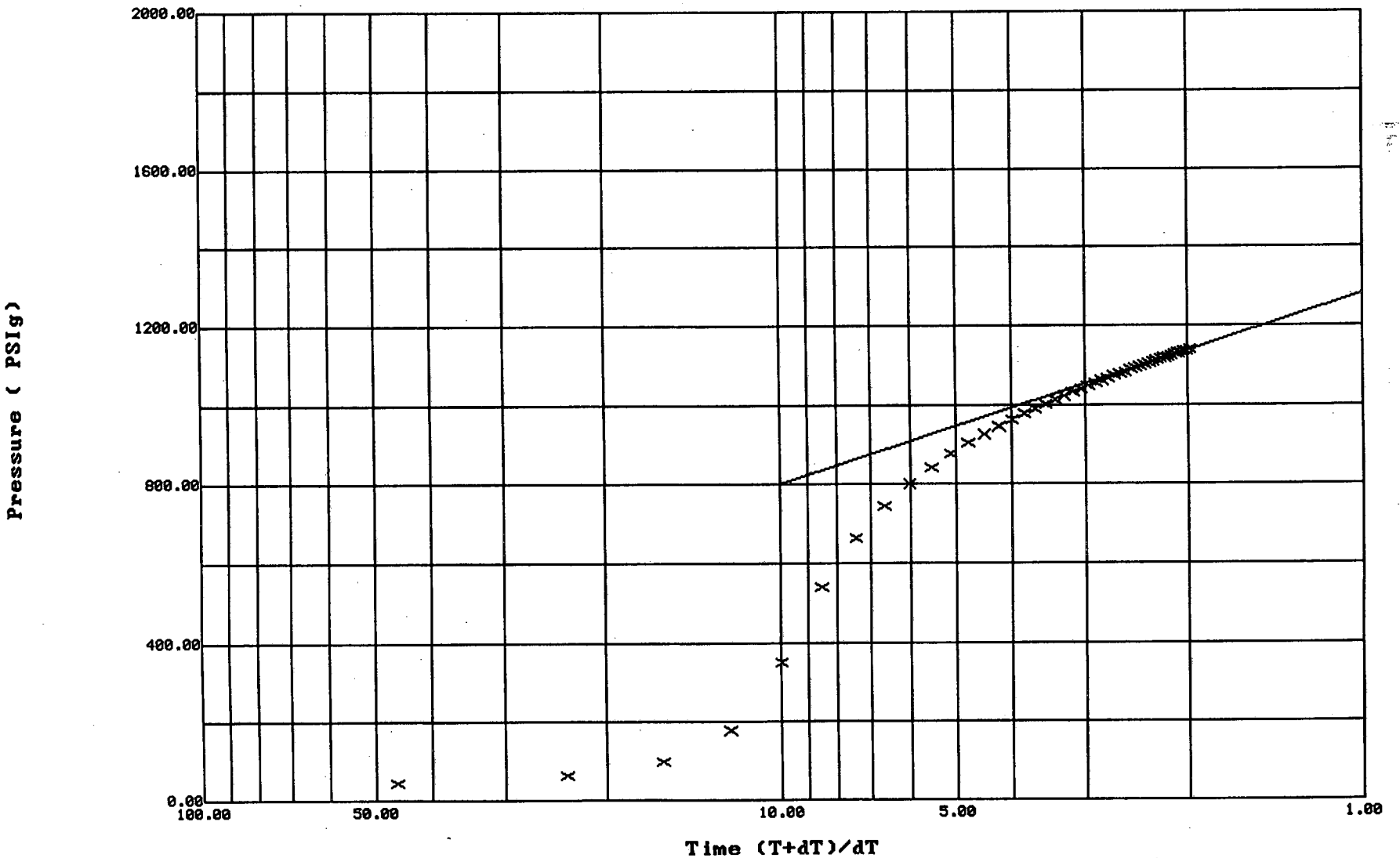
	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	14.00	833.3	784.9	104.89	7.3571	0.694
	15.00	856.9	808.5	104.97	6.9333	0.734
	16.00	877.4	829.0	105.04	6.5625	0.770
	17.00	895.2	846.7	105.06	6.2353	0.801
	18.00	910.6	862.2	105.06	5.9444	0.829
	19.00	924.4	876.0	105.06	5.6842	0.854
	20.00	937.0	888.5	105.13	5.4500	0.878
	21.00	948.2	899.8	105.21	5.2381	0.899
	22.00	958.3	909.9	105.20	5.0455	0.918
	23.00	967.8	919.3	105.28	4.8696	0.937
	24.00	976.4	928.0	105.34	4.7083	0.953
	25.00	984.3	935.9	105.40	4.5600	0.969
	26.00	991.6	943.2	105.42	4.4231	0.983
	27.00	998.4	950.0	105.48	4.2963	0.997
	28.00	1004.9	956.4	105.51	4.1786	1.010
	29.00	1010.9	962.5	105.57	4.0690	1.022
	30.00	1016.5	968.1	105.59	3.9667	1.033
	31.00	1021.9	973.5	105.65	3.8710	1.044
	32.00	1026.9	978.5	105.68	3.7812	1.055
	33.00	1031.8	983.4	105.72	3.6970	1.065
	34.00	1036.3	987.9	105.77	3.6176	1.074
	35.00	1040.7	992.3	105.79	3.5429	1.083
	36.00	1044.8	996.4	105.83	3.4722	1.092
	37.00	1048.8	1000.3	105.85	3.4054	1.100
	38.00	1052.5	1004.1	105.89	3.3421	1.108
	39.00	1056.1	1007.7	105.94	3.2821	1.115
	40.00	1059.6	1011.2	105.95	3.2250	1.123
	41.00	1062.9	1014.4	106.00	3.1707	1.130
	42.00	1066.0	1017.6	106.02	3.1190	1.136
	43.00	1069.1	1020.7	106.08	3.0698	1.143
****** End Shut-in 2	44.00	1072.0	1023.6	106.10	3.0227	1.149
****** Final Hydro.	282.00	1930.8	0.0	106.19		

Horner Plot: shut-in #1

8827 DST #2 NAU #1 J.O.Farmer Inc.

Slope: 479.9187 PSIg/cycle

Ext. Pressure: 1282.2687 PSIg

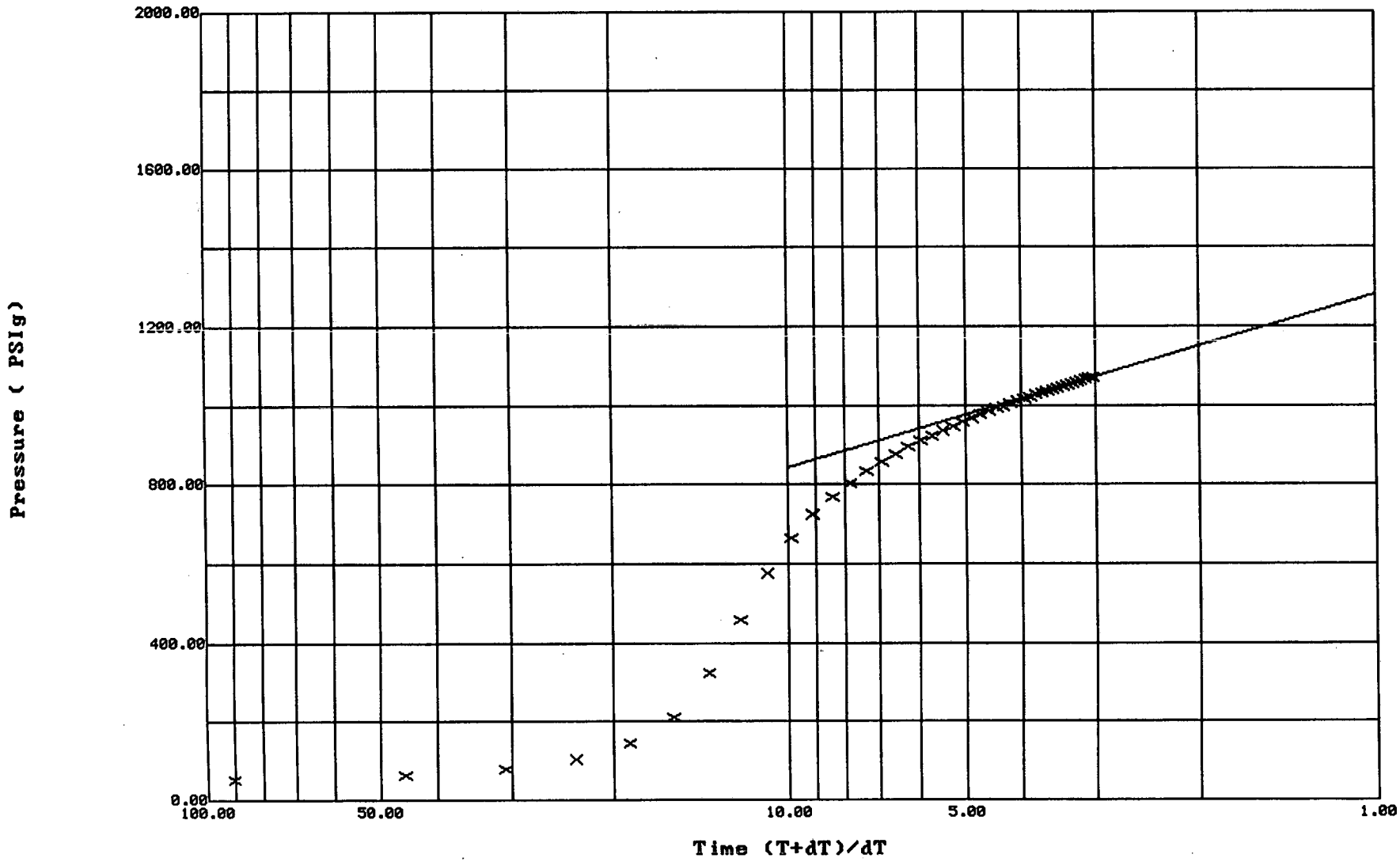


Horner Plot: shut-in #2

8827 DST #2 NAU #1 J.O.Farmer Inc.

Slope: 437.6327 PSIg/cycle

Ext. Pressure: 1282.2678 PSIg



*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: NAU #1

LOCATION : 6-13S-33W, Logan Cty KS

TICKET No. 8827 D.S.T. No. 2 DATE 12-20-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 20

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 20

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 40

D.C. ABOVE TOOLS.Stands4 Single Total 250

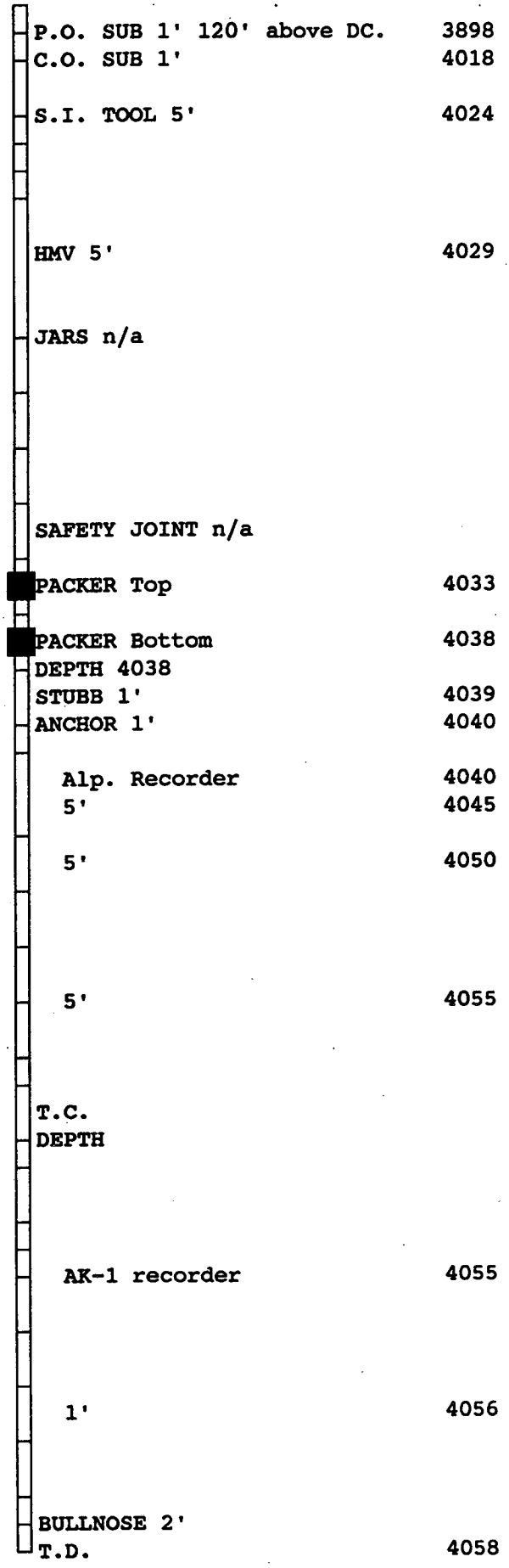
D.P. ABOVE TOOLS.Stands60 Single 1 Total 3794

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4084

TOTAL DEPTH 4058

TOTAL DRILL PIPE ABOVE K.B. 26

REMARKS:



TRILOBITE TESTING L.L.C.

OPERATOR : J. O. Farmer Inc DATE 12/20/95
WELL NAME: NAU #1 KB 3049.00 ft TICKET NO: 8828 DST #3
LOCATION : 6-13S-33W, Logan Cty KS GR 3044.00 ft FORMATION: Lansing "I"
INTERVAL : 4154.00 To 4184.00 ft TD 4184.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	30	Rec.	13339	13339	13276		
SI	30	Range(Psi)	4000.0	4000.0	0.0	0.0	0.0
SF	30	Clock(hrs)	AK-1	AK-1	AK-1		
FS	30	Depth(ft)	4170.0	4170.0	4180.0	0.0	0.0

TIME DATA----------
PF Fr. 2202 to 2232 hr
IS Fr. 2232 to 2302 hr
SF Fr. 2302 to 2332 hr
FS Fr. 2332 to 0002 hr

	Field	1	2	3	4
A. Init Hydro	2143.0	2128.0	0.0	0.0	0.0
B. First Flow	52.0	67.0	0.0	0.0	0.0
B1. Final Flow	52.0	67.0	0.0	0.0	0.0
C. In Shut-in	1060.0	1062.0	0.0	0.0	0.0
D. Init Flow	62.0	83.0	0.0	0.0	0.0
E. Final Flow	62.0	78.0	0.0	0.0	0.0
F. Fl Shut-in	1020.0	1022.0	0.0	0.0	0.0
G. Final Hydro	2123.0	2119.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 2030 hr
T ON BOTM 2200 hr
T OPEN 2202 hr
T PULLED 0002 hr
T OUT 0130 hr

RECOVERY
Tot Fluid 10.00 ft of 10.00 ft in DC and 0.00 ft in DP
10.00 ft of Drilling mud

TOOL DATA----------

Tool Wt.	0.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	70000.00 lbs
Initial Str Wt	62000.00 lbs
Unseated Str Wt	62000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	250.00 ft
D.P. Length	3889.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA----------

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	44.00 S/L
W.L.	8.40 in3
F.C.	0.00 in
Mud Drop	

BLOW DESCRIPTION

Initial Flow -
Surface blow built to .25", died back to surface

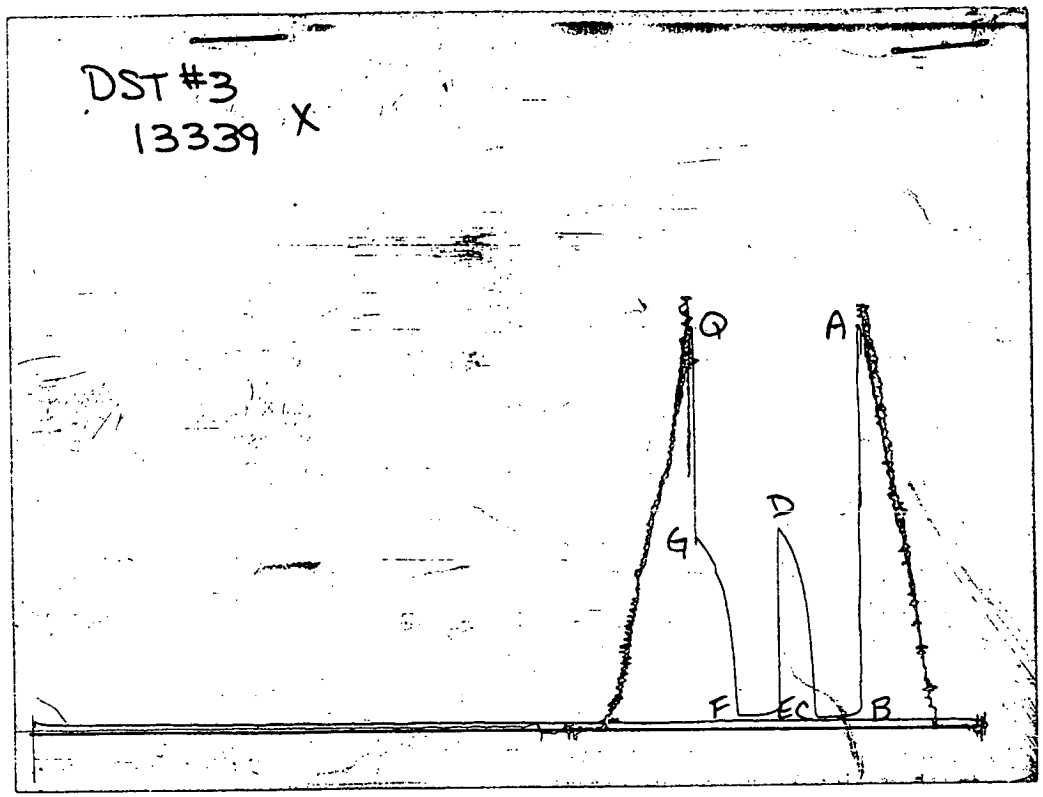
Final Flow -
Surge at open, no return blow

Amt. of fill	0.00 ft
Btm. H. Temp.	112.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Rod Steinbrink
Co. Rep.	J O Farmer IV
Contr.	Mallard
Rig #	1
Unit #	
Pump T.	

SAMPLES:
SENT TO:

Test Successful: Y

CHART PAGE



This is an actual photograph of recorder chart

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TRILOBITE TESTING L.L.C.

OPERATOR : J. O. Farmer Inc DATE 12/21/95
WELL NAME: NAU #1 KB 3049.00 ft TICKET NO: 8829 DST #4
LOCATION : 6-13S-33W, Logan Cty KS GR 3044.00 ft FORMATION: Lansing "K"
INTERVAL : 4210.00 To 4248.00 ft TD 4248.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins			Field	1	2	3	4
PF	30	Rec.	13339	13339	13276		
SI	30	Range(Psi)	4000.0	4000.0	0.0	0.0	0.0
SF	30	Clock(hrs)	AK-1	AK-1	AK-1		
FS	30	Depth(ft)	4235.0	4235.0	4245.0	0.0	0.0

TIME DATA----------
PF Fr. 1309 to 1339 hr
IS Fr. 1339 to 1409 hr
SF Fr. 1409 to 1439 hr
FS Fr. 1439 to 1509 hr

	Field	1	2	3	4
A. Init Hydro	2173.0	2177.0	0.0	0.0	0.0
B. First Flow	41.0	56.0	0.0	0.0	0.0
B1. Final Flow	41.0	56.0	0.0	0.0	0.0
C. In Shut-in	1100.0	1100.0	0.0	0.0	0.0
D. Init Flow	52.0	75.0	0.0	0.0	0.0
E. Final Flow	52.0	75.0	0.0	0.0	0.0
F. Fl Shut-in	1080.0	1092.0	0.0	0.0	0.0
G. Final Hydro	2123.0	2121.0	0.0	0.0	0.0
Inside/Outside	I	I	O		

T STARTED 1130 hr
T ON BOTM 1307 hr
T OPEN 1309 hr
T PULLED 1509 hr
T OUT 1640 hr

RECOVERY
Tot Fluid 60.00 ft of 60.00 ft in DC and 0.00 ft in DP
60.00 ft of Drilling mud

TOOL DATA----------

Tool Wt.	0.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	0.00 lbs
Initial Str Wt	0.00 lbs
Unseated Str Wt	0.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	250.00 ft
D.P. Length	3952.00 ft

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/
Vis.	52.00 S/L
W.L.	9.60 in3
F.C.	0.00 in
Mud Drop	
Amt. of fill	0.00 ft
Btm. H. Temp.	117.00 F
Hole Condition	
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	
Tool Chased	
Tester	Rod Steinbrink
Co. Rep.	J O Farmer IV
Contr.	Mallard
Rig #	1
Unit #	
Pump T.	

BLOW DESCRIPTION

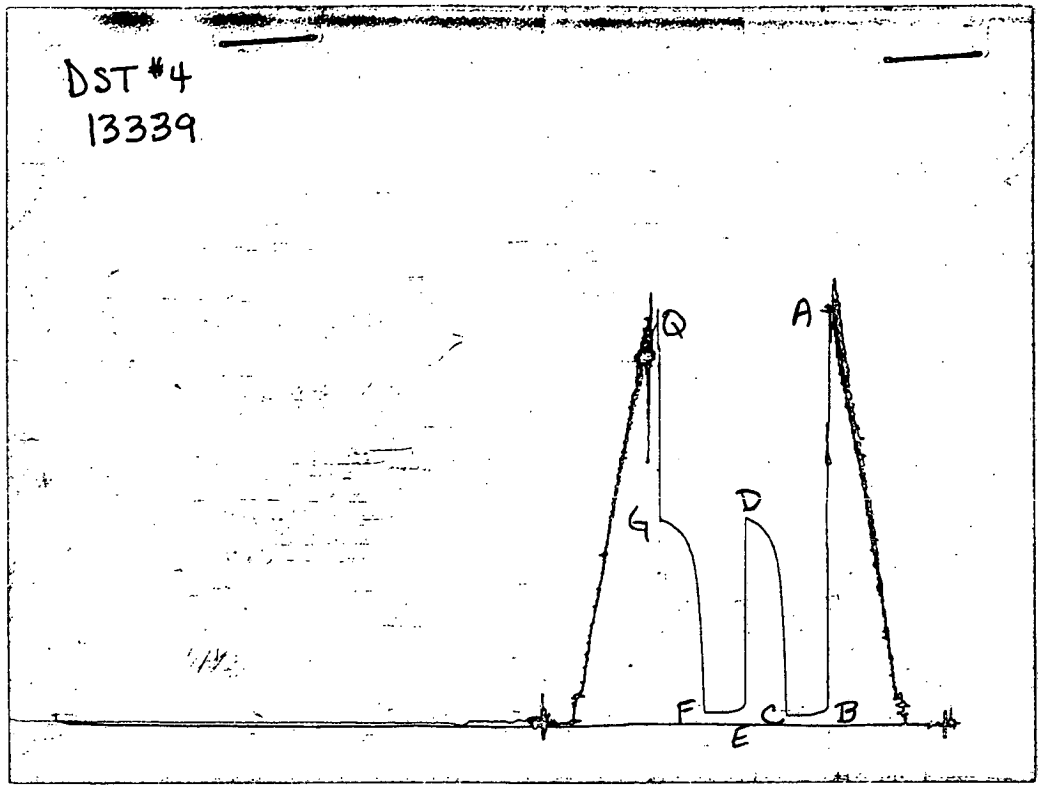
Initial Flow -
Weak .25" blow decreased to surface
at final

Final Flow -
Surge at open, no return blow

SAMPLES:
SENT TO:

Test Successful: Y

CHART PAGE



This is an actual photograph of recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : J.O.Farmer Inc. DATE 12-23-95
WELL NAME: NAU #1 KB 3049.00 ft TICKET NO: 8830 DST #5
LOCATION : 6-13S-33W, Logan Cty KS GR 3044.00 ft FORMATION: Johnson Zn
INTERVAL : 4516.00 To 4562.00 ft TD 4562.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	30	Rec.	13339	13339	2346		
SI	60	Range(Psi)	4025.0	4025.0	4995.0	0.0	0.0
SF	60	Clock(hrs)	AK-1	AK-1	Alp		
FS	90	Depth(ft)	4526.0	4526.0	4517.0	0.0	0.0

TIME DATA----------
PF Fr. 0130 to 0200 hr
IS Fr. 0200 to 0300 hr
SF Fr. 0300 to 0400 hr
FS Fr. 0400 to 0530 hr

	Field	1	2	3	4
A. Init Hydro	2303.0	2302.0	2288.0	0.0	0.0
B. First Flow	62.0	62.0	21.0	0.0	0.0
B1. Final Flow	62.0	62.0	30.0	0.0	0.0
C. In Shut-in	155.0	156.0	146.0	0.0	0.0
D. Init Flow	72.0	69.0	28.0	0.0	0.0
E. Final Flow	72.0	69.0	37.0	0.0	0.0
F. Fl Shut-in	155.0	156.0	145.0	0.0	0.0
G. Final Hydro	2283.0	2287.0	2262.0	0.0	0.0
Inside/Outside	O	O	I		

T STARTED 2336 hr
T ON BOTM 0058 hr
T OPEN 0130 hr
T PULLED 0545 hr
T OUT 0745 hr

TOOL DATA----------

Tool Wt.	1800.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	70000.00 lbs
Initial Str Wt	62000.00 lbs
Unseated Str Wt	62000.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	250.00 ft
D.P. Length	4266.00 ft

RECOVERY
Tot Fluid 60.00 ft of 60.00 ft in DC and 0.00 ft in DP
60.00 ft of Drilling mud w/faint odor of gas

SALINITY 0.00 P.P.M. A.P.I. Gravity 0.00

MUD DATA----------

Mud Type	Chemical
Weight	9.30 lb/
Vis.	54.00 S/L
W.L.	12.00 in3
F.C.	0.00 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	117.00 F
Hole Condition	Good
% Porosity	0.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00
Cushion Type	
Reversed Out	N
Tool Chased	N
Tester	Rod Steinbrink
Co. Rep.	J.O.Farmer IV
Contr.	Mallard
Rig #	#1
Unit #	
Pump T.	

BLOW DESCRIPTION
Initial Flow - Weak blow, died in 9 min

Rotated Tool 5 times -
Surface blow slowly built to 10"

Rotated 5 -
Bled off blow, no return

Rotated 4 -
Tool torqued up, rotated to left,
surface blow built to bottom in 17 min

Rotated 5 -
Bled off blow, no return

SAMPLES:
SENT TO:

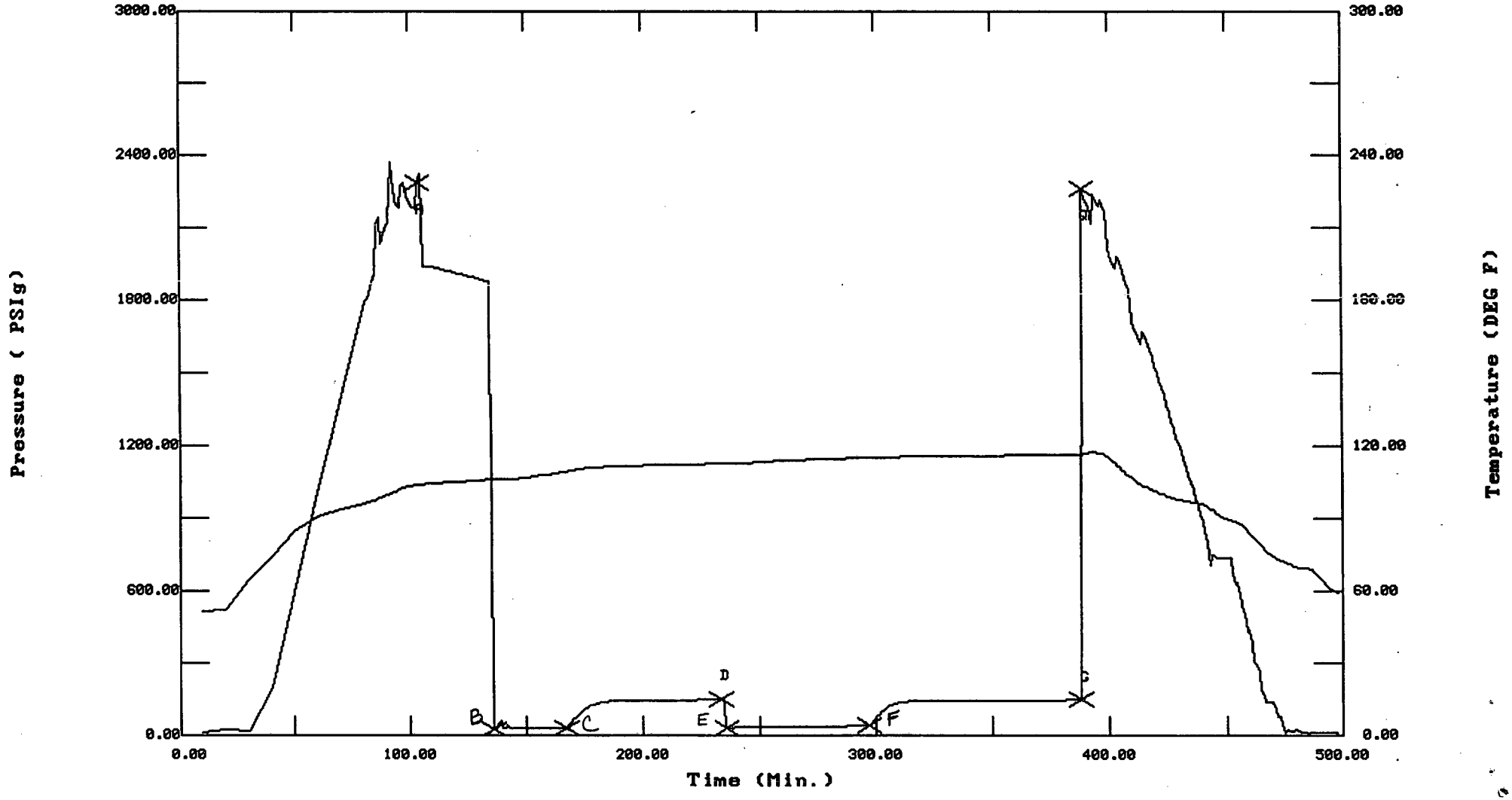
Test Successful: Y

TEST HISTORY

8830 DST #5 NAU #1 J.O.Farmer Inc.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2287.61
B:	0.00	21.23
C:	31.00	29.95
D:	67.00	145.77
E:	0.00	28.19
F:	61.00	37.34
G:	91.00	144.85
Q:	0.00	2262.10



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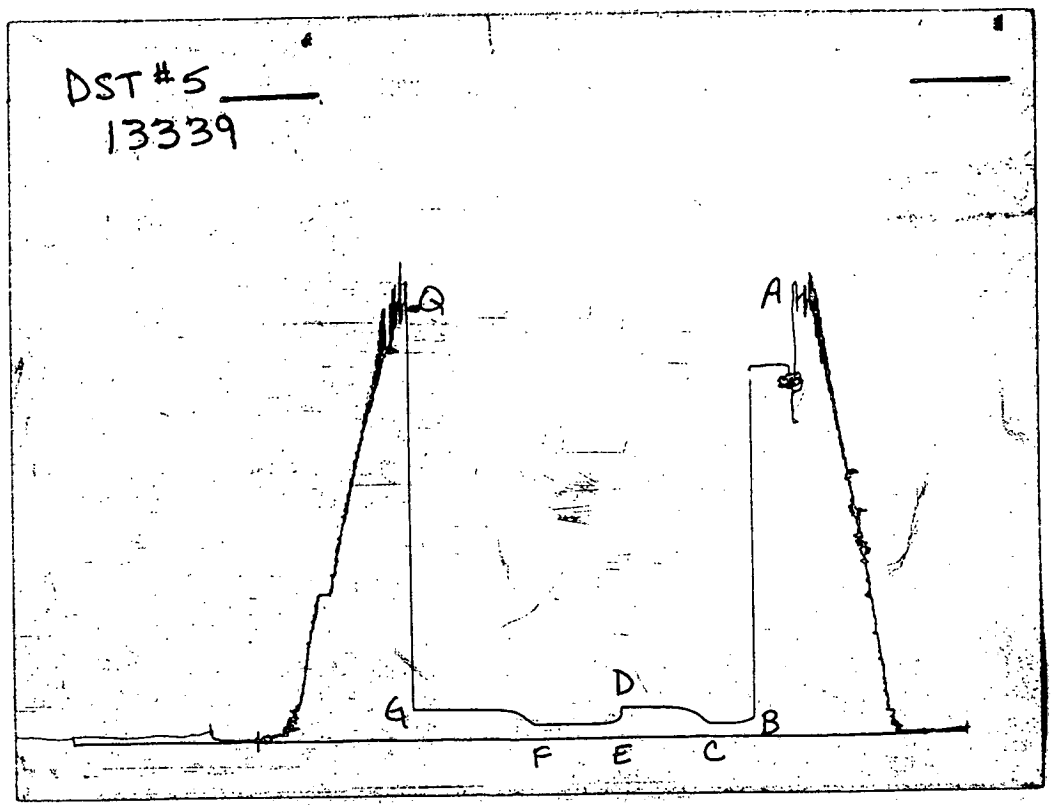

This is an actual photograph of recorder chart

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
****** Initial Hydro.	104.00	2287.6	0.0	103.72		
****** Start Flow 1	0.00	21.2	0.0	105.99		
	1.00	23.9	2.7	106.00		
	2.00	44.1	22.8	105.98		
	3.00	56.9	35.7	105.98		
	4.00	27.9	6.6	105.96		
	5.00	28.9	7.6	105.98		
	6.00	39.0	17.8	106.00		
	7.00	26.8	5.6	106.04		
	8.00	29.0	7.8	106.09		
	9.00	25.3	4.1	106.16		
	10.00	26.3	5.0	106.26		
	11.00	27.0	5.8	106.35		
	12.00	26.7	5.5	106.46		
	13.00	26.8	5.5	106.58		
	14.00	26.8	5.6	106.70		
	15.00	27.2	6.0	106.84		
	16.00	27.4	6.2	106.98		
	17.00	27.6	6.4	107.12		
	18.00	27.7	6.5	107.27		
	19.00	28.1	6.9	107.43		
	20.00	27.9	6.6	107.61		
	21.00	28.2	7.0	107.82		
	22.00	28.5	7.3	107.90		
	23.00	28.7	7.5	107.90		
	24.00	28.7	7.5	108.00		
	25.00	28.9	7.6	108.18		
	26.00	29.0	7.8	108.36		
	27.00	29.2	8.0	108.53		
	28.00	29.2	8.0	108.67		
	29.00	29.4	8.1	108.84		
	30.00	29.4	8.1	109.00		
****** End Flow 1	31.00	30.0	8.7	109.19		
****** Start Shutin 1	0.00	30.0	0.0	109.19	0.0000	0.001
	1.00	37.4	7.5	109.40	32.0000	0.001
	2.00	50.3	20.3	109.59	16.5000	0.003
	3.00	61.9	32.0	109.79	11.3333	0.004
	4.00	72.3	42.3	109.94	8.7500	0.005
	5.00	81.8	51.9	110.11	7.2000	0.007
	6.00	90.1	60.2	110.28	6.1667	0.008
	7.00	98.0	68.1	110.40	5.4286	0.01
	8.00	104.7	74.8	110.53	4.8750	0.011
	9.00	110.8	80.8	110.63	4.4444	0.012
	10.00	116.1	86.2	110.74	4.1000	0.013
	11.00	121.0	91.1	110.83	3.8182	0.015
	12.00	125.1	95.2	110.92	3.5833	0.016
	13.00	128.7	98.7	110.99	3.3846	0.017
	14.00	131.4	101.5	111.03	3.2143	0.017
	15.00	133.8	103.8	111.13	3.0667	0.018
	16.00	135.6	105.7	111.18	2.9375	0.018
	17.00	137.2	107.3	111.26	2.8235	0.019

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	18.00	138.4	108.4	111.30	2.7222	0.019
	19.00	139.6	109.6	111.35	2.6316	0.019
	20.00	140.4	110.4	111.40	2.5500	0.020
	21.00	141.2	111.2	111.43	2.4762	0.020
	22.00	141.7	111.7	111.46	2.4091	0.020
	23.00	142.2	112.2	111.49	2.3478	0.020
	24.00	142.4	112.5	111.52	2.2917	0.020
	25.00	142.8	112.8	111.55	2.2400	0.020
	26.00	143.0	113.1	111.61	2.1923	0.020
	27.00	143.2	113.2	111.62	2.1481	0.020
	28.00	143.3	113.4	111.68	2.1071	0.021
	29.00	143.6	113.6	111.70	2.0690	0.021
	30.00	143.6	113.6	111.71	2.0333	0.021
	31.00	143.6	113.7	111.74	2.0000	0.021
	32.00	143.7	113.8	111.74	1.9688	0.021
	33.00	143.7	113.8	111.78	1.9394	0.021
	34.00	143.7	113.8	111.83	1.9118	0.021
	35.00	143.8	113.9	111.83	1.8857	0.021
	36.00	143.9	113.9	111.87	1.8611	0.021
	37.00	143.9	113.9	111.89	1.8378	0.021
	38.00	144.0	114.0	111.91	1.8158	0.021
	39.00	144.0	114.0	111.92	1.7949	0.021
	40.00	144.1	114.1	111.96	1.7750	0.021
	41.00	144.1	114.1	111.98	1.7561	0.021
	42.00	144.1	114.2	111.99	1.7381	0.021
	43.00	144.2	114.2	112.02	1.7209	0.021
	44.00	144.3	114.3	112.03	1.7045	0.021
	45.00	144.4	114.4	112.07	1.6889	0.021
	46.00	144.4	114.4	112.07	1.6739	0.021
	47.00	144.4	114.4	112.10	1.6596	0.021
	48.00	144.5	114.5	112.13	1.6458	0.021
	49.00	144.5	114.5	112.14	1.6327	0.021
	50.00	144.5	114.5	112.16	1.6200	0.021
	51.00	144.5	114.5	112.17	1.6078	0.021
	52.00	144.5	114.5	112.22	1.5962	0.021
	53.00	144.5	114.6	112.25	1.5849	0.021
	54.00	144.6	114.6	112.26	1.5741	0.021
	55.00	144.7	114.8	112.30	1.5636	0.021
	56.00	144.7	114.8	112.29	1.5536	0.021
	57.00	144.8	114.9	112.33	1.5439	0.021
	58.00	144.9	114.9	112.34	1.5345	0.021
	59.00	144.9	114.9	112.38	1.5254	0.021
	60.00	145.1	115.1	112.41	1.5167	0.021
	61.00	145.1	115.1	112.42	1.5082	0.021
	62.00	145.1	115.1	112.44	1.5000	0.021
	63.00	145.1	115.1	112.47	1.4921	0.021
	64.00	145.1	115.2	112.51	1.4844	0.021
	65.00	145.1	115.2	112.53	1.4769	0.021
	66.00	145.4	115.5	112.59	1.4697	0.021
****** End Shut-in 1	67.00	145.8	115.8	112.59	1.4627	0.021

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
****** Start Flow 2	0.00	28.2	0.0	112.63		
	1.00	29.0	0.8	112.62		
	2.00	30.0	1.8	112.63		
	3.00	30.3	2.1	112.63		
	4.00	30.7	2.5	112.63		
	5.00	31.0	2.8	112.63		
	6.00	31.2	3.0	112.63		
	7.00	31.1	2.9	112.65		
	8.00	31.5	3.4	112.73		
	9.00	31.8	3.6	112.85		
	10.00	32.0	3.8	112.94		
	11.00	32.2	4.0	113.01		
	12.00	32.9	4.7	113.10		
	13.00	32.7	4.5	113.18		
	14.00	33.0	4.8	113.25		
	15.00	33.0	4.8	113.32		
	16.00	33.2	5.0	113.39		
	17.00	33.2	5.0	113.44		
	18.00	33.5	5.3	113.50		
	19.00	33.7	5.5	113.55		
	20.00	33.6	5.4	113.61		
	21.00	33.6	5.4	113.67		
	22.00	34.1	5.9	113.69		
	23.00	34.7	6.5	113.75		
	24.00	33.3	5.1	113.78		
	25.00	34.2	6.0	113.83		
	26.00	34.8	6.6	113.88		
	27.00	34.1	5.9	113.92		
	28.00	34.7	6.5	113.96		
	29.00	34.6	6.4	114.00		
	30.00	34.6	6.4	114.04		
	31.00	34.9	6.7	114.08		
	32.00	34.7	6.5	114.12		
	33.00	34.8	6.6	114.15		
	34.00	35.1	6.9	114.20		
	35.00	35.0	6.8	114.23		
	36.00	35.2	7.0	114.27		
	37.00	35.1	6.9	114.32		
	38.00	35.3	7.1	114.34		
	39.00	35.7	7.5	114.37		
	40.00	35.4	7.2	114.40		
	41.00	35.7	7.5	114.44		
	42.00	35.5	7.3	114.47		
	43.00	35.9	7.7	114.52		
	44.00	35.9	7.7	114.56		
	45.00	35.9	7.7	114.59		
	46.00	35.9	7.7	114.63		
	47.00	35.9	7.7	114.65		
	48.00	36.2	8.0	114.70		
	49.00	36.2	8.1	114.73		
	50.00	36.6	8.4	114.75		
	51.00	36.3	8.1	114.79		

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	52.00	36.7	8.5	114.83		
	53.00	36.7	8.5	114.86		
	54.00	37.0	8.8	114.90		
	55.00	36.9	8.7	114.92		
	56.00	37.1	8.9	114.99		
	57.00	37.0	8.8	115.00		
	58.00	37.2	9.0	115.00		
	59.00	37.2	9.0	115.00		
	60.00	37.4	9.2	115.01		
****** End Flow 2	61.00	37.3	9.1	115.01		
****** Start Shutin 2	0.00	37.3	0.0	115.01	0.0000	0.001
	1.00	47.9	10.6	115.01	93.0000	0.002
	2.00	61.2	23.8	115.03	47.0000	0.004
	3.00	72.9	35.6	115.06	31.6667	0.005
	4.00	83.4	46.1	115.10	24.0000	0.007
	5.00	93.2	55.8	115.16	19.4000	0.009
	6.00	102.0	64.6	115.20	16.3333	0.010
	7.00	109.2	71.8	115.24	14.1429	0.012
	8.00	115.8	78.5	115.26	12.5000	0.013
	9.00	121.1	83.8	115.29	11.2222	0.015
	10.00	125.1	87.8	115.33	10.2000	0.016
	11.00	128.7	91.3	115.35	9.3636	0.017
	12.00	131.7	94.3	115.37	8.6667	0.017
	13.00	134.1	96.8	115.41	8.0769	0.018
	14.00	135.9	98.5	115.43	7.5714	0.018
	15.00	137.4	100.0	115.44	7.1333	0.019
	16.00	138.3	101.0	115.48	6.7500	0.019
	17.00	139.1	101.8	115.49	6.4118	0.019
	18.00	139.9	102.6	115.51	6.1111	0.020
	19.00	140.3	103.0	115.54	5.8421	0.020
	20.00	140.7	103.4	115.55	5.6000	0.020
	21.00	141.1	103.7	115.57	5.3810	0.020
	22.00	141.4	104.1	115.57	5.1818	0.020
	23.00	141.6	104.2	115.59	5.0000	0.020
	24.00	141.8	104.5	115.61	4.8333	0.020
	25.00	142.0	104.7	115.62	4.6800	0.020
	26.00	142.1	104.7	115.64	4.5385	0.020
	27.00	142.3	105.0	115.66	4.4074	0.020
	28.00	142.4	105.1	115.66	4.2857	0.020
	29.00	142.6	105.3	115.67	4.1724	0.020
	30.00	142.6	105.3	115.68	4.0667	0.020
	31.00	142.7	105.4	115.70	3.9677	0.020
	32.00	142.8	105.5	115.70	3.8750	0.020
	33.00	142.8	105.5	115.71	3.7879	0.020
	34.00	142.9	105.5	115.73	3.7059	0.020
	35.00	143.0	105.7	115.74	3.6286	0.020
	36.00	143.0	105.7	115.75	3.5556	0.020
	37.00	143.0	105.7	115.75	3.4865	0.020
	38.00	143.0	105.6	115.78	3.4211	0.020
	39.00	143.1	105.8	115.79	3.3590	0.020
	40.00	143.1	105.8	115.81	3.3000	0.020

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
	41.00	143.1	105.8	115.82	3.2439	0.020
	42.00	143.0	105.7	115.83	3.1905	0.020
	43.00	143.3	106.0	115.84	3.1395	0.021
	44.00	143.3	106.0	115.85	3.0909	0.021
	45.00	143.4	106.0	115.87	3.0444	0.021
	46.00	143.5	106.1	115.87	3.0000	0.021
	47.00	143.5	106.1	115.90	2.9574	0.021
	48.00	143.6	106.2	115.90	2.9167	0.021
	49.00	143.6	106.2	115.91	2.8776	0.021
	50.00	143.6	106.2	115.93	2.8400	0.021
	51.00	143.6	106.3	115.93	2.8039	0.021
	52.00	143.6	106.3	115.95	2.7692	0.021
	53.00	143.7	106.4	115.96	2.7358	0.021
	54.00	143.7	106.4	115.97	2.7037	0.021
	55.00	143.8	106.5	115.97	2.6727	0.021
	56.00	143.8	106.5	115.99	2.6429	0.021
	57.00	143.9	106.5	116.00	2.6140	0.021
	58.00	144.0	106.6	116.01	2.5862	0.021
	59.00	144.0	106.6	116.03	2.5593	0.021
	60.00	144.0	106.6	116.04	2.5333	0.021
	61.00	143.9	106.5	116.06	2.5082	0.021
	62.00	143.9	106.5	116.07	2.4839	0.021
	63.00	144.1	106.8	116.07	2.4603	0.021
	64.00	144.1	106.8	116.09	2.4375	0.021
	65.00	144.1	106.7	116.10	2.4154	0.021
	66.00	144.2	106.9	116.11	2.3939	0.021
	67.00	144.2	106.9	116.12	2.3731	0.021
	68.00	144.2	106.9	116.13	2.3529	0.021
	69.00	144.3	107.0	116.15	2.3333	0.021
	70.00	144.4	107.1	116.16	2.3143	0.021
	71.00	144.4	107.1	116.18	2.2958	0.021
	72.00	144.4	107.1	116.20	2.2778	0.021
	73.00	144.3	107.0	116.21	2.2603	0.021
	74.00	144.3	107.0	116.22	2.2432	0.021
	75.00	144.5	107.1	116.23	2.2267	0.021
	76.00	144.5	107.1	116.24	2.2105	0.021
	77.00	144.5	107.1	116.27	2.1948	0.021
	78.00	144.6	107.2	116.27	2.1795	0.021
	79.00	144.6	107.3	116.29	2.1646	0.021
	80.00	144.6	107.3	116.30	2.1500	0.021
	81.00	144.6	107.3	116.32	2.1358	0.021
	82.00	144.7	107.4	116.33	2.1220	0.021
	83.00	144.7	107.4	116.33	2.1084	0.021
	84.00	144.7	107.4	116.34	2.0952	0.021
	85.00	144.8	107.5	116.36	2.0824	0.021
	86.00	144.8	107.5	116.36	2.0698	0.021
	87.00	144.9	107.6	116.37	2.0575	0.021
	88.00	144.9	107.6	116.40	2.0455	0.021
	89.00	144.9	107.6	116.41	2.0337	0.021
	90.00	144.9	107.6	116.42	2.0222	0.021
***** End Shut-in 2	91.00	144.9	107.5	116.42	2.0110	0.021

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: 8830 DST #5 NAU #1 J.O.Farmer Inc.

DATE: 12/22/95 TIME: 23:16:52

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P^2/10^6
****** Final Hydro.	389.00	2262.1	0.0	116.54		

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: NAU #1

LOCATION : 6-13S-33W, Logan Cty KS

TICKET No. 8830 D.S.T. No. 5 DATE 12-23-95

TOTAL TOOL TO BOTTOM OF TOP PACKERS 20

INTERVAL TOOL 18

BOTTOM PACKERS AND ANCHOR .....

TOTAL TOOL 38

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single 1 Total 31

TOTAL ASSEMBLY 69

D.C. ABOVE TOOLS.Stands4 Single Total 250

D.P. ABOVE TOOLS.Stands68 Single Total 4266

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4585

TOTAL DEPTH 4562

TOTAL DRILL PIPE ABOVE K.B. 23

REMARKS:

P.O. SUB 1' 120' above DC.	4373
C.O. SUB 1'	4493
S.I. TOOL 5'	4499
HMV 5'	4504
JARS n/a	
SAFETY JOINT n/a	
PACKER Top	4508
PACKER Bottom	4513
DEPTH 4513	
STUBB 1'	4514
ANCHOR	
Alpine recorder	4517
5'	4519
5'	4524
AK-1 recorder	4526
3'	4527
T.C.	
DEPTH	
1' CO.	4528
31' DP.	4559
1' CO.	4560
BULLNOSE 2'	
T.D.	4562