

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

Operator: License # 4058

Name: American Warrior, Inc.

Address P.O. Box 399

City/State/Zip Garden City, KS 67846

Purchaser: KGS

Operator Contact Person: Kevin Wiles, Sr.

Phone (316) 275-2963

Contractor: Name: Duke Drilling

License: 5929

Wellsite Geologist: Allan Downing

Designate Type of Completion

New Well  Re-Entry  Workover

Oil  SWD  S10W  Temp. Abd.  
 Gas  ENHR  SIGW  
 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  PBTB  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_

1-28-97 2-7-97 2-19-97  
Spud Date Date Reached TD Completion Date

API NO. 15- 033209240000

County Comanche

110'S C-E/2-SE Sec. 33 Twp. 32 Rge. 19  <sup>E</sup> <sub>W</sub>

550 Feet from  N (circle one) Line of Section

330 Feet from  W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
NE,  SE, NW or SW (circle one)

Lease Name Nielson Well # 1-33

Field Name Wildcat

Producing Formation Mississippian

Elevation: Ground 1917 KB 1930

Total Depth 5400' PBTB 5359'

Amount of Surface Pipe Set and Cemented at 650 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from \_\_\_\_\_

feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cat.

Drilling Fluid Management Plan ALT I 97 2-26-98  
(Data must be collected from the Reserve Pit)

Chloride content 48,000 ppm Fluid volume 200 bbls

Dewatering Method Used \_\_\_\_\_

Location of fluid disposal if hauled offsite:

OCT 13 1997  
10-13-97  
Operator Name \_\_\_\_\_

Lease Name WICHITA KS 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 attached 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 Kevin Wiles

Title Production Manager Date 10-9-97

Subscribed and sworn to before me this 9th day of October 1997.

Notary Public Debra J. Purcell

Date Commission Expires 11-11-99

Debra J. Purcell  
NOTARY PUBLIC  
State of Kansas  
MY APPT. EXPIRES 11-11-99

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

Operator Name American Warrior, Inc. Lease Name Nielson Well # 1-33

Sec. 33 Twp. 32 Rge. 19  East  West  
 County Comanche

**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.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Huebner	4173	-2243
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Toronto	4194	-2264
List All E.Logs Run:		Lansing	4368	-2438
Dual Induction		KC A	4708	-2777
Compresation Density/Netron		KC B	4772	-2842
Micro log		Marm.	4894	-2985
		Pawnee	4960	-3030
		Fort Scott	5000	-3070
		Cherokee	5012	-3082
		Miss.	5092	-3162

**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"	23#	650	Halliburton	250	2% CC
Production	7-7/8"	5-1/2"	17#	5398	Midcon	200	5% CA Gell Haid 322

**ADDITIONAL CEMENTING/SQUEEZE RECORD**

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> 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
2	5168 - 5172	1500 gallons 15%	5168
2	5222 - 5228	MCA	
2	5266 - 5272		5272

**TUBING RECORD** Size 2-3/8" Set At 5140' Packer At 5144' Liner Run  Yes  No

Date of First, Resumed Production, SWD or Inj. March 1997 Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		500			

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: 5168 -  
5272'



**HALLIBURTON ENERGY SERVICES**  
HAL-1906-P

CHARGE TO:  
**AMERICAN Warrior**

ADDRESS

CITY, STATE, ZIP CODE

CUSTOMER COPY

TICKET

No.

**218931 - 9**

PAGE 1 OF 2

1. SERVICE LOCATIONS <b>PRHT 25555</b>	WELL/PROJECT NO. <b>1-33</b>	LEASE <b>Neilson</b>	COUNTY/PARISH <b>Comanche</b>	STATE <b>KS</b>	CITY/OFFSHORE LOCATION	DATE <b>2-8-97</b>	OWNER <b>Same</b>
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR <b>Duke Drly</b>	RIG NAME/NO. <b>#7</b>	SHIPPED VIA <b>CT</b>	DELIVERED TO <b>Location</b>	ORDER NO.
3.	WELL TYPE <b>0.1</b>	WELL CATEGORY <b>01</b>	JOB PURPOSE <b>Dev 01</b>	WELL PERMIT NO. <b>15-033-20924000</b>	WELL LOCATION <b>Land</b>		
4.	REFERRAL LOCATION	INVOICE INSTRUCTIONS					

PRICE REFERENCE	SECONDARY REFERENCE/PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.	U/M	QTY.	U/M	UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
000-117		1			MILEAGE	160 mi		1		299	47840
001-016		1			Pump Charge	6 hrs	5400 ft				195000
030-016		1			5W AL PLW 6	1 ea	5 1/2 in				6000
40	806.60022	1			Centralizers	4 ea				6000	24000
12A	825.205	1			Guide Shoe	1 ea					12100
24A	815.19251	1			Insert Float Valve	1 ea					13100
27	815.19313	1			Auto Fillup Tube	1 ea					6900
018-317		1			Super Flush	10 sks	420 gal			10000	100000
314-163		1			CIAFIX II	2 gal				2800	5600
000-119		1			Crew Mileage	160 mi				160	25600

**LEGAL TERMS:** Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.

MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X *[Signature]*

DATE SIGNED **2-8-97** TIME SIGNED **0200**  A.M.  P.M.

do  do not require IPC (Instrument Protection).  Not offered

SUB SURFACE SAFETY VALVE WAS:  
 PULLED & RETURN  PULLED  RUN

TYPE LOCK DEPTH

BEAN SIZE SPACERS

TYPE OF EQUALIZING SUB. CASING PRESSURE

TUBING SIZE TUBING PRESSURE WELL DEPTH

TREE CONNECTION TYPE VALVE

**SURVEY** AGREE UN-DECIDED DIS-AGREE

OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?

WE UNDERSTOOD AND MET YOUR NEEDS?

OUR SERVICE WAS PERFORMED WITHOUT DELAY?

WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?

ARE YOU SATISFIED WITH OUR SERVICE?  
 YES  NO

CUSTOMER DID NOT WISH TO RESPOND

PAGE TOTAL **436140**

FROM CONTINUATION PAGE(S) **586215**

SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE **1022355**

**CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES** The customer hereby acknowledges receipt of the materials and services listed on this ticket.

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) <i>Kate Wiles</i>	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) X <i>[Signature]</i>	HALLIBURTON OPERATOR/ENGINEER <i>[Signature]</i> PRO201	EMP # <b>85826</b>	HALLIBURTON APPROVAL
------------------------------------------------------------------	------------------------------------------------------------------	------------------------------------------------------------	-----------------------	----------------------



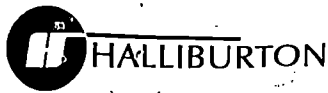
**JOB LOG** HAL-2013-C

DATE **2-8-97** PAGE NO. **1**

CUSTOMER **AMERICAN WARRIOR** WELL NO. **1-33** LEASE **Nelson** JOB TYPE **Longstring** TICKET NO. **218931**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1800							Called out
	2330							On Location Laying Down P...
	0300							Run FLOAT EQUIPMENT <sup>Insert</sup> Float
								Centralizers #2-#8-#12-#16
	0700							Casing on Bottom
	0715							Hook up To Well
	0730							Circulate Hole
	07							Shut Down
	0750	7	20			300		PUMP CIAFIX WATER
	0755	7	3			300		PUMP SPACER
	0756	7	10			350		PUMP SuperFLYSH
	0757	7	3			350		PUMP SPACER
	0800	7	0			-		Start Mixing light cement
	0805	3	4.5			-		PLUG Rathole
	0808	3	3.0			-		plug Mousehole
	0810		0			2000		Start Cement Downhole
	0812		7.6			200		Start Mixing Tail Cmt
	0820		44.2			200		Finish Mixing
			-					Wash out PUMP & LINES
			-					Release PLUG
	0828	9	0			200		Start Displacement
	0830	9	80			200		Cement on Bottom
	0835	2	122			600		Decrease Rate
	0840	2	125.3			1000		Land Plug
	0842					1200		PRESSURE UP on PLUG
	0845							Release PRESSURE
								FLOAT HELD
								Wash up
	0900							Job Complete
								THANKS
								Glen, Kevin, Robert

ORIGINAL



# JOB SUMMARY

HALLIBURTON DIVISION MED COU  
HALLIBURTON LOCATION PRATT KS

BILLED ON TICKET NO. 218931

WELL DATA  
FIELD \_\_\_\_\_ SEC. 33 TWP. 32S RNG. 19W COUNTY Comanche STATE KS

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	4	17 #	5 1/2"	KB	5279	
LINER						
TUBING						
OPEN HOLE			7 7/8"	5379	5400	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

### JOB DATA

CALLLED OUT DATE	ON LOCATION DATE	JOB STARTED DATE	JOB COMPLETED DATE
2-7-97	2-7	2-8	2-8-97
TIME 18 00	TIME 03 30	TIME 03 00	TIME 09 00

### TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR <u>INSCT 5 1/2"</u>	<u>1</u>	<u>HES</u>
FLOAT SHOE		
GUIDE SHOE <u>RCG 5 1/2"</u>	<u>1</u>	<u>"</u>
CENTRALIZERS <u>S-4 5 1/2"</u>	<u>4</u>	<u>"</u>
BOTTOM PLUG		
TOP PLUG <u>SWAL 5 1/2"</u>	<u>1</u>	<u>"</u>
HEAD <u>Manifold 5 1/2"</u>	<u>1</u>	<u>"</u>
PACKER		
OTHER		

### PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION

### MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL (API)  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL (API)  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 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 2 gal CLIPTEX II - 2061  
 OTHER \_\_\_\_\_

**ORIGINAL**

DEPARTMENT Cement  
 DESCRIPTION OF JOB 5 1/2" hang string  
 JOB DONE THRU: TUBING  CASING  ANNULUS  TBG./ANN.   
 CUSTOMER REPRESENTATIVE X [Signature]  
 HALLIBURTON OPERATOR [Signature] COPIES REQUESTED \_\_\_\_\_

### CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	<u>50</u>	<u>HLC</u>		<u>B</u>		<u>1.71</u>	<u>15.1</u>
	<u>150</u>	<u>1-4-2</u>	<u>STD</u>	<u>B</u>	<u>59 (100) 1570 LR 72 (100) 5 1/2" L. 400, 5 1/2" H. 101375, 1075 FT</u>	<u>1.57</u>	<u>13.95</u>

### 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 19 REASON 56.00 JF

### SUMMARY

### VOLUMES

PRESLUSH: BBL.-GAL. 20.10 TYPE Clif. x 500  
 LOAD & BKDN: BBL.-GAL. 8.82 (4900) PAD: BBL.-GAL. \_\_\_\_\_  
 TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL: BBL.-GAL. 12.5  
 CEMENT SLURRY: BBL.-GAL. 51.8  
 TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_

### REMARKS

CUSTOMER Anderson Warren  
LEASE McLison  
WELL NO. 1-33  
JOB TYPE 1-33  
DATE \_\_\_\_\_



**HALLIBURTON ENERGY SERVICES**  
HAL-1906-P

CHARGE TO:  
**AMERICAN Warrior**

ADDRESS

CITY, STATE, ZIP CODE

CUSTOMER COPY

TICKET

No.

**21893**

PAGE  
1 | 2

1. SERVICE LOCATIONS <b>PRATT 25555</b>	WELL/PROJECT NO. <b>1-33</b>	LEASE <b>Neilson</b>	COUNTY/PARISH <b>Comanche</b>	STATE <b>KS</b>	CITY/OFFSHORE LOCATION	DATE <b>2-8-97</b>	OWNER <b>Same</b>
2. TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR <b>Duke Drilg</b>	RIG NAME/NO. <b>#7</b>	SHIPPED VIA <b>CT</b>	DELIVERED TO <b>Location</b>	ORDER NO.	
3. WELL TYPE <b>0,1</b>	WELL CATEGORY <b>01</b>	WELL PURPOSE <b>Dev 01</b>	WELL PERMIT NO. <b>15-033-20924000</b>	WELL LOCATION <b>Lead</b>			
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE	AMOUNT
		LOC	ACCT	DF		U/M	U/M		
000-117		1			MILEAGE	160 mi	1	299	4784
001-016		1			Pump Charge	6 hrs	5400 ft		19500
030-016		1			5W AL PLW 6	1 eq			6000
40	806.60022	1			Centralizers	4 eq		6000	2400
12A	825.205	1			Guide Shoe	1 eq			1210
24A	815.19251	1			Insert Float Valve	1 eq			1310
27	815.19313	1			Auto Fillup Tube	1 eq			690
018-317		1			Super Flush	10 sks	420 gal	10000	10000
314-163		1			CIAFIX II	2 gal		2800	560
000-119		1			CRW Mileage	160 mi		160	2560

ORIGINAL

COPY

<b>LEGAL TERMS:</b> Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, <b>PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY</b> provisions.  MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS  X <i>[Signature]</i> DATE SIGNED <b>2-8-97</b> TIME SIGNED <b>0200</b> <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M. <input type="checkbox"/> do <input type="checkbox"/> do not require IPC (Instrument Protection). <input type="checkbox"/> Not offered	SUB SURFACE SAFETY VALVE WAS: <input type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN TYPE LOCK DEPTH BEAN SIZE SPACERS TYPE OF EQUALIZING SUB. CASING PRESSURE TUBING SIZE TUBING PRESSURE WELL DEPTH TREE CONNECTION TYPE VALVE	<b>SURVEY</b> AGREED TO IS-DECIDED, AGREE. OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN? WE UNDERSTOOD AND MET YOUR NEEDS? OUR SERVICE WAS PERFORMED WITHOUT DELAY? WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY? ARE YOU SATISFIED WITH OUR SERVICE? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND	FROM CONTINUATION PAGE(S) SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE	PAGE TOTAL <b>43614</b>  <b>58621</b>  <b>102235</b>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------	---------------------------------------------------------------------

**CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES** The customer hereby acknowledges receipt of the materials and services listed on this ticket.

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT) | CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) | HALLIBURTON OPERATOR/ENGINEER | EMP # | HALLIBURTON APPROVAL



# HALLIBURTON JOB SUMMARY

HALLIBURTON DIVISION 2122  
 HALLIBURTON LOCATION PAATHI KS

BILLED ON TICKET NO. 218931

## WELL DATA

FIELD \_\_\_\_\_ SEC. 33 TWP. 30S RING. 19W COUNTY Comanche STATE KS

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
 INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	4	17 1/2"	58'	KB	4200'	
LINER						
TUBING						
OPEN HOLE					5400'	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

## JOB DATA

CALLER OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>2-7-97</u>	DATE <u>2-7</u>	DATE <u>2-8</u>	DATE <u>2-8-97</u>
TIME <u>18 00</u>	TIME <u>23 30</u>	TIME <u>03 00</u>	TIME <u>09 00</u>

## TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR <u>1 INCH 5 1/2"</u>	<u>1</u>	<u>HES</u>
FLOAT SHOE		
GUIDE SHOE <u>RCG 5 1/2"</u>	<u>1</u>	<u>"</u>
CENTRALIZERS <u>S-3 5 1/2"</u>	<u>4</u>	<u>"</u>
BOTTOM PLUG		
TOP PLUG <u>SWAL 5 1/2"</u>	<u>1</u>	<u>"</u>
HEAD <u>Manifold 5 1/2"</u>	<u>1</u>	<u>"</u>
PACKER		
OTHER		

## PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<b>ORIGINAL</b>		

## 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 2 gal CLAFIX II 2066L  
 OTHER \_\_\_\_\_

DEPARTMENT Cement  
 DESCRIPTION OF JOB 5 1/2" Long string  
 JOB DONE THRU: TUBING  CASING  ANNULUS  TBG./ANN.   
 CUSTOMER REPRESENTATIVE X [Signature]  
 HALLIBURTON OPERATOR [Signature] COPIES REQUESTED \_\_\_\_\_

## CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
	<u>50</u>	<u>HLC</u>		<u>B</u>			
	<u>150</u>	<u>EA 2</u>	<u>STD</u>	<u>B</u>	<u>5% C-100 5% A-100 3% B-100 5# 65L</u>	<u>1.71</u>	<u>15.1</u>
					<u>HALAD 322 18% 5-17</u>	<u>1.37</u>	<u>15.4</u>

## PRESSURES IN PSI

## SUMMARY

## VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESLUSH: BBL.-GAL. \_\_\_\_\_ TYPE \_\_\_\_\_  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ SPAD: BBL.-GAL. \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL. BBL.-GAL. 12.5  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN \_\_\_\_\_ CEMENT SLURRY: BBL.-GAL. 51.8  
 HYDRAULIC HORSEPOWER \_\_\_\_\_ TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 CEMENT LEFT IN PIPE \_\_\_\_\_  
 FEET 111 REASON SI

## REMARKS

**JOB LOG** HAL-2013-C

 CUSTOMER **AMERICAN WARRIOR** WELL NO. **1-33** LEASE **Nelson** JOB TYPE **Longstring** TICKET NO. **218931**

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1800							Called out
	2330							On Location
	0300							Run FLOAT EQUIPMENT
								Centralizers #2 #8 #12 #16
	0700							Casing on Bottom
	0715							Hook up To Well
	0730							Circulate Hole
	07							Shot Down
	0750	7	20			300		PUMP CLAFIX WATER
	0755	7	3			300		PUMP SPACER
	0756	7	10			350		PUMP SuperFLYSH
	0759	7	3			350		PUMP SPACER
	0800	7	0			-		Start Mixing light Cement
	0805	3	4.5			-		PLUG Rathole
	0808	3	3.0			-		PLUG Mousehole
	0810		0			20000		Start Cement Downhole
	0812		7.6			200		Start Mixing Tail CNT
	0820		44.2			200		Finish Mixing
			-			-		wash out PUMP & LINES
			-			-		Release PLUG
	0828	9	0			200		Start Displacement
	0830	9	80			200		Cement on Bottom
	0835	2	122			600		Decrease Rate
	0840	2	125.3			1000		Land Plug
	0842					1200		PRESSURE UP on PLUG
	0845							RELEASE PRESSURE
								FLOAT HELD
								Wash up
	0900							Job Complete
								THANKS
								Glen, Kevin, Robert

ORIGINAL



ORIGINAL



REMIT TO:  
P.O. BOX 951046  
DALLAS, TX 75395-1046  
Corporate FIN 73-0271280

INVOICE

**HALLIBURTON ENERGY SERVICES**  
A Division of Halliburton Company

INVOICE NO.	DATE
106473	01/29/1997

WELL LEASE NO./PROJECT		WELL/PROJECT LOCATION		STATE	OWNER	
NEILSON 1-33		COMANCHE		KS	SAME	
SERVICE LOCATION		CONTRACTOR	JOB PURPOSE		TICKET DATE	
LIBERAL		DUKE DRILLING	CEMENT SURFACE CASING		01/29/1997	
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA		FILE NO.
018808	H A MOORE			COMPANY TRUCK		19748

ORIGINAL

AMERICAN WARRIOR  
BOX 399  
GARDEN CITY, KS 67846

DIRECT CORRESPONDENCE TO:  
P O BOX 1598  
LIBERAL KS 67901

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
000-117	MILEAGE CEMENTING ROUND TRIP	200	MI	2.99	598.00
		1	UNT		
000-119	MILEAGE FOR CREW	200	MI	1.60	320.00
		1	UNT		
001-016	CEMENTING CASING	652	FT	915.00	915.00
		1	UNT		
030-018	CEMENTING PLUG 5W, PLASTIC TOP	8 5/8	IN	130.00	130.00
		1	EA		
-24A	INSERT FLOAT VALVE - 8 5/8" BRD	1	EA	221.00	221.00
815.19502					
27	FILL-UP UNIT 7"- 8 5/8"	1	EA	64.00	64.00
815.19415					
019-200	PIPE 1"	100	FT	1.50	150.00
011-205	MISCELLANEOUS PUMPING JOBS	500	PSI	910.00	910.00
		1	UNT		
011-234	MISC JOBS NON PUMPING TIME	2	HR	170.00	340.00
		1	UNT		
504-281	MIDCON-2 PREMIUM CEMENT	175	SK	16.03	2,805.25
504-043	CEMENT - PREMIUM	60	SK	13.70	822.00
506-105	POZMIX A	2960	LB	.073	216.08
506-121	HALLIBURTON-GEL 2%	2	LB	.00	N/C
509-406	ANHYDROUS CALCIUM CHLORIDE	8	SK	40.75	326.00
507-210	FLOCELE	113	LB	1.65	186.45
500-207	BULK SERVICE CHARGE	308	CFT	1.35	415.80
500-306	MILEAGE CMTG MAT DEL OR RETURN	1532.48	TMI	1.05	1,609.10
504-043	CEMENT - PREMIUM	150	SK	13.70	2,055.00
509-406	ANHYDROUS CALCIUM CHLORIDE	4	SK	40.75	163.00
500-306	MILEAGE CMTG MAT DEL OR RETURN RD	546	TMI	1.05	573.30
500-225	CEMENTING MATERIALS RETURNED	20	%	16.03	320.60
500-207	BULK SERVICE CHARGE	258	CFT	1.35	348.30
500-306	MILEAGE CMTG MAT DEL OR RETURN	1379.36	TMI	1.05	1,448.33

\*\*\*\*\* CONTINUED ON NEXT PAGE \*\*\*\*\*

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.



# JOB SUMMARY

HALLIBURTON DIVISION

HALLIBURTON LOCATION

THIS CONTINUED

LIBERAL KS.

BILLED ON TICKET NO.

106473

FIELD \_\_\_\_\_ SEC. **33** TWP. **32S** RNG. **19W** COUNTY **COMMANCHE** STATE **KS.**

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_  
 INITIAL PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 PRESENT PROD: OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD  
 COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
 PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
 BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
 MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	N	24	8 7/8	KB	652	
LINER						
TUBING						
OPEN HOLE			12 1/4 KB		654	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

### JOB DATA

TOOLS AND ACCESSORIES			
TYPE AND SIZE	QTY.	MAKE	
ELOAT COLLAR <b>8 7/8</b>			
<b>INSERT</b>	1	A	
<b>Fillup</b>	1		
GUIDE SHOE		O	
CENTRALIZERS			
BOTTOM PLUG		W	
TOP PLUG <b>SW</b>	1		
HEAD		C	
PACKER			
OTHER		O	

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <b>1-28-97</b>	DATE <b>1-29-97</b>	DATE <b>1-29-97</b>	DATE <b>1-29-97</b>
TIME <b>2:00</b>	TIME <b>0300</b>	TIME <b>0935</b>	TIME <b>1700</b>

### PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<b>T. Broadfoot</b>	<b>420045</b>	<b>LIBERAL KS.</b>
<b>J. Nicholas</b>	<b>52947</b>	<b>"</b>
<b>B. McIntire</b>	<b>50866</b>	<b>Alton KS.</b>
<b>S. Telford</b>	<b>50737</b>	<b>"</b>

**MATERIALS**

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. °API  
 DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL. °API  
 PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
 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 \_\_\_\_\_

# ORIGINAL

DEPARTMENT **Cement**  
 DESCRIPTION OF JOB **CMT 8 7/8 SURFACE CSG.**

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

CUSTOMER REPRESENTATIVE **[Signature]**  
 HALLIBURTON OPERATOR **[Signature]** COPIES REQUESTED \_\_\_\_\_

### CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
1	175	MIDCON 2 PREM		B	3% C.C. 1/2" SK FLOCELE	2.17	12.5
1	100	40/60002 PREM		B	3% C.C. 1/4" SK FLOCELE	1.28	14.3
1	125	PREM		B	3% C.C.	1.18	15.6
1	25	PREM		B		1.18	15.6

### PRESSURES IN PSI

### SUMMARY

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESLURRY: **5** GAL. TYPE **N2O**  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ PAD: BBL.-GAL.  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BBL.-GAL. \_\_\_\_\_ DISPL. **38.7** GAL.  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN \_\_\_\_\_ CEMENT SLURRY: **67-23** GAL.  
 HYDRAULIC HORSEPOWER \_\_\_\_\_ TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 FEET **43.14** CEMENT LEFT IN PIPE \_\_\_\_\_ REASON **SABE JT.**

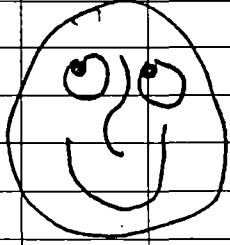
### REMARKS

**M.S.D.S. ON LOCT**  
**PREM-5 BBL CMT PIT 23 SKS.**  
**HEAD TO 1" TOP OUT**  
**CMT TO TOP OF G.L.**

CUSTOMER: AMERICAN WARRIOR  
 LEASE: NEILSON  
 WELL NO.: 1-33  
 JOB TYPE: 8 7/8 SURFACE  
 DATE: 1-29-97

**JOB LOG** HAL-2013-C

CUSTOMER <b>AMERICAN WARRIOR</b>	WELL NO. <b>1-33</b>	LEASE <b>NEILSON</b>	JOB TYPE <b>8 7/8 SURFACE</b>	TICKET NO. <b>106473</b>
-------------------------------------	-------------------------	-------------------------	----------------------------------	-----------------------------

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	2400							<b>ORIGINAL</b>  <div style="text-align: right; font-size: small; opacity: 0.5;"> RECEIVED  FEB 26 9 28 AM  OPERATION DIVISION  HALLIBURTON </div>
	0300							
	0730							
	0840							HOOK UP CMT LEAD
	0925							No CIRCULATION TO PIT - SAFETY MEET
	0935							HOOK UP CMT LINE
	0937					2500		PRESSURE TEST LINES
	0939	3.3	5			40		START A/O SPACER
	0941	3.3	67			?		START LEAD CMT 12.5 <sup>2</sup> / <sub>1</sub> GAL
	1001	3.3	23			80		START TRAIL CMT 14.3 <sup>1</sup> / <sub>1</sub> GAL
	1008	0	0			0		SHUT OFF DROP PLUG.
	1011	2.8	28			0		START DISPLACEMENT A/O
	1021	2	10.7			180		SLOW RATE 38.7 TOTAL BBL
	1026	—	—			700		PLUG LANDED - FLOAT HELD NEVER HAD CIRCULATION & FLUID STAYED 20' BELOW GROUND LEVEL CALLED 1" CMT OUT - HUGOTON KS.
	1130							
								
								<p>THANKS FOR CALLING.</p> <p>HALLIBURTON ENERGY SERVICES</p> <p>LI BERAC</p> <p>HAVE A GOOD DAY</p> <p>BROADFOOT - NICHOLAS - MCINTYRE</p> <p>MSSS ON LOCT.</p> <p>GROUND LEVEL</p> <p>RBL 5 CMT PIT - 23 SKS</p>
	1430							1" CMT ON LOCT. - RUN 1" TG 80 FT
	1520	1.2	26			300		FROM G.L. TAGGED - PUMPED 125 SKS H
	1545							CMT TO SURFACE - WAIT TO OUT C.C.
	1655	1	5					Pumped 25 SKS TO OUT
	1700							JOB OVER -

ORIGINAL

15-033-20924

**WELL NAME:** Nielson # 1-33  
**COMPANY:** American Warrior  
**LOCATION:** Sec. 33 Twp. 32S Rge. 19W  
Comanche County Kansas  
**DATE:** 2/07/97

TRILOBITE TESTING L.L.C.

OPERATOR : American Warrior  
 WELL NAME: Nelson #1-33  
 LOCATION : 33-32s-19w Comanche KS  
 INTERVAL : 4701.00 To 4740.00 ft

DATE 2/4/97  
 KB 1930.00 ft TICKET NO: 9684 DST #1  
 GR 1917.00 ft FORMATION: Kansas City "A"  
 TD 4740.00 ft TEST TYPE: CONV

RECORDER DATA

Mins		Field	1	2	3	4	TIME DATA-----
PF	30	Rec.	11084	11084	2350		PF Fr. 1552 to 1622 hr
SI	60	Range(Psi )	4300.0	4300.0	4995.0	0.0	IS Fr. 1622 to 1722 hr
SF	30	Clock(hrs)	12hr.	12hr.	Elec.		SF Fr. 1722 to 1752 hr
FS	60	Depth(ft )	4734.0	4734.0	4709.0	0.0	FS Fr. 1752 to 1852 hr

	Field	1	2	3	4	
A. Init Hydro	2166.0	2319.0	2303.0	0.0	0.0	T STARTED 1346 hr
B. First Flow	186.0	204.0	192.0	0.0	0.0	T ON BOTM 1550 hr
B1. Final Flow	634.0	631.0	653.0	0.0	0.0	T OPEN 1552 hr
C. In Shut-in	1746.0	1721.0	1733.0	0.0	0.0	T PULLED 1852 hr
D. Init Flow	721.0	1717.0	692.0	0.0	0.0	T OUT 2130 hr
E. Final Flow	1013.0	1000.0	1010.0	0.0	0.0	
F. Fl Shut-in	1746.0	1722.0	1731.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2166.0	2266.0	2239.0	0.0	0.0	Tool Wt. 2100.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 25000.00 lbs
						Wt Pulled Loose 100000.00 lb
						Initial Str Wt 72000.00 lbs
						Unseated Str Wt 82000.00 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 243.00 ft
						D.P. Length 4463.00 ft

RECOVERY

Tot Fluid 2648.00 ft of 243.00 ft in DC and 1875.00 ft in DP  
 248.00 ft of Gas Cut Watery Mud  
 0.00 ft of 14% gas 10% oil 46% water 30% mud  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 SALINITY 70000.00 P.P.M. A.P.I. Gravity 0.00

BLOW DESCRIPTION

Initial Flow:  
 Strong blow, bottom of bucket in 30sec

Initial Shut In:

Bled down for 5 mins, built back to  
 Bottom in 15 mins

Final Flow:

Strong blow, bottom of bucket  
 instantly

Final Shut In:

Bled down for 15 mins, built back to  
 bottom of bucket

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type Chemical  
 Weight 9.20 lb/  
 Vis. 48.00 S/L  
 W.L. 9.50 in3  
 F.C. 0.32 in  
 Mud Drop N

Amt. of fill 0.00 ft  
 Btm. H. Temp. 127.00 F  
 Hole Condition GOOD  
 % Porosity 0.00  
 Packer Size 6.75 in  
 No. of Packers 2  
 Cushion Amt. 0.00  
 Cushion Type  
 Reversed Out  
 Tool Chased  
 Tester Darren Amerine  
 Co. Rep. Alan Downing  
 Contr. DUKE  
 Rig # 7  
 Unit #  
 Pump T.

Test Successful: Y

\*\*\* TOOL DIAGRAM \*\*\* CONV

WELL NAME: Nelson #1-33

LOCATION : Sec.33 Twp.32s Rge.19w

TICKET No. 9684 D.S.T. No. 1 DATE 2/4/97

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 27'

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 9'

TOTAL TOOL ..... 36'

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 30'

TOTAL ASSEMBLY ..... 66'

D.C. ABOVE TOOLS.Stands4 Single Total 243'

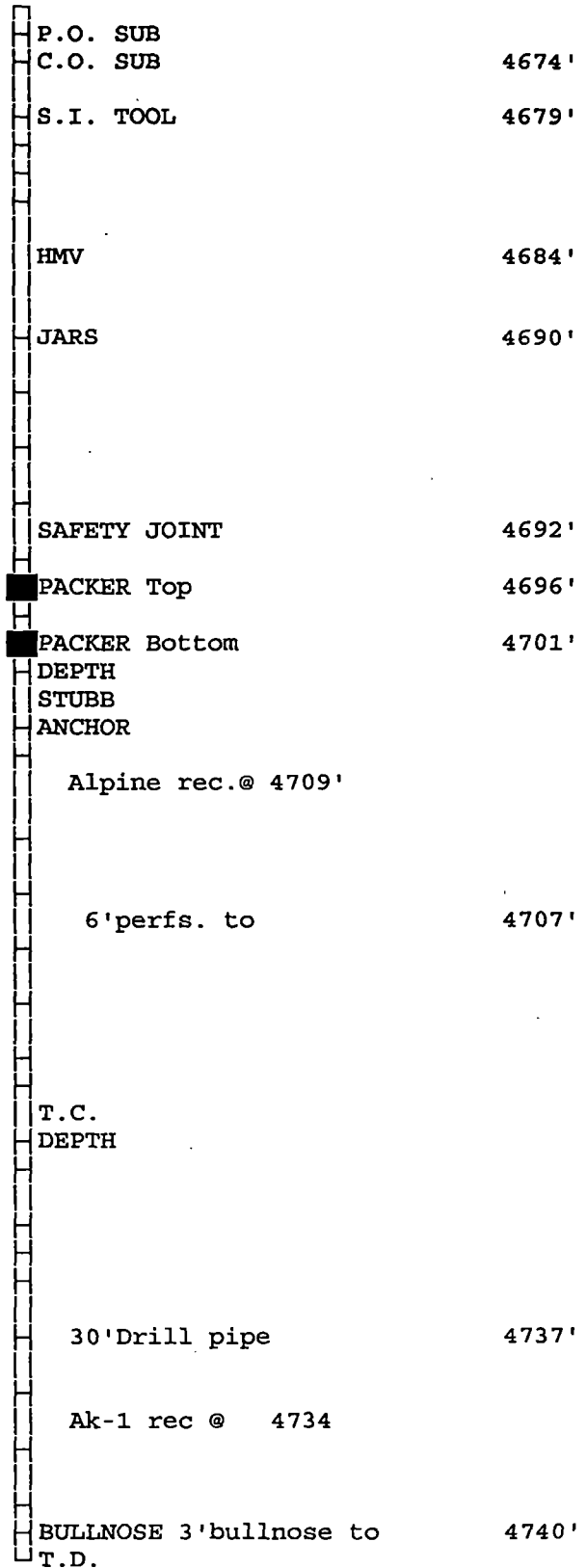
D.P. ABOVE TOOLS.Stands76 Single 1 Total 4463'

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 4772'

TOTAL DEPTH ..... 4740'

TOTAL DRILL PIPE ABOVE K.B. .... 32'

REMARKS:



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9684 American Warrior DST#1 Nelson 1-33

DATE: 02/04/97

TIME: 13:47:23

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	126.00	2303.2	0.0	101.77		
***** Start Flow 1	0.00	191.5	0.0	101.83		
	1.00	198.5	7.0	101.90		
	2.00	215.6	24.1	102.00		
	3.00	237.2	45.7	102.08		
	4.00	257.9	66.4	102.16		
	5.00	280.1	88.6	102.22		
	6.00	301.5	110.0	102.29		
	7.00	322.4	130.8	102.36		
	8.00	343.2	151.7	102.43		
	9.00	362.7	171.2	102.52		
	10.00	382.6	191.1	102.61		
	11.00	401.5	210.0	102.75		
	12.00	418.7	227.2	102.87		
	13.00	435.6	244.1	103.04		
	14.00	452.3	260.8	103.24		
	15.00	469.5	278.0	103.45		
	16.00	485.3	293.7	103.69		
	17.00	501.0	309.4	103.93		
	18.00	515.9	324.4	104.21		
	19.00	531.5	340.0	104.49		
	20.00	546.7	355.2	104.80		
	21.00	561.6	370.0	105.13		
	22.00	576.7	385.2	105.46		
	23.00	591.3	399.8	105.80		
	24.00	604.8	413.3	106.14		
	25.00	618.5	426.9	106.50		
	26.00	630.5	438.9	106.83		
	27.00	640.9	449.3	107.23		
***** End Flow 1	28.00	652.6	461.1	107.60		
***** Start Shutin 1	0.00	652.6	0.0	107.60	0.0000	0.426
	1.00	1119.7	467.1	107.98	29.0000	1.254
	2.00	1297.3	644.6	108.36	15.0000	1.683
	3.00	1365.2	712.5	108.75	10.3333	1.864
	4.00	1411.1	758.5	109.16	8.0000	1.991
	5.00	1447.7	795.0	109.54	6.6000	2.096
	6.00	1481.0	828.4	109.93	5.6667	2.193
	7.00	1504.9	852.3	110.30	5.0000	2.265
	8.00	1525.3	872.7	110.68	4.5000	2.327
	9.00	1542.8	890.1	111.03	4.1111	2.380
	10.00	1558.1	905.5	111.39	3.8000	2.428
	11.00	1571.5	918.9	111.70	3.5455	2.470
	12.00	1583.3	930.7	112.07	3.3333	2.507
	13.00	1593.9	941.3	112.40	3.1538	2.540
	14.00	1603.7	951.1	112.71	3.0000	2.572
	15.00	1612.5	959.9	113.00	2.8667	2.600
	16.00	1612.8	960.2	113.31	2.7500	2.601
	17.00	1619.6	967.0	113.60	2.6471	2.623
	18.00	1626.3	973.6	113.86	2.5556	2.645
	19.00	1633.0	980.4	114.13	2.4737	2.667
	20.00	1639.3	986.7	114.35	2.4000	2.687

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9684 American Warrior DST#1 Nelson 1-33

DATE: 02/04/97

TIME: 13:47:23

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
21.00	1644.6	991.9	114.63	2.3333	2.705
22.00	1649.6	997.0	114.86	2.2727	2.721
23.00	1654.5	1001.8	115.08	2.2174	2.737
24.00	1658.8	1006.2	115.29	2.1667	2.752
25.00	1662.9	1010.2	115.53	2.1200	2.765
26.00	1666.9	1014.3	115.73	2.0769	2.778
27.00	1670.7	1018.1	115.93	2.0370	2.791
28.00	1674.1	1021.5	116.12	2.0000	2.803
29.00	1677.5	1024.8	116.30	1.9655	2.814
30.00	1680.6	1027.9	116.50	1.9333	2.824
31.00	1683.7	1031.1	116.67	1.9032	2.835
32.00	1686.5	1033.9	116.81	1.8750	2.844
33.00	1689.3	1036.7	116.95	1.8485	2.854
34.00	1691.8	1039.2	117.10	1.8235	2.862
35.00	1694.2	1041.6	117.25	1.8000	2.870
36.00	1696.7	1044.1	117.39	1.7778	2.879
37.00	1698.9	1046.3	117.53	1.7568	2.886
38.00	1701.2	1048.6	117.65	1.7368	2.894
39.00	1703.2	1050.6	117.78	1.7179	2.901
40.00	1705.2	1052.5	117.89	1.7000	2.908
41.00	1707.1	1054.5	117.97	1.6829	2.914
42.00	1709.1	1056.5	118.10	1.6667	2.921
43.00	1710.8	1058.2	118.20	1.6512	2.927
44.00	1712.5	1059.9	118.31	1.6364	2.933
45.00	1714.4	1061.8	118.40	1.6222	2.939
46.00	1715.8	1063.2	118.47	1.6087	2.944
47.00	1717.3	1064.7	118.57	1.5957	2.949
48.00	1718.9	1066.3	118.65	1.5833	2.955
49.00	1720.3	1067.6	118.72	1.5714	2.959
50.00	1721.9	1069.2	118.80	1.5600	2.965
51.00	1723.0	1070.4	118.87	1.5490	2.969
52.00	1724.4	1071.8	118.95	1.5385	2.973
53.00	1725.7	1073.1	119.00	1.5283	2.978
54.00	1727.0	1074.4	119.07	1.5185	2.982
55.00	1728.1	1075.5	119.14	1.5091	2.986
56.00	1729.3	1076.7	119.20	1.5000	2.991
57.00	1730.4	1077.8	119.24	1.4912	2.994
58.00	1731.4	1078.8	119.31	1.4828	2.998
59.00	1732.4	1079.8	119.35	1.4746	3.001
60.00	1733.4	1080.8	119.41	1.4667	3.005
***** End Shut-in 1					
0.00	691.9	0.0	119.44		
1.00	699.4	7.5	119.43		
2.00	714.0	22.1	119.40		
3.00	728.8	36.9	119.38		
4.00	743.6	51.7	119.36		
5.00	757.4	65.5	119.36		
6.00	770.8	78.9	119.36		
7.00	783.7	91.8	119.37		
8.00	796.5	104.6	119.38		
9.00	808.2	116.3	119.41		
10.00	820.0	128.1	119.44		
***** Start Flow 2					



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9684 American Warrior DST#1 Nelson 1-33

DATE: 02/04/97

TIME: 13:47:23

	Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	11.00	832.0	140.1	119.49		
	12.00	843.7	151.8	119.54		
	13.00	854.5	162.7	119.60		
	14.00	865.7	173.8	119.65		
	15.00	876.0	184.1	119.72		
	16.00	887.0	195.1	119.80		
	17.00	897.2	205.3	119.89		
	18.00	908.0	216.1	119.97		
	19.00	917.5	225.6	120.06		
	20.00	927.3	235.4	120.14		
	21.00	937.1	245.2	120.25		
	22.00	946.9	255.0	120.34		
	23.00	956.4	264.5	120.45		
	24.00	965.5	273.6	120.55		
	25.00	974.6	282.7	120.63		
	26.00	983.5	291.6	120.75		
	27.00	992.0	300.1	120.84		
	28.00	1001.1	309.2	120.94		
***** End Flow 2	29.00	1009.8	317.9	121.05		
***** Start Shutin 2	0.00	1009.8	0.0	121.05	0.0000	1.020
	1.00	1288.2	278.4	121.13	58.0000	1.659
	2.00	1436.1	426.3	121.25	29.5000	2.062
	3.00	1484.0	474.2	121.36	20.0000	2.202
	4.00	1515.3	505.5	121.35	15.2500	2.296
	5.00	1538.5	528.7	121.61	12.4000	2.367
	6.00	1557.1	547.3	121.70	10.5000	2.425
	7.00	1572.3	562.5	121.82	9.1429	2.472
	8.00	1585.3	575.5	121.92	8.1250	2.513
	9.00	1596.2	586.4	122.01	7.3333	2.548
	10.00	1605.7	595.9	122.12	6.7000	2.578
	11.00	1614.1	604.3	122.20	6.1818	2.605
	12.00	1621.6	611.8	122.30	5.7500	2.630
	13.00	1628.3	618.5	122.37	5.3846	2.651
	14.00	1634.4	624.6	122.45	5.0714	2.671
	15.00	1639.9	630.0	122.52	4.8000	2.689
	16.00	1645.1	635.2	122.59	4.5625	2.706
	17.00	1649.8	639.9	122.65	4.3529	2.722
	18.00	1654.1	644.3	122.72	4.1667	2.736
	19.00	1658.2	648.4	122.79	4.0000	2.750
	20.00	1662.0	652.2	122.84	3.8500	2.762
	21.00	1665.5	655.7	122.92	3.7143	2.774
	22.00	1668.8	659.0	122.98	3.5909	2.785
	23.00	1672.2	662.4	123.02	3.4783	2.796
	24.00	1675.0	665.2	123.06	3.3750	2.806
	25.00	1677.8	668.0	123.12	3.2800	2.815
	26.00	1680.5	670.7	123.14	3.1923	2.824
	27.00	1683.1	673.3	123.19	3.1111	2.833
	28.00	1685.3	675.5	123.23	3.0357	2.840
	29.00	1687.8	678.0	123.28	2.9655	2.849
	30.00	1690.0	680.2	123.24	2.9000	2.856
	31.00	1692.1	682.2	123.33	2.8387	2.863

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: #9684 American Warrior DST#1 Nelson 1-33

DATE: 02/04/97

TIME: 13:47:23

	Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
	32.00	1694.2	684.3	123.36	2.7812	2.870
	33.00	1696.1	686.3	123.38	2.7273	2.877
	34.00	1698.0	688.2	123.41	2.6765	2.883
	35.00	1699.7	689.9	123.43	2.6286	2.889
	36.00	1701.5	691.6	123.45	2.5833	2.895
	37.00	1703.1	693.2	123.47	2.5405	2.900
	38.00	1704.6	694.8	123.49	2.5000	2.906
	39.00	1706.4	696.6	123.50	2.4615	2.912
	40.00	1707.8	698.0	123.50	2.4250	2.917
	41.00	1709.3	699.5	123.54	2.3902	2.922
	42.00	1710.8	701.0	123.55	2.3571	2.927
	43.00	1712.0	702.2	123.57	2.3256	2.931
	44.00	1713.3	703.5	123.56	2.2955	2.935
	45.00	1714.6	704.8	123.57	2.2667	2.940
	46.00	1715.7	705.9	123.60	2.2391	2.944
	47.00	1717.0	707.2	123.59	2.2128	2.948
	48.00	1718.2	708.4	123.60	2.1875	2.952
	49.00	1719.3	709.5	123.60	2.1633	2.956
	50.00	1720.3	710.5	123.61	2.1400	2.960
	51.00	1721.4	711.6	123.61	2.1176	2.963
	52.00	1722.4	712.6	123.63	2.0962	2.967
	53.00	1723.4	713.6	123.62	2.0755	2.970
	54.00	1724.5	714.7	123.60	2.0556	2.974
	55.00	1725.3	715.5	123.61	2.0364	2.977
	56.00	1726.4	716.6	123.61	2.0179	2.980
	57.00	1727.3	717.5	123.63	2.0000	2.984
	58.00	1728.1	718.3	123.59	1.9828	2.986
	59.00	1728.9	719.1	123.60	1.9661	2.989
	60.00	1729.8	720.0	123.61	1.9500	2.992
***** End Shut-in 2	61.00	1730.7	720.9	123.62	1.9344	2.995
***** Final Hydro.	308.00	2239.2	0.0	123.61		

# TEST HISTORY

#9684 American Warrior DST#1 Nelson 1-33

## Flag Points

t (Min.)	P (PSIg)
A:	0.00 2303.22
B:	0.00 191.51
C:	28.00 652.61
D:	60.00 1733.44
E:	0.00 691.89
F:	29.00 1009.81
G:	61.00 1730.67
Q:	0.00 2239.19

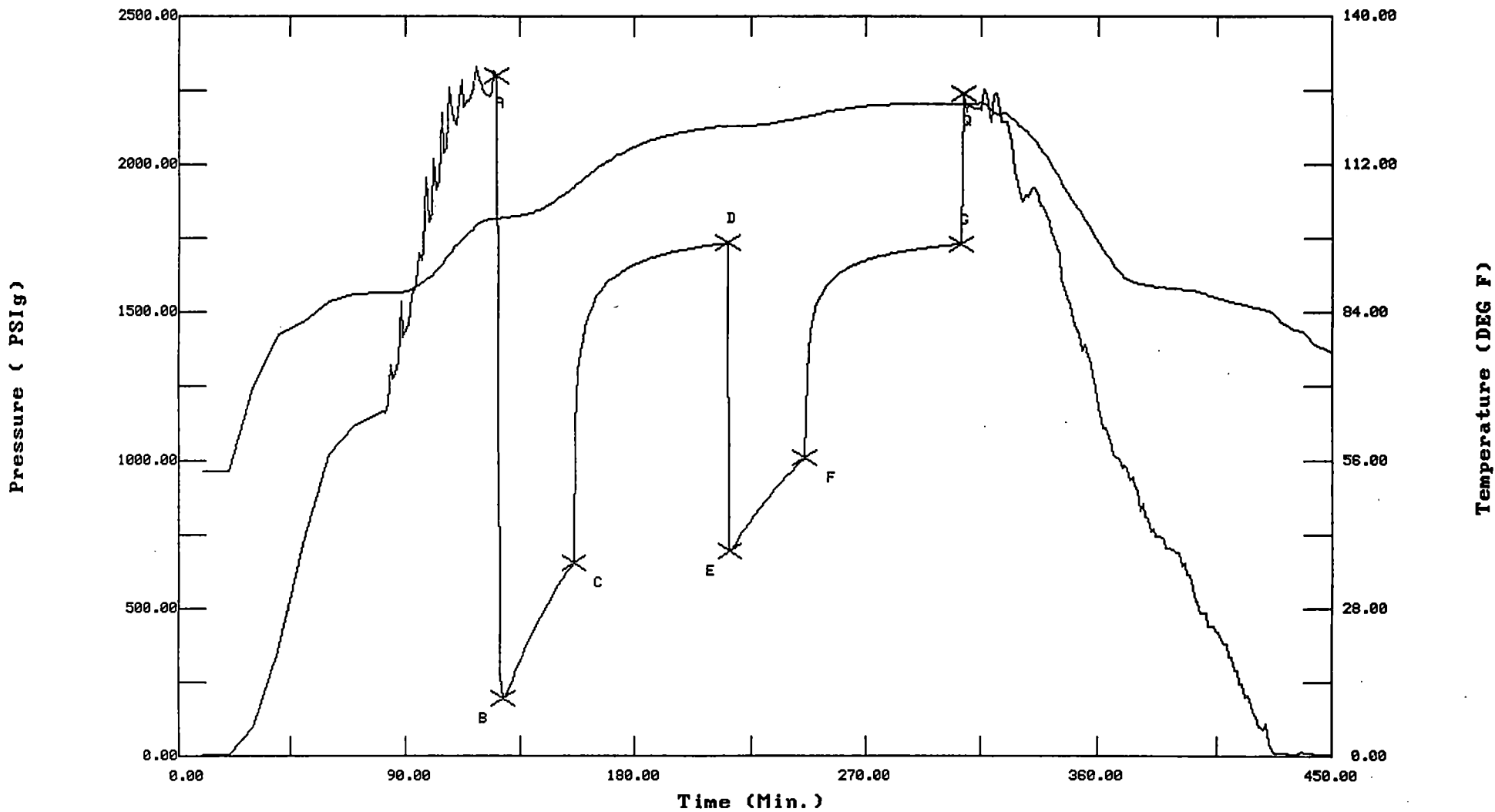
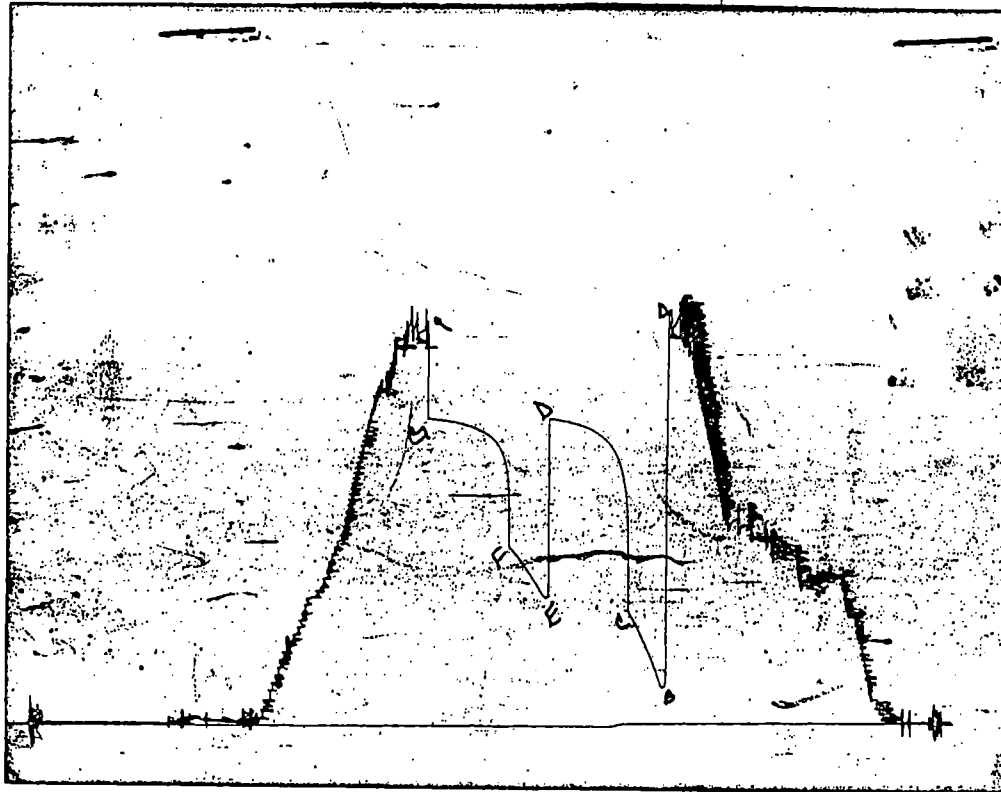


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

OPERATOR : American Warrior Inc  
 WELL NAME: Nielson #1-33  
 LOCATION : 33-32-19-Comanche-Co-Ks  
 INTERVAL : 4976.00 To 5014.00 ft

DATE 2-6-97  
 KB 1930.00 ft TICKET NO: 9766 DST #2  
 GR 1917.00 ft FORMATION: Pawnee  
 TD 5014.00 ft TEST TYPE: CONV

RECORDER DATA

Mins	Field	1	2	3	4	TIME DATA-----
PF 30 Rec.	13754	13754	2357			PF Fr. 2415 to 2445 hr
SI 60 Range(Psi )	4000.0	4000.0	4995.0	0.0	0.0	IS Fr. 2445 to 0145 hr
SF 60 Clock(hrs)	12	12	Elec			SF Fr. 0145 to 0245 hr
FS 60 Depth(ft )	5011.0	5011.0	4979.0	0.0	0.0	FS Fr. 0245 to 0345 hr

	Field	1	2	3	4	
A. Init Hydro	2502.0	2421.0	2447.0	0.0	0.0	T STARTED 2224 hr
B. First Flow	68.0	83.0	89.0	0.0	0.0	T ON BOTM 2410 hr
B1. Final Flow	68.0	68.0	77.0	0.0	0.0	T OPEN 2415 hr
C. In Shut-in	1866.0	1864.0	1890.0	0.0	0.0	T PULLED 0345 hr
D. Init Flow	78.0	87.0	82.0	0.0	0.0	T OUT 0550 hr
E. Final Flow	78.0	73.0	82.0	0.0	0.0	
F. Fl Shut-in	1846.0	1848.0	1876.0	0.0	0.0	TOOL DATA-----
G. Final Hydro	2421.0	2371.0	2368.0	0.0	0.0	Tool Wt. 1500.00 lbs
Inside/Outside	0	0	I			Wt Set On Packer 20000.00 lbs
						Wt Pulled Loose 76000.00 lbs
						Initial Str Wt 85000.00 lbs
						Unseated Str Wt 76000.00 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 243.00 ft
						D.P. Length 4721.00 ft

RECOVERY

Tot Fluid 125.00 ft of 125.00 ft in DC and 0.00 ft in DP  
 125.00 ft of Gassy mud  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of  
 0.00 ft of

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

BLOW DESCRIPTION

Initial Flow:  
 Strong blow, bottom of bucket in 20sec  
 Gas to surface in 5 mins

Initial Shut In:

Final Flow:

Strong blow, bottom of bucket when  
 tool opened, Gas sample taken

Final Shut In:

SAMPLES:

SENT TO:

MUD DATA-----

Mud Type	Chemical
Weight	9.20 lb/c
Vis.	47.00 S/L
W.L.	12.80 in3
F.C.	0.00 in
Mud Drop N	

Amt. of fill	0.00 ft
Btm. H. Temp.	109.00 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	Dan Bangle
Co. Rep.	Alan Downing
Contr.	Duke
Rig #	7
Unit #	
Pump T.	

Test Successful: Y

\*\*\* TOOL DIAGRAM \*\*\* CONV

WELL NAME: Nielson #1-33

LOCATION : 33-32-19-Comanche-Co-Ks

TICKET No. 9766 D.S.T. No. 2 DATE 2-6-97

TOTAL TOOL TO BOTTOM OF TOP PACKERS ..... 28

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR ..... 38

TOTAL TOOL ..... 66

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY ..... 66

D.C. ABOVE TOOLS.Stands4 Single Total 243

D.P. ABOVE TOOLS.Stands76 Single 1 Total 4721

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5030

TOTAL DEPTH ..... 5014

TOTAL DRILL PIPE ABOVE K.B. .... 16

REMARKS:

P.O. SUB	
C.O. SUB	4948
S.I. TOOL Sterling	4954
HMV Sterling	4959
JARS Sterling	4964
SAFETY JOINT Bowen	4967
PACKER Top	4971
PACKER Bottom	4976
DEPTH 4976	
STUBB 1'	4977
ANCHOR 2' Perfs	4979
Alpine Rec @ 4979	
5' Perfs	4984
5' Perfs	4989
5' Perfs	4994
T.C.	
DEPTH	
5' Perfs	4999
5' Perfs	5004
5' Perfs	5009
Ak-1 Rec @ 5011	
BULLNOSE 5' Bullplug	5014
T.D.	

GAS RECOVERY  
-----

COMPANY: American Warrior Inc

DATE: 2-6-97

WELL NAME: Nielson #1-33

KB Elev: 1930.00 ft TICKET #9766 DST #2

WELL LOCATION: 33-32-19-Comanche-Co-Ks

GR Elev: 1917.00 ft FORMATION: Pawnee

INTERVAL Fr.: 4976.00 To 5014.00 T.D.: 5014.00 ft TEST TYPE: CONV

GAS RECOVERY MEASURED WITH Merla

\*\*\*\*\* GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	1.50	0	8	197000.0
10	1.50	0	8	197000.0
15	1.50	0	10	220000.0
20	1.50	0	10	220000.0
25	1.50	0	10	220000.0
30	1.50	0	10	220000.0

\*\*\*\*\* GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
5	1.50	0	12	241000.0
10	1.50	0	12	241000.0
15	1.50	0	12	241000.0
20	1.50	0	12	241000.0
25	1.50	0	12	241000.0
30	1.50	0	12	241000.0
35	1.50	0	12	241000.0
40	1.50	0	12	241000.0
45	1.50	0	12	241000.0
50	1.50	0	12	241000.0
55	1.50	0	12	241000.0
60	1.50	0	12	241000.0

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 9766 DST# 2 Nielson #1-33 American Warrior

DATE: 02/05/97 TIME: 22:25:34

	Time	Pressure PSig	delta P PSig	P	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
***** Initial Hydro.	110.00	2447.2	0.0		105.91		
***** Start Flow 1	0.00	88.9	0.0		107.18		
	1.00	74.5	-14.4		107.73		
	2.00	69.6	-19.3		108.27		
	3.00	70.7	-18.2		108.75		
	4.00	71.0	-17.9		109.16		
	5.00	70.2	-18.6		109.48		
	6.00	72.0	-16.9		109.74		
	7.00	71.5	-17.4		109.92		
	8.00	70.5	-18.4		110.03		
	9.00	73.6	-15.3		110.10		
	10.00	72.0	-16.9		110.13		
	11.00	72.1	-16.8		110.12		
	12.00	71.9	-17.0		110.09		
	13.00	72.3	-16.6		110.04		
	14.00	75.1	-13.8		109.97		
	15.00	71.4	-17.5		109.88		
	16.00	73.8	-15.0		109.76		
	17.00	74.3	-14.6		109.63		
	18.00	73.4	-15.4		109.48		
	19.00	73.8	-15.0		109.32		
	20.00	73.3	-15.6		109.15		
	21.00	78.7	-10.2		108.98		
	22.00	79.6	-9.3		108.81		
	23.00	76.8	-12.1		108.64		
	24.00	74.7	-14.2		108.46		
	25.00	75.3	-13.6		108.28		
	26.00	74.9	-13.9		108.10		
	27.00	75.9	-12.9		107.93		
	28.00	75.7	-13.2		107.75		
***** End Flow 1	29.00	77.0	-11.8		107.57		
***** Start Shutin 1	0.00	77.0	0.0		107.57	0.0000	0.006
	1.00	308.2	231.1		107.39	30.0000	0.095
	2.00	918.5	841.5		107.33	15.5000	0.844
	3.00	1290.8	1213.8		107.87	10.6667	1.666
	4.00	1507.8	1430.7		109.23	8.2500	2.273
	5.00	1630.6	1553.6		111.04	6.8000	2.659
	6.00	1706.2	1629.2		112.84	5.8333	2.911
	7.00	1747.8	1670.8		114.37	5.1429	3.055
	8.00	1776.3	1699.3		115.54	4.6250	3.155
	9.00	1794.3	1717.2		116.36	4.2222	3.219
	10.00	1806.5	1729.4		116.89	3.9000	3.263
	11.00	1816.7	1739.7		117.21	3.6364	3.300
	12.00	1825.6	1748.6		117.38	3.4167	3.333
	13.00	1833.1	1756.1		117.45	3.2308	3.360
	14.00	1839.9	1762.9		117.47	3.0714	3.385
	15.00	1845.6	1768.5		117.48	2.9333	3.406
	16.00	1850.5	1773.5		117.48	2.8125	3.424
	17.00	1854.6	1777.6		117.39	2.7059	3.440
	18.00	1858.2	1781.1		117.27	2.6111	3.453
	19.00	1861.0	1784.0		117.12	2.5263	3.463



ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 9766 DST# 2 Nielson #1-33 American Warrior

DATE: 02/05/97

TIME: 22:25:34

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
20.00	1863.8	1786.7	116.96	2.4500	3.474
21.00	1866.0	1789.0	116.79	2.3810	3.482
22.00	1868.1	1791.1	116.62	2.3182	3.490
23.00	1869.9	1792.9	116.45	2.2609	3.497
24.00	1871.5	1794.5	116.31	2.2083	3.503
25.00	1873.0	1796.0	116.20	2.1600	3.508
26.00	1874.4	1797.3	116.20	2.1154	3.513
27.00	1875.5	1798.5	116.01	2.0741	3.518
28.00	1876.5	1799.5	115.88	2.0357	3.521
29.00	1877.5	1800.4	115.66	2.0000	3.525
30.00	1878.5	1801.5	115.83	1.9667	3.529
31.00	1879.4	1802.4	115.80	1.9355	3.532
32.00	1880.1	1803.0	115.77	1.9062	3.535
33.00	1880.9	1803.9	115.75	1.8788	3.538
34.00	1881.6	1804.5	115.73	1.8529	3.540
35.00	1882.2	1805.1	115.72	1.8286	3.543
36.00	1882.7	1805.7	115.70	1.8056	3.545
37.00	1883.2	1806.2	115.69	1.7838	3.547
38.00	1883.8	1806.8	115.69	1.7632	3.549
39.00	1884.3	1807.2	115.69	1.7436	3.550
40.00	1884.7	1807.6	115.68	1.7250	3.552
41.00	1885.2	1808.1	115.68	1.7073	3.554
42.00	1885.6	1808.6	115.69	1.6905	3.555
43.00	1886.0	1809.0	115.69	1.6744	3.557
44.00	1886.4	1809.3	115.70	1.6591	3.558
45.00	1886.7	1809.7	115.71	1.6444	3.560
46.00	1887.1	1810.1	115.71	1.6304	3.561
47.00	1887.4	1810.3	115.73	1.6170	3.562
48.00	1887.7	1810.7	115.74	1.6042	3.563
49.00	1887.9	1810.9	115.75	1.5918	3.564
50.00	1888.2	1811.2	115.76	1.5800	3.565
51.00	1888.5	1811.5	115.78	1.5686	3.567
52.00	1888.8	1811.7	115.79	1.5577	3.568
53.00	1889.0	1811.9	115.81	1.5472	3.568
54.00	1889.2	1812.2	115.82	1.5370	3.569
55.00	1889.4	1812.3	115.84	1.5273	3.570
56.00	1889.6	1812.6	115.85	1.5179	3.571
57.00	1889.9	1812.8	115.86	1.5088	3.572
58.00	1890.0	1813.0	115.90	1.5000	3.572
59.00	1890.2	1813.2	115.92	1.4915	3.573
60.00	1890.4	1813.3	115.92	1.4833	3.574

\*\*\*\*\* End Shut-in 1

\*\*\*\*\* Start Flow 2

0.00	82.7	0.0	114.97
1.00	77.2	-5.5	114.07
2.00	74.3	-8.4	113.22
3.00	78.2	-4.4	112.48
4.00	76.3	-6.4	111.83
5.00	75.0	-7.6	111.27
6.00	78.5	-4.2	110.77
7.00	74.9	-7.7	110.33
8.00	74.4	-8.3	109.93
9.00	74.2	-8.5	109.57

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 9766 DST# 2 Nielson #1-33 American Warrior

DATE: 02/05/97

TIME: 22:25:34

Time	Pressure PSig	delta P PSig	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
10.00	74.1	-8.6	109.24		
11.00	74.1	-8.6	108.93		
12.00	75.1	-7.6	108.64		
13.00	76.1	-6.5	108.36		
14.00	75.4	-7.3	108.08		
15.00	75.2	-7.5	107.82		
16.00	75.1	-7.6	107.57		
17.00	77.0	-5.7	107.33		
18.00	75.6	-7.0	107.11		
19.00	75.1	-7.6	106.88		
20.00	74.6	-8.1	106.65		
21.00	76.2	-6.5	106.44		
22.00	77.0	-5.6	106.22		
23.00	76.1	-6.5	106.01		
24.00	77.1	-5.5	105.79		
25.00	77.5	-5.1	105.59		
26.00	77.5	-5.1	105.38		
27.00	77.4	-5.2	105.18		
28.00	78.0	-4.7	104.98		
29.00	78.4	-4.3	104.79		
30.00	78.3	-4.4	104.59		
31.00	78.3	-4.4	104.41		
32.00	79.7	-2.9	104.23		
33.00	79.1	-3.6	104.04		
34.00	78.5	-4.2	103.87		
35.00	78.0	-4.6	103.70		
36.00	78.8	-3.9	103.53		
37.00	79.6	-3.1	103.36		
38.00	81.0	-1.7	103.20		
39.00	78.8	-3.9	103.04		
40.00	79.8	-2.9	102.87		
41.00	80.2	-2.4	102.72		
42.00	79.1	-3.6	102.55		
43.00	82.1	-0.6	102.40		
44.00	80.1	-2.5	102.25		
45.00	80.4	-2.3	102.09		
46.00	79.5	-3.2	101.95		
47.00	80.1	-2.5	101.80		
48.00	81.0	-1.7	101.66		
49.00	81.2	-1.4	101.52		
50.00	81.0	-1.7	101.38		
51.00	81.4	-1.3	101.25		
52.00	81.1	-1.5	101.11		
53.00	82.0	-0.7	100.98		
54.00	81.9	-0.8	100.85		
55.00	82.6	-0.1	100.72		
56.00	82.0	-0.7	100.60		
57.00	81.7	-1.0	100.47		
58.00	81.9	-0.8	100.35		
***** End Flow 2					
***** Start Shutin 2	0.00	81.9	0.0	100.35	0.0000
	1.00	580.1	498.2	100.25	88.0000
					0.007
					0.337

ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 9766 DST# 2 Nielson #1-33 American Warrior

DATE: 02/05/97

TIME: 22:25:34

Time	Pressure PSIg	delta P PSIg	Temp. DEG F	(T+dT)/dT	P <sup>2</sup> /10 <sup>6</sup>
2.00	1114.2	1032.3	100.52	44.5000	1.241
3.00	1402.0	1320.1	101.75	30.0000	1.966
4.00	1559.3	1477.4	103.49	22.7500	2.431
5.00	1649.8	1567.9	105.18	18.4000	2.722
6.00	1702.0	1620.1	106.64	15.5000	2.897
7.00	1733.4	1651.5	107.67	13.4286	3.005
8.00	1753.6	1671.7	108.31	11.8750	3.075
9.00	1767.7	1685.8	108.59	10.6667	3.125
10.00	1778.0	1696.1	108.67	9.7000	3.161
11.00	1786.2	1704.3	108.62	8.9091	3.191
12.00	1793.6	1711.7	108.49	8.2500	3.217
13.00	1800.1	1718.2	108.32	7.6923	3.240
14.00	1806.0	1724.0	108.15	7.2143	3.261
15.00	1811.2	1729.3	108.00	6.8000	3.281
16.00	1815.9	1733.9	107.82	6.4375	3.297
17.00	1820.1	1738.1	107.69	6.1176	3.313
18.00	1823.9	1742.0	107.59	5.8333	3.327
19.00	1827.5	1745.6	107.52	5.5789	3.340
20.00	1830.9	1749.0	107.48	5.3500	3.352
21.00	1834.1	1752.2	107.44	5.1429	3.364
22.00	1836.8	1754.8	107.42	4.9545	3.374
23.00	1839.2	1757.3	107.41	4.7826	3.383
24.00	1841.6	1759.7	107.40	4.6250	3.392
25.00	1843.7	1761.8	107.40	4.4800	3.399
26.00	1845.7	1763.8	107.42	4.3462	3.407
27.00	1847.6	1765.7	107.44	4.2222	3.414
28.00	1849.3	1767.4	107.45	4.1071	3.420
29.00	1851.0	1769.1	107.47	4.0000	3.426
30.00	1852.5	1770.6	107.50	3.9000	3.432
31.00	1854.0	1772.1	107.52	3.8065	3.437
32.00	1855.3	1773.4	107.55	3.7188	3.442
33.00	1856.5	1774.6	107.58	3.6364	3.446
34.00	1857.7	1775.8	107.61	3.5588	3.451
35.00	1858.8	1776.9	107.65	3.4857	3.455
36.00	1859.9	1778.0	107.69	3.4167	3.459
37.00	1861.0	1779.1	107.70	3.3514	3.463
38.00	1861.9	1780.0	107.75	3.2895	3.467
39.00	1862.9	1780.9	107.80	3.2308	3.470
40.00	1863.7	1781.8	107.84	3.1750	3.473
41.00	1864.6	1782.7	107.88	3.1220	3.477
42.00	1865.5	1783.6	107.94	3.0714	3.480
43.00	1866.1	1784.2	107.96	3.0233	3.482
44.00	1866.9	1785.0	108.03	2.9773	3.485
45.00	1867.6	1785.7	108.08	2.9333	3.488
46.00	1868.4	1786.5	108.14	2.8913	3.491
47.00	1869.0	1787.1	108.20	2.8511	3.493
48.00	1869.7	1787.7	108.26	2.8125	3.496
49.00	1870.2	1788.3	108.32	2.7755	3.498
50.00	1870.8	1788.9	108.39	2.7400	3.500
51.00	1871.3	1789.4	108.45	2.7059	3.502
52.00	1872.0	1790.1	108.51	2.6731	3.504

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ALPINE SUBSURFACE ELECTRONICS PROBE INCREMENTS LISTING

TEST: Tk# 9766 DST# 2 Nielson #1-33 American Warrior  
DATE: 02/05/97 TIME: 22:25:34  
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	Time	Pressure PSig	delta P PSig	P	Temp. DEG F	(T+dT)/dT	P^2/10^6
	53.00	1872.4	1790.5		108.57	2.6415	3.506
	54.00	1872.9	1791.0		108.64	2.6111	3.508
	55.00	1873.4	1791.5		108.71	2.5818	3.510
	56.00	1873.9	1792.0		108.78	2.5536	3.512
	57.00	1874.4	1792.5		108.86	2.5263	3.514
	58.00	1874.9	1793.0		108.92	2.5000	3.515
	59.00	1875.4	1793.5		108.99	2.4746	3.517
***** End Shut-in 2	60.00	1875.7	1793.8		109.07	2.4500	3.518
***** Final Hydro.	323.00	2367.8	0.0		109.39		

# TEST HISTORY

Tk# 9766 DST# 2 Nielson #1-33 American Warrior

Flag Points  
t(Min.) P(PSig)

A:	0.00	2447.24
B:	0.00	88.87
C:	29.00	77.04
D:	60.00	1890.38
E:	0.00	82.66
F:	58.00	81.90
G:	60.00	1875.69
Q:	0.00	2367.76

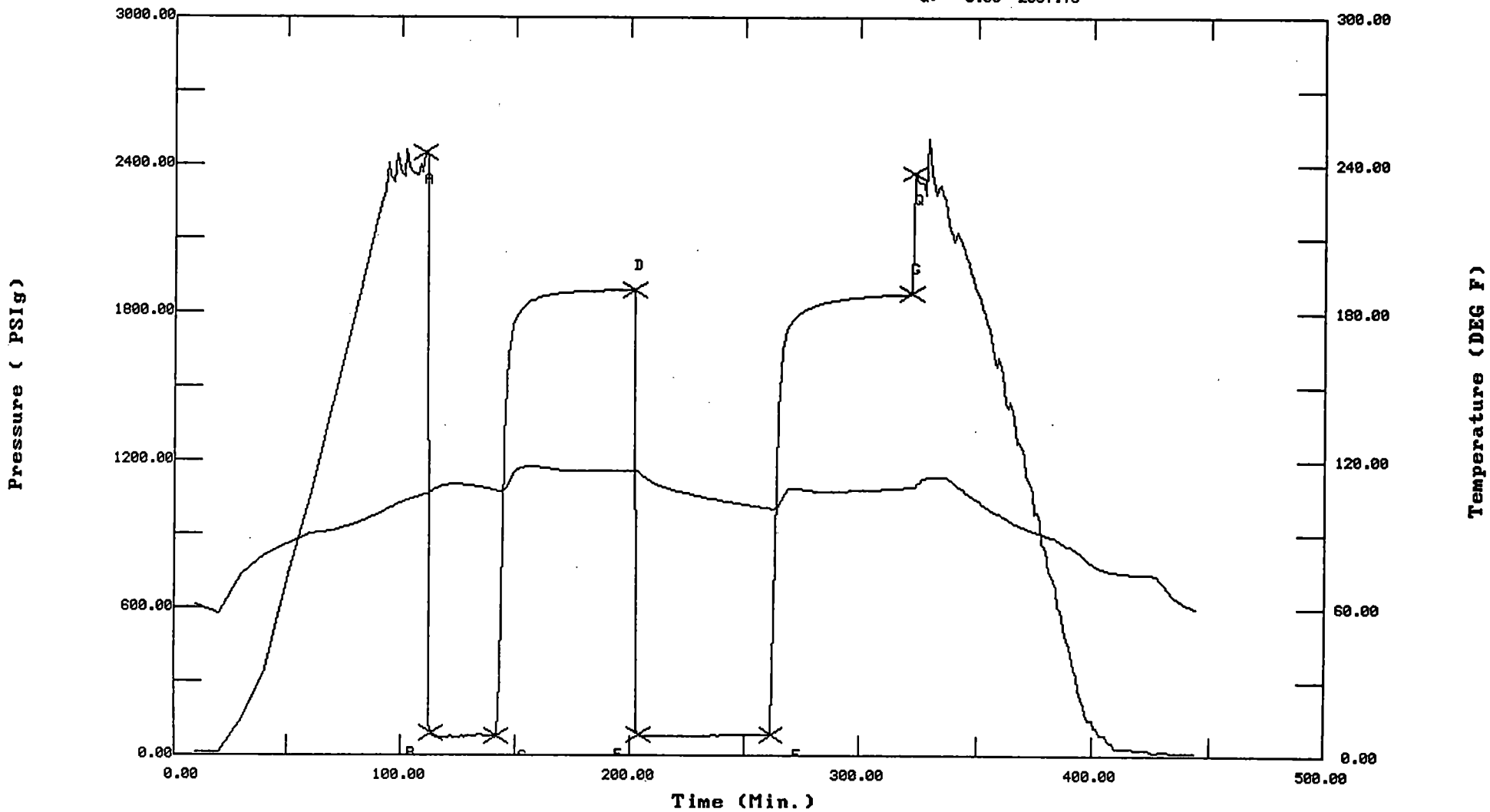


CHART PAGE



This is a photocopy of the actual AK-1 recorder chart