

15-063-21474-00-00

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

Operator: License # 5701

Name: National Oil Company

Address P.O. Box 399

Garden City, KS 67846

City/State/Zip Garden City, Ks 67846

Purchaser: Clear Creek

Operator Contact Person: Scott Corsair

Phone (913) 398-2270

Contractor: Name: Emphasis Oil Operations

License: 8241

Wellsite Geologist: Scott Corsair

Designate Type of Completion

New Well  Re-Entry  Workover

Oil  SWD  SIOW  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  PBDT  
 Commingled  Docket No. \_\_\_\_\_  
 Dual Completion  Docket No. \_\_\_\_\_  
 Other (SWD or Inj?)  Docket No. \_\_\_\_\_

6-8-1994 6-18-1994 7-13-1994  
Spud Date Date Reached TD Completion Date

API NO. 15- 063-21474 0000

County Gove

S/2 - NW - NE - SE - SW Sec. 16 Twp. 13S Rge. 30

990 Feet from S/W (circle one) Line of Section

1980 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 Harrison Well # 2

Field Name Beogher SE

Producing Formation Lansing

Elevation: Ground 2858' KB 2863'

Total Depth 4580' PBDT 4550'

Amount of Surface Pipe Set and Cemented at 221 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set 2284' Feet

If Alternate II completion, cement circulated from 2284'

feet depth to surface w/ 450 sx cmt.

Drilling Fluid Management Plan  
(Data must be collected from the Reserve Pit)

Chloride content 19,000 ppm Fluid volume 2800 bbl.

Dewatering method used evaporation

Location of fluid disposal if hauled offsite:

Operator Name \_\_\_\_\_

Lease Name 15-063-21474 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.

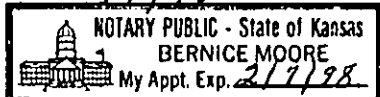
Signature Scott Corsair

Title Geologist Date 8-24-1994

Subscribed and sworn to before me this 24th day of August, 19 94.

Notary Public Bernice Moore

Date Commission Expires 2/7/98



K.C.C. OFFICE USE ONLY  
F  Letter of Confidentiality Attached  
C  Wireline Log Received  
C  Geologist Report Received  
Distribution:  
01-09-1994  
 KCC  SWD/Rep  NGPA  
 KGS  Plug  Other  
(Specify)

Operator Name National Oil Company Lease Name Harrison Well # 2

Sec. 16 Twp. 13S Rge. 30  East  West  
 County Gove

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests given 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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Anhydrite	2310	+553
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Topeka	3648	-785
		Heebner	3864	-1001
		Lansing	3903	-1040
		Base Kansas City	4200	-1337
		Pawnee	4319	-1456
		Ft. Scott	4383	-1520
		Mississippian	4478	-1615

List All E.Logs Run: Dual Induction, Spectral Density Dual Spaced Neutron II, Long Spaced Sonic

**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 1/2	8 5/8	20	221	40/60 poz	145	2% gel/3% cc
Production	7 7/8	4 1/2	10.5	4576	EA-2	115	

**ADDITIONAL CEMENTING/SQUEEZE RECORD**

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input checked="" type="checkbox"/> Protect Casing	Surf/2284	HLC	450	1/4# flocele
<input type="checkbox"/> Perforate				
<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)	
		Amount	Depth
4	4190-93, 3908-3911, 4065-4068, 3980-83 3945-48	3000 gal 20% FE	3908-4193

**TUBING RECORD** Size 2 3/8 Set At 4350 Packer At \_\_\_\_\_ Liner Run  Yes  No

Date of First, Resumed Production, SWD or In]. 8-1-1994 Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	30		20		37

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 3908-4193 OA

15-063-21474-00-00

ORIGINAL

**SCOTT CORSAIR**

**PETROLEUM GEOLOGIST**

211 N. Main P.O. Box 6

Bazine, Ks 67516

913-398-2270 Mobile 913-731-5060

FAX 913-398-2586

**GEOLOGICAL REPORT**

**NATIONAL OIL COMPANY**

**AMERICAN WARRIOR, INC.**

Harrison No. 2

C S/2 NW NE

Section 16-13S-30W

Gove County, Kansas

ORIGINAL

15-063-21474-00-00

OPERATOR: AMERICAN WARRIOR, INC.  
WELL: HARRISON NO. 2  
API NO.: 15-063-21474  
LOCATION: C OF S/2 NW NE SEC. 16-13S-30W  
WELLSITE: FARMGROUND  
COMMENCED: JUNE 8, 1994  
COMPLETED: JUNE 18, 1994  
ELEVATIONS: 2858' GL ; 2863' KB  
TOTAL DEPTH: 4580' (DRILLER); 4578 (LOGGER)  
CASING: SURFACE: 8 5/8 @ 221/145 SKS.  
PRODUCTION: 4 1/2 @ 4576' W/225 SKS  
DV TOOL @ 2284' W/450SKS, CIRC.  
SAMPLES: 10 FT. FROM 3600' TO T.D.  
LOGS: DUAL INDUCTION, SPECTRAL DENSITY DUAL  
SPACED NEUTRON II , L S SONIC, BY HLS  
DRILL STEM TESTS: 6 BY TRILOBITE  
CONTRACTOR: EMPHASIS OIL OPERATIONS (RIG 7)

REMARKS: Geological supervision: 3600' - T.D.

FORMATION TOPS	ELECTRICAL LOG		SAMPLES	
		SUBSEA		SUBSEA
Anhydrite	2310	+553		
Topeka	3648	-785	3650	-787
Heebner	3864	-1001	3866	-1003
Lansing	3903	-1040	3906	-1043
Base Kansas City	4200	-1337	4202	-1339
Pawnee	4319	-1456	4322	-1459
Ft. Scott	4383	-1520	4386	-1523
Mississippian Osage	4478	-1615	4483	-1620

ORIGINAL

**SAMPLE ZONE DESCRIPTION**

Logger's Measurements

**TOPEKA 3648 -785**

**3650-3653, Limestone:** tan to gray, fossiliferous, poor interfossiliferous porosity, fair show of free oil, good cut fluorescence, no odor, looks tight on log.

**3778-3783, Limestone:** tan to buff, fossiliferous, fair to good pinpoint porosity, fair show of free oil, good fluorescence and cut, fair odor, computes wet on log.

**3816-3821, Limestone:** buff to tan with sparry inclusions, fair intercrystalline porosity, fair to good show of free oil, good fluorescence and cut, fleeting odor, computes wet on log.

**3845-3854, Limestone:** buff to tan, fair intercrystalline porosity, fair show of free oil, fair fluorescence, good cut fluorescence, no odor, computes wet on log.

**Drill Stem Test No. 1:** 3804-3870/30-30-30-45/ Good blow building to the bottom of bucket in 10 minutes during initial flow; No blow back on initial shut in; Good blow building to the bottom of the bucket in 13 minutes during final shut in; No blow back during final shut in. Recovered 490 feet of total fluid; 20 feet of slightly oil stained watery mud, 40% water/60% mud; 470 feet of muddy water, 90% water/10% mud.

IHP 1856.5

IFP 55.5-135.3

ISIP 766

FFP 169.1-238.9

FSIP 1150.6

FHP 1837.9

**LANSING-KANSAS CITY 3903 -1040**

**3906-3916, Limestone:** gray to tan, micritic, fair intergranular porosity, trace of vuggy porosity, trace sparry, fair show of free oil, good fluorescence, excellent cut, excellent odor.

**Drill Stem Test No. 2:** 3903-3920/30-45-45-60/ Weak surface blow building to 8 inches in 30 minutes during initial flow; Weak surface blow building to 10.5 inches during final flow; No blow back during either shut in period. Recovered 105 feet of total fluid and 135 feet of gas in pipe; 45 feet of clean oil; 30 feet of oil cut mud, 40% oil/60% mud; 30 feet of oil cut muddy water, 10% oil/60% water/30% mud.

IHP 1973.9  
IFP 32.7-38.1  
ISIP 1152.8  
FFP 43.6-52.4  
FSIP 1109.1  
FHP 1892.3

ORIGINAL

**3945-3952, Limestone:** buff to gray, micritic, few pieces with intergranular porosity, very slight show of free oil, poor fluorescence, good cut fluorescence, trace of oolitic.

**3980-4013, Limestone:** tan to buff, micritic to sparry, poor to fair intergranular and intercrystalline porosity, good fluorescence and excellent cut, good odor.

**4066-4070, Limestone:** tan to buff, fossiliferous to sparry with trace of tan fossiliferous **Chert**, good intercrystalline porosity, fair show of free oil, fair fluorescence, good cut, fleeting odor.

**4104-4107, Limestone:** white, trace of sparry, slight show of dark black free oil, poor fluorescence and fair cut, no odor.

**4116-4127, Limestone:** buff to tan, good pinpoint porosity, trace intercrystalline vuggy porosity, very slight show of free oil, fleeting odor, fair fluorescence and excellent cut, computes wet on log.

**Drill Stem Test No. 3:** 4104-4136/20-30-20-30/ Strong blow to bottom of bucket in 2.5 minutes during initial flow; Strong blow to bottom of bucket in 3 minutes during final flow. No blow back during either shut in. Recovered 1135 feet of salt water.

IHP 2013.6  
IFP 125.9-346.9  
ISIP 1015.7  
FFP 397.9-584.6  
FSIP 1015.7  
FHP 1995.4

**4146-4150, Dolomite:** brown, sucrosic, sparry, good intergranular and intercrystalline porosity, good oil saturation, fair fluorescence and good cut, faint odor.

**4152-4154, Limestone:** tan to gray, fossiliferous, fair interfossiliferous porosity, very slight show of free oil, good fluorescence and cut, faint odor.

**Drill Stem Test No. 4:** 4137-4162/30-30-10/ weak surface blow building to 1 inch in 30 minutes during initial flow; Weak surface blow for 5 minutes and flush tool; Weak surface blow for 5 minutes and pull tool. Recovered 35 feet of total fluid and 25 feet of gas; 35 feet of slightly oil stained mud.

IHP 2019.5  
IFP 35.1-35.1  
ISIP 1061.8  
FFP 35.1-45.6  
FHP 2001.9

ORIGINAL

**4189-4196, Limestone:** buff, sparry, fair intercrystalline porosity, very slight show of free oil, fair fluorescence and cut fluorescence, faint odor.

PAWNEE 4319 -1456

**4330-4340, Limestone:** buff to gray, poor pinpoint porosity, very slight show of free oil, good fluorescence and cut.

**4362-4373, Limestone:** buff to gray, fossiliferous, poor intercrystalline porosity, very slight show of free oil, good fluorescence and cut.

FT. SCOTT 4383 -1520

**4486-4491, Limestone:** gray to mottled tan, poor intercrystalline porosity, very slight show of free oil, poor fluorescence, good cut, no odor.

**4400-4410, Limestone:** buff to tan, poor intercrystalline porosity, very slight show of free oil, good fluorescence and cut, no odor.

**Drill Stem Test No. 5:** 4316-4415/30-30-45-60/ Weak surface blow building to 3 inches in 30 minutes during initial flow; Weak surface blow building to 4.5 inches in 45 minutes during final flow; No blow back during either shut in; Recovered 30 feet of total fluid and 90 feet of gas.

IHP 2131.9  
IFP 46.3-46.3  
ISIP 112.8  
FFP 46.3-46.3  
FSIP 121.9  
FHP 2116.3

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**MISSISSIPPIAN 4478 -1615**

**4478-4492, Limestone:** white, micritic, tight, barren, **Chert:** white and black, fossiliferous, angular, fresh, **Dolomite:** tan-brown, sparry, fair intercrystalline porosity, very slight show of free oil, poor fluorescence, good cut, no odor.

**Drill Stem Test No. 6:** 4412-4503/15/ 1/4" to 3 inches in 5 minutes the lost packer seat. Recovered 280 feet of total fluid; 280 feet of mud with oil specks in tool.

IHP 2234.9  
IFP 59.1-163.8  
FHP 2185.9

ORIGINAL

FORMATION	AMERICAN WARRIOR, INC./NATIONAL OIL COMPANY Harrison #2 C S/2 NW/4 NE/4 16-13S-30W	NATIONAL OIL COMPANY #41-16 Harrison SE NE NE 16-13S-30W	NATIONAL OIL COMPANY #1 Wilson SW NW NW 15-13S-30W
Anhydrite	+553	+565	+563
Lansing	-1040	-1039	-1047
Ft. Scott	-1520	-1525	-1533
Mississippian	-1615	-1626	-1628

**SUMMARY AND RECOMMENDATIONS**

Sample examination, drill stem tests and electrical log analysis indicate commercial production from multiple zones. Based upon available data 4 1/2" production casing was set.



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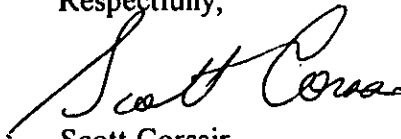
Pipe was set 2.5 feet off bottom @ 4575.66'. The following zones are recommended for testing.

1. Mississippian: 4487-4490
2. Lansing/KC: 4190-4193
3. Lansing/KC: 3908-3911
4. Ft. Scott: 4385-4389
5. Lansing/KC: 4065-4068
6. Lansing/KC: 3980-3983
7. Lansing/KC: 3945-3948

ORIGINAL

Measurements were taken from rotary kelly bushing ( 5 feet above ground level).  
Logger's measurements are taken as correct.

Respectfully,



Scott Corsair  
Petroleum Geologist

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

## Drill-Stem Test Data

15-063-21474-00-00

Well Name HARRISON #2 Test No. 1 Date 6/13/94  
Company NATIONAL OIL Zone SHAWNEE  
Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
Co. Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7 Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS

Interval Tested 3804-3870 Drill Pipe Size 4.5" XH  
Anchor Length 66 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
Top Packer Depth 3799 Drill Collar - 2.25 Ft. Run 30  
Bottom Packer Depth 3804 Mud Wt. 8.9 lb/Gal.  
Total Depth 3870 Viscosity 60 Filtrate 9

Tool Open @ 2:20PM Initial Blow GOOD BLOW - OFF BOTTOM IN 10 MINUTES

Final Blow GOOD BLOW - OFF BOTTOM IN 13 MINUTES  
NO BLOW ON SHUT-IN

Recovery - Total Feet 490 Flush Tool? NO

20 Feet of SLIGHTLY OIL STAINED WATERY MUD 40%WATER/60%MUD  
470 Feet of MUDDY WATER 90%WATER/10%MUD  
\_\_\_\_ Feet of \_\_\_\_\_  
\_\_\_\_ Feet of \_\_\_\_\_  
\_\_\_\_ Feet of \_\_\_\_\_

BHT \_\_\_\_\_ °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
pH 0.2 @ 85 °F Chlorides 30000 ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud 1856.5 PSI AK1 Recorder No. 11086 Range 4350

(B) First Initial Flow Pressure 55.5 PSI @ (depth) 3807 w / Clock No. 25828

(C) First Final Flow Pressure 135.3 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 1139.7 PSI @ (depth) 3840 w / Clock No. 26199

(E) Second Initial Flow Pressure 169.1 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

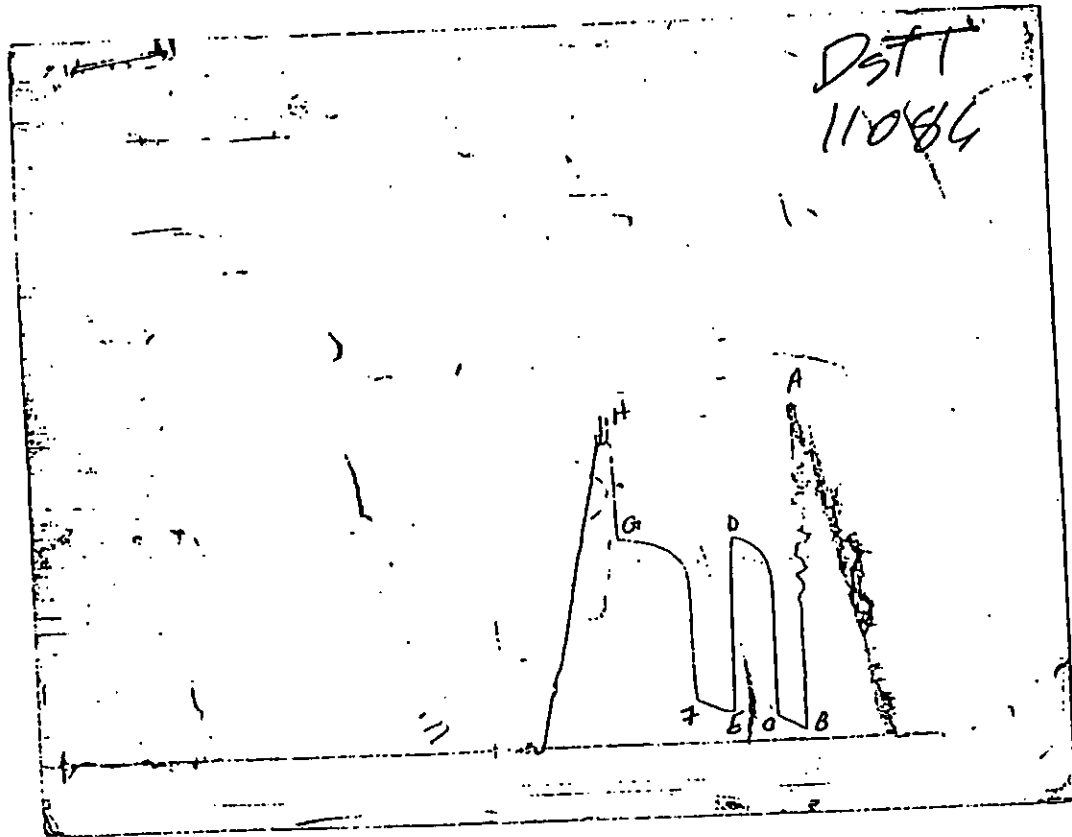
(F) Second Final Flow Pressure 238.9 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 1150.6 PSI Initial Opening 30 Final Flow 30

(H) Final Hydrostatic Mud 1837.9 PSI Initial Shut-in 30 Final Shut-in 45

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1844	1856.5
(B) FIRST INITIAL FLOW PRESSURE	60	55.5
(C) FIRST FINAL FLOW PRESSURE	151	135.3
(D) INITIAL CLOSED-IN PRESSURE	1064	1139.7
(E) SECOND INITIAL FLOW PRESSURE	172	169.1
(F) SECOND FINAL FLOW PRESSURE	263	238.9
(G) FINAL CLOSED-IN PRESSURE	1074	1150.6
(H) FINAL HYDROSTATIC MUD	1773	1837.9

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

15-063-21474-00-00

# ORIGINAL

Well Name HARRISON #2 Test No. 2 Date 6/14/94  
 Company NATIONAL OIL Zone LKC  
 Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
 Co. Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7 Est. Ft. of Pay \_\_\_\_\_  
 Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS

Interval Tested 3903-3920 Drill Pipe Size 4.5" XH  
 Anchor Length 17 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
 Top Packer Depth 3897 Drill Collar - 2.25 Ft. Run 30  
 Bottom Packer Depth 3903 Mud Wt. 8.7 lb/Gal.  
 Total Depth 3920 Viscosity 62 Filtrate 10

Tool Open @ 3:15AM Initial Blow WEAK SURFACE BLOW BUILT TO 8" IN 30 MINUTES  
 Final Blow WEAK SURFACE BLOW BUILT TO 10 1/2" IN 45 MINUTES

Recovery - Total Feet 105 Flush Tool? NO

Rec. 135 Feet of GAS IN PIPE  
 Rec. 45 Feet of CLEAN OIL  
 Rec. 30 Feet of OIL CUT MUD 40%OIL/60%MUD  
 Rec. 30 Feet of OIL CUT MUDDY WATER 10%OIL/60%WATER/30%MUD  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 118 °F Gravity 39 °API @ 85 °F Corrected Gravity 36.5 °API  
 pHV \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides 30000 ppm Recovery Chlorides \_\_\_\_\_ ppm System

(A) Initial Hydrostatic Mud 1973.9 PSI AK1 Recorder No. 11086 Range 4350

(B) First Initial Flow Pressure 32.7 PSI @ (depth) 3905 w / Clock No. 25828

(C) First Final Flow Pressure 38.1 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 1152.8 PSI @ (depth) 3915 w / Clock No. 26199

(E) Second Initial Flow Pressure 43.6 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

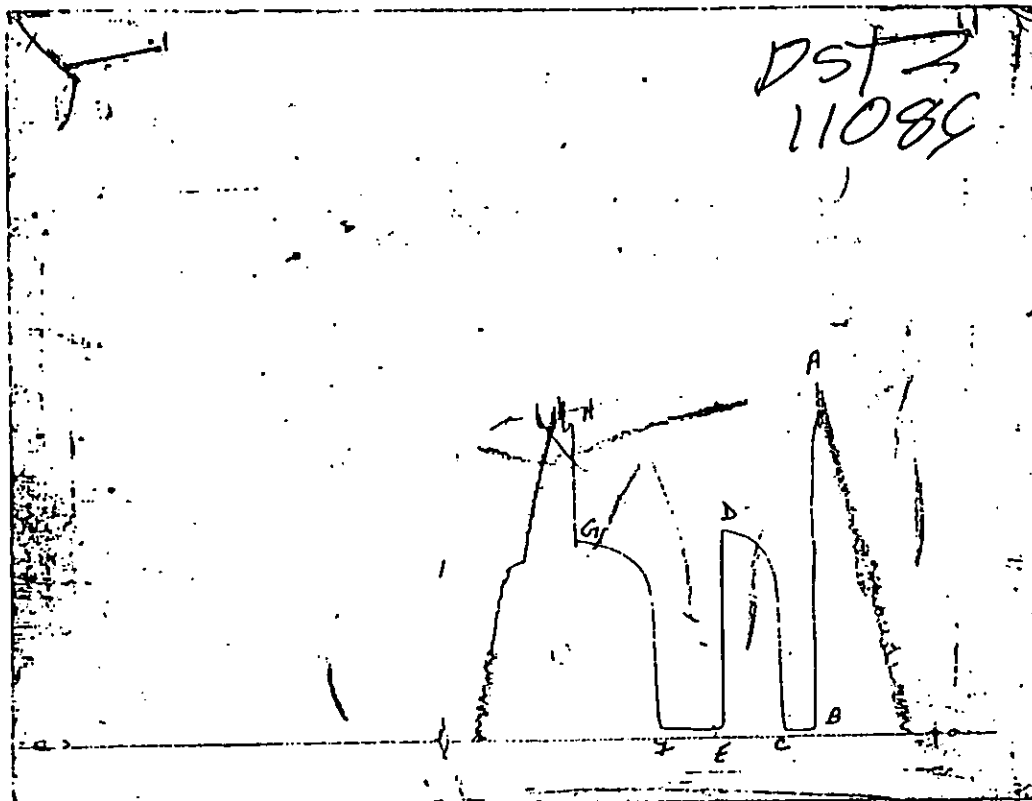
(F) Second Final Flow Pressure 52.4 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 1109.1 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 1892.3 PSI Initial Shut-in 45 Final Shut-in 60

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1815	1973.9
(B) FIRST INITIAL FLOW PRESSURE	32	32.7
(C) FIRST FINAL FLOW PRESSURE	43	38.1
(D) INITIAL CLOSED-IN PRESSURE	1150	1152.8
(E) SECOND INITIAL FLOW PRESSURE	43	43.6
(F) SECOND FINAL FLOW PRESSURE	54	52.4
(G) FINAL CLOSED-IN PRESSURE	1106	1109.1
(H) FINAL HYDROSTATIC MUD	1771	1892.3

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# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

# ORIGINAL

Well Name HARRISON #2 Test No. 3 Date 6/15/94  
 Company NATIONAL OIL Zone LKC 'J'  
 Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
 Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7  
 Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS  
 Est. Ft. of Pay \_\_\_\_\_

Interval Tested	<u>4104-4136</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>32</u>	Wt. Pipe I.D. - 2.7 Ft. Run	_____
Top Packer Depth	<u>4094</u>	Drill Collar - 2.25 Ft. Run	<u>30</u>
Bottom Packer Depth	<u>4104</u>	Mud Wt.	<u>9.1</u> lb/Gal.
Total Depth	<u>4136</u>	Viscosity	<u>46</u>
		Filtrate	<u>10.4</u>

Tool Open @ 3:02AM Initial Blow OFF BOTTOM IN 2 MINUTES 30 SECONDS

Final Blow OFF BOTTOM IN 3 MINUTES  
NO BLOW ON SHUTIN

Recovery - Total Feet 1135 Flush Tool? NO

1135	Feet of	<u>SALT WATER</u>
_____	Feet of	_____
_____	Feet of	_____
_____	Feet of	_____
_____	Feet of	_____

WT 124 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW 0.22 @ 71 °F Chlorides 31000 ppm Recovery Chlorides \_\_\_\_\_ ppm System

A) Initial Hydrostatic Mud 2013.6 PSI AK1 Recorder No. 11086 Range 4350

First Initial Flow Pressure 125.9 PSI @ (depth) 4106 w / Clock No. 25828

First Final Flow Pressure 346.9 PSI AK1 Recorder No. 10332 Range 4050

D) Initial Shut-in Pressure 1015.7 PSI @ (depth) 4131 w / Clock No. 26199

Second Initial Flow Pressure 397.9 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

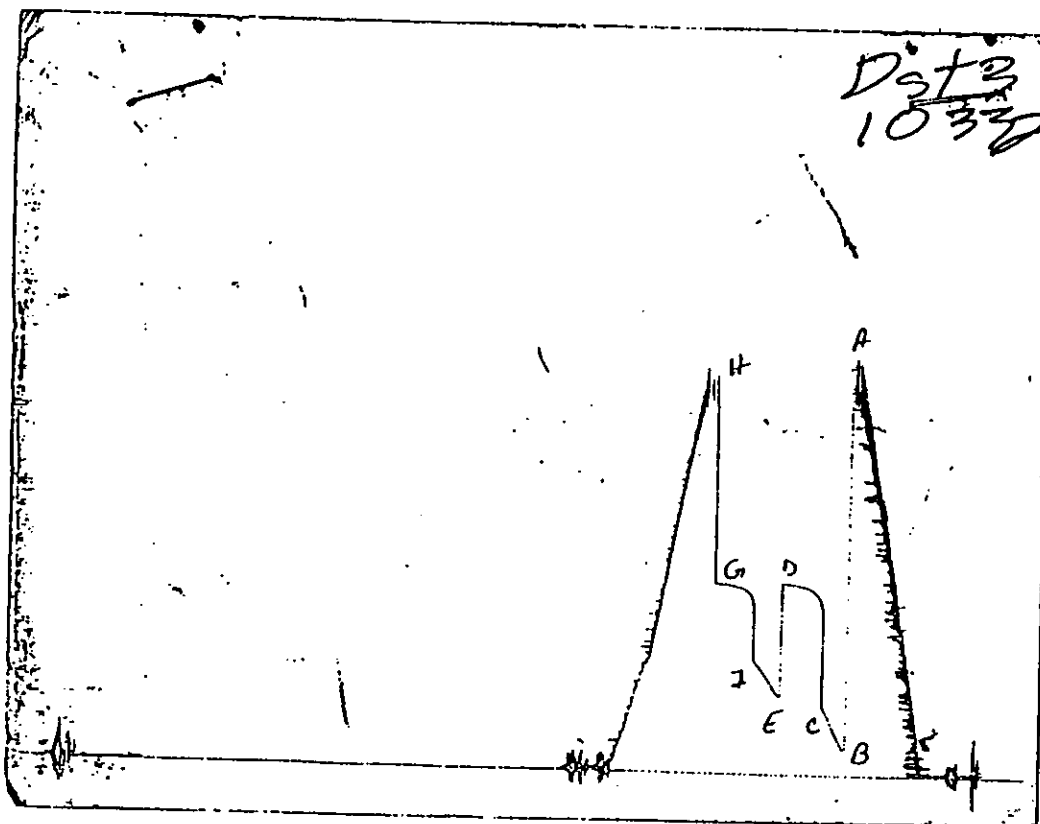
Second Final Flow Pressure 584.6 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

E) Final Shut-in Pressure 1015.7 PSI Initial Opening 20 Final Flow 20

F) Final Hydrostatic Mud 1995.4 PSI Initial Shut-in 30 Final Shut-in 30

Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2008	2013.6
(B) FIRST INITIAL FLOW PRESSURE	131	125.9
(C) FIRST FINAL FLOW PRESSURE	344	346.9
(D) INITIAL CLOSED-IN PRESSURE	993	1015.7
(E) SECOND INITIAL FLOW PRESSURE	394	397.9
(F) SECOND FINAL FLOW PRESSURE	577	584.6
(G) FINAL CLOSED-IN PRESSURE	993	1015.7
(H) FINAL HYDROSTATIC MUD	1987	1995.4

15-063-21474-00-00

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

# ORIGINAL

Well Name HARRISON #2 Test No. 4 Date 6/15/94  
 Company NATIONAL OIL Zone LKC 'K'  
 Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
 Co. Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7 Est. Ft. of Pay \_\_\_\_\_  
 Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS

Interval Tested 4137-4162 Drill Pipe Size 4.5" XH  
 Anchor Length 25 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
 Top Packer Depth 4132 Drill Collar - 2.25 Ft. Run 30  
 Bottom Packer Depth 4137 Mud Wt. 9.2 lb/Gal.  
 Total Depth 4162 Viscosity 55 Filtrate 8.0

Tool Open @ 2:13PM Initial Blow WEAK SURFACE BLOW BUILT TO 1" IN 30 MINUTES  
 Final Blow WEAK SURFACE BLOW IN 5 MINUTES - FLUSHED TOOL -  
WEAK SURFACE BLOW IN 5 MINUTES / OUT OF HOLE

Recovery - Total Feet 35 Flush Tool? NO

Sec. 25 Feet of GAS IN PIPE  
 Rec. 35 Feet of SLIGHTLY OIL STAINED MUD  
 Sec. \_\_\_\_\_ Feet of \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
 Sec. \_\_\_\_\_ Feet of \_\_\_\_\_

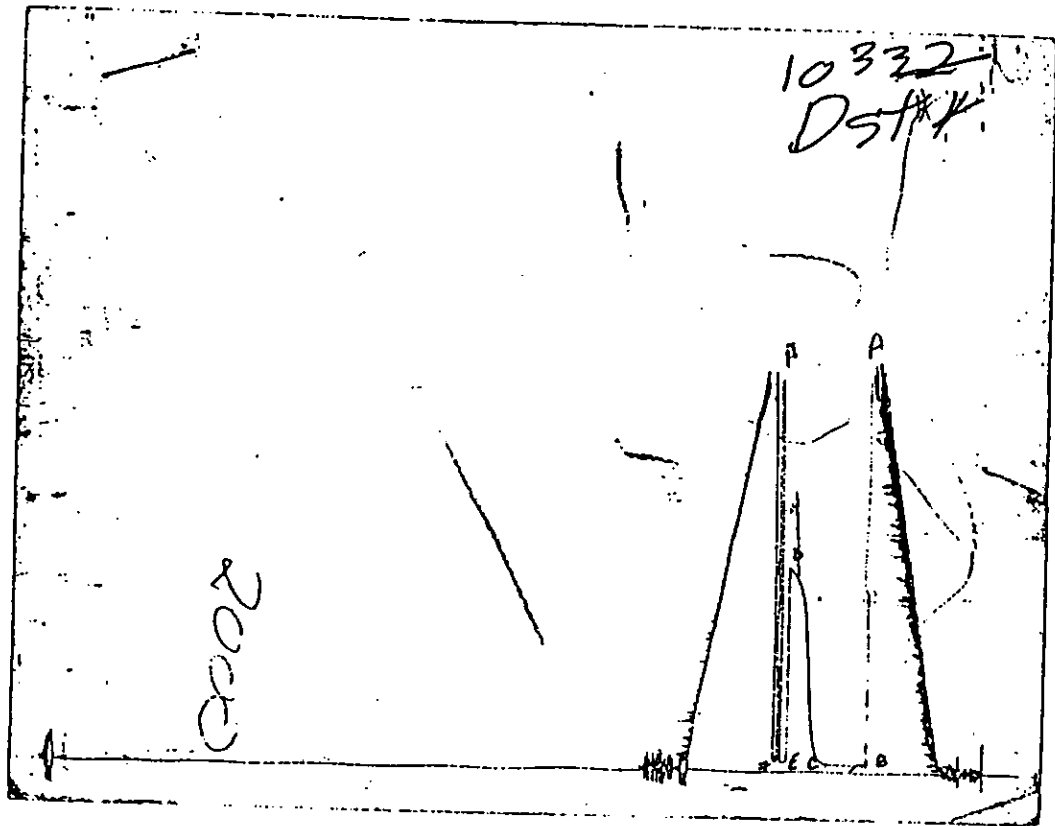
BHT 118 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud 2019.5 PSI AK1 Recorder No. 11086 Range 4350  
 (B) First Initial Flow Pressure 35.1 PSI @ (depth) 4139 w/ Clock No. 25828  
 (C) First Final Flow Pressure 35.1 PSI AK1 Recorder No. 10332 Range 4050  
 (D) Initial Shut-in Pressure 1061.8 PSI @ (depth) 4157 w/ Clock No. 26199  
 (E) Second Initial Flow Pressure 35.1 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_  
 (F) Second Final Flow Pressure 45.6 PSI @ (depth) \_\_\_\_\_ w/ Clock No. \_\_\_\_\_  
 (G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening 30 Final Flow 10  
 (H) Final Hydrostatic Mud 2001.9 PSI Initial Shut-in 30 Final Shut-in \_\_\_\_\_

Our Representative MARK HERSKOWITZ



CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2028	2019.5
(B) FIRST INITIAL FLOW PRESSURE	40	35.1
(C) FIRST FINAL FLOW PRESSURE	40	35.1
(D) INITIAL CLOSED-IN PRESSURE	1064	1061.8
(E) SECOND INITIAL FLOW PRESSURE	40	35.1
(F) SECOND FINAL FLOW PRESSURE	50	45.6
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	2008	2001.9

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

# ORIGINAL

15-063-21474-00-00

Well Name HARRISON #2 Test No. 5 Date 6/16/J94  
 Company NATIONAL OIL Zone FT SCOTT  
 Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
 Co. Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7 Est. Ft. of Pay \_\_\_\_\_  
 Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS

Interval Tested 4316-4415 Drill Pipe Size 4.5" XH  
 Anchor Length 99 Wt. Pipe I.D. - 2.7 Ft. Run \_\_\_\_\_  
 Top Packer Depth 4311 Drill Collar - 2.25 Ft. Run 30  
 Bottom Packer Depth 4316 Mud Wt. \_\_\_\_\_ 9.5 lb/Gal.  
 Total Depth 4415 Viscosity 60 Filtrate 10

Tool Open @ 4:12PM Initial Blow WEAK SURFACE BLOW BUILT TO 3" IN 30 MINUTES

Final Blow WEAK SURFACE BLOW BUILT TO 4 1/2" IN 45 MINUTES  
NO BLOW ON SHUTIN

Recovery - Total Feet 30 Flush Tool? NO

Sec. 90 Feet of GAS IN PIPE  
 Rec. 30 Feet of SLIGHTLY OILY MUD 5%OIL/95/5MUD  
 Sec. \_\_\_\_\_ Feet of \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
 Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 122 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud 2131.9 PSI AK1 Recorder No. 11086 Range 4350

(B) First Initial Flow Pressure 46.3 PSI @ (depth) 4320 w / Clock No. 25828

(C) First Final Flow Pressure 46.3 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure 112.8 PSI @ (depth) 4345 w / Clock No. 26199

(E) Second Initial Flow Pressure 46.3 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

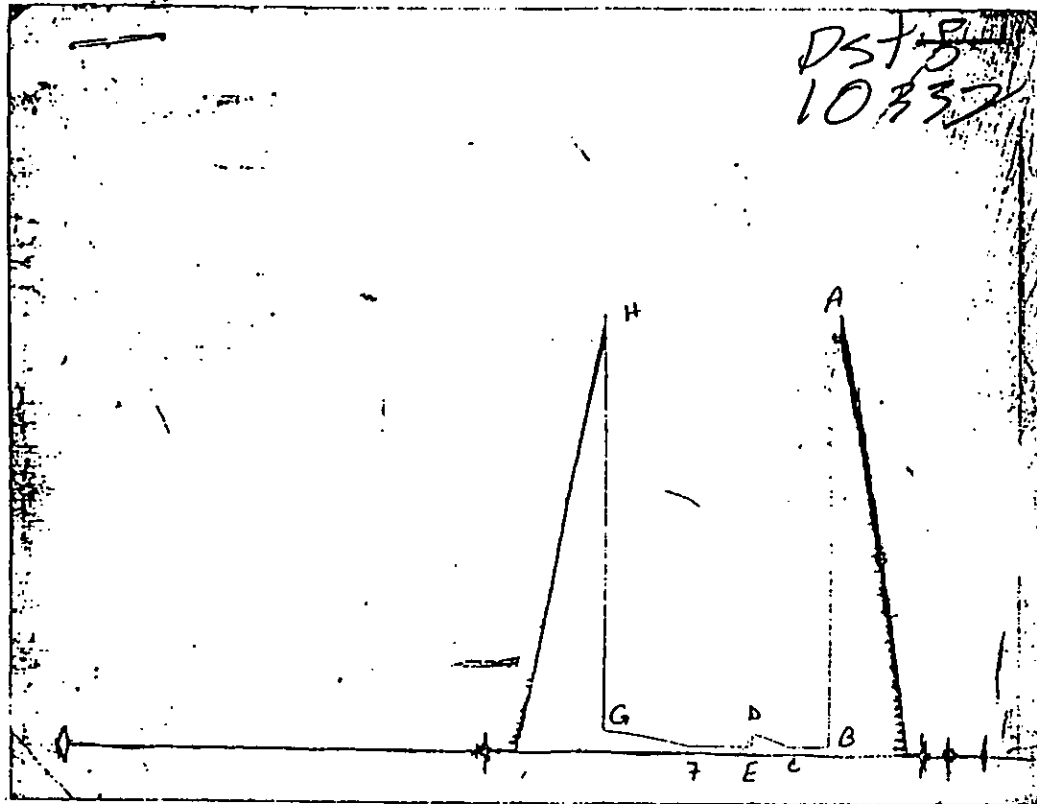
(F) Second Final Flow Pressure 46.3 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 121.9 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 2116.3 PSI Initial Shut-in 30 Final Shut-in 60

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2128	2131.9
(B) FIRST INITIAL FLOW PRESSURE	40	46.3
(C) FIRST FINAL FLOW PRESSURE	40	46.3
(D) INITIAL CLOSED-IN PRESSURE	101	112.8
(E) SECOND INITIAL FLOW PRESSURE	40	46.3
(F) SECOND FINAL FLOW PRESSURE	40	46.3
(G) FINAL CLOSED-IN PRESSURE	111	121.9
(H) FINAL HYDROSTATIC MUD	2108	2116.3

15-063-21474-00-00

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

# ORIGINAL

## Drill-Stem Test Data

Well Name HARRISON #2 Test No. 6 Date 6/17/94  
 Company NATIONAL OIL Zone MISSISSIPPIA  
 Address BOX 399 GARDEN CITY KS Elevation 2863 KB  
 Co. Rep./Geo. SCOTT CORSAIR Cont. EMPHASIS #7 Est. Ft. of Pay \_\_\_\_\_  
 Location: Sec. 16 Twp. 13S Rge. 30W Co. GOVE State KS

Interval Tested	<u>4412-4503</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>91</u>	Wt. Pipe I.D. - 2.7 Ft. Run	_____
Top Packer Depth	<u>4407</u>	Drill Collar - 2.25 Ft. Run	<u>30</u>
Bottom Packer Depth	<u>4412</u>	Mud Wt.	<u>9.3</u> lb/Gal.
Total Depth	<u>4503</u>	Viscosity	<u>53</u>
		Filtrate	<u>6.4</u>

Tool Open @ 11:00AM Initial Blow 1/4" TO 3" BLOW IN 5 MINUTES - BLOW INCREASED TO  
BOTTOM OF BUCKET - BEGAN LOSING MUD IN HOLE - OUT OF HOLE W/TOOL  
 Final Blow \_\_\_\_\_

Recovery - Total Feet 280 Flush Tool? NO

Rec.	<u>280</u>	Feet of	<u>MUD</u>
Rec.	_____	Feet of	<u>OIL SPECKS IN TOOL</u>
Rec.	_____	Feet of	_____
Rec.	_____	Feet of	_____
Rec.	_____	Feet of	_____

BHT 120 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
 RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 2000 ppm System

(A) Initial Hydrostatic Mud 2234.9 PSI AK1 Recorder No. 11086 Range 4350

(B) First Initial Flow Pressure 59.1 PSI @ (depth) 4443 w / Clock No. 25828

(C) First Final Flow Pressure 163.8 PSI AK1 Recorder No. 10332 Range 4050

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 4435 w / Clock No. 26199

(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

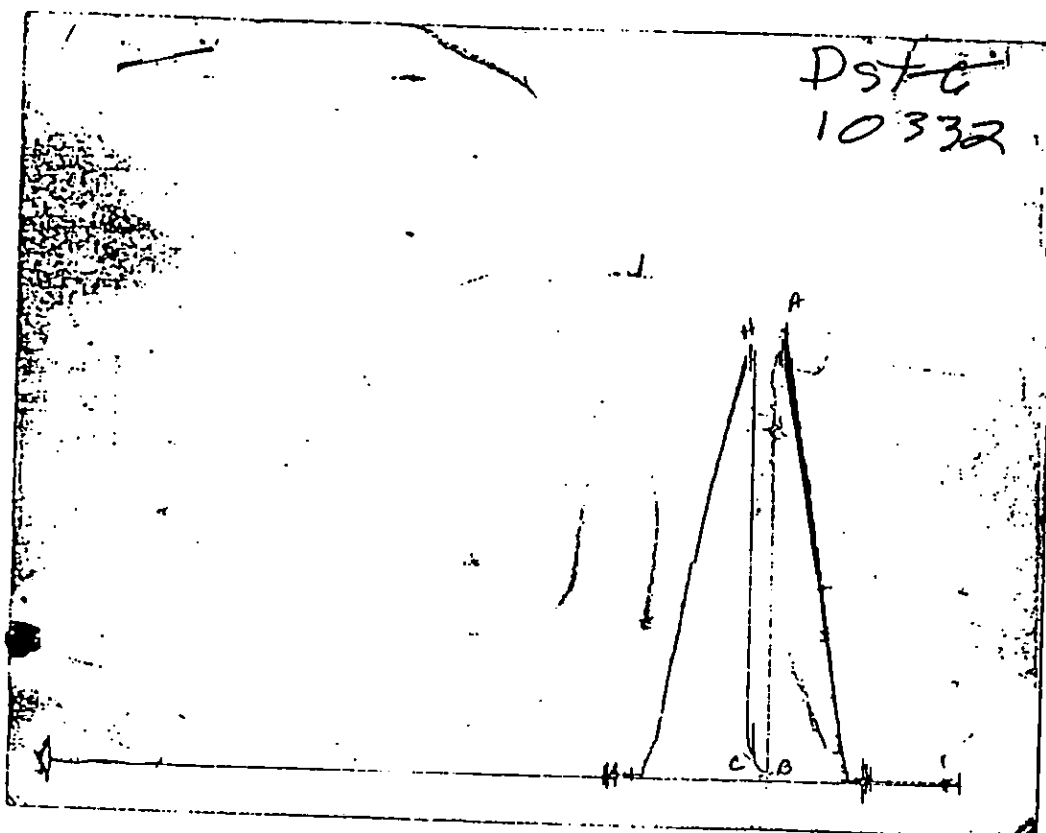
Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(F) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening 15 Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud 2185.9 PSI Initial Shut-in \_\_\_\_\_ Final Shut-in \_\_\_\_\_

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2228	2234.9
(B) FIRST INITIAL FLOW PRESSURE	50	59.1
(C) FIRST FINAL FLOW PRESSURE	151	163.8
(D) INITIAL CLOSED-IN PRESSURE		
(E) SECOND INITIAL FLOW PRESSURE		
(F) SECOND FINAL FLOW PRESSURE		
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD	2178	2185.9



HALLIBURTON ENERGY SERVICES

FORM 1506 8-13

SERVICE LOCATIONS

1 HAYS, KS

2.

3.

4.

REFERRAL LOCATION

CHANGE TO

NATIONAL OIL COMPANY

ADDRESS

P.O. BOX 399

CITY, STATE, ZIP CODE

GARDEN CITY, KS 67846

TICKET

No.

PAGE 1 OF 2

API# 15-063-21474-00-010

WELL/PROJECT NO. 2	LEASE HARRISON	COUNTY/PARISH GOVE	STATE KS	CITY/OFFSHORE LOCATION LOCALTON	DATE 6-9-94	OWNER SAME
TICKET TYPE <input checked="" type="checkbox"/> SERVICE	NITROGEN JCB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR EMPHASIS DRUG.	RIS NAME/NO. RLB #7	SHIPPED VIA 51143	DELIVERED TO	ORDER NO.
WELL TYPE 01	WELL CATEGORY 01	JCB PURPOSE 010	WELL PERMIT NO. 15-063-21474	WELL LOCATION S 16 - T 135 - R 30W		
INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF			U/M			
000-117		1			MILEAGE	80	MI		2.75	220.00
001-016		1			PUMP CHARGE	221	PT	6.12	585.00	585.00
030-503					TOP PLUG - WOODS	1	EA	85.00	95.00	95.00
ORIGINAL										

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.		SURFACE SAFETY VALVE WAS <input type="checkbox"/> PULLED & RETURNED <input type="checkbox"/> PULLED <input type="checkbox"/> RUN		SURVEY		AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	900
CUSTOMER OR CUSTOMER'S AGENT SIGNATURE X Thomas Ah...		TYPE LOCK	DEPTH	OUR EQUIPMENT (IF PERFORMED) WITHOUT BREAKDOWN?					FROM CONTINUATION PAGE(S)	1488
DATE SIGNED 6-8-94		TIME SIGNED 2:00 P.M.	TUBING SIZE	TUBING PRESSURE	WELL DEPTH	OUR SERVICE WAS PERFORMED WITHOUT DELAY?				
<input type="checkbox"/> do not require IPC (Instrument Protection) <input type="checkbox"/> Not offered		TRIE CONNECTION	TYPE VALVE		WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?		ARE YOU SATISFIED WITH OUR SERVICE?		SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE	
						<input type="checkbox"/> YES <input type="checkbox"/> NO		<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND		2389.1

**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) THOMAS ALM	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE) X Thomas Ah...	HALLIBURTON OPERATOR/ENGINEER WAYNE E WESOLD	EMP # R9377	HALLIBURTON APPROVAL [Signature]
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FROM: HES HAYS FAX NO. 1 913 625 2536 11-20-97 031238 P.02



HALLIBURTON

API # 15-063-21474-00-00

DATE 6-8-94 PAGE NO 1

JOB LOG HAL-2013-C

CUSTOMER NATIONAL OIL CO. WELL NO L LEASE HARRISON JOB TYPE 8 5/8" SURFACE TICKET NO. 621801

CHART NO.	TIME	RATE (BPM)	VOL (GAL)	JME (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
					T	C	TUBING	CASING	
	1700								CALLED OUT
	1800								ON LOCATION - CUT RATHOLE
	2345								BREAK CIRCULATION
	2355	6	32.8			✓		300	MIX CEMENT
	0004								RELEASE PLUG ORIGINAL
	0005	7	0			✓		400	DISPLACE PLUG
	0007		13.6						PLUG DOWN 25 SK CEMENT TO PET. ✓
	0008								SHUT IN
									WASH UP TRUCK
									BACK-UP
	0100								JOB COMPLETE

THANK YOU  
WAYNE WILSON  
DAVE ASH  
MEL KARLEN

WELL DATA  
FIELD **API# 15-063-21474-00-00** SEC **16** TWP **13S** RNG **30W** COUNTY **GOVE** STATE **KS**FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO **10652**  
INITIAL PROD: OIL \_\_\_\_\_ BRD. WATER \_\_\_\_\_ BRD. GAS \_\_\_\_\_ MCFD  
PRESENT PROD: OIL \_\_\_\_\_ BRD. WATER \_\_\_\_\_ BRD. GAS \_\_\_\_\_ MCFD  
COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_  
PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_  
BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_  
WEG DATA \_\_\_\_\_ TOTAL DEPT. \_\_\_\_\_

HEV. USED	WEIGHT	SIZE	FROM	TO	MAXIMUM FEI ALLOWABLE
<b>N</b>	<b>20</b>	<b>8 5/8</b>	<b>KB</b>	<b>221</b>	
			<b>12 1/4</b>	<b>221</b>	<b>224</b>
					SHOTS/FT

## JOB DATA

DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME
<b>6-8</b>	<b>1700</b>	<b>6-8</b>	<b>1800</b>	<b>6-8</b>	<b>2355</b>	<b>6-9</b>	<b>0100</b>

TYPE AND SIZE	QTY	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG <b>LA 11</b>	<b>1</b>	<b>HOWCO</b>
HEAD <b>PC</b>		
PACKER		
OTHER		

NAME	UNIT NO. & TYPE	LOCATION
<b>W. WILSON</b>	<b>89377</b> <b>PIEK UP</b> <b>COMBO</b>	<b>HAYS, KS</b>
<b>D. ASH</b>	<b>E1604</b> <b>BULK</b>	<b>"</b>
<b>M. KARLIN</b>	<b>61511</b> <b>51252-76103</b>	<b>"</b>

**ORIGINAL**MATERIALS  
TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB. GAL. GAL. SPM  
DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB. GAL. GAL. SPM  
PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB.  
ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
ACID TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
SURFACTANT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
VE AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
FLUID LOSS AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
GELLING AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
FRIC. RED AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
BREAKER TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
BLOCKING AGENT TYPE \_\_\_\_\_ GAL. \_\_\_\_\_ FA \_\_\_\_\_  
PERFPAC BALLS TYPE \_\_\_\_\_ QTY \_\_\_\_\_  
OTHER \_\_\_\_\_  
OTHER \_\_\_\_\_DEPARTMENT **CEMENT**  
DESCRIPTION OF JOB **8 5/8" SURFACE**  
JOB DONE THRU TUBING  CASING  ANNULUS  163 ANV   
CUSTOMER REPRESENTATIVE **X THOMAS ALM**  
HALLIBURTON OPERATOR **Way E W** COPIES REQUESTED \_\_\_\_\_

## CEMENT DATA

STAGE	NUMBER OF BAGS	CEMENT	BRAND	BULK BACKED	ADDITIONS	YIELD CU. FT. 15% W/W	MIXED LBS. GAL.
	<b>145</b>	<b>4090P02</b>	<b>8475 STD</b>	<b>B</b>	<b>290 GEL, 390 CC</b>	<b>1.27</b>	<b>14.32</b>

PRESSURES IN PSI: \_\_\_\_\_  
 CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_  
 SHUT IN INSTANT \_\_\_\_\_ HYDRAULIC HORSEPOWER \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN GPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 CEMENT LEFT IN PIPE \_\_\_\_\_  
 FEET **15'** REASON **REQUESTED**

SUMMARY  
 VOLUMES  
 PREFLUSH EQL. GAL. \_\_\_\_\_ TYPE \_\_\_\_\_  
 LOAD N BRON. EQL. GAL. \_\_\_\_\_ PAD EQL. GAL. \_\_\_\_\_  
 TREATMENT EQL. GAL. \_\_\_\_\_ DISPL. **EBB** - **13.6**  
 CEMENT SLURRY **EBB** - **33.8**  
 TOTAL VOLUME EQL. GAL. \_\_\_\_\_  
 REMARKS  
**TOTAL DEPT - 224.18**





HALLIBURTON ENERGY SERVICES

TRK 51252-76103

TICKET CONTINUATION

ORIGINAL

APT# 15-063-21474-00-00

TICKET No.	621201
DATE	6-8-94
PAGE	2
OF	2

CUSTOMER	National Oil Co.	WELL	Harrison #2
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FORM 1911 B-10

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE	AMOUNT
		LCG	ACCT	RF		U/M	U/M		
504-136		1		B	40/60 Pozmix Standard	145		6 03	881 60
506-121		1		B	2sk Halliburton Gel@2%				n/
509-406		1		B	Calcium Chloride Blended	4		36 73	147 00
ORIGINAL									
500-207		1		B	SERVICE CHARGE		CUBIC FEET	1 35	206 5
500-206		1		B	MILEAGE CHARGE		TOTAL WEIGHT	95	252 98
						41	LOADS PER FS		
							TON MILES		
							266.295		

CONTINUATION TOTAL	1,488.13
--------------------	----------

No. B 232862

FROM: HES, HAYS  
FORM NO. 1 913 625 2536  
11-20-97 03:24P P.03



HALLIBURTON ENERGY SERVICES

FORM 1906 R-13

CHARGE TO: WARRIOR OIL COMPANY  
 ADDRESS: P.O. Box 244  
 CITY, STATE, ZIP CODE: GALVESTON, TEXAS 77551

COPY: \_\_\_\_\_ TICKET No. **621806 - 9**  
 PAGE \_\_\_\_\_ OF \_\_\_\_\_  
**API# 15-063-21474-00-00**

1. SERVICE LOCATIONS	WELL/PROJECT NO. <u>2</u>	LEASE <u>WARRIOR</u>	COUNTY/PARISH <u>WJL</u>	STATE	CITY/OFFSHORE LOCATION	DATE <u>5-13-00</u>	OWNER
2.	TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES	NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR <u>EMPLOYEE</u>	RIG NAME/NO. <u>21607</u>	SHIPPED VIA	DELIVERED TO <u>LOCATION</u>	ORDER NO.
3.	WELL TYPE <u>01</u>	WELL CATEGORY <u>01</u>	JOB PURPOSE <u>025</u>	WELL PERMIT NO. <u>15-063-21474</u>	WELL LOCATION <u>S 16 - 123 - 30N</u>		
4. REFERRAL LOCATION	INVOICE INSTRUCTIONS						

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UNIT PRICE		AMOUNT
		LOC	ACCT	DF		U/M	U/M			
000-113		1			MILEAGE	80	M	1	2.75	220.00
001-016		1			PUMP CHANGE 1 <sup>ST</sup> STAGE	4525	FT	6	170.500	1705.00
007-181		1			PUMP CHANGE 2 <sup>ND</sup> STAGE	1	PT.	1	1400.00	1400.00
019-241		1			ROTATING HEAD	1	FT	1	185.00	185.00
018-317		1			SUPERFLUSH	8	KS	1	100.00	800.00
36	847.6316	1			INSERT VALVE FLOAT SHADE	1	EA	47.2	235.00	235.00
50	807.93504	1			CENTRALIZERS - FLOWMASTERS	7	EA	47.4	57.00	399.00
71	813.80100	1			MULTIPLE STAGE CEMENT	1	EA	47.1	2474.00	2474.00
75	213.16410	1			TWO STAGE FREE FALL PLUG SET	1	EA	47.5	450.00	450.00
27	215.14113	1			AUTO FALL UP JOINT	1	EA	1.25	45.00	45.00
320	800.8231	1			CEMENT BASKET	2	EA	47.4	105.00	210.00
		1			SP 101	3	EA	1.50	100.00	200.00

**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.

CUSTOMER OR CUSTOMER'S AGENT SIGNATURE: X Scott G...

DATE SIGNED: 6-14-00 TIME SIGNED: 1000  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	<b>SURVEY</b> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND	PAGE TOTAL <b>8522.00</b> FROM CONTINUATION PAGE(S) <b>10936.98</b> SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE <b>19469.98</b>
BEAN SIZE	SPACERS		
TYPE OF EQUALIZING SUB.	CASING PRESSURE		
TUBING SIZE	TUBING PRESSURE		
TREE CONNECTION	TYPE VALVE		

**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): Scott G... CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE): X Scott G...

HALLIBURTON OPERATOR/ENGINEER: WAYNE E. WOOD EMP #: 34317

HALLIBURTON APPROVAL: \_\_\_\_\_

WELL DATA

FIELD API# 15-063-21474-10-00 SEC 16 TWP. 13 RING. 30W COUNTY GOVE STATE KS

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_  
 FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO 10134  
 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	<u>U</u>	<u>10.5</u>	<u>4 1/2</u>	<u>KB</u>	<u>4575.6</u>	
LINER						
TUBING						
OPEN HOLE			<u>7 7/8</u>	<u>4575</u>	<u>4578</u>	SHOTS/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

JOB DATA

CALLLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>6-13</u>	DATE <u>6-13</u>	DATE <u>6-13</u>	DATE <u>6-13</u>
TIME <u>0900</u>	TIME <u>1300</u>	TIME <u>1100</u>	TIME <u>2200</u>

TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR	<u>1</u>	<u>WALSH</u>
FLOAT SHOE	<u>1</u>	<u>"</u>
GUIDE SHOE	<u>1</u>	<u>"</u>
CENTRALIZERS	<u>7</u>	<u>"</u>
BOTTOM PLUG	<u>1</u>	<u>"</u>
TOP PLUG	<u>1</u>	<u>"</u>
HEAD	<u>1</u>	<u>"</u>
PACKER		
OTHER	<u>2</u>	<u>"</u>

PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>W. WILSON</u>	<u>84377</u>	<u>PICK-UP</u>
	<u>39624</u>	<u>1174, KS</u>
	<u>COMB</u>	
<u>R. BROWN</u>	<u>57210</u>	<u>51374 W</u>
		<u>BULK</u>
<u>M. KAPLAN</u>	<u>61511</u>	<u>2857-2206</u>
		<u>BULK</u>
<u>M. KAPLAN</u>	<u>61511</u>	<u>3122-76102</u>
		<u>"</u>

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. \_\_\_\_\_ %  
 SURFACIANT 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 4 1/2" LONGSTRENGTH

CIRCULATED 30 SKS CEMENT TO PCT.

JOB DONE THRU: TUBING  CASING  ANNULUS  TBG/ANN.

CUSTOMER REPRESENTATIVE X

HALLIBURTON OPERATOR Wing E. White COPIES REQUESTED \_\_\_\_\_

CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU.FT./SK.	MIXED LBS./GAL.
<u>1</u>	<u>50</u>	<u>STANDARD</u>		<u>B</u>	<u>1075 - AIR</u>	<u>1.20</u>	<u>15.8</u>
<u>1</u>	<u>175</u>	<u>"</u>		<u>B</u>	<u>575 UNISOL, 1275 - AIR, 4 1/2" UNISOL 344</u>		
					<u>11475 - AIR-3, 7" UNISOL 344</u>	<u>1.36</u>	<u>15.5</u>
<u>1</u>	<u>150</u>	<u>HLC</u>		<u>B</u>	<u>475 UNISOL 344, 1 1/2" UNISOL 344</u>	<u>2.02</u>	<u>12.46</u>

PRESSURES IN PSI

SUMMARY

VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESLUST: BBL. GAL. 9 TYPE SUBMERGED  
 BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BKDN: BBL.-GAL. \_\_\_\_\_ PAD: BBL.-GAL. \_\_\_\_\_  
 AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BBL.-GAL. \_\_\_\_\_ QISP: BBL. GAL. 72.4  
 SHUT-IN: INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN \_\_\_\_\_ CEMENT SLURRY: BBL. GAL. (10.1 - 43.4 = 54.1) (16.9)  
 HYDRAULIC HORSEPOWER \_\_\_\_\_ TOTAL VOLUME: BBL.-GAL. \_\_\_\_\_  
 ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_  
 AVERAGE RATES IN BPM \_\_\_\_\_  
 TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_  
 CEMENT LEFT IN PIPE \_\_\_\_\_  
 FEET 2500 REASON WATER

REMARKS

TOTAL PORE = 4575.6  
CENTRALIZER = 2, 5, 7, 13, 16, 19, 55  
PACKETS = P-2 = 12, 56  
DNL 10X2 TOP 56, 2184'



HALLIBURTON ENERGY SERVICES

FORM 1911 R-10

TRK #3859-8206  
#76003  
#51252

TICKET CONTINUATION

CUSTOMER COPY

API # 15-063-21474-00-00

TICKET

No. 641806

CUSTOMER

National Oil Co.

WELL

Harrison #2

DATE

06/18/94

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PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE		AMOUNT	
		LOC	ACCT	DF									
504-308		1		B	Standard Cement	225				7.24		1629	00
504-136		1		B	Halliburton Light Cement	450				6.82		3069	00
09-968		1		B	Salt Blended 50 SKS Standard	250				15		37	50
509-968		1		B	Salt Blended 175 SKS Standard	1650				15		247	50
508-127		1		B	CalSeal Blended 175 SKS STD	800				25.90		207	20
500-153		1		B	CFR-3 Blended 175 SKS STD	41				198.85		198	85
508-291		1		B	Gilsonite Blended 175 SKS STD	1225				40		490	00
507-778		1		B	Halad-344 Blended 175 SKS STD	82				27.15		2226	30
507-277		1		B	Halliburton Gel 4% Add. in HLC	16				18.60		297	60
507-210		1		B	Flocele Blended in HLC	113				1.65		186	45
500-207		1		B	SERVICE CHARGE								
500-306		1		B									
						CUBIC FEET							
						777				1.35		1048.72	
						MILEAGE CHARGE		TOTAL WEIGHT		LOADED MILES		TON MILES	
						68,361		40		1367.22		95 1298.86	

ORIGINAL

No. B 232874

CONTINUATION TOTAL

10936.98

CUSTOMER		WELL NO.		LEASE		JOB TYPE		TICKET NO.	
W. O. S. S.		L		W. O. S. S.		4 1/2" LOGS, TRIG		621226	
CHART NO.	TIME	RATE (BPM)	VOLUME (BBB) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS	
				T	C	TUBING	CASING		
	10:00								CALL OUT
	12:00								ON LOW FLOW
	16:15								DROP BALL
	16:15								BREAK CIRCULATION <b>ORIGINAL</b>
	17:02	4	2		✓		100		PUMP SPACER - 1120
	17:03	4	8		✓		100		PUMP SUPERFLOW
	17:07	4	2		✓		100		PUMP SPACER - 1120
	17:09	5.5	0		✓		150		START MIXING CEMENT
	17:11		54.1						FINISH MIXING CEMENT
	17:21		6						WASH OUT PUMP - LINES
	17:22								DROP 1ST STAGE PLUG
	17:27	6.5	0		✓		400		DISPENSE PLUG (36 BBL WATER - 36.4 BBL MUD)
	17:31		72.4				800		PLUG DOWN
	17:38						200		RELEASE PRT
							OK		FLAT HOLD
	17:40								WASH UP TRUCK
	17:40								DROP D.V. OPENING PLUG
	17:41						1200		OPEN D.V. TOOL - PUMP TRUCK
	17:42								CIRCULATE WITH REG MUD PUMP
	20:17		4.5						PLUG RATION - 2 <sup>ND</sup> STAGE CEMENT
	20:17		3						PLUG MASSURE - " "
	20:27	6.3			✓		100		START MIXING CEMENT
	20:31		161.9						FINISH MIXING CEMENT
	20:33								WASH OUT PUMP - LINES - DROP CLOSING PLUG
	20:25	5.5	0		✓		500		DISPENSE PLUG
	21:05		36.3				1600		PLUG DOWN 30 SXS CEMENT TO PRT
	21:06						OK		RELEASE PRT - HOLD <i>South Corner, Unit 10</i>
									WASH UP TRUCK <i>Wash up truck</i>
									BACK-UP TRUCK <i>Way &amp; W</i> 115
	22:00								JOB COMPLETE
									THANK YOU
									WASH WELLS, ROW PRTS
									MEL KAGLE