FORM MUST BE TYPED

SIDE ONE

ORIGINAL

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

API NO. 15- 033-21095 0000

County Comanche County, Kansas

NE - SE - ___ - ___ Sec. 10 Twp. 33S Rge. 19 E X W

1960 Feet from (S) N (circle one) Line of Section

700 Feet from (E) W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner: 2081
NE, (SE) NW or SW (circle one)

Lease Name Donald Herd Well # 2-10

Field Name Wildcat

Producing Formation Mississippian

Elevation: Ground 2018 KB 2029

Total Depth 6136' PBTD ___

Amount of Surface Pipe Set and Cemented at 730 Feet

Multiple Stage Cementing Collar Used? ___ Yes X No

If yes, show depth set ___ Feet

If Alternate II completion, cement circulated from 730

feet depth to surface w/ 350 sx cmt.

Drilling Fluid Management Plan ALT 1 JH 7-14-00
(Data must be collected from the Reserve Pit)

Chloride content 22000 ppm Fluid volume 1800 bbls

Dewatering method used evaporation

Location of fluid disposal if hauled offsite:

Operator Name KBW Oil & Gas

Lease Name Harmon SWD License No. 5993

NW Quarter Sec. 11 Twp. 33 S Rng. 20 E (W)

County Comanche County, KS Docket No. 22304

Operator: License # 6528

Name: R. J. Patrick Operating Company

Address P O Box 1157

City/State/Zip Liberal, Kansas 67905-1157

Purchaser: Kansas Gas Supply

Operator Contact Person: R. J. Patrick

Phone (316) 624-8483

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Marvin Harvey

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

___ Oil ___ SWD ___ SIOW ___ Temp. Abd.
X 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 ___ PBTD
___ Commingled Docket No. ___
___ Dual Completion Docket No. ___
___ Other (SWD or Inj?) Docket No. ___

05/22/00 Spud Date | 06-07-00 Date Reached TD | 06-14-00 Completion Date

RECEIVED
STATE CORPORATION COMMISSION
JUN 19 2000
CONSERVATION DIVISION
Wichita, Kansas
6-19-00

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 R J Patrick

Title Owner Date 06/19/00

Subscribed and sworn to before me this 19th day of June 19 2000

Notary Public Jayn Berry

Date Commission Expires 04/04/04

STATE NOTARY PUBLIC KANSAS
JAYN BERRY
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Expires: 4-4-04

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)

Form ACO-1 (7-91)

SIDE TWO

Operator Name R. J. Patrick Operating Company Lease Name Donald Herd Well # 2-10

Sec. 10 Twp. 33 Rge. 19 ☐ East ☒ West County Comanche County, Kansas

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

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

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

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

List All E.Logs Run: Dual Compensated Porosity, Dual Induction, Micro, Sonic Porosity and Cement Bond Log.

Copy of 6 DST Enclosed.

☒ Log Formation (Top), Depth and Datums ☐ Sample

Name	Top	Datum
Heebner Shale	4328	2301
Lansing	4517	2490
Kansas City	4756	2729
Marmaton	5024	2997
Pawnee	5123	3096
Ft. Scott	5159	3132
Cherokee Shale	5168	3141
Mississippian	5264	3237

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
Conductor		20"		60'	Grout		
Surface	12-1/4"	8-5/8"	24#	730'	Lite Class A	250 100	3% cc 3%cc 2%gel
Production	7-7/8"	4-1/2"	11.60#	5400'	50/50 Poz	150	18% salt

ADDITIONAL CEMENTING/SQUEEZE RECORD

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2	5274' to 5280' & 5294' to 5300'	500 gal 15% & 2500 gal 7½%	5274 to 5300

TUBING RECORD	Size	Set At	Packer At	Liner Run
	2 3/8	5128'	5136'	☐ Yes ☒ No

Date of First, Resumed Production, SWD or Inj.	Producing Method
June 13-2000	☒ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0 0	2,000,000pd	0		—

Disposition of Gas: ☒ Vented ☐ Sold ☐ Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION 5274-5280 & 5294-5300 Production Interval

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

☐ Other (Specify) _____

ORIGINAL

P.O. BOX 1087
WOODWARD, OK 73802

WEDER SERVICES, INC.

PHONE (580) 256-9371
FAX (580) 256-6997

R.J. PATRICK OPERATING CO.
P.O. BOX 1157
LIBERAL KS 67905-1157

05/19/00

20648

LEASE NAME: DON HERD 2-10
RIG #5
WORK ORDER #WO2073
FURNISHED WELDER & MATERIAL
DRILLED 60' OF 30" CONDUCTOR HOLE
DRILLED 5' OF 66" HOLE FOR CELLAR
FURNISHED 60' OF 20" CONDUCTOR PIPE
FURNISHED GROUT

TOTAL BID	$3,475.00
INSURANCE SURCHARGE	69.50
FUEL SURCHARGE	105.00

THANK YOU!!!!

1 RC

TOTAL BID, FUEL, AND INSURANCE	3,649.50
SALES TAX	33.75
TOTAL INVOICE	3,683.25

RECEIVED MAY 24 2000

SERVICES:
- Welding • Dozers • Roustabouts
- Backhoe • Cargo • Trucking
- Conductor Service

DIVISIONS:

Conductor Services	Weder Service	L & L Dirt Co.	Tri-State Construction
256-9371	254-5383	921-3375 254-5379	256-0605

ALLIED CEMENTING CO., INC.

CEMENTING LOG

ORIGINAL

STAGE NO.

Date 6-8-00 District Medicine Lodge Ticket No. 4429

Company RT Patrick Rig Duke #5

Lease Herd Well No. 1-10

County Comanche State KS

Location Coldwater, 5S to Tct Field 10-33-19

2W-3/4S

CASING DATA: PTA ☐ Squeeze ☐

Surface ☐ Intermediate ☐ Production ☒ Liner ☐

Size 4 1/2 Type _____ Weight 11.60 Collar _____

Casing Depths: Top _____ Bottom _____

Drill Pipe: Size 4 1/2 Weight 16.60 Collars X hole

Open Hole: Size 7 7/8 T.D. 6136 ft. P.B. to _____ ft.

CAPACITY FACTORS:

Casing:	Bbls/Lin. ft.	.0155	Lin. ft./Bbl.	64.34
Open Holes:	Bbls/Lin. ft.	.0602	Lin. ft./Bbl.	16.5993
Drill Pipe:	Bbls/Lin. ft.		Lin. ft./Bbl.	
Annulus:	Bbls/Lin. ft.	.0406	Lin. ft./Bbl.	24.6174
	Bbls/Lin. ft.		Lin. ft./Bbl.	

Perforations: From _____ ft. to _____ ft. Amt. _____

CEMENT DATA:

Spacer Type: _____

Amt. _____ Sks Yield _____ ft³/sk Density _____ PPG

LEAD: Pump Time _____ hrs. Type _____

Excess _____

Amt. _____ Sks Yield _____ ft³/sk Density _____ PPG

TAIL: Pump Time _____ hrs. Type 50:50:2

18% salt, .75% CD-31, Flo-Seal Excess _____

Amt. 175 Sks Yield 1.28 ft³/sk Density 14.5 PPG

WATER: Lead _____ gals/sk Tail 5.43 gals/sk Total _____ Bbls.

Pump Trucks Used 343

Bulk Equip. 242

Float Equip: Manufacturer _____

Shoe: Type _____ Depth _____

Float: Type _____ Depth _____

Centralizers: Quantity _____ Plugs Top TCP Btm. _____

Stage Collars _____

Special Equip. _____

Disp. Fluid Type 2% KCL Amt. 83 1/2 Bbls. Weight 8.43 PPG

Mud Type Chemical Weight 9.1 PPG

COMPANY REPRESENTATIVE RT Patrick CEMENTER Larry Dreiling

TIME AM/PM	PRESSURES PSI: DRILL PIPE CASING	PRESSURES PSI: ANNULUS	FLUID PUMPED DATA: TOTAL FLUID	FLUID PUMPED DATA: Pumped Per Time Period	FLUID PUMPED DATA: RATE Bbls Min.	REMARKS
12:00	300					Pipe on Bottom - Break Circ.
						Recip. Pipe.
						Spot 500 gal Fresh H2O
12:45	25		2		3	Mix Rathole w/ 15 sx
12:50	25		1		3	Mix mousehole w/ 10 sx
12:55	300		34		6	Cement w/ 150 sx 50:50:2
						18% salt - .75% CD-31 + 1/4# Flo-Seal
1:05			5		4	Wash out Pump + lines
						Release Plug
1:10	100		10		6	Start 2% KCL water
						Displacement
	100		50		6	Cement to surface
	150		65		6	PSI lift Increase
	300		70		4	Slow Rate - PSI Increase
	500		83 1/2		3	Slow Rate
	1000		—		3	Bump Plug
						Release PSI
						Float Held

FINAL DISP. PRESS: 500 PSI BUMP PLUG TO 1000 PSI BLEEDBACK 1/2 BBLS.

THANK YOU

Taylor Printing Inc. Pratt, KS

ALLIED CEMENTING CO., INC. 4429

Federal Tax I.D.# 48-0727860

ORIGINAL

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

SERVICE POINT:
med. lodge, ks

DATE 6-8-00	SEC. 10	TWP. 33s	RANGE 19w	CALLED OUT 7:00 A.m.	ON LOCATION 9:45 A.m.	JOB START 12:00 P.m.	JOB FINISH 1:30 P.m.
LEASE Herd	WELL # 1-10		LOCATION Coldwater 5S to 7et.			COUNTY Comanche ks.	STATE
OLD OR NEW (Circle one)			2w-3/4s-4/s				

CONTRACTOR Duke Drlg
TYPE OF JOB Prod. Csg.
HOLE SIZE 7 7/8 T.D. 6136
CASING SIZE 4 1/2 x 11.60 DEPTH 5415
TUBING SIZE DEPTH
DRILL PIPE DEPTH
TOOL DEPTH
PRES. MAX 1000 MINIMUM 150
MEAS. LINE SHOE JOINT 12.00
CEMENT LEFT IN CSG.
PERFS.
DISPLACEMENT 2% KCL - 38 1/2 Bbls

OWNER RJ Patrick oper.

CEMENT

AMOUNT ORDERED 175sx 50.50.2 & 18% Salt. 75% CD-31+1/4# Flo-Seal 10gals. Clay pro

EQUIPMENT

PUMP TRUCK CEMENTER Larry Dreiling
343 HELPER Justin
BULK TRUCK
342 DRIVER Mike
BULK TRUCK
DRIVER

COMMON		@	
POZMIX		@	
GEL		@	
CHLORIDE		@	
		@	
		@	
		@	
		@	
		@	
HANDLING		@	
MILEAGE			
		TOTAL	

REMARKS:

Pipe on Bottom. Break Circ. Recip. Pipe. Pump Rathole w/15sx. mousehole w/10sx. Cement 150sx 50.50.2+18% Salt, .75% CD-31+1/4# Flo-Seal W/Shout Pump Lines - Release Plug Displace 38 1/2 Bbls 2% KCL. Bump Plug Release PSI Float Held

SERVICE

DEPTH OF JOB 5415			
PUMP TRUCK CHARGE			
EXTRA FOOTAGE		@	
MILEAGE		@	
PLUG Rubber 4 1/2		@	
		@	
		@	
		TOTAL	

CHARGE TO: RJ Patrick operating
STREET
CITY STATE ZIP

FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	

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

TAX
TOTAL CHARGE
DISCOUNT IF PAID IN 30 DAYS

SIGNATURE x RJ Patrick

x RJ Patrick
PRINTED NAME

ALLIED CEMENTING CO., INC. 1498

Federal Tax I.D.# 48-0727860

ORIGINAL

REMIT TO: P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Medicine Lodge

DATE	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
5-23-00	10	33S	19W	11:30 pm	1:30 Am	7:05 Am	7:40 Am

LEASE	WELL #	LOCATION	COUNTY	STATE
Herd	H-10	Coldwater, S. to Jct 3W 3S, W/S	Comanche	KS

OLD OR NEW (Circle one)

CONTRACTOR Duke #5

TYPE OF JOB Surface

HOLE SIZE 12 1/4 T.D. 735

CASING SIZE 8 5/8 x 24 DEPTH 730

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX 200 MINIMUM

MEAS. LINE SHOE JOINT 42.18

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 43 1/2 BBls freshwater

OWNER RJ Patrick Operating Co

EQUIPMENT

PUMP TRUCK CEMENTER Carl Balding
233-302 HELPER Mark B

BULK TRUCK
214-314 DRIVER Dave W.

BULK TRUCK
DRIVER

CEMENT

AMOUNT ORDERED
250 sx 65:35:6 + 3% cc + 1/4# flo-seal
100 sx Class A + 3% cc + 2% gel

COMMON		@	
POZMIX		@	
GEL		@	
CHLORIDE		@	
		@	
		@	
		@	
		@	
HANDLING		@	
MILEAGE			
		TOTAL	

REMARKS:

Pipe on bottom. Break circulation. Pump 3 BBls freshwater. 250 sx 65:35:6 + 3% cc + 1/4# flo-seal + 100 sx A + 2 gel. Cement in. Switch valve + Release plug. Displace with 43 1/2 BBls freshwater. Bump plug + Float held. Circulate 300 sx to pit.

SERVICE

DEPTH OF JOB	730		
PUMP TRUCK CHARGE			
EXTRA FOOTAGE		@	
MILEAGE		@	
PLUG	Rubber	@	
		@	
		@	
		TOTAL	

CHARGE TO: RJ Patrick Operating Co

STREET

CITY STATE ZIP

FLOAT EQUIPMENT

	@	
	@	
	@	
	@	
	@	
	TOTAL	

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

TAX	
TOTAL CHARGE	
DISCOUNT	IF PAID IN 30 DAYS

SIGNATURE RJ Patrick

PRINTED NAME RJ Patrick

ALLIED CEMENTING CO., INC.

CEMENTING LOG

STAGE NO. ORIGINAL

Date 5-23- District Med-Lodge Ticket No. 1498
Company KJ Patrick Rig Duke #5
Lease Herd Well No. 1-10
County Comanche State KS.
Location Coldwater 5 to Field 10-33S-19W
JCT 3W 3/4 S w/S

CASING DATA: PTA ☐ Squeeze ☐
Surface ☒ Intermediate ☐ Production ☐ Liner ☐
Size 8 5/8 Type _____ Weight 24 Collar _____

Casing Depths: Top KB Bottom 230

Drill Pipe: Size _____ Weight _____ Collars _____
Open Hole: Size _____ T.D. _____ ft. P.B. to _____ ft.

CAPACITY FACTORS:
Casing: Bbls/Lin. ft. .0637 Lin. ft./Bbl. 15.70
Open Holes: Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
Drill Pipe: Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
Annulus: Bbls/Lin. ft. .0725 Lin. ft./Bbl. 13.80
Bbls/Lin. ft. _____ Lin. ft./Bbl. _____
Perforations: From _____ ft. to _____ ft. Amt. _____

CEMENT DATA:
Spacer Type: _____
Amt. _____ Sks Yield _____ ft³/sk Density _____ PPG

LEAD: Pump Time _____ hrs. Type 65:35:6+3%cc
+ 1/4 #/sk Flo-Seal Excess _____
Amt. 250 Sks Yield 1.97 ft³/sk Density 12.5 PPG
TAIL: Pump Time _____ hrs. Type Class A+3%cc
+ 2% gel Excess _____
Amt. 100 Sks Yield 1.34 ft³/sk Density 15.2 PPG
WATER: Lead 10.9 gals/sk Tail 6.51 gals/sk Total _____ Bbls.

Pump Trucks Used 233-302 Mark C
Bulk Equip. 214-314 Duke U.

Float Equip: Manufacturer _____
Shoe: Type _____ Depth _____
Float: Type AFU Insert Depth _____
Centralizers: Quantity _____ Plugs Top Rubber Btm. _____
Stage Collars _____
Special Equip. _____
Disp. Fluid Type Freshwater Amt. 43 1/2 Bbls. Weight 8.34 PPG
Mud Type _____ Weight _____ PPG

COMPANY REPRESENTATIVE Joe Lewingston CEMENTER Carl Balding

TIME AM/PM	PRESSURES PSI DRILL PIPE CASING	ANNULUS	FLUID PUMPED DATA TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	REMARKS
						Pipe on bottom, Break Circulation.
6:30 AM						
2:04	100		3	3	5	Start Freshwater
2:05	100		91	88	5	Pump 250 sx lead cement
2:21	150		115	24		Pump 100 sx tail Cement
2:26	50					Switch valves + Release plug.
2:27	—				3	Start Displacement
	100		125	10	5	Steady Rate
	350		155	30	3	Slow Rate
	350		158 1/2	3 1/2	—	Displacement in
2:40	700			43 1/2 total		Bump plug. Release pressure + Float Held.

FINAL DISP. PRESS: 350 PSI BUMP PLUG TO 700 PSI BLEEDBACK 1/2 BBLS. THANK YOU

Taylor Printing, Inc., Pratt, KS

FORM MUST BE TYPED

SIDE ONE

COPY

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

Operator: License # 6528

Name: R. J. Patrick Operating Company

Address P O Box 1157

City/State/Zip Liberal, Kansas 67905-1157

Purchaser: Kansas Gas Supply

Operator Contact Person: R. J. Patrick

Phone (316) 624-8483

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Marvin Harvey

RECEIVED
STATE CORPORATION COMMISSION
JUN 19 2000
CONSERVATION DIVISION
Wichita, Kansas

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

___ Oil ___ SWD ___ SIOW ___ Temp. Abd.
X 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 ___ PBTD
___ Commingled Docket No.
___ Dual Completion Docket No.
___ Other (SWD or Inj?) Docket No.

05/22/00 (Spud Date) 06-07-00 (Date Reached TD) 06-14-00 (Completion Date)

API NO. 15- 033-21095 0000

County Comanche County, Kansas

NE - SE - ___ - ___ Sec. 10 Twp. 33S Rge. 19 E X W

1960 Feet from S N (circle one) Line of Section

700 Feet from E W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner: 2081
NE, SE NW or SW (circle one)

Lease Name Donald Herd Well # 2-10

Field Name Wildcat

Producing Formation Mississippian

Elevation: Ground 2018 KB 2029

Total Depth 6136' PBTD

Amount of Surface Pipe Set and Cemented at 730 Feet

Multiple Stage Cementing Collar Used? ___ Yes X No

If yes, show depth set ___ Feet

If Alternate II completion, cement circulated from 730

feet depth to surface w/ 350 sx cmt.

Drilling Fluid Management Plan ALT 1 JH 7-14-00
(Data must be collected from the Reserve Pit)

Chloride content 22000 ppm Fluid volume 1800 bbls

Dewatering method used evaporation

Location of fluid disposal if hauled offsite:

Operator Name KBW Oil & Gas

Lease Name Harmon SWD License No. 5993

NW Quarter Sec. 11 Twp. 33 S Rng. 20 E W

County Comanche County, KS Docket No. 22304

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 R J Patrick

Title Owner Date 06/19/00

Subscribed and sworn to before me this 19th day of June, 19 2000

Notary Public Jayn Berry

Date Commission Expires 04/04/04

STATE NOTARY PUBLIC KANSAS
JAYN BERRY
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Expires: 4-4-04

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)

Form ACO-1 (7-91)

SIDE TWO

Operator Name R. J. Patrick Operating Company Lease Name Donald Herd Well # 2-10

Sec. 10 Twp. 33 Rge. 19 ☐ East ☒ West County Comanche County, Kansas

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

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

Samples Sent to Geological Survey ☐ Yes ☒ No

Cores Taken ☐ Yes ☒ No

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

List All E.Logs Run: Dual Compensated Porosity, Dual Induction, Micro, Sonic Porosity and Cement Bond Log.

Copy of 6 DST Enclosed.

☒ Log Formation (Top), Depth and Datums ☐ Sample

Name	Top	Datum
Heebner Shale	4328	2301
Lansing	4517	2490
Kansas City	4756	2729
Marmaton	5024	2997
Pawnee	5123	3096
Ft. Scott	5159	3132
Cherokee Shale	5168	3141
Mississippian	5264	3237

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
Conductor		20"		60'	Grout		
Surface	12-1/4"	8-5/8"	24#	730'	Lite Class A	250 100	3% cc 3%cc 2%gel
Production	7-7/8"	4-1/2"	11.60#	5400'	50/50 Poz	150	18% salt

ADDITIONAL CEMENTING/SQUEEZE RECORD

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2	5274' to 5280' & 5294' to 5300'	500 gal 15% & 2500 gal 7½%	5274 to 5300

TUBING RECORD	Size	Set At	Packer At	Liner Run
	2 3/8	5128'	5136'	☐ Yes ☒ No

Date of First, Resumed Production, SWD or Inj.	Producing Method
June 13-2000	☒ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0	0	2,000,000pd	0	—

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: 5274-5280 & 5294-5300

WELL NAME: Herd #2-10
COMPANY: R.J. Patrick Operating Co.
LOCATION: 10-33s-19w
Comanche co Kansas
DATE: 6/8/00

ORIGINAL

ORIGINAL

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co. DATE 05-30-000
WELL NAME: Herd #2-10 KB 2029.00 ft TICKET NO: 12854 DST #1
LOCATION : 10-33s-19w Comanche co KS GR 2018.00 ft FORMATION: Altamont
INTERVAL : 5073.00 To 5086.00 ft TD 5086.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins			Field	1	2	3	4
PF	0	Rec.	10248	10248	2342		
SI	0	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF	0	Clock(hrs)	12 hr	12 hr	batt.		
FS	0	Depth(ft)	5083.0	5083.0	5078.0	0.0	0.0

TIME DATA----------
PF Fr. to hr
IS Fr. to hr
SF Fr. to hr
FS Fr. to hr

	Field	1	2	3	4
A. Init Hydro	0.0	0.0	0.0	0.0	0.0
B. First Flow	0.0	0.0	0.0	0.0	0.0
B1. Final Flow	0.0	0.0	0.0	0.0	0.0
C. In Shut-in	0.0	0.0	0.0	0.0	0.0
D. Init Flow	0.0	0.0	0.0	0.0	0.0
E. Final Flow	0.0	0.0	0.0	0.0	0.0
F. Fl Shut-in	0.0	0.0	0.0	0.0	0.0
G. Final Hydro	0.0	0.0	0.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 2347 hr
T ON BOTM hr
T OPEN hr
T PULLED 0030 hr
T OUT 0130 hr

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

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	0.00 lbs
Initial Str Wt	0.00 lbs
Unseated Str Wt	0.00 lbs
Bot Choke	0.75 in
Hole Size	7.88 in
D Col. ID	2.25 in
D. Pipe ID	3.80 in
D.C. Length	0.00 ft
D.P. Length	1100.00 ft

RECOVERY
Tot Fluid 0.00 ft of 0.00 ft in DC and 0.00 ft in DP
0.00 ft of Gas in pipe.
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw n.c. ohms @ degrees F.
0.00 ft of EST.FT. of PAY----------4
SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

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

Mud Type	Chemical
Weight	9.10 lb/cf
Vis.	57.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	121.00 F
Hole Condition	poor
% Porosity	10.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	N
Tester	Gary Pevoteaux
Co. Rep.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

BLOW DESCRIPTION
IF:n/a

ISI:

FF:n/a

FSI:

SAMPLES: None
SENT TO:Caraway/Liberal

Test Successful: N

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12854 D.S.T. No. 1 DATE 05-30-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 13

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 40

D.C. ABOVE TOOLS.Stands0 Single Total 0

D.P. ABOVE TOOLS.Stands19 Single Total 1100

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 1140

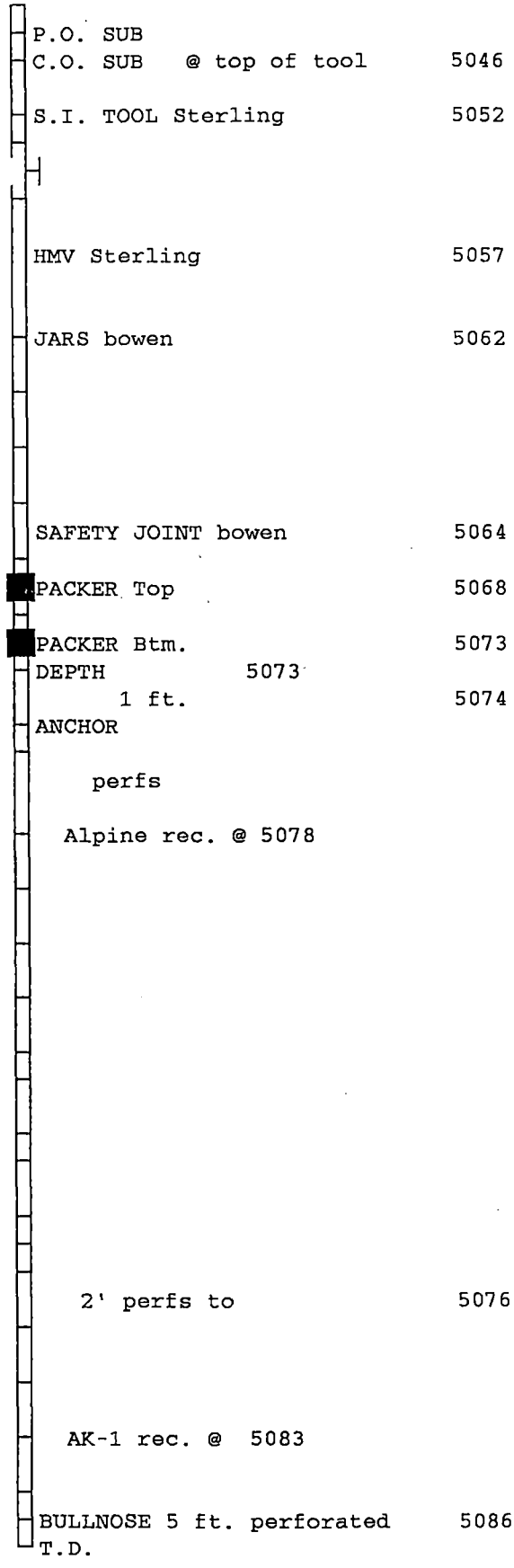
TOTAL DEPTH 5086

TOTAL DRILL PIPE ABOVE K.B. 4

REMARKS:
Comments:Hit bridge @ approx. 1100'. Tried sevral times to break through but were unsucessful. MISRUN!

FLUID SAMPLER DATA (not run)

GAS----------		cubic ft
OIL----------		ML.
MUD----------		ML.
WATER----------		ML.
OTHER----------		
PRESSURE----------		PSI
Rw ----------	ohms @	deg. F.
CHLORIDES----------		ppm.
GRAVITY----------		deg.API

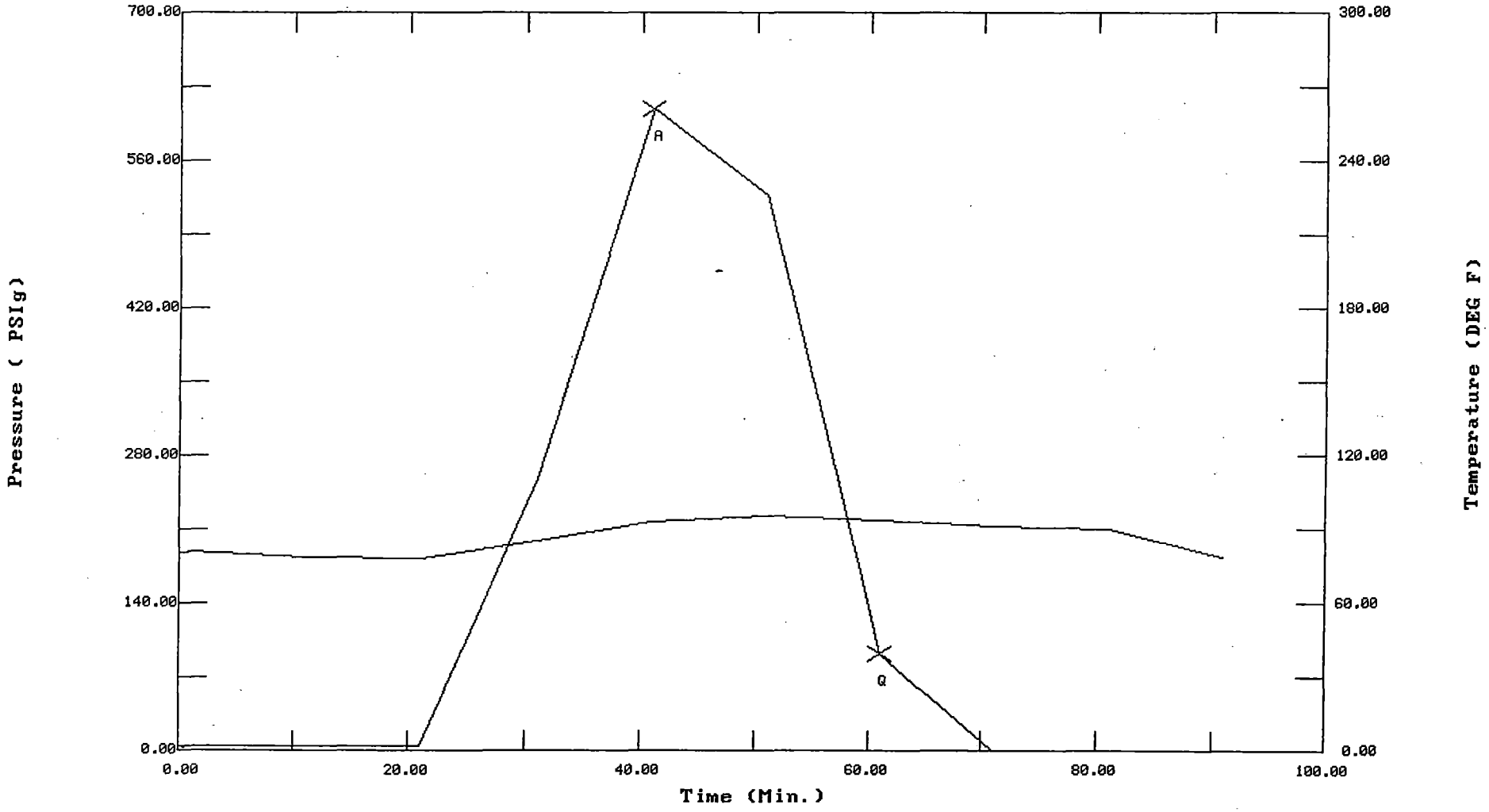


TEST HISTORY

12854 DST#1 HERD #2-10 R.J.PATRICK OPERATING CO.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	608.89
Q:	0.00	92.40



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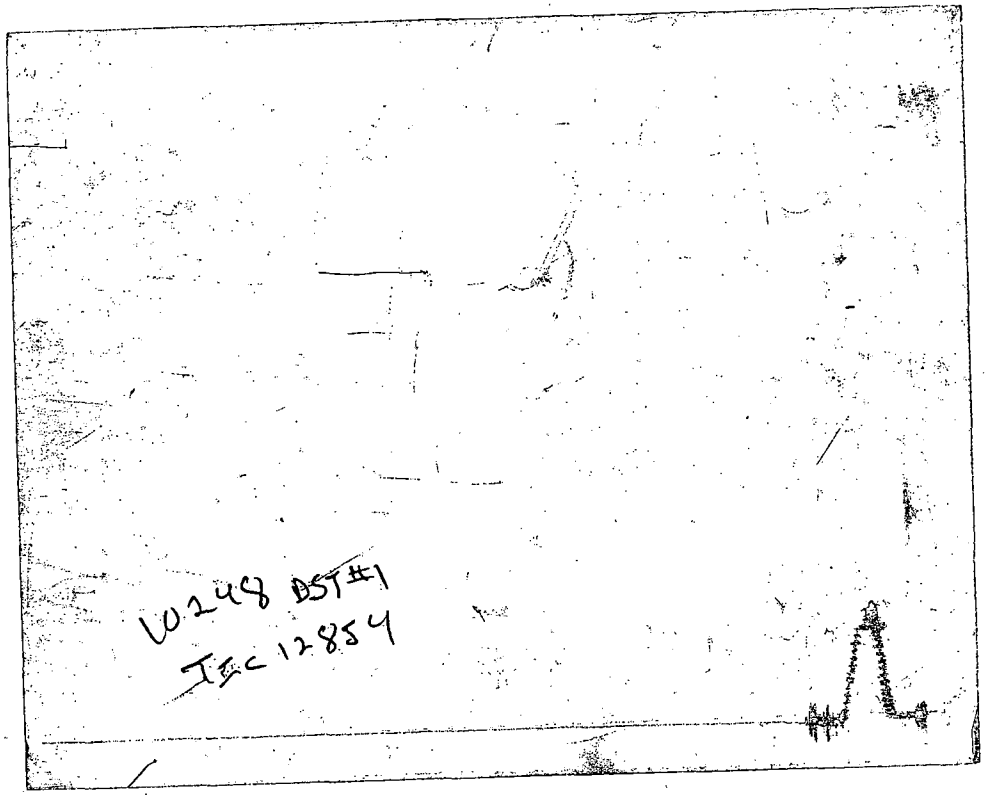


This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 12854

Well Name & No. Herd #2-10 Test No. 1 Date 5-30-2000

Company R.J. Patrick Opr. Co. Zone Tested Altamont

Address P.O. Box 1157, Liberal Ks. 67905 Elevation 2029 KB 2018 GL

Co. Rep / Geo. Marvin Hansen Cont. Duke Drlg. #5 Est. Ft. of Pay 4 Por. ____ %

Location: Sec. 10 Twp. 33S Rge. 19W Co. Comanche State Ks.

No. of Copies ____ Distribution Sheet (Y, N) ____ Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 5073 - 5086'

Anchor Length 13'

Top Packer Depth 5068

Bottom Packer Depth 5073'

Total Depth 5086'

Mud Wt. 9.1 LCM 4# Vis. 57 WL 8.0cc

Blow Description None

Initial Str Wt./Lbs. N/A Unseated Str Wt./Lbs. N/A

Wt. Set Lbs. N/A Wt. Pulled Loose/Lbs. N/A

Tool Weight 2100#

Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Wt. Pipe Run None Drill Collar Run None

Drill Pipe Size 4 1/2" X.H Ft. Run 1100'

COMMENT: Hit bridge @ approx. 1100'. Tried several times to break through but were unsuccessful. Misrun.

Recovery — Total Feet 0 GIP 0 Ft. in DC 0 Ft. in DP 0

Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT N/A °F Gravity ~ °API D@ N/A °F Corrected Gravity N/A °API

RW N/A @ ~ °F Chlorides ____ ppm Recovery Chlorides 8,000 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud			PSI	Recorder No.	2342	T-On Location	2307
(B) First Initial Flow Pressure	Misrun		PSI	(depth)	5078'	T-Started	2347
(C) First Final Flow Pressure			PSI	Recorder No.	10248	T-Open	N/A
(D) Initial Shut-In Pressure		Misrun	PSI	(depth)	5083'	T-Pulled	0030
(E) Second Initial Flow Pressure			PSI	Recorder No.	~	T-Out	0130
(F) Second Final Flow Pressure			PSI	(depth)	~	T-Off Location	N/A
(G) Final Shut-in Pressure			PSI	Initial Opening		Test Misrun	600'
(Q) Final Hydrostatic Mud			PSI	Initial Shut-in		Jars ✓	200'
				Final Flow		Safety Joint ✓	50'
				Final Shut-in		Straddle	
						Circ. Sub	
						Sampler	
						Extra Packer	
						Elec. Rec. ✓	150
						Mileage	
						Other	
						TOTAL PRICE $ ✓	1000

Approved By ____

Our Representative Tony Pawelczyk

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co. DATE 05-31-000
WELL NAME: Herd #2-10 KB 2029.00 ft TICKET NO: 12855 DST #2
LOCATION : 10-33s-19w Comanche co KS GR 2018.00 ft FORMATION: Altamont
INTERVAL : 5073.00 To 5086.00 ft TD 5086.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	10248	10248	2342		
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF 45	Clock(hrs)	12 hr	12 hr	batt.		
FS 120	Depth(ft)	5083.0	5083.0	5078.0	0.0	0.0

TIME DATA----------
PF Fr. 0940 to 1010 hr
IS Fr. 1010 to 1110 hr
SF Fr. 1110 to 1155 hr
FS Fr. 1155 to 1355 hr

	Field	1	2	3	4
A. Init Hydro	2503.0	2536.0	2503.0	0.0	0.0
B. First Flow	12.0	15.0	26.0	0.0	0.0
B1. Final Flow	16.0	1.0	23.0	0.0	0.0
C. In Shut-in	341.0	328.0	354.0	0.0	0.0
D. Init Flow	14.0	8.0	22.0	0.0	0.0
E. Final Flow	14.0	8.0	25.0	0.0	0.0
F. Fl Shut-in	659.0	649.0	671.0	0.0	0.0
G. Final Hydro	2437.0	2348.0	2387.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 0705 hr
T ON BOTM 0930 hr
T OPEN 0940 hr
T PULLED 1357 hr
T OUT 1610 hr

RECOVERY
Tot Fluid 20.00 ft of 20.00 ft in DC and 0.00 ft in DP
530.00 ft of Gas in pipe.
20.00 ft of Drilling mud
0.00 ft of 100% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw n.c. ohms @ degrees F.
0.00 ft of EST.FT. of PAY----------4
SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

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

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	90000.00 lbs
Initial Str Wt	74000.00 lbs
Unseated Str Wt	74000.00 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	120.00 ft
D.P. Length	4951.00 ft

BLOW DESCRIPTION
Initial Flow:
Fair to strong blow. Bottom of bucket in 29 minutes.
Initial Shut-In:
No blow.

Final Flow:
Strong blow. Bottom of bucket in 8 minutes.

Final Shut-In:
No blow.

SAMPLES: None
SENT TO:Caraway/Liberal

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

Mud Type	Chemical
Weight	9.10 lb/c
Vis.	57.00 S/L
W.L.	8.00 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	1.00 ft
Btm. H. Temp.	119.00 F
Hole Condition	Fair
% Porosity	10.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out N	
Tool Chased N	
Tester	Gary Pevoteaux
Co. Rep.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: Y

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12855 D.S.T. No. 2 DATE 05-31-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 13

TOTAL TOOL 40

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 40

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands79 Single 1 Total 4951

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5111

TOTAL DEPTH 5086

TOTAL DRILL PIPE ABOVE K.B. 25

REMARKS:
Comments:

FLUID SAMPLER DATA (not run)

GAS----------		cubic ft
OIL----------		ML.
MUD----------		ML.
WATER----------		ML.
OTHER----------		
PRESSURE----------		PSI
Rw ----------	ohms @	deg. F.
CHLORIDES----------		ppm.
GRAVITY----------		deg.API

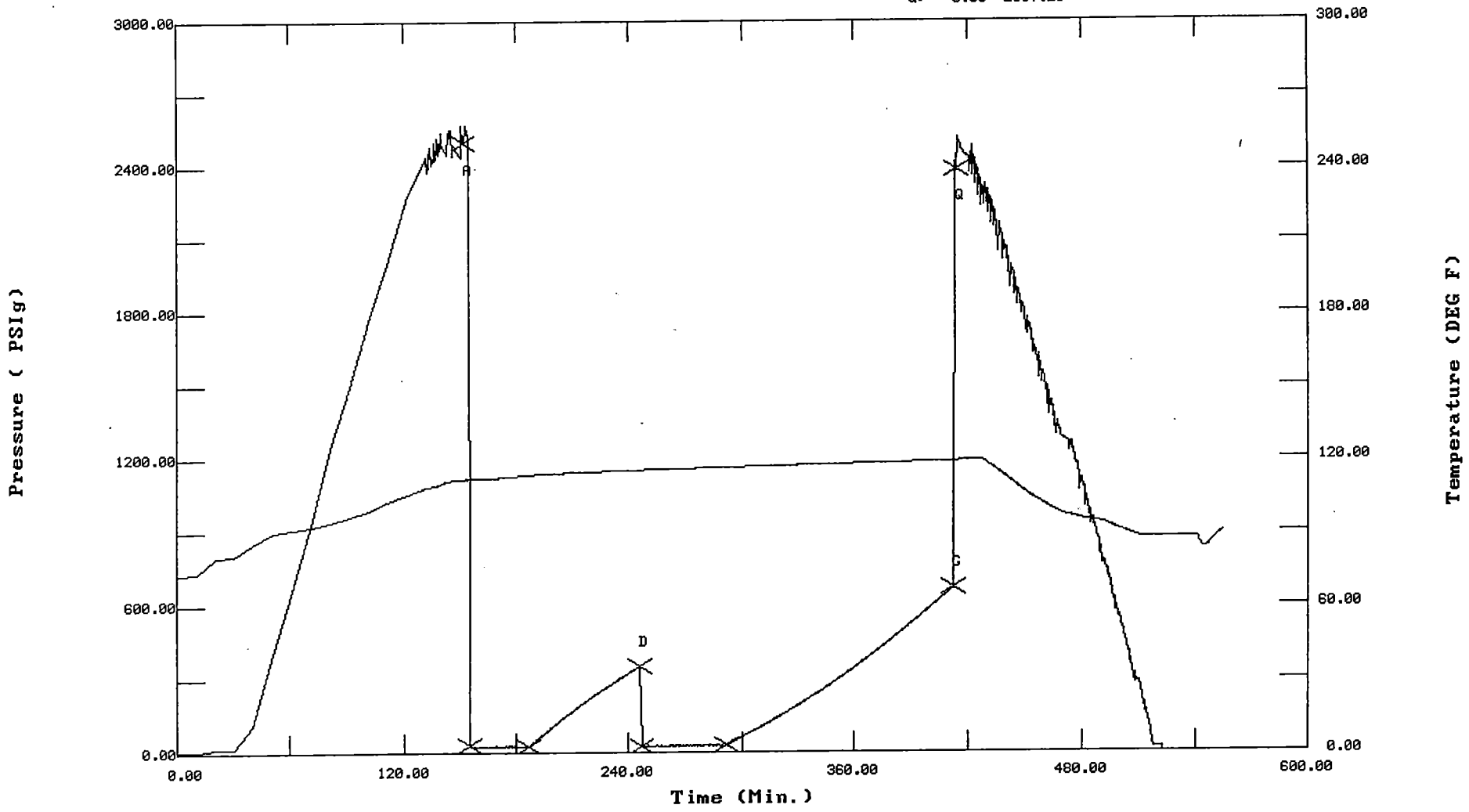
P.O. SUB	
C.O. SUB @ top of tool	5046
S.I. TOOL Sterling	5052
HMV Sterling	5057
JARS bowen	5062
SAFETY JOINT bowen	5064
PACKER Top	5068
PACKER Btm.	5073
DEPTH 5073	
1 ft.	5074
ANCHOR	
perfs	
Alpine rec. @ 5078	
2' perfs to	5076
AK-1 rec. @ 5083	
BULLNOSE 5 ft. perforated	5086
T.D.	

TEST HISTORY

12855 DST#2 HERD #2-10 R.J.PATRICK OPERATING CO.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2503.14
B:	0.00	26.34
C:	32.00	22.90
D:	59.50	353.75
E:	0.00	21.98
F:	44.50	24.75
G:	120.50	670.74
Q:	0.00	2387.23



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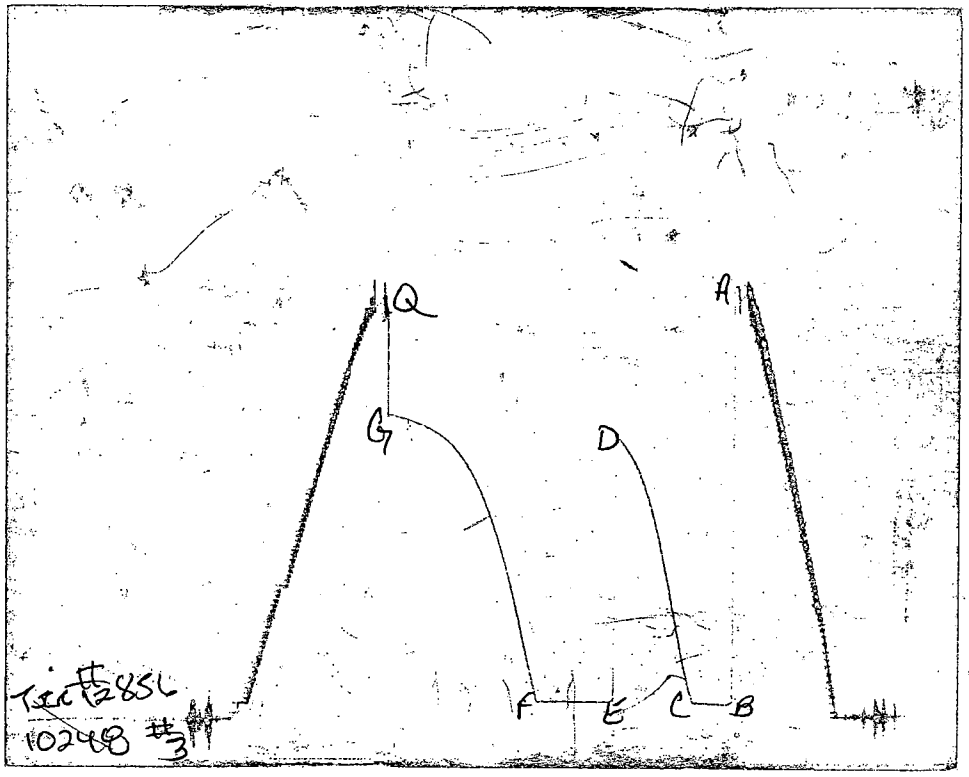


This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

Nº 12856

Well Name & No. Herd # 2-10 Test No. 3 Date 6-1-2000

Company R.S. Patrick Oper. Co. Zone Tested Pawnee

Address P.O. Box 1157, Ivred Ks. 67905 Elevation 2029 KB 2018 GL

Co. Rep / Geo. Marvin Harvey Cont. Duke Drlg. #5 Est. Ft. of Pay 8 Por. ___ %

Location: Sec. 10 Twp. 33S Rge. 19W Co. Comanche State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) N Evaluation (Y, N) ___

Interval Tested 5088 - 5152' Initial Str Wt./Lbs. 74,000 Unseated Str Wt./Lbs. 78,000

Anchor Length 64' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 96,000

Top Packer Depth 5083' Tool Weight 2100 #

Bottom Packer Depth 5088' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Total Depth 5152' Wt. Pipe Run None Drill Collar Run 120

Mud Wt. 9.1 LCM 4# Vis. 57 WL 8.0 Drill Pipe Size 4½" X.H. Ft. Run 4951

Blow Description IF: Strong blow. BOB in 12 mins.
ISI: No blow.
FF: Strong blow. BOB in 3-5 secs. FSI: No blow

Recovery — Total Feet 130 GIP 310 Ft. in DC 120 Ft. in DP 10

Rec. 130	Feet Of Heavy Mud.	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 120 °F Gravity N/A °API D@ ~ °F Corrected Gravity N/A °API

RW N.C. @ ~ °F Chlorides 8,000 ppm Recovery Chlorides 8000 ppm System

	AK-1	Alpine	
(A) Initital Hydrostatic Mud	2536	2519	PSI
(B) First Initial Flow Pressure	57	48	PSI
(C) First Final Flow Pressure	73	60	PSI
(D) Initial Shut-In Pressure	1655	1657	PSI
(E) Second Initial Flow Pressure	73	51	PSI
(F) Second Final Flow Pressure	78	68	PSI
(G) Final Shut-in Pressure	1794	1776	PSI
(Q) Final Hydrostatic Mud	2426	2374	PSI

Recorder No. 2342 (dp) T-On Location 0330

(depth) 5098' T-Started 0350

Recorder No. 10248 T-Open 0555

(depth) 5149' T-Pulled 1025

Recorder No. ~ T-Out 1250

(depth) ~ T-Off Location 1350

Initial Opening 30 Test ✓ 800.00

Initial Shut-in 60 Jars ✓ 200.00

Final Flow 60 Safety Joint ✓ 50.00

Final Shut-in 120 Straddle ___

4 Circ. Sub ___

Sampler ___

Extra Packer ___

Elec. Rec. ✓ 150.00

Mileage ___

Other ___

TOTAL PRICE $ ✓ 1200

Approved By Marvin Harvey

Our Representative Tony Pursley

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co. DATE 06-01-000
WELL NAME: Herd #2-10 KB 2029.00 ft TICKET NO: 12857 DST #4
LOCATION : 10-33s-19w Comanche co KS GR 2018.00 ft FORMATION: Ft.Scott
INTERVAL : 5150.00 To 5172.00 ft TD 5172.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins		Field	1	2	3	4
PF 30	Rec.	10248	10248	2342		
SI 60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF 60	Clock(hrs)	12 hr	12 hr	batt.		
FS 120	Depth(ft)	5169.0	5169.0	5155.0	0.0	0.0

TIME DATA----------
PF Fr. 0016 to 0046 hr
IS Fr. 0046 to 0146 hr
SF Fr. 0146 to 0246 hr
FS Fr. 0246 to 0446 hr

	Field	1	2	3	4
A. Init Hydro	2492.0	2481.0	2509.0	0.0	0.0
B. First Flow	9.0	18.0	19.0	0.0	0.0
B1. Final Flow	9.0	10.0	21.0	0.0	0.0
C. In Shut-in	1850.0	1822.0	1848.0	0.0	0.0
D. Init Flow	14.0	10.0	18.0	0.0	0.0
E. Final Flow	14.0	10.0	22.0	0.0	0.0
F. Fl Shut-in	1854.0	1843.0	1864.0	0.0	0.0
G. Final Hydro	2428.0	2443.0	2452.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 2210 hr
T ON BOTM 0010 hr
T OPEN 0016 hr
T PULLED 0446 hr
T OUT 0650 hr

RECOVERY
Tot Fluid 30.00 ft of 30.00 ft in DC and 0.00 ft in DP
0.00 ft of Gas in all fluid free pipe.
30.00 ft of Drilling mud
0.00 ft of 100% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw n.c. ohms @ degrees F.
0.00 ft of EST.FT. of PAY----------3
SALINITY 8000.00 P.P.M. A.P.I. Gravity 0.00

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

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	100000.00 lbs
Initial Str Wt	76000.00 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	120.00 ft
D.P. Length	5010.00 ft

BLOW DESCRIPTION
Initial Flow:
Strong blow. Bottom of bucket in 3 1/2 minutes.
Initial Shut-In:
No blow.

Final Flow.
Strong blow. Bottom of bucket in 2 seconds. Gas to surface in 5 1/2 minutes. (See gas volume report).
Final Shut-In:
No blow.

SAMPLES: Gas sample
SENT TO:Caraway/Liberal

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

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	50.00 S/L
W.L.	8.80 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	116.00 F
Hole Condition	Fair
% Porosity	12.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	N
Tester	Gary Pevoteaux
Co. Rep.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co. DATE: 06-01-000
WELL NAME: Herd #2-10 KB Elev: 2029.00 ft TICKET #12857 DST #4
WELL LOCATION: 10-33s-19w Comanche co KS GR Elev: 2018.00 ft FORMATION: Ft.Scott
INTERVAL Fr.: 5150.00 To 5172.00 T.D.: 5172.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.25	0	16	6720.0
20	0.25	0	20	7510.0
30	0.25	0	20	7510.0
40	0.25	0	20	7510.0
50	0.25	0	20	7510.0
60	0.25	0	20	7510.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12857 D.S.T. No. 4 DATE 06-01-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 22

TOTAL TOOL 49

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands Single Total

TOTAL ASSEMBLY 49

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands80 Single 1 Total 5010

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5179

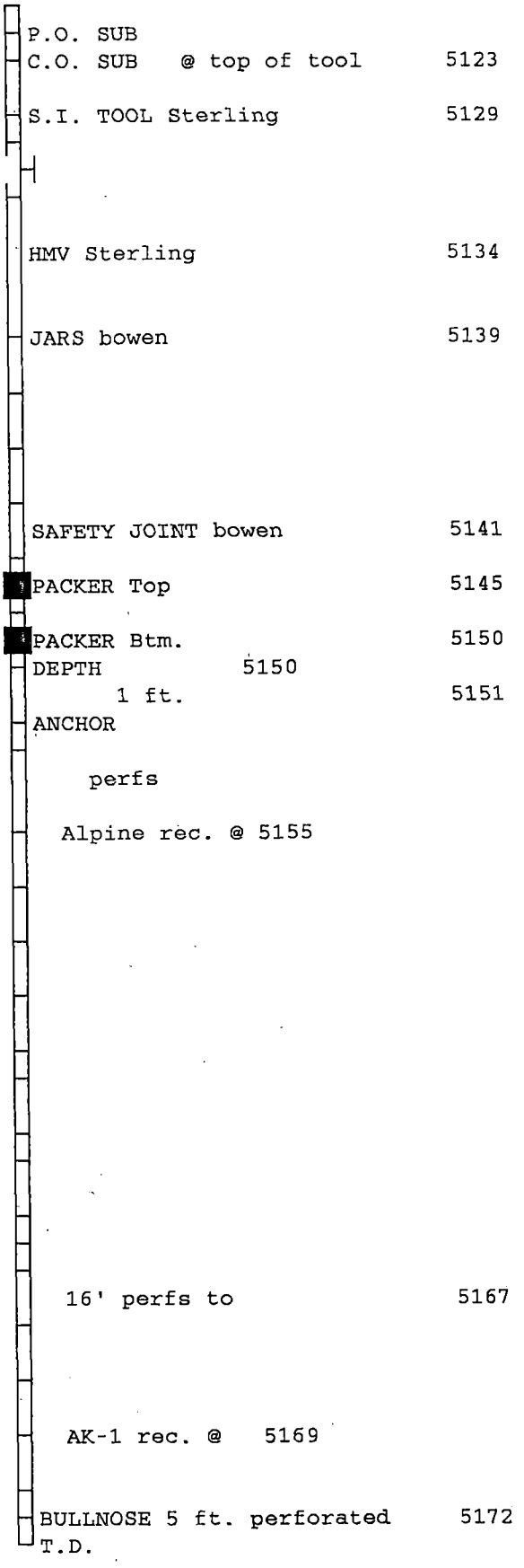
TOTAL DEPTH 5172

TOTAL DRILL PIPE ABOVE K.B. 7

REMARKS:
Comments:

FLUID SAMPLER DATA (not run)

GAS----------		cubic ft
OIL----------		ML.
MUD----------		ML.
WATER----------		ML.
OTHER----------		
PRESSURE----------		PSI
Rw ----------	ohms @	deg. F.
CHLORIDES----------		ppm.
GRAVITY----------		deg.API



TEST HISTORY

12857 DST#4 HERD #2-10 R.J.PATRICK OPERATING CO.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2508.93
B:	0.00	19.21
C:	30.00	20.89
D:	60.50	1848.25
E:	0.00	18.12
F:	59.50	21.64
G:	120.00	1864.36
Q:	0.00	2453.29

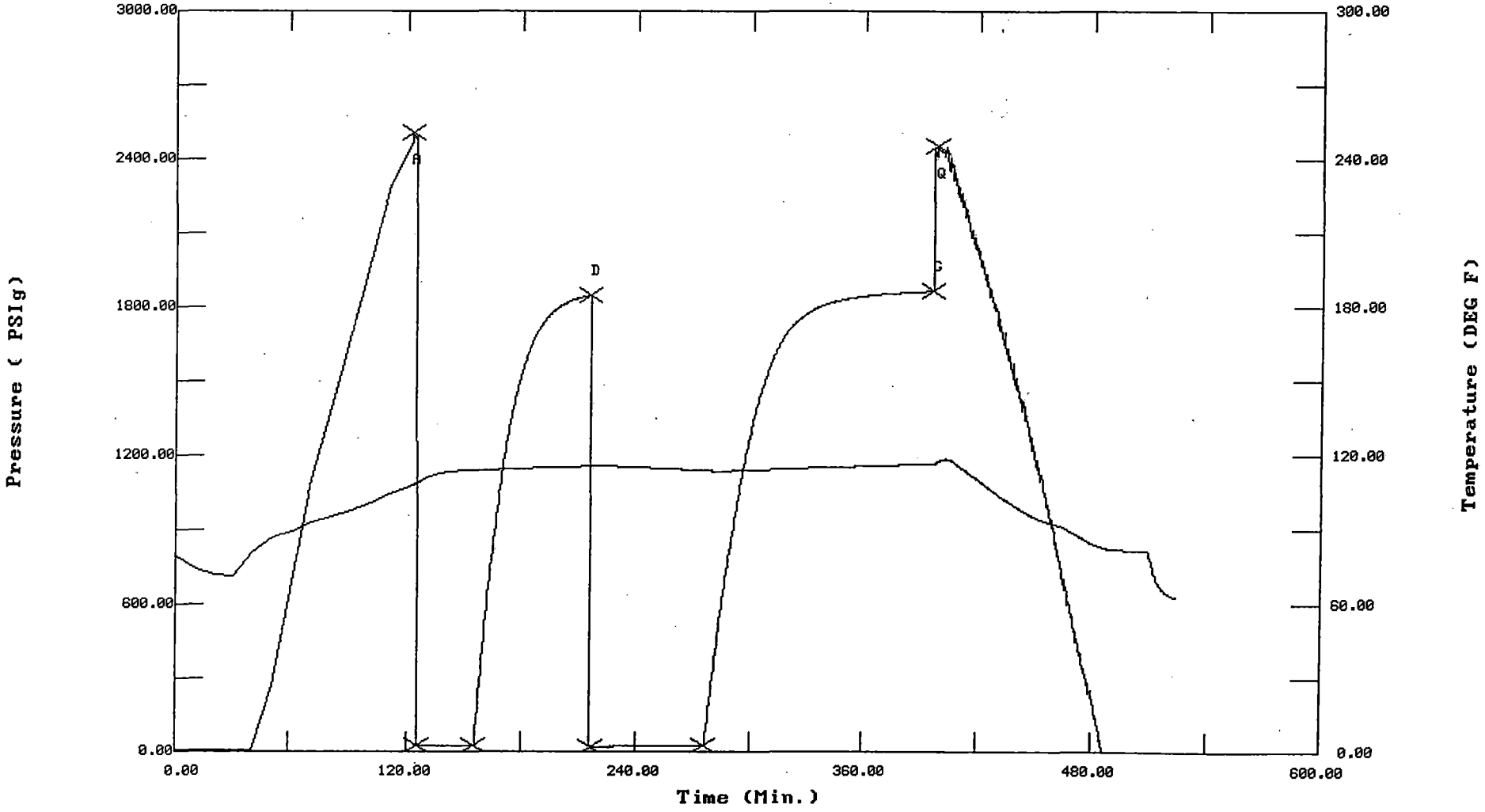
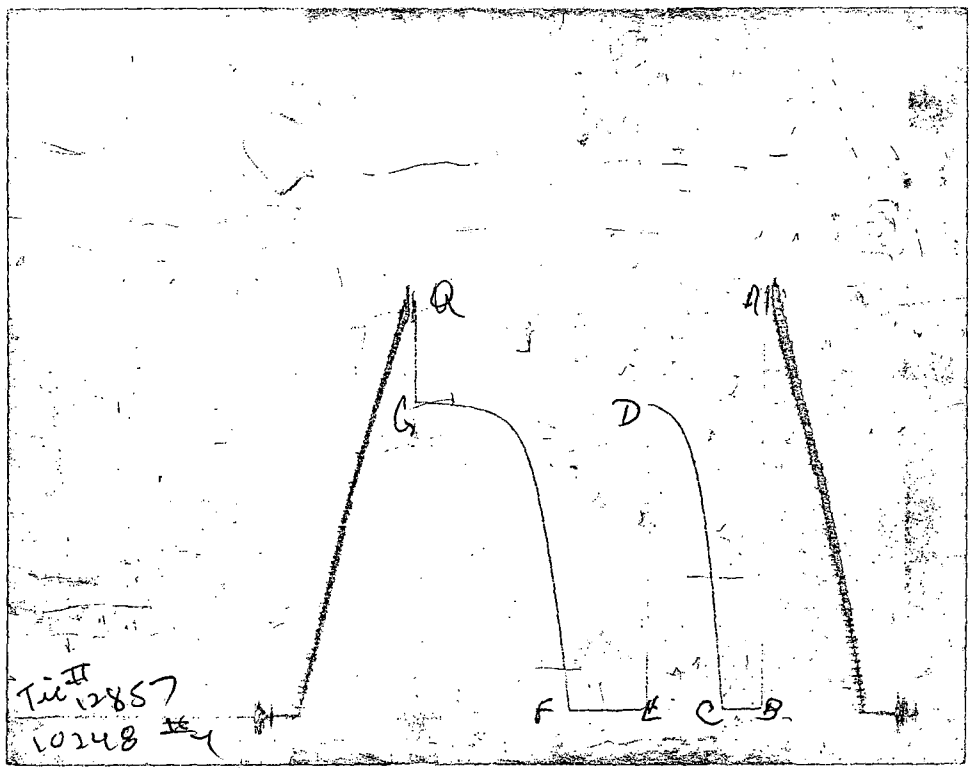
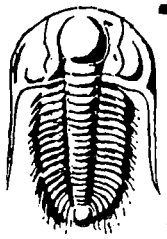


CHART PAGE



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



TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

R.J. Patrick Oper. — OPERATOR

Hurd # 2-10 — WELL NAME AND NO.

4 — DST NO.

Initial Open				Final Open			
Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
		1/4"	No GTS	55		3/8"	GTS
				10	16" in H2O	1/4"	6.72
				20	20" in H2O	1/4"	7.51
				30	20" in H2O	1/4"	7.51
				40	20" in H2O	1/4"	7.51
				50	20" in H2O	1/4"	7.51
				60	20" in H2O	1/4"	7.51

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 12857

Well Name & No. Herd # 2-10 Test No. 4 Date 6-1-2000

Company R.S. Patrick Opr. Co. Zone Tested Ft. Dodt

Address Liberal Ks. 67905 Elevation 2029 KB 2019 GL

Co. Rep / Geo. Marvin Harvey Cont. Duke Drlg. #5 Est. Ft. of Pay 3 Por. ____ %

Location: Sec. 10 Twp. 33S Rge. 19W Co. Comanche State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 5150 - 5172'

Anchor Length 22'

Top Packer Depth 5145'

Bottom Packer Depth 5150

Total Depth 5172'

Mud Wt. 9.0 LCM C# Vis. 50 WL 8.8 cc.

Blow Description IF: Strong blow, BOB in 3½ mins. ISI: No blow

FF: Strong blow. BOB in 2 secs. GTS in 5½ mins. (see gas volume report) FSI: No blow.

Initial Str Wt./Lbs. 76,000 Unseated Str Wt./Lbs. 76,000

Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 100,000

Tool Weight 2100 #

Hole Size — 7 7/8" V Rubber Size — 6 3/4" V

Wt. Pipe Run None Drill Collar Run 120

Drill Pipe Size 4½" X.H. Ft. Run 5010'

Recovery — Total Feet 30 GIP yes Ft. in DC 30 Ft. in DP 0

Rec. 30	Feet Of Drlg. Mud	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 116 °F Gravity N/A °API D@ — °F Corrected Gravity N/A °API

RW N.C. @ — °F Chlorides 8,000 ppm Recovery Chlorides 8,000 ppm System

	AK-1	Alpine					
(A) Initial Hydrostatic Mud	2492	2509	PSI	Recorder No.	2342	T-On Location	2140
(B) First Initial Flow Pressure	9	19	PSI	(depth)	5155'	T-Started	2210
(C) First Final Flow Pressure	9	21	PSI	Recorder No.	10248	T-Open	0016
(D) Initial Shut-In Pressure	1858	1848	PSI	(depth)	5169'	T-Pulled	0446
(E) Second Initial Flow Pressure	14	18	PSI	Recorder No.	—	T-Out	0650
(F) Second Final Flow Pressure	14	22	PSI	(depth)	—	T-Off Location	0745
(G) Final Shut-in Pressure	1854	1864	PSI	Initial Opening	30	Test	602
(Q) Final Hydrostatic Mud	2428	2453	PSI	Initial Shut-in	60	Jars	✓ 200
				Final Flow	60	Safety Joint	✓ 50
				Final Shut-in	120	Straddle	
						Circ. Sub	
						Sampler	
						Extra Packer	
						Elec. Rec.	✓ 150
						Mileage	
						Other	
						TOTAL PRICE $	✓ 120

Approved By Marvin Harvey

Our Representative Tony Thomas

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co. DATE 06-03-000
WELL NAME: Herd #2-10 KB 2029.00 ft TICKET NO: 12858 DST #5
LOCATION : 10-33s-19w Comanche co KS GR 2018.00 ft FORMATION: Mississippi
INTERVAL : 5263.00 To 5356.00 ft TD 5360.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

	Mins		Field	1	2	3	4
PF	30	Rec.	10248	10248	2342		
SI	60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF	60	Clock(hrs)	12 hr	12 hr	batt.		
FS	120	Depth(ft)	5357.0	5357.0	5268.0	0.0	0.0

TIME DATA----------
PF Fr. 0740 to 0810 hr
IS Fr. 0810 to 0910 hr
SF Fr. 0910 to 1010 hr
FS Fr. 1010 to 1210 hr

	Field	1	2	3	4
A. Init Hydro	2647.0	2624.0	2616.0	0.0	0.0
B. First Flow	216.0	200.0	242.0	0.0	0.0
B1. Final Flow	141.0	158.0	137.0	0.0	0.0
C. In Shut-in	1903.0	1893.0	1886.0	0.0	0.0
D. Init Flow	177.0	183.0	193.0	0.0	0.0
E. Final Flow	125.0	138.0	116.0	0.0	0.0
F. Fl Shut-in	1881.0	1886.0	1882.0	0.0	0.0
G. Final Hydro	2536.0	2533.0	2470.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 0432 hr
T ON BOTM 0730 hr
T OPEN 0740 hr
T PULLED 1212 hr
T OUT 1430 hr

RECOVERY
Tot Fluid 80.00 ft of 80.00 ft in DC and 0.00 ft in DP
0.00 ft of Gas in all fluid free pipe.
80.00 ft of Drilling mud
0.00 ft of 100% mud
0.00 ft of
0.00 ft of
0.00 ft of
0.00 ft of Rw n.c. ohms @ degrees F.
0.00 ft of EST.FT. of PAY----------10
SALINITY 9000.00 P.P.M. A.P.I. Gravity 0.00

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

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	90000.00 lbs
Initial Str Wt	78000.00 lbs
Unseated Str Wt	80000.00 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	120.00 ft
D.P. Length	5139.00 ft

BLOW DESCRIPTION
Initial Flow:
Strong blow. Gas to surface in 3 1/2 minutes. (see gas volume report)
Initial Shut-In:
No blow.

Final Flow:
Strong blow. (see gas volume report)

Final Shut-In:
No blow.

SAMPLES: Gas sample
SENT TO:Caraway/Liberal

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

Mud Type	Chemical
Weight	9.00 lb/
Vis.	51.00 S/L
W.L.	10.40 in3
F.C.	0.20 in
Mud Drop	N
Amt. of fill	0.00 ft
Btm. H. Temp.	114.00 F
Hole Condition	Fair
% Porosity	18.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out	N
Tool Chased	N
Tester	Gary Pevoteaux
Co. Rep.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 8 #/bl

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co. DATE: 06-03-000
WELL NAME: Herd #2-10 KB Elev: 2029.00 ft TICKET #12858 DST #5
WELL LOCATION: 10-33s-19w Comanche Co KS GR Elev: 2018.00 ft FORMATION: Mississippi
INTERVAL Fr.: 5263.00 To 5356.00 T.D.: 5360.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #1

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	21	0	517600.0
20	0.75	18	0	474000.0
30	0.75	17	0	459500.0

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
10	0.75	34	0	706600.0
20	0.75	25	0	575800.0
30	0.75	21	0	517600.0
40	0.75	20	0	503100.0
50	0.75	20	0	503100.0
60	0.75	20	0	503100.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12858 D.S.T. No. 5 DATE 06-03-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 36

TOTAL TOOL 63

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 61

TOTAL ASSEMBLY 124

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands82 Single 1 Total 5139

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5383

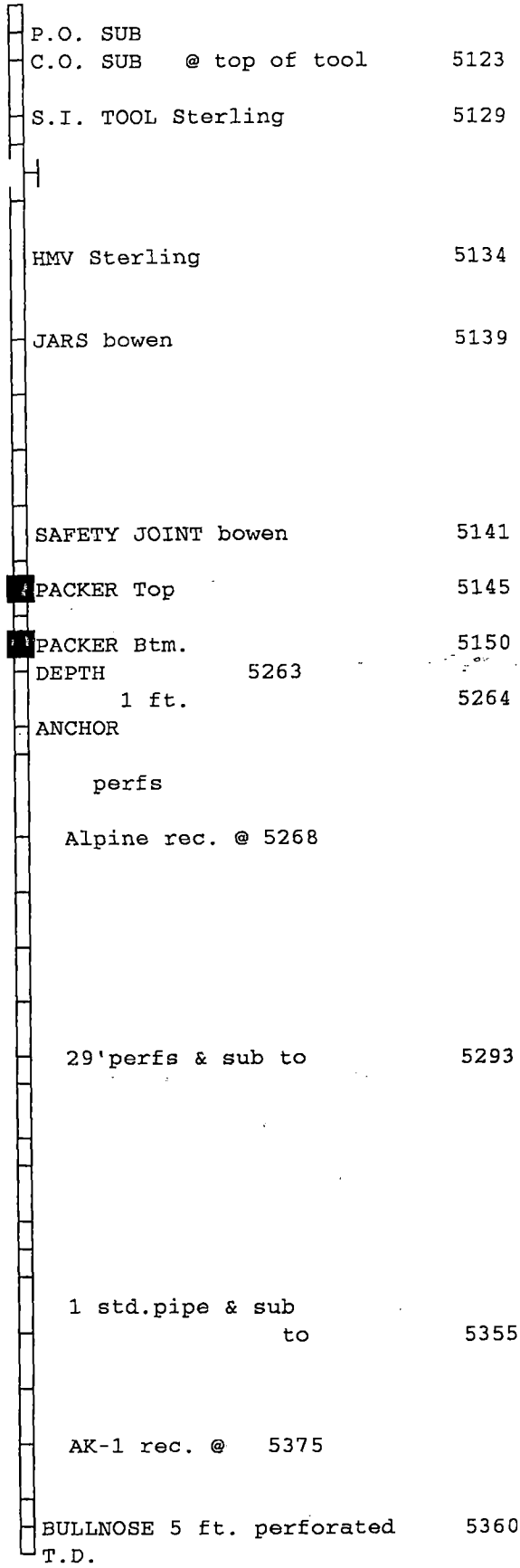
TOTAL DEPTH 5360

TOTAL DRILL PIPE ABOVE K.B. 23

REMARKS:
Comments:

FLUID SAMPLER DATA (not run)

GAS----------		cubic ft
OIL----------		ML.
MUD----------		ML.
WATER----------		ML.
OTHER----------		
PRESSURE----------		PSI
Rw ----------	ohms @	deg. F.
CHLORIDES----------		ppm.
GRAVITY----------		deg.API

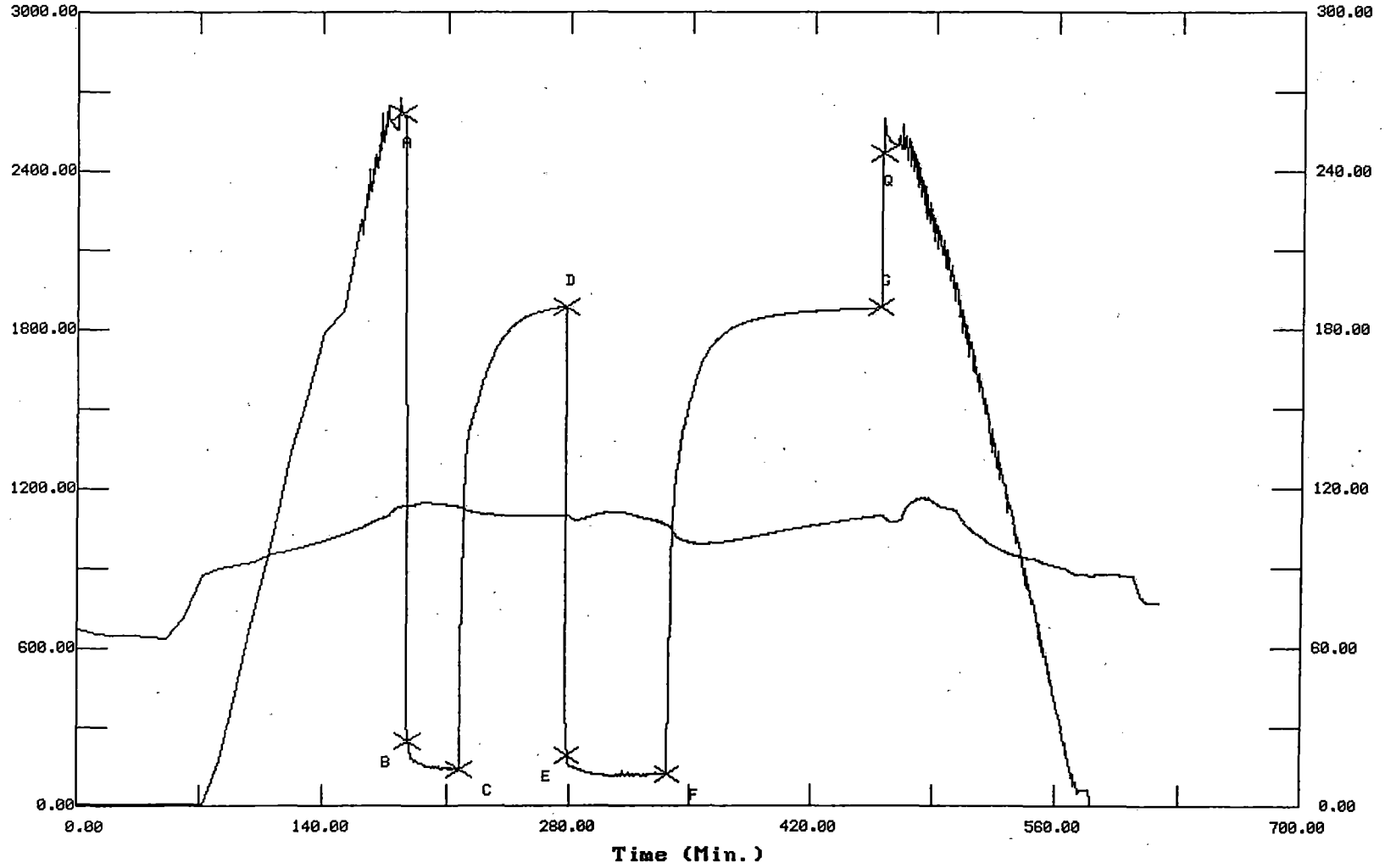


TEST HISTORY

12858 DST#5 HERD #2-10 R.J.PATRICK OPERATING CO.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2615.77
B:	0.00	241.62
C:	29.00	136.54
D:	60.50	1885.93
E:	0.00	192.52
F:	58.50	116.32
G:	121.00	1881.65
Q:	0.00	2469.82



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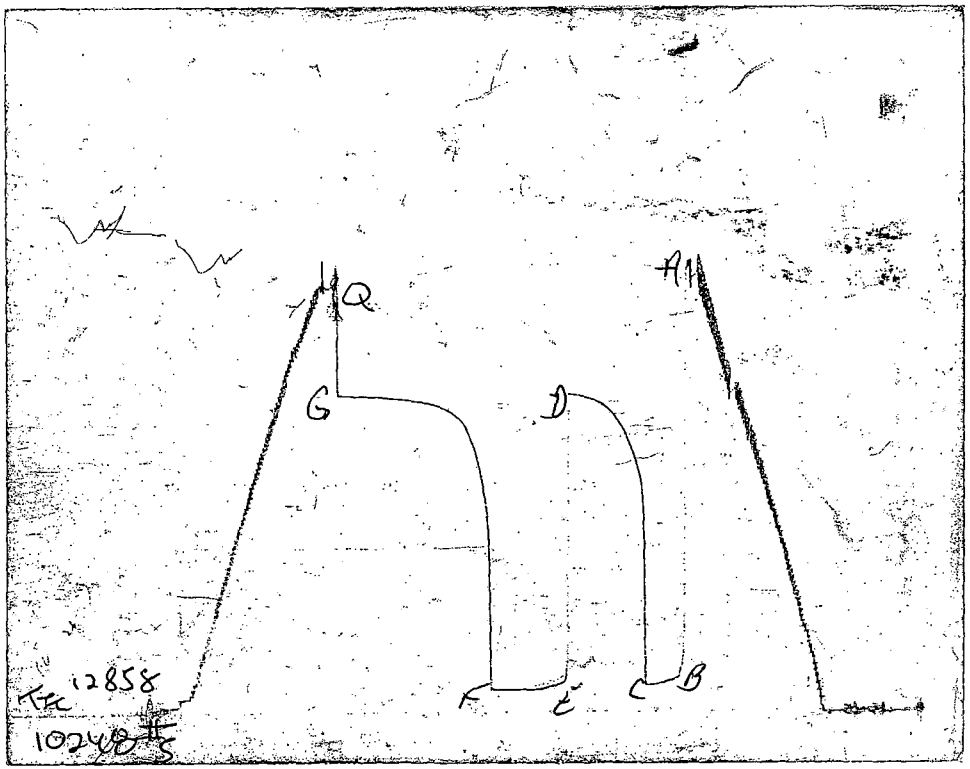
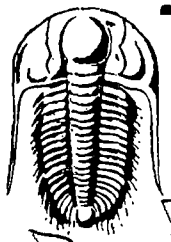


This is a photocopy of the actual AK-1 recorder chart



TRILOBITE TESTING L.L.C.

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GAS VOLUME REPORT

R.J. Patrick Oper. Co. — OPERATOR

Herd #2-10 — WELL NAME AND NO.

5 — DST NO.

Initial Open				Final Open			
Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
3.5	~~	3/4"	GTS	10	34 PSI	3/4"	706.1
10	21 PSI	3/4"	517.6	20	25 PSI	3/4"	575.8
20	18 PSI	3/4"	474.8	30	21 PSI	3/4"	517.6
30	17 PSI	3/4"	459.5	40	20 PSI	3/4"	503.1
				50	20 PSI	3/4"	503.1
				60	20 PSI	3/4"	503.1

Remarks:

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

№ 12858

Well Name & No. Herd #2-10 Test No. #5 Date 2-3-2010

Company R.J. Patrick Oper. Co. Zone Tested Miss.

Address Liberal Ks. 67905 Elevation 2029 KB 2018 GL

Co. Rep / Geo. Marvin Harvey Cont. Duke Drlg. #5 Est. Ft. of Pay 10 Por. ____ %

Location: Sec. 10 Twp. 33S Rge. 19W Co. Comanche State Ks.

No. of Copies 5 Distribution Sheet (Y, N) ____ Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 5263 - 5360 Initial Str Wt./Lbs. 78,000 Unseated Str Wt./Lbs. 80,000

Anchor Length 97' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 90,000

Top Packer Depth 5258' Tool Weight 2100 #

Bottom Packer Depth 5263' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Total Depth 5360' Wt. Pipe Run None Drill Collar Run 120

Mud Wt. 9.0 LCM 8# Vis. 51 WL 10.4cc Drill Pipe Size 4½" XH Ft. Run 5139

Blow Description IF: Strong blow. GTS in 3½ mins. (no gas volume)
ISI: No blow.
FF: Strong blow. (see gas volume report) FSI: No blow.

Recovery — Total Feet 80 Fluid GIP yes Ft. in DC 80 Ft. in DP 0

Rec. 80	Feet Of Drlg. Mud	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT 114 °F Gravity N/A °API D@ ~ °F Corrected Gravity N/A °API

RW N.C. @ ~ °F Chlorides 9,000 ppm Recovery Chlorides 9,000 ppm System

	AK-1	Alpine				
(A) Initital Hydrostatic Mud	2647	2616	PSI	Recorder No. (alp) 2342	T-On Location	0350
(B) First Initial Flow Pressure	216	242	PSI	(depth) 5268'	T-Started	0432
(C) First Final Flow Pressure	141	137	PSI	Recorder No. 10248	T-Open	0740
(D) Initial Shut-In Pressure	1903	1886	PSI	(depth) 5357'	T-Pulled	1215
(E) Second Initial Flow Pressure	177	193	PSI	Recorder No. ~	T-Out	1430
(F) Second Final Flow Pressure	125	116	PSI	(depth) ~	T-Off Location	1520
(G) Final Shut-in Pressure	1881	1882	PSI	Initial Opening 30	Test ✓	800
(Q) Final Hydrostatic Mud	2536	2470	PSI	Initial Shut-in 60	Jars ✓	200
				Final Flow 60	Safety Joint ✓	SD
				Final Shut-in 120	Straddle	
				4	Circ. Sub	
					Sampler	
					Extra Packer	
					Elec. Rec. ✓	150
					Mileage	
					Other STAND BY ✓	30
					TOTAL PRICE $ ✓	1230.00

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Marvin Harvey

Our Representative Tony Pinkerton

TRILOBITE TESTING L.L.C.

OPERATOR : R.J.Patrick Oper.Co. DATE 06-04-000
WELL NAME: Herd #2-10 KB 2029.00 ft TICKET NO: 12859 DST #6
LOCATION : 10-33s-19w Comanche co KS GR 2018.00 ft FORMATION: Mississippi
INTERVAL : 5363.00 To 5442.00 ft TD 5442.00 ft TEST TYPE: CONVENTIONAL

RECORDER DATA

Mins			Field	1	2	3	4
PF	30	Rec.	10248	10248	2342		
SI	60	Range(Psi)	4400.0	4400.0	4995.0	0.0	0.0
SF	60	Clock(hrs)	12 hr	12 hr	batt.		
FS	120	Depth(ft)	5439.0	5439.0	5370.0	0.0	0.0

TIME DATA----------
PF Fr. 0615 to 0645 hr
IS Fr. 0645 to 0745 hr
SF Fr. 0745 to 0845 hr
FS Fr. 0845 to 1045 hr

	Field	1	2	3	4
A. Init Hydro	2667.0	2667.0	2667.0	0.0	0.0
B. First Flow	46.0	57.0	55.0	0.0	0.0
B1. Final Flow	69.0	66.0	72.0	0.0	0.0
C. In Shut-in	1701.0	1694.0	1706.0	0.0	0.0
D. Init Flow	69.0	88.0	73.0	0.0	0.0
E. Final Flow	110.0	117.0	114.0	0.0	0.0
F. Fl Shut-in	1701.0	1697.0	1701.0	0.0	0.0
G. Final Hydro	2591.0	2549.0	2626.0	0.0	0.0
Inside/Outside	O	O	I	T	

T STARTED 0354 hr
T ON BOTM 0607 hr
T OPEN 0615 hr
T PULLED 1047 hr
T OUT 1325 hr

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

Tool Wt.	2100.00 lbs
Wt Set On Packer	20000.00 lbs
Wt Pulled Loose	90000.00 lbs
Initial Str Wt	76000.00 lbs
Unseated Str Wt	78000.00 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	120.00 ft
D.P. Length	5233.00 ft

RECOVERY
Tot Fluid 205.00 ft of 120.00 ft in DC and 85.00 ft in DP
0.00 ft of Gas in all fluid free pipe.
85.00 ft of Slightly oil cut mud
0.00 ft of 1% oil 99% mud
120.00 ft of Slightly oil cut muddy water
0.00 ft of 1% oil 54% water 45% mud
0.00 ft of
0.00 ft of Rw .063 ohms @100 degrees F.
0.00 ft of EST.FT. of PAY----------14
SALINITY 87000.00 P.P.M. A.P.I. Gravity 0.00

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

Mud Type	Chemical
Weight	9.00 lb/c
Vis.	51.00 S/L
W.L.	10.40 in3
F.C.	0.20 in
Mud Drop N	
Amt. of fill	0.00 ft
Btm. H. Temp.	126.00 F
Hole Condition	Fair
% Porosity	10.00
Packer Size	6.75 in
No. of Packers	2
Cushion Amt.	0.00 N
Cushion Type	None
Reversed Out N	
Tool Chased N	
Tester	Gary Pevoteaux
Co. Rep.	Marvin Harvey
Contr.	Duke Drlg.
Rig #	5
Unit #	
Pump T.	LCM 6 #/bl

BLOW DESCRIPTION
Intial Flow:
Strong blow. Bottom of bucket in 2-3 seconds.
Initial Shut-In:
No blow.

Final Flow:
Strong blow. Gas to surface in 11 minutes. (see gas volume report)

Final Shut-In:
Weak blow. 1/2 - 2".

SAMPLES: none
SENT TO:Caraway/Liberal

Test Successful: Y

GAS RECOVERY

COMPANY: R.J.Patrick Oper.Co. DATE: 06-04-000
WELL NAME: Herd #2-10 KB Elev: 2029.00 ft TICKET #12859 DST #6
WELL LOCATION: 10-33s-19w Comanche co KS GR Elev: 2018.00 ft FORMATION: Mississippi
INTERVAL Fr.: 5363.00 To 5442.00 T.D.: 5442.00 ft TEST TYPE: CONVENTIONAL

GAS RECOVERY MEASURED WITH Adjusting Choke

***** GAS RATES FOR FLOW #2

Time (min)	Orifice (in)	Pressure (Psi)	H2O (in)	Rate (cf/d)
15	0.25	0	10	5320.0
20	0.25	0	10	5320.0
30	0.25	0	9	5050.0
40	0.25	0	8	4760.0
50	0.25	0	8	4760.0
60	0.25	0	8	4760.0

*** TOOL DIAGRAM *** CONVENTIONAL

WELL NAME: Herd #2-10

LOCATION : 10-33s-19w Comanche co KS

TICKET No. 12859 D.S.T. No. 6 DATE 06-04-000

TOTAL TOOL TO BOTTOM OF TOP PACKERS 27

INTERVAL TOOL .....

BOTTOM PACKERS AND ANCHOR 18

TOTAL TOOL 45

DRILL COLLAR ANCHOR IN INTERVAL .....

D.C. ANCHOR STND.Stands Single Total

D.P. ANCHOR STND.Stands 1 Single Total 61

TOTAL ASSEMBLY 106

D.C. ABOVE TOOLS.Stands2 Single Total 120

D.P. ABOVE TOOLS.Stands84 Single Total 5233

TOTAL DRILL COLLARS DRILL PIPE & TOOLS .. 5459

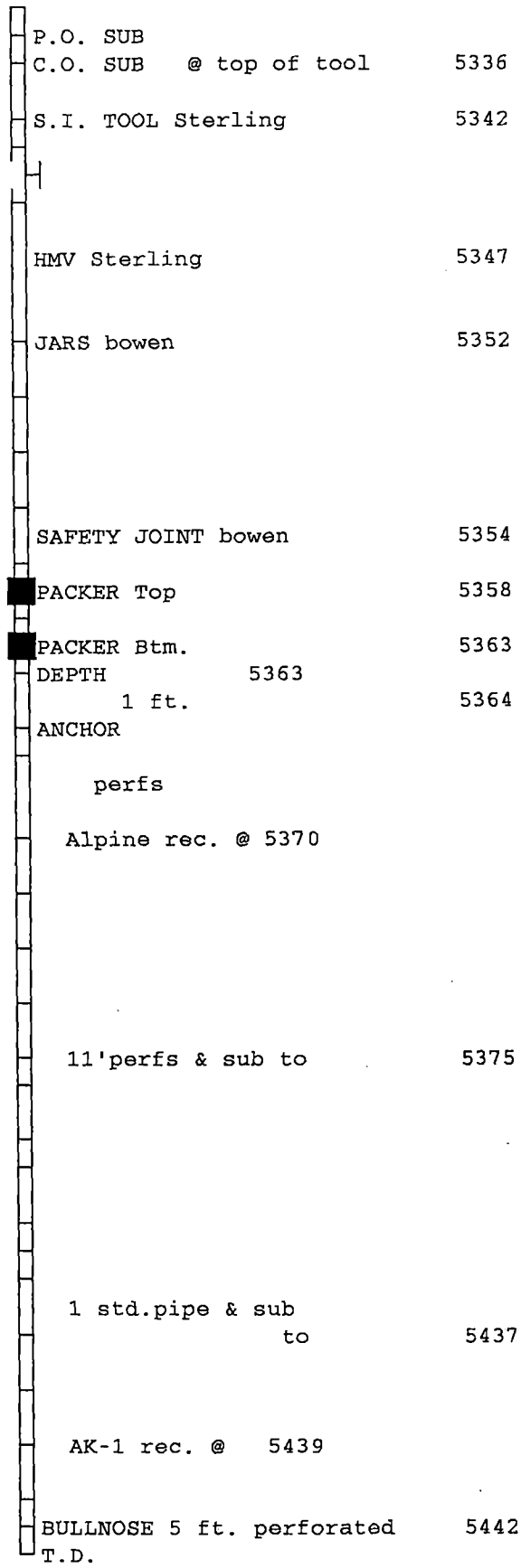
TOTAL DEPTH 5442

TOTAL DRILL PIPE ABOVE K.B. 17

REMARKS:
Comments:

FLUID SAMPLER DATA (not run)

GAS----------		cubic ft
OIL----------		ML.
MUD----------		ML.
WATER----------		ML.
OTHER----------		
PRESSURE----------		PSI
Rw ----------	ohms @	deg. F.
CHLORIDES----------		ppm.
GRAVITY----------		deg.API

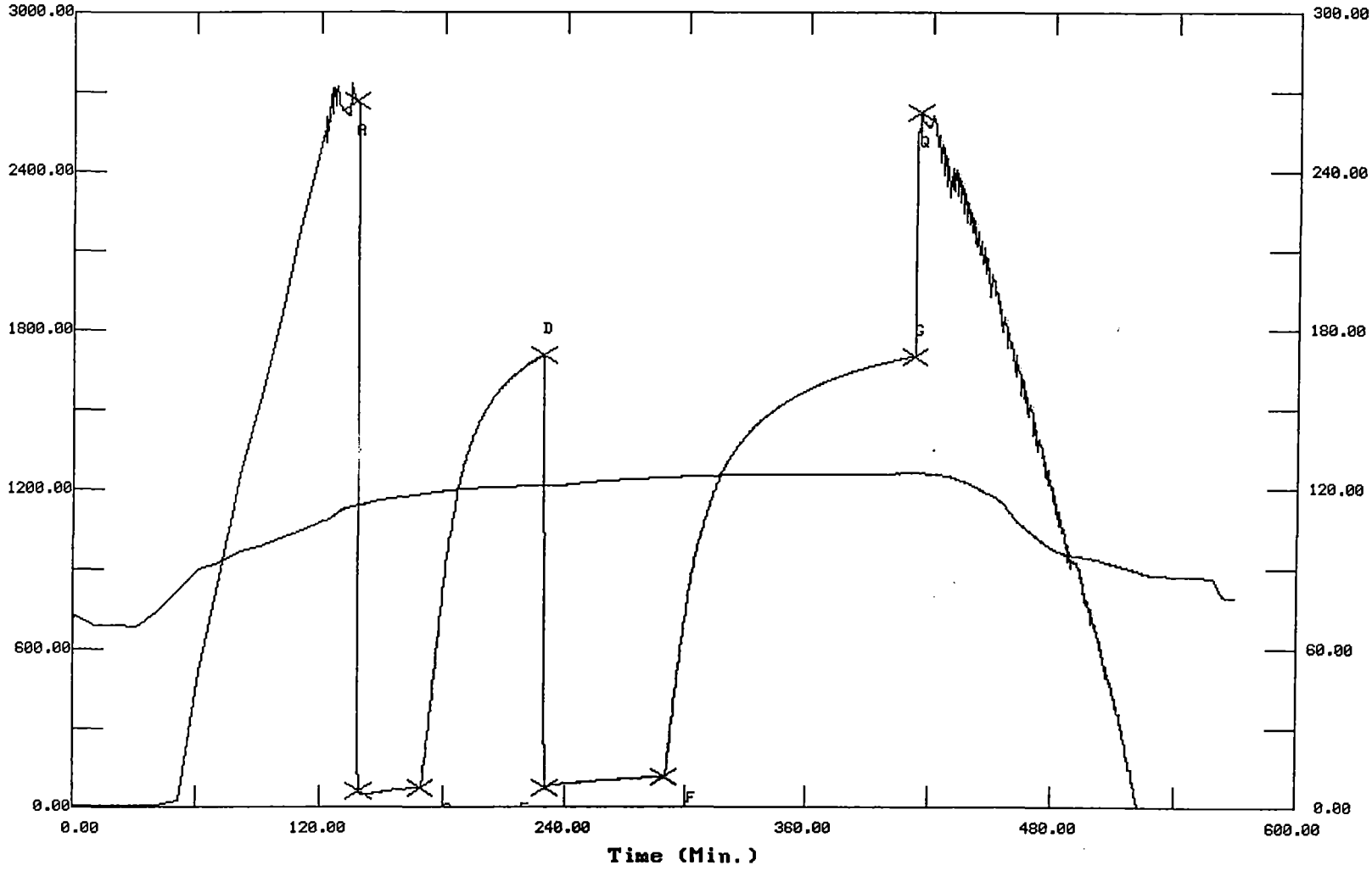


TEST HISTORY

12859 DST#6 HERD #2-10 R.J.PATRICK OPERATING CO.

Flag Points

	t(Min.)	P(PSIg)
A:	0.00	2666.63
B:	0.00	54.96
C:	30.00	72.17
D:	60.00	1706.50
E:	0.00	72.59
F:	59.50	114.22
G:	122.00	1700.62
Q:	0.00	2625.76



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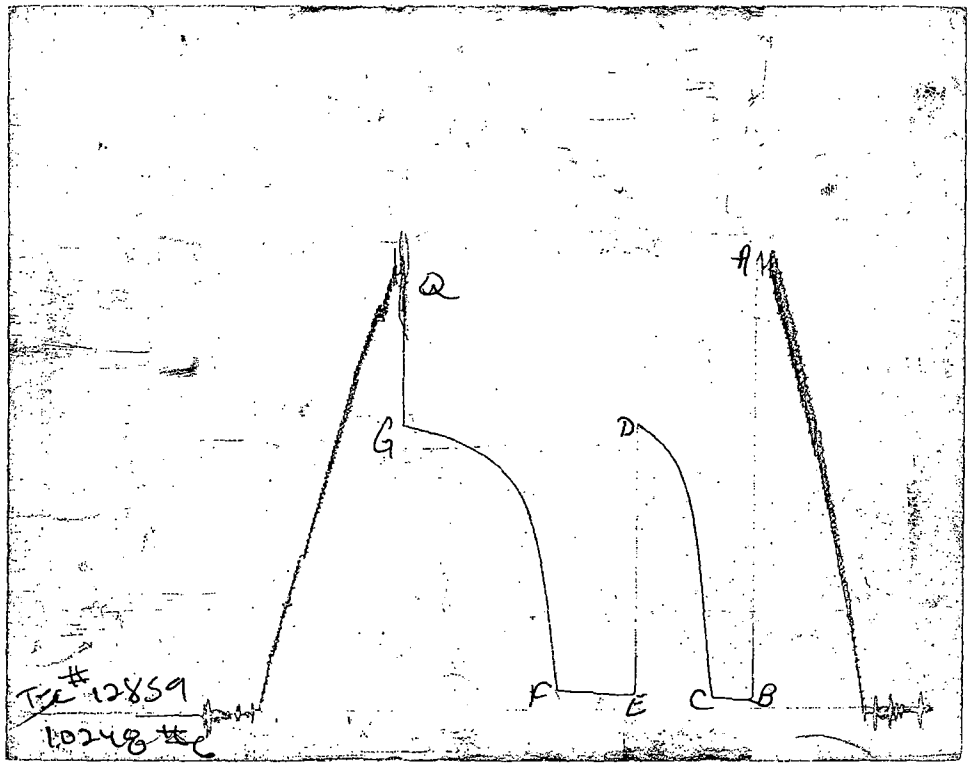

This is a photocopy of the actual AK-1 recorder chart

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

R.J. Patrick Oper. Co. — OPERATOR

Hurd # 2-10 — WELL NAME AND NO.

6 — DST NO.

Initial Open				Final Open			
Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				11	~	1/4"	GTS
				15	10" in H2O	1/4"	5.32
				20	10" in H2O	1/4"	5.32
				30	9" in H2O	1/4"	5.05
				40	8" in H2O	1/4"	4.76
				50	8" in H2O	1/4"	4.76
				60	8" in H2O	1/4"	4.76

Remarks:

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Test Ticket

№ 12859

Well Name & No. Herd # 2-10 Test No. 6 Date 6-4-2000

Company R.J. Patrick Oper. Co. Zone Tested Miss.

Address Liberal Ks. 67905 Elevation 2029 KB 2018 GL

Co. Rep / Geo. Marvin Harvey Cont. Duke Drlg #5 Est. Ft. of Pay 14 Por. ____ %

Location: Sec. 10 Twp. 33S Rge. 19W Co. Comanche State Ks.

No. of Copies 5 Distribution Sheet (Y, N) N Turnkey (Y, N) ____ Evaluation (Y, N) ____

Interval Tested 5363-5442' Initial Str Wt./Lbs. 76,000 Unseated Str Wt./Lbs. 78,00

Anchor Length 79' Wt. Set Lbs. 20,000 Wt. Pulled Loose/Lbs. 90,00

Top Packer Depth 5358' Tool Weight 2100 II

Bottom Packer Depth 5363' Hole Size — 7 7/8" ✓ Rubber Size — 6 3/4" ✓

Total Depth 5442' Wt. Pipe Run None Drill Collar Run 120'

Mud Wt. 9.0 LCM 6# Vis. 51 WL 10.4cc. Drill Pipe Size 4½" X.H. Ft. Run 5233

Blow Description IF: Strong blow. BOB in 2-3 secs. ISI: No blo

FF: Strong blow. GTS in 11 mins. (see gas volume report)

FST: Weak blow. ½-2"

Recovery — Total Feet 205 GIP Yes Ft. in DC 120 Ft. in DP 85

Rec. 85 Feet Of S.O.C.M. %gas 1 %oil %water 99 %mud

Rec. 120 Feet Of S.O.C.M.W. %gas 1 %oil 54 %water 45 %mud

Rec. ____ Feet Of ____ %gas %oil %water %mud

Rec. ____ Feet Of ____ %gas %oil %water %mud

Rec. ____ Feet Of ____ %gas %oil %water %mud

BHT 126 °F Gravity N/A °API D@ ✓ °F Corrected Gravity N/A °API

RW .063 @ 100 °F Chlorides 87,000 ppm Recovery Chlorides 9,000 ppm System

	AK-1	Alpine				
(A) Initial Hydrostatic Mud	2667	2647	PSI	Recorder No.	2342	T-On Location 0325
(B) First Initial Flow Pressure	46	55	PSI	(depth)	5378'	T-Started 0354
(C) First Final Flow Pressure	69	72	PSI	Recorder No.	10248	T-Open 0615
(D) Initial Shut-In Pressure	1701	1706	PSI	(depth)	5439'	T-Pulled 1047
(E) Second Initial Flow Pressure	69	73	PSI	Recorder No.	~~~	T-Out 1325
(F) Second Final Flow Pressure	110	114	PSI	(depth)	~~~	T-Off Location 1445
(G) Final Shut-in Pressure	1701	1701	PSI	Initial Opening	30	Test ✓ 800
(Q) Final Hydrostatic Mud	2591	2626	PSI	Initial Shut-in	60	Jars ✓ 200
				Final Flow	60	Safety Joint ✓ 50
				Final Shut-in	120	Straddle ____
					4	Circ. Sub ____
						Sampler ____
						Extra Packer ____
						Elec. Rec. ✓ 150
						Mileage ____
						Other ____
						TOTAL PRICE $ ✓ 1200

Approved By Marvin Harvey

Our Representative Craig Walters