

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

ORIGINAL

API NO. 15- 033-20994 0000

County Comanche County, Kansas

NW - NW - NW/4 Sec. 15 Twp. 32 Rge. 19 XX <sup>E</sup> <sub>W</sub>

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

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

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

Lease Name Harold Herd Well # 2-15

Field Name Wildcat

Producing Formation Ft. Scott

Elevation: Ground 2040' KB 2053'

Total Depth 5300' PBDT 5275'

Amount of Surface Pipe Set and Cemented at 728 Feet

Multiple Stage Cementing Collar Used? Yes X No

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

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

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

Drilling Fluid Management Plan Att. 1, 3-25-99 uc  
(Data must be collected from the Reserve Pit)

Chloride content 7500 ppm Fluid volume 420 bbls

Dewatering method used settled water & hauled

Location of fluid disposal if hauled offsite:

Operator Name KBW Oil & Gas Company

Lease Name Harmon #1 License No. 5993

NW Quarter Sec. 11 Twp. 33 S Rng. 20 <sup>E</sup> <sub>W</sub>

County Comanche Docket No. 22304

Operator: License # 6528

Name: RJ Patrick Operating Operating Co

Address P.O. Box 1157

City/State/Zip Liberal, Kansas 67905-1157

Purchaser: Kansas Gas Supply

Operator Contact Person: RJ Patrick

Phone (316) 624-8483

Contractor: Name: Duke Drilling Co., Inc.

License: 5929

Wellsite Geologist: Marvin Harvey

Designate Type of Completion  
 New Well  Re-Entry  Workover

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

If Workover:

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. \_\_\_\_\_

02-15-99 02-27-99 02-28-99  
Spud Date Date Reached TD Completion Date

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, 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 RJ Patrick

Title Owner Date 03/22/99

Subscribed and sworn to before me this 22 day of March 19 99.

Notary Public Lisa K. Smith

Date Commission Expires 7-5-00

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)

NOTARY PUBLIC - State of Kansas  
LISA K. SMITH  
My Appt. Expires 7-5-00

Operator Name RJ Patrick Operating Company

Lease Name Harold Herd

Well # 2-15

Sec. 15 Twp. 32 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  Yes  No  
(Attach Additional Sheets.)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No  
(Submit Copy.)

Log Formation (Top), Depth and Datum  Sample

Name	Top	Datum
Heebner Shale	4309'	-2243'
Toronto	4320'	-2254'
Lansing	4507'	-2241'
Marmaton	4973'	-2907'
Pawnee	5059'	-2993'
Ft. Scott	5092'	-3026'
Cherokee Shale	5104'	-3038'
Mississippi	5178'	-3112'

List All E.Logs Run:  
dual compensated porosity log, dual induction log, microresistivity, drilling time and cement bond log.

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	30	20"		90'			
Surface	12-1/4"	8-5/8"	28# & 24#	728.19'	65/35 Class A	300 100	6%gel 3%cc 3%cc 2%gel
Production	7-7/8"	4-1/2"	10.5#	5306'	50/50 Poz	150	18%salt 2%gel

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TO				
<input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2 per ft.	5182' to 5204' & 5221' to 5248'	5000 gals. 15% FE	5182' to 5248'
	Set bridge plug @ 5096'		
2 per ft.	5097' to 5103'	2000 gals 15% FE	5097' to 5103'

TUBING RECORD		Size	Set At	Packer At	Liner Run
		2 3/8	5092	none	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj.			Producing Method		
03/17/99			<input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)		
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0	415	21		

Disposition of Gas:

METHOD OF COMPLETION

Production Interval

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

Open Hole  Perf.  Dually Comp.  Commingled  
 Other (Specify) \_\_\_\_\_

5097' to 5103'





CEMENTING LOG

STAGE NO.

Date 2-16-99 District Med-Lodge Ticket No. 9563
Company R J Patrick Rig Duke 7
Lease Herd Well No. 1-15
County Comanche State KS
Location Coldwater Car Wash Field 15-325-19W
3W 75

CASING DATA: PTA Intermediate Production Liner
Surface 8 5/8 Type Weight 28 Collar

Casing Depths: Top 40 Bottom 72.8

Drill Pipe: Size 4 1/2 Weight 16.60 Collars

Open Hole: Size T.D. ft. P.B. to ft.

CAPACITY FACTORS:

Casing: Bbls/Lin. ft. .0624 Lin. ft./Bbl. 16.02
Open Holes: Bbls/Lin. ft. .0602 Lin. ft./Bbl. 16.59
Drill Pipe: Bbls/Lin. ft. Lin. ft./Bbl.
Annulus: Bbls/Lin. ft. .0735 Lin. ft./Bbl. 13.60
Bbls/Lin. ft. 1.58 Lin. ft./Bbl.

Perforations. From ft. to ft Amt.

CEMENT DATA:

Spacer Type: 5 bbls Freshwater
Amt. Skys Yield ft^3/sk Density PPG

LEAD Pump Time hrs. Type
65:35:6+3%cc + 1/4 Flo-seal Excess

Amt. 300 Skys Yield 1.97 ft^3/sk Density 12.5 PPG

TAIL Pump Time hrs. Type

CLASS A + 3%cc + 2% gel Excess
Amt. 100 Skys Yield 1.34 ft^3/sk Density 15.2 PPG

WAIT: Lead 10.9 gals/sk Tail 65 gals/sk Total 93 Bbls

Pump Trucks Used 256-265 Shane Winsor
Bulk Equip. 240-251 Mark Brungardt

Float Equip: Manufacturer

Shoe Type Depth

Float Type AFU Insert Depth 686

Centralizers: Quantity Plugs Top Rubber Btm.

Stage Collars

Special Equip.

Disp. Fluid Type Freshwater Amt. 44 Bbls Weight 834 PPG

Mud Type Weight PPG

COMPANY REPRESENTATIVE Ken McGuire

CEMENTER Carl Balding

Table with columns: TIME, PRESSURES PSI (DRILL PIPE CASING, ANNULUS), FLUID PUMPED DATA (TOTAL FLUID, Pumped Per Time Period, RATE Bbls Min.), REMARKS. Includes handwritten entries for pump times and pressures.

RECEIVED STATE CORPORATION COMMISSION 3-24-99 MAR 24 1999

CONSERVATION DIVISION Wichita, Kansas

15-833-20994-0000

# ALLIED CEMENTING CO., INC. ORIGINAL 9578

Federal Tax I.D.# 48-0727860

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

SERVICE POINT:  
Med. Lodge, KS

DATE <u>2-28-99</u>	SEC. <u>15</u>	TWP. <u>32S</u>	RANGE <u>19W</u>	CALLED OUT <u>7:30A.M.</u>	ON LOCATION <u>10:45A.M.</u>	JOB START <u>1:30P.M.</u>	JOB FINISH <u>3:30P.M.</u>
LEASE <u>Herd</u>		WELL #	LOCATION <u>Coldwater Carwash</u>		COUNTY <u>Comanche</u>	STATE <u>Ks.</u>	
OLD OR NEW (Circle one)			<u>3w-9/5</u>				

CONTRACTOR Duke #7  
 TYPE OF JOB Prod. CSG.  
 HOLE SIZE 7 7/8 T.D. 5300  
 CASING SIZE 4 1/2 x 10.5 DEPTH 5300'  
 TUBING SIZE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 DRILL PIPE \_\_\_\_\_ DEPTH \_\_\_\_\_  
 TOOL \_\_\_\_\_ DEPTH \_\_\_\_\_  
 PRES. MAX 1200 MINIMUM 300  
 MEAS. LINE \_\_\_\_\_ SHOE JOINT 10'  
 CEMENT LEFT IN CSG. \_\_\_\_\_  
 PERFS. \_\_\_\_\_  
 DISPLACEMENT 2% KCL w/ 85 Bls  
 EQUIPMENT  
 PUMP TRUCK CEMENTER Harry Drenting  
 # 233-302 HELPER Justin Hart  
 BULK TRUCK  
 # 259-314 DRIVER Robert Burr  
 BULK TRUCK  
 # \_\_\_\_\_ DRIVER \_\_\_\_\_

OWNER R. J. Patrick operating  
 CEMENT  
 AMOUNT ORDERED 255xs. 60/40/6  
1505xs. 50/50+2%Gel+18%Salt  
75%CD-31+1/4#Flo-Seal  
 COMMON \_\_\_\_\_ @ \_\_\_\_\_  
 POZMIX \_\_\_\_\_ @ \_\_\_\_\_  
 GEL \_\_\_\_\_ @ \_\_\_\_\_  
 CHLORIDE \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 HANDLING \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

**REMARKS:**

**SERVICE**

Pipe on Bottom - Break Circ + Recip Pipe  
mix + Pump 1505xs. 50/50+2%Gel  
18% Salt + 75%CD-31+1/4#Flo-Seal  
Release Plug - wash out Pump lines  
Displace Plug w/ 85 Bls 2%KCL water  
Bump Plug Release PST Float Held  
Plug Rathole - 155xs 60/40/6  
Plug masehole - 105xs 60/40/6

DEPTH OF JOB 5300  
 PUMP TRUCK CHARGE \_\_\_\_\_  
 EXTRA FOOTAGE \_\_\_\_\_ @ \_\_\_\_\_  
 MILEAGE \_\_\_\_\_ @ \_\_\_\_\_  
 PLUG 4 1/2 Rubber @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 TOTAL \_\_\_\_\_

CHARGE TO: R. J. Patrick operating  
 STREET \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**FLOAT EQUIPMENT**

1-AFU Insert @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 \_\_\_\_\_ @ \_\_\_\_\_  
 RECEIVED BY \_\_\_\_\_  
 STATE CORPORATION COMMISSION

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 R. J. Patrick

X R. J. Patrick  
 PRINTED NAME

RECEIVED  
 MAR 24 1999  
 3-24-99  
 CONCERNATION DIVISION  
 Wichita, Kansas

15-033-20994-0000

ORIGINAL



CEMENTING LOG

STAGE NO.

Date 2-28-99 District med. loda Ticket No. 9578  
 Company R. J. Patrick Oper. Rig Duke #7  
 Lease Herd Well No. \_\_\_\_\_  
 County Comanche State KS  
 Location Coldwater Carwash Field LS-325-19  
3w-7S

CASING DATA: PTA  Squeeze   
 Surface  Intermediate  Production  Liner   
 Size 4 1/2 Type \_\_\_\_\_ Weight 10.5 Collar \_\_\_\_\_

Casing Depths: Top \_\_\_\_\_ Bottom \_\_\_\_\_

Drill Pipe Size 4 1/2 Weight 16.60 Collars xhole  
 Open Hole Size 7 7/8 T.D. 5300 ft. P.B. to \_\_\_\_\_ ft.

CAPACITY FACTORS:  
 Casing: Bbbs/Lin. ft. 0159 Lin. ft./Bbl. 62.70  
 Open Holes: Bbbs/Lin. ft. 0602 Lin. ft./Bbl. 16.8599  
 Drill Pipe: Bbbs/Lin. ft. \_\_\_\_\_ Lin. ft./Bbl. \_\_\_\_\_  
 Annulus: Bbbs/Lin. ft. 0406 Lin. ft./Bbl. 24.6474  
 Perforations: From \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Amt. \_\_\_\_\_

COMPANY REPRESENTATIVE R. J. Patrick

CEMENT DATA:  
 Spacer Type: \_\_\_\_\_  
 Amt. \_\_\_\_\_ Sks Yield \_\_\_\_\_ ft<sup>3</sup>/sk Density \_\_\_\_\_ PPG

LEAD: Pump Time \_\_\_\_\_ hrs. Type 60/40/696Gel  
 Excess \_\_\_\_\_  
 Amt. 25 Sks Yield 1.58 ft<sup>3</sup>/sk Density 13.8 PPG  
 TAIL: Pump Time \_\_\_\_\_ hrs. Type 50/50+2+18%SAIT  
.75%CD-31+1/4#Flu-seal Excess \_\_\_\_\_  
 Amt. 150 Sks Yield 1.28 ft<sup>3</sup>/sk Density 14.5 PPG  
 WATER: Lead 7.8 gals/sk Tail 543 gals/sk Total 20 Bbbs.

Pump Trucks Used 233-302 Justin H.  
 Bulk Equip. 259-314 Robert B.

Floater Equip: Manufacturer \_\_\_\_\_  
 Shoe: Type \_\_\_\_\_ Depth \_\_\_\_\_  
 Floater: Type AFU Insert Depth \_\_\_\_\_  
 Centralizers: Quantity \_\_\_\_\_ Plugs Top Robber Btm. \_\_\_\_\_  
 Stage Collars \_\_\_\_\_  
 Special Equip. \_\_\_\_\_  
 Disp. Fluid Type 2% KCL Amt. 85 Bbbs. Weight 8.43 PPG  
 Mud Type Chemical Weight 9.2 PPG

CEMENTER Harry Oreiling

TIME	PRESSURES PSI		FLUID PUMPED DATA			REMARKS	
	AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period		RATE Bbbs Min.
1:30		600					Pipe on Bottom - Break Circ.
1:30		600					Reciprocate csg. 15'
2:24		500		34	5h		mix Pump 150 Sks. 50/50+2%Gel 18%SAIT+.75%CD31+1/4#Flu-seal
2:30		300			5		Cement In. Stop Pumps
2:31		50		10	4 1/2		wash out Pump+lines
2:31		-		-	-		Release Plug
2:35		300		2	5		Start Displace 100% KCL water
		300		15	6		Steady Rate + PST
		300		50	6		Cement turn shoe
		375		65	5		PST lift Increase
		400		66	4		slow Rate
		550		75	4		steady Rate Increase
		600		81	3		Decrease Rate
3:00		1200		85	3		Bump Plug Release Plug Float Heid
3:00		50		3	3		Plug Rathole / 15 Sks. 60/40/6
3:05		50		2	3		Plug Rathole / 10 Sks. 60/40/6

STATE CORPORATION COMMISSION  
 3-24-99  
 DIVISION

# ALLIED CEMENTING CO., INC.

ORIGINAL  
9578

Federal Tax I.D.# 48-0727860

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

15-033-20994-0000

SERVICE POINT:

Med. Lodge, Ks.

DATE <u>2-28-99</u>	SEC. <u>15</u>	TWP. <u>32S</u>	RANGE <u>19W</u>	CALLED OUT <u>7:30A.M.</u>	ON LOCATION <u>10:45A.M.</u>	JOB START <u>11:30P.M.</u>	JOB FINISH <u>3:30P.M.</u>
LEASE <u>Herd</u>	WELL #	LOCATION <u>Coldwater Carwash</u>			COUNTY <u>Comanche</u>	STATE <u>Ks.</u>	
OLD OR NEW (Circle one)		<u>3w-5/8</u>					

CONTRACTOR Duke #7  
 TYPE OF JOB Prod. CSG.  
 HOLE SIZE 7 7/8 T.D. 5300  
 CASING SIZE 4 1/2 x 10.5 DEPTH 5300  
 TUBING SIZE DEPTH  
 DRILL PIPE DEPTH  
 TOOL DEPTH  
 PRES. MAX 1200 MINIMUM 300  
 MEAS. LINE SHOE JOINT 10'  
 CEMENT LEFT IN CSG.  
 PERFS.  
 DISPLACEMENT 2% KCL w/ 85 BLS

OWNER R. J. Patrick Operating  
 CEMENT  
 AMOUNT ORDERED 25xys. 60/40/6  
150xys. 50/50 + 2% Gel + 18% SALT  
7.5% CD-31 + 1/4 # FLO-SEAL  
 COMMON @  
 POZMIX @  
 GEL @  
 CHLORIDE @  
 HANDLING @  
 MILEAGE @

EQUIPMENT  
 PUMP TRUCK CEMENTER Arny Drilling  
 # 233-302 HELPER Justin Hart  
 BULK TRUCK  
 # 259-314 DRIVER Robert Burr  
 BULK TRUCK  
 # DRIVER

TOTAL

REMARKS:

Pipe on Bottom - Break Circ. + Recip. Pipe  
mix + Pump 150xys. 50/50 + 2% Gel  
18% SALT + 7.5% CD-31 + 1/4 # FLO-SEAL  
Release Plug - wash out Pump lines  
Displace Liquid 85 BLS 2% KCL water  
Bump Plug - Release PST Float Held  
Plug Pathole - 15xys 60/40/6  
Plug mouse hole - 10xys 60/40/6

SERVICE

DEPTH OF JOB 5300  
 PUMP TRUCK CHARGE  
 EXTRA FOOTAGE @  
 MILEAGE @  
 PLUG 4 1/2 Rubber @  
 @  
 @

CHARGE TO R. J. Patrick Operating  
 STREET  
 CITY STATE ZIP

FLOAT EQUIPMENT

1-AFU Insert @  
 @  
 @  
 @  
 @

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 R. J. Patrick

RECEIVED  
 X R. J. Patrick  
 PRINTED NAME

3-24-99  
 WICHITA, KANSAS

ORIGINAL

15-033-20994-0000  
R.J. PATRICK OPERATING COMPANY  
P.O. BOX 1157  
LIBERAL, KANSAS 67905-1157

Phone No. 316-624-8483

e-mail: patrick@ptsi.net

Fax: 316-624-1819

DRILLING REPORT

Re: Harold Herd 2-15  
NW/NW/NW Section 15-32S-19W  
Comanche County, Kansas

RECEIVED  
STATE CORPORATION COMMISSION

MAR 24 1999  
3-24-99  
CONSERVATION DIVISION  
Wichita, Kansas

- 02/01/99 Staked location and ran elevation - GR - 2053
- 02/08/99 Making location and reserve pit.
- 02/09/99 Set 90' of 20" Conductor Pipe.
- 02/10/99 Finished making location and reserve pit.
- 02/16/99 Spudded @ 5:30 p.m. Drilling 12½" surface hole. Drilling @ 685' @ 7:00 a.m.
- 02/17/99 Drilling ahead @ 1317'. Set 728' of 8 5/8 - 28# casing (17 joints). Cemented w/300 sks. 65 - 35 w/6% gel & 3% c.c. and 1/4# Flo Seal. Tailed in w/100 sks. Class "A" w/3% C.C. and 2% gel. Plug down @ 11:00 a.m., 02/16/99. Cement did circulate by Allied Cementing Company. W.O.C. 8 hours. Rigged up 8 5/8" well head and Blow -Out Preventors. Started drilling out from under surface pipe @ 7:00 p.m.
- 02/18/99 Drilling ahead @ 2331'. Survey 3/4° @ 1496'.
- 02/19/99 Drilling ahead @ 2830'. Survey 3/4° @ 2616'.
- 02/20/99 Drilling ahead @ 3355' in lime and shale.
- 02/21/99 Drilling ahead @ 3860' in lime and shale.
- 02/22/99 Drilling ahead @ 4430' in lime and shale.
- 02/23/99 Tripping out of hole for DST#1 @ 4827'. Testing from 4810' to 4827'.
- 02/24/99 DST#1 - recovered 2160' of salt water and drilling mud. Drilling ahead @ 4827'.
- 02/25/99 Circulating for DST#3 @ 5076'. Ran DST#2 @ 5008' to 5040'. Recovered 560' of salt water and drilling mud.
- 02/26/99 Taking DST#4 @ 5116'. Ran DST#3 @ 5064' to 5076'. Recovered 260' of gas cut mud and muddy water. No gas in pipe.
- 02/27/99 Circulating for logs @ 5300'. Results DST#4 - 5089' to 5116'. Recovered 30' drilling mud with stablized gas flow of 137,000 cu ft per day w/1871# shut in pressure. DST Chart showed formation damage which would result in less gas flow. Drill Stem Test analyses report said we should expect 6 to 8 times increase after acid treatment.
- 02/28/99 Finished logging and ran DST#5 @ 5210' to 5267'. Recovered 80' of gas cut mud w/show of oil and stabilizing flow of 17,000 cu. ft. gas per day w/1600# shut-in pressure. Lay down drill pipe and ran 131 jts., 5306' of 4½" - 10.5# casing Cemented w/150 sks Poz Mix. Plug down @ 2:50 p.m. Set slips and released rig @ 5:15 p.m. WOC and completion unit.



## R.J. PATRICK OPERATING COMPANY

P.O. BOX 1157

LIBERAL, KANSAS 67905-1157

Phone No. 316-624-8483

e-mail: patrick@ptsi.net

Fax: 316-624-1819

COMPLETION REPORT

RE: Harold Herd 2-15  
 NW/NW/NW Section 15-32S-19W  
 Comanche County, Kansas

- 03/03/99 Move in Completion Unit. Rig up and run Cement Bond and Collar Log. Had good cement bond. PBD 5275'. Cement top 4508'. Swabbed casing down to 4800'. Perforated 5221' to 5248', 2 holes per ft. and 5182' to 5204', 2 holes per ft. (Mississippi Zone) had slight blow on casing. Swabbed to bottom. Had slight show of gas. No fluid coming in. Let well open to pit overnight.
- 03/04/99 Had slight show of oil. Acidized Mississippian w/5000 gals. 15% FE Acid w/additives and 150 ball sealers. Broke down @ 1100#. Treated @ 6bbls. per minute @ 800#'s. Balled off w/4 bbls. of Flush left. Finished treatment @ 400#'s. Instant shut-down. Bled to 300 in 20 min. Bled off pressure to tank and started swabbing to tank. 205 bbls. to recover. We recovered 169 bbls. of load today w/36 bbls to be recovered. Making gas at the rate of 25,000 gas per day and oil @ the rate of 3 bbls. per day. Shut well in overnight.
- 03/05/99 Shut-in pressure, 360#'s. Had 1000' of fluid in hole. Swabbed 10% oil. Swabbed hole down. Making approximately 1½ bbls. per hour of fluid. Recovered all but 10 bbls. of load water. Making 10% oil and gas too small to measure. Rigged down. Swabbed and rigged up perforators. Set Cast Iron Bridge Plug @ 5169' and load hole w/treated water. Perforated 5097' to 5103' - 6 feet, 2 holes per ft. Ran tubing in hole w/2 ft. sub on bottom then seating nipple, then ran 159 jts. (5089') 2 3/8" used tubing, top of perms @ 5097'. Ran tubing in hole. Shut down overnight.
- 03/06/99 Circulated hole and spotted acid. Treated down tubing 2000 gals., 15% FE Acid w/additives. Broke down @ 600#'s. Treated @ 2 to 2½ bbls per minute. Instant shut-down 500#'s. Bled off to 150# in 20 minutes. Closed in and bled back to swab tank. Started swabbing 2 3/8" tubing. Total load to recover, 125 bbls. Swab back 40 bbls. and well kicked off flowing and cleaning up acid water. Recovered 97 bbls. and shut well in. Lack 28 bbls. having load back. Making approximately 400,000 gas per day. Flowing tubing pressure, 600#'s. Flowing casing pressure, 800#'s on a 16/64 choke. Shut well in @ 6:00 p.m. Shut in overnight for pressure test. Rigged down Completion Unit and move out.
- 03/07/99 Shut-in tubing pressure, 1435#'s. Casing pressure, <sup>1530</sup>~~1550~~#'. Job complete. Waiting on pipe line connection.
- 03/08/99 Shut-in Tubing pressure, 1560#'s. Casing pressure, <sup>1560</sup>~~1650~~#'s.

END REPORT

RECEIVED  
 STATE CORPORATION COMMISSION

MAR 24 1999  
 3-24-99  
 CONSERVATION DIVISION  
 Wichita, Kansas