

KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
September 1999  
Form Must Be Typed

ORIGINAL

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 32210  
Name: Harry A. Spring  
Address: P.O. Box 1788  
City/State/Zip: Ardmore, OK 73402  
Purchaser: Westona  
Operator Contact Person: Harry A Spring  
Phone: (580) 226 3800  
Contractor: Name: Duke Drilling Co, Inc  
License: 5929  
Wellsite Geologist: Mike Pollok  
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: \_\_\_\_\_  
Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_  
 Deepening  Re-perf.  Conv. to Enhr./SWD  
 Plug Back \_\_\_\_\_ Plug Back Total Depth \_\_\_\_\_  
 Commingled \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Dual Completion \_\_\_\_\_ Docket No. \_\_\_\_\_  
 Other (SWD or Enhr.?) \_\_\_\_\_ Docket No. \_\_\_\_\_  
1-30-01 2/8/01 4/26/01  
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 007 22640 0000  
County: Barber  
\* 1/2 Sec. 18 Twp. 35 S. R. 15  East  West  
450 feet from  N (circle one) Line of Section  
450 feet from  W (circle one) Line of Section  
\* state line runs midway thru sec 18  
Footages Calculated from Nearest Outside Section Corner:  
(circle one) NE?  SE  NW  SW  
Lease Name: Brownback Well #: 1-18  
Field Name: \_\_\_\_\_  
Producing Formation: Mississippi  
Elevation: Ground: 1815' Kelly Bushing: 1823'  
Total Depth: 5385' Plug Back Total Depth: 5326'  
Amount of Surface Pipe Set and Cemented at 1140 Feet  
Multiple Stage Cementing Collar Used?  Yes  No  
If yes, show depth set \_\_\_\_\_ Feet  
If Alternate II completion, cement circulated from \_\_\_\_\_  
feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan ACT 1 8th 11/13/02  
(Data must be collected from the Reserve Pit)  
Chloride content 3500 ppm Fluid volume 600 bbls  
Dewatering method used evaporation + dilution  
Location of fluid disposal if hauled offsite: \_\_\_\_\_  
Operator Name: McGinness  
Lease Name: Lohmann License No.: 5255  
Quarter \_\_\_\_\_ Sec. 3 Twp. 35 S. R. 12  East  West  
County: Barber Docket No.: GD 4812

RECEIVED  
KANSAS CORPORATION COMMISSION  
6-21-01  
JUN 21 2001

**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 of 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: [Signature]  
Title: owner Date: 6-19-01  
Subscribed and sworn to before me this 19th day of June  
2001  
Notary Public: Linda Hamilton  
Date Commission Expires: April 13, 2002

**KCC Office Use ONLY**  
 Letter of Confidentiality Attached  
If Denied, Yes  Date: \_\_\_\_\_  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution

Operator Name: Harry A Spring Lease Name: Brownback Well #: 1-18  
 Sec. 18 Twp. 35 S. R. 15  East  West County: Barber

**INSTRUCTIONS:** Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems 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 test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Attach Additional Sheets)  Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Submit Copy)  List All E. Logs Run: <u>Dual Induction</u> <u>CNL-Density</u> <u>Microlog</u> <u>CEMENT BOND</u>	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Name</td> <td style="width:25%;">Top</td> <td style="width:25%;">Datum</td> </tr> <tr> <td><u>Heebner SH</u></td> <td><u>4320</u></td> <td><u>-2494</u></td> </tr> <tr> <td><u>Lansing</u></td> <td><u>4508</u></td> <td><u>-2682</u></td> </tr> <tr> <td><u>Stark SH</u></td> <td><u>4955</u></td> <td><u>-3129</u></td> </tr> <tr> <td><u>MISS</u></td> <td><u>5264</u></td> <td><u>-3438</u></td> </tr> </table>	Name	Top	Datum	<u>Heebner SH</u>	<u>4320</u>	<u>-2494</u>	<u>Lansing</u>	<u>4508</u>	<u>-2682</u>	<u>Stark SH</u>	<u>4955</u>	<u>-3129</u>	<u>MISS</u>	<u>5264</u>	<u>-3438</u>
Name	Top	Datum														
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<u>MISS</u>	<u>5264</u>	<u>-3438</u>														

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> 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	# Sacs Used	Type and Percent Additives
<u>Surface</u>	<u>12 1/4</u>	<u>8 5/8</u>	<u>24</u>	<u>1140</u>	<u>Class A</u>	<u>525</u>	<u>2% gel 3% CC</u>
<u>Production</u>	<u>7 7/8</u>	<u>4 1/2</u>	<u>10.5</u>	<u>5380</u>	<u>ASC</u>	<u>125</u>	<u>2% gel 7% flocculants</u> <u>5% gilsonite</u>

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

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
<u>2</u>	<u>5242-56, 5270-88, 5302-10</u>	<u>Treat w/ 1200 gal 15% MCA</u> <u>Frac w/ 65 Q N2 foam 569 bbl</u> <u>w/ 940 mcf Nitrogen and</u> <u>69,000 # 16/30 sd</u>	

TUBING RECORD	Size <u>2 3/8</u>	Set At <u>5190</u>	Packer At <u>5190</u>	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumerd Production, SWD or Enhr. <u>WOPL</u>	Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil Bbls. <u>0</u>	Gas Mcf <u>500</u>	Water Bbls. <u>0</u>	Gas-Oil Ratio	Gravity
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Disposition of Gas  Vented  Sold  Used on Lease (If vented, Sumit ACO-18.)

METHOD OF COMPLETION  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify)

Production Interval 5242'-5256' 5270'-5288' 5302'-5310'

# ALLIED CEMENTING CO., INC.

5167

Federal Tax I.D.# 48-0727860

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

ORIGINAL SERVICE POINT: Med Lodge

DATE <u>2-1-01</u>	SEC. <u>18</u>	TWP. <u>35S</u>	RANGE <u>15W</u>	CALLED OUT <u>7:00 pm</u>	ON LOCATION <u>9:00 pm</u>	JOB START <u>2:00 AM</u>	JOB FINISH <u>3:00 AM</u>
LEASE <u>Brownback</u>		WELL# <u>1-18</u>	LOCATION <u>Hardtner west to Airport</u>	COUNTY <u>Barber</u>	STATE <u>KS</u>		
OLD OR NEW (Circle one) <u>NEW</u>			<u>1 E</u>				

CONTRACTOR <u>Duke #5</u>	OWNER <u>Harry Spring Operating</u>
TYPE OF JOB <u>Surface</u>	CEMENT
HOLE SIZE <u>12 1/8</u>	T.D. <u>1145</u>
CASING SIZE <u>8 7/8</u>	DEPTH <u>1140</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL <u>Baffle plate</u>	DEPTH <u>1100</u>
PRES. MAX <u>800</u>	MINIMUM <u>350</u>
MEAS. LINE	SHOE JOINT <u>40.30</u>
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>70 1/2 BRLS Fresh H<sub>2</sub>O</u>	

COMMON <u>A 150</u>	@ <u>6.35</u>	<u>952.50</u>
POZMIX	@	
GEL <u>3</u>	@ <u>9.50</u>	<u>28.50</u>
CHLORIDE <u>18</u>	@ <u>28.00</u>	<u>504.00</u>
<u>AW 375</u>	@ <u>6.00</u>	<u>2250.00</u>
<u>Flo-SEAL 94#</u>	@ <u>1.40</u>	<u>131.60</u>
	@	
	@	
	@	
HANDLING <u>565</u>	@ <u>1.05</u>	<u>593.25</u>
MILEAGE <u>565 X 48</u>	<u>-04</u>	<u>1084.80</u>
		TOTAL <u>5918.65</u>

EQUIPMENT

PUMP TRUCK CEMENTER <u>Justin Hart</u>
#359-265 HELPER <u>Mark Brungardt</u>
BULK TRUCK
#233-290 DRIVER <u>Scott Spriggs</u>
BULK TRUCK
#258-314 DRIVER <u>Jason Tritt</u>

REMARKS:

Pipe on Bottom Break Circ  
Mix 375 SX 65.35.6 @ 12.8"  
Mix 150 SX 1 1/2 @ 15.2"  
Release Plug & Start Disp 5 BPM  
lift press @ 56 BRLS 150#  
60 BRLS slow rate 3 BPM 70 1/2 BRLS  
350# press Bump Plug to 800# shut  
head in Release press circulated cement

SERVICE

DEPTH OF JOB <u>1140'</u>		
PUMP TRUCK CHARGE <u>0-300'</u>		<u>470.00</u>
EXTRA FOOTAGE <u>840'</u>	@ <u>.43</u>	<u>361.20</u>
MILEAGE <u>48</u>	@ <u>3.00</u>	<u>144.00</u>
PLUG <u>8 7/8 TRP</u>	@ <u>90.00</u>	<u>90.00</u>
	@	
	@	
		TOTAL <u>1065.20</u>

CHARGE TO: Harry Spring Operating  
 STREET P.O. Box 1788  
 CITY ARMORE STATE OKLA. ZIP 73402

FLOAT EQUIPMENT

<u>8 7/8</u>		
<u>1 - Baffle plate</u>	@ <u>45.00</u>	<u>45.00</u>
<u>2 - Baskets</u>	@ <u>180.00</u>	<u>360.00</u>
	@	
	@	
	@	
		TOTAL <u>405.00</u>

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

SIGNATURE [Signature]

TAX \_\_\_\_\_  
 TOTAL CHARGE 7013.35  
 DISCOUNT 701.39 IF PAID IN 30 DAYS  
6312.46  
JOE LIVINGSTON  
 PRINTED NAME

# 15-007-22640-0000 ALLIED CEMENTING CO., INC.

5211

Federal Tax I.D.# 48-0727860

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

ORIGINAL SERVICE POINT:  
Med Lodge

DATE <u>2-9-01</u>	SEC. <u>18</u>	TWP. <u>35S</u>	RANGE <u>15W</u>	CALLED OUT <u>11:00 A.M.</u>	ON LOCATION <u>3:30 P.M.</u>	JOB START <u>12:20 P.M.</u>	JOB FINISH <u>1:30 P.M.</u>
LEASE <u>Ream Pack</u>		WELL # <u>1-18</u>	LOCATION <u>Jacks Trailer 1E</u>	COUNTY <u>Barber</u>	STATE <u>KS</u>		
OLD OR (NEW) (Circle one)							

CONTRACTOR Duke Drilling Co #5

TYPE OF JOB Head Casing

HOLE SIZE 7 7/8 T.D. 5385

CASING SIZE 4 1/2 10.50 DEPTH

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 39.87

CEMENT LEFT IN CSG. 40 ft

PERFS. 0

DISPLACEMENT 85 bbls

**EQUIPMENT**

PUMP TRUCK	CEMENTER <u>LARRY STORM</u>
# <u>356-302</u>	HELPER <u>DAVID WEST</u>
BULK TRUCK	
# <u>353</u>	DRIVER <u>JASON</u>
BULK TRUCK	
#	DRIVER

OWNER Happy Spring Oper Co.

CEMENT

AMOUNT ORDERED 125 sks ASC + 5 # Kol-Seal  
25 sks 60/40 lb for Rathole - Mousehole

COMMON <u>15</u>	@ <u>6.35</u>	<u>95.25</u>
POZMIX <u>10</u>	@ <u>3.25</u>	<u>32.50</u>
GEL <u>1</u>	@ <u>9.50</u>	<u>9.50</u>
CHLORIDE	@	
<u>HSC 125</u>	@ <u>8.20</u>	<u>1025.00</u>
<u>KOL-SEAL 625#</u>	@ <u>.38</u>	<u>237.50</u>
<u>MUD CLEAN 500 bbls</u>	@ <u>.73</u>	<u>375.00</u>
	@	
	@	<u>195.30</u>
HANDLING <u>186</u>	@ <u>1.05</u>	<u>195.30</u>
MILEAGE <u>48 X 186 X .04</u>		<u>357.12</u>

TOTAL 2327.44  
2327.17

**REMARKS:**

Probe circulation Rotary Mud  
Cpe 25 min Switchover pump  
Push - Bottom plug - cement  
Push pump & lines - Trip loaded  
with 85 bbls fresh water  
land plug. Float valve  
15 sks 60/40 lb - Rathole  
10 sks 60/40 lb - Mousehole

**SERVICE**

DEPTH OF JOB	<u>5385</u>	
PUMP TRUCK CHARGE		<u>1290.00</u>
EXTRA FOOTAGE	@	
MILEAGE <u>48</u>	@ <u>3.00</u>	<u>144.00</u>
PLUG <u>1-4 1/2 TRP</u>	@ <u>38.00</u>	<u>38.00</u>
<u>1-4 1/2 BRP</u>	@ <u>50.00</u>	<u>50.00</u>
	@	

TOTAL 1522.00

CHARGE TO: Happy Spring Oper Co.

STREET P.O. Box 1788

CITY ARMORE STATE OKLA ZIP 73402

**FLOAT EQUIPMENT**

<u>1-4 1/2 GUIDE SHOE</u>	@ <u>125.00</u>	<u>125.00</u>
<u>1-4 1/2 RFU Float Collar</u>	@ <u>245.00</u>	<u>245.00</u>
<u>5-4 1/2 Cent.</u>	@ <u>45.00</u>	<u>225.00</u>
<u>1-4 1/2 STOP PLUG</u>	@ <u>20.00</u>	<u>20.00</u>
	@	

TOTAL 615.00

To Allied Cementing Co., Inc.  
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SIGNATURE Joe Livingston

TAX \_\_\_\_\_

TOTAL CHARGE 4467.44

DISCOUNT 446.45 IF PAID IN 30 DAYS

4017.99

JOE LIVINGSTON

PRINTED NAME

15-007-22640-0000

RECEIVED FEB 16 2001



# MAP EXPLORATION, INC.

MICHAEL ANTHONY POLLOK, PRES.

P.O. Box 106 ■ PURCELL, OKLAHOMA 73080  
OFFICE 405/527-6038 ■ HOME 405/527-5200 ■ MOBILE 405/650-0793 ■ FAX 405/527-7629

## GEOLOGICAL REPORT

ORIGINAL

### BROWBACK 1-18

450 FSL & 450 FEL OF SEC. 18 - T35S - R15W

BARBER COUNTY, KANSAS

### SUMMARY

The above captioned well was drilled to a total depth of 5,385 feet on February 8, 2001. A one-man mud-logging unit with gas chromatograph was on location from 1,500 feet to TD, with samples being analyzed from 4,000 feet to TD. The well was under the geological supervision of the undersigned from approximately 4,300 feet to TD. At TD, Reeves electric logs were run that consisted of Dual Induction, Compensated Density-Neutron, and Micro-log. From data collected while drilling and analyzing, hydrocarbon shows were encountered in the middle Kansas City Limestone, the Oswego Limestone, the Mississippian Detrital and Mississippian Dolomite. The decision was made to set a production string of casing and attempt completion in the two Mississippian zones.

### MIDDLE KANSAS CITY LIMESTONE

A porosity zone that would be considered equivalent to the Dennis Limestone member in Kansas's nomenclature was encountered at 4,936 (-3110) feet. A three-foot drilling break was encountered with a 20-unit above background gas kick recorded on the gas chromatograph. Samples were described as off-white to cream buff, very fine to microcrystalline predominately chalky limestone. Electric logs indicate a three-foot zone of 10% porosity that calculates "wet".

### OSWEGO LIMESTONE

The Oswego (Pawnee) Limestone was topped at 5,144 (-3318) feet. Samples were described as cream to buff, very fine to fine crystalline limestone, with some slightly oolitic pieces being observed, along with some pin-point and oomoldic porosity being seen. A dull yellow mineral fluorescence with no visible cut or odor was recorded. The gas chromatograph recorded a 20-unit above background gas kick. Electric logs indicate a two-foot zone of 10% porosity that calculates productive. The micro-log recorded two feet of positive separation, which indicates permeability. This zone should be perforated and tested before the well is plugged and abandoned.

**MISSISSIPPIAN**

The Mississippian Detrital was cut at 5,242 (-3416) feet. This zone was a total of 14 feet thick, with porosity averaging 16% or above throughout. Samples consisted of off-white to tan dolomitic limestone with sucrosic texture and intercrystalline porosity. A wide spectrum of cherts was observed and consisting of fresh milky translucent grading to mottled slightly tripolitic cherts, with pinpoint porosity observed. An 85-unit above background gas kick was recorded along with a bright greenish yellow fluorescence with slow streaming cut.

The top of the Mississippian Unconformity was encountered at 5,264 (-3438) feet. Samples were described as cream tan very fine to fine crystalline sucrosic dolomite, with good intercrystalline, pinpoint, and vugular porosity being observed. Samples illustrated the sucrosic dolomite grading into a cherty facies. The gas chromatograph recorded a 205-unit above background gas kick. A bright greenish yellow fluorescence along with a streaming cut and live oil staining was seen. Electric logs indicate a twenty-foot thick dolomite zone with average porosity of 13%. Micro-log was scattered at best, but seemed to be illustrating some permeability.

**ELECTRIC LOG TOPS**

	SPRING BROWNBACK 1-18 450 FSL & 450 FEL	JACK COOT 1-13 NE NESW	SPRING BRASS 1-17 650 FNL & 600 FEL
CHASE (SUBSEA)	2424 (-598)	2425 (-599)	2307 (-583)
TOP PENN. (SUBSEA)	3380 (-1554)	3388 (-1562)	3256 (-1523)
BS. HEEB. (SUBSEA)	4320 (-2494)	4346 (-2520)	4203 (-2479)
LANSING (SUBSEA)	4508 (-2682)	4540 (-2714)	4400 (-2676)
STARK SH. (SUBSEA)	4955 (-3129)	4976 (-3150)	4834 (-3110)
CHEROKEE (SUBSEA)	5190 (-3364)	5210 (-3384)	5069 (-3345)
MISS DETR. (SUBSEA)	5242 (-3416)	5257 (-3431)	5113 (-3389)

MISS UNCON.	5264	5278	5148
(SUBSEA)	(-3438)	(-3452)	(-3424)

**CONCLUSION**

The Brownback 1-18 was drilled as a western extension to existing production. Potential zones of interest were Oswego (Pawnee) Limestone, Mississippian Detrital and Mississippian Dolomites. All three zones were cut in the Brownback and should be evaluated through perforations.

After all data was analyzed, the decision was made to set pipe and attempt completion in the Mississippian Detrital and Dolomite zones. The Oswego should be perforated for production at some time before abandonment of the well.

Respectfully submitted,



Mike Pollok  
Petroleum Geologist  
2/14/01