

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
September 1999
Form Must Be Typed

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License # 5539
Name: Southwest Gas Storage Company
Address: 5444 Westheimer Road
City/State/Zip: Houston, TX 77056-5306
Purchaser: _____
Operator Contact Person: Larry Jenkins WT-418
Phone: (713) 989-7484
Contractor: Name: Cheyenne
License: 5382
Wellsite Geologist: Peter Debenham

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/Re-entry: Old Well Info as follows:
Operator: Southwest Gas Storage Company

Well Name: Bartel 1-5
Original Comp. Date: 7/7/81 Original Total Depth: 5646
____ 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. 195,523-C

<u>10/02/01</u>	<u>11/8/01</u>	<u>1/18/02</u>
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15-119-20478-01-03

County: Meade

SE-NE-NE Sec. 5 Twp. 33 S. R. 28 East West

850 feet from S / (circle one) Line of Section

180 feet from (circle one) E / W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:

(circle one) NE SE NW SW

Lease Name: Bartel Well #: 1-5

Field Name: Borchers North Storage Field

Producing Formation: Morrow

Elevation: Ground: 2441 Kelly Bushing: 2460

Total Depth: 6833 Plug Back Total Depth: 6833

Amount of Surface Pipe Set and Cemented at 2541 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

(Data must be collected from the Reserve Pit)

Chloride content 1000 ppm Fluid volume 1200 bbls

Dewatering method used Hauled offsite

Location of fluid disposal if hauled offsite:

Operator Name: Gene R. Dill

Lease Name: Regier SWD License No.: 6652

Quarter _____ Sec. 17 Twp. 33 S. R. 27 East West

County: Meade Docket No.: C-21,232

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: Larry J Jenkins

Title: Principal Petroleum Engineer Date: 1/31/02

Subscribed and sworn to before me this 31st day of January

19 02

Notary Public: Gloria A. Rivas

Date Commission Expires: 8-16-2005

KCC Office Use ONLY

____ Letter of Confidentiality Attached

If Denied, Yes Date: _____

____ Wireline Log Received

____ Geologist Report Received

____ UIC Distribution

Operator Name: Southwest Gas Storage Company Lease Name: Bartel Well #: 1-5
 Sec. 5 Twp. 33 S. R. 28 East West County: Meade

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 <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input checked="" 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 <i>(Submit Copy)</i> List All E. Logs Run: Cement bond log, gamma ray neutron, vertilog	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input checked="" type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>Atoka</td> <td>5455MD</td> <td>5342TVD</td> </tr> <tr> <td>Morrow Shale</td> <td>5844MD</td> <td>5526TVD</td> </tr> <tr> <td>Morrow B-C Sand</td> <td>5855MD</td> <td>5530TVD</td> </tr> <tr> <td>Morrow A Sand</td> <td>5896MD</td> <td>5542TVD</td> </tr> <tr> <td>All depths are KB Datum</td> <td>2460KB</td> <td></td> </tr> </table>	Name	Top	Datum	Atoka	5455MD	5342TVD	Morrow Shale	5844MD	5526TVD	Morrow B-C Sand	5855MD	5530TVD	Morrow A Sand	5896MD	5542TVD	All depths are KB Datum	2460KB	
Name	Top	Datum																	
Atoka	5455MD	5342TVD																	
Morrow Shale	5844MD	5526TVD																	
Morrow B-C Sand	5855MD	5530TVD																	
Morrow A Sand	5896MD	5542TVD																	
All depths are KB Datum	2460KB																		

CASING RECORD <input checked="" 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	# Sacks Used	Type and Percent Additives
Conductor	22	20	53	62		162	
Surface	12.25	8.625	28	2541	H,HLC	1600	4%gel,10#Calse
Production	7.875	5.5	17	5928	Midcon C, Pi	365	1%CC,10#Gilsoi

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 checked="" type="checkbox"/> Plug Off Zone	Plug first	lateral due to junk	in hole.	15.6#, 17#, 1%CC, 0.5 CFR3
	4460-5933	premium	200	100 sx mixed to 15.6#, 100 sx mixed to 17#

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
	Openhole completed 5934-6833	1000 gal 7.5%FE Acid with Nitrogen	5934-
			6540

TUBING RECORD	Size	Set At	Packer At	Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No
None				

Date of First, Resumed Production, SWD or Enhr. Gas Storage	Producing Method <input 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
-----------------------------------	-----------	---------	-------------	---------------	---------

Disposition of Gas	METHOD OF COMPLETION	Production Interval
<input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Sumit ACO-18.)</i>	<input checked="" type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <input type="checkbox"/> Other (Specify) _____	_____