

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

Operator: License # 5269

Name: Kansas Natural Gas, Inc.

Address P.O. Box 815

City/State/Zip Sublette, KS 67877

Purchaser: Colorado Interstate Gas

Operator Contact Person: Mr. Steve Lehning

Phone (316) 675-8185

Contractor: Name: Cheyenne Drilling Company

License # 5382

Wellsite Geologist: No samples taken

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:

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

Deepening Re-perf. Conv. to Inj/SWD

Plug Back PBSD

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. _____

11-27-93 11-29-93 12-29-93
Spud Date Date Reached TD Completion Date

API NO. 15- 067-21,252-0000 ORIGINAL

County Grant

App - C - NW - 1/4 Sec. 36 Twp. 27 Rge. 35 X W

3960 Feet from S/N (circle one) Line of Section

3960 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 Fee Well # 1-2

Field Name Hugoton

Producing Formation Chase Series

Elevation: Ground 3067' KB 3078'

Total Depth 2825' KB PBSD 2824' KB

Amount of Surface Pipe Set and Cemented at 729 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 CB 3-7-93
(Data must be collected from the Reserve Pit)

Chloride content NA ppm Fluid volume NA bbls

Dewatering method used remove & backfill

Location of fluid disposal if hauled offsite:

Operator Name _____

Lease Name _____ License No. _____

Quarter Sec. Twp. S Rng. E/W

County _____ Docket No. _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Steven M. Lehning

Title Superintendent Date 1-5-94

Subscribed and sworn to before me this 5th day of January 19 94.

Notary Public Judy L. Webb

Date Commission Expires September 11, 1996

RECEIVED
STATE CORPORATION COMMISSION

1-6-94
JAN 06 1994

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



Operator Name Kansas Natural Gas, Inc. Lease Name _____ Fee _____ Well # 1-2

Sec. 36 Twp. 27 Rge. 35 East West County Grant ORIGINAL API # 15-067-21252

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.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datums	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	T/Cement - 5 1/2"	200'	+2878'
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	T/Permian	842'	+2236'
List All E-Logs Run:		T/Cedar Hills	1420'	+1658'
Gamma Ray Neutron Log		B/Stone Corral	1914'	+1164'
Cement Bond Log		T/Herrington	2619'	+459'
		T/Winfield	2685'	+393'
		T/Towanda	2732'	+346'
		T/Ft. Riley	2780'	+298'
		Plug Back T.D.	2824'	+254'
		Rotary T.D.	2825'	+253'

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
Surface Casing	12 1/4"	8 5/8"	24#	742' KB	Class "C"	350	6% Gel
Production Casing	7 7/8"	5 1/2"	14#	2824' KB	Class "C"	550	2% Cal. Ch.

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		Acid, Fracture, Shot, Cement Squeeze Record	
	Specify Footage of Each Interval Perforated		(Amount and Kind of Material Used) Depth	
4	2623' - 2627'		Acid - 3,000 gallons 15% HCL Acid and	
	2634' - 2648'		2% KCL	
	2688' - 2698'			
	2736' - 2744'		Fracture - 107,780# 10/40 Mesh Sand, Linear	
	2757' - 2767'			
	2788' - 2796'		Gel at 35 BPM and flush to top of perfs	

TUBING RECORD	Size 2 3/8" EUE	Set At 2798'	Packer At None	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj. Pending pipeline connection	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
Estimated Production Per 24 Hours	Oil Bbls. NOTE: Estimated Production	Gas N/A	Mcf	Water Bbls. N/A

Disposition of Gas:	METHOD OF COMPLETION	Production Interval
<input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, submit ACC-18.)	<input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled	2623' - 2627'
<input checked="" type="checkbox"/> N/A	<input type="checkbox"/> Other (Specify) _____	2634' - 2648'
		2688' - 2698'
		2736' - 2744'
		2757' - 2767'
		2788' - 2796'

RECEIVED
STATE GEOLOGICAL COMMISSION
JAN 06 1994
CONSERVATION DIVISION
Wichita, Kansas

ORIGINAL

DRILLERS LOG

KANSAS NATURAL GAS, INC.
FEE #1-2
SECTION 36-T27S-R35W
GRANT COUNTY, KANSAS

API #15-067-21252

COMMENCED: 11-27-93
COMPLETED: 11-29-93

SURFACE CASING: 730' OF 8 5/8"
CMTD W/200 SX 65/35 C/POZ, 6% D-20
2% SI, 1/4#/SX D-29; TAILED IN W/
150 SX "C", 2% SI, 1/4#/SX D-29

FORMATION	DEPTH
SURFACE HOLE	0- 750
CLAY & SAND	750-1215
SAND, ANHYDRITE & RED BED	1215-1423
GLORIETTA SAND	1423-1582
SAND, ANHYDRITE & RED BED	1582-2035
SHALE & LIME	2035-2418
LIME & SHALE	2418-2644
SHALE & LIME	2644-2825 RTD

I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHEYENNE DRILLING, INC.

A.J. Jacques

A.J. JACQUES

RECEIVED
STATE CORPORATION COMMISSION

JAN 06 1994

CONSERVATION DIVISION
Wichita, Kansas

STATE OF KANSAS :ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 30TH DAY OF NOVEMBER, 1993.

Becky J. Whetstone
BECKY J. WHETSTONE, NOTARY PUBLIC

BECKY J. WHETSTONE
NOTARY PUBLIC
STATE OF KANSAS
MY APPT. EXPIRES 4/29/95

OPERATOR: Kansas Natural Gas, Inc. KCC #: 5269
 WELL NAME: Appleman-Jackson Fee #1-2 API #: 15-067-21,252
 LOCATION: 3960' FSL, 3960' FEL sec 36-T27S-R35W COUNTY: Grant
 ELEVATIONS: GL-3067', KB-3078' TOTAL DEPTH: 2825'
 SPUD DATE: 11/27/93 DRILLING COMPLETED: 11/29/93
 DRILLING CONTRACTOR: Cheyenne Drlg. - Rig #4 KCC #: 5382

SURFACE CASING SIZE: 8.625" WEIGHT: 24# GRADE: J55 DEPTH: 742'
 CEMENT: 200 sx of 65/35 with 6% gel, 2% CaCl₂, 1/4# cello-flake; and
 150 sx Class "C" with 2% CaCl₂, 1/4# cello-flake.
 CASING EQUIPMENT: 1 centralizer, baffle-plate, "Texas" pattern shoe.
 COMMENTS: circulated 40 sx cement to surface.

PRODUCTION CASING SIZE: 5.500" WEIGHT: 14# GRADE: J55 DEPTH: 2825'
 1st STAGE CEMENT: 450 sx of 65/35 with 6% gel, 2% CaCl₂, 1/4# flake;
 100 sx "C" with 1% CaCl₂, 1% "FLAC", .2% anti-foamer.
 2nd STAGE CEMENT:

CASING EQUIPMENT: 8 centralizers, guide shoe, latch-down baffle & plug.
 COMMENTS: displaced latch-down plug with acetic acid and 2% KCl water.
 landed plug @ 1240#, circulated approx. 30 sx cement to surface.

OPEN-HOLE LOGS: none

CASED-HOLE LOGS: G/R-Neutron, CCL, Cement bond

FORMATION TOPS:

horizon	depth	datum	remarks
T/Cement (for 5 1/2")	200'	+2878'	cement top from bond log
T/Permian	842'	+2236'	"red beds"
T/Cedar Hills	1420'	+1658'	unconsolidated fine sand
B/Stone Corral	1914'	+1164'	anhydrite marker
T/Herington	2619'	+ 459'	
T/Winfield	2685'	+ 393'	
T/Towanda	2732'	+ 346'	
T/Ft. Riley	2780"	+ 298'	
Plug-back Depth	2824'	+ 254'	log depth
Casing Total Depth	2825'	+ 253'	log depth
Rotary Total Depth	2825'	+ 253'	driller depth

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 CONSERVATION DIVISION
 Wichita, Kansas

PERFORATIONS: 2623'-2627', 2634'-2648', 2688'-2698', 2736'-2744';
 2757'-2767', 2788'-2796'; all intervals with 4 jet shots/foot.
 ACID TREATMENTS: 3000 gallons 15% HCl, maximum shut-in pressure
 after recovering partial load was 170 psig.
 FRACTURE TREATMENTS: 107,780# 20-40 mesh Ottawa sand; 73,000 gallons
 of 25# linear gel (1% KCl). set plug over the Ft. Riley and treated
 at 35 bpm at 130 psig (max-355#). ISIP was vacuum.

REMARKS: all depths are from KB elevation. SICP was 152# after frac
 treatment was shut in for 72 hours. after pulling plug over the
 Ft. Riley, 72 hour SICP was 100 psig. CAOF was 1,253 mcf/d with no
 water.

R. S. Ostroff

CEMENTING SERVICE REPORT



DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER 03-12-5742	DATE 11/27/93
STAGE 1	DS DISTRICT ULYSSES

DS-496 PRINTED IN U.S.A.

WELL NAME AND NO. FEE 1-2	LOCATION (LEGAL) SEC. 36-275-35W.	RIG NAME: CHEYENNE #4
FIELD-POOL	FORMATION	WELL DATA: BIT SIZE 12 1/4" CSG/Liner Size 8 5/8" BOTTOM TOP
COUNTY/PARISH GRANT	STATE KANSAS API NO.	TOTAL DEPTH 742' WEIGHT 24'
NAME KANSAS NATURAL GAS	AND SURFACE CEMENT	<input type="checkbox"/> ROT <input type="checkbox"/> CABLE FOOTAGE 742' ORIGINAL
ADDRESS	ZIP CODE	MUD TYPE WB GRADE J-55
SPECIAL INSTRUCTIONS DS TO SAFELY CEMENT 8 5/8" CS. 11-12 CUSTOMERS ORDERS		<input type="checkbox"/> BHST <input type="checkbox"/> BHCT THREAD 810
		MUD DENSITY 10.2 LESS FOOTAGE SHOE JOINT(S) 12.95 TOTAL 099
		MUD VISC. Disp Capacity 699
NOTE: Include Footage From Ground Level To Head In Disp. Capacity		
		SHOE DEPTH 742.44'

IS CASING/TUBING SECURED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	LIFT PRESSURE 275 PSI CASING WEIGHT - SURFACE AREA (3.14 x R ²)	TOOL TYPE
PRESSURE LIMIT 225 PSI BUMP PLUG TO 500' BUMP PSI	ROTATE <input type="checkbox"/> RPM <input type="checkbox"/> RECIPROCATE <input type="checkbox"/> FT No. of Centralizers 2	DEPTH
		TAILO PIPE: SIZE DEPTH
		TUBING VOLUME Bbls
		CASING VOL. BELOW TOOL Bbls
		TOTAL Bbls
		ANNUAL VOLUME Bbls

TIME	PRESSURE		VOLUME PUMPED BBL		JOB SCHEDULED FOR DATE: 11/27/93			ARRIVE ON LOCATION TIME: 1330	DATE: 11/27/93	LEFT LOCATION TIME: 1530	DATE: 11/27/93
0001 to 2400	TBG OR D.P.	CASING	INCREMENT	CUM.	INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL			
								PRE-JOB SAFETY MEETING			
								PSI TEST TO 200 PSI / OK			
1731	N/A	180	20		6.00	H ₂ O	8.34	PUMP H ₂ O AHEAD			
1735	N/A	190	82.3		6.00	CMT	12.2	START LEAD CEMENT			
1752	N/A	220	35.3		6.00	CMT	14.8	START TAIL CEMENT			
	N/A							SHUTDOWN DROP PLUG			
1803	N/A	170	44.6		5.5	H ₂ O	8.34	START DISPLACEMENT			
1810	N/A	190	34.6		2.0	H ₂ O	8.34	LOWER RATE			
		850						BUMP PLUG			
								RELEASE PRESSURE / PLUG DID NOT HOLD			
								BUMP PLUG			
1815								RELEASE PRESSURE / PLUG DID NOT HOLD			
								Applied 500 PSI SI WELL = LEFT			
								11/27/93 ON WELL			

RECEIVED STATE CORPORATION COMMISSION

JAN 06 1994

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS			SLURRY MIXED		
			CLASS	SI	WT	BBLS	DENSITY	
1.	220	2.1	65% 110Z	6% D ₁₀	2% SI	1/4 #/SK	82.2	12.2
2.	150	1.32	CLASS C	2% SI	1/4 #/SK	D-29	35.3	14.8
3.								
4.								
5.								
6.								

BREAKDOWN FLUID TYPE	VOLUME	DENSITY	PRESSURE	MAX	MIN:
<input type="checkbox"/> HESITATION SQ. <input checked="" type="checkbox"/> RUNNING SQ.	CIRCULATION LOST	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Cement Circulated To Surf.	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	15 Bbls
BREAKDOWN PSI FINAL	PSI	DISPLACEMENT VOL. 44.6 Bbls	TYPE OF WELL <input checked="" type="checkbox"/> OIL <input type="checkbox"/> GAS	<input type="checkbox"/> STORAGE <input type="checkbox"/> INJECTION	<input type="checkbox"/> BRINE WATER <input type="checkbox"/> WILDCAT
Washed Thru Perfs <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	TO	FT.	MEASURED DISPLACEMENT <input type="checkbox"/>	<input type="checkbox"/> WIRELINE	
PERFORATIONS	CUSTOMER REPRESENTATIVE	DS SUPERVISOR	David R. Amwer		

CEMENTING SERVICE REPORT



DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER 03-12-5743	DATE 11-27-93
STAGE 1	DS U1V5552 KS

DS-496 PRINTED IN U.S.A.

WELL NAME AND NO: Fee 1-2
 LOCATION (LEGAL): sec 36-275-3510 L
 FIELD-POOL: Hugoton
 COUNTY/PARISH: Grant
 STATE: Kansas
 API NO:

RIG NAME: Cheyenne Rig 4
 WELL DATA: BIT SIZE 7 1/2", CSGAL. inner Size 5 1/2", TOTAL DEPTH 2828.56
 BOTTOM: WEIGHT 14, FOOTAGE 2828.56
 TOP: MUD TYPE WB, GRADE, THREAD 8 1/2"
 MUD DENSITY 9.0, LEAS FOOTAGE SHOE JOINT(S) 0
 MUD VISC, Disp Capacity 2828.56

NAME: Cheyenne Drilling
 AND:
 ADDRESS:
 ZIP CODE:

ORIGINAL

SPECIAL INSTRUCTIONS: Safely cement the production casing per customer's request.
 (Long string)

Floor	TYPE	DEPTH	Stage Top	TYPE	DEPTH
	Bottom L/D P	2828.56			
SHOE	TYPE	DEPTH		TYPE	DEPTH
	Alumi.	2828.56			

IS CASING/TUBING SECURED? YES NO
 LIFT PRESSURE 1667 PSI CASING WEIGHT - SURFACE AREA (3 1/2" ID)
 PRESSURE LIMIT 1500 PSI BUMP PLUG TO 1177 + 500 PSI
 ROTATE RPM RECIPROCATE 10 FT No of Centralizers 8

Head & Plugs: TBG D P
 Double Single Swage Knockoff
 SQUEEZE JOB: SIZE, WEIGHT, GRADE, THREAD, NEW USED
 TOOL: TYPE, DEPTH
 TAIL PIPE: SIZE, DEPTH
 TUBING VOLUME, CASING VOL. BELOW TOOL, TOTAL, ANNUAL VOLUME (Bbls)

JOB SCHEDULED FOR TIME 1300 DATE 11-29-93
 ARRIVE ON LOCATION TIME 1230 DATE 11-29-93
 LEFT LOCATION TIME 1745 DATE 11-27-93

TIME	PRESSURE		VOLUME PUMPED BBL		JOB SCHEDULED FOR			ARRIVE ON LOCATION		LEFT LOCATION	
	TBG OR D P	CASING	INCREMENT	CUM	TIME	DATE	INJECT RATE	FLUID TYPE	FLUID DENSITY	TIME	DATE
0001 to 2400											
1602		320	20		7	11-29-93	7	thru	8.34		
1606		310	20	20	7		7	cm7	8.35		
1609		210	168	40	7		7	cm7	12.2		
1634		190	23	208	7		7	cm7	14.8		
1638		210	-	231	-		-	-	-		
1644		270	6	231	7		7	Acetic	8.6		
1646		2610	53	237	7		7	2% KCl	8.93		
1700		640	10	210	2		2	2% KCl	8.93		
1707		1240		300	-		-	-	-		

REMARKS

SYSTEM CODE	NO OF SACKS	YIELD CU FT/SK	COMPOSITION OF CEMENTING SYSTEMS			SLURRY MIXED		
						BBLs	DENSITY	
1	450	2.1	62% 2	16% D20	2% 51	1/4% BK D24	168	12.2
2	100	1.32	Class "C"	12% 51	1/4% BK D24	0.8% B30 + 0.2% D16	23	11.5
3								
4								
5								
6								

BREAKDOWN FLUID TYPE: HESITATION SQ RUNNING SQ CIRCULATION LOST
 DENSITY: YES NO
 PRESSURE: Cement Circulated To Surf YES NO 30 Bbls
 BREAKDOWN: PSI FINAL PSI DISPLACEMENT VOL 69 Bbls
 WASHED THRU PARTS: YES NO TO FT MEASURED DISPLACEMENT WIRELINE
 PERFORATIONS: TO TO CUSTOMER REPRESENTATIVE: Todd Davis
 DS SUPERVISOR: Steve Menech