

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- 081 - 20,746 - 0000
County Haskell
App - C - SE - 1/4 Sec. 33 Twp. 29 Rge. 32 X E
W

Operator: License # 5269

Name: Kansas Natural Gas, Inc.

Address P.O. Box 815

City/State/Zip Sublette, KS 67877

Purchaser: Williams Natural Gas

Operator Contact Person: Mr. Steve Lehning

Phone (316) 675-8185

Contractor: Name: Cheyenne Drilling Company

License # 5382

Wellsite Geologist: Mr. Ron Osterbuhr

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 PBTB

Commingled Docket No. _____

Dual Completion Docket No. _____

Other (SWD or Inj?) Docket No. _____

11-22-92 11-25-92 1-20-93

Spud Date Date Reached TD Completion Date

1250' Feet from (S)N (circle one) Line of Section

1250' 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 Murphy Well # 1-2

Field Name Hugoton

Producing Formation Chase Series

Elevation: Ground 2904' KB 2915'

Total Depth 2780' KB PBTB 2775' KB

Amount of Surface Pipe Set and Cemented at 689' Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from 689'

feet depth to surface w/ 300 sx cmt.

Drilling Fluid Management Plan DLT 2-18-93
(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 2-5-93
Subscribed and sworn to before me this 5 day of February,
19 93.
Notary Public Judy L. Webb
Date Commission Expires September 11, 1996

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)

Notary Public-State of Kansas
JUDY L. WEBB
My Appt. Exp. 9-11-96

RECEIVED
STATE CORPORATION COMMISSION
Form ACO-1 (7-91)
FEB 8 1993
2-8-1993
CONSERVATION DIVISION
Wichita, Kansas

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

East County Haskell

Sec. 33 Twp. 29 Rge. 32 West

ORIGINAL

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	T/Cement (for 5 1/2")	175'	+2740'
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	T/Permian	782'	+2133'
List All E.Logs Run:		T/Cedar Hills	1341'	+1574'
Gamma Ray Neutron Log		B/Stone Corral	1854'	+1061'
Cement Bond Log		T/"Chase Group"	2633'	+ 282'
		T/Winfield	2743'	+ 172'
		Plug Back TD	2776'	+ 149'
		Rotary TD	2780'	+ 135'

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#	689' G.L.	Class "C"	330	6% Gel
Production Casing	7 7/8"	5 1/2"	14#	2762' G.L.	Class "C"	600	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	
(3) Shots Per Foot	2673' - 2683'	10' Zone	Acid - 2500 gals 15% HCL, 2 gals A-260	
	2700' - 2708'	8' Zone	130 Ball Sealers	
	2718' - 2724'	6' Zone	Fracture - 20,000# Slick Water Linear Gel at	
			10 bbls per minute, 600 gals LGC-IV, 20# of GBW-30	

TUBING RECORD	Size	Set At	Packer At	Liner Run	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	2 3/8" EUE	2723'	None		

Date of First, Resumed Production, SWD or Inj. Pending pipeline connection _____ Producing Method Flowing Pumping Gas Lift Other (Explain) _____

Estimated Production Per 24 Hours	Oil Bbls. Estimated Production	Gas Mcf Open Flow	Water Bbls. 3.4 BPD	Gas-Oil Ratio Est. Deliv.: 416 Mcf	Gravity .680
		416			

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 2673' - 2683' 2700' - 2708' 2718' - 2724'

RECEIVED STATE CORPORATION COMMISSION

FEB 8 1993

CONSERVATION DIVISION

DRILLERS LOG

ORIGINAL

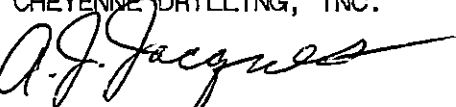
KANSAS NATURAL GAS, INC.
 MURPHY #1-2
 SECTION 33-T29S-R32W
 HASKELL COUNTY, KANSAS

COMMENCED: 11-22-92
 COMPLETED: 11-25-92

SURFACE CASING: 685' OF 8 5/8"
 CMTD W/180 SX 65/35 POZ/C, 6% D-20
 2% C.C., 1/4#/SX CELLO-FLAKE; TAILED IN W/
 150 SX "C", 2% C.C., 1/4#/SX CELLO-FLAKE

FORMATION	DEPTH
SURFACE HOLE	0- 700
SHALE	700-1230
SHALE & SAND	1230-1340
GLORIETTA SAND	1340-1505
RED BED & SHALE	1505-1776
LIME & SHALE	1776-2780 RTD

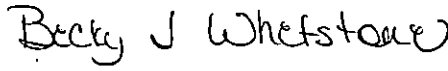
I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHEYENNE DRILLING, INC.

 A.J. JACQUES

STATE OF KANSAS :ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 30TH DAY OF NOVEMBER, 1992.

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


 BECKY J. WHETSTONE, NOTARY PUBLIC

RECEIVED
 STATE CORPORATION COMMISSION
 FEB 8 1993
 CONSERVATION DIVISION
 Wichita, Kansas

OPERATOR: Kansas Natural Gas, Inc. KCC #: 5269
 WELL NAME: Murphy #1-2 API #: 15-081-20,746
 LOCATION: 1250' FSL, 1250' FEL sec 33-T29S-R32W COUNTY: Haskell
 ELEVATIONS: GL-2904', KB-2915' TOTAL DEPTH: 2780'
 SPUD DATE: 11/22/92 DRILLING COMPLETED: 11/25/92
 DRILLING CONTRACTOR: Cheyenne Drlg. - Rig #1 KCC #: 5382

SURFACE CASING SIZE: 8.625" WEIGHT: 24# GRADE: J55 DEPTH: 700'
 CEMENT: 180 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: 2 centralizers, baffle-plate, "Texas" pattern shoe.
 COMMENTS: circulated 59 sx cement to surface.

PRODUCTION CASING SIZE: 5.500" WEIGHT: 14# GRADE: J55 DEPTH: 2773'
 1st STAGE CEMENT: 500 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 @ 1510#, circulated approx. 61 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")	175'	+2740'	cement top from bond log
T/Permian	782'	+2133'	"red beds"
T/Cedar Hills	1341'	+1574'	unconsolidated fine sand
B/Stone Corral	1854'	+1061'	anhydrite marker
T/"Chase Group"	2633'	+ 282'	
T/Winfield	2743'	+ 172'	
Plug-back Depth	2776'	+ 149'	log depth
Casing Total Depth	2778'	+ 137'	log depth
Rotary Total Depth	2780'	+ 135'	driller depth

PERFORATIONS: 2673'-2683', 2700'-2708', 2718'-2724'; all with 3 jet shots per foot.

ACID TREATMENTS: 2500 gallons 15% HCl

FRACTURE TREATMENTS:

REMARKS: all depths are from KB elevation.

CEMENTING SERVICE REPORT



TREATMENT NUMBER 4894 DATE 11/23/92
 STAGE — DS UKS DISTRICT

DS-496 PRINTED IN U.S.A.

DOWELL SCHLUMBERGER INCORPORATED

WELL NAME AND NO. Murphy #1-2 LOCATION (LEGAL) Sec. 33-29-32w
 FIELD-POOL Hugoton FORMATION Surface
 COUNTY/PARISH Haskell STATE Ks. API. NO. —
 NAME Cheyenne Drilling
 ADDRESS —
 ZIP CODE —

RIG NAME Cheyenne #1
 WELL DATA: BOTTOM TOP
 BIT SIZE 12 1/4 CSG/Liner Size 8 5/8
 TOTAL DEPTH 697 WEIGHT 27
 ROT CABLE 300 FOOTAGE 1599
 MUD TYPE GRADE
 BHST BHCT THREAD 8Rd
 MUD DENSITY LESS FOOTAGE SHOE JOINT(S) 4.3 TOTAL
 MUD VISC. Disp. Capacity 156

ORIGINAL

SPECIAL INSTRUCTIONS
Provide materials and services to safely cement 8 5/8 surface casing.

NOTE: Include Footage From Ground Level To Head In Disp. Capacity

Float	TYPE	<u>Baffle Plate</u>	TYPE	
	DEPTH	<u>656</u>	DEPTH	
Shoe	TYPE	<u>Tx Pattern</u>	TYPE	
	DEPTH	<u>699</u>	DEPTH	

Head & Plugs TBG D.P. SQUEEZE JOB
 Double WEIGHT GRADE THREAD
 Single SWAGE KNOCKOFF NEW USED
 ROT CW DEPTH

IS CASING/TUBING SECURED? YES NO
 LIFT PRESSURE 277 PSI CASING WEIGHT - SURFACE AREA (3.14 x R²)
 PRESSURE LIMIT 300 PSI BUMP PLUG TO 610 PSI
 ROTATE RPM — RECIPROCATE — FT. No. of Centralizers 2

JOB SCHEDULED FOR TIME 0100 DATE 11/23/92 ARRIVE ON LOCATION TIME 0130 DATE 11/23/92 LEFT LOCATION TIME 0700 DATE 11/23/92

TIME	PRESSURE		VOLUME PUMPED BBL		INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
	TBG OR D.P.	CASING	INCREMENT	CUM				
05:48	1500	—	1	—	1	H ₂ O	8.32	PRE-JOB SAFETY MEETING PSI Test
05:50		70	10	—	5.9	40	8.32	Start H ₂ O Ahead
05:52		230	67	—	5.9	Cnt.	12.2	Start Lead Cnt.
06:04		220	85	—	5.9	Cnt.	14.8	Start Tail Cnt.
06:11		100	—	—	—	—	—	Shut down - Drop Plug
06:14		190	41.7	—	5.9	420	8.32	Start Displacement
06:19		260	32	—	1.7	↓	↓	Lower Pump Rate
06:25		610	42	—	1.7	↓	↓	Bump Plug - Shot in Head
06:27		—	—	—	—	—	—	End Job!

REMARKS 59 sks. returned

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS		SLURRY MIXED	
			BBLs	DENSITY		
1.	180	21	6 1/2 % SPO2 + 6% D2O + 2% SL + 1/4 #SK D29	67.3	12.2	
3.	150	132	Class "C" + 2% SL + 1/4 #SK D29	35.2	14.8	

BREAKDOWN FLUID TYPE VOLUME DENSITY PRESSURE
 HESITATION SO. RUNNING SO. CIRCULATION LOST YES NO Cement Circulated To Surf. YES NO 22
 BREAKDOWN PSI FINAL PSI DISPLACEMENT VOL. 41.7 Bbls TYPE OF WELL OIL STORAGE BRINE WATER GAS INJECTION WILDCAT 15.3
 Washed Thru Perfs YES NO TO FT. MEASURED DISPLACEMENT WIRELINE
 PERFORATIONS TO TO CUSTOMER REPRESENTATIVE Rick Beniger DS SUPERVISOR Spencer Rickway CONSERVATION DIVISION Wichita, Kansas

RECEIVED
 STATE CORPORATION COMMISSION
 FEB 15 1993

CEMENTING SERVICE REPORT



DS-496 PRINTED IN U.S.A.

DOWELL SCHLUMBERGER INCORPORATED

TREATMENT NUMBER	DATE
4901	11/25/92
STAGE	DISTRICT
OKS	0312

WELL NAME AND NO.	LOCATION (LEGAL)	
Murphy #1-2	Sec 33-295-32W	
FIELD/POST	FORMATION	
Agodon	Chase	
COUNTY/PARISH	STATE	API. NO.
Waskell	Kansas	

RIG NAME:	Cheyenne Dtg #1		
WELL DATA:	BOTTOM	TOP	
BIT SIZE 7 7/8	CSG/Liner Size	5 1/2	
TOTAL DEPTH	WEIGHT	14	
<input type="checkbox"/> ROT <input type="checkbox"/> CABLE	FOOTAGE	2803	
MUD TYPE	GRADE		
<input type="checkbox"/> BHST <input type="checkbox"/> BHCT	THREAD	874	
MUD DENSITY	LESS FOOTAGE SHOE JOINT(S)	43	
MUD VISC.	Disp. Capacity	2760	6000

NOTE: Include Footage From Ground Level To Head In Disp. Capacity

NAME: Cheyenne Dtg

AND:

ADDRESS:

ZIP CODE:

SPECIAL INSTRUCTIONS: Provide materials & services to satisfy crmt 5 1/2 production csg.

LIFT LOG	TYPE	1 1/2" Dun Duff	TYPE	
	DEPTH	2803	DEPTH	
SHOE LOG	TYPE	Al. Nox G.S. de	TYPE	
	DEPTH	2803	DEPTH	

IS CASING/TUBING SECURED? YES NO

LIFT PRESSURE 1602 PSI CASING WEIGHT + SURFACE AREA (3.14 x R²)

PRESSURE LIMIT 100 PSI BUMP PLUG TO 1510 PSI

ROTATE RPM RECIPROGATE FT No. of Centralizers 8

Head & Plugs	<input type="checkbox"/> TBG <input type="checkbox"/> D.P.	SQUEEZE JOB
<input type="checkbox"/> Double <input checked="" type="checkbox"/> Single	SIZE WEIGHT	JOB TYPE DEPTH
<input type="checkbox"/> Swage <input type="checkbox"/> Knockoff	GRADE THREAD	TAIL PIPE: SIZE DEPTH
<input type="checkbox"/> NEW <input type="checkbox"/> USED	TUBING VOLUME	Bbls
<input type="checkbox"/> NEW <input type="checkbox"/> USED	CASING VOL. BELOW TOOL	Bbls
<input type="checkbox"/> NEW <input type="checkbox"/> USED	TOTAL	Bbls
<input type="checkbox"/> NEW <input type="checkbox"/> USED	ANNUAL VOLUME	Bbls

JOB SCHEDULED FOR TIME: 0800 DATE: 11/24

ARRIVE ON LOCATION TIME: 0000 DATE: 11/25

LEFT LOCATION TIME: 0000 DATE: 11/25

TIME	PRESSURE		VOLUME PUMPED BBL		INJECT RATE	FLUID TYPE	FLUID DENSITY	SERVICE LOG DETAIL
	TBG OR D.P.	CASING	INCREMENT	CUM				
0001 to 2400						160	8.33	PRE-JOB SAFETY MEETING psi test done
1820	NA	170	20	-	8.1	H ₂ O	8.33	H ₂ O Ahead
1823		340	25	-	8.1	CW	160	CW 100 + SFC
1825		330	187	-	8.1	Crmt	12.2	Lead crmt
1849		450	25	-	8.1	Crmt	14.5	TAIL Crmt
1852		0			0			Shot Down washdown Deep plug
19:01		140	6	-	6	H ₂ O	240	Displace Acid
19:02		140	61.3	-	6	2% KCl		Start H ₂ O 2% KCl
19:10	NA	560	57	-	2.0	H ₂ O	2%	Lead Dump pt.
19:15	NA	1510	68.3	-	1.9			Bump Plug
19:16		0	0	-	0			Release psi
19:20								End 500

ORIGINAL

REMARKS:

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS		SLURRY MIXED		
			BBLs	DENSITY	BBLs	DENSITY	
1.	500	2.1	3% KCl + 6% D2O + 7% D2H + 1/4" #13C D29	187	12.2		
2.	100	1.41	C + 1% S1 + 1% flo Bloc + 2% D46 + 1/4" #13C D29	25.1	14.5		
3.							
4.							
5.							
6.							

RECEIVED STATE CORPORATION COMMISSION

BREAKDOWN FLUID TYPE:	VOLUME	DENSITY	PRESSURE	MAX.	MIN.
<input type="checkbox"/> HESITATION SQ. <input type="checkbox"/> RUNNING SQ.	CIRCULATION LOST	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Cement Circulated To Surf.	FEB 8 1993	Bbls
BREAKDOWN PSI FINAL	PSI DISPLACEMENT VOL.	47.2	TYPE OF WELL	<input type="checkbox"/> OIL <input type="checkbox"/> GAS	<input type="checkbox"/> STORAGE <input type="checkbox"/> BRINE WATER
Washed thru: Perfs <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	TO FT MEASURED DISPLACEMENT	<input type="checkbox"/> WIRELINE	CONSERVATION DIVISION		
PERFORATIONS TO TO	CUSTOMER REPRESENTATIVE	DS SUPERVISOR	Wichita, Kansas		
	Rick Berger	Greg Black			