

SIDE ONE

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

API NO. 15- 055-20,918-0000
County Finney County
APP SW Sec. 32 Twp. 24 Rge. 33 X East West

Operator: License # 5269

1250 Ft. North from Southeast Corner of Section

Name: Kansas Natural Gas, Inc.

3910 Ft. West from Southeast Corner of Section

Address P.O. Box 818

(NOTE: Locate well in section plat below.)

Hays, Kansas 67601

Lease Name Spratt Well # 13CG-13

City/State/Zip Hays, Kansas 67601

Field Name Panoma Council Grove

Purchaser: KN Energy

Producing Formation Council Grove

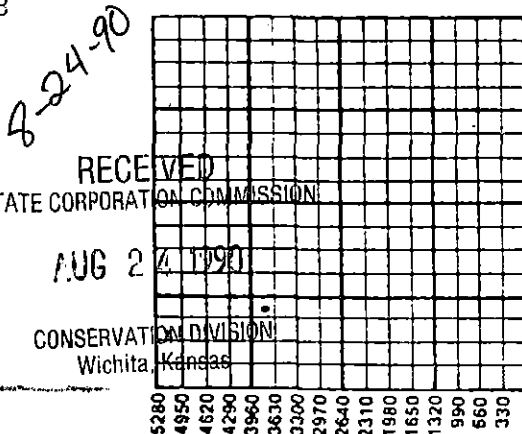
Operator Contact Person: Gary Unruh

Elevation: Ground 2908' KB 2919'

Phone (316) 275-1407 Mobile 275-7098

Total Depth 2960' PBDT 2943'

Contractor: Name: Cheyenne Drilling



License: 5382

Wellsite Geologist: Ron Osterbuhr

Designate Type of Completion

- New Well Re-Entry Workover
- Oil SWD Temp. Abd.
- Gas Inj Delayed Comp.
- Dry Other (Core, Water Supply, etc.)

If OWMO: old well info as follows:

Operator: _____

Well Name: _____

Comp. Date _____ Old Total Depth _____

Drilling Method:

- Mud Rotary Air Rotary Cable

6-12-90 6-14-90 7-7-90

Spud Date _____ Date Reached TD _____ Completion Date _____

Amount of Surface Pipe Set and Cemented at 614.39 Feet:

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set _____ Feet

If Alternate II completion, cement circulated from 614 2959

feet depth to Surface w/ 535 600 sq. mt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 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 drillers time log shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-1 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

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.

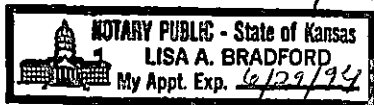
Signature Gary Unruh

Title Field Foreman Date 8-28-90

Subscribed and sworn to before me this 23rd day of August, 19 90.

Notary Public Lisa A Bradford

Date Commission Expires 6/29/94



K.C.C. OFFICE USE ONLY

F Letter of Confidentiality Attached

C Wireline Log Received

C Drillers Timelog Received

Distribution

KCC SWD/Rep NGPA

KGS Plug Other (Specify)

SIDE TWO

Operator Name Kansas Natural Gas, Inc. Lease Name Spratt Well # 13CG-13

Sec. 32 Twp. 24 Rge. 33 East West
 County Finney County

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 <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Attach Additional Sheets.) 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 (Submit Copy.)	<p style="text-align: center;">Formation Description</p> <p style="text-align: center;"><input checked="" type="checkbox"/> Log <input type="checkbox"/> Sample</p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Name</th> <th style="text-align: left;">Top</th> <th style="text-align: left;">Bottom</th> </tr> </thead> <tbody> <tr> <td>T/Permian</td> <td>885'</td> <td></td> </tr> <tr> <td>T/Blaine</td> <td>1325'</td> <td></td> </tr> <tr> <td>T/Cedar Hills</td> <td>1445'</td> <td></td> </tr> <tr> <td>B/Cedar Hills</td> <td></td> <td>1590'</td> </tr> <tr> <td>B/Stone Corral</td> <td></td> <td>1960'</td> </tr> <tr> <td>T/Chase Group</td> <td>2520'</td> <td></td> </tr> <tr> <td>T/Ft. Riley</td> <td>2725'</td> <td></td> </tr> <tr> <td>T/Council Grove</td> <td>2830'</td> <td></td> </tr> </tbody> </table>	Name	Top	Bottom	T/Permian	885'		T/Blaine	1325'		T/Cedar Hills	1445'		B/Cedar Hills		1590'	B/Stone Corral		1960'	T/Chase Group	2520'		T/Ft. Riley	2725'		T/Council Grove	2830'	
Name	Top	Bottom																										
T/Permian	885'																											
T/Blaine	1325'																											
T/Cedar Hills	1445'																											
B/Cedar Hills		1590'																										
B/Stone Corral		1960'																										
T/Chase Group	2520'																											
T/Ft. Riley	2725'																											
T/Council Grove	2830'																											

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
Surface	12 1/2"	8 5/8"	24#	614	Class C	335	6%D20 2%ST
Production	7 7/8"	5 1/2"	14#	2942	35/65PozC	600	6%D20 1/4#D29 2%D20 10%D44

Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
2	2850'-2860'	3,000 Gals. 15% MSR-100	
2	2866'-2876'	Acid- 1/A200 2%KCL	
2	2883'-2893'		
		Frac- 115,500 gal WF-130	
		Water Frac 180,000lbs.	
		10/20 Brady Sand	

TUBING RECORD Size 2 3/8" Set At 2899' Packer At _____
 Liner Run Yes No

Date of First Production Pending on pipeline connection Producing Method Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas <u>1165.0</u> Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		<u>Open Flow</u>	<u>31 1/2 BPD</u>		<u>0.726</u>

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION

Open Hole Perforation Dually Completed Commingled

Other (Specify) _____

Production Interval
2850-2860
~~2866-2876~~
~~2883-2893~~

CEMENTING SERVICE REPORT



TREATMENT NUMBER 83-12-2694 DATE 6/12/90
 STAGE DS DISTRICT 03-12

PRINTED IN U.S.A.

DOWELL SCHLUMBERGER INCORPORATED

WELL NAME AND NO. SPRATT-13CG-13
 LOCATION (LEGAL) SEC. 32-245-33W
 FIELD-POOL PANOMA COUNCIL GROVE
 COUNTY/PARISH FINNEY STATE KS APL. NO.

RIG NAME: CHEYENNE # 5
 WELL DATA: BOTTOM TOP
 BIT SIZE 12 1/4 CSG/Liner Size 8 7/8
 TOTAL DEPTH WEIGHT 24
 ROT CABLE FOOTAGE 629.39
 MUD TYPE GRADE
 BHST BHCT THREAD 8rd
 MUD DENSITY LESS FOOTAGE SHOE JOINT(S) 585.07 TOTAL
 MUD VISC. Disp. Capacity 37

NAME: KANSAS NATURAL
 AND
 ADDRESS
 ZIP CODE

SPECIAL INSTRUCTIONS EQUIPMENT & MATERIALS TO DO
 8 7/8 SURFACE CASING

Float	TYPE	BAFFERING	TYPE
	DEPTH	585.07	DEPTH
Shoe	TYPE	TEX. PATCON	TYPE
	DEPTH	629.39	DEPTH

IS CASING/TUBING SECURED? YES NO
 LIFT PRESSURE 260 PSI CASING WEIGHT ÷ SURFACE AREA (3.14 x R²)
 PRESSURE LIMIT PSI BUMP PLUG TO 500 OVER PSI
 ROTATE RPM RECIPROCATE FT No. of Centralizers

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

JOB SCHEDULED FOR TIME: 15:00 DATE: 6/12/90 ARRIVE ON LOCATION TIME: 2300 DATE: 6/12/90 LEFT LOCATION TIME: 03:30 DATE: 6/13/90

TIME	PRESSURE LINES		VOLUME PUMPED BBL		INJECT RATE	FLUID TYPE	FLUID DENSITY
	TBG-OR-D.P.	CASING	INCREMENT	CUM			
0001 to 2400						H2O	8.34
02:12	130	10			6.5	H2O	8.34
02:14	150	66	10		6.5	CMT	12.2
02:25	160	35	76		6.5	CMT	14.8
02:31	30		111				
02:33	60	37	111		5	H2O	8.34
02:37	140		148		2	H2O	8.34
02:43	240		148				
02:44			148				
02:45							

SERVICE LOG DETAIL
 PRE-JOB SAFETY MEETING PSI TEST LINES
 START H2O AHEAD
 START LEAD CMT
 START TAIL CMT
 SHUT DOWN & DROP PLUG
 START DISPLACEMENT
 LOWER RATE
 BUMP PLUG & BLEED OFF
 CHECK FLOAT
 END JOB

RECEIVED
 STATE CORPORATION COMMISSION
 AUG 24 1990

CONSERVATION DIVISION
 Wichita, Kansas

REMARKS

SYSTEM CODE	NO. OF SACKS	YIELD CU. FT/SK	COMPOSITION OF CEMENTING SYSTEMS		SLURRY MIXED		
			BLS	DENSITY	BLS	DENSITY	
1.	185	2.01	55% 100% + 6% D90 + 2% SI + 14 1/2% D99	66	12.2		
2.	150	1.32	CLASS C + 2% SI + 14 1/2% D99	35	14.8		
3.							
4.							
5.							
6.							

BREAKDOWN FLUID TYPE VOLUME DENSITY PRESSURE MAX. MIN:
 HESITATION SQ. RUNNING SQ. CIRCULATION LOST YES NO Cement Circulated To Surf. YES NO 8 Bbls
 BREAKDOWN PSI FINAL PSI DISPLACEMENT VOL. 37 Bbls TYPE OF WELL OIL STORAGE BRINE WATER
 GAS INJECTION WILDCAT
 Washed Thru Perfs YES NO TO FT. MEASURED DISPLACEMENT WIRELINE
 PERFORATIONS TO TO CUSTOMER REPRESENTATIVE DS SUPERVISOR
 To: To: *Marylin* *Mark Edwards*

CEMENTING SERVICE REPORT



TREATMENT NUMBER 05-17-2703	DATE 6-15-70
STAGE DS	DISTRICT Mississippi

DOWELL SCHLUMBERGER INCORPORATED

DS 906 PRINTED IN U.S.A.

WELL NAME AND NO. 13CG-13	LOCATION (LEGAL) Sec. 22-24-37E	RIG NAME (Cheyenne) Drilling # 5
FIELD-POOL 13CG-13	FORMATION Coral Gable	WELL DATA BIT SIZE 7 7/8 TOIAD DEPTH 74 ROT CABLE MUD TYPE GRADE S S MUD DENSITY LESS FOOTAGE SINCE JOINT(S) 5 MUD VISC. Disp Capacity 72
COUNTY/PARISH Leflore	STATE MS	API NO
NAME Thomas Martinez	AND	TOTAL
ADDRESS	ZIP CODE	NOTE: Include Footage From Ground Level To Head in Disp. Capacity

SPECIAL INSTRUCTIONS Cementing	<table border="1"> <tr> <th>Final</th> <th>TYPE</th> <th>DEPTH</th> <th>Stage Tool</th> <th>TYPE</th> <th>DEPTH</th> </tr> <tr> <td></td> <td></td> <td>2959</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>2974</td> <td></td> <td></td> <td></td> </tr> </table>	Final	TYPE	DEPTH	Stage Tool	TYPE	DEPTH			2959						2974			
Final	TYPE	DEPTH	Stage Tool	TYPE	DEPTH														
		2959																	
		2974																	

IS CASING/TUBING SECURED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	LIFT PRESSURE 1753 PSI	CASING WEIGHT - SURFACE AREA (3.14 x R ²)	<input type="checkbox"/> Double <input checked="" type="checkbox"/> Single <input type="checkbox"/> Swage <input type="checkbox"/> Knockoff	<input type="checkbox"/> TBG <input type="checkbox"/> D P <input type="checkbox"/> NEW <input type="checkbox"/> USED	SQUEEZE JOB TOOL TYPE DEPTH TAIL PIPE SIZE DEPTH TUBING VOLUME CASING VOL BELOW TOOL TOTAL ANNUAL VOLUME
ROTATE RPM	RECIPROCATATE	FT	No of Centralizers	DATE 15-70	DATE 15-70

TIME	PRESSURE		VOLUME PUMPED BBL		JOB SCHEDULED FOR			ARRIVE ON LOCATION		LEFT LOCATION	
	TBG OR DP	CASING	INCREMENT	CUM	INJECT RATE	FLUID TYPE	FLUID DENSITY	TIME	DATE	TIME	DATE
0001 to 2400											
0613		1140									
0621		0	10		60						
0623		130	4.5		3.5	11.2	12.3				
0655		1100	4.5		4.0	11.2	14.3				
0705											
0709		30	12		0	11.1					
0711		150	6.0		0	11.2					
0717		760		4.5	6	11.2					
0720		850		4.5	2	11.2					
0724		1500			2	11.2					
0727											

REMARKS

SYSTEM CODE	NO. OF SACKS	YIELD CU FT/SK	COMPOSITION OF CEMENTING SYSTEMS				SLURRY MIXED	
			1	2	3	4	BBL	DENSITY
1	400	2.01	100%				14.5	12.5
2								
3	200	1.28	100%				45.0	14.0
4								
5								
6								

BREAKDOWN FLUID TYPE	VOLUME	DENSITY	PRESSURE	MAX	MIN
<input type="checkbox"/> HESITATION SO <input type="checkbox"/> RUNNING SO	CIRCULATION LOST	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Cement Circulated To Surf	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	27 Bbls
BREAKDOWN PSI FINAL	PSI	DISPLACEMENT VOL	TYPE OF WELL	<input type="checkbox"/> OIL <input checked="" type="checkbox"/> GAS	<input type="checkbox"/> STORAGE <input type="checkbox"/> INJECTION
Washed Thru Perls	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	FT	MEASURED DISPLACEMENT	<input type="checkbox"/> WIRELINE	<input type="checkbox"/> BRINE WATER <input type="checkbox"/> WILDCAT
PERFORATIONS	CUSTOMER REPRESENTATIVE	DS SUPERVISOR			
TO TO	TO TO	James Esquivel			

DRILLERS LOG

KANSAS NATURAL GAS, INC.
SPRATT 13CG-13
SECTION 32-T24S-R33W
FINNEY COUNTY, KANSAS

COMMENCED: 06-12-89
COMPLETED: 06-15-89

SURFACE CASING: 614' OF 8 5/8"
OMTD W/185 SX "C", 2% C.C.,
1/4#/SX D-29, TAILED IN W/150 SX
"C", 2% C.C., 1/4#/SX D-29

FORMATION	DEPTH
SURFACE HOLE	0- 630
SAND & CLAY	630-1870
RED BED	1870-1970
RED BED & SHALE	1970-2274
SHALE & CLAY	2274-2925
SHALE	2925-2962 RTD

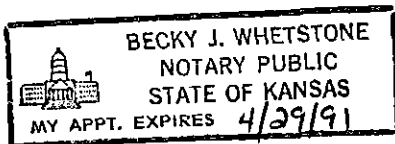
I DO HEREBY CERTIFY THAT THE FOREGOING STATEMENTS ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHEYENNE DRILLING, INC.

A.J. JACQUES

STATE OF KANSAS :ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 15TH DAY OF JUNE, 1990.



Becky J. Whetstone

BECKY J. WHETSTONE, NOTARY PUBLIC

RECEIVED
STATE OF KANSAS
JUN 19 1990
CONSERVATION DIVISION
Wichita Kansas

6-19-90