

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

API NO. 15- 095-209320001

County Kingman

Appx- C - SE4 - Sec. 30 Twp. 27S Rge. 10 X W

1235 Feet from S (circle one) Line of Section

1398 Feet from E (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:
NE, (SE) NW or SW (circle one)

Lease Name Prentice Well # 30-24

Field Name Cunningham

Producing Formation Viola/Simpson

Elevation: Ground 1668 KB 1676

Total Depth 4120 PBDT 4107

Amount of Surface Pipe Set and Cemented at 1374 KB Feet

Multiple Stage Cementing Collar Used? X Yes No

If yes, show depth set 2090 KB Feet

If Alternate II completion, cement circulated from

feet depth to w/ sx cmt.

Drilling Fluid Management Plan REWORK 8/21 11-14-97
(Data must be collected from the Reserve Pit)

Chloride content 14,000 ppm Fluid volume 220 bbls

Dewatering method used N/A

Location of fluid disposal if hauled offsite:

Operator Name Geary Mud Disposal

Lease Name Gray License No. 2284168

 Quarter Sec. 15 Twp. 14N Rng. 7W

County Garfield, OK Docket No. 284168

Operator: License # 32119

Name: Northern Natural Gas

Address P.O. Box 178

City/State/Zip Cunningham, KS 67035

Purchaser: Storage Well

Operator Contact Person: Dan Dobbins

Phone (316) 257-5146

Contractor: Name: Pratt Well Service

License: 5893

Wellsite Geologist: None

Designate Type of Completion
 New Well Re-Entry X Workover

 Oil SWD SOW Temp. Abd.
 Gas ENHR SIGW
 Dry X Other (Core, WSW, Expl., Cathodic, etc)
 Gas Storage Inj/Wdl

If Workover:

Operator: Northern Natural Gas

Well Name: Prentice 30-24

Comp. Date 3-3-80 Old Total Depth 4061

X Deepening X Re-perf. Conv. to Inj/SWD
 Plug Back PBDT
XXX Commingled Docket No.
 Dual Completion Docket No.
 Other (SWD or Inj?) Docket No.

7-18-97 7-24-97 8-1-97
Date of START Date Reached TD Completion Date of
OF WORKOVER WORKOVER

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 207B, 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.

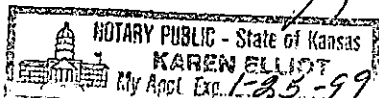
Signature Dan Dobbins

Title Sr. Reservoir Analyst Date 11/5/97

Subscribed and sworn to before me this 5th day of November 19 97.

Notary Public Karen Elliot

Date Commission Expires January 25, 1999



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)

Form ACO-1 (7-91)

11-12-97

SIDE TWO

ORIGINAL

Operator Name Northern Natural Gas Lease Name Prentice Well # 30-24
 Sec. 30 Twp. 27S Rge. 10 East West
 County Kingman

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 Yes No
 (Attach Additional Sheets.)
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No
 Electric Log Run Yes No
 (Submit Copy.)
 List All E.Logs Run: Cement Bond Log
 Dual Induction Laterolog
 Compensated Density Dual Spaced Neutron Log

Log Formation (Top), Depth and Datum Sample
 Name Top Datum
 Viola 3955 -2279
 Simpson 4065 -2389

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	20"	13.375"	48#/ft	74	Common	80	
Surface	12.25"	8.625"	24#/ft	1363	Reg Poz	600	2% C.C.
Production	7.875"	5.5"	15.5#/ft	4058	Howco Lite Common	525 100	

ADDITIONAL CEMENTING/SQUEEZE RECORD				
Purpose: Set Liner	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	4032-4118	Standard	25	5# G11., 18% NaCl, .25 Flocele, 5% Calseal

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	
4	4066 - 4086	1000 Gals. 15% HCL	3972
4	3972 - 3982		
4	3988 - 3994		
4	3956 - 3996		

TUBING RECORD		Size	Set At	Packer At	Liner Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
		2.375	4031	4029			
Date of First, Resumed Production, SWD or Inj. Storage Well - Inj/Wd1			Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input checked="" type="checkbox"/> Other (Explain)				
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)
 METHOD OF COMPLETION Open Hole Perf. Dually Comp. Commingled 3956-3996
 Other (Specify) _____ 4066-4086
 Production Interval



Natural gas. Electricity.
Endless possibilities.™

November 7, 1997

Kansas Corporation Commission
130 South Market #2078
Wichita, KS 67202-3802

RE: Form AC0-1

Please find enclosed the completion reports for the Glenn 19-11, McClellan 29-21, Prentice 30-24, and Goyen 8-41 in our storage field. The cementing tickets and electrical logs are also included. There will not be any geologist well report filed as we did not have a geologist on site for the well deepening.

If you need more information please call me at 316-257-5146 or 316-298-5111.

Thanks,

A handwritten signature in cursive script that reads "Dan Dobbins".

Dan Dobbins
Sr. Reservoir Analyst

RECEIVED
STATE CORPORATION COMMISSION

NOV 12 1997

CONSERVATION DIVISION
Wichita, Kansas

ORIGINAL

INVOICE



HALLIBURTON ENERGY SERVICES, INC.

REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046 Corporate FIN 73-0271280

INVOICE NO.	DATE
307882	07/28/1997

WELL/LEASE NO./PROJECT	WELL/PROJECT LOCATION	STATE	OWNER		
PRENTICE 30-24	KINGMAN	KS	SAME		
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE	TICKET DATE		
PRATT	PRATT WELL SERVICE	SHOWN BELOW	07/28/1997		
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
634280	ART MERRICK		L 4420 7 008	COMPANY TRUCK	27850

ORIGINAL

DIRECT CORRESPONDENCE TO:

NORTHERN NATURAL GAS CO
BOX 178
CUNNINGHAM, KS 67035

1102 E. 8TH
HAYS KS 67601
913-625-3431

REFERENCE NO.	DESCRIPTION	QUANTITY	UM	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
JOB PURPOSE - CEMENT PRODUCTION LINER					
000-117	MILEAGE CEMENTING ROUND TRIP	36	MI	3.20	115.20
		1	UNT		
000-119	MILEAGE FOR CREW	36	MI	1.95	70.20
		1	UNT		
009-407	CEMENTING LINERS/SHORT CASING	4119	FT	2,019.00	2,019.00
009-019		1	UNT		
504-308	CEMENT - STANDARD	50	SK	10.83	541.50
508-291	GILSONITE BULK	125	LB	.50	62.50
509-968	SALT	300	LB	.17	51.00
507-775	HALAD-322	14	LB	7.70	107.80
507-970	D-AIR 1, POWDER	6	LB	3.65	21.90
509-406	ANHYDROUS CALCIUM CHLORIDE	1	SK	46.90	46.90
507-210	FLOCELE	6	LB	1.90	11.40
508-127	CAL SEAL 60	1	SK	28.00	28.00
500-207	BULK SERVICE CHARGE	61	CFT	1.55	94.55
500-306	MILEAGE CMTG MAT DEL OR RETURN	47.43	TMI	1.18	110.00MN
JOB PURPOSE SUBTOTAL					3,279.95
INVOICE SUBTOTAL					3,279.95
DISCOUNT - (BID)					655.99-
INVOICE BID AMOUNT					2,623.96
*- KANSAS STATE SALES TAX					125.84
*- PRATT COUNTY SALES TAX					25.68
Simpson Project 543828 LF					
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$2,775.48

RECEIVED
STATE CORPORATION COMMISSION

NOV 12 1997

COMMISSION DIVISION
Wichita, Kansas

TERMS: If Customer does not have an approved open account with Halliburton, all sums due are payable in cash at the time of performance of services or delivery of equipment, products or materials. If customer has an approved open account, invoices are payable on the twentieth day after date of invoice. Customer agrees to pay interest on any unpaid balance from the date payable until paid at the highest lawful contract rate applicable, but never to exceed 18% per annum. In the event Halliburton employs an attorney for collection of any account, Customer agrees to pay attorney fees of 20% of the unpaid account, plus all collection and court costs.



HALLIBURTON

HALLIBURTON ENERGY SERVICES

1906-Q

20

CUSTOMER COPY TICKET

No.

307882 - 3

PAGE 1 2

SERVICE LOCATIONS 1. Prath KS		WELL/PROJECT NO. 20-24	LEASE Prentice	COUNTY/PARISH Kingman	STATE KS	CITY/OFFSHORE LOCATION	DATE 12/28/97	OWNER Same
TICKET TYPE <input checked="" type="checkbox"/> SERVICE <input type="checkbox"/> SALES		NITROGEN JOB? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	CONTRACTOR Prath Well Serv.	RIG NAME/NO.	SHIPPED VIA Howie	DELIVERED TO Loc	ORDER NO.	
WELL TYPE 05		WELL CATEGORY 02	JOB PURPOSE 055	WELL PERMIT NO.	WELL LOCATION Prath			
REFERRAL LOCATION		INVOICE INSTRUCTIONS						

JOB PURPOSE	PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING	DESCRIPTION	QTY	UM	QTY	UM	UNIT PRICE	AMOUNT
	000.117		1	MILEAGE	53387	RD TP	36	mi	3.20	115.20
	000.119		1	Crew mileage	40042	RDTP	36	mi	1.95	70.20
	009.407	009.019	1	Pump Charge	1	Trk	4119	ft	6 hrs	2429 2019
ORIGINAL										
RECEIVED NOV 2 1997 INFORMATION DIVISION										
BANK # B-338370										

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY provisions.

DATE SIGNED: 12-28-97 TIME SIGNED: 1130

do do not require IPC (Instrument Protection). Not offered

TYPE LOCK	SUB SURFACE SAFETY VALVE WAS: <input type="checkbox"/> PULLED & RETURN <input type="checkbox"/> PULLED <input type="checkbox"/> RUN		PAGE TOTAL 3279
BEAN SIZE	TYPE OF EQUALIZING SUB.	CASING PRESSURE	FROM CONTINUATION PAGE(S)
DEPTH	TUBING SIZE	TUBING PRESSURE	WELL DEPTH
SPACERS	TREE CONNECTION	TYPE VALVE	SUB-TOTAL APPLICABLE TAXES WILL BE ADDED ON INVOICE

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.

CUSTOMER OR CUSTOMER'S AGENT (PLEASE PRINT)	CUSTOMER OR CUSTOMER'S AGENT (SIGNATURE)	HALLIBURTON OPERATOR/ENGINEER	EMP #	HALLIBURTON APPROVAL
	X	David L Scott	B9475	DL Scott



TICKET CONTINUATION CUSTOMER COPY

TICKET No. 309882

HALLIBURTON ENERGY SERVICES

CUSTOMER Northern Natural Gas Co. Practice 30-24 WELL DATE 7-26-77 PAGE 2 OF 2

FORM 1911 R-10

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		U/M		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
504-308	516.02261	1			Standard Cement	50				10.83	541.50
508-391	516.02337	1			White Portland Cement 5# per	125				50	62.50
509-968	516.02157	1			Salt P.H. 12%	230				17	51.00
501-975	516.02144	1			Haled-222 P.H. 2%	14				7.70	107.80
502-970	516.02164	1			D. Air 1 P.H. 25%	6				3.65	21.90
509-406	516.02212	1			Calcium Chloride P.H. 19%	1				46.90	46.90
507-310	516.02071	1			Fluoride P.H. 25% per	6				1.90	11.40
508-127	516.02131	1			Calcium P.H. 2%	1				28.00	28.00
					Loaded on TRK. 52530-F						

ORIGINAL

RECEIVED STATE COMMISSION NOV 2 1977 C. DIVISION Wichita, Kansas

500-207	1			SERVICE CHARGE						61	1.55	94.55
500-326	1			MILEAGE CHARGE	TOTAL WEIGHT 5270	LOADED MILES 18	TON MILES	Minimum Charge				110.00

No: B 338370

CONTINUATION TOTAL 1075.55



Natural gas. Electricity.
Endless possibilities.™

September 26, 1997

Jim Hemmen
Kansas Corporation Commission
130 South Market #2078
Wichita, KS 67202-3802

RECEIVED
KANSAS CORP COMM
1997 SEP 29 1:52

RE: Schematic for Liners at Cunningham

Please find enclosed a schematic for a typical completion in the Cunningham Storage field on our deepening project. If you need more information please call me at 316-257-5146 or 316-298-5111.

Thanks,

A handwritten signature in cursive script that reads "Dan Dobbins".

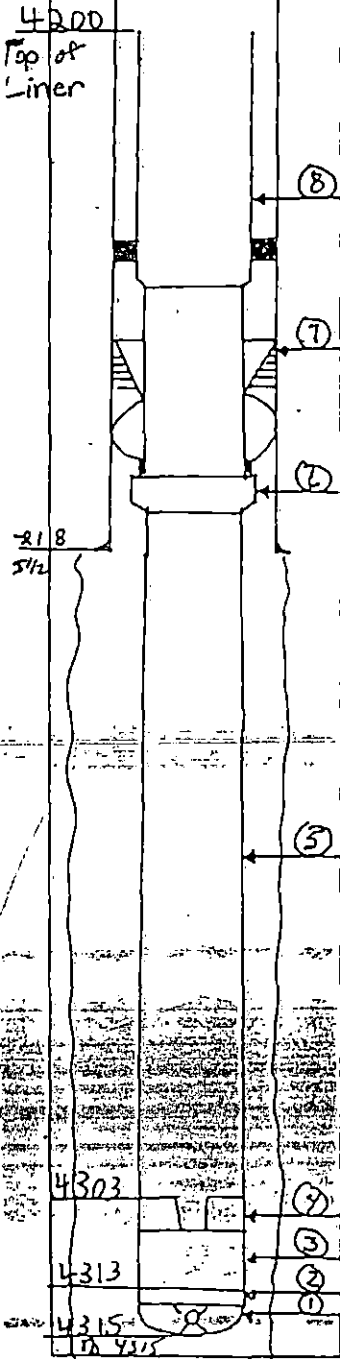
Dan Dobbins
Sr. Reservoir Analyst

15-095-20932-0001

COMPANY NORTHERN NATURAL Gas Co.	SIZE	NG	LINER	UPPER TUBING	LOWER TUBING
WELL NAME & NUMBER STEFFAN 24-32	5 1/2		3 1/2		
FIELD Cunningham Gas Storage	WEIGHT	15.50	9.3"		
COUNTY PRATT	GRADE		J-55		
STATE KANSAS	THREAD		(CS Hydr.)		
DATE 07-12-97	<input type="checkbox"/> NEW <input checked="" type="checkbox"/> W.O.	DEPTH 4318	4		

ORIGINAL

ITEM	DESCRIPTION	MAX. O.D. INCHES	MIN. I.D. INCHES	LENGTH FEET	DEPTH FEET
1	3 1/2 Halliburton Float Shoe	4.465	3.375	1.16	4315
2	X-over sub	4.250	3"	.37	4313.84
3	3 1/2 9.3# Tubing Sub	3.870	2.925	9.90	4313.47
4	Baker 3 1/2 CS Hydril Landing Collar	3 15/16	2 15/16	.74	4303.57
5	(3) Jts 3 1/2 9.3# CS Hydril Tubing	3.870	2.925	89.54	4252.83
6	X-over sub w/ 3 1/2 CS Hydril Pin	4 1/2	2 15/16	.78	4213.28
7	Baker 3 1/2 by 5 1/2 Hyflo III Hanger	4 11/16	3.50	3.77	4212.51
8	Baker Hyflo III Liner Top Packer w/ 4" 6' setting sleeve	4 11/16 PKR10	4" 3.50	8.72	4208.74
					4200.02



1997 SEP 29 PD 1:52
 KANSAS OIL & GAS
 RECEIVED
 JOHN DRUMM

PREPARED FOR: Mrs. Ann Mergler

PREPARED BY: John Drumm
 OFFICE: OKLA. City, OK
 PHONE: (405) 672-5552



6023 NAVIGATION BOULEVARD HOUSTON TEXAS 77011-1131
 P.O. BOX 3048 HOUSTON TEXAS 77253-3048
 Telephone (713) 923-9351 Telex 76-2803