

ORIGINAL

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- 189-21,443 100-00  
County Stevens  
50' E \_\_\_\_\_ East  
S/2 S/2 S/2 Sec. 4 Twp. 34S Rge. 36 X West

Operator: License # 04782  
Name: Ensign Operating Co.  
Address 621 17th Street  
Suite 1800  
City/State/Zip Denver, Colorado 80293

330' Ft. North from Southeast Corner of Section  
2590' Ft. West from Southeast Corner of Section  
(NOTE: Locate well in section plat below.)

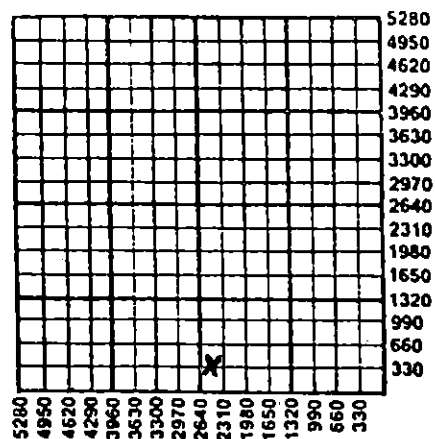
Purchaser: Mobil into Northern Natural Gas Co.  
(WOPL)  
Operator Contact Person: Jerry Simmons  
Phone ( 303 ) 293-9999

Lease Name Walkemeyer Well # 1-4  
Field Name \_\_\_\_\_  
Producing Formation Morrow

Contractor: Name: H-30 Drilling Inc.  
License: 5107  
Wellsite Geologist: Edwin H. Grieves

Elevation: Ground 3058' KB 3070'  
Total Depth 6750' PBTD 6599'

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



If OWD: old well info as follows:  
Operator: \_\_\_\_\_  
Well Name: \_\_\_\_\_  
Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at 1770' Feet:  
Multiple Stage Cementing Collar Used? \_\_\_\_\_ Yes X No  
If yes, show depth set \_\_\_\_\_ Feet

Drilling Method:  
 Mud Rotary \_\_\_\_\_ Air Rotary \_\_\_\_\_ Cable  
9/9/90 9/30/90 10/24/90  
Spud Date Date Reached TD Completion Date

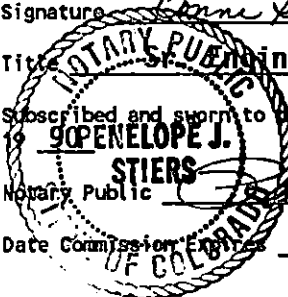
If Alternate II completion, cement circulated from \_\_\_\_\_  
feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx -mf.

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-4 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 Conni Smith  
Title Engineering Technician Date 10/24/90  
Subscribed and sworn to before me this 24 day of October  
90 ENNELOPE J.  
Notary Public Ennelope J. Stiers  
Date Commission Expires October 21, 1991

K.C.C. OFFICE USE ONLY  
F \_\_\_\_\_ Letter of Confidentiality Attached  
C  Wireline Log Received  
C \_\_\_\_\_ Drillers Timelog Received  
MISSION   
\_\_\_\_\_ KCC \_\_\_\_\_ SWD/Rep \_\_\_\_\_ NGPA  
\_\_\_\_\_ KGS \_\_\_\_\_ Plug \_\_\_\_\_ Other  
(Specify)



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WICHITA, KANSAS

SIDE TWO

Operator Name Ensign Operating Co. Lease Name Walkemeyer Well # 1-4  
 Sec. 4 Twp. 34S Rge. 36  East County Stevens  
 West

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.)

See Attached

Formation Description

Log  Sample

Name Top Bottom

See Attached

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
Conductor	30"	20"		40'	4 Yds grout		
Surface	12-1/4"	8-5/8"	24#	1770'	Lite Wt. Class "H"	560	2% cc
Production	7-7/8"	4-1/2"	10.5#	6644'	Class "H"	535'	2% KCl .25% CBL

PERFORATION RECORD

Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
1 JSPF	6174, 86, 87, 6202, 10-13, 20, 23-25, 28, 32, 36'	Acidized 750 gals 7-1/2% Fe-HCl 2% LoSurf, 300 1% ClaSta XP 2% HAI-60. Displ with 24 bbls 2% KCl wtr.	6174-6236
		Frac: 81,800 gals 70% Quality CO2 foam & 137,800# 20/40 mesh sd.	6174-6236'

TUBING RECORD

Size	Set At	Packer At	Liner Run
2-3/8"	6167'		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Date of First Production 10/24/90

Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	0	1727	0		N/A

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 Morrow

# ORIGINAL

## General Well Information

Operator: Ensign Operating Company

Well Name: No. 1-4 Walkemeyer, API No. 15-189-21443

Location: 330' FSL & 2590' FEL (SW SW SE) Section 4-T34S-R36W

County: Stevens

State: Kansas

Field: Walkemeyer SW Ext.

Elevation: 3058' GL, 3066' DF, 3068' KB

Date Spudded: September 9, 1990, 4:30 p.m.

Date Drilling Completed: September 23, 1990 6:59 p.m.

Status: Ran Production Casing to Complete Lower Morrow

### Drill Stem Tests:

DST #1 Lower Morrow Sdst 6185 to 6230  
IQ Strong blow to bottom of bucket immediately  
ISI Bled off blow - no return  
FO Strong blow (to bottom of bucket immediately)  
decreased to weak (7" into bucket)  
Rec: 20' Mud  
BHT 139° F  
IHP 3068#  
IFP 41 to 41# in 15 min.  
ISIP 41# in 60 min.  
FFP 41 to 41# in 60 min.  
FSIP 1649# in 120 min.  
FHP 2919#

### Sampler Recovery

Total 2000 ml.  
100 ml. mud w/few specks light green oil  
1900 ml. gas  
Pressure 1450#

Trilobite Testing Company, Rod Steinbrink, Testor

DST #2 Lower Morrow Sdst 6187 to 6287  
IO Strong Blow bottom of bucket immediately  
ISI Bled off pressure blow-back of bottom of bucket 7 min.  
FO Strong blow bottom of bucket immediately blding.  
FSI Bled off pressure blow back weak surface blow  
increasing to bottom of bucket GTS 1 hr 10 min into FSI  
Rec: 80' gassy pit mud 18% gas 82% mud  
6207' gas in pipe

DEC 4 1990  
G. J. JOHNSON  
MANAGER

ORIGINAL

BHT ? ° F  
IHP 3018#  
IFP 72 to 72# in 15 min.  
ISIP 509# in 60 min.  
FFP 83 to 93# in 60 min.  
FSIP 1361# in 120 min.  
FHP 2949#

Sampler Recovery  
Total 2000 ml  
1200 ml gas  
800 ml mud  
Pressure 1250#

Trilobite Testing Company, Roger F. Sells, Testor

Logging Program: Atlas Wireline Service, Dirk Becker, Engineer

- 1) Dual Induction Focused Log w/Gamma Ray & SP TD to surface casing (6744 to 1770) w/Gamma Ray continued to ground level
- 2) Compensated Z-Densilog Compensated Neutron (6744 to 2500)
- 3) Minilog Gamma Ray (6744 to 2500)

Mud Properties: See List #1, Page 4

Mud Logging: Holmes Logging Service - unmanned unit  
1770' to Total Depth

Lost Circulation: Approx. 80 Bbls. at 4014'

Contractor: H-30 Rig #1  
John Schlenz, Tool Pusher

Deviation Surveys:

9-11-90	1770'	1 1/4°
9-13-90	3300'	Miss Run
9-13-90	3332'	3/4°
9-14-90	3910'	1 1/4°
9-15-90	4470'	1°
9-16-90	4900'	1°
9-17-90	5290'	1 1/4°
9-18-90	6070'	1 1/4°
9-19-90	6230'	2°
9-23-90	6750'	2 1/4°

Bit Record:

Bit A 12 1/4" Smith S-1 in at 40' out at 1770'  
Bit #1 7 7/8" Hughs ATJ-11C in at 1760' out at 5290'  
Bit #2 7 7/8" Hughs J-22S in at 5290 out at TD

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DEC 26 1950

DR. J. A. ...  
Vice ...

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Formation Tops

Ensign  
#1-4 Walkemeyer  
SW SW SE Sec. 4-34S-36W  
KB 3068

	Sample	Log
Stone Corral	1705	1706 + 1362
Base Stone Corral	1769	1770 + 1298
Wellington	2269	2275 + 793
Herington	2655	2652 + 416
Krider	2716	2712 + 356
Winfield	2775	2769 + 299
Towanda	2835	2825 + 243
Ft. Riley	2897	2890 + 178
Wreford	2986	2979 + 89
Council Grove	3086	3081 - 13
Wabaunsee	3421	3414 - 346
Heebner	4251	4245 - 1177
Toronto	4278	4274 - 1206
Lansing/KC	4315	4309 - 1241
Marmaton	5119	5113 - 2045
Cherokee	5341	5345 - 2277
Atoka	5410	5405 - 2337
Morrow Fm	5845	5836 - 2768
Lower Mor. Sd. Zn	6183	6165 - 3097
Chester	6261	6259 - 3191
St. Genevieve	6459	6458 - 3390
St. Louis	6524	6520 - 3452
TD	6750	6744

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