

RELEASED

OCT 30 1990

ORIGINAL CONFIDENTIAL

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- 175-21,114-0000

County Seward

C E/2 NW/4 Sec. 4 Twp. 32S Rge. 31 X East West

Operator: License # 04782

Name: Ensign Operating Company

Address 621 Seventeenth Street, Suite

City/State/Zip Denver, Co 80293

Purchaser:

Operator Contact Person: Jerry Simmons

Phone (303) 293-9999

Contractor: Name: H-30 Drilling, Inc.

License: 5107

Wellsite Geologist:

Designate Type of Completion

X New Well Re-Entry Workover

X Oil SWD Temp. Abd

Gas Inj Delayed Comp

Dry Other (Core, Water Supp, etc.)

If OMO: old well info as follows:

Operator:

Well Name:

Comp: Date Old Total Depth

Drilling Methods:

X Mud Rotary Air Rotary Cable

11-18-89 11-29-89 12-2-89

Spud Date Date Reached TD Completion Date

3960 Ft. North from Southeast Corner of Section

3300 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

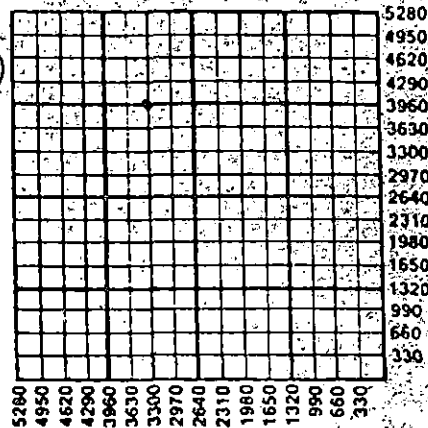
1800 Lease Name Quillin Well # 1-4

Field Name Wildcat

Producing Formation Marmaton

Elevation: Ground 2800' KB 2811'

Total Depth 6,000' PBD 5588'



Amount of Surface Pipe Set and Cemented at 1650 Feet

Multiple Stage Cementing Collar Used? Yes X No

If yes, show depth set Feet

If Alternate II completion, cement circulated from

feet depth to w/ sx cmt.

RESERVED
STATE CORPORATION COMMISSION
Wichita, Kansas

APR 02 1990

5-2-90

ACT I
10-15-90

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: *J. Simmons*

Title: Production Operations Manager Date: 3/29/90

Subscribed and sworn to before me this 29 day of March

Notary Public: *Joseph Stiers*

Date Commission Expires: October 21, 1991

621 17th St. Suite 1800
Denver, Colorado 80293

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)

CONFIDENTIAL

SIDE TWO

Operator Name Ensign Operating Company Lease Name Quillin Well # 1-4

Sec. 4 Twp. 32 Rge. 31 East County Seward 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 (Attach Additional Sheets.) Yes No

Samples Sent to Geological Survey Yes No

Cores Taken Yes No

Electric Log Run (Submit Copy.) Yes No

RELEASED
OCT 30 1990
FROM CONFIDENTIAL

Formation Description *See attached*

Log Sample

Name	Top	Bottom
Sand	0	540'
Sand, Red Bed and Anhydrite	540'	1,302'
Red Bed	1,302'	1,757'
Lime and Shale	1,757'	2,210'
Shale	2,210'	2,610'
Lime and Shale	2,610'	2,973'
Shale	2,973'	3,185'
Lime and Shale	3,185'	6,000'
Rotary Total Depth		6,000'

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	12-1/4"	8-5/8"	24#	1650'	Lite Wt.	600	2% cc
Production	7-7/8"	4-1/2"	10.5#	5633'	Class C	100	2% cc
					Class H	325	3% KCl 7% Halad .25% CDL

Shots Per Foot	PERFORATION RECORD Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
4 JSPF	5000-5006'	900 gal 15% Fe HCl	5000-5006'
		4000 gal WOO-202	5000-5006'
		5500 gal 28% Fe	5000-5006'

TUBING RECORD Size 2-3/8" Set At 5048' Packer At --- Liner Run Yes No

Date of First Production 12/8/89 Producing Method Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	12	TSTM	24		39

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

METHOD OF COMPLETION: Open Hole Perforation Dually Completed Other (Specify)

Production Interval 2851'

11 18 1990
0031 5108 321
00003 0000

QUILLIN #1-4
Section 4-T32S-R31W
Seward County, Kansas

<u>Formation Tops</u>	<u>Depth</u>	<u>Datum</u>
Herrington	2641'	+ 169'
Krider	2704'	+ 106'
Topeka	3539'	- 729'
Heebner	4265'	-1455'
Toronto	4281'	-1471'
Lansing	4374'	-1564'
Kansas City	4610'	-1800'
Cherokee	5188'	-2378'
Morrow	5490'	-2680'
Morrow Sand	5550'	-2740'
Chester	5567'	-2751'
St. Genevieve	5758'	-2948'
St. Louis	5803'	-2993'

RELEASED

CONFIDENTIAL

OCT 3 0 1990

FROM CONFIDENTIAL

ORIGINAL

RECEIVED
STATE CORPORATION COMMISSION
OCT 02 1990
CONSERVATION DIVISION
Wichita, Kansas

ORIGINAL
CONFIDENTIAL

Ensign Operating Co.
#1-4 Quillin
Page 4

RELEASED

OCT 30 1990

SHOW DESCRIPTION: (Continued)

FROM CONFIDENTIAL

<u>Formation</u>	<u>Interval</u>	<u>Description</u>
Atoka	5476'-5479'	Dolomite. Brown, dense-microsugrosic, brown oil stain, tight-poor vuggy porosity, dull-bright gold fluorescence, moderate pale streaming cut, strong ring? 25 unit hot wire increase. FAIR-GOOD SHOW.
Atoka	5480'-5488'	Dolomite. Dark brown-dark gray, crystalline, tight-fair vuggy porosity, bright yellow fluorescence, instant pale streaming cut, strong ring. 10 unit hot wire increase. FAIR SHOW.

DRILL STEM TESTS:

DST #1 5465'-5505' Basal Atoka
30-60-60-120

Initial blow: opened with strong blow, bottom of bucket in 4 minutes
Final blow: opened bottom of bucket. Gas to surface 40 minutes at 22.9 MCFD
Recovery: 10' Drilling Mud, No Show 5100 ppm Cl⁻
FP 31-31, 31-31
SIP 1786-1786
HP 2620-2514
BHT 125°
Pit Sample: 5000 ppm Cl⁻

DST #2 5494'-5576' Morrow Sand
packers failed immediately. Misrun

DST #3 5545'-5576' Morrow Sand
packers failed immediately. Misrun

GAS DETECTION:

Due to oversight by geologist, recorder clock stopped from 5478'-5849'.
Otherwise equipment functioned very efficiently throughout the well.

RECEIVED
STATE CORPORATION COMMISSION

OCT 15 1990

HALLIBURTON SERVICES

A Halliburton Company

ORIGINAL

P.O. BOX 951046
DALLAS, TX 75395-1046

INVOICE NO: 876713
DATE: 12/01/1989

WELL/PLANT NAME IN 1-4		WELL/PLANT LOCATION SEWARD		STATE KS	WELL/PLANT OWNER SAME
SERVICE LOCATION LIBERAL		CONTRACTOR H-30 DRLG	JOB PURPOSE CEMENT PRODUCTION CASING		TICKET DATE 12/01/1989
AGCT. NO. 273943	CUSTOMER AGENT REED WACKER	VENDOR NO. RELEASED	CUSTOMER P.O. NUMBER	SHIPPED VIA COMPANY TRUCK	FILE NO. 87050

OCT 30 1990

ENSIGN OPERATING COMPANY
P O BOX 937
GARDEN CITY, KS 67846

DIRECT CORRESPONDENCE TO:
SUITE 600
FROM CONFIDENTIAL COLORADO DERBY BUILDING
WICHITA, KS 67202-0000

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
000-117	PRICING AREA - MID CONTINENT MILEAGE	31	MI	2.20	68.20
001-016	CEMENTING CASING	5634	FT	1,260.00	1,260.00
018-317	SUPER FLUSH	10	SK	72.00	720.00
314-163	CLAYFIX II	2	GAL	17.00	34.00
50	FLUIDMASTER CENTRALIZER 4 1/2"	8	EA	42.00	336.00
807.93504					
66	FASGRIP LIMIT CLAMP 4 1/2"	1	EA	9.60	9.60

INVOICE CODING

CODED BY kes APPROVED BY aw
 BATCH # CH9 VOUCHER # CHP-257
 INV. TYPE JB INV. TOTAL 8879.06
 ACTIVITY DATE _____ DUE DATE _____

CHECK REMARKS: _____

ACCOUNT	A/E	PROPERTY	TYPE	COST CENTER	AMOUNT	DESCRIPTION
957-070	890053				8879.06	
						RECEIVED STATE CORPORATION COMMISSION
						OCT 15 1989

INVOICE TOTAL - PLEASE PAY THIS AMOUNT == 8879.06

TERMS INVOICES PAYABLE NET BY THE 20TH OF THE FOLLOWING MONTH AFTER DATE OF INVOICE. UPON CUSTOMER'S DEFAULT IN PAYMENT OF CUSTOMER'S ACCOUNT BY THE LAST DAY OF THE MONTH FOLLOWING THE MONTH IN WHICH THE INVOICE IS DATED, CUSTOMER AGREES TO PAY INTEREST THEREON AFTER DEFAULT AT THE HIGHEST LAWFUL CONTRACT RATE APPLICABLE BUT NEVER TO EXCEED 18% PER ANNUM. IN THE EVENT IT BECOMES NECESSARY TO EMPLOY AN ATTORNEY TO ENFORCE COLLECTION OF SAID ACCOUNT CUSTOMER AGREES TO PAY ALL COLLECTION COSTS AND