

ORIGINAL

RELEASED

SIDE ONE

CONFIDENTIAL 9 1992

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

Operator: License # 04782
Name: Ensign Operating Co.
Address 621 17th St., #1800

City/State/Zip Denver, CO 80293
Purchaser: Northern Natural
Operator Contact Person: J. C. Simmons
Phone (303) 293-9999

Contractor: Name: Gabbert-Jones Rig #8
License: 5842
Wellsite Geologist: Duane E. Moredock

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

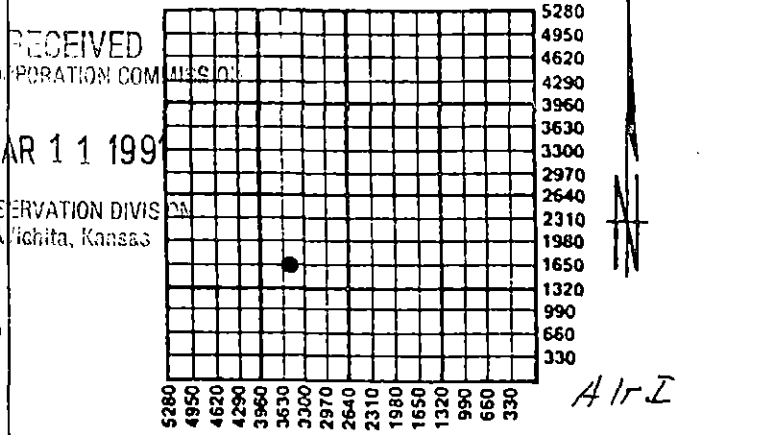
If **OLD**: old well info as follows:
Operator: _____
Well Name: _____
Comp. Date _____ Old Total Depth _____

Drilling Method:
 Mud Rotary Air Rotary Cable
11/19/90 12/3/90 2/8/91-SI WOPL
Spud Date Date Reached TD Completion Date

API NO. 15- 175-21,158-00-02 FROM CONFIDENTIAL
County Seward

SW NE SW Sec. 3 Twp. 34S Rge. 33 East West
1650 Ft. North from Southeast Corner of Section
3530 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

Lease Name Wood Well # 1-3
Field Name Wildcat
Producing Formation L. Chester & U. Chester
Elevation: Ground 2880' KB 2891'
Total Depth 6650' PBDT 6433'

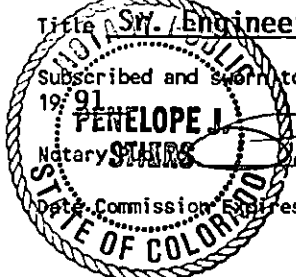


Amount of Surface Pipe Set and Cemented at 1654 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set _____ Feet
If Alternate II completion, cement circulated from _____
feet depth to _____ w/ _____ sx cmr.

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 Connie Smith
Title Sr. Engineering Technician Date 3/6/91



Subscribed and sworn to before me this 6 day of March, 1991
Penelope J. Stare
Notary Public
My 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 SMD/Rep NGPA
 KGS Plug Other (Specify)

CONFIDENTIAL

SIDE TWO

Operator Name Ensign Operating Co. Lease Name Wood Well # 1-3

Sec. 3 Twp. 34S Rge. 33 East West County Seward

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.)

Formation Description
 Log Sample
Name Top Bottom

See attached

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
Surface	12-1/4	8-5/8	24	1654	HLC	575	1/4#/Sk Floccle* 2% CaCl2
Production	7-7/8	4-1/2	10.5	6435	Class "C" CI "H"	200 400	3% KCl, .7% **
*-2% CaCl2		**-Halad		322 & .25% CB			

Shots Per Foot	PERFORATION RECORD Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
1 JSPF	6295-96; 6298-6300; 6310; 6320; 6322 6333; 6340; 6342; 6344; 6346; 6348; 6353-54; 6356 (L. Chester)	850 Gals 7 1/2% Fe-HCl, .2% Lo Surf 300, .1% Cla Sta XP & .1% HAI60.	6295-6356 L. Chester
4 JSPF	6288-6324 & 6329-6356 (L. Chester)	52,000 Gals 70% Qual CO-2 Foam & 130,000 Gals 20/40 Mesh Sand	6295-6356
2 JSPF	6116-23 & 6128-32 (U. Chester)	825 Gals 7 1/2% Fe-HCl, .1% Lo Surf 300, .1% Cla Sta XP & .1% HAI60 45000 Gals 70% Qual CO-2 Foam &	6116-6132 U. Chester

TUBING RECORD Size 2-3/8" Set At 6280' Packer At 6280' Liner Run Yes No 112,500 # 20/40 Mesh Sd.

Date of First Production 1/31/91 SI WOPL Producing Method Flowing Pumping Gas Lift Other (Explain)

Estimated Production Per 24 Hours	Oil	Gas	Water	Gas-Oil Ratio	Gravity
	<u>70 - b. Chester</u>	<u>7 - b. Chester</u>	<u>10 - L. Chester</u>	<u>100:1</u>	<u>38</u>
	<u>3 - b. Chester</u>	<u>250 - b. Chester</u>	<u>5 - U. Chester</u>	<u>83000:1</u>	<u>38</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: U. Chester
L. Chester

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

RECEIVED
 RELEASED STATE CORPORATION COMMISSION
 CONFIDENTIAL
 APR 09 1992 MAR 11 1991

ORIGINAL

Drill-Stem Test Data

Well Name & No.	WOOD #1-3	Test No.	FROM CONFIDENTIAL	Date	11/29/90 sas
Company	ENSIGN OPERATING COMPANY		Zone Tested	CHESTER	
Address	621 17th ST #1800 DENVER CO 80293		Elevation	2892 KB	
Co. Rep./Geo.	D MOREDOCK/E LoCRICCHIO	Cont.	GABBERT - JONES #8	Est. Ft. of Pay	0
Location: Sec.	3	Twp.	34S	Rge.	33W
				Co.	SEWARD
				State	KANSAS

Interval Tested	6070-6186	Drill Pipe Size	4.5" XH
Anchor Length	116	Top Choke - 1"	Bottom Choke - 3/4"
Top Packer Depth	6065	Hole Size - 7 7/8"	Rubber Size - 6 3/4"
Bottom Packer Depth	6070	Wt. Pipe I.D. - 2.7 Ft. Run	0
Total Depth	6186	Drill Collar - 2.25 Ft. Run	625
Mud Wt.	9.1	lb/gal.	Viscosity 50 Filtrate 6.8
Tool Open @	6:25 PM	Initial Blow	STRONG BLOW TO BOTTOM IN 1 MINUTE-OPENED
	2" W/ 1/2" ORIFICE-GTS @30 MINS-ISI: BLEW OFF BLOW-NO RETURN		
Final Blow	STRONG BLOW TO BOTTOM IMMEDIATELY-GAUGED 27.0 MCF/DAY		
	AT FINAL		

Recovery - Total Feet	120	Flush Tool?	NO
Rec.	Feet of		
Rec.	Feet of		
Rec.	120	Feet of	GAS CUT DRILLING MUD
Rec.	Feet of		
Rec.	Feet of		

BHT	131	°F Gravity	°API @	0	°F Corrected Gravity	0	°API
RW	@	°F Chlorides	ppm Recovery	Chlorides	2000	ppm System	
(A) Initial Hydrostatic Mud		3030.7	PSI	Ak1 Recorder No.	13309	Range	4700
(B) First Initial Flow Pressure		172.6	PSI	@ (depth)	6073	w/Clock No.	25828
(C) First Final Flow Pressure		145.5	PSI	AK1 Recorder No.	13339	Range	4025
(D) Initial Shut-in Pressure		1875.7	PSI	@ (depth)	6181	w/Clock No.	30418
(E) Second Initial Flow Pressure		147.6	PSI	AK1 Recorder No.	0	Range	0
(F) Second Final Flow Pressure		134.1	PSI	@ (depth)	0	w/Clock No.	0
(G) Final Shut-in Pressure		1882.7	PSI	Initial Opening	30		
(H) Final Hydrostatic Mud		2884.1	PSI	Initial Shut-in	60		
				Final Flow	60		
				Final Shut-in	120		

MR ROD STEINBRINK

1200

Our Representative _____

TOTAL PRICE \$ _____

APR 09 1992

CONFIDENTIAL

ORIGINAL

FORMATION TOPS CONFIDENTIAL

	G.L. 2880' K.B. 2892'	Comparison Well No. 1-A Bozarth SE NW 11 T34S R33W G.L. 2850' Surface +2850'	Drill Time & Samples	Bore Hole Geophysical Logs
Tertiary			Surface +2880'	Surface +2880'
Permian				
Guadalupian				
Taloga		NL	550' +2342'	532' +2360'
Leonardian				
Nippewalla Gr.				
Blaine		NL	952' +1940'	956' +1936'
Cedar Hill		NL	1123' +1769'	1122' +1770'
Salt Plain		NL	1223' +1669'	1232' +1660'
Sumner Gr.				
Stone Corral		NL	1611' +1281'	1616' +1276'
Ninnescah		1652' +1198'	1663' +1229'	1694' +1198'
Wellington		2112' +738'	2186' +706'	2186' +706'
Wolfcampian				
Chase Gr.				
Herington		2636' +214'	2665' +227'	2664' +228'
Krider		2688' +162'	2737' +155'	2732' +160'
Winfield		2749' +101'	2794' +98'	2791' +101'
Towanda		2804' +46'	2851' +41'	2848' +44'
Fort Riley		2864' +14'	2909' -17'	2904' -12'
Wreford		2969' -119'	3011' -119'	3008' -116'
Council Grove Gr.		3079' -229'	3123' -231'	3120' -228'
Admire Gr.		3472' -622'	3476' -584'	3468' -576'
Pennsylvanian				
Virgilian				
Wabaunsee Gr.		3510' -660'	3525' -633'	3516' -624'
Douglas Gr.				
Heebner		4340' -1490'	4373' -1481'	4372' -1480'
Toronto		4358' -1508'	4388' -1496'	4390' -1498'
Missourian				
Lansing Gr.		4482' -1632'	4513' -1621'	4513' -1621'
Kansas City Gr.		4752' -1902'	4815' -1923'	4818' -1926'
Desmoinesian				
Marmaton Gr.		5222' -2372'	5242' -2350'	5244' -2352'
Cherokee Gr.		5414' -2564'	5437' -2545'	5440' -2548'
Atokian		5610' -2760'	5636' -2744'	5644' -2752'
Morrowian		5762' -2912'	5808' -2916'	5814' -2922'
Terra Rossa		6378' -3486'	6358' -3466'	6363' -3471'
Mississippian				
Meramecian				
Ste. Genevieve		6648' -3498'	6378' -3486'	6368' -3476'
Total Depth		6608' -3758'	6650' -3758'	6602' -3710'

RECEIVED
STATE CORPORATION COMMISSION

MAR 11 1991

ORIGINAL



REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046

ORIGINAL HALLIBURTON SERVICES

CONFIDENTIAL

APR 09 1992

A Halliburton Company

INVOICE NO.	DATE
043216	11/19/1990

WELL LEASE NO./PLANT NAME	WELL/PLANT LOCATION	WELL/PLANT OWNER			
WOOD 1-3	SEWARD KS	SAME			
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE	TICKET DATE		
LIBERAL	GABBERT & JONES	CEMENT SURFACE CASING	11/19/1990		
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
273943	B. J. MCGRIFF	RECEIVED		COMPANY TRUCK	05907

STATE CORPORATION COMMISSION

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

MAR 11 1991

CONSERVATION DIVISION
 Wichita, Kansas

DIRECT CORRESPONDENCE TO:
 SUITE 1300
 LIBERTY TOWER
 100 BROADWAY AVENUE
 OKLAHOMA CITY, OK 73102-0000

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
000-117	MILEAGE	8	MI	2.35	18.80
000-118	MILEAGE SURCHARGE-CEMENT-LAND	8	MI	.40	3.20
001-016	CEMENTING CASING	1669	FT	945.00	945.00
030-018	CEMENTING PLUG 5W, PLASTIC TOP	8 5/8	IN	100.00	100.00
16A	CASING SHOE - 8 5/8" 8RD THD.	1	EA	161.00	161.00
830.2171		1	EA	161.00	161.00
24A	INSERT FLOAT VALVE - 8 5/8" 8RD	1	EA	171.00	171.00
815.19502		1	EA	171.00	171.00
27	FILL-UP UNIT 7"- 8 5/8"	1	EA	29.00	29.00
815.19414		1	EA	29.00	29.00
40	CENTRALIZER 8-5/8" MODEL S-4	3	EA	53.00	159.00
807.93059		3	EA	53.00	159.00
66	FASGRIP LIMIT CLAMP 8 5/8"	1	EA	13.75	13.75
807.64056		1	EA	13.75	13.75
504-050	PREMIUM PLUS CEMENT	200	SK	7.08	1,416.00
504-120	HALL. LIGHT -PREMIUM PLUS	575	SK	6.29	3,616.75
507-210	FLOCELE	141	LB	1.30	183.30
509-406	ANHYDROUS CALCIUM CHLORIDE	13	SK	25.75	334.75
500-307	MILEAGE SURCHARGE-CEMENT MAT.	980.08	TMI	.10	98.01
500-207	BULK SERVICE CHARGE	810	CFT	1.10	891.00
500-306	MILEAGE CMTG MAT DEL OR RETURN	980.08	TMI	.75	735.06
INVOICE SUBTOTAL					8,875.62
DISCOUNT-(BID)					1,775.12-
INVOICE BID AMOUNT					7,100.50

***** CONTINUED ON NEXT PAGE *****

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 COLLECT SUCH ACCOUNT. CUSTOMER AGREES TO PAY ALL COLLECTION COSTS AND

ORIGINAL



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

CONFIDENTIAL

INVOICE

ORIGINAL

HALLIBURTON SERVICES APR 09 1992

A Halliburton Company

FROM CONFIDENTIAL

INVOICE NO.	DATE
043216	11/19/1990

WELL LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER	
WOOD 1-3		SEWARD		KS	SAME	
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE		TICKET DATE
LIBERAL		GABBERT & JONES		CEMENT SURFACE CASING		11/19/1990
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.	
273943	B. J. MCGRIFF			COMPANY TRUCK	05907	

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

DIRECT CORRESPONDENCE TO:
SUITE 1300
LIBERTY TOWER
100 BROADWAY AVENUE
OKLAHOMA CITY, OK 73102-0000

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
	*-KANSAS STATE SALES TAX				265.55
	*-SEWARD COUNTY SALES TAX				62.49
	<p>RECEIVED STATE CORPORATION COMMISSION MAR 11 1991 CONSERVATION DIVISION Wichita, Kansas</p> <p>LOE _____ W/O _____ CAP <u>6010</u> _____ APPROVAL _____</p> <p>Wood 1-3 RWacker</p>				
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$7,428.54

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 ATTORNEY FEES IN THE AMOUNT OF 20% OF THE AMOUNT OF THE UNPAID ACCOUNT.

ORIGINAL

INVOICE

ORIGINAL

HALLIBURTON SERVICES



A Halliburton Company

RELEASED CONFIDENTIAL APR 09 1992

REMIT TO: P.O. BOX 951046 DALLAS, TX 75395-1046

INVOICE NO. 043380 DATE 12/03/1990

FROM CONFIDENTIAL

WELL LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER	
WOOD 1-3		SEWARD		KS	SAME	
SERVICE LOCATION		CONTRACTOR		JOB PURPOSE		TICKET DATE
LIBERAL		G & J		CEMENT PRODUCTION CASING		12/03/1990
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.	
273943	B.J. MCGRUFF			COMPANY TRUCK	06814	

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

RECEIVED
STATE CORPORATION COMMISSION
MAR 11 1991
CONSERVATION DIVISION
Wichita, Kansas

DIRECT CORRESPONDENCE TO:
SUITE 1300
LIBERTY TOWER
100 BROADWAY AVENUE
OKLAHOMA CITY, OK 73102-0000

PRICE REF. NO.	DESCRIPTION	QUANTITY	U/M	UNIT PRICE	AMOUNT
PRICING AREA - MID CONTINENT					
000-117	MILEAGE	9	MI	2.35	21.15
		1	UNT		
000-118	MILEAGE SURCHARGE-CEMENT-LAND	9	MI	.40	3.60
		1	UNT		
001-016	CEMENTING CASING	6437	FT	1,475.00	1,475.00
		1	UNT		
018-317	SUPER FLUSH	18	SK	74.00	1,332.00
218-738	CLAYFIX II	2	GAL	20.00	40.00
50	FLUIDMASTER CENTRALIZER 4 1/2"	9	EA	42.00	378.00
807.93504					
66	FASGRIP LIMIT CLAMP 4 1/2"	1	EA	9.60	9.60
807.64021					
80	FORM PKR SHOE FLAP VLV 4 1/2"	1	EA	2,300.00	2,300.00
855.128					
82	FILL-UP UNIT	1	EA	45.00	45.00
855.02545					
504-043	PREMIUM CEMENT	400	SK	6.85	2,740.00
507-775	HALAD-322	263	LB	5.75	1,512.25
508-002	POTASSIUM CHLORIDE	500	LB	.25	125.00
500-959	SUPER CBL	94	LB	21.50	2,021.00
500-307	MILEAGE SURCHARGE-CEMENT MAT.	576.855	TMI	.10	57.69
500-207	BULK SERVICE CHARGE	400	CFT	1.10	440.00
500-306	MILEAGE CMTG MAT DEL OR RETURN	576.855	TMI	.75	432.64
INVOICE SUBTOTAL					12,932.93
LOE	DISCOUNT-(BID)				2,586.57-
W/O	INVOICE BID AMOUNT				10,346.36
CAP	8010	*-KANSAS STATE SALES TAX			340.12
APPROVAL		*-SEWARD COUNTY SALES TAX			80.03
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$10,766.51

Wood 1-3
Rucker

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