

ORIGINAL

SIDE ONE

RELEASED
CONFIDENTIAL FEB 06 1992

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

API NO. 15- 175-21.151-0000
County Seward FROM CONFIDENTIAL

Operator: License # 04782

NE NW Sec. 13 Twp. 33S Rge. 23 East X West

Name: Ensign Operating Co.

4620' Ft. North from Southeast Corner of Section

Address 621 17th Street

3400' Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

Suite 1800

Lease Name Kane Well # 1-13

City/State/Zip Denver, Colorado 80293

Field Name Unknown

Purchaser: Panhandle

Producing Formation Chase

Operator Contact Person: J. C. Simmons

Elevation: Ground 2759' KB 2770'

Phone (303) 293-9999

Total Depth 6348' PBTD 2724'

Contractor: Name: Cheyenne Drilling, #4

License: _____

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 OWMO: old well info as follows:

Operator: _____

Well Name: _____

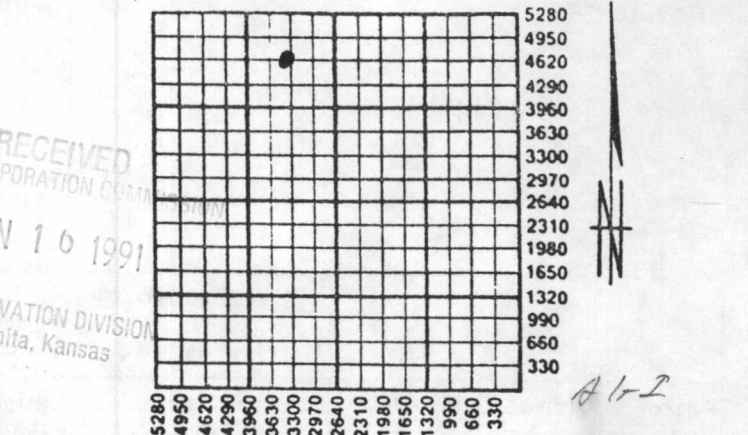
Comp. Date _____ Old Total Depth _____

Drilling Method:

Mud Rotary Air Rotary Cable

10/8/90 10/19/90 11/7/90

Spud Date Date Reached TD Completion Date



Amount of Surface Pipe Set and Cemented at 1532' 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 Tech. Date 1/9/91

Subscribed and sworn to before me this 9 day of January

PELOUSE J. STIERS
Notary Public

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

Distribution

KCC SWD/Rep NGPA
 KGS Plug Other
 (Specify)

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SIDE TWO

Operator Name Ensign Operating Co. Lease Name Kane Well # 1-13

Sec. 13 Twp. 33S Rge. 32 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.)

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
Surface	12-1/4"	8-5/8"	24	1532'	Howco Lite Premium +	535	2% CaCl ₂ + 1/4#/sx Flocele
Production	7-7/8"	4-1/2"	10.5	2782'	C1 "C" Lite	200	Same as above
					C1 "H"	175	1/4#/sx Flocele + .5% Halad 322 + 1/4#/sx Flocele

PERFORATION RECORD		Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	
Shots Per Foot	Specify Footage of Each Interval Perforated		Depth
1	2564, 68, 71, 75, 77, 79, 96-98, 2600, 02, 04, 10-12	750 Gals 15% MCA	2529-2614
		22,300 Gals 50% Quality 28% Fe-HCl	2529-2614

TUBING RECORD	Size <u>2-3/8</u>	Set At <u>2620</u>	Packer At	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First Production <u>11/7/90</u> SI-WOPL Text	Producing Method <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)
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Estimated Production Per 24 Hours	Oil <u>0</u> Bbls.	Gas <u>522</u> Mcf	Water <u>0</u> Bbls.	Gas-Oil Ratio	Gravity
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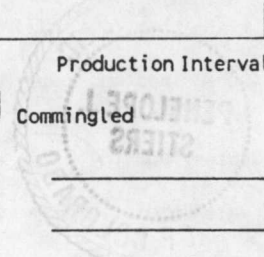
Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION

Open Hole Perforation Dually Completed Commingled

Other (Specify) _____

Production Interval _____



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TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

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OCT 28 1990

well file

Drill-Stem Test Data

ENSIGN OIL & GAS INC.
10/10/90

Well Name & No. <u>KANE #1-13</u>	Test No. <u>1</u>	Date <u>10/10/90</u>
Company <u>ENSIGN OPERATING COMPANY</u>	Zone Tested <u>KRIDER</u>	
Address <u>621 17th #1800 DENVER CO 80293</u>	Elevation <u>2770 KB</u>	
Co. Rep./Geo. <u>B McGRIFFITH/D MOREDOCK</u>	Cont. <u>CHEYENNE #4</u>	Est. Ft. of Pay <u>14</u>
Location: Sec. <u>13</u>	Twp. <u>33S</u>	Rge. <u>32W</u>
Co. <u>SEWARD</u>	State <u>KANSAS</u>	

Interval Tested <u>2529-2614</u>	Drill Pipe Size <u>4.5" XH</u>
Anchor Length <u>85</u>	Top Choke - 1" _____ Bottom Choke - 1/4" _____
Top Packer Depth <u>2524</u>	Hole Size - 7 7/8" _____ Rubber Size - 6 3/4" _____
Bottom Packer Depth <u>2529</u>	Wt. Pipe I.D. - 2.7 Ft. Run <u>0</u>
Total Depth <u>2614</u>	Drill Collar - 2.25 Ft. Run <u>572</u>
Mud Wt. <u>9.0</u> lb/gal.	Viscosity <u>51</u> Filtrate <u>6.0</u>

Tool Open @ 10:58 PM (CDT) Initial Blow FAIR TO STRONG BLOW TO BOTTOM IN 5 1/2
MINUTES-ISI: BLED OFF BLOW-SURFACE RETURN BUILT TO 5" BLOW

Final Blow STRONG RETURN TO BOTTOM IN 2 1/2 MINUTES-FSI: BLED OFF
BLOW- CAME BACK STRONG WITH GAS TO SURFACE

Recovery - Total Feet <u>180</u>	Flush Tool? <u>NO</u>
Rec. <u>80</u> Feet of <u>GAS CUT MUD-GRINDOUT TOPS-20%GAS/5%WTR/75%MUD</u>	
Rec. _____ Feet of <u>MIDDLE-25%GAS/5%WTR/65%MUD</u>	
Rec. _____ Feet of <u>BOTTOM-15%GAS/15%WTR/70%MUD</u>	
Rec. <u>0</u> Feet of _____	
Rec. <u>0</u> Feet of _____	

BHT <u>90</u> °F	Gravity _____	°API @ <u>0</u>	°F Corrected Gravity <u>0</u>	°API _____
RW <u>.33</u> @ <u>59</u> °F	Chlorides <u>25000</u> ppm	Recovery _____	Chlorides <u>25000</u> ppm	System _____
(A) Initial Hydrostatic Mud <u>1288.3</u>	PSI	Ak1 Recorder No. <u>13309</u>	Range _____	<u>4700</u>
(B) First Initial Flow Pressure <u>75.4</u>	PSI @ (depth) <u>2534</u>	w/Clock No. <u>25828</u>		
(C) First Final Flow Pressure <u>96.2</u>	PSI	Ak1 Recorder No. <u>13339</u>	Range _____	<u>4025</u>
(D) Initial Shut-In Pressure <u>461.2</u>	PSI @ (depth) <u>2609</u>	w/Clock No. <u>30418</u>		
(E) Second Initial Flow Pressure <u>115.9</u>	PSI	Ak1 Recorder No. <u>0</u>	Range _____	<u>0</u>
(F) Second Final Flow Pressure _____	PSI @ (depth) <u>0</u>	w/Clock No. <u>0</u>		
(G) Final Shut-In Pressure <u>460.1</u>	PSI	Initial Opening <u>30</u>		
(H) Final Hydrostatic Mud <u>1244.3</u>	PSI	Initial Shut-In <u>60</u>		
		Final Flow <u>60</u>		
		Final Shut-In <u>120</u>		

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JAN 10 1991

CONSERVATION DIVISION
Wichita, Kansas

MR ROD STEINBRINK

Our Representative _____

TOTAL PRICE \$ _____

FEB 06 1992

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FORMATION TOPS NO. 1-13 Kane

	G.L. 2759' K.B. 2770'	Comparison Well No. 1-11 Liberal K.B. 2799'	Drill Time & Samples	Bore Hole Geophysical Logs
Tertiary			Surface +2759'	Surface +2759'
Permian		NL	512' +2258'	520' +2250'
Guadalupian				
Day Creek		NL	NP	NP
Whitehorse		NL	NP	NP
Leonardian				
Nippewalla Gr.				
Blaine		NL	NP	NP
Cedar Hill		NL	1042' +1728'	1042' +1728'
Salt Plain		NL	1160' +1610'	1160' +1610'
Sumner Gr.				
Stone Corral		NL	1510' +1260'	1538' +1232'
Ninnescah	1656' +1143'		1566' +1316'	1594' +1176'
Wellington	2102' +697'		2118' +652'	2114' +656'
Wolfcampian				
Chase Gr.				
Herington	2616' +183'		2500' +270'	2562' +208'
Krider	2686' +113'		2555' +215'	2626' +144'
Winfield	2748' +51'		2630' +140'	2688' +82'
Towanda	2808' -9'		2694' +76'	2748' +22'
Fort Riley	2868' -69'		2751' +13'	2808' -38'
Wreford	2982' -183'		2871' -101'	2922' -152'
Council Grove Gr.	3086' -286'		2981' -211'	3029' -259'
Admire Gr.	3528' -729'			
Pennsylvanian				
Virgilian				
Wabaunsee Gr.	3660' -861'			
Douglas Gr.				
Heebner	4308' -1509'		4256' -1486'	4254' -1484'
Toronto	4326' -1527'		4271' -1501'	4271' -1501'
Missourian				
Lansing Gr.	4472' -1673'		4408' -1638'	4387' -1617'
Kansas City Gr.	4770' -1971'		4692' -1922'	4690' -1920'
Desmoinesian				
Marmaton Gr.	5132' -2333'		5069' -2299'	5062' -2292'
Cherokee Gr.	5312' -2513'		5265' -2495'	5260' -2490'
Atokian	5490' -2691'		5437' -2667'	5434' -2664'
Morrowian	5648' -2849'		5600' -2830'	5593' -2823'
Lower Sandstone	5750' -2951'		5693' -2923'	5694' -2924'
Chester*	5774' -2975'		5708' -2938'	5707' -2937'
Mississippian				
Meramecian				
Ste. Genevieve	6132' -3333'		5955' -3185'	5959' -3189'
Total Depth	6340' -3541'		6348' -3598'	6349' -3579'

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JAN 10 1991
CONSERVATION DIVISION
Wichita, Kansas

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HALLIBURTON SERVICES

RELEASED
P.O. BOX 951046
DALLAS, TX 75395-1046
FEB 06 1992

INVOICE

A Halliburton Company

NOV 16 1990

FROM CONFIDENTIAL

INVOICE NO. 042931 DATE 10/20/1990

WELL LEASE NO./PLANT NAME		WELL/PLANT LOCATION		STATE	WELL/PLANT OWNER
KANE 1-13		SEWARD		KS	SAME
ENSIGN OIL & GAS INC.					
SERVICE LOCATION	CONTRACTOR	JOB PURPOSE		TICKET DATE	
LIBERAL	CHEYENNE DRLG.	CEMENT PRODUCTION CASING		10/20/1990	
ACCT. NO.	CUSTOMER AGENT	VENDOR NO.	CUSTOMER P.O. NUMBER	SHIPPED VIA	FILE NO.
273945	B.J. MCGRIFF			COMPANY TRUCK	04410

CONFIDENTIAL

DIRECT CORRESPONDENCE TO:

ENSIGN OIL & GAS INC.
621 17TH STREET, SUITE 1800
DENVER, CO 80293

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	16	MI	2.35	37.60
		1	UNT		
001-016	CEMENTING CASING	2787	FT	1,045.00	1,045.00
		1	UNT		
80	FORM PKR SHOE FLAP VLV 4 1/2"	1	EA	2,300.00	2,300.00
855.128					
40	CENTRALIZER 4-1/2" MODEL S-4	4	EA	41.00	164.00
807.93004					
82	FILL-UP UNIT	1	EA	45.00	45.00
855.02545					
66	FASGRIP LIMIT CLAMP 4 1/2"	1	EA	9.60	9.60
807.64021					
320	CEMENT BASKET 4 1/2"	2	EA	85.00	170.00
800.8881					
350	HALLIBURTON WELD-A	1	LB	11.00	11.00
890.10802					
018-315	MUD FLUSH	500	GAL	.45	225.00
504-043	PREMIUM CEMENT	175	SK	6.85	1,198.75
504-120	HALL. LIGHT -PREMIUM PLUS	200	SK	6.29	1,258.00
507-210	FLOCELE	94	LB	1.30	122.20
507-775	HALAD-322	100	LB	5.75	575.00
500-207	BULK SERVICE CHARGE	381	CFT	1.10	419.10
500-306	MILEAGE CMTG MAT DEL OR RETURN	701.76	TMI	.75	526.32
INVOICE SUBTOTAL					8,106.57
DISCOUNT-(BID)					1,621.31-
INVOICE BID AMOUNT					6,485.26
*-KANSAS STATE SALES TAX					231.17
*-SEWARD COUNTY SALES TAX					54.39
INVOICE TOTAL - PLEASE PAY THIS AMOUNT =====>					\$6,770.82

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JAN 19 1991

CONSERVATION DIVISION
Wichita, Kansas

Kane 1-13
R. Walker

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.

KCC

12 33 326

OCT 24 1990

DRILLERS LOG

ENSIGN OPERATING COMPANY
KANE #1-13
SECTION ~~1312~~ ¹³¹²-T33S-R32W
SEWARD COUNTY, KANSAS

COMMENCED: 10-08-90
COMPLETED: 10-20-90

SURFACE CASING: 1530' OF 8 5/8"
OMTD W/535 SX HALCOO LITE, 2% C.C.,
1/4#/SX FLO-CELE; TAILED IN W/150
SX PREM PLUS, 2% C.C., 1/4#/SX FLO-CELE

FORMATION

DEPTH

FORMATION	DEPTH
CONDUCTOR CASING	0- 45
SURFACE HOLE	45-1532
RED BED	1532-1790
RED BED, SALT & SHALE	1790-2290
SHALE	2290-2614
SHALE & LIME	2614-2860
LIME & SHALE	2860-3640
LIME	3640-3815
LIME & SHALE	3815-5210
LIME	5210-5463
LIME & SHALE	5463-5595
SHALE & LIME	5595-5750
LIME & SHALE	5750-6348

RTD

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

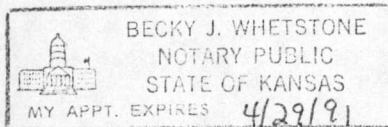
CHEYENNE DRILLING, INC.

A. J. Jacques

A. J. JACQUES

STATE OF KANSAS :ss:

SUBSCRIBED AND SWORN TO BEFORE ME THIS 22ND DAY OF OCTOBER, 1990.



Becky J. Whetstone

BECKY J. WHETSTONE, NOTARY PUBLIC

OCT 24 1990