

6-35-334

CONFIDENTIAL

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

API NO. 15- 175-21320-01-00

County Seward

COPY

SE - SE - NE Sec. 6 Twp. 35S Rge. 33 X ^E _W

Operator: License # 04782

1990 Feet from ~~N~~/N (circle one) Line of Section

Name: Ensign Operating Co. OCT 17

330 Feet from E/W (circle one) Line of Section

Address 621 17th St. CONFIDENTIAL

BHL: 2043 FNL, 3705 FWL, SESWNE Sec. 5-T35S-R33
Footages Calculated from Nearest Outside Section Corner:
~~SE~~ SE, ~~SW~~ or ~~NW~~ (circle one)

Suite 1800

City/State/Zip Denver, CO 80293

Lease Name Liberal Well # 1-5

Purchaser: NNG

Field Name Salley SW

Operator Contact Person: J. C. SIMMONS

Producing Formation Morrow

Phone (303) 293-9999

Elevation: Ground 2852 KB 2864

Contractor: Name: Gabbert Jones Inc.

Total Depth 8399 SIM TVD: 6656 PBD 7960

License: 5482

Amount of Surface Pipe Set and Cemented at 1599 Feet

Wellsite Geologist: John D. Pruitt and Duane Moredock

Multiple Stage Cementing Collar Used? Yes X No

Designate Type of Completion
X New Well Re-Entry Workover

If yes, show depth set _____ Feet

Oil X SWD S10W Temp. Abd.
Gas ENHR S1GW
Dry Other (Core, WSW, Expl., Cathodic, etc)

If Alternate II completion, cement circulated from _____

feet depth to _____ w/ _____ sx cmt.

If Workover/Re-Entry: old well info as follows:

Drilling Fluid Management Plan ALT 1 12-17-93
(Data must be collected from the Reserve Pit)

Operator: _____

Chloride content 2800 ppm Fluid volume 15,000 bbls

Well Name: _____

Dewatering method used Evaporation

Comp. Date _____ Old Total Depth _____

Location of fluid disposal if hauled offsite: _____

Deepening Re-perf. Conv. to Inj/SWD
Plug Back PBD
Commingle Docket No.
Dual Completion Docket No.
Other (SWD or Inj?) Docket No.

RELEASED

Operator Name _____

Lease Name NOV 2 1 1994 Lease No. _____

6/17/93 7/15/93 9/22/93
Spud Date Date Reached TD Completion Date

Quarter Sec. Twp. Rge. E/W

FROM CONFIDENTIAL

County _____ Docket No. _____

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, 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 Conni Smith

Title Sr. Engineering Technician Date 10/28/93

Subscribed and sworn to before me this 25th day of October 1993

Notary Public _____

Date Commission Expires 9-2-94

K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Geologist Report Received
NOV 03 1993
KCC S.W.D/Rep NGPA
KCS Plug DIVISION Other (Specify)
RECEIVED
STATE CORPORATION COMMISSION

Operator Name Ensign Operating Co. Lease Name Liberal Well # 1-5
 Sec. 6 Twp. 35S Rge. 33 East County Seward
 West

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem test 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.)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	See attached		
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	See attached		
List All E.Logs Run: See attached				

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
Surface	12 1/4	8 5/8	32	1599	HLC	650	2% cc, 1" sk Flocele
					CL "C"	150	3% cc
Production	7 7/8	4 1/2	11.6	8399	CL "H"	425	3%KCl, .25%CB 7%Halad 322

ADDITIONAL CEMENTING/SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input checked="" type="checkbox"/> Perforate		50/50 Poz Class "H"	100	2% gel, 10% salt, .5% Halad 322
<input type="checkbox"/> Protect Casing			250	10#7sk FA-2, 15% salt, .75% Halad 322
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

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)	De.
2	8346-47 Upper Morrow	Acidized: 3200 gals 7 1/2% Fe-HCl	8233-38, 825
2	7650-52 Upper Morrow	Frac: 25000 gal 70% CO2	161, 8276-88,
2	8233-38, 8254-61, 8276-88, 8301-09	Foam: 45570 20/40 mesh sd	8301-9
2	7842-56, 7860-66 Lower Morrow	Acidized: 1000gal 7 1/2% Fe-HCl	7842-66
		Acidized: 1000gal 7 1/2% Fe-HCl	7486-7518
4	7486-94, 7502-18 Upper Morrow	Frac: 31500gal 70 quality CO2	
		Foam: 43900 20/40 mesh sd	
		4865gal 50 quality CO2 foam flush	

TUBING RECORD	Size 2 3/8	Set At 7806	Packer At 7806	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj.	10/26/93	Producing Method	Sliding sleeve @ 7454 <input checked="" type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)	
Estimated Production Per 24 Hours	Oil 0	Bbls.	Gas 350	Mcf 2
			Water 2	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

Production Interval: Upper Morrow
Lower Morrow

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Ensign Operating Company
 #1-5 Liberal
 Page 5

API# 15-175-21320-0100

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WELL HISTORY: (continued)

OCT 1 7

NOV 2 1 1994

Date	Depth	Formation	Operation
7-15-93	8280'	Chester	Drilling. Made 430' in 24 hrs. VIS 43, MW 9.0, CI 2400, pH 10.0 WL 8.0, FC 2, LCM 2#, CA 80, O11 4% WOB 39-40, RPM 85, PP 1200, SPM 55
7-16-93	8416 LTD 8397 STD 8399 STD	Meramec	Logging. Made 119' in 24 hrs. VIS 46, MW 9.1, CI 2800, pH 9.5 WL 7.2, FC 2, LCM 2, CA 40, O11 3% WOB 39-40, RPM 85, PP 1200, SPM 55

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FORMATION TOPS:

Formation	Sample	TVD	Datum	Log	TVD	Datum	Log
Heebner	4982'	4382'	(-1518')	4960'	4352'	(-1488')	(-1479')
Toronto	5030'	4409'	(-1545')	4997'	4390'	(-1526')	(-1491')
Lansing	5261'	4550'	(-1686')	5228'	4530'	(-1666')	(-1627')
Marmaton	6507'	5251'	(-2387')	6484'	5235'	(-2371')	(-2327')
Cherokee	6991'	5560'	(-2696')	6976'	5543'	(-2679')	(-2653')
Atoka	7248'	5737'	(-2873')	7222'	5719'	(-2855')	(-2833')
Morrow	7503'	5921'	(-3057')	7472'	5900'	(-3036')	(-3012')
Upper Morrow Sand		not picked		7484'	5907'	(-3043')	absent
			from Duane E. Moredock				
Lower Morrow	7870'		(78')	7800'	6148'	(-3284')	(-3274')
Lower Morrow Sand		not picked		7842'	6182'	(-3318')	absent
Chester	7892'			7870'	6208'	(-3344')	(-3311')
Orange Marker	8152'			8132'	6426'	(-3562')	(-3538')
Basal Chester		not picked		8215'	6506'	(-3642')	(-3625')
Meramec	8366'			8340'	6606'	(-3942')	(-3832')

SHOW DESCRIPTION:

Formation	Interval	Description
Marmaton	6678'-6684'	Limestone, light brown-dark brown, mudstone-wackestone, micritic, dolomitic in part, shell fragments in part, tight, trace pinpoint gold fluorescence, pale streaming cut, very pale ring. POOR SHOW.

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GABBERT-JONES, INC.
WICHITA, KANSAS

DRILLERS' WELL LOG

WELL NAME: LIBERAL 1-5
SEC: 6-35S-33W
SEWARD COUNTY, KANSAS

KCC

COPY

OCT 17

CONFIDENTIAL

COMMENCED: 6-17-93
COMPLETED: 7-17-93
OPERATOR: ENSIGN OPERATING COMPANY

API# 15-175-21320-0100

DEPTH		FORMATION	REMARKS
From	To		
0	1557	sand-redbed	
57	1600	redbed	Ran 36jts of 32#8 5/8" csg
1600	1750	sand-redbed	set @ 1500'w/450sks
1750	2163	redbed	class C lite-1/4#Flo seal
2163	2366	shale-lime	2%CC-150sks common
2366	2598	lime-shale	3%CC
2598	2863	shale-lime	PD @ 5:45am 6-18-93
3043	3043	lime-shale	
3043	3225	shale-lime	
3225	3365	lime-shale	Ran 191jts of 11.6#4 1/2"
3365	3403	shale-lime	csg LD @ 8399'w/425
3403	3753	lime-shale	sks class H
3753	4730	shale-lime	PD @ 1:00pm 7-17-93
4730	5482	lime-shale	RR @ 6:00pm 7-17-93
5482	6369	shale-lime	
6369	6410	lime-shale	
6410	7547	shale-lime	
7547	7693	lime-shale	
7693	7750	shale-lime	
7750	7777	lime-shale	
7777	7999	shale	
7999	8127	lime-shale	
8127	8394	shale-lime	
8394	8399	lime-shale	

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NOV 21 1994

FROM CONFIDENTIAL

8399-TD

STATE OF KANSAS]
COUNTY OF SEDGWICK]

I, the undersigned, being duly sworn on oath, state that the above Drillers' Well Log is true and correct to the best of my knowledge and belief and according to the records of this office.

GABBERT-JONES, INC.

[Signature]
James S. Sutton, II - President

NOV 03 1994

CONSERVATION DIVISION
WICHITA, KANSAS

Subscribed & sworn to before me this 20th, day of July, 1993

[Signature]
Brenda L. Raple, Notary Public

My commission expires October 16, 1996.

