

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

ORIGINAL

API NO. 15- 033-20819-0000

Operator: License # 3882

Name: Samuel Gary Jr. & Associates, Inc

Address 1775 Sherman Street, Suite 1925

City/State/Zip Denver, CO 80203

Purchaser: Enron

Operator Contact Person: Hugh Harvey

Phone ( 303 ) 831-4673

Contractor: Name: Eagle Drilling

License: 5380

Wellsite Geologist: T. M. McCoy

Designate Type of Completion

New Well  Re-Entry  Workover

Oil  SWD  SLOW  Temp. Abd.

Gas  ENHR  SIGW

Dry  Other (Core, WSW, Expl., Cathodic, etc)

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

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Comp. Date \_\_\_\_\_ Old Total Depth \_\_\_\_\_

Deepening  Re-perf.  Conv. to Inj/SWD

Plug Back  PBDT

Commingled  Docket No. \_\_\_\_\_

Dual Completion  Docket No. \_\_\_\_\_

Other (SWD or Inj?)  Docket No. \_\_\_\_\_

04/09/91 04/25/91 05/08/91

Spud Date Date Reached TD Completion Date

County Comanche

NW SE NW Sec. 16 Twp. 34S Rge. 20  E  W

3380 Feet from  N (circle one) Line of Section

3480 Feet from  W (circle one) Line of Section

Footages Calculated from Nearest Outside Section Corner:  
NE, SE, NW or SW (circle one)

Lease Name Selzer Well # 16-6

Field Name First Snow

Producing Formation Arbuckle

Elevation: Ground 1761' KB 1774'

Total Depth 6400 DTD, 6410 LTD PBDT \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at 664 Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set 5483 Feet

If Alternate II completion, cement circulated from \_\_\_\_\_

feet depth to \_\_\_\_\_ w/ \_\_\_\_\_ sx cnt.

Drilling Fluid Management Plan ALT 13-292  
(Data must be collected from the Reserve Pit)

Chloride content N/A ppm Fluid volume N/A bbls

Dewatering method used By Evaporation

Location of fluid disposal if hauled offsite: \_\_\_\_\_

Operator Name Samuel Gary Jr. & Associates, Inc.

Lease Name Selzer License No. 3882

NW/4 Quarter Sec. 16 Twp. 34 S Rge. 20 E/W

County Comanche 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 Samuel Gary, Jr.

Title President

Subscribed and sworn to before me this 25th day of February, 1992

Notary Public Joan S. Lucero

Date Commission Expires 01/21/1996

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03-02-92

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K.C.C. OFFICE USE ONLY		
F	<input checked="" type="checkbox"/>	Letter of Confidentiality Attached
C	<input checked="" type="checkbox"/>	Wireline Log Received
C	<input checked="" type="checkbox"/>	Geologist Report Received
Distribution		
<input checked="" type="checkbox"/>	KCC	<input type="checkbox"/> SWD/Rep
<input type="checkbox"/>	KGS	<input type="checkbox"/> Plug
<input type="checkbox"/>		<input type="checkbox"/> NGPA
<input type="checkbox"/>		<input type="checkbox"/> Other
(Specify)		

Operator Name Samuel Gary Jr. & Associates, Inc. Lease Name Selzer Well # 16-6

Sec. 16 Twp. 34S Rge. 20  East County Comanche  
 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.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datums	<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	Stone Corral	794	810
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Wabaunsee	3202	3320
		Stark	4717	4743
List All E.Logs Run: Array Induction Elec. Log		Marmaton	4828	4913
Compensated Neutron		Chester	5056	5538
Compensated Photo-Density Log		Osage	5538	5984
Borehole Compensated Sonic		Viola	5984	6154
Integrated Transit Time Log		Simpson	6154	6309
		Arbuckle	6309	----

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"	24 #	664	Class "A"	200	3% CaCl2
					Class "A"	100	3% CaCl2+2%gel
Production	7-7/8"	5-1/2"	15.5 #	6408'	50/50 POZ	150	2% gel, 10% sa
					50/50 POZ	275	2% gel, 10% sa

ADDITIONAL CEMENTING/SQUEEZE RECORD					
Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives	
Perforate					
Protect Casing					
Plug Back TD					
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)	Depth
4	6314-6320'	1000 gallons 15% HCl	6314'

<b>TUBING RECORD</b>	Size <u>2-7/8"</u>	Set At <u>6357'</u>	Packer At <u>N/A</u>	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or Inj. <u>05/11/91</u>	Producing Method <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain)			
Estimated Production Per 24 Hours	Oil Bbls. <u>45</u>	Gas Mcf <u>25</u>	Water Bbls. <u>60</u>	Gas-Oil Ratio <u>45</u>

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

METHOD OF COMPLETION:  Open Hole  Perf.  Dually Comp.  Commingled  Other (Specify)

Production Interval: Arbuckle 6314'-6320'

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15-033-20819-0000

GEOLOGIST'S REPORT

Samuel Gary Jr. & Associates, Inc.  
Selzer #16-6

DISCUSSION

Production casing was run at the Samuel Gary Jr. & Associates, Inc. Selzer #16-6. Potential new pay for the area is Ordovician Arbuckle. Ordovician Viola "B", the principal objective, also tested oil. Several Pennsylvanian horizons--including Elgin, Douglas, and Marmaton--merit completion.

Structure

The Selzer #16-6 is a 40-acre offset to the north of the First Snow Field discovery well, the Selzer #16-11. Compared to the Selzer #16-11, the Selzer #16-6 is flat at the Wabaunsee, 3 ft. to 9 ft. low through the remainder of the Pennsylvanian and at the top of the Mississippian, 14 ft. high at the Osage, 52 ft. high at the Viola, and 37 ft. high at the Arbuckle.

The high structural position accounts for most of the multiple-pay potential at the Selzer #16-6.

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Pennsylvanian

The Elgin Sandstone 4013'-4019' "cleans up" and develops porosity and permeability that is absent at the Selzer #16-11 and other nearby wells. Log porosity is good; Sw = 34%. Although relatively thin, the potential pay merits testing.

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The Douglas 4154'-4171' has fair to good Log porosity; calculated Sw = 22%.

Lansing 4327'-4330' and 4334'-4338' are thin but Log porosity is fair, Sw = 30%.

Primary Pennsylvanian zone of interest was Lansing 4344'-4374' based on the show and logs at the Selzer #16-11. Calculated Sw values at the Selzer #16-6 are about 30% higher than at the Selzer #16-11. For comparison, Sw values at the Woolfolk #26-13 (which is entirely wet) are 100% higher than at the Selzer #16-11. The top of the porosity is 4 ft. low to that at the Selzer #16-11. Logs do not show an oil/water contact above which pay is evident.

Marmaton 4864'-4885' flowed gas at 219-274 MCFPD on DST #2 and produced no oil or water. Neutron-density crossover also is in agreement with gas production. Log porosity is fair; Sw = 32%.

Remaining Pennsylvanian show intervals considered less likely to produced in paying quantities are: 1) Lansing 4290'-4296' where log porosity is low and Sw = 57%; 2) Lansing 4537'-4545' where log porosity is slight; 3) Stark 4701'-4706' where log porosity is low

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GEOLOGIST'S REPORT

Selzer #16-6

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and Sw = 58%; 4) Swope 4717'-4734' where log porosity is low to slight and Sw = 63%; 5) Swope 4750'-4754' and 4759'-4762' where log porosity is low to slight and Sw = 59%; and 6) Pawnee 4928'-4942' where log porosity is low to fair, neutron-density crossover suggests gas, but Sw is high.

Mississippian

Uppermost Chester show 5056'-5063' exhibits characteristics of gas from fair to good log porosity.

Zones of interest in the Chester at 5075'-5079', 5084'-5088', and 5134'-5138' exhibited good drilling breaks that correlate to good to excellent log porosity where best Sw values are < 20%. Gas is likely. A fourth streak 5142' - 5148' appears shaly.

Log porosity in the Osage is fair to good, perhaps influenced by clay. Calculated Sw values are very high.

Viola

Sucrosic dolomite and fractured chert/silicified carbonate within Viola "B" 6003'-6026' tested 29.4 bbl of highly gas cut oil on DST #3. Contribution of Viola "A" is believed to be minor. Extensive fracturing is indicated in Viola "B" 6012'-6026'. Small rock chips were blown out with the gassy oil during DST #3, These chips may have been cuttings and/or formation fragments dislodged from fractured intervals. No water was recovered. A good drilling break correlates to good log porosity.

A lesser sample and gas show was found in the Viola 6070'-6080'. Log porosity is good. Interval 6052' - 6066' exhibits a similar log show.

Arbuckle

New pay for the area is indicated in sucrosic dolomite 6314'-6324'. 8.3 bbl of highly gas cut oil was tested DST #4. The oil is visually identical to that from Viola; field determined gravity is 46.5 deg. API. No water was detected during reverse circulation, however, 5 gal of clear salt water were recovered from below reverse-circulation sub. A combination of filtrate and formation water is suggested by the chloride concentration of 58,760 ppm. The sample chamber contained no water. Log porosity is good.

Tom Fertal  
Senior Geologist

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## GEOLOGIST'S REPORT

Selzer #16-6  
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### FORMATION TOPS

	MD Log Top	1774 KB Datum
<b>PERMIAN</b>		
Stone Corral	794	+ 980
Base Stone Corral	806	+ 968
Council Grove	2648	- 874
Cottonwood	2826	-1052
<b>PENNSYLVANIAN</b>		
Wabaunsee	3202	-1428
Elgin	4013	-2239
Heebner	4113	-2339
Toronto	4121	-2347
Douglas	4154	-2380
Lansing	4287	-2513
Stark	4694	-2920
Swope	4717	-2943
Marmaton	4828	-3054
Pawnee	4913	-3138
Cherokee/Atoka Undivided	4971	-3196
<b>MISSISSIPPIAN</b>		
Chester	5056	-3281
Osage	5538	-3763
<b>ORDOVICIAN</b>		
Viola "A"	5984	-4208
Viola "B"	6003	-4227
Viola "C" (Middle Viola Marker)	6052	-4276
Simpson	6154	-4378
Simpson Shale (Main Body)	6247	-4470
Simpson Sandstone	6286	-4509
Arbuckle	6309	-4532
TD Logger	6410	
TD Driller	6400	

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GEOLOGIST'S REPORT

Selzer 16-6  
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WELL DATA

OPERATOR: SAMUEL GARY JR. & ASSOCIATES, INC.  
WELL NAME: SELZER #16-6  
LOCATION: 1900' FNL & 1800' FWL  
SENW Sec. 16, T34S, R20W  
Comanche County, Kansas  
ELEVATIONS: 1761' Graded GL 1774' KB  
FIELD: First Snow  
ROAD DIRECTIONS: From Protection, S 5.5 miles on main county road,  
W 0.5 mile at Mennonite Cemetery; S 2 miles; W  
0.7 mile and S 0.4 mile on lease road to  
location.  
SURFACE CASING: 14 joints 8-5/8" set at 664 KB.  
SPUD DATE: 9 April 1991 4:00 p.m.  
DRILLING COMPLETED: 26 April 1991 9:15 a.m.  
TOTAL DEPTH: 6400' Driller 6410' Logger  
MAXIMUM  
TEMPERATURE: 139 deg. F  
LAST FORMATION  
PENETRATED: Arbuckle  
WELL STATUS: Set 5-1/2" production casing  
OPERATOR  
REPRESENTATIVES: Tom Fertal - Geologist  
Dan Hall - Engineer

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DRILL STEM TEST #1

Halliburton ran conventional open hole test of Lansing.

TEST INTERVAL: 4338'-4371' rig depth; 4342'-4375' log depth

PACKERS:

Upper Packers: 4332'  
Lower Packers: 4338'  
TD at Test: 4371'

PRESSURES & TIMES: Recorder Depth: 4368'

Initial Hydrostatic: 2136 psi  
Initial Flow: 349 psi to 748 psi 15 min  
Initial Shut-In: 1630 psi 30 min  
Final Flow: 748 psi to 818 psi 60 min  
Final Shut-In: 1640 psi 60 min  
Final Hydrostatic: 2024 psi

RECOVERY: 650 ft of gassy oily emulsion; see grind-out  
2460 ft of salt water  
3110 ft total fluid

GRIND-OUT: 3% mud, 65% water, 32% oily emulsion (top).  
8% mud, 44% water, 28% oily emulsion, 20%  
gas (middle).

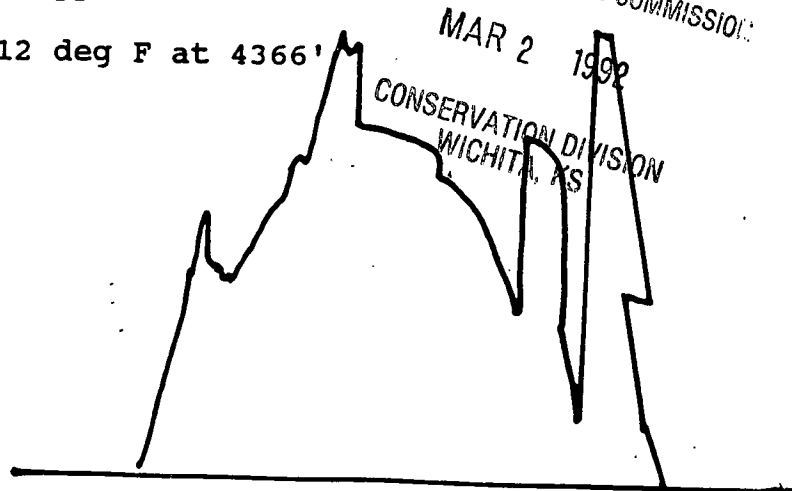
SAMPLER: 220 psi 0.156 cu. ft. of gas  
2 cc oil  
0 cc mud  
2238 cc water

BLOW: Tool opened with strong blow. Opened 2"  
line at 6 min with 1 1/2" choke. Blow dead  
at 10 min, closed 2" line. Strong blow off  
bottom of bucket at 11 min. Tool reopened  
with strong blow. Gas to surface at 4.84  
MCFPD in 45 min; 3.92 MCFPD at 60 min.

APPARENT SALINITY

Pit mud: 6000 ppm chlorides  
Bottom Sample: 131000 ppm chlorides

TEMPERATURE: 112 deg F at 4366'



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DRILL STEM TEST #2

Halliburton ran conventional open hole test of Marmaton.

TEST INTERVAL: 4858'-4879' rig depth; 4864'-4885' log depth

PACKERS:

Upper Packers: 4845'  
Lower Packers: 4858'  
TD at Test: 4879'

PRESSURES & TIMES: Recorder Depth: 4876'

Initial Hydrostatic:	2309 psi	
Initial Flow:	90 psi to 70 psi	30 min
Initial Shut-In:	1903 psi	60 min
Final Flow:	50 psi to 40 psi	60 min
Final Shut-In:	1903 psi	120 min
Final Hydrostatic:	2248 psi	

RECOVERY: 30 ft of drilling mud.

SAMPLER: 75 psi 0.645 cu. ft. of gas  
0 cc oil  
0 cc mud  
0 cc water

BLOW: Tool opened with strong blow. Gas to surface in 5 min; 219 MCFPD at 15 min; 236 MCFPD at 30 min. Tool reopened with strong blow; 266 MCFPD at 20 min; 266 MCFPD at 30 min; 266 MCFPD at 40 min; 274 MCFPD at 60 min.

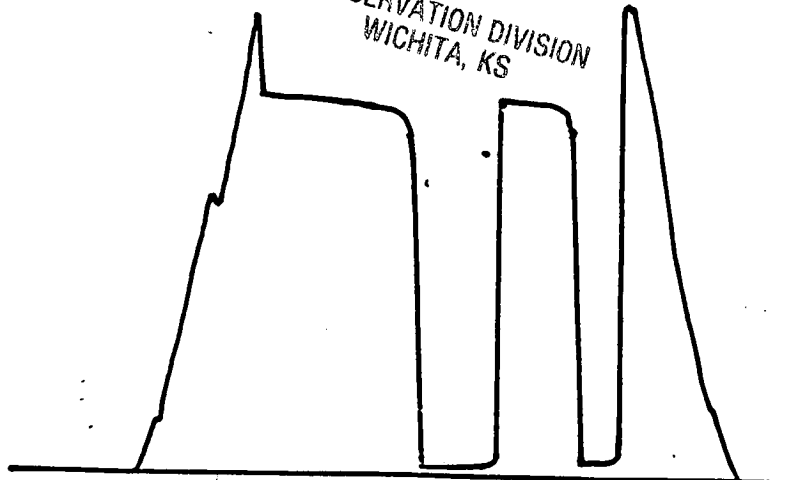
TEMPERATURE: 116 deg F at 4874'

REMARKS: Sweet gas.

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DST #2



DRILL STEM TEST #3

Halliburton ran conventional open hole test of Viola "B".

TEST INTERVAL: 5941'-6012' rig depth; 5951'-6022' log depth

PACKERS:

Upper Packers: 5935'  
Lower Packers: 5941'  
TD at Test: 6012'

PRESSURES & TIMES:

Initial Hydrostatic: 2872 psi  
Initial Flow: 1499 psi to 1903 psi 15 min  
Initial Shut-In: 2320 psi 90 min  
Final Hydrostatic: 2800 psi

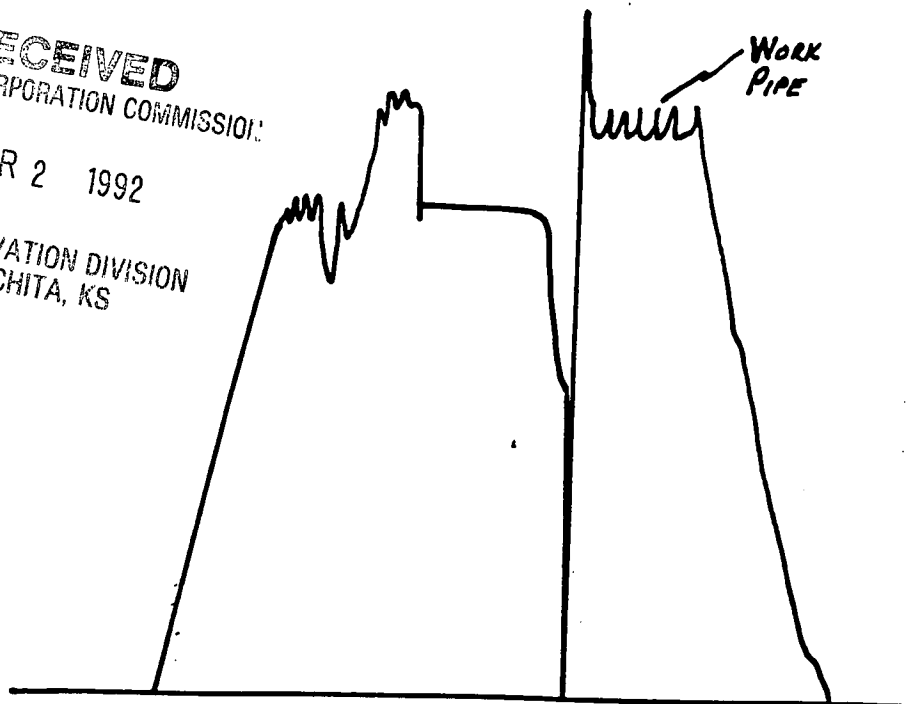
RECOVERY: 29.4 bbl oil were reversed out to frac tank.  
No water.

BLOW: Tool opened with strong blow. 3 min: gas to surface. 5 min: 739.5 MCFPD. 10 min: 725 MCFPD. 15 min: 696 MCFPD.

TEMPERATURE: 136 deg F

REMARKS: Reversed out after pulling 24 stands (doubles). Oil gravity 46 API at 60 deg F.

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DST #3

DRILL STEM TEST #4

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Halliburton ran conventional open hole test of Arbuckle.

TEST INTERVAL: 6302'-6317' rig depth; 6313'-6328' log depth

PACKERS:

Upper Packers: 6296'  
Lower Packers: 6302'  
TD at Test: 6317'

PRESSURES & TIMES: Recorder Depth: 6314'

Initial Hydrostatic: 3067 psi  
Initial Flow: 149 psi to 279 psi 15 min  
Initial Shut-In: 2432 psi 30 min  
Final Flow: 309 psi to 958 psi 60 min  
Final Shut-In: 2350 psi 93 min  
Final Hydrostatic: 2985 psi

RECOVERY: 18.3 BO were reversed out to frac tank. No water was observed during reversal. Drilling mud and 5 gal of salt water were observed below reverse-sub.

SAMPLER: 660 psi 4.673 cu. ft. of gas  
1500 cc oil no mud, no water.

BLOW: Tool opened with strong blow. Gas to surface in 5 min; 245 MCFPD at 10 min; 251 MCFPD at 15 min. Tool reopened with slight blow through 3/4" choke; changed to 1/4" choke. 31 MCFPD at 10 min; 45 MCFPD at 20 min; 41 MCFPD at 30 min; 72 MCFPD at 40 min; 34 MCFPD at 60 min.

APPARENT SALINITY:

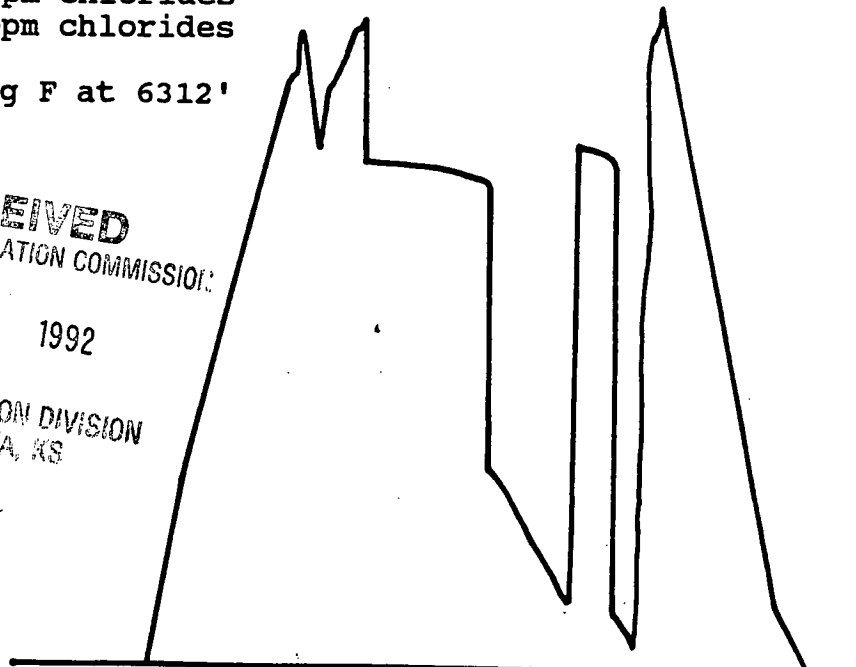
Pit mud: 12000 ppm chlorides  
Bottom Samples: 58760 ppm chlorides

TEMPERATURE: 132 deg F at 6312'

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DST