

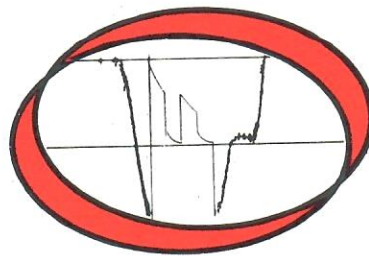
Formation Testing Service Report

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COLO. OIL & GAS CONS. COMM.

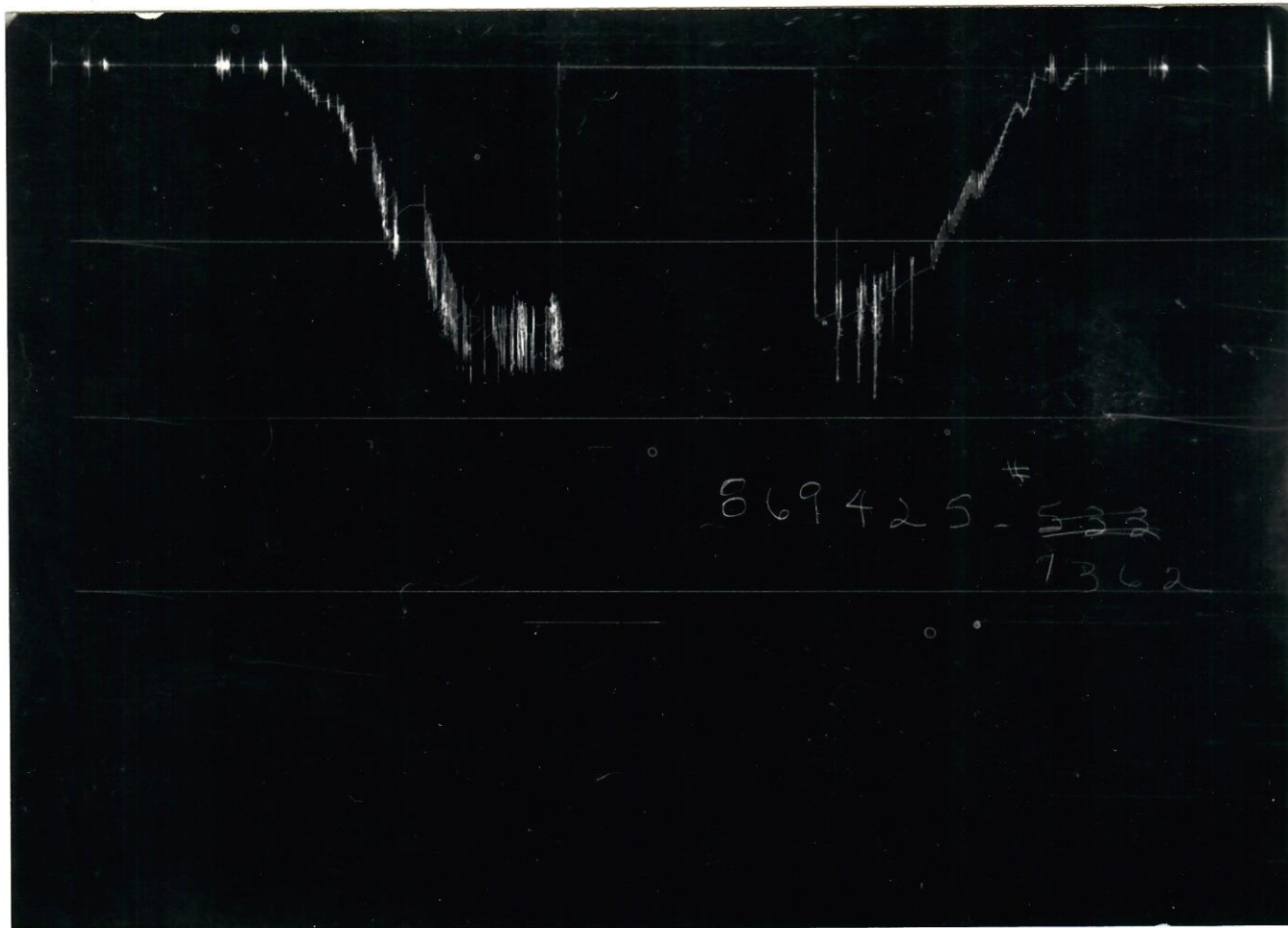


WELL	
NO.	
DATE	
TIME	
BY	
REVIEWED	
APPROVED	
DATE	
TIME	
BY	

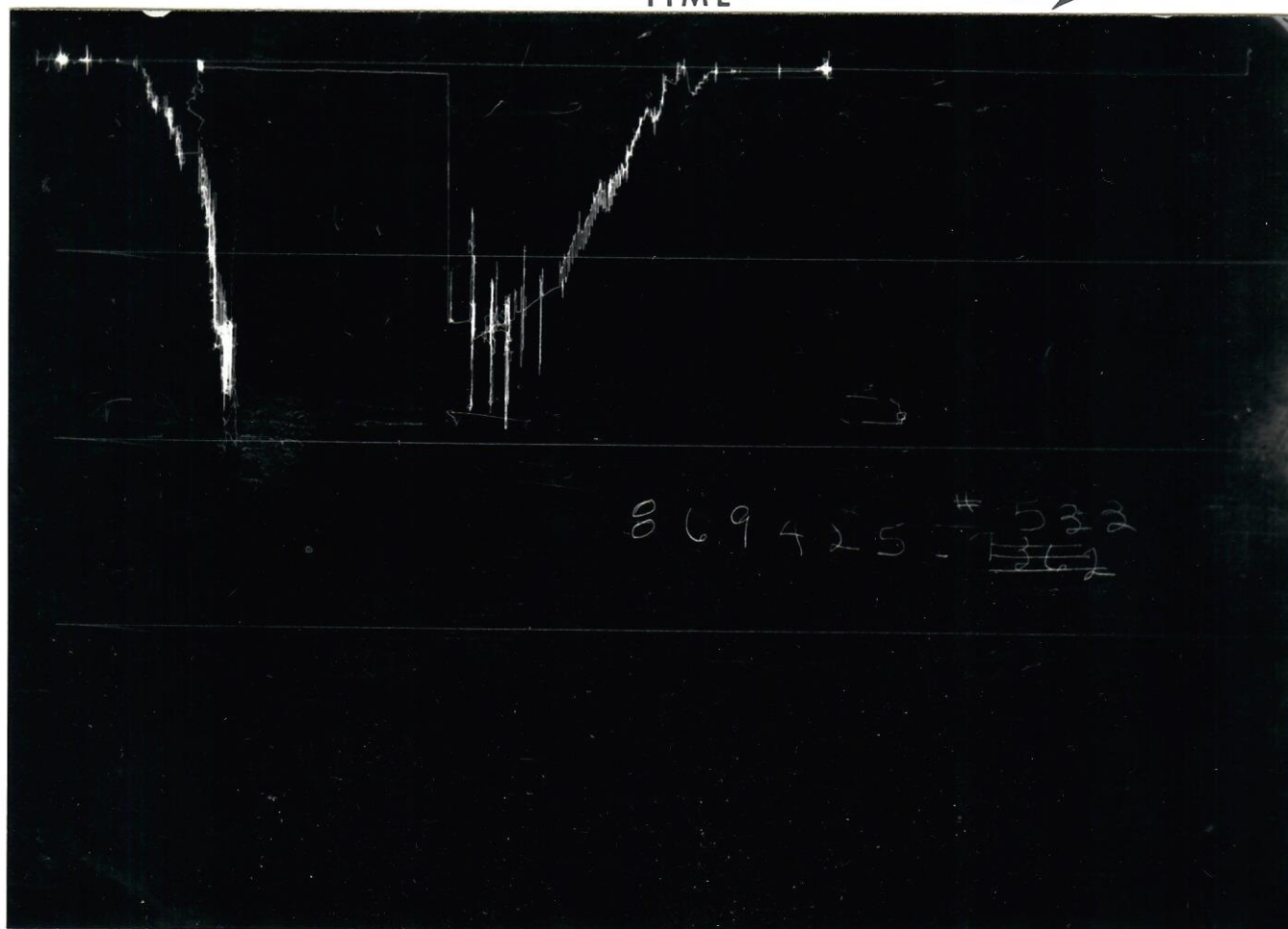
HALLIBURTON SERVICES

DUNCAN, OKLAHOMA

↓ PRESSURE ↓



→ TIME →



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA				Date 10-22-80		Ticket Number 869425	
Sampler Pressure <u>0</u> P.S.I.G. at Surface Recovery: Cu. Ft. Gas <u>-</u> cc. Oil <u>-</u> cc. Water <u>-</u> cc. Mud <u>2200</u> Tot. Liquid cc. <u>2200</u>				Kind of D.S.T. OPEN HOLE OFF		Halliburton Location LAMAR	
				Tester MOORE		Witness NATTON	
Gravity _____ ° API @ _____ °F.				Drilling Contractor WAKEFIELD DRILLING COMPANY NM			
Gas/Oil Ratio _____ cu. ft./bbl.				EQUIPMENT & HOLE DATA			
RESISTIVITY _____ CHLORIDE CONTENT _____ Recovery Water _____ @ _____ °F. _____ ppm Recovery Mud _____ @ _____ °F. _____ ppm Recovery Mud Filtrate _____ @ _____ °F. _____ ppm Mud Pit Sample _____ @ _____ °F. _____ ppm Mud Pit Sample Filtrate _____ @ _____ °F. <u>4500</u> ppm Mud Weight <u>9.2</u> vis <u>60</u> sec.				Formation Tested _____			
				Elevation _____ 3988' GL _____ Ft.			
				Net Productive Interval _____ 6' _____ Ft.			
				All Depths Measured From _____ Kelly Bushing - 3998' _____ Ft.			
				Total Depth _____ 3475' _____ Ft.			
				Main Hole/Casing Size _____ 7 7/8" _____			
				Drill Collar Length _____ 468' I.D. _____ 2.25"			
				Drill Pipe Length _____ 2633' I.D. _____ 3.826"			
				Packer Depth(s) _____ 3126' - 3152' _____ Ft.			
				Depth Tester Valve _____ 3109' _____ Ft.			
Cushion		TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke	
		NONE		NONE	.25"	.75"	
Recovered <u>1'</u> Feet of drilling mud							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Remarks SEE PRODUCTION TEST DATA SHEET...							
Q = QUESTIONABLE.							
TEMPERATURE		Gauge No. 7362	Gauge No. 533	Gauge No. _____	TIME (00:00-24:00 hrs.)		
Depth: _____		<u>3110'</u> Ft.	<u>3148'</u> Ft.	_____ Ft.			
Hour Clock		<u>12</u>	<u>12</u>	Hour Clock			
Blanked Off		NO	YES	Blanked Off			
Actual °F.		Pressures		Pressures	Tool		
					Opened <u>21:02</u>		
					Opened Bypass <u>23:32</u>		
		Field	Office	Field	Office	Reported	Computed
						Minutes	Minutes
First Period	Initial Hydrostatic	-	<u>1536.9</u>	<u>1710</u>	<u>1579.5</u>		
	Flow Initial	-	<u>7.9</u>	<u>0</u>	<u>25.7</u>		
	Flow Final	-	<u>7.9</u>	<u>0</u>	<u>32.9</u>	<u>15</u>	
Second Period	Closed in	-	<u>9.3</u>	<u>0</u>	<u>45.8</u>	<u>45</u>	
	Flow Initial	-	<u>6.6</u>	<u>0</u>	<u>41.5</u>		
	Flow Final	-	<u>6.6</u>	<u>0</u>	<u>47.2</u>	<u>30</u>	
Third Period	Closed in	-	<u>9.3</u>	<u>0</u>	<u>55.8</u>	<u>60</u>	
	Flow Initial	-					
	Flow Final	-					
Final Hydrostatic		-	<u>1321.0-0</u>	<u>1426</u>	<u>1473.0-0</u>		

 COOK
 Lease Name

 7-7
 Well No.

 2
 Test No.

 3126' - 3152'
 Tested Interval

 MICHIGAN-WISCONSIN PIPELINE COMPANY
 Lease Owner/Company Name

 Legal Location
 Sec. - Twp. - Rng.

7 - 33S - 43W

 Field Area
 S. WALSH, COLORADO

County

BACA

State

COLORADO

Casing perms. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. _____
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

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FORM 182-R1-PRINTED IN U.S.A. PRODUCTION TEST DATA LITTLE'S 96672 5M 8/74



	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Drill Collars				
Reversing Sub	5.75"	2.75"	1'	
Water Cushion Valve				
Drill Pipe	4.5"	3.826"	2633'	
Drill Collars	6.25"	2.25"	468'	
Handling Sub & Choke Assembly	5"	3.25"	4'	
Dual CIP Valve	5"	.87"	7'	3105'
Dual CIP Sampler	5"	.75"	5'	3109'
Hydro-Spring Tester				
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	3110'
Hydraulic Jar	5.03"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover	5"	-	1'	
Packer Assembly	6.75"	1.53"	6'	3126'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	3.24"	19'	
Pressure Equalizing Tube	1"	.75"	19'?	
Blanked-Off B.T. Running Case	5"	3.06"	4'	3148'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly	6.75"	1.53"	6'	3152'
Anchor Pipe Safety Joint				
Side Wall Anchor	6.75"	1.53"	5'	3161'
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				
Total Depth				3475'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b₁	= Approximate Radius of Investigation (Net Pay Zone h ₁)	Feet
D.R.	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h₁	= Net Pay Thickness	Feet
K	= Permeability	md
K₁	= Permeability (From Net Pay Zone h ₁)	md
m	= Slope Extrapolated Pressure Plot (Psi ² /cycle Gas)	psi/cycle
OF₁	= Maximum Indicated Flow Rate	MCF/D
OF₂	= Minimum Indicated Flow Rate	MCF/D
OF₃	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF₄	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q₁	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100° F.