



00257723

WELL REPORT

**GLG ENERGY INC.
#1 VISINTAINER #34-33
SWSE Sec 33, Twp 9N - Rng 91 W
1650 FEL - 660 FSL
Moffat County, Colorado**

**by
Duncan McBane
Geological Consultant
12/3/90**

HISTORY

The #1 Visintainer #34-33 is a 320 acre NW offset to the Blue Gravel #3-1, drilled in the NENW of Section 3, T8N-R91W. The objective of this well was the upper Mesaverde Almond sandstone, which flowed 3.6 mmcf/gpd from a DST at the Blue Gravel #3-1 well. A secondary objective was the Lewis Formation sandstones.

The mudloggers and wellsite geologist began examining samples on November 20, at 3900'.

Lewis Formation

The top of the Lewis Formation was penetrated at 4022'. Mudlog gas shows up to 74 units of total gas over background were recorded in middle Lewis sandstone stringers from 4450' to 4720'. Samples indicated tight to poor sandstone porosity through this interval. No DST's were run. Logs confirmed low porosity and poor correlation between sandstones and mudlog gas shows.

Mesaverde Formation

The top of the Almond sandstone is at 6269'. Fourteen feet of Almond sandstone was cut, yielding a 340 unit mudlog gas show. A DST of this interval recovered 2203' of highly gas cut water. DST pressure chart curves show the test to be valid with no apparent formation damage, reservoir depletion, or significant tool plugging.

Although this first downdip offset to the discovery well was wet, it has confirmed a NW-SE trend to the Almond pay sand and defined the downdip limit of the reservoir. This sand is not present in nearby adjacent wells.

Total depth was reached on November 27, 1990, 194' into the upper Williams Fork coal group. Four thin coals with mudlog gas shows ranging from 45-110 units were encountered.

The well was drilled and plugged in 14 days by Exeter rig #41 for a total cost of \$261,611. It was plugged on November 28, 1990

RECEIVED

DEC 10 1990

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CHRONOLOGY

- 11/16/90 Exeter rig #41. Spud at 0245 Hrs. 121/4" surface hole in Wasatch Formation. Drid 314'. TD 314. Mud 8.4, Vis 27, YP 1. Cost \$14,082.
- 11/17/90 Drid 696'. TD 1010' @ 0600 Hrs. Ran surface casing, TD @ 970. Cmt 22 jts. Mud 8.9, Vis 28. YP 1. Daily cost \$36,214. Cum \$50,296.
- 11/18/90 Drid 0'. TD 1010' @ 0600 Hrs. Rig up 1" and cmt. Cut off conductor & csg. Weld on well head. 95/8" csg @ 958'. Mudloggers on location. Mud 8.9, Vis 28, YP 1. Daily cost \$22,778. Cum \$73,074.
- 11/19/90 Drid 360'. TD 1370' @ 0600 Hrs. Nipple up. Test BOP. TIH drill shoe jt. Bit #2. 7 7/8" Reed HP11 @ 1010'. Mud 8.4, vis 28, WL -, YP 1. Daily cost \$14,317. Cum \$87,391.
- 11/20/90 Drid 1605'. TD 2975' @ 0600 Hrs. PU btm hole assm. TIH, ream 280' to btm, drl, tite conn, drlg. Bit #3. 7 7/8" XH. Drlg w/mud motor. Survey 1846'-1deg, 2315' - 1deg. Wellsite geologist on location. Mud 8.6, Vis 28, WL -, YP 1., Daily cost \$34,441. Cum \$121,832.
- 11/21/90 Drid 800'. TD 3755' @ 0600 Hrs. Begin mudlogging @ 3900'. Slowed drlg to 2min/ft from 4275-4700' to look for breaks and shows. Bit #4. 7 7/8" XH, HP 43A. Mud 9.2, Vis 31, WL 24, YP 4. Daily cost \$4,427. Cum \$126,878.
- 11/22/90 Drid 884'. TD 4639' @ 0600 Hrs. Lewis Shale Formation sample top @ 4714'. Cut 7 thin sandstones from 4446-4604'. Total gas shows 8-72 units over background. Bit #5, 7 7/8" XH, Security 582 CF, 35 hours. Mud 9.3, Vis 43, WL 162, YP 14. Daily cost \$19,349. Cum \$158,748.
- 11/23/90 Drid 526'. TD 5165' @ 0600 Hrs. Slowed drlg to 2min/ft from 5500-5650' to look for breaks and shows. Mud 9.3, Vis 34, WL 18.4, YP 10. Daily cost \$13,592. Cum \$172,959.
- 11/24/90 Drid 1021'. TD 6168' @ 0600 Hrs. Williams Fork Formation sample top @ 6145' w/85 unit gas increase in tight sandstone. Mud 9.2, Vis 44, WL 11.4, YP 12. Daily cost \$24,559. Cum \$197,518.
- 11/25/90 Drid 124'. TD 6310' @ 0600 Hrs. Trip for Bit #6 @ 6239', 7 7/8" STC F2H. Almond Sandstone sample top @ 6281'. Mudlog total gas 340 units. Almond coal 650 units total gas. Tripping for DST #1. Mud 9.1, Vis 47, WL 10.8, YP 21. Daily cost \$9,320. Cum \$206,838.

- 11/26/90 Drid 0'. TD 6310' @ 0600 Hrs. DST #1: 6277-6310. Rec 2203' HGCW. Drlg to TD at 6480'. Mud 9, Vis 38, WL 10.6, YP 9. Daily cost \$10,162. Cum \$217,000.
- 11/27/90 Drid 170'. TD 6480' @ 0915 Hrs. Circ for logs. Mud 9.1, Vis 55, WL 10.8, YP 32. Daily cost \$12,779. Cum \$229,779.
- 11/28/90 Drid 0. TD 6480'. Logging. Prep to plug. Mud 9.1, Vis 43, WL 11.4, YP 12. Daily cost \$16,157. Cum \$245,936.
- 11/29/90 TD 6480'. Plugged w/200 sacks. Laid down drill pipe. Clear mud tanks. Daily cost \$15,675. Cum \$261,611.

SERVICES

Operator: GLG Energy L.P.: Rick Kirby, Project Engineer; Albert L. (Leroy) Stout,
Project Drilling Foreman.

Drilling Contractor: Exeter. Rig #41. Doug Giberson, Toolpusher.

Wellsite Geologist: Duncan McBane

Cementing: Halliburton

Mud Logging: Monaco Engineering. Logged from 3900' to 6480' (11/20/90 -
11/27/90). Engineers: Dudley Deardorff, John Trenchard.

Mud Engineering: Rheotech. Richard Miller.

DST: Schlumberger. Cliff Richards, Vernal Utah.
DST #1: 6277-6310. Almond Sandstone. (Details on following pages)

Logs: Atlas Wireline: KB 6892'. Logged interval: 954'-6465'. CDL/CN/GR, BHC-
AL/GR, DIL/GR, PROLOG.
Recorded by Bob Bangerter.

FORMATION TOPS

	<u>Depth</u>
Fort Union Formation	1220
Lance Formation	2892
Fox Hills Formation	3594
Lewis Formation	4022
Lewis Shale	4697
Williams Fork Formation	6126
Almond Sandstone	6269
TD	6480

REPORT NO.
113920

PAGE NO. 1

TEST DATE:
25-NOV-1990

S T A R

Schlumberger Transient Analysis Report Based on Model Verified Interpretation

Schlumberger

COMPANY: GLG ENERGY, L.P.

WELL: #1 VISINTAINER 34-33

TEST IDENTIFICATION

Test Type MFE-OH-DST
 Test No. 1
 Formation MESA VERDE/ALM
 Test Interval (ft) 6277 to 6310
 Depth Reference KB

WELL LOCATION

Field
 County MOFFAT
 State COLORADO
 Sec/Twn/Rng S33T9NR91W
 Elevation (ft)

HOLE CONDITIONS

Total Depth (MD/TVD) (ft) 6310
 Hole Size (in) 7.875
 Casing/Liner I.D. (in)
 Perf'd Interval/Net Pay (ft) .. / 22
 Shot Density/Diameter (in) ...

MUD PROPERTIES

Mud Type KCL WATER
 Mud Weight (lb/gal) 9.1
 Mud Resistivity (ohm.m) 0.42 @ 68F
 Filtrate Resistivity (ohm.m) .. 0.40 @ 68F
 Filtrate Chlorides (ppm) 17900

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi) 3031
 Gas Cushion Type
 Surface Pressure (psi)
 Liquid Cushion Type
 Cushion Length (ft)

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in) ... 5713 / 3.8
 Collar Length (ft)/I.D. (in) .. 525 / 2.25
 Packer Depths (ft) 6271,6277
 Bottomhole Choke Size (in) ... 0.93
 Gauge Depth (ft)/Type 6290/J-1401

NET PIPE RECOVERY

Volume	Fluid Type	Properties
	GAS & WATER	Rw0.41@68F 17000ppm
2203 ft	CUT MUD	Rw0.55@68F 12100ppm
		Rw0.60@68F 11800ppm

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.84 cuft	Gas	
1840 cc	Water	Rw1.5@68F 4200ppm
Pressure:420 GOR:0 GLR:73		

INTERPRETATION RESULTS

Model of Behavior
 Fluid Type Used for Analysis..
 Reservoir Pressure (psi)
 Transmissibility (md.ft/cp) ..
 Effective Permeability (md) ..
 Skin Factor/Damage Ratio
 Storativity Ratio, Omega
 Interporos.Flow Coef.,Lambda..
 Distance to an Anomaly (ft) ..
 Radius of Investigation (ft)..
 Potentiometric Surface (ft) ..

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)
 Basic Solids (%)
 Gas Gravity
 GOR (scf/STB)
 Water Cut (%)
 Viscosity (cp)
 Total Compressibility (1/psi).
 Porosity (%) 12
 Reservoir Temperature (F) 158
 Form.Vol.Factor (bbl/STB)

PRODUCTION RATE DURING TEST: xxxxxxxx

COMMENTS:

This test was mechanically successful. This zone produced gas and water cut mud during the drillstem test. The well was closed at surface during the test.

The general character of the buildup plots suggest that the zone has low effective permeability and some wellbore damage at the time and conditions of the test.

 ** WELL TEST DATA PRINTOUT **

COMPANY: GLG ENERGY
 WELL: VISINTAINER 34-33

FIELD REPORT NO. 113920
 INSTRUMENT NO. 1401

RECORDER CAPACITY: 6400 PSI PORT OPENING: OUTSIDE DEPTH: 6290 FT
 TEMPERATURE: 158 DEG F

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME, MIN	BOT HOLE PRESSURE PSIA
1	13:13:40	25-NOV	HYDROSTATIC MUD	-1.33	3031
2	13:15:00	25-NOV	START FLOW	0.00	926
3	13:30:00	25-NOV	END FLOW & START SHUT-IN	15.00	350
4	14:30:01	25-NOV	END SHUT-IN	75.01	2543
5	14:32:00	25-NOV	START FLOW	77.00	500
6	15:32:01	25-NOV	END FLOW & START SHUT-IN	137.02	633
7	18:33:51	25-NOV	END SHUT-IN	318.85	2558
8	18:59:10	25-NOV	HYDROSTATIC MUD	344.17	3011

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	0.00	15.00	15.00	926	350	926
2	77.00	137.02	60.02	500	633	500

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME, MIN	END ELAPSED TIME, MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	15.00	75.01	60.01	350	2543	350	15.00
2	137.02	318.85	181.83	633	2558	633	75.02

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 113920

COMPANY : GLG ENERGY

INSTRUMENT NO. 1401

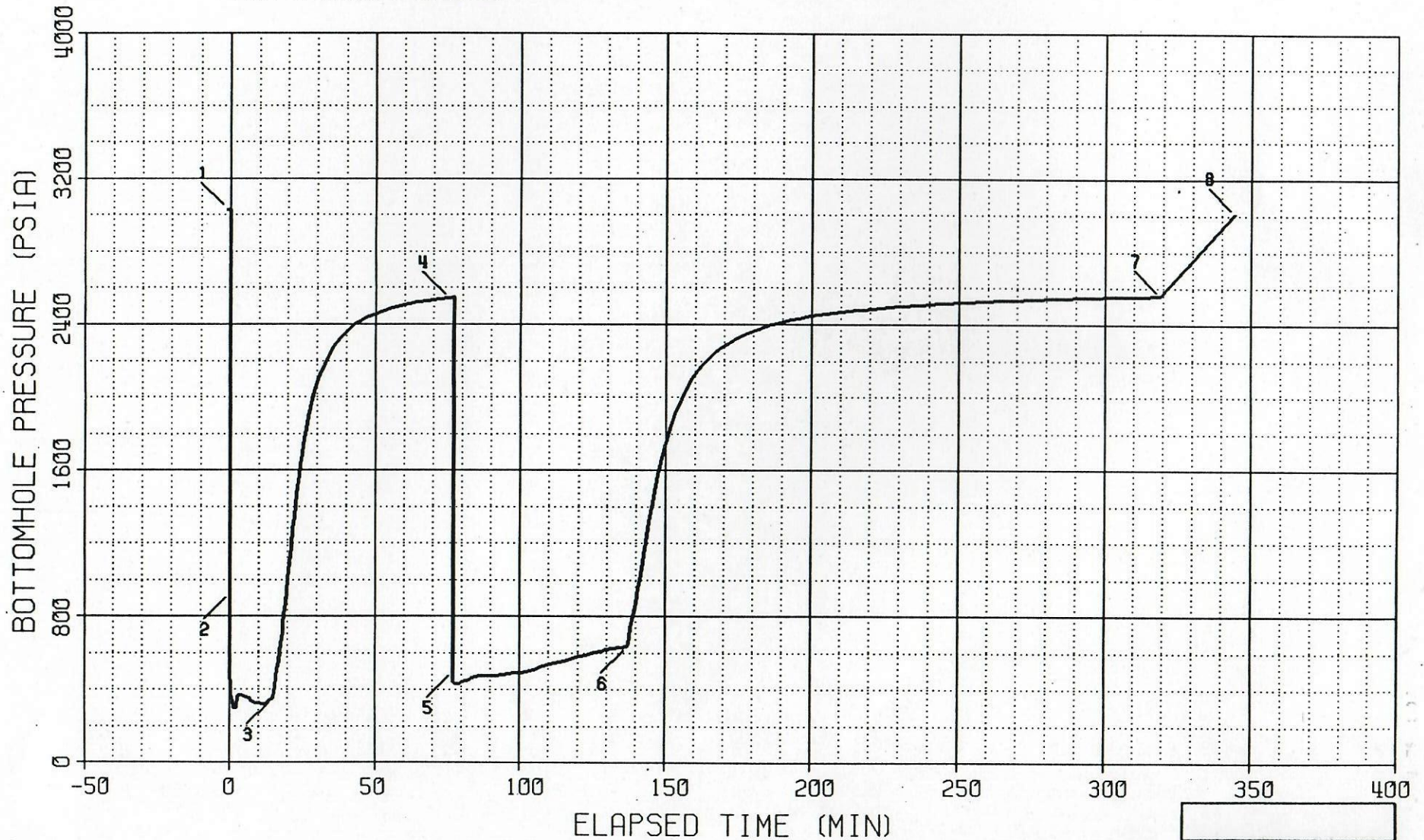
WELL : VISINTAINER 34-33

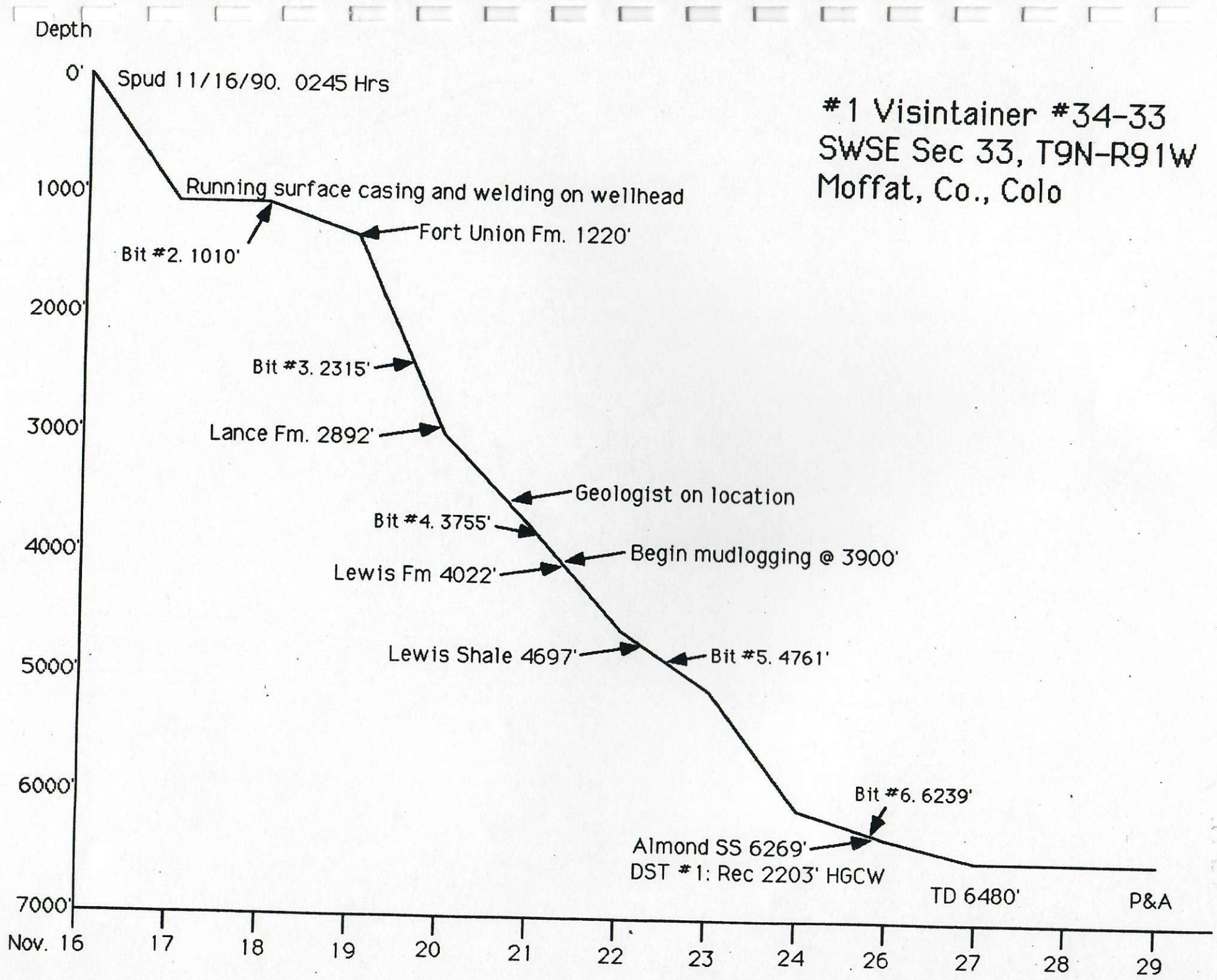
DEPTH : 6290 FT

CAPACITY : 6400 PSI

Mechanical Recorder Data

PORT OPENING : OUTSIDE





ALMOND

06300

06400

GAMMA RAY

FR

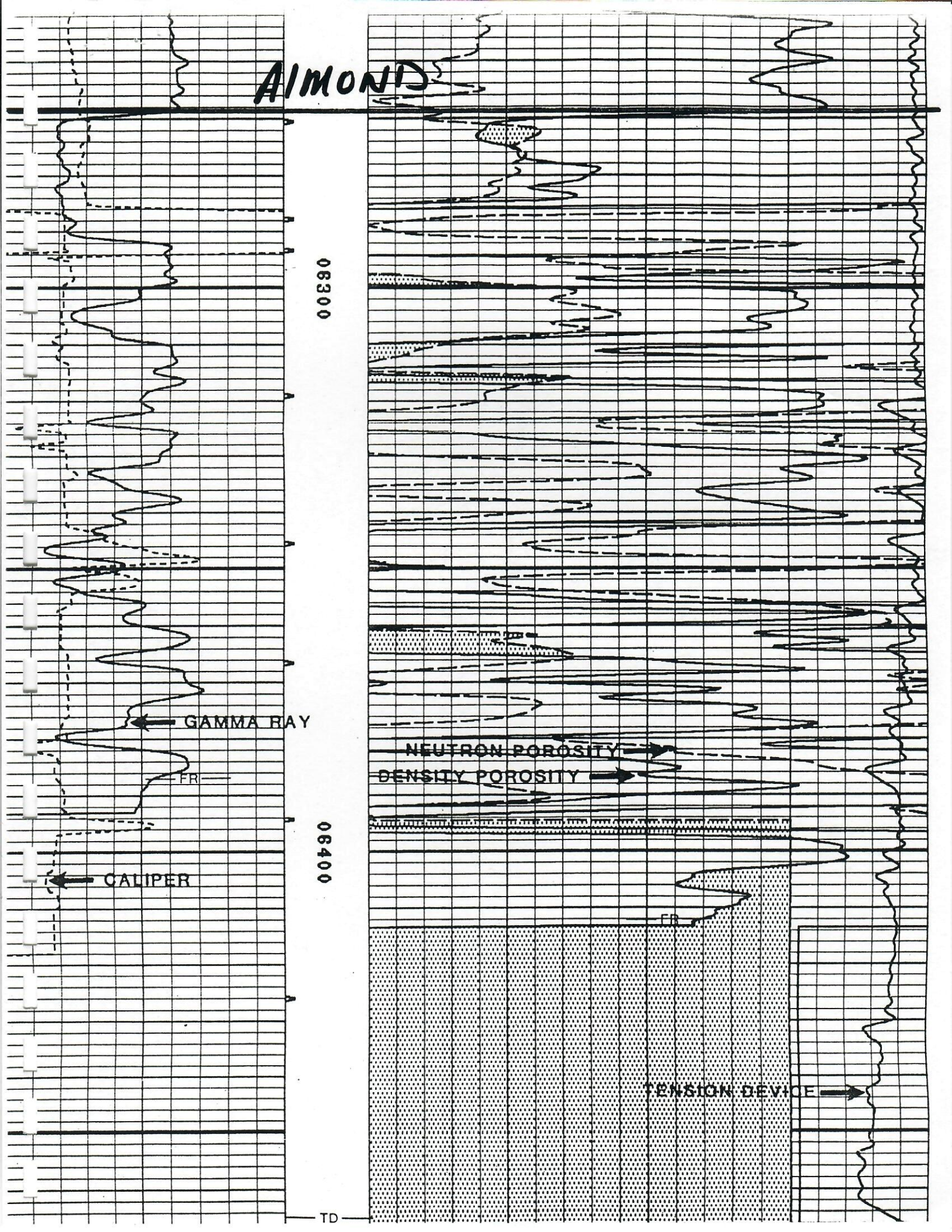
CALIPER

NEUTRON POROSITY

DENSITY POROSITY

TENSION DEVICE

TD



ALMOND

06300

06400

GAMMA RAY

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CALIPER

SP

LATEROLOG

MEDIUM INDUCTION

DEEP INDUCTION

TENSION DEVICE

TD

