

TABULATION OF DEVIATION TESTS

ENERGY RESERVES GROUP, INC.

Gallegos Canyon Unit #278

<u>DEPTH</u>	<u>DEVIATION</u>
131'	1/4 °
650'	1/2 °
1134'	3/4 °
1630'	1 °

A F F I D A V I T

THIS IS TO CERTIFY that to the best of my knowledge the above tabulation details the deviation test taken in ENERGY RESERVES GROUP, INCORPORATED'S Gallegos Canyon Unit - Pictured Cliffs #278, SW SE Section 17, T28N-R12W,
San Juan County, New Mexico

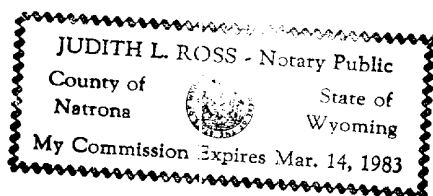
Signed

Dean B. Barnes
District Production Engineer

THE STATE OF WYOMING)
) SS.
COUNTY OF NATRONA)

BEFORE ME, the undersigned authority, on this day personally appeared Dean B. Barnes known to me to be District Production Engineer for Energy Reserves Group, Inc. and to be the person whose name is subscribed to the above statement, who, being by me duly sworn on oath, states that he has knowledge of the facts stated herein and that said statement is true and correct.

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for said County and State this 22 day of Oct. 1979.



Judith L. Ross
Notary Public

My Commission Expires March 14, 1983

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other In-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL:		OIL WELL ☐	GAS WELL ☒	DRY ☐	Other _____										
b. TYPE OF COMPLETION:		NEW WELL ☒	WORK OVER ☐	DEEP-EN ☐	PLUG BACK ☐	DIFF. RESVR. ☐	Other _____								
2. NAME OF OPERATOR						7. UNIT AGREEMENT NAME									
Energy Reserves Group, Inc.						Gallegos Canyon Unit									
3. ADDRESS OF OPERATOR						8. FARM OR LEASE NAME									
P.O. Box 3280, Casper, Wyoming 82602						9. WELL NO.									
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*						278									
At surface						10. FIELD AND POOL, OR WILDCAT									
870' FSL, 1730' FEL (SW SE)						Kutz, Pictured Cliffs, West									
At top prod. interval reported below						11. SEC. T., R., M., OR BLOCK AND SURVEY OR AREA									
At total depth						Sec. 17-T28N-R12W									
14. PERMIT NO.				DATE ISSUED		12. COUNTY OR PARISH		13. STATE							
						San Juan		New Mexico							
15. DATE SPUDDED		16. DATE T.D. REACHED		17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*		19. ELEV. CASINGHEAD							
9-20-79		9-23-79		10-12-79		GRD 5589' KB 5600'									
20. TOTAL DEPTH, MD & TVD		21. PLUG, BACK T.D., MD & TVD		22. IF MULTIPLE COMPL., HOW MANY*		23. INTERVALS DRILLED BY		ROTARY TOOLS							
1650'		1596'				O-TD		CABLE TOOLS							
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*								25. WAS DIRECTIONAL SURVEY MADE							
1402' - 1412'								No							
26. TYPE ELECTRIC AND OTHER LOGS RUN								27. WAS WELL CORED							
Dual Ind - Laterolog, Comp Neutron - Density								No							
28. CASING RECORD (Report all strings set in well)															
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED					
8-5/8"		36#		131' KB		12-1/4"		100 sks "B" w/2% CaCl ₂		-0-					
4-1/2"		10.79#		1636' KB		6-3/4"		260 sks 50-50 Poz + 2% Gel + 1/4#/sk Flocele *		-0-					
29. LINER RECORD										30. TUBING RECORD					
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE		DEPTH SET (MD)		PACKER SET (MD)	
		None								2-3/8"		1422'		-----	
31. PERFORATION RECORD (Interval size and number)										32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.					
1402' - 1412' w/ JSPF										DEPTH INTERVAL (MD)		AMOUNT AND KIND OF MATERIAL USED			
										1402' - 1412'		Fraced w/24,000 gals 70% quality foam + 40,000#10-20 sand			
33.*										PRODUCTION					
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)								WELL STATUS (Producing or shut-in)					
										SIGW					
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.		GAS—MCF.		WATER—BBL.		GAS-OIL RATIO	
10-11-79		24		30/64		→		-0-		300		34		NA	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.		WATER—BBL.		OIL GRAVITY-APF (CORR.)			
100 psi		210 psi		→		-0-		300		34		NA			
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)										TEST WITNESSED BY					
Vented during test										T.C. Durham					
35. LIST OF ATTACHMENTS															
Sample Description															
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records															
SIGNED		Healy B. Barnes				TITLE		District Production Engineer		DATE		10-15-79		RMD	

*(See Instructions and Spaces for Additional Data on Reverse Side)

NMOCC

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:				38. GEOLOGIC MARKERS	
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES				TOP	
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH
			SEE ATTACHED		LOG TOPS
			*4-1/2" csg cent'd to surface	OJO Alamo	70'
				Kirtland	180'
				Fruitland	1,083'
				Pictured Cliffs	1,379'
				Lewis	1,591'
				TD Driller	1,650'
				Logger	1,649'

SAMPLE DESCRIPTION

140 - 70 90% Ss: milky wht, crs-g, sbrnd, lse.
10% Sh: lt gry, soft, fri, silty-sandy, lignitic

70 - 80 50% Ss: AA, m-crs-g
50% Sh: lt gry, soft, sl clayey-sl silty, fri.

80 - 200 100% Ss: AA

200 - 10 100% Sh: gry, soft-firm, sl clayey, sl micro-micaceous

10 - 20 100% Sh: AA, sl silty

20 - 30 50% Sh: AA
50% Clystn: gry, soft, waxy

30 - 40 No Sample

40 - 50 100% Sh: gry, soft-firm, fri, silty, w/occ. carb. incl.

50 - 70 50% Ss: clr, m-g, sbang-sbrnd, lse.
50% Sh: AA

70 - 300 N.S.

300 - 10 90% Sh: gry, firm, fri, silty-sl sandy, sl lignitic
10% Clystn: gry, soft, waxy

10 - 30 100% Sh: gry, soft, fri, clayey

30 - 40 70% Ss: clr, m-g, sbrnd, lse.
30% Sh: AA

40 - 50 50% Ss: AA
50% Sh: AA

50 - 60 90% Ss: AA, m-crs-g, some sl cons.
10% Sh: AA

60 - 80 100% Ss: wht, m-g, sbrnd, cons.-sl lse, sl-mod clay fld.

80 - 90 N.S.

90 - 400 40% Ss: wht, m-g, sbang, mod-hvy clay fld
60% Sh: gry, soft-firm, sandy-sl silty, sl lignitic

400 - 10 N.S.

10 - 20 70% Ss: wht, fn-g, sbang, hvy clay fill, no vis. porosity
30% Sh: gry, soft, fri, sl silty-sl clayey

20 - 30 N.S.

430 - 40 20% Ss: wht, m-g, sbang, mod clay fld, fair porosity
80% Sh: AA

40 - 50 20% Ss: AA
80% Sh: AA, silty, sl lignitic

50 - 60 70% Ss: wht, fn-g, sbang, hvy clay fill
30% Sh: AA

60 - 70 N.S.

70 - 90 20% Ss: AA, vfn-fn-g
80% Sh: gry-drk gry, soft, sl clayey, some carb.

90 - 500 N.S.

500 - 10 40% Ss: AA
60% Sh: AA, sl clayey-silty

10 - 20 100% Sh: gry, firm, fri, silty, sl lignitic

20 - 30 40% Ss: wht, fn-g, sbang, hvy clay fill, w/occ. carb. incl.
60% Sh: AA

30 - 50 70% Ss: wht, fn-crs-g, sbang, mod. clay fld, w/occ.
carb. incl., some lse.
30% Sh: gry, soft, fri, clayey

50 - 60 50% Ss: wht, fn-m-g, sbang, mod clay fld, fair porosity,
w/occ. carb. incl.
50% Sh: AA

60 - 70 10% Ss: AA
90% Sh: gry, firm, sl clayey-silty, fri, sl lignitic

70 - 80 N.S.

80 - 90 10% Ss: AA
90% Sh: AA

90 - 600 N.S.

600 - 10 10% Ss: wht, fn-g, sbang, hvy clay fld, sl arkosic,
w/occ. carb. incl.
90% Sh: gry, soft, fri, sl silty-clayey, sl micro-
micaceous

10 - 20 100% Sh: AA

20 - 40 10% Ss: wht, vfn-g, vy hvy clay fill, no vis. porosity
90% Sh: AA

40 - 50 N.S.

50 - 60 10% Ss: AA, vfn-fn-g
90% Sh: AA

60 - 70 20% Ss: AA
80% Sh: AA

670 - 700 10% Ss: AA
90% Sh: gry-drk gry, firm, fri, silty-sl sandy, some carb.

700 - 50 50% Ss: wht, fn-g, sbang, hvy clay fill, sl arkosic
50% Sh: gry, soft, fri, sl silty

50 - 70 50% Ss: AA
50% Sh: gry, soft, fri, clayey, sl lignitic

70 - 80 30% Ss: AA, w/occ. carb. incl.
70% Sh: AA

780 - 810 N.S.

810 - 20 50% Ss: AA
50% Sh: gry, firm, silty, lignitic

20 - 30 70% Ss: AA
30% Sh: AA

30 - 40 30% Ss: AA, fn-m-g
70% Sh: AA

40 - 50 60% Ss: AA
30% Sh: gry, soft, fri, clayey
10% Coal: blk, vit.

50 - 60 80% Ss: AA
20% Sh: AA
Tr. Coal: AA

60 - 70 30% Ss: AA, fn-g
70% Sh: AA

70 - 80 80% Ss: AA, mod-hvy clay fill
20% Sh: AA

80 - 90 10% Ss: AA
90% Sh: AA, sl micro-micaceous

90 - 900 70% Ss: AA
30% Sh: AA

900 - 10 60% Ss: wht, fn-g, sbang, hvy clay fill
40% Sh: gry, soft, fri, clayey, sl lignitic

10 - 20 N.S.

20 - 40 60% Ss: AA
40% Sh: AA

40 - 70 50% Ss: AA
40% Sh: AA
10% Coal: blk, vit.

70 - 80 N.S.

980 - 90 20% Ss: clr wht, fn-g, sbang, sl-mod clay fill, good-fair porosity, w/occ. carb. incl.
 80% Sh: gry, soft, fri, clayey, sl micro-micaceous, w/occ. carb. incl.

90 - 1000 30% Ss: wht, fn-g, sbang, hvy clay fill, poss. sl. porosity
 70% Sh: AA

1000 - 10 40% Ss: wht, fn-g, sbrnd, sl-mod clay fld, w/occ. carb. incl.
 60% Sh: gry, soft, fri, clayey, sl lignitic

10 - 20 50% Ss: AA
 50% Sh: AA
 Tr. Chert: clr-milky wht, sbang, crs-g.

20 - 30 20% Ss: AA
 80% Sh: gry-drk gry, firm, fri, sl silty, sl carb.

30 - 60 10% Ss: AA, sl clay fld, good porosity, w/occ. carb.incl.
 80% Sh: AA
 10% Coal: blk, vit.

60 - 70 20% Ss: AA
 80% Sh: AA

70 - 1110 40% Ss: AA
 60% Sh: AA

1110 - 30 50% Ss: wht, m-g, sbang, mod clay fill, fair porosity, w/occ. carb. incl.
 40% Sh: AA
 10% Coal: blk, vit.

30 - 50 30% Ss: clr wht, m-g, sbrnd, sl clay fld, good porosity, sl arkosic
 70% Sh: gry-drk gry, firm, fri, silty, some carb.

50 - 60 N.S.

60 - 80 90% Sh: AA
 10% Coal: blk, vit.

80 - 90 100% Sh: AA

90 - 1200 30% Ss: clr wht, fn-g, sbrnd, sl clay fld, good por.
 70% Sh: gry, firm, fri, silty, w/carb. incl., some drk gry and carb.

1200 - 10 10% Ss: AA
 80% Sh: AA
 10% Coal: blk, vit.

10 - 20 100% Sh: drk gry, firm, fri, carb., silty

1220 - 30 30% Ss: wht, fn-g, sbrnd, hvy clay fill, poss. sl.
porous, sl calc.
70% Sh: gry, firm, fri, silty, w/occ. carb. incl.

30 - 40 10% Ss: clr-wht, fn-g, sbrnd, sl clay fld, good por.
80% Sh: gry, soft-firm, fri, clayey-sl silty, w/carb.
incl.
10% Coal: blk, vit.

40 - 50 50% Sh: gry, soft, fri, clayey, w/carb. incl.
50% Coal: blk, vit.

50 - 70 70% Sh: AA
30% Coal: AA

70 - 80 20% Ss: wht, fn-g, sbrnd, sl clay fld, good por.,
w/occ. carb.incl., sl calc
20% Coal: AA
60% Sh: AA

80 - 90 60% Ss: AA
40% Sh: lt gry-gry, soft-firm, silty, w/carb. incl.

90 - 1300 N.S.

1300 - 20 10% Ss: wht, fn-m-g, sbrnd, sl clay fld, good por,
sl arkosic, sl glauc, w/occ. carb. incl.
80% Sh: gry, soft, fri, clayey-silty, w/carb. incl.,
some waxy
10% Coal: blk, vit.

20 - 30 10% Ss: AA
70% Sh: AA
20% Coal: AA

30 - 40 30% Ss: wht, m-g, sbrnd, sl-mod clay fld, good por,
sl arkosic, w/carb. incl.
70% Sh: AA

40 - 50 30% Ss: AA, sl clay fld, good por.
60% Sh: AA
10% Coal: blk, vit.

50 - 60 N.S.

60 - 70 10% Ss: AA, calc, sl-mod clay fld, fair por.
90% Sh: gry, soft-firm, fri, silty-clayey, some waxy

70 - 80 N.S.

80 - 90 20% Ss: AA, sl glauc.
70% Sh: AA
10% Coal: blk, vit.

90 - 1410 30% Ss: AA
70% Sh: lt gry, firm, fri, silty, w/carb. incl.

1410 - 20 20% Ss: clr gry, fn-g, sbrnd, sl clay fld-clean, good por, sl arkosic, sl glauc, calc.
80% Sh: gry, soft, clayey, some drk gry and carb.

20 - 30 60% Ss: wht, fn-g, sbrnd, sl-mod clay fld, fair por, some sl shaly, calc.
30% Sh: AA
10% Coal: blk, vit.

30 - 50 30% Ss: AA
60% Sh: AA, no carb.
10% Coal: AA

50 - 60 40% Ss: AA, w/carb. incl.
50% Sh: AA
10% Coal: AA

60 - 70 50% Ss: AA, less carb, sl glauc.
40% Sh: AA, gry-drk gry
10% Coal: AA

70 - 80 20% Ss: AA, mod clay fld, fair por.
60% Sh: AA
20% Coal: blk, vit.

80 - 90 40% Ss: wht, fn-g, sbrnd, mod clay fld, fair por., calc, w/carb. incl., some shaly and tite
40% Sh: gry, soft-firm, silty-clayey, fri.
20% Coal: AA

90 - 1500 40% Ss: AA, less clay fld, good por, sl glauc.
50% Sh: AA
10% Coal: AA

1500 - 20 10% Ss: gry, fn-g, sbrnd, shaly, tite, calc.
80% Sh: AA
10% Coal: AA

20 - 50 N.S.

50 - 60 10% Ss: wht, vfn-fn-g, sbrnd, clay fld, poor por, calc, w/occ. carb. incl.
80% Sh: AA, vy silty
10% Coal: AA

60 - 70 90% Sh: gry-gry brn, firm, fri, silty, w/carb. incl.
10% Coal: AA

70 - 90 100% Sh: AA
Tr. Coal: AA

90 - 1620 N.S.

1620 - 30 10% Ss: wht, fn-m-g, sbrnd, sl clay fld, good por.
70% Sh: lt gry, sl less silty
20% Coal: blk, vit.