

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____				5. LEASE DESIGNATION AND SERIAL NO. SF-078828-A			
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____				6. IF INDIAN, ALLOTTEE OR TRIBE NAME			
2. NAME OF OPERATOR Energy Reserves Group, Inc.				7. UNIT AGREEMENT NAME Gallegos Canyon Unit			
3. ADDRESS OF OPERATOR P.O. Box 3280 - Casper, Wyoming 82602				8. FARM OR LEASE NAME			
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1,680' FNL & 1,540' FWL At top prod. interval reported below At total depth				9. WELL NO. 317			
14. PERMIT NO. _____ DATE ISSUED _____				10. FIELD AND POOL, OR WILDCAT West Kutz Pictured Cliffs			
15. DATE SPUDDED 2-13-81				11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA Sec. 27-T28N-R12W			
16. DATE T.D. REACHED 2-15-81				12. COUNTY OR PARISH San Juan			
17. DATE COMPL. (Ready to prod.) 4-08-81				13. STATE New Mexico			
18. ELEVATIONS (DF, REB, RT, GR, ETC.)* G.L. 5,704'; K.B. 5,706'				19. ELEV. CASINGHEAD			
20. TOTAL DEPTH, MD & TVD 1,650' K.B.		21. PLUG BACK T.D., MD & TVD 1,608' K.B.		22. IF MULTIPLE COMPL., HOW MANY* NA		23. INTERVALS DRILLED BY 0-1,650'	
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Pictured Cliffs 1,430'-1,458' K.B.						25. WAS DIRECTIONAL SURVEY MADE NO	
26. TYPE ELECTRIC AND OTHER LOGS RUN Induction Electric Log - Density & Nertron Borehole Compensated						27. WAS WELL CORED NO	
28. CASING RECORD (Report all strings set in well)							
CASING SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE	
7"		17#		124' KB		9-7/8"	
4-1/2"		10.5#		1,650' KB		6-1/4"	
						CEMENTING RECORD	
						75 sx "B" + 2% CaCl ₂	
						& 1/4# Flocele/sx	
						See Back of Page	
						AMOUNT PULLED	
						-0-	
						-0-	
29. LINER RECORD							
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*	
None							
30. TUBING RECORD							
SIZE		DEPTH SET (MD)		PACKER SET (MD)			
2-3/8"		1,472' K.B.		None			
31. PERFORATION RECORD (Interval, size and number)							
1,430'-32'							
1,442'							
1,446'-48'							
1,454'-58' w/1 JSPF (12 holes)							
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.							
DEPTH INTERVAL (MD)				AMOUNT AND KIND OF MATERIAL USED			
1,430'-1,458'				Brokedown w/500 gal 7 1/2% "Spearhead Acid" w/additives + 18 ball sealers			
				Frac'd w/12,000 gal gelled pad +			
				10,000 gal 70% Quality Foam w/6100#			
33.* PRODUCTION See Back of Page							
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)				WELL STATUS (Producing or shut-in)	
						SI	
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD	
4-08-81		24		3/8"		0	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.	
95		160				0	
						GAS—MCF.	
						319	
						WATER—BBL.	
						1	
						OIL GRAVITY-API (CORR.)	
						NA	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) VENTED DURING TEST						TEST WITNESSED BY T.C. DURHAM	
35. LIST OF ATTACHMENTS SAMPLE DESCRIPTION ATTACHED							
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records							
SIGNED <u>James L. RMD</u>				TITLE Production Engineer-RMD			
DATE 4-16-81				FARMINGTON DISTRICT			

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

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.

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				NAME	MEAS. DEPTH	TRUE VERT. DEPTH
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.			
			Sample Description Attached Continued from front - 4-1/2" casing cementing - 250 sx 50-50 Pozmix w/1/4# Flocele/sx. Squeezed 4-1/2" x 7" annulus w/75 sx 50-50 Pozmix + 2% CaCl₂. Frac cont - 10-20 sand - refrac'd w/ 20,000 gal 70% Quality Foam w/ 22,500# 10-20 sand.	LOG TOPS		
				Ojo Almo	195'	
				Kirkland	291'	
				Fruiland	1,042'	
				Pictured Cliffs	1,423'	
				Lewis	1,597'	
				T.D. Logger	1,642'	
				T.D. Driller	1,650'	

SAMPLE DESCRIPTION .

250 - 60 60% Ss: wht, transp, cg, sbang-sbrnd, lse
10% Chert: pink, lt org, cg, sbang-sbrnd, lse, sme banded
20% Clystn: lt grn, plty, vy sft
10% Pyrite: yel, metallic, xln, vy hard
60 - 70 70% Ss: AA, w/sme wht, opaque
30% Chert: AA, w/sme smoky
70 - 80 90% Ss: wht, transp, mg, sbrnd, sme glauc, vy cly fld, vy
sft, tite
10% Chert: cream-lt org, vy cg, sbang
80 - 90 50% Ss: AA
30% Sh: grnish gry, blk, sft
20% Chert: lt org, transp-opaque, vy cg, sbrnd, lse
Tr. Pyrite: AA
90 - 300 30% Ss: wht, transp, f-mg, sbrnd, sme glauc, vy cly fld,
vy sft, tite
60% Sh: grnish gry, dk gry, blk, sme carb incl, sft
10% Chert: AA
300 - 10 80% Ss: wht, transp, cg, ang, lse, vy cly fld, sft, tite
10% Chert: AA
10% Sh: m gry, blk, sme carb incl, sft
10 - 20 40% Ss: AA
30% Sh: AA
30% Chert: AA
20 - 30 80% Ss: AA, w/sme mg, cly fld, mst lse
10% Chert: AA
10% Clystn: wht, plty, vy sft
30 - 40 70% Ss: AA
20% Sh: lt gry, blk, sme carb, sft
10% Chert: AA
40 - 50 90% Ss: wht, transp, cg, sbrnd, lse, cly fld, sft, tite
10% Chert: AA
Tr. Pyrite: AA
50 - 60 100% Ss: wht, mg, sbrnd, sme glauc, carb, vy cly fld, sft
brittle, tite
60 - 70 100% Clystn: wht, vy lt grn, blk-plty, sme glauc, vy sft
70 - 80 40% Ss: bluish gry, vfn-g, sbrnd, vy cly fld, sft, tite
60% Clystn: AA
80 - 90 100% Clystn: wht, md gry, blk, sft, sme glauc
Tr. Ss: wht, fg, sbrnd, vy cly fld, sme glauc, sft, tite
90 - 400 10% Ss: wht, grn, transp-opaque, vfn-cg, vy cly fld, hard,
tite
90% Clystn: AA
400 - 10 90% Ss: wht, transp, fn-cg, sbrnd, lse, sme silicified,
hard-sft, tite, vy cly fld
10% Chert: lt org, transp, cg, sbang, lse
10 - 50 70% Ss: AA
30% Clystn: wht, blk, smooth, sme glauc, vy sft
Tr. Pyrite: yel, metallic, hard
50 - 60 30% Ss: wht, transp, mg, sbang-sbrnd, carb incl, glauc,
sl-vy cly fld, sft, tite
50% Sh: grn, blk, smooth, sl siliceous, frm
20% Clystn: wht, plty, sme glauc, vy sft
60 - 70 60% Ss: AA, w/sme f & cg, lse
40% Sh: lt gry, blk, carb, frm-sft

470 - 90	70% Ss: AA, w/frags of wht, transp, mg, vy clean, hard, tite
	10% Sh: AA
	20% Clystn: AA
90 - 500	60% Ss: AA
	10% Sh: AA, w/sme plty
	30% Clystn: AA
500 - 10	50% Ss: grn, vfn-g, sbrnd, vy cly fld, frm, tite
	50% Clystn: wht, plty, vy sft, w/glauc
10 - 20	70% Ss: AA, w/fg, wht, vy cly fld
	20% Chert: wht, lt org, transp-opaque, cg, ang-sb ang, lse, hard
	10% Clystn: AA
20 - 30	40% Ss: AA
	40% Clystn: AA
	20% Chert: AA
30 - 40	70% Ss: AA
	20% Chert: AA, w/sme pink
	10% Clystn: AA
	Tr. Sh: gry, blk, sme carb, frm
40 - 50	80% Ss: AA, w/mstly fg, wht, vy cly fld
	10% Chert: AA
	10% Clystn: AA
50 - 60	80% Ss: wht-grn-brn, fg, sft-frm, shly, glauc, sme carb incl, vy cly fld, sl ark, sbrnd
	20% Chert: wht, vy lt brn, transp, cg, ang-sbrnd, lse
60 - 70	100% Ss: AA, w/o brn
70 - 80	60% Ss: AA
	40% Chert: AA, w/occ pink-red xls
	Tr. Pyrite: yel, metallic, xln, hard
	Tr. Sh: lt gry, blk, sme carb, sft
80 - 600	20% Ss: lt grn, vfn-g, sbrnd, cly fld, frm, tite
	60% Sh: gry, blk, carb, sft
	10% Chert: AA
	10% Clystn: AA
600 - 10	50% Ss: AA, w/sme sl-vy clyfld
	30% Sh: AA
	20% Chert: AA
10 - 20	50% Ss: wht, grn, gry, fg, sbrnd, glauc, carb, cly fld, sft, tite
	50% Sh: AA
20 - 30	40% Ss: AA
	30% Sh: AA
	30% Chert: wht, org, cg, sbrnd-sbang, lse, hard
30 - 50	20% Ss: AA
	60% Sh: gry, blk, carb, frm
	20% Chert: AA
50 - 60	30% Ss: AA
	50% Sh: AA
	20% Chert: AA
60 - 70	20% Ss: AA
	70% Sh: AA
	10% Clystn: wht, plty, amber, vy sft
70 - 80	30% Ss: AA
	70% Sh: blu-grn, gry, blk, carb incl, sl slty, sft-frm
80 - 90	40% Ss: AA
	60% Sh: AA

690 - 700 60% Ss: AA, w/sme sucrosic
 40% Sh: AA, w/sme reddish brn, and blk-y-plty
 700 - 10 70% Ss: wht, mg, sbrnd, glauc, carb, mod cly fld, sft,
 poss sl por, sme frm
 30% Sh: lt gry, brn, blk-y, carb, sl slty
 10 - 20 50% Ss: AA, mstly wht
 40% Sh: AA, w/sme plty
 10% Chert: wht, lt org, vy cg, sbang-sbrnd, hrd
 20 - 30 40% Ss: AA, w/f-mg
 50% Sh: AA
 10% Clystn: lt grn, plty, smooth, sft
 30 - 40 20% Ss: AA
 70% Sh: AA
 10% Clystn: grn, blk-y, smooth, frm
 40 - 50 30% Ss: wht, mg, sbrnd-sbang, glauc, carb, mod cly fld,
 sme bent., frm, tite
 50% Sh: brn, blk-y, carb, frm
 20% Clystn: AA, w/sme plty
 50 - 60 60% Ss: AA
 30% Sh: AA
 10% Clystn: AA
 60 - 70 50% Ss: AA
 20% Clystn: AA
 30% Chert: wht, org, cg, sbrnd, lse, sme red staining
 70 - 80 60% Ss: AA
 20% Sh: AA
 10% Clystn: AA
 10% Chert: AA
 80 - 800 30% Ss: AA
 70% Sh: lt grn, gry, blk-y-plty, sme carb, frm
 800 - 10 20% Ss: AA
 80% Sh: AA, w/mst sl slty, frm
 Tr. Pyrite, AA, hard
 10 - 20 10% Ss: wht, fg, sbrnd, carb incl, sl cly fld, frm, tite
 90% Sh: AA
 20 - 30 50% Ss: AA, w/sme blu grn, vfn-g, bent., all cly fld, tite
 50% Sh: gry, grn, plty-blk-y, sft
 30 - 40 40% Ss: AA, w/mstly wht, fg, vy cly fld
 50% Sh: AA, w/sme brn, sl slty
 10% Chert: wht, lt org, cg, sbang-sbrnd, hard, lse
 40 - 50 10% Ss: AA
 90% Sh: AA
 Tr. Chert: AA
 50 - 70 50% Ss: wht, blu-grn, vfn-g, sbrnd, glauc, carb incl,
 sme bent., brittle-frm, tite
 50% Sh: AA
 Tr. Pyrite: AA and Tr. Coal: blk, vit, ang
 70 - 80 10% Ss: AA
 90% Sh: AA, w/sme sl slty, sme carb
 Tr. Pyrite: AA
 880 - 920 100% Sh: lt gry, lt grn, plty-blk-y, frm-sft, sl slty
 Tr. Ss: wht, fg, sbrnd, vy cly fld, sft
 20 - 30 20% Ss: AA, w/glauc, carb, sft, poss sl por
 80% Sh: AA
 30 - 40 100% Sh: AA
 40 - 50 20% Ss: AA
 80% Sh: AA

950 - 60 100% Sh: AA
 60 - 90 100% Sh: gry, grn, brn, blk-pty, sl slty, carb, sft
 990 - 1000 10% Ss: wht, vfn-g, sbrnd, glauc, carb, sl cly fld, sft,
 poss sl por
 90% Sh: AA
 1000 - 10 100% Sh: AA, w/sme carb incl
 Tr. Ss: AA
 10 - 20 100% Sh: grn, gry, med brn, pty-blky, sft
 Tr. Ss: AA
 Tr. Clystn: wht, pty, vy sft
 20 - 40 20% Ss: wht, f-mg, sbrnd-sbang, sme glauc, carb, fri, mod
 calc, poss sl por
 80% Sh: AA
 40 - 50 20% Ss: AA
 70% Sh: AA
 10% Coal: blk, vit, sbrnd, sl shly, sft
 50 - 60 100% Sh: AA
 60 - 70 10% Ss: AA, frm
 90% Sh: AA
 70 - 80 10% Ss: AA, w/sl brn. staining
 90% Sh: AA, w/sme rddsh brn
 Tr. Pyrite: AA, and Tr. Coal: AA
 80 - 90 10% Ss: AA, but clean, frm, vy calc
 90% Sh: AA
 1090 - 1100 20% Ss: AA, w/incr. carb incl and sme brn. staining
 80% Sh: AA
 Tr. Pyrite: AA
 1100 - 10 20% Ss: wht, fg, sbrnd, carb incl, cly fld, hard-brittle,
 vy calc, tite
 80% Sh: gry, grn, blk-pty, sl slty
 Tr. Pyrite: AA and Tr. Clystn: pink-flesh, pty, vy sft
 10 - 30 10% Ss: AA, w/sme vfn-g, lt brn, vy calc
 90% Sh: AA, w/sme dk brn
 30 - 40 10% Ss: AA, but sl cly fld, brittle, tite
 90% Sh: AA, sft
 Tr. Coal: blk, vit, sbrnd, sl shly, sft
 40 - 50 10% Ss: AA
 90% Sh: AA
 50 - 60 20% Ss: AA, sl ark, non-calc, sft
 80% Sh: AA
 Tr. Pyrite: AA and Chert: org, wht, transp-opaque, cg,
 sbrnd
 60 - 70 30% Ss: AA, but sft-frm, mod-vy calc
 70% Sh: AA
 Tr. Chert and Tr. Coal: AA
 70 - 80 20% Ss: AA
 80% Sh: AA
 Tr. Coal: AA
 80 - 90 40% Ss: AA
 60% Sh: AA
 Tr. Coal: AA
 1190 - 1200 50% Ss: AA, but w/sme lt grn, fg, frm
 50% Sh: AA
 Tr. Chert: AA
 1200 - 10 20% Ss: AA, w/sbang-sbrnd, sft-hard, vy calc in part, tite
 80% Sh: AA
 Tr. Pyrite and Tr. Chert: AA

1210 - 30 30% Ss: AA, w/mstly vy cly fld, tite
60% Sh: AA, w/incr. carb content
10% Chert: AA
Tr. Pyrite: AA

30 - 40 10% Ss: AA
80% Sh: AA
10% Chert: wht, lt org, cs-xln, sbrnd-sbang, lse, hard
Tr. Coal: blk, vit, frm, shly
Tr. Pyrite: AA

40 - 50 40% Ss: AA
60% Sh: AA, w/sme sl slty
Tr. Coal and Tr. Chert: AA

50 - 60 50% Ss: wht, fg, sbrnd, glauc, carb, cly fld, sl ark, sft, tite
40% Sh: lt grn, brn, blk-pty, sft
10% Chert: AA

60 - 70 60% Ss: AA
40% Sh: AA
Tr. Pyrite: AA and Tr. Coal: blk, vit, tabular, hard

70 - 80 50% Ss: AA
50% Sh: AA
Tr. Pyrite: AA and Tr. Chert: AA

80 - 90 40% Ss: AA
50% Sh: gry, grn, pty-blky, sme sl slty, frm
10% Chert: AA, w/occ org-red stn
Tr. Pyrite: AA

1290 - 1300 60% Ss: AA
40% Sh: AA
Tr. Pyrite: AA and Tr. Chert: AA, w/o stain

1300 - 10 60% Ss: wht, gry, grn, vfn-g, sbrnd, glauc & carb incl, cly fld-clean, sft-hrd, clean are vy calc, all tite
40% Sh: AA, but sme are sft
Tr. Coal: blk, vit, ang, hard, and Tr. Chert: wht, transp, cs-xln, lse, hard

10 - 20 50% Ss: wht, fg, sbrnd, glauc & carb, cly fld, frm, vy calc tite
30% Sh: AA
10% Chert: AA, w/sme lt org and red staining
10% Pyrite: AA, and drusy in appearance

20 - 30 40% Ss: AA, w/sme brn, vfn-g, and non-calc
50% Sh: AA
10% Chert: AA, w/o staining

30 - 40 20% Ss: AA
60% Sh: AA
10% Chert: AA
10% Pyrite: AA

40 - 50 40% Ss: AA, w/wht vy sl calc
50% Sh: AA
10% Chert: AA

50 - 60 50% Ss: wht, fg, sbang-sbrnd, cly fld, carb & glauc incl, frm-brittle, calc, tite, blu strmg fluor after chlor, blu-grn, fg, sbrnd, brittle, non-calc, clean
30% Sh: brn, grn, gry, blk-pty, sme carb, sft
10% Chert: wht, red, org, transp-opaque, cs-xln, sbrnd, lse
10% Pyrite: yel, metallic, cs-xln, hard

1360 - 70 40% Ss: AA, w/lt brn, sl ark, sl cly.fld, frm, poss
sl por, and w/o blu-grn, vy calc, blu strmg fluor
after chlor.
50% Sh: AA
10% Chert: wht, transp, cs-xln, lse, hard
Tr. Pyrite: AA and Tr. Coal: AA

70 - 90 40% Ss: AA, w/blu strmg. fluor after chlor.
30% Sh: AA
20% Clystn: gry, blk, smooth, swlg, vy sft
10% Chert: AA
Tr. Coal: AA

1390 - 1400 40% Ss: AA, w/blu strmg fluor after chlor
50% Sh: grn, brn, plty-blky, sl carb, sft
10% Coal: blk, vit, ang, sl shly, hard
Tr. Chert: AA and Pyrite: AA

1400 - 10 30% Ss: wht, gry, grn, fg, sbrnd, glauc & carb incl, cly
fld, hard-sft, vy calc, por, strmg. blu fluor
40% Sh: gry, brn, blk, sme slty, sme carbonaceous,
frm-sft
10% Chert: wht, transp, cs-xln, lse
10% Coal: AA
10% Pyrite: AA

10 - 20 40% Ss: AA, w/fluor AA
30% Sh: AA
20% Chert: AA, w/sme red & org stng.
10% Coal: AA

20 - 50 40% Ss: AA, w/fluor AA
40% Sh: AA
20% Chert: AA, w/org, transp & opaque
Tr. Coal: AA

50 - 60 40% Ss: AA, firm, mod por.
20% Sh: AA
20% Clystn: lt grn, plty, vy sft
20% Chert: wht, org, red, transp-opaque, cs-xln, lse

60 - 70 60% Ss: AA, blu strmg. fluor
20% Sh: AA
10% Chert: AA
10% Coal: AA

70 - 80 20% Ss: AA, w/fluor AA
40% Sh: AA
20% Chert: AA
10% Pyrite: AA
10% Coal: AA

80 - 90 10% Ss: AA, w/fluor AA
60% Sh: AA, w/sme vy slty & hard
20% Chert: AA
10% Coal: AA

1490 - 1500 20% Ss: AA
60% Sh: AA
20% Chert: AA, w/mstly wht

1500 - 20 30% Ss: AA, w/sme blu grn, hard, w/strmg. blu fluor
40% Sh: AA, w/mstly lt grn, plty
20% Chert: AA
10% Pyrite: yel, metallic, hard

1520 - 30 30% Ss: AA, w/decreasing cly flg, strmg blu fluor w/weak cut
40% Sh: AA
20% Chert: AA
10% Pyrite: AA

30 - 40 50% Ss: wht, fg, sbrnd, sl cly fld, carb incl, weakly cemented, poss sl por, w/strmg. blu fluor w/fair cut
30% Sh: grn, gry, rddsh brn, plty-blky, sme sl slty, sft
20% Chert: wht, pink, org, cs-xln, sbrnd, ls e
Tr. Pyrite: AA and Tr. Clystn: wht, plty, vy sft

40 - 50 30% Ss: AA, w/strmg. blu fluor w/wk cut
40% Sh: AA, w/sme dk gry
10% Chert: AA
10% Pyrite: AA
10% Coal: blk, vit, ang, hard

50 - 60 20% Ss: AA, sl ark, strmg. fluor w/cut AA
50% Sh: AA
20% Chert: AA
10% Pyrite: AA

60 - 70 40% Ss: wht, fg, sbrnd, cly fld, carb incl, weakly cemented, frm, poss sl por.
30% Sh: grn, brn, plty, sl slty, sft, calc
20% Chert: AA
10% Pyrite: AA

70 - 80 40% Ss: brn, wht, vfn-g, sbrnd, carb incl, cly fld, sft, poss sl por
30% Sh: AA
10% Clystn: grn, plty, vy sft
20% Chert: AA
Tr. Pyrite: AA

80 - 90 40% Ss: AA, w/strmg. blu fluor w/wk cut
30% Sh: AA, w/mstly dk brn
20% Chert: AA
10% Pyrite: AA

1590 - 1600 10% Ss: AA
70% Sh: AA
10% Clystn: AA
10% Chert: AA
Tr. Pyrite: AA

1600 - 10 60% Ss: lt gry, wht, fg, sbrnd, carb incl, glauc, cly fld, sft-brittle
20% Sh: gry, plty-blky, carb, sft
10% Clystn: grn, wht, plty, vy sft
10% Chert: AA
Tr. Coal: AA

10 - 20 80% Ss: AA, w/mstly sl ark, lt gry
10% Sh: AA
10% Chert: AA
Tr. Coal: AA

20 - 30 70% Ss: AA
20% Sh: AA
10% Chert: AA
Tr. Pyrite: AA

30 - 35 50% Ss: AA
20% Sh: AA
10% Clystn: AA
20% Chert: AA

TD 1635'