

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

5a. Indicate Type of Lease	
State ☐	Fee ☒
5. State Oil & Gas Lease No.	

1a. TYPE OF WELL	
OIL WELL ☐	GAS WELL ☐
b. TYPE OF COMPLETION	
NEW WELL ☒	WORK OVER ☐
DEEPEN ☐	PLUG BACK ☐
DIFF. RESVR. ☐	OTHER ☐

7. Unit Agreement Name
Miller Gas Com Unit
8. Farm or Lease Name
K.S. Ferguson

2. Name of Operator
Energy Reserves Group, Inc.

9. Well No.
1-E

3. Address of Operator
P.O. Box 3280 - Casper, Wyoming 82602

10. Field and Pool, or Wildcat Basin
Dakota

4. Location of Well	
UNIT LETTER D	LOCATED 820 FEET FROM THE North
LINE AND 840	FEET FROM
West	20 TWP. 30N
LINE OF SEC. 20	RGE. 13W
THE	NMPM

12. County
San Juan

15. Date Spudded
8-21-80
16. Date T.D. Reached
9-4-80
17. Date Compl. (Ready to Prod.)
9-22-80
18. Elevations (DF, RKB, RT, GR, etc.)
GL 5,533'; KB 5,547'

19. Elev. Casinghead

20. Total Depth
6,152'
21. Plug Back T.D.
6,100'
22. If Multiple Compl., How Many
NA
23. Intervals Drilled By
Rotary Tools
0-6,152'
Cable Tools

25. Was Directional Survey Made
NO

24. Producing Interval(s), of this completion - Top, Bottom, Name	
Dakota: 5,960' - 6,066'	

27. Was Well Cored
NO

26. Type Electric and Other Logs Run
Dual Induction Focused Log, Compensated Neutron - Density Log

27. Was Well Cored
NO

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24#	378' KB	12-1/4"	375 sx 'B' + 2% CaCl ₂	
4-1/2"	10.5#	6,142' KB	7-7/8"	See Back Page	

29. LINER RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
None				

30. TUBING RECORD	
SIZE	DEPTH SET
2-3/8"	6,051'

31. Perforation Record (Interval, size and number)	
5,960'-62'	
5,980'-82'	w/1 JSPF
6,021'-25'	(27 perforations)
6,041'-47'	
6,058'-66'	

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5,960'-6,066'	Spot'd 2 bbl acid, broke down
	perfs 6,021'-66' w/1000 gal
	7 1/2% Spearhead acid + 30 ball
	sealers - See Back Page

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
						SI	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
9-22-80	24	16/64"		1-1/2	725	6 (Frac Fluid)	483,333 SCF/STB
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
400 psi	560 psi		1-1/2	725	6 (Frac Fluid)	± 55	

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 information shown on both sides of this form is true and complete to the best of my knowledge and belief.		
SIGNED	TITLE	DATE
<i>David C. Sh...</i>	Production Engr-RMD	September 30, 1980

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depth. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 36 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1165.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

T. Anhy _____
 T. Salt _____
 B. Salt _____
 T. Yates _____
 T. 7 Rivers _____
 T. Queen _____
 T. Grayburg _____
 T. San Andres _____
 T. Glorieta _____
 T. Paddock _____
 T. Blinebry _____
 T. Tubb _____
 T. Drinkard _____
 T. Abo _____
 T. Wolfcamp _____
 T. Penn. _____
 T. Cisco (Bough C) _____

T. Canyon _____
 T. Strawn _____
 T. Atoka _____
 T. Miss _____
 T. Devonian _____
 T. Silurian _____
 T. Montoya _____
 T. Simpson _____
 T. McKee _____
 T. Ellenburger _____
 T. Gr. Wash _____
 T. Granite _____
 T. Delaware Sand _____
 T. Bone Springs _____
 T. _____
 T. _____
 T. _____

Northwestern New Mexico

T. Ojo Alamo _____
 T. Kirtland-Fruitland _____
 T. Pictured Cliffs 1,358'
 T. Cliff House 1,511'
 T. Menefee _____
 T. Point Lookout 3,789'
 T. Mancos 4,148'
 T. Gallup 5,097'
 Base Greenhorn 5,849'
 T. Dakota 5,954'
 T. Morrison _____
 T. Todilto _____
 T. Entrada _____
 T. Wingate _____
 T. Chinle _____
 T. Permian _____
 T. Penn. "A" _____

T. Penn. "B" _____
 T. Penn. "C" _____
 T. Penn. "D" _____
 T. Leadville _____
 T. Madison _____
 T. Elbert _____
 T. McCracken _____
 T. Ignacio Qtzte _____
 T. Granite _____
 T. _____
 T. _____
 T. _____
 T. _____
 T. _____
 T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from 5,960' to 6,066' No. 4, from _____ to _____
 No. 2, from _____ to _____ No. 5, from _____ to _____
 No. 3, from _____ to _____ No. 6, from _____ to _____

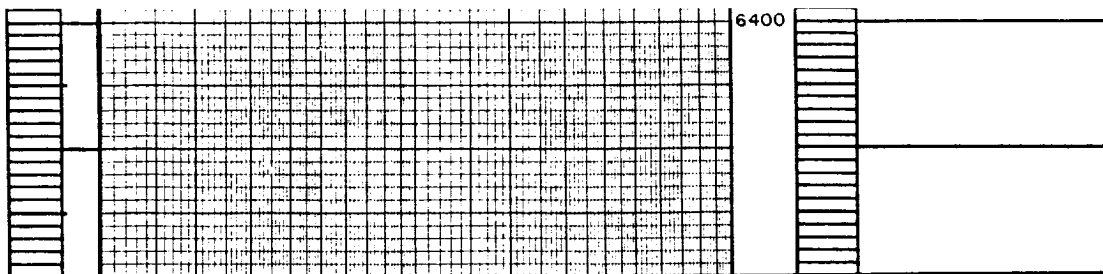
IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from _____ to _____ feet.
 No. 2, from _____ to _____ feet.
 No. 3, from _____ to _____ feet.
 No. 4, from _____ to _____ feet.

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
			<u>SAMPLE DESCRIPTION ATTACHED</u>				<u>ACID & FRACTURE:</u>
			Continued from 1st page				Broke down perfs 5,060'-82'
			Cementing 4-1/2":				w/750 gal 7 1/2% Spearhead acid +
			1st stage - 475 sx 'B'				10 ball sealers. Frac entire
			w/10% salt				zone w/60,000 gal 70% Quality
			2nd stage - Collar @ 4,270'				Foam w/60,000# 20-40 Sand.
			625 sx 50-50				
			Poz w/2% gel,				
			1/4# Flocele/sx.				
			3rd stage - Collar @ 1,651'				
			500 sx 50-50				
			Poz w/2% gel,				
			1/4# Flocele/sx.				
			Cement top @ 400'.				



EXPLANATION

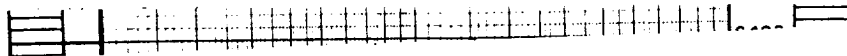
Ss . . . Shstn - - - Sh ——— Clystn ——— Ls ⊥ ⊥ ⊥ Dol / / / Coal ■■■ Chert ΔΔΔ Pyrite □ □ □

Sample Description.

- 1000-10 30% Ss: wht, fg, sbnd, clay fld, S&P, calc, frm, tite
70% Sh: gry-brn, frm, blk, slty, carb incl, some bl gry, sft & clayey
- 10-20 10% Ss: gry, fg, sbnd, shly-clay fld, S&P, calc, frm, tite
90% Sh: AA
- 20-30 100% Sh: lt gry-gry-brn, frm, blk, some slty carb incl
- 30-40 10% Ss: wht, vfg, sbnd, clay fld, S&P, sl calc, frm, tite
80% Sh: AA
10% coal: blk, vit, some shly
- 40-50 20% Ss: AA
80% Sh: AA
- 50-60 10% Ss: AA
90% Sh: AA, some coaly & blk
- 60-70 20% Ss: wht, vfg, sbnd, mod clay fld, calc, S&P, frm, poss sl por, N-S
80% Sh: lt gry-gry-bl gry, sft, blk-ppty, sl clayey, occ carb incl.
- 70-80 30% Ss: AA, fg, N-S
70% Sh: AA
- 80-90 10% Ss: AA
90% Sh: AA
- 90-1100 20% Ss: lt gry-tan, fg, sbnd, clay fld-shly, calc, S&P, sft, tite
70% Sh: lt gry-gry, sft, blk-ppty, sl clayey, occ carb incl
10% coal: blk, vit
- 1100-10 40% Ss: clr gry-wht, fg, sbnd, sl clay fld, sl calc, S&P, frm, sl por, N-S
60% Sh: lt gry, sft, blk-ppty, some sandy, occ carb incl.
- 10-20 50% Ss: wht, fg, sbnd, clay fld, sl calc, S&P, fri, poss sl por, N-S
40% Sh: gry-lt gry, sft, ppty
10% coal: blk, vit
- 20-30 100% Sh: gry, sft, blk-ppty, occ carb incl, sl clayey
- 30-40 30% Ss: wht, fg, sbnd, clay fld, sl calc, S&P, fri, tite, N-S
60% Sh: AA
10% coal: blk, vit
- 1140-1300 NS
- 1300-10 100% Sh: gry-olk gry, frm, ppty, sl clayey, carb incl.
- 10-20 90% Sh: AA
10% clystn: lt gry, sft, waxy
- 20-30 80% Sh: AA
20% clystn: AA
- 30-50 NS
- 50-60 10% clystn: lt gry, sft, waxy
90% coal: blk, vit
- 60-70 AA
- 70-80 90% Ss: wht, mg, sbnd, mod clay fld, S&P, sl calc, fld, occ glauc incl,
frm-fri, poss sl por, N-S
10% clystn: AA

- 80 - 90 10% ss AA, some sl shly, N.S.
10% sh gry, frm, blkly - pthy, sl clayey
- 90 - 1400 80% ss: wht, mg, sbnd, mod clay fld, SiP, sl calc, feld, glauc incl, fri, pass sl
por N.S.
20% sh: AA
- 1400 - 10 70% ss: wht, mg, sbnd, sl clay fld, SiP, calc, feld, ~~glauc incl~~, fri, ~~pass~~
~~st por~~ fair por, N.S.
- 10 - 20 70% ss: wht, mg, sbnd, mod clay fld, SiP, feld, calc, occ carb incl, occ glauc
incl, sl por, N.S.
30% sh: AA
- 20 - 30 70% ss: wht, mg, sbnd, sl clay fld, SiP, feld, calc, fair por, N.S.
30% sh: AA
- 30 - 40 60% ss: AA
40% sh: AA
- 40 - 50 60% ss: wht-gry, mg, sbnd, mod clay fld - sl shly, SiP, feld, calc, occ glauc
incl, fair por, N.S.
- 50 - 60 50% ss: AA
50% sh: gry, frm, blkly, sl clayey
- 60 - 70 50% ss: wht, fg, sbnd, clay fld, SiP, calc, feld, occ glauc incl, fri, pass
sl por, N.S.
50% sh: AA
- 70 - 80 AA
- 80 - 90 60% ss: wht, vgt-fg, sbnd, clay fld, SiP, calc, occ glauc incl, fri-frm, tite.
40% sh: AA
- 90 - 1500 NS
- 1500 - 10 100% sh: gry-dk gry, frm, pthy, some slty, sl calc
- 10 - 20 100% sh: AA, carb incl
- 20 - 40 AA
- 40 - 50 10% sltstn: gry, shly, carb incl, frm, tite
90% sh: AA

- 5100 - 10 100% sh: gry, sft, blkly, sl clayey, sl calc, carb incl
- 10 - 20 100% sh: AA
Tr. coal: blk, vit
- 20 - 30 100% sh: AA
- 30 - 40 100% sh: lt gry-gry, sft, blkly, sl clayey, sl calc, occ carb incl
- 40 - 50 100% sh: AA, some blk & carb
- 50 - 60 100% sh: lt gry-brn, sft-frm, blkly, some sl clayey, sl calc, occ
carb incl
- 60 - 70 AA
- 70 - 80 100% sh: AA, sft, some pthy
- 80 - 5200 AA
- 5200 - 10 100% sh: lt gry-brn, sft, blkly, sl clayey, sl calc, carb incl.
Tr. coal: blk, vit.
- 10 - 20 AA
- 20 - 30 90% sh: AA
10% coal: AA
- 30 - 40 AA



50-60	50% ss: AA 50% sh: gry, frm, blk, sl clayey
60-70	50% ss: wht, fg, sbnd, clay fld, S&P, calc, feld, occ glauc incl, fri, pass sl por; N-s 50% sh: AA
70-80	AA
80-90	60% ss: wht, vgt-fg, sbnd, clay fld, S&P, calc, occ glauc incl, fri-frm, tite. 40% sh: AA
90-1500	NS
1500-10	100% sh: gry-dk gry, frm, plty, some slty, sl calc
10-20	100% sh: AA, carb incl
20-40	AA
40-50	10% siltstn: gry, shly, carb incl, frm, tite 90% sh: AA
5100-10	100% sh: gry, sft, blk, sl clayey, sl calc, carb incl
10-20	100% sh: AA Tr. coal: blk, vit
20-30	100% sh: AA
30-40	100% sh: lt gry-gry, sft, blk, sl clayey, sl calc, occ carb incl
40-50	100% sh: AA, some blk & carb
50-60	100% sh: lt gry-brn, sft-frm, blk, some sl clayey, sl calc, occ carb incl
60-70	AA
70-80	100% sh: AA, sft, some plty
80-5200	AA
5200-10	100% sh: lt gry-brn, sft, blk, sl clayey, sl calc, carb incl. Tr. coal: blk, vit.
10-20	AA
20-30	90% sh: AA 10% coal: AA
30-40	AA
40-50	100% sh: AA, some bl gry, sft & clayey
50-60	100% sh: lt gry-gry-bl gry, sft, blk, sl clayey, sl calc, occ carb incl
60-70	90% sh: lt gry-brn, sft, frm, blk, sl calc, occ carb incl 10% coal: blk, vit
70-80	AA
80-90	100% sh: AA
90-5300	NS
5300-10	100% sh: lt gry-brn, sft, blk, sl calc, occ carb incl, clayey Tr. coal: blk, vit
10-20	AA
20-30	100% sh: AA
30-40	NS
40-50	100% sh: lt gry-gry, sft-frm, blk-plty, sl calc, some bl gry, sft & clayey Tr. coal: blk, vit

- 50-60 10% ss: AA
90% sh: AA, some coaly & blk
- 60-70 20% ss: wht, v. f. gy, sbnd, mod clay fld, calc, S&P, frm, poss sl por, N-S
80% sh: lt gry - gry, blk gry, sft, blk-ppty, sl clayey, occ carb incl.
- 70-80 30% ss: AA, fg, N-S
70% sh: AA
- 80-90 10% ss: AA
90% sh: AA
- 90-1100 20% ss: lt gry - tan, fg, sbnd, clay fld - shly, calc, S&P, sft, fite
70% sh: lt gry - gry, sft, blk-ppty, sl clayey, occ carb incl
10% coal: blk, vit
- 1100-10 40% ss: clr gry - wht, fg, sbnd, sl clay fld, sl calc, S&P, frm, sl por, N-S
60% sh: lt gry, sft, blk-ppty, some sandy, occ carb incl.
- 10-20 50% ss: wht, fg, sbnd, clay fld, sl calc, S&P, fri, poss sl por, N-S
40% sh: gry - lt gry, sft, ppty
10% coal: blk, vit
- 20-30 100% sh: gry, sft, blk-ppty, occ carb incl, sl clayey
- 30-40 30% ss: wht, fg, sbang, clay fld, sl calc, S&P, fri, fite, N-S
60% sh: AA
10% coal: blk, vit
- 1140-1300 NS
- 1300-10 100% sh: gry - dk gry, frm, ppty, sl clayey, carb incl.
- 10-20 90% sh: AA
10% clystn: lt gry, sft, waxy
- 20-30 80% sh: AA
20% clystn: AA
- 30-50 NS
- 50-60 10% clystn: lt gry, sft, waxy
90% coal: blk, vit
- 60-70 AA
- 70-80 90% ss: wht, mg, sbnd, mod clay fld, S&P, sl calc, feld, occ glauc incl,
frm - fri, poss sl por, N-S
10% clystn: AA
- 80-90 10% ss: AA, some sl shly, N-S
10% sh: gry, frm, blk-ppty, sl clayey
- 90-1400 80% ss: wht, mg, sbnd, mod clay fld, S&P, sl calc, feld, glauc incl, fri, poss sl
por, N-S
20% sh: AA
- 1400-10 70% ss: wht, mg, sbang, sl clay fld, S&P, calc, feld, ~~glauc incl~~, fri, ~~poss~~
~~sl por~~ fair por, N-S
- 10-20 70% ss: wht, mg, sbang, mod clay fld, S&P, feld, calc, occ carb incl, occ glauc
incl, sl por, N-S
30% sh: AA
- 20-30 70% ss: wht, mg, sbnd, sl clay fld, S&P, feld, calc, fair por, N-S
30% sh: AA
- 30-40 60% ss: AA
40% sh: AA
- 40-50 60% ss: wht - gry, mg, sbnd, mod clay fld - sl shly, S&P, feld, calc, occ glauc
incl, fair por, N-S
- 50-60 50% ss: AA
50% sh: gry, frm, blk, sl clayey
- 60-70 50% ss: wht, fg, sbnd, clay fld, S&P, calc, feld, occ glauc incl, fri, poss
sl por, N-S
50% sh: AA
- 70-80 AA

85 - 90 10% ss AA, some sl shly. N-S
10% sh gry, frm, blkgy - pty, sl clayey

90 - 1400 80% ss: wht, mg, sbnd, mod clay fld, S&P, sl calc, feld, glauc incl, fri, pass sl
por N-S
20% sh: AA

1400 - 10 70% ss: wht, mg, sbang, sl clay fld, S&P, calc, feld, ~~glauc incl~~, fri, ~~pass~~
~~sl por~~ fair por, N-S

10 - 20 70% ss: wht, mg, sbang, mod clay fld, S&P, feld, calc, occ carb incl, occ glauc
incl, sl por, N-S
30% sh: AA

20 - 30 70% ss: wht, mg, sbnd, sl clay fld, S&P, feld, calc, fair por, N-S
30% sh: AA

30 - 40 60% ss: AA
40% sh: AA

40 - 50 60% ss: wht-gry, mg, sbnd, mod clay fld - sl shly, S&P, feld, calc, occ glauc
incl, fair por, N-S

50 - 60 50% ss: AA
50% sh: gry, frm, blkgy, sl clayey

60 - 70 50% ss: wht, fg, sbnd, clay fld, S&P, calc, feld, occ glauc incl, fri, pass
sl por, N-S
50% sh: AA

70 - 80 AA

80 - 40 60% ss: wht, vgt-fg, sbnd, clay fld, S&P, calc, occ glauc incl, fri-frm, tite.
40% sh: AA

90 - 1500 NS

1500 - 10 100% sh: gry-dk gry, frm, pty, some slty, sl calc

10 - 20 100% sh: AA, carb incl

20 - 40 AA

40 - 50 10% sltstn: gry, shly, carb incl, frm, tite
90% sh: AA

5100 - 10 100% sh: gry, sft, blkgy, sl clayey, sl calc, carb incl

10 - 20 100% sh: AA
Tr. coal: blk, vit

20 - 30 100% sh: AA

30 - 40 100% sh: lt gry-gry, sft, blkgy, sl clayey, sl calc, occ carb incl

40 - 50 100% sh: AA, some blk & carb

50 - 60 100% sh: lt gry-brn, sft-frm, blkgy, some sl clayey, sl calc, occ
carb incl

60 - 70 AA

70 - 80 100% sh: AA, sft, some pty

80 - 5200 AA

5200 - 10 100% sh: lt gry-brn, sft, blkgy, sl clayey, sl calc, carb incl.
Tr. coal: blk, vit

10 - 20 AA

20 - 30 90% sh: AA
10% coal: AA

30 - 40 AA

- 40-50 100% sh: AA, some bl gry, sft & clayey
- 50-60 100% sh: lt gry-gry - blk gry, sft, blk, sl clayey, sl calc, occ carb incl
- 60-70 90% sh: lt gry-brn, sft, frm, blk, sl calc, occ carb incl
10% coal: blk, vit
- 70-80 AA
- 80-90 100% sh: AA
- 90-5300 NS
- 5300-10 100% sh: lt gry-brn, sft, blk, sl calc, occ carb incl, clayey
Tr coal: blk, vit
- 10-20 AA
- 20-30 100% sh: AA
- 30-40 NS
- 40-50 100% sh: lt gry-gry, sft-frm, blk-ply, sl calc, some bl gry, sft & clayey
Tr coal: blk, vit
- 50-60 100% sh: AA
- 60-70 100% sh: lt gry-gry, sft, blk, clayey, sl calc, some w/abnd carb incl
- 70-80 90% sh: AA
10% coal: blk, shly

80-90 AA

90-5400 NS

5400-10 100% sh: lt gry-gry brn, sft, blk, sl clayey, sl calc, carb incl.

10-20 NS

20-30 100% sh: gry-brn, frm, blk, sl silty, sl calc, some bl gry & clayey

30-40 100% sh: lt gry-brn, -gry, sft-frm, blk, sl calc, some clayey

40-50 100% sh: bl gry-gry, frm, blk, sl clayey-sl silty, some carb.
Tr. ss: gry vgtg, sband, shly, frm, fite, NS
Tr coal: blk, vit.

50-60 100% sh: gry-brn, frm, blk, sl silty, carb incl, some bl gry & clayey

60-70 AA

70-80 90% sh: AA
10% coal: blk, vit

80-5500 NS

5500-10 100% sh: bl gry-gry, frm, blk-ply, sl calc, some clayey, some mic mica
10% coal: blk, vit
Tr. ss: wkt, vgtg, sband, clay dls, calc, frm, fite, NS.

10-20 NS

20-30 100% sh: lt gry-gry, sft-frm, blk, clayey, occ carb incl, sl calc
Tr. coal:

30-40 90% sh: gry-bl gry-brn, frm, blk, sl clayey, sl calc
10% coal: blk, vit

40-50 AA

50-60 100% sh: AA, some ply & sl silty

60-70 AA

70-80 100% sh: lt gry, sft, blk, sl calc, clayey, some gry, frm & blk

80-90 100% sh: bl gry-gry, frm, blk-ply, sl calc, occ carb incl.

90-5600 AA

- 5000-10 100% Sh: lt gry-brn, sft-frn, blk, clayey-silty, sl calc, occ carb incl.
- 10-20 100% Sh: lt gry-gry-brn, sft-frn, blk, some clayey, sl calc
- 20-30 100% Sh: AA, some sl silty w/carb incl.
- 30-40 100% Sh: bl gry-brn, frm, blk, some clayey, sl calc, occ carb incl.
- 40-50 100% Sh: lt gry, sft, blk, some silty, sl calc
Tr coal: blk, vit.
- 50-60 AA
- 60-70 100% Sh: gry, sft-frn, blk, sl silty, calc, carb incl
- 70-80 AA
- 80-90 100% Sh: bl gry-brn, frm, blk, sl silty, some clayey, sl calc, occ carb incl
- 90-5700 AA
- 5700-10 AA
- 10-20 100% Sh: bl gry-gry, frm, blk-pilty, sl calc, occ carb incl.
- 20-30 100% Sh: dk gry, frm, blk-pilty, calc, carb incl.
- 30-40 100% Sh: dk gry, frm, pilty, silty, calc, carb.
- 40-50 NS
- 50-60 10% SS: wht, fg, sbnd, mod clay fld, calc, S&P, hard, N-S
90% Sh: AA
- 60-70 100% Sh: dk gry, frm, pilty, sl calc, carb.
- 70-5930 NS
- 5930-40 100% Sh: dk gry, frm, pilty, limy, carb, some bl gry & clayey
- 40-50 20% SS: gry, fg, sbnd, sl clay fld, frm, poss sl por, N-S
80% Sh: dk gry, frm, blk, limy, carb
- 50-60 20% SS: gry-whit, fg, sbnd, mod clay fld + clay fld, frm, tite, N-S
80% Sh: AA
- 60-70 100% Sh: gry-dk gry, frm, blk-pilty, calc, carb, some sl clayey
- 70-80 10% SS: gry-whit, fg, sbnd, mod clay fld-shly, calc, sl glauc, hard, tite, N-S
90% Sh: dk gry, frm, blk-pilty, limy, carb
- 80-90 100% Sh: bl gry-gry, frm, blk, limy, carb incl
- 90-6000 NS
- 6000-10 10% SS: wht-gry, vgt-fg, sbnd, clay fld-shly, hard, tite, N-S
90% Sh: dk gry, frm, pilty, calc.
- 10-20 10% SS: AA, N-S
90% Sh: AA, scat pyrite masses
- 20-30 20% SS: gry, vgt, sbnd, shly, frm, calc, tite N-S
80% Sh: dk gry, frm, blk, silty, calc, carb
- 30-40 10% SS: AA, N-S
90% Sh: dk gry, frm, pilty, calc, carb
- 40-50 20% SS: gry, fg, sbnd, shly, calc, occ glauc incl, hard, tite, N-S
80% Sh: AA
- 50-60 10% SS: AA, N-S
90% Sh: AA
- 60-70 50% SS: clv wht, fg, sbnd, sl clay fld, occ ~~carb~~ glauc incl, calc, hard, fair por, faint bl fluor w/no cat.
50% Sh: dk gry, frm, pilty, calc, silty, w/carb incl

70-80 70% SS: clr wht, fg, sbrnd, oblong, clean, occ glauc incl, calc, hard.
 fair por, faint bl fluor w/no cut
 30% Sh: AA

80-90 30% SS: wht, fg, sbrnd, mod clay fld, calc, occ glauc incl, hard, tite.
vy faint bl fluor w/no cut
 70% Sh: AA

90-100 30% SS: wht, fg, sbrnd, mod clay fld, calc, occ carb incl, hard, tite,
vy faint bl fluor w/no cut
 70% Sh: dk gry - gry, sft - frm, blky - pthy, calc, carb incl, scat pyrite
 masses.

100-110 30% SS: wht-brn, fg, sbrnd, mod clay fld, occ glauc incl, hard-
 frm, poss sl por, N-S.
 70% Sh: AA

110-120 100% Sh: AA

120-130 30% SS: clr wht, fmg. sbrnd, sl clay fld, calc, frm. fair por, N-S
 70% Sh: AA

130-140 AA

140-150 N-S