

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 _____		
b. TYPE OF COMPLETION:		NEW WELL ☒	WORK OVER ☐	DEEP-EN ☐	PLUG BACK ☐	DIFF. RESVR. ☐	Other _____
2. NAME OF OPERATOR Energy Reserves Group, Inc.						5. LEASE DESIGNATION AND SERIAL NO. NM-03153	
3. ADDRESS OF OPERATOR P.O. Box 3280 - Casper, Wyoming 82602						6. IF INDIAN, ALLOTTEE OR TRIBE NAME	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1820' FNL, 1710' FEL (SW NE) At top prod. interval reported below At total depth						7. UNIT AGREEMENT NAME	
14. PERMIT NO.						DATE ISSUED	
15. DATE SPUDDED 4-09-80						16. DATE T.D. REACHED 4-21-80	
17. DATE COMPL. (Ready to prod.) 7-10-80						18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* GRD 6,366' - KB 6,379'	
19. ELEV. CASINGHEAD -----						20. TOTAL DEPTH, MD & TVD 6,375' KB	
21. PLUG, BACK T.D., MD & TVD 6,336' KB						22. IF MULTIPLE COMPL., HOW MANY* NA	
23. INTERVALS DRILLED BY -----						24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Dakota 6,295' - 6,306' KB	
25. WAS DIRECTIONAL SURVEY MADE NO						26. TYPE ELECTRIC AND OTHER LOGS RUN Dual Induction - SFL, Comp. Neutron - Form. Density	
27. WAS WELL CORED 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"	24#	853' KB	12-1/4"	500 sks "B" + 2% CaCl ₂	-0-		
4-1/2"	9.5# & 10.5#	6,371' KB	7-7/8"	+ 1/4#/sk Flocele See Page 2	-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"	6,292'	none
31. PERFORATION RECORD (Interval, size and number)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
6,295' - 6,306' w/1 JSPF				DEPTH INTERVAL (MD)			
6,295' - 6,306' w/1 JSPF				AMOUNT AND KIND OF MATERIAL USED			
				B.D. w/1000 gal 7 1/2% HCl + 10% Methanol, 500 SCF N ₂ /bbl. + 25 RCNB			
				B.D. w/1500 gal 7 1/2% HCl + 10% Methanol + 40 RCNB. Frac - See back			
33.* PRODUCTION				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 7-10-80	HOURS TESTED 24	CHOKE SIZE 1/2"	PROD'N. FOR TEST PERIOD -----	OIL—BBL. 10	GAS—MCF. 1269	WATER—BBL. 3(Frac Fluid)	GAS-OIL RATIO 126,900 SCF/STB
FLOW. TUBING PRESS. 450	CASING PRESSURE 525	CALCULATED 24-HOUR RATE -----	OIL—BBL. 10	GAS—MCF. 1269	WATER—BBL. 3(Frac Fluid)	OIL GRAVITY-API (CORR.) 50°	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) VENTED DURING TESTING						TEST WITNESSED BY 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: <i>[Signature]</i>		TITLE: Prod. Engr. - RMD			DATE: July 10, 1980		

*(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.

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: 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				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TRUE VERT. DEPTH
			SEE ATTACHED	LOG TOPS		
			Cementing 4-1/2"	Fruitland	1,502'	
			1st Stage - 325 sx 50-50 Pozmix + 2% gel + 1/4#/sk Flocele followed w/165 sks "G" + 10% salt + 1/4#/sk Flocele.	Pictured Cliffs	1,727'	
				Lewis	2,012'	
				Chacra	2,995'	
				Cliff House	3,274'	
				Menefee	3,350'	
			Stage Collar @ 4,474'	Point Lookout	4,140'	
				Mancos	4,428'	
				Gallup	5,279'	
			2nd Stage - 390 sx "Lite" + 10#/sk Gil- sonite followed w/700 sks 50-50 Pozmix + 2% gel + 12- 1/2#/sk Gilsonite.	Greenhorn	6,130'	
				Graneros	6,188'	
				Dakota	6,248'	
				TD Driller	6,375'	
			Temp Survey Cement Top @ 800' ±	Logger	6,366'	
			Frac: 60,000 gal 70% Quality Foam w/60,000# 20-40 sand.			

SAMPLE DESCRIPTION

1700 - 10 70% Ss bn vfg-clt s&p shly carb
30% Sh gy-bn carb

10 - 20 30% Ss aa,sm lt gy fg s&p shly
70% Sh aa,sm lt gy slty carb

20 - 30 40% Ss lt tn s&p vfg s rdd,sm lt gy
60% Sh aa

30 - 40 AA

40 - 50 tr Ss aa
Sh lt crm bent sdy ip

50 - 60 30% Ss wht fg s rdd clay flld abdt unconc
70% Sh lt gy slty,tn slty

60 - 70 30% Ss aa,sm lt gy vfg s&p carb
70% Sh aa,sm dk gy-bn carb

70 - 80 60% Ss aa
30% Sh aa
10% Coal

80 - 90 20% Ss aa
80% Sh dk bn carb slty,sm tn carb

90 - 1300 70% Ss wht-tn fg s rdd abdt unconc clay flld
30% Sh aa

1500 - 10 70% Ss wht fg s&p clay flld s rdd,sm lt gy vfg shly
30% Sh aa,sm tn sdy sft

10 - 20 10% Ss aa
90% Sh gy,dk gy,dk gy-bn carb

20 - 30 20% Ss wht-tn fg clay flld
80% Sh aa

30 - 40 90% Ss wht fg s&p clay flld,sm glauc,sm lt tn fg shly
10% Sh aa

40 - 50 50% Ss aa
50% Sh tn carb,gy,dk gy

50 - 60 AA

60 - 70 70% Ss aa
30% Sh tn slty carb

70 - 80 AA

80 - 90 70% Ss aa,sm tn shly fri
30% Sh aa

90 - 1900 AA

1900 - 10 80% Ss wht fg s&p s rdd clay flldx
20% Sh gy,dk bn slty

2 10 - 20 90% Ss aa,occ gy vfg s&p clay flld shly
10% Sh gy carb

20 - 30 70% Ss aa
30% Sh aa

30 - 40 90% Ss aa
10% Sh aa

40 - 50 80% Ss aa
20% Sh gy slld,dk bn carb

50 - 60 90% Ss wht-lt gy fg clay flld,sm lt gy vfg s&p sl shly
10% Sh aa

60 - 70 80% Ss aa,occ tn vfg s&p shly
20% Sh gy slty

70 - 80 80% Ss aa
20% Sh bn carb,sm aa

80 - 90 90% Ss lt gy fg s&p shly,sm gy-tn vfg s&p shly
10% Sh gy,bn carb

90 - 2000 80% Ss aa,tn bn vfg shly carb
20% Sh aa

2000 - 10 70% Ss lt gy vfg s&p sl shly, sm aa
 30% Sh aa
 10 - 20 AA
 20 - 30 70% Ss aa,
 30% Sh gy slty, bn slty carb
 30 - 40 AA
 40 - 50 60% Ss lt gy, tn vf-fg s&p sl shly, sm lt bn vfg shly
 40% Sh aa
 50 - 60 AA
 60 - 70 60% Sstst bn s&p shly carb
 10% Ss aa
 30% Sh aa
 70 - 80 AA
 80 - 90 100% Sh bn carb slty, gy slty
 90 - 2100 AA
 2100 - 10 20% Ss tn vfg s&p shly
 80% Sh gy slty carb
 10 - 20 AA
 20 - 30 AA
 30 - 40 tr Ss aa
 Sh gy slty, gy bn slty carb
 40 - 50 AA
 50 - 60 AA
 60 - 70 60% Ss gy-bn vfg slty-shly
 40% Sh gy-bn slty carb
 70 - 80 AA
 80 - 90 AA
 90 - 2200 90% Ss gy-bn dk gy fg s&p shly, sm clay fild, tr tnls
 10% Sh gy-bn slty
 2200 - 10 AA
 10 - 20 AA
 20 - 30 90% Ss dk gy-bn fg s&p shly calc
 10% Sh aa
 30 - 40 AA
 40 - 50 AA
 50 - 60 90% Ss gy-bn vfg s&p shly calc
 10% Sh gy-bn slty
 tr tn-yell ls dns
 60 - 70 AA
 70 - 80 AA
 80 - 90 70% Ss aa
 30% Sh aa
 90 - 2300 AA
 2300 - 10 AA
 10 - 20 60% Ss dk gy-bn vffg shly calc carb ip
 40% Sh gy, dk gy slty carb
 20 - 30 AA
 30 - 40 AA
 40 - 50 20% Ss aa
 80% Sh gy slty, dk gy-bn carb
 50 - 60 AA
 60 - 70 AA
 70 - 80 10% Ss lt gy fg s&p clay fild
 90% Sh aa
 80 - 90 AA
 90 - 2400 AA
 2400 - 10 80% Ss bn, dk bn vfg shly carb calc
 20% Sh dk gy, gy-bn slty carb
 10 - 20 AA
 20 - 30 AA

2430 - 40 60% Ss aa, sm wht-lt gy fg s&p sl glauc
 40% Sh aa, sm gy
 40 - 50 AA
 50 - 60 AA
 60 - 70 70% Ss tn-clr frost eg s rdd unconsl, sm lt tn mg s rdd calc
 30% Sh dk gy, dk gy-bn slty carb
 70 - 80 AA
 80 - 90 AA
 90 - 2500 20% Ss tn-lt gy vfg sl shly carb
 80% Sh aa, sm blk slty
 2500 - 10 AA
 10 - 20 AA
 20 - 30 20% Ss aa, sm dk on fg shly
 80% Sh dk gy-blk slty ip
 tr Coal
 30 - 40 AA
 40 - 50 AA
 50 - 60 tr Ss lt gy vfg s&p shly
 Sh gy-bn carb, dk bn carb slty
 60 - 70 AA
 70 - 80 AA
 80 - 90 tr Ss tn vfg carb shly
 Sh aa, tr Coal
 90 - 2600 AA
 2600 - 10 AA
 10 - 20 tr Ss tn vfg shly carb strks
 Sh gy slty, dk bn carb
 50% Coal
 20 - 30 AA
 30 - 40 AA
 40 - 50 tr Ss aa
 tr Lign
 tr Coal
 Sh aa
 50 - 60 AA
 60 - 70 AA
 70 - 80 tr Ss gy vfg shly
 Sh bn slty, dk bn carb, gy slty
 tr Coal
 80 - 90 AA
 90 - 2700 AA
 2700 - 10 20% Ss wht f-mg s rdd clay flld
 80% Sh tn, lt bn, ooc dk bn carb
 10 - 20 AA
 20 - 30 AA
 30 - 40 100% Sh aa, sm bn slty
 40 - 50 AA
 50 - 60 AA
 60 - 70 100% Sh gy-bn slty, dk bn carb
 70 - 80 AA
 80 - 90 AA
 90 - 2800 100% Sh aa, sm lt bn slty
 2800 - 10 AA
 10 - 20 AA
 20 - 30 AA
 30 - 40 AA
 40 - 50 AA
 50 - 60 100% Sh lt bn carb slty ip, bn carb, dk gy-blk lign
 60 - 70 AA
 70 - 80 AA

90 - 2900 AA
 2900 - 10 AA
 10 - 20 100% Sh aa,ccc bn slty
 20 - 30 AA
 30 - 40 AA
 40 - 50 AA,tn Coal
 50 - 60 AA
 60 - 70 AA
 70 - 80 100% Sh bn carb,dk bn carb,tn Coal
 80 - 90 AA
 90 - 3000 AA
 3000 - 10 100% Sh lt bn slty,bn carb,ccc dk bn lign
 10 - 20 AA
 20 - 30 AA
 30 - 40 100% Sh aa,sm lt bn bent,tn Coal
 40 - 50 100% Sh bn slty,ccc bn carb
 50 - 60 100% Sh aa,ccc tn sft
 60 - 70 tr Ss wht vfg s redd clay fldd
 Sh aa
 70 - 80 100% Sh lt bn carb,bn slty
 80 - 90 AA
 90 - 3100 AA
 3100 - 10 AA
 10 - 20 100% Sh bn slty,gy-bn carb slty ip
 20 - 30 10% Ss tn vfg shly glauc ip
 90% Sh aa
 30 - 40 100% Sh aa ccc dk bn carb
 40 - 50 100% Sh gy,bn slty,dk gy-bn carb
 50 - 60 100% Sh aa,abdt dk gy-bn carb
 60 - 70 10% Ss tn vfg s&p shly
 90% Sh bn slty carb,dk bn carb,tn Coal
 70 - 80 tr Ss aa
 Sh aa
 80 - 90 100% Sh bn carb,sm dk bn carb slty
 90 - 3200 AA
 3200 - 10 10% Coal
 90% Sh aa
 10 - 20 100% Sh aa,abdt dk gy-bn carb
 20 - 30 100% Sh gy slty,tn slty,dk gy-bn carb,tn Coal
 30 - 40 AA
 40 - 50 AA
 50 - 60 100% Sh bn carb,slty ip,dk bn carb
 60 - 70 AA
 70 - 80 AA
 80 - 90 AA
 90 - 3300 100% Sh bn carb,dk bn carb
 3300 - 10 AA
 10 - 20 AA
 20 - 30 AA
 30 - 40 AA
 40 - 50 AA,abdt dk bn carb
 50 - 60 tr Ss wht vfg s redd clay fldd
 Sh bn carb,dk bn carb
 60 - 70 100% Sh aa,ccc dk gy-bn carb
 70 - 80 AA,sm bn sft slty
 80 - 90 100% Sh bn slty,dk bn carb
 90 - 3400 100% Sh aa,tn tn slty carb
 3400 - 10 100% Sh tn slty carb,bn slty
 10 - 20 AA
 20 - 30 100% Sh aa,ccc dk gy slty,tn Coal - 11 -

3450 - 40 AA
40 - 50 AA
50 - 60 tr Ss lt gy vfg s&p; sm clay flld
Sh aa
60 - 70 100% Sh aa
70 - 80 tr Ss lt gy vfg s&p sl shly clay flld
Sh aa
80 - 90 AA
90 - 3500 N S
3500 - 10 N S
10 - 20 tr Ss bn vfg shly-slt
Sh bn carb, dk gy-bn carb, sm dk gy
20 - 30 tr Ss lt gy S&p vfg s rdd
Sh aa
30 - 40 AA
40 - 50 tr Ss lt gy-gy vfg s&p sl shly
Sh aa
50 - 60 100% Sh bn slty carb, sm lt bn carb
60 - 70 tr Ss wht fg clay flld
Sh aa
70 - 80 10% Ss wht fg s rdd clay flld
90% Sh aa
80 - 90 tr Ss aa, Sh aa
90 - 3600 100% Sh bn carb slty lp
3600 - 10 100% Sh aa, sm gy carb, tn slty
10 - 20 100% Sh aa, abd dk gy-bn carb
20 - 30 100% Sh tn carb, bn carb, ooc dk gy-bn carb
30 - 40 10% Ss wht fg s rdd clay flld
90% Sh aa
40 - 50 10% Ss frost m-cg s rdd unconc
90% Sh aa
50 - 60 N S
60 - 70 10% Ss bn vfg-slt shly
90% Sh bn slty carb, ooc dk bn slty carb, tr Coal
70 - 80 100% Sh aa, tr Coal
80 - 90 100% Sh aa, sm dk gy-bn carb, tr Coal
90 - 3700 10% Ss tn vfg-slt s&p shly
90% Sh aa
3700 - 10 10% Ss gy-tn vfg shly
90% Sh bn slty carb
10 - 20 tr Ss aa
Sh ss, sm dk bn carb
20 - 30 10% Ss tn vfg s&p sl shly
90% Sh aa, tr Coal
30 - 40 AA
40 - 50 10% Ss gy vfg s&p shly, ooc tn vfg s&p shly
90% Sh aa
50 - 60 100% Sh aa, sm dk gy-bn carb
60 - 70 100% Sh bn carb, dk bn slty carb, tr Coal
70 - 80 20% Ss clr m-cg s ang unconc
80% Sh aa, sm tn slty sft
80 - 90 tr Ss aa, Sh aa
90 - 3800 10% Ss wht f-, mg s sang clay flld, sm unconc
90% Sh aa
3800 - 10 100% Ss lt tn vfg s&p shly
90% Sh aa
10 - 20 20% Ss lt gy vfg s&p shly, sm aa, sm fri
80% Sh aa
20 - 30 tr Ss-aa
Sh aa

3330 - 40 tr Ss tn-lt bn vfg fri shly, sm aa, carb ip
 Sh gy, bn slty dk bn carb
 40 - 50 100% Sh gy slty, dk bn carb
 50 - 60 20% Ss lt gy vfg s&p shly
 80% Sh bn carb slty ip
 60 - 70 100% Sh aa
 70 - 80 tr Ss wht fg s ang clay flld
 Sh lt bn carb, bn slty carb
 80 - 90 tr Ss lt gy vfg s&p clay flld
 Sh aa
 90 - 3900 100% Sh aa
 3900 - 10 AA
 10 - 20 AA
 20 - 30 100% Sh bn carb slty, dk bn carb
 30 - 40 AA
 40 - 50 AA
 50 - 60 AA
 60 - 70 Sh tn dft sdy, bn carb, ooc dk gy-bn carb
 70 - 80 tr Ss wht fg s&p clay flld
 Sh aa
 80 - 90 100% Sh gy slty, tn sft, gy-bn slty carb
 90 - 4000 AA
 4000 - 10 100% Sh gy-tn, gy slty, dk bn carb
 10 - 20 AA, tr Coal
 20 - 30 AA
 30 - 40 100% Sh aa, abd dk bn carb
 40 - 50 AA
 50 - 60 100% Sh bn carb slty ip
 tr Ss gy vfg shly
 60 - 70 100% Sh tn carb
 70 - 80 100% Sh aa, gy-bn carb, tr Coal
 80 - 90 AA
 90 - 4100 100% Sh gy-bn carb, sm tn sft carb, tr Coal
 4100 - 10 N S
 10 - 20 80% Sh aa
 20% Coal
 20 - 40 70% Sh aa
 30% Coal
 30 - 40 60% Sh aa
 40% Coal
 40 - 50 70% Sh aa, smgy slty
 30% Coal
 50 - 60 100% Sh aa
 60 - 70 AA
 70 - 80 tr Ss lt tn vfg s&p clean
 Sh tn slty, gy slty, gy-bn carb
 80 - 90 AA
 90 - 4200 10% Coal
 90% Sh gy-bn carb
 4200 - 10 N S
 10 - 20 N S
 20 - 30 N S
 30 - 40 N S
 40 - 50 N S
 50 - 60 N S
 60 - 70 N S
 70 - 80 N S
 80 - 90 N S
 90 - 4300 N S -

4300 - 10 100% Sh gy cabb,tn slty carb ip,bn carb
 10 - 20 AA,tn Coal
 20 - 30 tr Ss lt gy vfg s&p sl shly
 Sh aa
 30 - 40 AA
 40 - 50 100% Sh bn carb slty ip,dk gy-bn carb
 50 - 60 AA,tn Coal
 60 - 70 10% Coal
 90% Sh bn carb,dk gy-bn carb
 70 - 80 AA
 80 - 90 AA
 90 - 4400 100% Sh aa
 4400 - 10 100% Sh aa,sm lt gy sft
 10 - 20 100% Sh gy carb,bn carb slty ip,tr Coal
 20 - 30 AA
 30 - 40 AA
 40 - 50 tr Ss tn vfg s&p sl shly
 Sh aa
 50 - 60 tr Ss lt gy vfg-slt s&p
 Sh gy slty carb,bn slty
 60 - 70 10% Coal,AA
 70 - 80 AA
 80 - 90 Sh aa sm lt tn sft slty,tr Coal
 90 - 4500 AA
 4500 - 10 AA
 10 - 20 100% Sh aa,ooo wht-lt tn bent
 20 - 30 AA
 30 - 40 AA
 40 - 50 100% Sh aa,tr Coal
 50 - 60 AA
 60 - 70 AA
 70 - 80 10% Coal
 90% Sh gy slty,tn,bn slty carb
 80 - 90 AA
 90 - 4600 AA
 4600 - 10 100% Sh aa sm lt tn bent
 10 - 20 AA
 20 - 30 AA
 30 - 40 AA
 40 - 50 AA
 50 - 60 AA
 60 - 70 tr Ss lt gy vfg s&p sl shly
 Sh gy slty,bn carb
 70 - 80 AA
 80 - 90 AA
 90 - 4700 100% Sh aa,sm lt gy,tn bent
 4700 - 10 AA
 10 - 20 AA
 20 - 30 100% Sh bn carb,gy bent,sm dk gy-bn carb
 30 - 40 AA
 40 - 50 AA
 50 - 60 100% Sh gy slty carb ip,sm bn slty
 tr Ss lt bn s&p vfg shly
 60 - 70 AA
 70 - 80 AA
 80 - 90 100% Sh aa,sm gy-bn carb
 90 - 4800 AA
 4800 - 10 AA
 10 - 20 100% Sh bn carb,gy-bn slty carb ip,sm lt bn slty

3320 - 30 AA
30 - 40 AA
40 - 50 AA
50 - 60 AA
60 - 70 AA
70 - 80 100% Sh aa, tr Ss lt gy vfg shly
80 - 90 AA
90 - 4900 AA
4900 - 10 100% Sh bn carb, gy-bn slty
10 - 20 AA
20 - 30 AA
30 - 40 AA
40 - 50 AA
50 - 60 AA
60 - 70 AA
70 - 80 AA
80 - 90 AA
90 - 5000 100% Sh gy-bn carb slty ip
5000 - 10 AA
10 - 20 AA
20 - 30 AA
30 - 40 AA
40 - 50 AA
50 - 60 100% Sh gy-bn slty carb, gy slty
60 - 70 AA
70 - 80 AA
80 - 90 Sh aa, sm bn slty
90 - 5100 AA
5100 - 10 AA, tr Ss gy vfg s&p shly
10 - 20 AA
20 - 30 AA
30 - 40 AA
40 - 50 AA
50 - 60 AA
60 - 70 AA
70 - 80 100% Sh gy-bn carb, gy slty
80 - 90 AA
90 - 5200 AA
5200 - 10 100% Sh aa, ooc lt bn slty sft
10 - 20 AA
20 - 30 AA
30 - 40 AA
40 - 50 Sh aa, ooc dk gy-bn carb
50 - 60 tr Ss lt gy vfg-slt shly
Sh aa
60 - 70 100% Sh aa, abdt dk gy-bn carb
70 - 80 100% Sh dk gy slty carb ip, gy slty dk gy-bn carb
80 - 90 tr Ss gy vfg shly slty
Sh aa
90 - 5300 Sh aax, tr Ss aa

5300 - 10 N S
 10 - 20 N S
 20 - 30 N S
 30 - 40 100% Sh gy-dk gy frm blkly sm slty w/occ carb incl
 40 - 50 AA
 50 - 60 100% Sh gy-bb frm blkly slty w/carb incl
 60 - 70 20% Ss wht vfg s rdd mod clay flld sl shly tite calc
 70 - 80 tr Ss aa,Sh aa
 80 - 90 AA
 90 - 5400 10% Ss wht fg s rdd clay flld frm-hard tt occ carb incl calc
 90% Sh aa
 5400 - 10 10% Ss aa
 90% Sh gy-brn frm blkly,sm slty w/carb incl
 10 - 20 10% Ss
 90% Sh aa
 20 - 30 20% Ss wht-gy vyt-fg s rdd clay flld hard tt calc
 80% Sh aa
 30 - 40 10% Ss aa
 90% Sh aa
 40 - 50 20% Ss wht fg s ang sl-mod clay flld sl poros calc
 80% Sh aa Tr inoceramias pris
 50 - 60 20% Ss wht fg s ang mod clay flld frm poss sl poros calc
 80% Sh aa
 60 - 70 10% Ss aa,sm gy shly tt
 90% Sh gy-dk gy frm blkly slty w/carb incl seat pyrt
 70 - 80 10% Ss wht fg s ang clay flld tt calc
 90% Sh aa
 80 - 90 AA
 90 - 5500 100% Sh aa
 5500 - 10 AA
 10 - 20 AA
 20 - 30 10% Ss wht fg s ang clay flld tt calc s&p
 90% Sh aa
 30 - 40 10% Ss wht fg s rdd mod clay flld poss sl poros hard s&p
 90% Sh aa
 40 - 50 20% Ss buff f-mg s rdd clay flld frm sl shlyx tt w/carb incl
 90% Sh aa
 50 - 60 20% Ss wht fg s rdd clay flld frm tt calc
 80% Sh aa
 60 - 70 10% Ss wht-buff fg s rdd-s ang clay flld tt calc
 90% Sh aa,sm bl gy clayey,seat pyrt
 70 - 80 100% Sh gy-brn frm blkly slty w/carb incl
 tr Coal
 80 - 90 AA
 90 - 5600 100% Sh aa,sm bl gy clayey
 5600 - 10 AA
 10 - 20 10% Ss wht fg s ang clay flld tt calc s&p
 90% Sh gy-dk gy frm blkly-platy w/carb incl
 20 - 30 AA
 30 - 40 100% Sh aa,tr Coal
 40 - 50 N S
 50 - 60 20% Ss wht fg s ang clay flld hard tt calc
 80% Sh aa
 60 - 70 10% Ss aa
 90% Sh aa
 70 - 80 20% Ss aa
 80% Sh aa
 80 - 90 100% Sh a
 90 - 5700 100% Sh gy-dk gy frm blkly slty w/carb incl sl calc
 5700 - 10 AA
 10 - 20 AA

5720 - 30 AA
 30 - 40 AA
 40 - 509 AA
 50 - 60 100% Sh gy-dk gy frm blk sl slty w/occ carb incl
 60 - 70 AA
 70 - 80 AA
 80 - 90 AA
 90 - 59008 AA
 5800 - 10 100% Sh gy-dk gy frm blk sm bl gy clayey
 10 - 20 AA
 20 - 30 AA
 30 - 40 AA
 40 - 50 AA
 50 - 60 AA
 60 - 70 AA
 70 - 80 100% Sh dk gy frm blk slty sl calc w/carb incl
 80 - 90 AA
 90 - 5900 N S
 5900 - 10 100% Sh dk gy frm blk sl slty w/carb incl sl carb
 10 - 20 AA
 20 - 30 AA
 30 - 40 100% Sh dk gy frm blk sl slty sl carb sl calc w/carb incl
 40 - 50 AA
 50 - 60 AA
 60 - 70 tr Ss bl gy fg s ang clay flld glauc sl feld calc
 Sh aa
 70 - 80 AA
 80 - 90 AA
 90 - 6000 AA
 6000 - 10 AA
 10 - 20 10% Ss wht fg s ang clay flld hard tt w/occ carb incl
 90% Sh aa, tr inoceramids prisms
 20 - 30 30% Ss aa
 70% Sh aa
 30 - 40 10% Ss aa
 90% Sh aa
 40 - 50 20% Ss gy-wht fng s ang mod-w clay flld frm pss sl pores
 80% Sh aa
 50 - 60 10% Ss wht vf-fg s rdd clay flld tt sl glauc w/occ carb incl
 90% Sh aa
 60 - 70 100% Sh dk gy frm blk-plty carb mod calc
 70 - 80 N S
 80 - 90 N S
 90 - 6100 N S
 6100 - 10 N S
 10 - 20 100% Sh dk gy frm blk sl clayey-sl slty calc
 20 - 30 AA
 30 - 40 10% Ss wht fg s rdd clay flld frm-hard tt occ carb incl
 40 - 50 100% Sh aa
 50 - 60 AA
 60 - 70 AA
 70 - 80 AA
 80 - 90 100% Sh dk gy frm blk limy
 90 - 6200 AA
 6200 - 10 AA
 10 - 20 AA
 20 - 30 100% Sh aa, slty limy
 30 - 40 10% Ss wht fg s ang clay flld hard tt sl glauc w/occ carb incl
 90% Sh aa, mod calc
 40 - 50 AA

6250 - 60 30% Ss wht fg s rdd hard poss sl poros clean-sl clayey calc sl glauc
 70% Sh dk gy-gy frm blkyl sl slty carb incl sl calc
 60 - 70 20% Ss wht f-mg s rdd psrt frm fair poros sl clay flld calc sl glauc
 80% Sh aa
 x 70 - 80 10% Ss aa
 90% Sh aa
 80 - 90 50% Ss wht fg s rdd hard mod clay flld poss sl poros sl glauc w/occ carb flks
 50% Sh aa
 90 - 6300 30% Ss aa
 70% Sh aa
 6300 - 10% 40% Ss wht fg s rdd sl clay flld fair poros sl poros
 10 - 20 AA
 20 - 30 30% Ss aa
 70% Sh aa
 30 - 40 LA
 6300 - TD N S