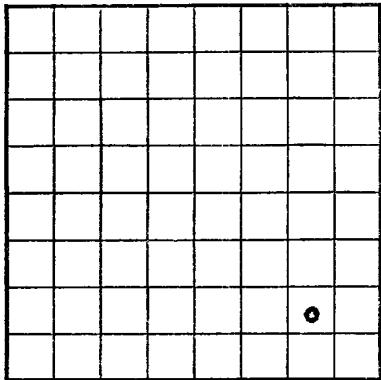




LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Southern Union Gas Company Address Burt Bldg., Dallas, Texas
Lessor or Tract Primo-Mudge Field Blanco State New Mexico
Well No. 1 Sec. 24 T. 32N R. 11W Meridian N.M.P.M. County San Juan
Location 990 ft. {N.} of S. Line and 990 ft. {W.} of E. Line of Section 24 Elevation 6352 DF
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Van Thompson
Date November 28, 1952 Title Manager Exploration Dept.

The summary on this page is for the condition of the well at above date.

Commenced drilling April 18, 1951, 19____ Finished drilling September 29, 1952, 19____

OIL OR GAS SANDS OR ZONES

(Denote gas by G)
No. 1, from 4930 to 5000 No. 4, from _____
No. 2, from 5395 to 5550 No. 5, from _____
No. 3, from _____ to _____ No. 6, from _____
IMPORTANT WATER SANDS
No. 1, from _____ to _____ No. 3, from _____
No. 2, from _____ to _____ No. 4, from _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated	Purpose
10-3/4	40.5		J-55	217.98'				Surface
7"	20#		J-55	4820'				Production
2" tubing	4.7#		J-55	5470'				

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10-3/4	217'	200	Halliburton		
7"	4820'	232 from 4030' to 4820', also 185 sx from 2440' to 3223# by Halliburton also	Halliburton		

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
		Nitro glycerine	1900Q	9/25/52	4865-5717	5717'
Well tested 110 MCF before shot						

TOOLS USED

Rotary tools were used from 0 feet to 4820 feet, and from _____ feet to _____ feet
Cable tools were used from 4820 feet to 5717 feet, and from 4820 feet to 5565 feet

DATES

_____, 19____ Put to producing October 31, 1952

The production for the first 24 hours was _____ barrels of fluid of which _____ % was oil; _____ % emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____

If gas well, cu. ft. per 24 hours 1780 MCF Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. 415# — Something wrong, and we plan to check further, and will advise.
EMPLOYEES

Dennan Drilling Company, Driller — Rotary; Carpenter-Tarrent Drig. Co., Driller
Southern Union Gas Co., Cable, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	244	244	Surface sand & rock
244	340	96	Sandy shale
340	460	120	Shale
460	900	440	Sand and shale
900	1100	200	Sandy shale
1100	1140	40	Sand
1140	1240	100	Sand and shale
1240	1260	20	Shale
1260	1360	100	Sand and shale
1360	1380	20	Shale w/trace of coal
1380	1480	100	Shale
1480	1500	20	Shale
1500	1690	190	Shale
1690	1810	120	Sand and shale
1810	1890	80	Shale — Top Kirtland 1710'—?
1890	1930	40	Sand and shale
1930	1970	40	Shale w/ stks. coal
1970	2010	40	Shale and sand
2010	2040	30	Shale w/ stks of coal
2040	2200	160	Shale
2200	2350	150	Sandstone
2350	2390	40	Sand and shale
2390	2410	20	Sand and shale
2410	2440	30	Shale
2440	2720	280	Sand and shale

FORMATION RECORD—Continued

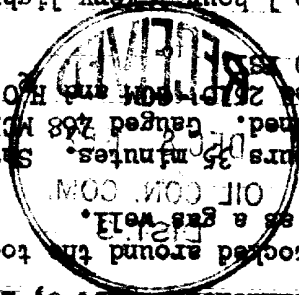
FROM—	TO—	TOTAL FEET	FORMATION
2710	2820	110	Sand and shale
2820	2830	10	Shale
2830	2880	50	Sand
2880	2930	50	Sand and shale and coal
2930	2970	40	Sand
2970	3010	40	Shale and sand and coal
3010	3020	10	Coal and sand and coal
3020	3090	70	Coal and shale
3090	3100	10	Sand and shale
3100	3130	30	Sand, shale and coal
3130	3190	60	Sand, shale and coal
3190	3200	10	Sand, shale w/trace of coal
3200	3270	70	Sand and shale
3270	3330	60	Sand, shale and coal
3330	3350	20	Shale
3350	3360	10	Sand and shale
3360	4820	1360	Sand and shale
4820	4888	68	Sand
4888	4925	37	Sand and shale
4925	5009	84	Sand
5009	5163	154	Sand and shale
5163	5215	52	Shale
5215	5225	10	Coal
5225	5233	8	Shale
5233	5260	27	Sand
5260	5400	140	Sand and shale
5400	5510	110	Sand
5510	5717	207	Sand and shale
Geological Tops:			
Measured cliffs	3115		
Cliff House	4930		
Point Lookout	5395		

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give the size and location. If the well has been dynamited, give date, size, position, and number of shots. If pipes or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

16-43094-1 U. S. GOVERNMENT PRINTING OFFICE

HISTORY OF OIL OR GAS WELL

Primo Oil Company, as operator, drilled this well down to a total depth of 5565', at which place tools were dropped and well was abandoned August 8, 1951. Southern Union Gas Company took the well over and whistled around the tools and drilled it to a total depth of 5717', and completed as a gas well. Drill Stem Test was made from 2974' to 3015'. Open 3 hours 35 minutes. Shut in 15 minutes. Flowing blow of gas to surface when tool opened. Gauged 268 MCF at start, declining to light blow at end of test. Recovered 261 MCF and H₂O of which 810' was formation water. SIP 1400 PSI. BHP 1400 PSI. Flowing pressure throughout test. Recovered 70' drilling fluid. SIP 1400 PSI. Flowing pressure was nil.



RECEIVED

DEC 3 1952

U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

SAMPLES

Southern Union Gas Company's Primo-Edge No. 1
Location: 220th from S and E lines - Sec. 24, T-32-N, R-11-W

100-80	Fine to large sandstone clusters & xls; lots of lime
20-40	" " " " " and vry much Qts xls
40-60	" " " " " " " " " "
60-80	" " " " " " " " " "
80-100	" " " " " " " " " "
200-80	" " " " " " " " " "
20-40	40% wh. xls med. ss, 60% choc. & gray vry soft shale
40-60	Tr. above 100% sandy shale, red gry & choc.
60-80	Top McDermott ?? 20% wh, varieg. sand; 80% choc sand
80-100	" " " " " " " " " "
300-80	50% wh, grn vry fine grn ss; 50% choc shale
20-40	40% above, 60% choc sh (sandy)
40-60	40% above, 60% choc sh (silty)
60-80	10% wh and grn ss clstra, tr red ss, 90% gry bely shale
80-100	Same as above - bad sample
100-80	30% wh & grn fn grnd ss, 70% choc & gry sh
20-40	35% wh & grn fn grnd ss, 65% choc & gry sh
40-60	60% large Qts xls, 20% fine grnd and clstra, 20% gry & choc sh
60-80	80% Qts xls tr. Jagger, 20% blk & choc. crumbly shale
80-100	20% grn fng grn and clstra, 10% choc sh, 70% Qts xls
900-80	100% Qts xls large
20-40	" " " " " " " " " "
40-60	85% Qts xls, 15% gry soft shale
60-80	20% fn grnd ss, 60% gry soft sh, Qts xls
80-100	Bad sample
600-80	85% wh w/ rddgd med. and grnd, 15% brn & gry bely sh
20-40	Tr. anhy, same as above
40-60	85% choc gry & grn bely sh, 15% drty fine and
60-80	90% choc bely andy sh, 10% grn same
80-100	55% wh blk fine and, 65% choc andy sh
700-80	50% " " " " " 50% " " " "
20-40	20% " " " " " 80% " " " "
40-60	Tr. chalsee, 25% wh blk fine and, 75% choc andy sh (silty)
60-80	60% wh & blk med grn ss bubbling; 40% (silty)
80-100	80% wh & blk med grn ss, 20% gry micritic sh
800-80	" " " " " " " " " "
20-40	Bad sample
40-60	75% wh & blk, med grn med grn ss, 25% choc & gry sh
60-80	Bad sample
80-100	25% wh & blk med grn ss, 75% choc & gry andy sh
900-80	15% wh & blk med grn ss, 85% choc & gry andy sh
20-40	50% wh & blk med grn ss, 10% gry fng grn ss, 40% andy sh
40-60	" " " " " " " 35% andy sh
60-80	Tr. chalsee, 75% wh & blk med grn ss, 25% choc blk sh

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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DEC 3 1901
 GEOLOGICAL SURVEY
 WASHINGTON, D. C.

80-100	Bad Sample
1000-80	Bad Sample
20-40	20% wh blk fine grn ss, 60% med to large ss xls, 20% choc & gry sh
40-60	20% " " " " " " " " " " " " " " " "
60-80	80% wh & blk fine grn ss, 10% grn vry fine ss, 10% choc sh
80-1100	80% wh & blk fine grn ss, 20% choc & gry sh
1100-20	70% wh crystalline sd, 10% grn sh, 10% red sh, 10% blk sh
20-40	60% brn sd, 20% gry sh, vry fractionous, 15% grn sh, 5% kayalite
40-60	Tr. of Jasper, 40% gry sd, 30% gry fractionous sh, 10% gry sh, tr lymanite
60-80	Tr. of Jasper, 40% gry sd, 40% gry fractionous sh, 10% grn sh
1180-1200	Tr. of Jasper, 50% gry sd, (clusters) 30% gry & brn micaceous sh, 20% grn sh, tr lymanite
1200-20	Tr. of Jasper, 40% gry sd, 50% gry & brn sh, 10% grn tr lymanite
20-40	30% brn sh, 35% wh to brn sd (clusters) 35% gry sh, tr Jasper.
40-60	60% grn micaceous sh, tr of Jasper, tr wh limestone, 20% wh to brn ss, 10% brn to blk sh
60-80	Tr. Chalco, tr of Jasper, 65% wh sd crystals, 20% brn to gry sh, 15% grn sh, tr of limestone
1280-1300	Tr. Jasper, 40% wh sd crystals, 60% brn, gry & grn sh, gry being predominant, bad sample
1300-20	20% grn sd sh, 60% gry dull sh, 20% wh to brn sd crystals, tr blk sh
20-40	Tr. Jasper, Chalco, 40% grn & wh limy sd, 40% wh sd, 20% gry & brn sh
40-60	Tr. stain, 35% wh sd clusters, 45% brn sh, 20% grn limy sh, tr blk sh
60-80	Tr. blk coal, tr chalco, 20% wh sd grns, 50% brn sh, 30% grn sh
1380-1400	Tr. lymanite, 25% wh sd grns, 70% brn & grn sh, grn being predominant
1400-20	80% brn & grn micaceous sh, 20% wh to brn sd clusters, tr variegated sh
20-40	Tr. ss, 100% sh, gry, grn & brn, bad sample
40-60	Tr. ss, 40% grn sh, 50% brn sh, 10% gry sh, tr of chalco
60-80	Bad sample - 60% brn, 40% grn sh, tr wh ss
1480-1500	70% brn resinous sd sh, 30% grn dull shale, tr of dead oil, tr sd clusters
1500-1510	20% wh sd clusters, 30% brn resinous sh, 25% grn limy sd sh, 25% gry sh
10-20	60% choc sh, typical McDermitt, 30% grn variegated sh, 10% wh ss clusters
20-30	35% choc, 50% grn variegated, tr Jasper, 10% wh ss, 5% gry sh
30-40	Tr. chalco, 40% choc sh, 5% bright red sh, 20% grn sh, 25% gry sh, tr. white ss clusters.
40-50	Tr. Chalco, 50% choc sh, 20% grn sh, 30% gry sh, tr ss
50-60	Bad sample, all galled. When washing out washed all sample away
60-70	75% grn sh, 20% choc sh, 5% gry sh
70-80	Bad sample, all galled
80-90	Tr. Jasper, 25% wh ss, 70% grn sh, 5% brn sh
1590-1600	30% grn sh, 40% choc, 30% red & gry mixed sh
1600-1610	40% choc, 30% grn, 30% gry sh
10-20	Bad sample, all galled
20-30	Bad sample, over-run with mud
30-40	30% choc, 40% grn, 20% wh sd stone cluster, 10% gry sh
40-50	40% wh ss clusters, 30% grn sh, 30% gry sh, tr choc sh
50-60	40% grn sh, 60% brn & choc sh, tr. grn sh & tr gry ss
60-70	50% grn sh, 50% choc & gry sh, tr gry ss
70-80	30% grn sh, 60% " " " " " ss, dead oil
80-90	Tr. ss, 100% choc, grn & gry sh
1690-1700	Tr. ss, 100% choc, grn & gry sh with grn being predominate
1700-1710	Tr. ss, 30% red sh, similar to West Texas Permian sh, 70% grn, choc & gry sh, gry being predominate

The first of these is the fact that the
 government has been unable to secure
 the necessary funds to carry out its
 policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The second of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The third of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The fourth of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The fifth of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The sixth of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The seventh of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
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 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The eighth of these is the fact that
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 government is unable to pay its
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 military and police forces.
 The ninth of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.
 The tenth of these is the fact that
 the government has been unable to
 secure the necessary funds to carry out
 its policy of non-interference in the
 internal affairs of the country.
 This has led to a situation where the
 government is unable to pay its
 debts and to maintain its
 military and police forces.

10-20	30% grn sh, 10% bright red, 60% gry sh, probable top Kirtland
20-30	20% grn, tr bright red sh, 80% gry & tr of choc sh
30-40	15% grn, tr red sh, 85% gry & some brn sh
40-50	Tr. coal, 20% grn sh, 80% gry & brn sh
50-60	30% grn sh, 40% choc, 20% gry, 10% red, tr. buff sh
60-70	30% grn sh, 40% choc sh, 20% gry, 10% red, tr buff sh, excellent samples
70-80	30% grn sh, 35% choc sh, 25% gry sh, 10% red, trace buff ss & tr coal
80-90	30% grn sh, 40% choc sh, 20% gry sh, 15% wh ss clusters, tr of coal
1790-1800	Tr. of Chalco, 40% wh ss clusters, 20% grn sh, 30% choc sh, 10% gry sh. Somewhere between 70 and 1800 was the top of the Farmington sandstone
1800-1810	35% wh to gry ss clusters, 55% gry sh, 5% red & choc sh, 5% grn sh
10-20	75% wh to gry ss clusters, 15% gry sh, 5% red & choc sh, 5% grn sh Tr. of Chalco
20-30	35% wh to gry ss clusters, fine grained, 20% gry, 25% grn, 20% red & choc sh
30-40	30% wh to gry ss clusters, fine grad, 50% gry sh, 15% grn, 5% red & choc Tr. of coal
40-50	30% wh to gry ss clusters, 40% grn sh, 10% gry, 20% red & choc sh
50-60	20% wh & grn & gry ss clusters, tr of aragonite, 50% gry sh, 20% grn sh, very blocky, 10% red & choc sh
60-70	20% wh to gry ss clusters, tr of aragonite, 60% gry sh, 10% grn, very blocky 10% red & choc sh
70-80	25% wh to gry ss clusters, tr of chalco, 30% gry sh, 30% grn sh, 15% choc & red sh
80-90	5% red & choc sh, 25% grn, 40% gry, 30% wh to brn ss clusters, med sized grns
90-1900	5% coal, 5% wh ss cluster, med grad, 20% grn sh, 20% brn & choc sh, 50% gry sh
1900-10	Tr. of coal, 20% red & choc sh, 20% grn sh, 60% gry sh, vry micaceous
10-20	Tr. of coal, 40% red & choc sh, 10% grn sh, 20% brn sh, 30% gry sh, vry micaceous
20-30	50% red & choc sh, 20% grn, 30% gry sh, vry micaceous
30-40	40% wh to gry ss clusters, med sized grn, 30% grn, 40% gry sh, 10% brn sh, vry rotten, almost a black
40-50	Bad sample
50-60	20% grn, 90% brn to gry, very rotten resinous looking sh, try limonite
60-70	80% dk brn to gry sh, 10% red, tr of grn sh
70-80	Tr. of coal, tr of ss, 100% brn to gry, vry rotten, resinous looking sh, tr of grn sh
80-90	Same as above
90-2000	Tr. dead oil, 5% ss, 95% brn to gry sh, rotten, vry resinous, similar to that above
2000-10	5% coal, 10% wh, fine grained ss clusters, 35% grn sh, 50% brn to gry, rotten, vry resinous looking sh, similar to that above
10-20	Bad sample
20-30	Tr ss, 35% grn sh, 65% brn to gry, rotten, resinous sh, similar to above
30-40	Tr dead oil, 10% ss, 70% brn to gry sh, vry rotten, resinous looking, 20% grn ss sh, vry, vry fine grns
40-50	80% wh to light grn ss clusters, tr dead oil, 10% gry sh, 10% red & choc sh, tr grn sh
50-60	Tr ss, 30% grn sh, 70% gry to brn, rotten, resinous sh, tr coal
60-70	60% ss, wh & grn variegated, vry fine grns, 20% grn sh, 20% gry sh
70-80	70% grn ss, vry fine grad, 20% gry sh, 10% brn to red sh, tr Jasper tr petrified wood
80-90	90% grn to wh, vry fine grad ss, 10% gry sh, tr choc sh

1. The first part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses in various cities and states.

2. The second part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a small number followed by a period. The text in these paragraphs is also written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

3. The third part of the document is a list of names and addresses, similar to the first part. This list is also arranged in two columns, and it includes names such as "Mary White", "James Brown", and "Elizabeth Green". The addresses are written in a printed style, and the names are written in a cursive script.

4. The fourth part of the document is a series of numbered paragraphs, similar to the second part. These paragraphs are numbered from 1 to 10, and each one contains a different piece of information. The text is written in a cursive script, and it appears to be a continuation of the information provided in the third part of the document.

5. The fifth part of the document is a list of names and addresses, similar to the first and third parts. This list is also arranged in two columns, and it includes names such as "William Black", "Susan Gray", and "Thomas White". The addresses are written in a printed style, and the names are written in a cursive script.

6. The sixth part of the document is a series of numbered paragraphs, similar to the second and fourth parts. These paragraphs are numbered from 1 to 10, and each one contains a different piece of information. The text is written in a cursive script, and it appears to be a continuation of the information provided in the fifth part of the document.

7. The seventh part of the document is a list of names and addresses, similar to the first, third, and fifth parts. This list is also arranged in two columns, and it includes names such as "Charles Black", "Margaret White", and "John Brown". The addresses are written in a printed style, and the names are written in a cursive script.

8. The eighth part of the document is a series of numbered paragraphs, similar to the second, fourth, and sixth parts. These paragraphs are numbered from 1 to 10, and each one contains a different piece of information. The text is written in a cursive script, and it appears to be a continuation of the information provided in the seventh part of the document.

9. The ninth part of the document is a list of names and addresses, similar to the first, third, fifth, and seventh parts. This list is also arranged in two columns, and it includes names such as "Elizabeth Black", "Robert White", and "Mary Brown". The addresses are written in a printed style, and the names are written in a cursive script.

10. The tenth part of the document is a series of numbered paragraphs, similar to the second, fourth, sixth, and eighth parts. These paragraphs are numbered from 1 to 10, and each one contains a different piece of information. The text is written in a cursive script, and it appears to be a continuation of the information provided in the ninth part of the document.

2090-2100 85% grn to wh, vry fine grnd ss, 15% gry sh, tr dead oil, tr coal
2100-10 85% wh to light grn, vry fine grnd ss, 5% brn, rotten ss clusters, 10% gry & choc sh
10-20 80% multi-colored, vry fine grnd ss clusters, tr brn rotten ss clusters, 20% choc & gry sh
20-30 75% wh to multi-colored, vry fine grnd, ss clusters, 25% choc & gry sh
30-40 90% wh to multi-colored, vry fine grnd ss clusters, 10% choc & gry sh, vry blocky
40-50 80% wh to multi-colored, vry fine grnd ss clusters, 20% choc & gry sh
50-60 75% wh to multi-colored, vry fine grnd ss clusters, 25% choc & gry sh
60-70 60% wh to multi-colored ss, vry fine grnd clusters, 40% choc & gry sh
70-80 5% lime, 30% wh to multi-colored ss clusters, vry fine grnd, 15% choc sh, tr gry sh
80-90 Tr. limestone, 30% wh ss clusters, med grns, 50% brn & grn ss clusters, vry fine grnd, 20% choc & gry sh
90-2200 90% brn & grn, rotten ss clusters, vry fine grnd, 10% choc & gry sh, blocky
2200-10 Tr. lime, 20% wh ss cluster, med grnd, 60% brn sdy sh, vry fine grnd, 15% choc sh, tr gry shy sd
10-20 Tr. limestone, 30% wh to grn ss clusters, fine grnd, 60% brn sdy sh, 10% choc & tr of grn sh
20-30 Bad sample, too much geol
30-40 25% wh, med size ss clusters, 60% brn sdy sh, 15% choc sh, tr grn sh, tr buff ss, vry, vry, minute sized grns.
40-50 Bad sample
50-60 15% wh ss clusters, medium size grns, 75% brn sdy sh, 10% gry sh, tr gr sh
60-70 15% wh ss clusters, med grnd, 75% brn sh, vry rotten, 10% gry sh, tr gr sh
70-80 20% wh ss clusters, med grnd, 60% brn sh, 20% gry sh, tr grn sh
80-90 Bad sample
90-2300 Bad sample
2300-2330 Have been lost or misplaced
2330-10 Tr ss clusters, 30% brn to grn sdy sh, 70% gry to brn sh
40-50 Tr ss clusters, 40% brn to grn sdy sh, 60% gry to vry dk brn rotten sh
50-60 50% wh to dk brn multi-colored, med grnd ss clusters, 50% gry sh, micaceous, tr choc sh
60-70 30% multi-colored ss clusters, med grnd, 70% gry to dk brn, rotten sh
70-80 10% wh ss clusters, 30% brn to grn shaley sd, med sized grns, 60% gry & choc sh
80-90 Same as above
90-2400 10% wh ss clusters, med size grns, 35% brn to grn shaley sd, vry small grns, 55% gry sh, tr choc sh
2400-10 Tr. coal, 15% wh ss clusters, 35% brn & grn shaley sd, vry minute sized grns, 60% gry sh, tr choc sh
10-20 35% wh ss clusters, 35% brn & grn shaley sd, minute sd grns, 30% gry & choc sh
20-30 Same as above
30-40 Tr. coal, 20% wh ss clusters, med sized grns, 60% brn, grn & gry shaley sd, 20% gry and choc sh
40-50 60% wh ss clusters, med size grns, 40% brn & grn & gry shaley sand, tr gry & sh
50-60 25% wh ss clusters, med size grns, 45% grn to wh ss clusters, vry minute in size, 30% gry & choc sh, both vry micaceous

60-70	25% wh ss clusters, med size grns, 45% grn to wh ss clusters, vry minute in size, 30% gry & choc sh, both vry micaceous
70-80	10% wh med sized grn ss clusters, 65% grn to wh, vry minute grns, 35% gry sh
80-90	Tr. coal, tr limonite, tr wh ss clusters, med sized grns, 75% grn to wh ss clusters, vry minute size grns, 25% gry & choc sh, mostly choc
90-2500	Same as above - bad sample
2500-10	Bad sample
10-20	70% wh ss clusters, med sized grns, 15% grn sh, 5% choc sh, 10% gry sh
20-30	75% wh ss clusters, med sized grns, 15% grn sh, 10% gry sh, tr coal
30-40	85% wh, grn & brn ss, little bit below med in size, 10% grn, 5% gry sh
40-50	75% wh, grn & brn ss, sub-medium sized grains, 10% grn, 10% gry, 5% choc sh
50-60	90% wh, grn & brn ss, sub-med sized grns, 5% grn, 5% gry, tr choc sh
60-70	Tr. dead oil, tr coal, 80% brn & grn ss clusters, med sized grns, 15% grn sh, 5% gry shale, tr dead oil
70-80	Tr. dead oil, tr coal, 80% wh & grn ss clusters, 15% gry sh, tr gr sh
80-90	Good staining, tr coal, 80% wh to grn ss clusters, 15% gry sh, tr grn sh
90-2600	Good staining in samples, tr coal, 75% wh to brn & grn ss clusters, med sized grains, 20% gry sh, 5% choc sh
2600-10	65% grn to brn ss clusters, med size grns, 20% gry sh, 15% grn sh, tr. dead stain
10-20	Tr. dead oil, 75% brn to grn ss clusters, med size grns, 15% grn sh 10% gry sh
20-30	90% grn to brn ss clusters, med size grns, 10% grn & choc, vry good stain in samples
30-40	85% greenish to brn ss clusters, med size grns, 10% grn & choc sh, good stain, 5% coal
40-50	Same as above
50-60	Bad sample
60-70	Tr. aragonite, 70% wh, grn & brn ss clusters, sub-med sized grns, 30% gry blocky shale
70-80	Tr. aragonite, 40% wh, grn, brn ss clusters, sub-med sized grns, 30% gry sh, 30% grn sh, tr coal
80-90	Tr. stain, 40% wh, grn, brn ss clusters, sub-med sized grns, 40% gry sh, 20% grn sh, tr coal
90-2700	Tr. stain, 35% wh, grn, brn ss clusters, sub-med sized grains, 40% gry sh, 2% choc sh, tr. grn sh
2700-10	Tr. stain, 40% wh, grn, brn ss clusters, 40% gry sh, 20% choc sh, tr rd sh
10-20	Tr. stain, 40% wh, grn, brn ss clusters, sub-med size grns, 40% gry sh, 20% choc, tr of grn.
20-30	Tr. stain, 40% wh, grn, brn, ss clusters, sub-med size grns, 40% gry sh, 20% choc sh, 5% coal
30-40	Tr. stain, 40% wh, grn, brn ss clusters, sub-med size grns, 40% gry sh, 20% choc sh, tr coal
40-50	Tr. stain, tr lime, 30% wh, grn, brn ss clusters, 40% gry sh, 30% choc sh, tr coal
50-60	Tr. stain, 30% wh, grn & brn ss clusters, sub-med size grns, 35% gry sh, 30% choc to dk brn, vry rotten sh, 5% coal
60-70	Tr. stain, 30% wh, grn & brn ss clusters, sub-med size grns, 35% gry sh, 50% choc to dk brn sh, tr coal
2800-10	5% limestone, 25% wh, grn, brn ss clusters, 50% gry shale, 25% choc to drk brn rotten shale, tr of coal
10-20	Same as above
20-30	15% wh, grn, brn ss clusters, med size grns, 70% gry sh, blocky, 15% choc to dk brn rotten sh, tr coal

1. The first part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses.

2. The second part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a number followed by a period. The text in the paragraphs is written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

3. The third part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses.

4. The fourth part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a number followed by a period. The text in the paragraphs is written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

5. The fifth part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses.

6. The sixth part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a number followed by a period. The text in the paragraphs is written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

7. The seventh part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses.

8. The eighth part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a number followed by a period. The text in the paragraphs is written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

9. The ninth part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive script, and the addresses are written in a more formal, printed style. The list includes names such as "John Doe", "Jane Smith", and "Robert Johnson", along with their respective addresses.

10. The tenth part of the document is a series of numbered paragraphs, each containing a different piece of information. The paragraphs are numbered from 1 to 10, and each one begins with a number followed by a period. The text in the paragraphs is written in a cursive script, and it appears to be a continuation of the information provided in the first part of the document.

- 30-40 Tr. limestone, 70% wh to brn ss clusters, 25% gry sh, 5% brn rotten sh, tr of coal
- 40-50 Tr. limestone, 75% wh to grn to brn ss crystals, 20% gry sh, 5% brn to dk choc, vry rotten sh, tr coal
- 50-60 85% wh ss grns, 15% gry sh, tr coal
- 60-70 Tr. limestone, 80% wh, grn, brn ss clusters, med size grns, 20% gry blocky sh
- 70-80 Tr. limestone, 90% wh, grn, brn ss clusters, med sized grns, 10% gry sh, blocky & micaceous
- 80-90 30% wh to grn to brn ss clusters, 20% gry sh, 25% brn to dk rotten almost black sh, vry blocky, 25% coal
- 90-2900 40% wh, grn, brn ss clusters, med size grns, 10% gry sh, 15% brn to black rotten coalified sh, 35% coal
- 2900-10 50% wh, grn, brn ss clusters, med size grns, 10% gry wh, 15% brn to blk coalified, rotten sh, 25% coal
- 10-20 75% wh, & black, silt & pepper ss clusters, small grns, some grn included in the clusters, 15% gry sh, 5% red sh, 5% coal
- 20-30 Tr. limestone, 75% wh & black ss clusters, some gr included in clusters 10% gry sh, 5% choc, 10% coal
- 30-40 Tr limestone, 80% wh & blk ss clusters, 10% gry, tr c ss, 19% coal
- 40-50 Tr limestone, 60% black & wh ss clusters, med size grns, 15% gry sh, 5% choc sh, 20% coal
- 50-60 70% salt & pepper, however this sample was mostly brn, rotten, ss clusters, ss grns being a little larger than they have been, 5% gry sh, 15% choc sh, 10% coal
- 60-70 55% brownish ss clusters, a little larger than med size grns, 10% gry sh, 20% choc sh, 15% coal

Circulated 30 minutes at 2970 - very good stain, flocculation in bucket
85% dark brown to coalified shale, 15% brown sandstone.

- 70-80 60% brn, rotten ss, med size grns, 5% gry sh, tr choc, 35% coal
- 80-90 Flocculation in the pit, 40% brn, rotten ss, med size grns, tr gry sh, 20% choc sh, 40% coal
- 2990-3000 35% brn, vry rotten, med size ss, tr gry sh, 25% choc sh, 35% coal
- 3000-10 Pits flocculating very tremendously, rainbow on the pits at the stopping of pump, 20% coal, 20% brn to dk mottled ss, 15% wh salt & pepper ss, 35% brn to blk rotten sh, 10% gry blocky sh, tr grn sh
- 10-20 Pits flocculating, rainbow, 80% coal, 20% wh salt & pepper ss, tr brn to dk mottled sh, tr gry sh, tr chert
- 20-30 Pits flocculating, 50% coal, 20% brn to blk sh, 30% brn to grn to wh salt & pepper ss, tr gry sh
- 30-40 Traces gry sh, 35% coal, 25% brn to blk rotten sh, 30% brn to wh salt & pepper ss, 10% grn, vry fine grnd ss, good flocculations in pit, rainbow on pit, tr dead oil
- 40-50 10% coal, pits flocculating, rainbow, 70% brn to blk rotten sh, 20% wh to dk brn salt & pepper ss, tr Jasper
- 3050 - circulated 30 minutes - 30% coal, 40% brn to blk rotten shale, 20% brown mottled sandstone, 10% white very fine grained sandstone, traces gray shale
- 50-60 40% coal, 20% brn to blk sh, 10% gry sh, 15% brn mottled sandstone, 15% wh, vry fine grn ss, tr Jasper

The first of these is the fact that the
 government has been unable to raise the
 necessary funds to meet its obligations.
 This is due to a number of factors, including
 the fact that the government has been unable to
 collect the necessary taxes, and the fact that
 the government has been unable to borrow the
 necessary funds from the international market.
 The second factor is the fact that the
 government has been unable to control the
 inflation rate, which has led to a sharp
 decline in the value of the national currency.
 This has led to a sharp increase in the
 cost of imports, and a sharp decline in the
 value of exports, which has led to a sharp
 decline in the government's revenue.
 The third factor is the fact that the
 government has been unable to control the
 balance of payments, which has led to a
 sharp decline in the value of the national
 currency, and a sharp increase in the cost of
 imports, and a sharp decline in the value of
 exports, which has led to a sharp decline in
 the government's revenue.

The fourth factor is the fact that the
 government has been unable to control the
 money supply, which has led to a sharp
 increase in the inflation rate, and a sharp
 decline in the value of the national currency.
 This has led to a sharp increase in the
 cost of imports, and a sharp decline in the
 value of exports, which has led to a sharp
 decline in the government's revenue. The fifth
 factor is the fact that the government has
 been unable to control the foreign exchange
 rate, which has led to a sharp decline in
 the value of the national currency, and a
 sharp increase in the cost of imports, and a
 sharp decline in the value of exports, which
 has led to a sharp decline in the government's
 revenue.

The sixth factor is the fact that the
 government has been unable to control the
 interest rate, which has led to a sharp
 increase in the inflation rate, and a sharp
 decline in the value of the national currency.
 This has led to a sharp increase in the
 cost of imports, and a sharp decline in the
 value of exports, which has led to a sharp
 decline in the government's revenue.

60-70	50% coal, 25% brn to blk rotten sh, tr gry sh, 15% brn mottled ss, 10% wh, vry fine grnd ss
70-80	Same as above
80-90	30% wh salt & pepper ss, med size grns, 20% brn & gry sh, 25% coal, 25% brn mottled ss, med size grns
1090-1100	40% wh variegated ss, med size grns, 40% brn to gry sh, 20% coal, tr brn mottled, med sized ss
1100-12	40% wh multi-colored ss, 40% coal, 20% gry & grn sh
12-20	60% wh multi-colored ss, typical Pictured Cliff - Schlumberger log shows Top of Pictured Cliff to be 1112, med sized grns in the ss, 20% coal, 20% coal, 20% gry blocky sh
20-30	Same as above
30-40	70% wh multi-colored med size grn ss, 10% coal, 20% gry sh, tr gr sh
40-50	80% wh ss clusters, med size grns, 20% gry sh, tr grn sh
50-60	60% wh ss clusters, med size grns, 40% gry & choc sh, both blocky, tr grn sh
60-70	85% wh med size grn ss clusters, 15% gry sh, tr coal
80-90	60% wh ss clusters, 40% gry & choc sh, tr coal.
90-1200	40% wh ss clusters, grns are diminishing, showing base of P.C. vry near, 60% gry & choc sh, both blocky, tr of coal
1200-12	15% wh ss clusters, 35% brn, vry fine, rotten ss clusters, 50% gry & choc sh, tr coal
12-20	Tr wh ss clusters, typical P.C., 30% brn, vry fine, rotten ss, 70% gry & choc sh, tr blk sh, vry rotten
20-30	10% vry fine white ss clusters, 20% brn to gry shaley ss, 70% gry to blk sh, tr choc sh
30-40	Same as above
40-50	40% brn to gry shaley ss, 50% gry to blk sh, vry rotten, 10% coal
50-60	30% vry fine wh to brn ss, 20% coal 50% gry to brn to blk sh, vry vry rotten
60-70	Red sample
70-80	35% vry fine wh to brn ss, 20% coal, 45% gry, brn to blk rotten sh
90-1100	80% vry fine grnd wh ss, 20% coal, tr gry sh
1100-12	65% wh, vry fine grnd ss, 15% grn sh, 20% coal
12-20	60% coal, 20% brn, med sized ss grns, 20% gry & grn sh
20-30	60% brn, vry fine, ss clusters, 10% coal, 30% gry & dk grn sh, vry blocky and micaceous
30-40	20% wh salt & pepper ss cluster, these are probably caving from up above, 30% vry fine brn, vry fine grnd, ss, 50% gry and dk grn sh
40-50	Tr. wh ss, typical P. C., droppings from above, 40% vry fine grnd brn ss, 50% gry & dk grn sh, both blocky & micaceous, 10% coal
50-60	Tr. wh, typical P.C., ss, caving from above, 50% vry fine grnd brn ss clusters, 10% coal, 40% gry & dk grn sh, blocky & micaceous
60-70	Same as above
70-80	" " " Tr. light grn sh almost a sdy sh
80-90	20% light to dk multi-colored ss, grn size vry varied, 40% gry sh, 10% coal
90-1100	60% brn, vry fine, multi-colored ss, 20% gry sh, tr of coal
1100-12	Tr. wh ss, 50% brn to grn, vry fine grnd ss clusters, 30% gry to blk rotten sh, 10% coal
12-20	Same as above
20-30	60% brn to blk sdy sh, 40% gry sh, tr coal
30-40	70% brn, vry fine sdy sh, 30% gry sh

1. The first part of the report is a general introduction to the subject of the study.	1-1
2. The second part of the report is a detailed description of the methods used in the study.	2-1
3. The third part of the report is a presentation of the results of the study.	3-1
4. The fourth part of the report is a discussion of the results of the study.	4-1
5. The fifth part of the report is a conclusion of the study.	5-1
6. The sixth part of the report is a list of references.	6-1
7. The seventh part of the report is an appendix.	7-1
8. The eighth part of the report is a glossary.	8-1
9. The ninth part of the report is a bibliography.	9-1
10. The tenth part of the report is a list of figures.	10-1
11. The eleventh part of the report is a list of tables.	11-1
12. The twelfth part of the report is a list of abbreviations.	12-1
13. The thirteenth part of the report is a list of symbols.	13-1
14. The fourteenth part of the report is a list of units.	14-1
15. The fifteenth part of the report is a list of definitions.	15-1
16. The sixteenth part of the report is a list of footnotes.	16-1
17. The seventeenth part of the report is a list of endnotes.	17-1
18. The eighteenth part of the report is a list of appendices.	18-1
19. The nineteenth part of the report is a list of references.	19-1
20. The twentieth part of the report is a list of figures.	20-1
21. The twenty-first part of the report is a list of tables.	21-1
22. The twenty-second part of the report is a list of abbreviations.	22-1
23. The twenty-third part of the report is a list of symbols.	23-1
24. The twenty-fourth part of the report is a list of units.	24-1
25. The twenty-fifth part of the report is a list of definitions.	25-1
26. The twenty-sixth part of the report is a list of footnotes.	26-1
27. The twenty-seventh part of the report is a list of endnotes.	27-1
28. The twenty-eighth part of the report is a list of appendices.	28-1
29. The twenty-ninth part of the report is a list of references.	29-1
30. The thirtieth part of the report is a list of figures.	30-1
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33. The thirty-third part of the report is a list of symbols.	33-1
34. The thirty-fourth part of the report is a list of units.	34-1
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37. The thirty-seventh part of the report is a list of endnotes.	37-1
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49. The forty-ninth part of the report is a list of references.	49-1
50. The fiftieth part of the report is a list of figures.	50-1