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DYCO PETROLEUM COMPANY
#1 Anderson
Section 17, T1N-R93W
Rio Blanco County, Colorado



00038417

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ATTACHMENTS:	Lithologic Log with drilling time curve.

SUMMARY

WELL NAME: DYCO PETROLEUM CORPORATION
#1 Anderson

LOCATION: NESW 1/4 Section 17, T1N - R93W
1980 feet FSL and 1980 feet FWL
Rio Blanco County, Colorado

TYPE: Wildcat

ELEVATION: 6521 feet - Ground
6532 feet - Kelly Bushing

TOTAL DEPTH 5386 feet - Driller
5384 feet - Schlumberger

GEOLOGIST: Achille Vitali, Jr.
6670 West 28th Avenue
Denver, Colorado 80214

CONTRACTOR: Willard Pease Drilling Company
Grand Junction, Colorado
Rig 2 - Failing 5000
Pumps - Emsco 0-250
" D-300
Pusher - W. L. 'Rip' Douglas

MUD STREAM ANALYSIS: Core Laboratories Inc.
One Man Unit
Logger - Doug Vilbaurn

COMMENCED: Spudded - August 25, 1972

COMPLETED: Finished Drilling - October 12, 1972
Logged - October 12, 1972
Plugged and Abandoned October 14, 1972



CASING RECORD:

Surface Casing - Landed 10 3/4" casing at 402 feet KB. Cemented with 325 sacks type 'G' regular cement plus 2% calcium chloride. Circulated cement to surface.

Intermediate Casing - Landed 8 5/8" 24 pound casing at 1865 feet KB. Cemented with 100 sacks cement mixed with 25% gilsonite plus 3% calcium chlorite followed by 25 sacks of neat cement.

LOGGING RECORD:

Samples:

Bagged		420' - 5386'
Described	selected	
	intervals	420' - 4680'
	continuously	4680' - 5386'

Drilling Time Log
(Geolograph) (see Litho-log) 300' - 5386'

Mud Stream Analysis 2300' - 5386'
(Core Lab - Grapholog)

Mechanical Logs (Schlumberger)

Dual Induction Laterolog	1363' - 5383'
B.H.C. Formation Density Log	1363' - 5383'
Compensated Neutron Formation Density Log	1366' - 5368'

FORMATION TOPS

<u>Formation and Age</u>	<u>Sample Tops</u>	<u>Log Tops</u>	<u>Datum</u>
<u>Cretaceous</u>			
Frontier Formation	Surface	--	6521
Dakota Formation	420'	410' (see Gamma Ray of Compensated Newtron Density Log)	
<u>Jurissic</u>			
Morrison Formation	519'	518'	"
Curtis Formation	930' drilling time	930'	"
Entrada Formation	963'	978'	"
<u>Triassic</u>			
Chinle Formation	1330' drilling time	1334'	"
Shinarump Formation	1640' " "	1644'	
Moenkopie Formation	1670' " "	1671'	
<u>Permian</u>			
Park City Formation	2200' drilling time	2285'	
<u>Pennsylvanian</u>			
Weber Sand	2290'	2288'	
Minturn Formation	2460'	2453'	
Morgan Formation	3830'	3820'	
Objective Sand	5239' - 57'	5238' - 56'	

DRILL STEM TEST

D.S.T. #1 5234' - 5386' (151') - Morgan Sand

Halliburton Testers - Tool open with strong blow that continued throughout test. No Gas to surface. Muddy water to surface in 52 minutes. Recovered 5234 feet brackish water.

Pressures

Time

IHP	2677#	
IFP	695/1103#	5 minutes
ISIP	2354#	70 minutes
FP	1264/2273#	60 minutes
FSIP	None	None
FHP	2697#	

Note: No final shut in pressure or sample chamber recovery obtained - could not rotate tool shut on final shut in attempt. Packers pulled free with no difficulty.

Resistivity of recovered water was 1.00 hms at 98°F.

D.S.T. #2 5270' - 5330' (60') - Fractured Shale Show

Johnston Testers - Bottom hole straddle test. Bottom packer held. Tool open with very faint blow (1/4" of water) that remained steady throughout the test. Recovered 10 feet of mud. No Gas at all.

Pressures

Time

IHP	2736#	
IFP	12#	10 minutes
ISIP	78#	60 minutes
FP	14#	90 minutes
FSIP	78#	150 minutes
FHP	2755#	
Temperature	132°F	

Sample Chamber Recovery: Pressure - zero pounds.
1500 cc of drilling mud. No Gas.

BIT RECORD

<u>No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Depth Out</u>	<u>Feet</u>	<u>Hours</u>	<u>Pump Press.</u>
1.	9 7/8	HTC	OSC-3J	420	420	-	-
2.	15	Reed	Reemer Hole Opener	420	420	-	-
1.	7 7/8	HTC	OSC-1G	510	90	8 1/2	
2.	"	Reed	FBCT-J	1385	875	52	
3.	9 7/8	Smith	V2H-J	770	350	22 1/2	
4.	"	Smith	V2H-J	1355	585	22	
5.	7 7/8	Reed	YSL	1440	55	5 1/2	
6.	"	Reed	FBCT-J (RR)	1454	14	3 1/2	600
7.	"	HTC	OSC-1G	1640	196	21	"
8.	"	Smith	DG	1885	245	19 1/4	"
9.	"	HTC	OSC-1G	2048	163	16 1/2	"
10.	"	Smith	V2	2210	152	20 1/4	700
11.	"	HTC	J-55	2219	9	3 1/4	"
12.	"	HTC	OWL	2302	83	13	"
13.	"	HTC	J55-J	2316	14	6 1/2	"
14.	"	Reed	FBCT (RR)	2355	39	13	"
15.	"	HTC	WDR-J	2407	52	18 1/2	"
16.	"	HTC	J-55-J (RR)	2485	78	23 1/4	"
17.	"	Smith	4JS-J	2681	196	35 1/2	"
18.	"	HTC	J33-J	3066	385	61 1/4	"
19.	"	Reed	FBGM-J	3598	532	76 1/2	"
20.	"	HTC	J44	3832	234		
21.	"	Smith	4JS	4184	352	48 1/2	700
22.	"	Reed	FCM-J	4192			
23.	"	Smith	3JS	4414	222	39 1/4	"
24.	"	HTC	J44	4698	284	54	"
25.	"	Reed	FCM-J	4709	11	3 1/2	"
26.	"	HTC	ODV-J	4819	110	16	"
27.	"	Smith	V2H-J	4900	81	15 1/4	"
28.	"	HTC	W7	4912	12	4 3/4	"
29.	"	HTC	J33	4921	9	6 3/4	"
30.	"	HTC	OD4-J	4987	66	14 1/2	"
31.	"	HTC	ODV-J	5077	90	17	"
32.	"	Reed	YMG	5164	88	16	"
33.	"	HTC	J44-J	5183	19	6	"
34.	"	HTC	OWC	5236	53	14 1/2	"
35.	"	Reed	YSL-R	5325	89	20	"
36.	"	Smith	V-2	5386	61	15	"

DEVIATION RECORD

<u>Depth</u>	<u>Deviation</u>
130	$1/2^{\circ}$
215	$3/4^{\circ}$
420	$1 \ 1/4^{\circ}$
480	$1 \ 1/2^{\circ}$
600	-
1260	$2 \ 1/4^{\circ}$
1410	$2 \ 1/4^{\circ}$
1624	$2 \ 1/2^{\circ}$
2200	$3 \ 1/2^{\circ}$
2300	$3 \ 1/4^{\circ}$
2400	$4 \ 1/4^{\circ}$
2650	$4 \ 1/2^{\circ}$
3030	$5 \ 1/2^{\circ}$
3410	$6 \ 1/4^{\circ}$
3600	$6 \ 3/4^{\circ}$
3800	7 $^{\circ}$
3818	$7 \ 1/4^{\circ}$
4184	$8 \ 1/4^{\circ}$
4414	9 $^{\circ}$
4698	$9 \ 1/4^{\circ}$
4800	10 $^{\circ}$
4987	10 $^{\circ}$

CHRONOLOGICAL HISTORY

August 22 - 24	Moving in and rigging up.
August 25 - 27	Drilled Surface hole and set 10 3/4" casing.
August 28 - 31	Drilling ahead. T.D. 1383'. Hit water flow at 855' - approximately 100 bbls per hour, water flow increased to 300 bbls per hour at 1100' and to 1000 bbls per hour at 1200'.
September 1 - 5	Killed water flow and reamed hole.
September 5	Ran and cemented 8 5/8" pipe.
September 6 - October 12	Drilling ahead. Reached T.D. 5386' at 5 AM.
October 12	Ran Logs.
October 13 - 14	Ran D.S.T. #1 and D.S.T. #2.
October 14	Plugged and Abandoned.

PLUGGING RECORD

Verbal permission to plug was obtained from Mr. James McKee of the Colorado Oil and Gas Commission October 13, 1972.

Plugs were to be set as follows:

<u>Depth</u>	<u>Number of Sacks</u>
4000' - 3900'	35
2400' - 2300'	25
1/2 in 1/2 out of base of surface casing (1365')	25
Surface with marker	10

REMARKS

Hydrocarbon Evaluation:

The objective sand was encountered at a drilling depth of 5239 feet to 5257 feet. It was described as light to medium gray, very fine grain to silt in size, very finely micaceous, soft to friable. It was slightly calcareous and associated with much Anhydrite mush. It appeared to be tight, but Log (24 - 26% porosity) and D.S.T. data (flowed water to surface in 52 minutes) showed it to have good to excellent effective porosity and permeability. No show was detected in samples or on the mud logger. As already indicated, this zone flowed brackish water on a D.S.T.

A mud logging show of 80 units (maximum) was encountered in a zone cover by the drilling depth \pm 5292 feet to 5308 feet. The lithology of this zone was predominately a black calcareous, brittle and fractured Shale with only a slight trace of show on a very few pieces of calcite material. It was judged to be tight and a no test recommendation was made. D.S.T. #2 straddled this zone and recovered only 10 feet of drilling mud with no evidence of gas and very low (74#) shut in pressures.

All other sands and carbonates were judged to be tight and, or water bearing.

Operations:

Daily operations were conducted efficiently and in good spirits.

The wet sample cuttings were preserved and were sent to American Stratigraphic Company in Denver, Colorado for deposit and storage.

A. Vitali Jr.

Achille Vitali, Jr.
Geologist

DYCO PETROLEUM COMPANY
#1 Anderson
Section 17, T1N - R93W
Rio Blanco County, Colorado

SAMPLE DESCRIPTION

Samples described by Pleas Stringer (Geologist)

<u>FROM</u>	<u>TO</u>	<u>IN DAKOTA</u>
420'	440'	Sandstone, light gray, very fine to fine grain, very poor sort, angular to sub-angular, friable to hard, partly clay filled, poor to no porosity and permeability, No Show.
440'	470'	Sandstone, as above, No Show; scattered Shale, black, firm, fissle.
470'	480'	Shale, light blue-gray, hard and cherty, floating Sandstone grain, round, fine to medium, some pyritic.
480'	490'	Siltstone, brown, soft, pyritic.
490'	500'	Shale, light blue-gray, as above.
500'	510'	Cavings.
510'	520'	Siltstone, dark gray, hard to soft.

MORRISON 519' (+6013)

520'	550'	Shale, reddish brown, lavender and pale green, firm, fissle.
550'	940'	<u>Samples not described, Geologist not on well site.</u>
940'	950'	Sandstone, light gray, very fine to fine grain, very poor sort, sub-angular, friable to firm, partly clay filled, occasionally glauconitic, poor porosity and permeability, No Show.
950'	970'	No Samples.

ENTRADA 963'

970'	1000'	Shale, maroon, firm, fissle, silty; Sandstone, pink, very fine to fine grain, angular to sub-round, friable to unconsolidated, silty, partly clay filled, good porosity and permeability, No Show; Siltstone, pink, soft, sandy.
1000'	1020'	Sandstone, pink, very fine to occasional fine grain, sub-round, friable, partly clay filled, poor to good porosity and permeability, No Show.

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Note: Samples between 1020' to 2250' were not described as Geologist was not on well when samples were caught. A later attempt to run these samples was determined not worth the effort as weather had eradicated a goodly percentage of the depth numbers from the sample sacks. (Rough necks had used ball point pens instead of pencils to mark depths and ink had washed off).

SAMPLE DESCRIPTION

Samples described by Achille Vitali, Jr. Geologist.
Not lagged except where noted.

FROM TO IN PARK CITY FORMATION

2250'	2280'	Siltstone, brick red, very finely sandy in part, firm to hard, slightly calcareous, chunky.
2280'	2290'	Siltstone, medium to dark gray, very finely sandy, firm to very hard, slightly calcareous, chunky grading in part to Sandstone, light to medium gray, very fine grain to silt size, slightly calcareous, hard, tight, No Show.

WEBER SAND

2290'	2300'	Sandstone, white to very light gray, very fine grain, angular, firm to hard, calcareous to very calcareous, with floating medium to very coarse, sub-round to round, frosted quartz grains common, pyritic, occasionally finely micaceous, looks tight, some poor porosity and permeability, trace Sandstone, as above, speckled with asphaltic residue.
2300'	2330'	Sandstone, white to medium gray, due to increase in asphaltic speckling, rest as above, floating round frosted grain becoming rare.
2330'	2370'	Sandstone, white predominately with some medium gray due to asphaltic speckling, very fine to fine grain, calcareous, some clay matrix, firm to hard, some very hard, quartzitic and glassy, tight to fair porosity and permeability, occasionally pyritic, occasional trace Chert, milky.
2370'	2480'	Sandstone, all dead white, very fine to fine grain, firm to hard and calcareous, with abundant very hard to quartzitic and glassy occasionally finely pyritic, rare clusters with very rare large round grains, looks tight.

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<u>FROM</u>	<u>TO</u>	<u>MINTURN FORMATION</u>
2480'	2490'	Sandstone, as above, plus 50% Sandstone, light orange cast, rest as above.
2490'	2500'	Sandstone, white as above, occasionally very micaceous mixed with Sandstone, light orange, firm to hard, calcareous, rest as above, plus 10 to 20% Shale, wine to brick red, clay type, plus Siltstone, orange-red, occasionally micaceous to very micaceous, very calcareous, firm, in part very sandy grading to Sandstone, orange-red, very fine to fine grain, very calcareous, silty and clay filled, occasionally very micaceous, tight.
2500'	2510'	Predominately Siltstone, orange-red as above, grading to Sandstone, orange-red type, plus heavy trace Shale, as above, plus 10 to 20% Sandstone, white type.
2510'	2520'	Sandstone, medium orange, fine grain, very calcareous, friable to firm, slightly hard, micaceous in part, sub-angular to sub-round occasional medium to very coarse round grain, frosted, looks tight.
2520'	2550'	Sandstone, light orange grading to very light gray and white in bottom sample, fine grain, angular to sub-round, very calcareous, friable to firm, some hard, sorted, tight.
2550'	2570'	Sandstone, dirty white to very light gray, some with orange cast, very fine to fine grain as above, plus abundant Sandstone, coarse to very coarse, angular to sub-round, some small pebble size, quartzose, with occasional milky to light gray Chert type grains.
2570'	2580'	Siltstone, deep orange to red, sandy, calcareous, grading to Sandstone, orange-red, very calcareous, angular, silty and clay, firm, plus heavy trace Shale, as above, plus Sandstone, white to light gray as above.
2580'	2590'	Sandstone, deep orange to red, fine grain with some very fine to medium grain, angular, friable to firm, very micaceous, (biotite) giving spotted appearance.
2590'	2600'	Sandstone, bright orange to red, very fine grain, very calcareous, friable to firm, silty, clay filled grading to Siltstone, bright orange to red, finely sandy, very calcareous plus occasional trace Shale, brick red to wine clay type.
2600'	2610'	Missed.

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<u>FROM</u>	<u>TO</u>	
2610'	2650'	Sandstone, bright orange, as above, grading in minor part to Siltstone, as above, plus occasional trace Shale, brick red to orange, silty.
2650'	3750'	<u>Samples not described for reasons stated above.</u>
3750'	3760'	Sandstone, white to very light gray, occasional trace medium to dark gray, micaceous in part, very fine to fine grain, angular to sub-angular, firm to very hard, very calcareous, occasionally finely pyritic, looks very tight, No Show, plus trace Shale, dark gray to very dark gray, firm, calcareous, very micaceous with biotite mica.
3760'	3770'	Sandstone, very light to light gray in part with light orange cast, predominately fine grain, sub-angular, clay filled, calcareous, with abundant medium to coarse rounded light to bright orange grains, also common - very coarse, round, frosted clear quartz grain, plus abundant Clay, white, soft to firm, (calcareous Kaolin ?) occasionally slightly silty.
3770'	3790'	Shale, very dark gray to black, very micaceous with biotite and some bronze mica (has Schistose appearance and indeed suggests fresh detrital Schist), calcareous, interlaminated with Sandstone, light to medium gray, very fine to fine grain, angular, very calcareous, very micaceous in part.
3790'	3800'	Sandstone, light to medium gray, very fine grain to silt size, very calcareous, sorted, firm to hard, very finely micaceous, occasionally pink and orange grains, sub-angular to sub-round.
3800'	3820'	Sandstone, faint to light orange, some very light to light gray-orange, very fine to fine grain, angular to sub-round, heavy clay and calcareous matrix, occasionally light to bright orange sub-round grain, friable to firm, looks very tight.
3820'	3830'	Sandstone, white to very light gray, fine grain, some fine to medium grain and occasional coarse to very coarse floating round grain, heavy white very calcareous matrix, looks tight plus abundant Chalk, white, soft.
3830'	3840'	Sandstone, as above, plus 20% Limestone, as below.
<u>1st LIMESTONE MORGAN FORMATION</u>		
3840'	3850'	Limestone, medium gray, predominately dense, firm to hard, plus 20 to 30% light dove-gray, micro-crystalline to earthy, softer.

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<u>FROM</u>	<u>TO</u>	
3850'	3870'	Limestone, medium to very dark gray and shaly, dense to crypto-crystalline, firm to hard, platy to chunky grading in small part to Shale, dark gray to black, very calcareous.
3870'	3900'	Sandstone, medium gray, with some light gray, very fine grain, hard to very hard, in part quartzitic, slightly calcareous in part, sub-angular to sub-round, very finely micaceous, tight.
3900'	3920'	Sandstone, white to very light gray, fine grain, sorted, hard to quartzitic, some white clay matrix, tight, No Show.
3920'	3950'	Anhydrite, very light to light gray, crypto-crystalline to dense, occasionally micro-crystalline, firm to hard, (occasional streak finely sandy ?).
3950'	3960'	Anhydrite as above, with 50% white, powdery, soft.
3960'	3980'	Anhydrite, light to medium gray, medium to coarse crystals, friable, clear crystals, looks like crystal sand with light amounts coloring matrix.
3980'	4020'	Anhydrite, light to medium gray, dense to finely crystalline, friable to firm, slightly shaly in part, plus trace white, powdery, soft.
4020'	4040'	Sandstone, very light gray, with mottling of light orange to wine cast, very fine to fine grain, angular to sub-angular, speckled with fine mica flakes, hard to very hard, blocky, tight.
4040'	4060'	Sandstone, bright orange, very fine to fine grain, sub-angular with occasional floating medium to coarse grains sub-round, plus rare very coarse round grains, firm to hard, slightly calcareous heavy clay matrix, tight.
4060'	4070'	Sandstone, as above, plus Sandstone, white to light gray, very fine grain, as above, plus Shale, medium maroon to wine, silty and sandy, calcareous, firm to hard, blocky, micaceous.
4070'	4080'	Sandstone, light orange, rest as above.
4080'	4090'	Sandstone, white, fine to medium grain, predominately glassy and quartzitic, some hard to very hard, plus heavy traces Shale, dark gray, very micaceous to Schistose in aspect.
4090'	4100'	Sandstone, as above, plus Sandstone, grading to Siltstone, orange, maroon and brick red, very fine to fine grain, clay filled and shaly, calcareous in part, tight, plus trace Shale, maroon, clay type, silty in part.

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<u>FROM</u>	<u>TO</u>	
4100'	4680'	<u>Samples not described for reasons stated above.</u>
4680'	4690'	Limestone, very light to medium gray, crypto-crystalline to dense, firm, in part slightly anhydritic, very finely sandy grading to Sandstone, light gray, very fine grain, occasionally fine to medium grain, very calcareous, friable to firm, angular to sub-angular, very tight, No Show.
4690'	4700'	Limestone, as above, finely sucrosic to crypto-crystalline, occasionally blebs of Anhydrite crystals, clear, appears very tight.
4700'	4710'	Limestone, light to medium gray, as above, generally hard.
4710'	4720'	Caving, trip sample, probably Limestone, as above.
4720'	4730'	Anhydrite, white to off white to very light gray, crypto-crystalline to dense, soft to firm, plus heavy trace Limestone, as above.
4730'	4740'	Anhydrite, as above, occasional splotches of buff, rest as above.
4740'	4750'	Limestone, very dark gray with olive cast to light black, predominately dense, firm to hard, brittle, chunky, sharp edges.
4750'	4760'	Anhydrite, white, crypto-crystalline to sucrosic, occasionally slightly calcareous, soft to firm, interlaminated with Limestone, as above.
4760'	4800'	Limestone, dolomitic, medium gray-brown, dense to crypto-crystalline, firm to hard, occasional trace pyrite, occasional blebs of Anhydrite, as above.
4800'	4820'	Limestone, mixture of medium to dark gray-brown, as above, with 60% being brown-black, dense, shaly, firm to hard, chunky to slightly platy.
4820'	4830'	Anhydrite, white, dense to crypto-crystalline, soft to hard, occasionally slightly calcareous plus heavy trace Limestone, as above, plus trace pyrite clusters.
4830'	4850'	Limestone, light gray buff, crypto-crystalline to finely sucrosic, firm to hard, looks tight, No Show.
4850'	4860'	Limestone, cream to very light buff, dense, semi-chunky to almost platy, trace chalky soft, mostly hard, brittle.

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<u>FROM</u>	<u>TO</u>	
4860'	4900'	Limestone, light to medium tan with slightly olive cast, some dense, mostly crypto-crystalline, very finely sucrosic, trace soft to friable, mostly firm to hard, occasional trace of vugs with calcite filling, sub-platy to chunky, occasional trace fine pyrite crystals, looks tight, No Show.
4900'	4910'	Limestone, color as above, becoming mostly dense with some grading to crypto-crystalline plus trace very light tan, earth to chalky, soft, plus heavy trace Chert flakes, medium olive-brown, conchoidal fractures, brittle, translucent.
4910'	4920'	Limestone, as above, in part dark gray-brown, plus some tattle tale gray limy Siltstone, occasionally finely sandy, soft to friable, shaly, plus 25% Chert flakes, as above, plus some light tan (abundant evidence of fracturing in Limestone with Calcite and Anhydrite filled sides and veinlets).
4920'	4930'	Limestone, medium to dark brown-black, argillaceous in part, predominately firm to hard, occasionally some very hard, dolomitic, plus fractured as above, plus Anhydrite streaks, light gray, silty and shaly, soft, plus 5 to 10% Chert flakes as above, occasional trace pyrite crystals.
4930'	4950'	Limestone, black, dense, hard, shaly?, tabular to chunky, (abundant evidence of fractures with white Calcite and Anhydrite filled faces and veinlets).
4950'	4960'	Limestone, as above, plus heavy trace Sandstone, as below.
4960'	4990'	Sandstone, very light gray, with occasional light gray, very fine grain to silt size, very finely micaceous in part, firm to slightly hard, becoming firm to hard toward base, very limy and tight grading to Limestone, very light gray, very finely sandy for most part, dense to crypto-crystalline, firm to hard, occasionally sprinkled with very fine pyrite crystals, plus light trace Shale, black, very calcareous, firm.
4990'	5000'	Mixture of sandy Limestone, light to medium gray, as above, and Limestone, medium to dark gray, anhydritic, crypto-crystalline and occasionally finely sandy.
5000'	5030'	Limestone, predominately light to medium gray with fair mixture of dark gray to gray-black anhydritic in part, mostly crypto-crystalline to micro-crystalline with dark gray to black type, dense and shaly in part, heavy trace Chert flakes, medium to dark olive-brown to brown-black, translucent.

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<u>FROM</u>	<u>TO</u>	
5030'	5050'	Limestone, dark brown-black to black, shaly dolomitic in part, dense, hard, brittle, fractures (with Calcite crystals plus Calcite filled veinlets), plus 10% Sandstone, white, very fine grain, very calcareous, firm, sub-angular to sub-round, tight with some porosity and permeability, No Show.
5050'	5090'	Sandstone, very light to light gray, very fine grain to silt size, very finely micaceous, friable to slightly hard, anhydritic grading to very finely sandy, Anhydrite toward bottom of zone, occasionally finely pyritic and occasionally finely pyritic and occasional pyrite clusters.
5090'	5100'	Anhydrite, white to light gray, soft and amorphous to firm to slightly hard, in part slightly sandy.
5100'	5110'	Anhydrite, white to medium dark gray, rest as above.
5110'	5120'	Limestone, slightly dolomitic, medium to dark gray with occasional buff cast, very finely shaly and sandy, occasional anhydritic blebs.
5120'	5130'	Limestone, very dark gray to light black, occasional brown cast, firm to hard, crypto-crystalline to dense, very argillaceous, firm to hard, brittle, blocky to semi-platy flakes, trace fracture.
5130'	5140'	Limestone, as above, plus 10% Sandstone, as below.
5140'	5150'	Sandstone, buff, very fine grain, sorted, sub-angular, friable to slightly firm, slightly calcareous, (slightly anhydritic?), looks tight with some porosity and permeability, No fluorescence or cut. No show on Logger.
5150'	5170'	Sandstone, as above, becoming firm to hard, more anhydritic.
5170'	5180'	Anhydrite, light to medium gray, firm to hard, very finely sandy in part with thin black Shale parting, plus 20 to 25% Sandstone, as above.
5180'	5185'	Anhydrite, as above, plus streak of Sandstone, light to medium gray, as above, very anhydritic plus fair amount Dolomite medium olive-brown, dense, hard, brittle, plus traces Chert, medium to dark brown with olive cast, brittle.
5185'	5190'	Sample as above.

Sample Description
#1 Anderson

<u>FROM</u>	<u>TO</u>	
5190'	5200'	Anhydritic Limestone, medium to dark gray, some with olive black cast, blebs of white crystalline Anhydrite, fractures with Calcite crystals in filling, shaly in part, firm to hard, dense to crypto-crystalline.
5200'	5230'	Anhydrite, light to medium gray with buff to light brown cast in part, grainy looking, blebs soft white crystal Anhydrite, shaly in large part, calcareous for most part, firm to slightly hard.
5230'	5240'	Sample as above, with some becoming slightly sandy at base.
5240'	5260'	Sandstone, light to medium gray, very fine grain to silt size, very finely micaceous, very soft and friable, anhydritic matrix ?, plus abundant white to buff Anhydrite, mushy, slightly calcareous ?, very finely sandy. No Show in sample.
<u>No Gas on Logger - Lags to Drilling Break 5239' - 5257' (18')</u>		
5260'	5270'	80% as above to 20% as below.
5270'	5290'	Limestone, dark gray, grainy, anhydritic, firm to hard, shaly in part, chunky.
5290'	5300'	Limestone as above, plus 30% Shale, black, very calcareous, firm, brittle, semi-platy to chunky, occasional evidence of fractured faces.
5300'	5310'	Shale, black, very calcareous, firm, brittle, platy to chunky fractured faces and fractured veinlets filled with Calcite, trace granular anhydritic Calcite, few pieces bright yellow fluorescence and cut.
<u>Lags back to Gas Show 5292' - 5308' and Drilling Break 5294' - 5305'</u>		
5310'	5320'	Limestone, medium olive gray, platy, dense, firm to hard.
5320'	5330'	Limestone, some as above, with some becoming light gray with buff cast, in part semi-chalky looking, soft to firm, fossiliferous in part, plus very heavy trace Chert, amber, milky and light gray.
5330'	5340'	Sandstone, tattle tale gray, very fine grain, very limy (almost sandy lime) firm to slightly hard, very tight, No Show.
5340'	5350'	Sandstone, as above, with 40 to 50% fraction becoming non-sandy, Limestone, off-white to light gray, dense, platy, soft to hard, no porosity and permeability.

Sample Description
#1 Anderson

<u>FROM</u>	<u>TO</u>	
5350'	5370'	Limestone, light to medium gray, some with olive cast and some with light tan cast, platy, chunky, predominately dense to crypto-crystalline, small fracture with oolite shadows and a small fraction being slightly fossiliferous, occasional anhydritic blebs in bottom 10 feet, also heavy trace Chert amber, tan, milky, light gray in bottom 10 feet.
5370'	5380'	Limestone, tan to light gray, plus light to medium gray as above, plus 30% Anhydrite, off-white to light gray, soft and mushy to firm, plus heavy trace clear to milky crystals (selemite?) plus 10 to 20% fraction Shale, black, soft to firm, very splintery, slightly calcareous, very finely micaceous, plus traces Chert as above.

Circulation Sample - 45 minutes

5380'	5385'	Predominately Anhydrite as above, plus 30% Limestone, as above, plus 10 to 20% Shale, as above, plus (Selmite crystals as above).
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T. D. 5386'