

# FILE NOTATIONS

Entered in NID File

Checked by Chief

Entered on S R Sheet

Copy NID to Field Office

Location Map Pinned

Approval Letter

Card Indexed

Disapproval Letter

IWR for State or Fee Land

## COMPLETION DATA:

Date Well Completed

12-16-56

Location Inspected

OW

WW

TA

Bond released

GW

OS

PA

X

State of Fee Land

## LOGS FILED

Ditty's Log

1-22-57

Blot Log (No. 1)

7

E

I

E-I

GR

GR-N

Misc

Lat

Mir-L

(2)

Sonic

Others

Field Print

Run #1(2)

Run #2(2)

12-17-91  
JEP

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo

	14	
X		

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Tribal Lands

Lease No. I-149-IND-9122

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

September 26, 1956

Cahone Mesa  
Well No. 1 is located 500 ft. from N line and 800 ft. from W line of sec. 14

SW SW 14 40 S., 25 E. S. L. B. & M.  
(¼ Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Wildcat San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation ~~of the derrick floor above sea level~~ is 5081.5 ft. (approx. ground)

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

1. Drill 11" hole to 1000' +.
2. Run and cement 8 5/8" casing at 1000' + with 250 sacks cement.
3. Drill 7 7/8" hole to a total depth of 6000' +.
4. If commercial production is obtained a supplementary completion notice will be issued, otherwise plug and abandon in accordance with U.S.G.S. regulations.

Surface formation is the Brushy Basin (Jurassic).

IT IS REQUESTED THAT ALL INFORMATION ON THIS WELL BE KEPT CONFIDENTIAL UNTIL THE WELL IS COMPLETED.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

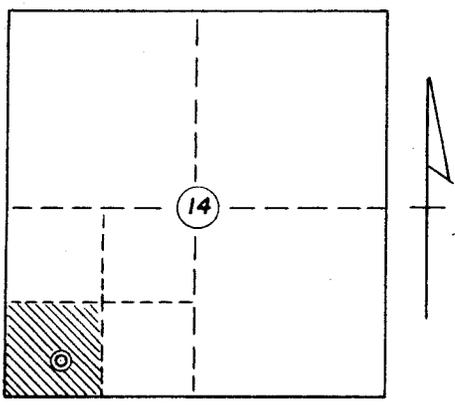
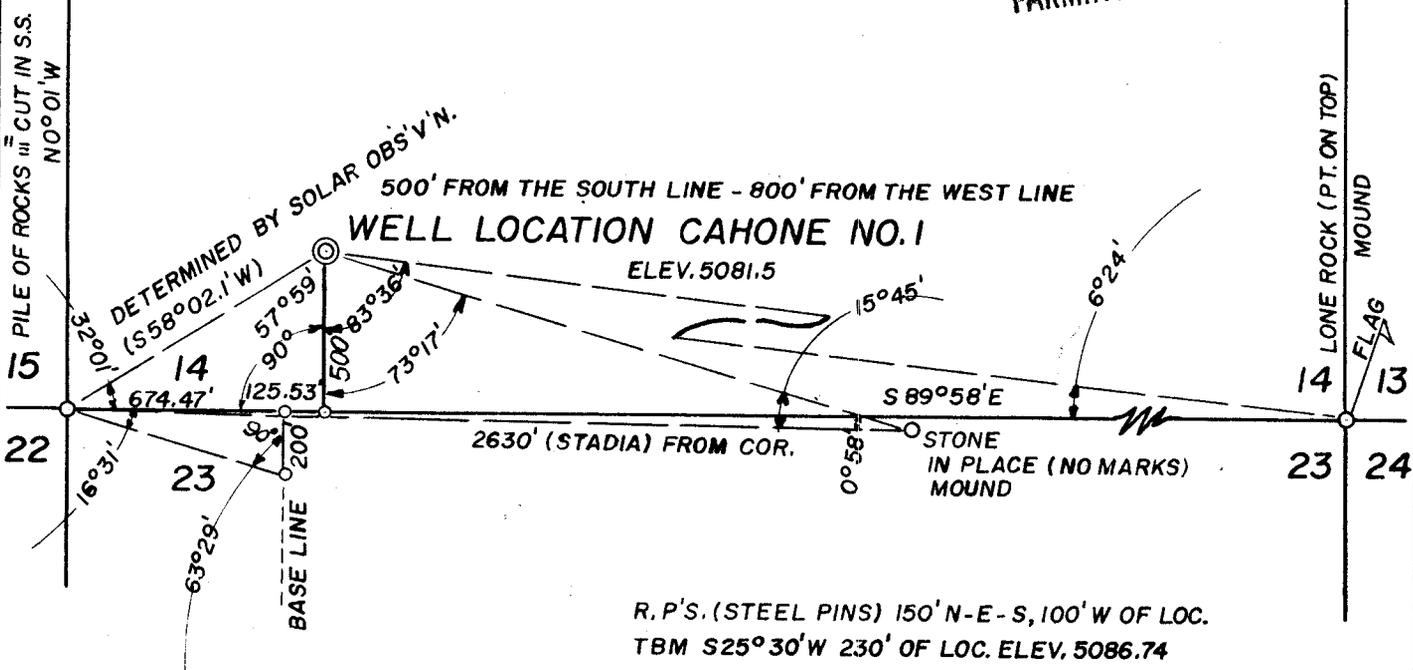
Address 33 Richards Street

Salt Lake City, Utah

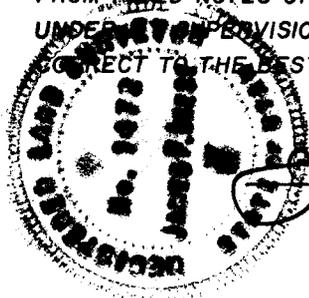
By R. E. Eddy  
R. E. Eddy

Title Senior Exploitation Engineer

**RECEIVED**  
 SEP 27 1956  
 U. S. GEOLOGICAL SURVEY  
 FARMINGTON, NEW MEXICO



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



*James P. Leese*  
 JAMES P. LEESE  
 REGISTERED LAND SURVEYOR  
 REG. NO. 1472, UTAH

SHELL OIL CO.	
WELL LOCATION SW1/4, SW1/4, SECTION 14, T40S, R25E, S.L.M. SAN JUAN COUNTY UTAH	
SEPT. 22, 1956.	SCALE: 1" = 600'
DRAWN BY - w.c.	
SAN JUAN ENGINEERING CO. FARMINGTON NEW MEXICO	

SHELL OIL COMPANY

WELL NO. 1

Cahone Mesa

DRILLING REPORT

FOR PERIOD ENDING

(FIELD)  
San Juan County, Utah

October 6, 1956

(COUNTY)

14

(SECTION OR LEASE)

T40S, R25E

(TOWNSHIP OR RANCHO)

DAY 1956	DEPTHS		REMARKS
	FROM	TO	
10-3 to 10-6	0	1305	<p><u>Location:</u> 500' N and 800' E of the SW corner, Section 14, T. 40 S., R. 25 E., S.L.B.M., San Juan County, Utah.</p> <p><u>Elevation:</u> MAT 5081.70' DF 5093.34' KB 5095.71'</p> <p><u>Drilled 1305'</u>. Spudded 10:00 P.M. October 3, 1956. Drilled with water base emulsion mud (Baroid). Ran and cemented 8-5/8" casing, 32#, at 1275' with 400 sacks construction cement. Treated with 2% calcium chloride. 15# slurry, one top plug, bumped OK, finished at 1:50 A.M., October 7, 1956, good returns, Halliburton cementers.</p> <p style="text-align: right;"><u>Mud Summary</u> Wt. 11.3 #/gal. Vis. 40 sec. FC6/32" pH 6 Salinity 10,000 (t) ppm</p>

CONDITION AT BEGINNING OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
DRILL PIPE SIZES				

B. B. Robinson

SIGNED

Cahone Mesa

DRILLING REPORT

FOR PERIOD ENDING

November 6, 1956

14

(SECTION OR LEASE)

San Juan County, Utah

T 40 S R25E

(COUNTY)

(TOWNSHIP OR RANCHO)

DAY 1956	DEPTHS		REMARKS
	FROM	TO	
10-7 to 10-11	1305	3133	<u>Drilled 1828'</u> . Drilled with water, converted to gypsum base mud at 3133.
10-12 to 11-1	3133	5814	<u>Drilled 2681'</u> .
11-2 to 11-4	5814	5838	<u>Drilled 11'</u> . (Depth Correction on geolograph 37'. 5825'=5788'). Cored 50' (Core #1), recovered 50'.
11-5 to 11-6	5838	5888	<u>Cored 50'</u> . (Core #2). Drill collars parted 90' from the surface while pulling core. Fish includes 19 drill collars and core barrel. Ran Bowen overshot. Bridges incountered at 2550', worked down to 2730' in 4 hours. Ran in with bit, spot reamed to 4192', clean hole to 5362, drilled solid fill to top of fish at 5409. Conditioned mud for 4 hours and ran Bowen overshot, bumper sub, and one drill collar. Worked pipe and jarred 1 hour (no circulation), freed fish. Recovered 50', Core #2. Magna-fluxed drill collars and core barrel.
			<u>Mud Summary:</u> Treated mud with impermix, preservative, gypsum, gel, Q-broxin.
			CHECKED BOP DAILY
			<u>Mud Summary</u>
			Wt. 10.1 #/gal Vis 30-40 Sec.
			WL 4-5 cc FC 1-2/32 Salinity 9000-12,000 ppm (R) pH 7.6

CONDITION AT BEGINNING OF PERIOD				
HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
11	0	1305	8-5/8"	1275
DRILL PIPE SIZES		4-1/2		

B. B. Robinson

SIGNED

Cahone Mesa

DRILLING REPORT

14

FOR PERIOD ENDING

(FIELD)  
San Juan County, Utah  
(COUNTY)

December 9, 1956

(SECTION OR LEASE)  
T. 10 S., R. 25 E.  
(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
56			
11-13	5989		DST #2 5795-5824 (Straddle Test) Johnston testers, 2 bobtail packers at 5792' and 5795', and (lower) 5824'; 2 outside and 2 inside pressure recorders, (1 Amerada 5798'; 1 "T" 5788'; and 2 "L" at 5985'), 1-3/4" subsurface bean and 1 - 1" surface bean, perforations 5795-5824'. Used 30' (.147 B) air cushion. Tool initially shut in 20 minutes, open 1 hour 30 minutes, final shut in 45 minutes. (Lower packer leaked during ISI, did not leak during most of flow period). Blow moderate through-out test. No gas to surface, no fluid loss in annulus. Recovered 2834' (38.2 B) total including: 85' (1.2 B) watery gas cut mud and 2749' (37.0 B) slightly muddy gas cut slightly sulphurous salt water. Maximum salinity 101,000 ppm (R). Mud before test 12,000 ppm (R), ISIP failed, IFP 265, FFP 1175, FSIP 1960 (still rising), HP 3020.
11-14 to 11-23	5989		Shut down, repairing engines.
11-24	5989		Installed reconditioned engines. Changed to salt base mud.
11-25 to 12-4	5989	7188	<u>Drilled 1199'</u> .
12-5	7188	7203	<u>Drilled 15'</u> . DST #3 7080-7188', Johnston Testers, 2- 6-5/8" bobtail packers at 7080' and 7075', 4 outside pressure recorders (1 Amerada at 7182', 1 "T" at 7186', and 2 "L" at 7069 and 7067'), 1" surface bean, 3/4" subsurface bean, perforations 7080-7085' and 7171-7188'. Used 30' (.147 B) air cushion. Tool initially shut in 24 minutes, open 1 hour 30 minutes, final shut in 58 minutes. Blow, immediately faint, becoming sporadic and nearly dead at end of test. No gas to surface, no fluid loss in annulus. Recovered 34' (.17 B) drilling mud. Salinity 120,000 ppm (R), ISIP 0, FFP 0, FSIP 0, HP 4197.
12-6 to 12-9	7203	7449	<u>Drilled 246'</u> .  Checked BOP daily

CONDITION AT BEGINNING OF PERIOD				
HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
11	0	1305	8-5/8	1275
7-7/8	1305	5989		
DRILL PIPE SIZES				
4-1/2				

B. B. Robinson

SIGNED

Cahone Mesa

## DRILLING REPORT

FOR PERIOD ENDING

November 12, 1956

(FIELD)

San Juan County, Utah

(COUNTY)

(SECTION OR LEASE)

T. 40 S., R. 25 E.

(TOWNSHIP OR RANCHO)

DAY 56	DEPTHS		REMARKS	
	FROM	TO		
11-7 to 11-9	5888	5938	<u>Cored 50'</u> . Recovered 49'. (Core #3)	
11-10 to 11-12	5938	5989	<p><u>Cored 51'</u>. Recovered 51'. (Core #4). Ran Schlumberger Electrical Survey, Gamma Ray-Neutron, Microlog, Hole Caliper, Laterolog.</p> <p><u>DST #1, Johnston Testers, 5788-5843'</u>, straddle test, upper bobtail packers at 5785 and 5788', lower packer 5843', 2 outside (long) recorders, 2 inside recorders (Amerada and Johnston "TW"), 3/4" sub-surface bean, 1" surface bean, perforations 5788-5806', 5836-5843', 30' air cushion. Tool initially shut in 15 minutes (leaked), open 1 hour 30 minutes, final shut in 45 minutes. Lower packer leaked throughout test. Blow moderate throughout test, no gas to surface, no fluid loss in annulus. Recovered 90' (1.3 bbls) water and gas cut mud, and 3099' (41.9 bbls) slightly muddy, gas cut salt water.</p> <p>Maximum salinity 100,000 ppm (R). Mud before test 12,000 ppm (R).</p> <p>ISIP failed, FSIP 2065' (still rising); IFP 255, FFP 1385; IHP 3085; FHP 3075; BHT 140°F.</p> <p>Treated mud with impermix, preservative, gypsum, gel, Q-broxin.</p> <p style="text-align: center;">CHECKED BOP DAILY</p> <p style="text-align: right;"><u>Mud Summary</u>  Wt. 10.1#/gal  Vis. 30-45 sec.  WL + 5 cc  Salinity 12,000 ppm (r)  pH. 7.5</p>	
CONDITION AT BEGINNING OF PERIOD				
HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
11	0	1305	8-5/8	1275
7-7/8"	1305	5888		
DRILL PIPE SIZES				
4-1/2				

B. B. Robinson

SIGNED

Cahone Mesa

**DRILLING REPORT**

WELL NO. \_\_\_\_\_

(FIELD)

FOR PERIOD ENDING

14

San Juan County, Utah

December 17, 1956

(SECTION OR LEASE)

T. 40 S., R. 25 E.

(COUNTY)

(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
56			
12-10	7449	7469	Drilled 20'. DST #4, 7280-7449' Johnston Testers. 2- 6-5/8" bobtail packers at 7280' and 7273', 3 outside and 2 inside pressure recorders; "1 "T" at 7447', 1 Amerada at 7444', 1 Amerada at 7439' and 2 "L" at 7264', 1" surface bean and 3/4" subsurface bean, perforations 7280-7292' and 7437-7449'. Used 30' (0.18 B) air cushion. Tool initially shut in 20 minutes, open 1 hour 30 minutes, final shut in 45 minutes. Blow, immediate faint increasing to weak after 1 minute, increasing to moderate after 3 minutes and remaining steady to end of test. No gas to surface, no fluid loss in annulus. Recovered 4860' (66.1 B) slightly mud cut, heavily (non-flammable) gas cut water. Minimum salinity 47,000 ppm (R). Mud before test 155,000 ppm (R), ISIP 2710, IFP 490, FFP 1040, SIP 2370 (still rising), HP 4480.
12-11 to 12-12	7469	7575	Drilled 88'.
12-13	7575	T.D.	Ran Schlumberger logs: Micro-Laterolog, Gamma Ray-Neutron Log.
12-14			Circulated. Ran Velocity Survey.
12-15			With open end drill pipe plugged as follows:  60 sacks at 7400' (7400-7200) 50 sacks at 6900' (6900-6750) 75 sacks at 6050' (6050-5800) 75 sacks at 2900' (2900-2650) 30 sacks at 1760' (1760-1660) 50 sacks at 1280' (1280-1160)
			Ran in and located top plug at 1163'. Released rig 4:00 P.M. 12-16-56.
12-17			Installed marker and officially abandoned 12-16-56.

Contractor: George Noland Drlg. Co.

Drillers: C. E. Swisher  
G. E. Williams  
T. T. Glazebrook

CONDITION AT BEGINNING OF PERIOD				
HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
11	0	1305	8-5/8	1275
7-7/8	1305	7449		
DRILL PIPE SIZES			4-1/2	

B.B. Robinson

SIGNED

## DITCH SAMPLES

Examined by J.R. Anklam 0 to 290  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>KAKKE</del> NOT LAGGED
0	150		No samples.	
150	160	50	<u>Siltstone</u> , light green, siliceous.	
		50	<u>Siltstone</u> , tan, siliceous.	
160	170	100	<u>Siltstone</u> , tan, as above.	
170	180	100	<u>Sandstone</u> , pale green, fine, sub rounded, poorly sorted, very argillaceous.	
180	190	30	<u>Shale</u> , medium grained, siliceous.	
		70	<u>Shale</u> , medium grained, mottled orange siliceous.	
190	200	50	<u>Shale</u> , medium grained, siliceous.	
		50	<u>Siltstone</u> , gray.	
200	210	100	<u>Shale</u> , medium grained, mottled orange.	
210	220	30	<u>Shale</u> , as above.	
		70	<u>Sandstone</u> , white-pale green, fine-medium, sub rounded-well rounded, frosted with fragments gray and green <u>shale</u> , slightly calcareous.	
220	230	20	<u>Shale</u> , as above.	
		80	<u>Sandstone</u> , as above.	
230	250	10	<u>Shale</u> , as above.	
		90	<u>Sandstone</u> , as above.	
250	260	80	<u>Sandstone</u> , as above.	
		20	<u>Limestone</u> , olive gray, IVFA sandy.	
260	270	90	<u>Sandstone</u> , as above.	
		10	<u>Limestone</u> , as above.	
270	280	90	<u>Sandstone</u> , as above with chert fragments, pyritic.	
		10	<u>Limestone</u> , as above.	
280	290	30	<u>Sandstone</u> , as above, green, argillaceous.	
		70	<u>Shale</u> , medium grained.	

## DITCH SAMPLES

Examined by J.R. Anklam 290 to 450  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>10252</del> NOT LAGGED
290	300	50	<u>Sandstone</u> , as above, becoming fine-very fine.	
		50	<u>Shale</u> , as above.	
300	310	50	<u>Sandstone</u> , as above, not argillaceous, not pyritic.	
		50	<u>Shale</u> , as above.	
310	320	50	<u>Sandstone</u> , as above.	
		50	<u>Shale</u> , pale green, very sandy.	
320	330	70	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
330	350	80	<u>Sandstone</u> , as above.	
		20	<u>Shale</u> , as above.	
350	360	80	<u>Sandstone</u> , white, fine-medium, angular-sub rounded, fairly well sorted.	
		20	<u>Shale</u> , pale green.	
360	370	10	<u>Bentonite</u> , red.	
		70	<u>Sandstone</u> , as above.	
		20	<u>Shale</u> , as above.	
370	380	30	<u>Bentonite</u> , red.	
		40	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
380	390	70	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
390	400	80	<u>Sandstone</u> , as above.	
		20	<u>Shale</u> , as above.	
400	430	90	<u>Sandstone</u> , as above.	
		10	<u>Shale</u> , as above.	
430	450	100	<u>Sandstone</u> , white-pale orange, fine, angular, fairly well sorted.	

## DITCH SAMPLES

Examined by J.R. Anklam 450 to 720  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXX</del> NOT LAGGED
450	470		Skip.	
470	500	100	<u>Shale</u> , red, gray, green, bentonitic.	
500	510	100	<u>Shale</u> , brown, gray, green, with chert fragments.	
510	530	100	<u>Sandstone</u> , pale orange, fine, angular, well sorted, calcareous.	
530	540		Skip.	
540	550	100	<u>Shale</u> , brown, very calcareous, sandy.	
550	560	30	<u>Sandstone</u> , pale gray, very fine, angular, well sorted, very calcareous.	
		70	<u>Shale</u> , brown, soft medium calcareous.	
560	570	30	<u>Sandstone</u> , as above, not calcareous.	
		70	<u>Shale</u> , as above.	
570	580	20	<u>Sandstone</u> , as above, calcareous.	
		80	<u>Shale</u> , as above.	
580	590	20	<u>Sandstone</u> , as above, very calcareous.	
		80	<u>Shale</u> , as above.	
590	600	30	<u>Sandstone</u> , as above.	
		70	<u>Shale</u> , as above.	
600	610	80	<u>Sandstone</u> , tan, very fine, angular, well sorted, very calcareous.	
		20	<u>Shale</u> , brown, calcareous.	
610	620	100	<u>Shale</u> , brown, mottled green, very calcareous.	
620	680	100	<u>Sandstone</u> , light brown, very fine-fine, sub rounded-well rounded, poorly sorted, slightly calcareous, argillaceous, frosted.	
680	690	100	<u>Sandstone</u> , as above, calcareous.	
690	700		Skip.	
700	710	100	<u>Sandstone</u> , as above.	
710	720		Skip.	

DITCH SAMPLES

Examined by J.R. Anklam 720 to 1140  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXX</del> NOT LAGGED
720	740	100	<u>Sandstone</u> , as above, not calcareous.	
740	760		Skip.	
760	770	80	<u>Sandstone</u> , becoming light orange, as above.	
		20	<u>Shale</u> , brown, green, calcareous, sandy.	
770	780	70	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
780	790	60	<u>Sandstone</u> , as above.	
		40	<u>Shale</u> , as above.	
790	800	70	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
800	850	80	<u>Sandstone</u> , as above.	
		20	<u>Shale</u> , as above, not sandy.	
850	900	80	<u>Sandstone</u> , as above, slightly calcareous.	
		20	<u>Shale</u> , as above.	
900	920	100	<u>Sandstone</u> , brown, very fine, angular, calcareous, argillaceous, frosted.	
920	940	100	<u>Sandstone</u> , as above, very calcareous.	
940	980	100	<u>Sandstone</u> , white, fine, angular-well rounded, well sorted, frosted.	
980	1050		Skip.	
1050	1060	90	<u>Sandstone</u> , as above.	
		10	<u>Shale</u> , brown, calcareous.	
1060	1070	80	<u>Sandstone</u> , as above.	
		20	<u>Shale</u> , as above.	
1070	1080	70	<u>Sandstone</u> , as above.	
		30	<u>Shale</u> , as above.	
1080	1140	100	<u>Sandstone</u> , pale orange, very fine, angular, well sorted.	

## DITCH SAMPLES

Examined by J.R. Anklam 1140 to 2210  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LAGGED</del> NOT LAGGED
1140	1200	100	<u>Sandstone</u> , red, green, angular-sub rounded, well sorted.	
1200	1300	100	<u>Sandstone</u> , tan-pale orange, very fine, angular, well sorted.	
1300	1560	100	<u>Sand</u> , very fine-fine, angular-sub rounded, with few fine rounded frosted grains.	
1560	1570		Skip.	
1570	1650	100	<u>Sand</u> , as above.	
1650	1770	100	<u>Sand</u> , as above, with few orange stained grains.	
1770	1800	100	<u>Shale</u> , orange, calcareous.	
1800	1820	100	<u>Shale</u> , dark brown, red.	
1820	1850	100	<u>Shale</u> , as above, sandy.	
1850	1900	100	<u>Sand</u> , very fine-fine, as above.	
1900	1920	100	<u>Shale</u> , red, calcareous.	
1920	2000	100	<u>Siltstone</u> , red, calcareous.	
2000	2040	100	<u>Shale</u> , red, calcareous, silty.	
2040	2050	100	<u>Siltstone</u> , red, calcareous.	
2050	2080	100	<u>Siltstone</u> , as above, very calcareous.	
2080	2090	60	<u>Siltstone</u> , as above.	
		40	<u>Shale</u> , red.	
2090	2100	50	<u>Siltstone</u> , as above.	
		50	<u>Shale</u> , as above.	
2100	2150	50	<u>Shale</u> , red, non calcareous.	
		50	<u>Shale</u> , orange, calcareous.	
2150	2200	100	<u>Shale</u> , red.	
2200	2210	60	<u>Shale</u> , red.	
		40	<u>Shale</u> , orange, calcareous.	

DITCH SAMPLES

Examined by J.R. Ankiam 2210 2550  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LAGGED</del> NOT LAGGED
2210	2220		Skip.	
2220	2240	40	<u>Shale</u> , red.	
		60	<u>Shale</u> , orange, calcareous.	
2240	2250	30	<u>Shale</u> , red.	
		70	<u>Shale</u> , orange, calcareous.	
2250	2270	50	<u>Shale</u> , as above, red.	
		50	<u>Shale</u> , orange, as above.	
2270	2280	70	<u>Shale</u> , red.	
		30	<u>Shale</u> , orange, as above.	
2280	2290	80	<u>Shale</u> , red.	
		20	<u>Shale</u> , orange, as above.	
2290	2300	70	<u>Shale</u> , red.	
		30	<u>Shale</u> , orange, as above.	
2300	2310	50	<u>Shale</u> , red.	
		50	<u>Shale</u> , orange, as above.	
2310	2330	60	<u>Shale</u> , red.	
		40	<u>Shale</u> , orange, as above.	
2330	2340	70	<u>Shale</u> , red.	
		30	<u>Shale</u> , orange, as above.	
2340	2370		Skip.	
2370	2400	100	<u>Shale</u> , red.	
2400	2500	100	<u>Shale</u> , red, very calcareous.	
2500	2530	100	<u>Shale</u> , red.	
2530	2550	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , red, IVFA.	

## DITCH SAMPLES

Examined by J.R. Anklam 2550 3160  
E.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LOGGED</del> NOT LOGGED
2550	2590	100	<u>Shale</u> , as above.	
2590	2600	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
2600	2630	100	<u>Shale</u> , red, very calcareous.	
2630	2640		Skip.	
2640	2670	100	<u>Shale</u> , as above.	
2670	2700	90	<u>Shale</u> , as above.	
		10	<u>Shale</u> , purple.	
2700	2730	100	<u>Shale</u> , light green, light red purple, soft.	
2730	2750	90	<u>Shale</u> , as above.	
		10	<u>Sandstone</u> , white, fine.	
2750	2770	100	<u>Sandstone</u> , white, conglomerate, with coarse fragments yellow chert and gray chert.	
2770	2780	100	<u>Shale</u> , light red, light purple.	
2780	2790	50	<u>Sandstone</u> , white, mottled green, fine, angular.	
		50	<u>Shale</u> , light gray.	
2790	2810		Skip.	
2810	2900	100	<u>Shale</u> , light green, purple, red, soft, sandy, slightly bentonitic.	
2900	2980	100	<u>Shale</u> , green, purple, slightly bentonitic.	
2980	3000	100	<u>Sandstone</u> , orange, very fine, angular, with abundant fine orange staining, well rounded grains.	
3000	3030	100	<u>Siltstone</u> , brown orange.	
3030	3040	100	<u>Shale</u> , red.	
3040	3070		Skip.	
3070	3140	100	<u>Siltstone</u> , orange.	
3140	3160	100	<u>Siltstone</u> , orange, calcareous.	

## DITCH SAMPLES

 Examined by J.R. Anklam 3160 3450  
B.B. Robinson to \_\_\_\_\_

 Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXXX</del> NOT LAGGED
3160	3170	60	<u>Siltstone</u> , as above.	
		40	<u>Shale</u> , light green, soft.	
3170	3180	80	<u>Siltstone</u> , as above.	
		20	<u>Shale</u> , as above.	
3180	3190	70	<u>Siltstone</u> , as above.	
		30	<u>Shale</u> , as above.	
3190	3200	70	<u>Sandstone</u> , orange, very fine, angular, well sorted, very calcareous.	
		30	<u>Shale</u> , as above.	
3200	3220	80	<u>Sandstone</u> , as above, micaceous.	
		20	<u>Shale</u> , as above.	
3220	3230	90	<u>Sandstone</u> , as above.	
		10	<u>Shale</u> , as above.	
3230	3240	90	<u>Shale</u> , orange, calcareous, sandy.	
		10	<u>Shale</u> , as above.	
3240	3250	100	<u>Shale</u> , as above.	
3250	3310	100	<u>Shale</u> , as above, very calcareous, very sandy.	
3310	3320	100	<u>Siltstone</u> , orange, very calcareous.	
3320	3330	70	<u>Siltstone</u> , orange, calcareous.	
		30	<u>Shale</u> , pale green.	
3330	3350	100	<u>Sandstone</u> , red, fine-medium, angular, poorly sorted, arkosic, micaceous, calcareous, argillaceous.	
3350	3390	100	<u>Siltstone</u> , orange, very calcareous.	
3390	3400	80	<u>Shale</u> , red, calcareous, silty.	
		20	<u>Shale</u> , pale green.	
3400	3440	100	<u>Siltstone</u> , as above.	
3440	3450	100	<u>Sandstone</u> , orange, very fine, angular, very micaceous, very calcareous.	

## DITCH SAMPLES

Examined by J.R. Anklam 3450 4010  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXX</del> NOT LAGGED
3450	3470	100	<u>Sandstone</u> , red, orange, fine-medium, angular, poorly sorted, slightly calcareous,	
3470	3490	100	<u>Siltstone</u> , orange, as above.	
3490	3500	100	<u>Shale</u> , red, silty.	
3500	3550	100	<u>Shale</u> , as above, soft, very calcareous.	
3550	3650	100	<u>Shale</u> , as above, calcareous.	
3650	3660	100	<u>Siltstone</u> , green, very calcareous.	
3660	3720	100	<u>Siltstone</u> , red, very calcareous.	
3720	3750	100	<u>Shale</u> , red, very calcareous.	
3750	3830	100	<u>Shale</u> , orange, soft, very calcareous.	
3830	3850	100	<u>Shale</u> , orange, medium calcareous, silty.	
3850	3890	100	<u>Siltstone</u> , orange, very calcareous.	
3890	3910	100	<u>Shale</u> , red, silty, slightly calcareous.	
3910	3920	70	<u>Shale</u> , as above.	
		30	<u>Shale</u> , pale green.	
3920	3930	80	<u>Shale</u> , red, as above.	
		20	<u>Shale</u> , pale green.	
3930	3940	70	<u>Shale</u> , red, as above.	
		30	<u>Shale</u> , pale green.	
3940	3950	60	<u>Shale</u> , red, as above.	
		40	<u>Shale</u> , pale green.	
3950	3960	100	<u>Shale</u> , green and red.	
3960	3980	100	<u>Shale</u> , red, calcareous, silty.	
3980	4000	100	<u>Sandstone</u> , red, calcareous, argillaceous.	
4000	4010	100	<u>Shale</u> , red, calcareous.	

## DITCH SAMPLES

Examined by J.R. Anklam 4010 to 4280  
B.E. Robinson toWell 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>MADE</del> NOT LAGGED
4010	4020	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , as above.	
4020	4030	100	<u>Sandstone</u> , very calcareous.	
4030	4070	100	<u>Shale</u> , as above.	
4070	4090	100	<u>Sandstone</u> , as above.	
4090	4110	100	<u>Shale</u> , as above.	
4110	4130	100	<u>Siltstone</u> , red, calcareous.	
4130	4140	100	<u>Sandstone</u> , calcareous.	
4140	4160		Skip.	
4160	4170	100	<u>Siltstone</u> , as above.	
4170	4180	80	<u>Sandstone</u> , as above.	
		20	<u>Limestone</u> , as above.	
4180	4190	50	<u>Siltstone</u> , as above.	
		30	<u>Shale</u> , red.	
		20	<u>Limestone</u> , as above.	
4190	4200	50	<u>Siltstone</u> , as above.	
		50	<u>Shale</u> , as above.	
4200	4210	70	<u>Shale</u> , red, calcareous.	
		20	<u>Siltstone</u> , as above.	
		10	<u>Limestone</u> , as above.	
4210	4260	70	<u>Shale</u> , as above.	
		30	<u>Siltstone</u> , as above.	
4260	4270	100	<u>Sandstone</u> , calcareous.	
4270	4280	50	<u>Siltstone</u> , red, calcareous.	
		50	<u>Sandstone</u> , as above.	

DITCH SAMPLES

Examined by J.R. Anklam 4280 4600  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>TABLE</del> NOT LAGGED
4280	4290	50	<u>Siltstone</u> , as above.	
		40	<u>Sandstone</u> , as above.	
		10	<u>Anhydrite</u> .	
4290	4300	50	<u>Siltstone</u> , as above.	
		30	<u>Sandstone</u> , as above.	
		20	<u>Limestone</u> , as above.	
4300	4310	50	<u>Shale</u> , red, calcareous.	
		40	<u>Siltstone</u> , as above.	
		10	<u>Limestone</u> , as above.	
4310	4470	50	<u>Shale</u> , as above.	
		50	<u>Siltstone</u> , as above.	
4470	4500	100	<u>Shale</u> , as above.	
4500	4510	50	<u>Shale</u> , red, calcareous, silty.	
		50	<u>Shale</u> , light gray, green, silty.	
4510	4520	60	<u>Shale</u> , red, as above.	
		40	<u>Shale</u> , light gray green, as above.	
4520	4550	100	<u>Shale</u> , red, calcareous.	
4550	4570	60	<u>Shale</u> , red, as above.	
		40	<u>Shale</u> , light green, silty.	
4570	4580	40	<u>Shale</u> , light green, sandy.	
		60	<u>Shale</u> , orange, silty, calcareous.	
4580	4590	30	<u>Shale</u> , light green as above.	
		70	<u>Shale</u> , orange, as above.	
4590	4600	100	<u>Limestone</u> , white-pale orange, I-III VF-FA, orange cherty.	

## DITCH SAMPLES

Examined by J.R. Anklam 4600 4800  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>TABLE</del> NOT LAGGED
4600	4610	20	<u>Shale</u> , green, as above.	
		60	<u>Shale</u> , orange, silty, calcareous.	
		20	<u>Limestone</u> , as above.	
4610	4660	100	<u>Shale</u> , orange-red, slightly calcareous, silty.	
4660	4670	10	<u>Shale</u> , light green, sandy.	
		90	<u>Shale</u> , orange, as above.	
4670	4680	20	<u>Shale</u> , light green, as above.	
		80	<u>Shale</u> , orange, as above.	
4680	4700	30	<u>Shale</u> , light green, as above.	
		70	<u>Shale</u> , orange, as above.	
4700	4720	30	<u>Shale</u> , light green, as above.	
		70	<u>Shale</u> , orange, as above.	
4720	4750	40	<u>Shale</u> , light green, as above.	
		60	<u>Shale</u> , orange, as above.	
4750	4760	20	<u>Shale</u> , light green, sandy.	
		80	<u>Shale</u> , orange, as above.	
4760	4770	30	<u>Shale</u> , light green, as above.	
		70	<u>Shale</u> , orange, as above.	
4770	4780	40	<u>Shale</u> , light green, as above.	
		60	<u>Shale</u> , orange, as above.	
4780	4790	30	<u>Shale</u> , light green, as above.	
		70	<u>Shale</u> , orange, as above.	
4790	4800	20	<u>Shale</u> , light green, as above.	
		60	<u>Shale</u> , orange, as above.	
		20	<u>Limestone</u> , light gray, IVFA.	

## DITCH SAMPLES

Examined by J.R. Anklam 4800 4960  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>1800-20</del> NOT LAGGED
4800	4810	20	<u>Shale</u> , as above.	
		60	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
4810	4820	40	<u>Shale</u> , green.	
		60	<u>Shale</u> , orange, slightly calcareous, silty.	
4820	4830		Skip.	
4830	4840	100	<u>Limestone</u> , tan, I-III VF-FA with fragments orange opaque chert.	
4840	4850	90	<u>Shale</u> , orange, calcareous.	
		10	<u>Limestone</u> , as above.	
4850	4855	100	<u>Limestone</u> , tan, IVFA.	
4855	4860		Skip.	
4860	4865	100	<u>Limestone</u> , light gray, IVFA.	
4865	4870	50	<u>Limestone</u> , as above with fragments black opaque chert.	
		50	<u>Limestone</u> , medium gray, III FA, argillaceous.	
4870	4875	100	<u>Limestone</u> , tan, III FA with fragments tan, translucent chert.	
4875	4885	100	<u>Limestone</u> , as above, no chert.	
4885	4890	100	<u>Limestone</u> , as above with chert fragments as above.	
4890	4900	100	<u>Limestone</u> , tan-white, I-III VF-FA with rare dark brown opaque chert.	
4900	4920	100	<u>Limestone</u> , tan, IVFA. Samples mostly red <u>shale</u> .	
4920	4930	100	<u>Limestone</u> , tan, IVFA, sandy.	
4930	4935		Skip.	
4935	4940	100	<u>Limestone</u> , light brown, III FA.	
4940	4945	100	<u>Sandstone</u> , white, very fine, angular, well sorted, very calcareous.	
4945	4950	100	<u>Sandstone</u> , as above.	
4950	4960	100	<u>Limestone</u> , tan, III FA.	

## DITCH SAMPLES

Examined by J.R. Anklam 4960 5070  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXX</del>
4960	4965	100	<u>Limestone</u> , tan, IVFA.	
4965	4970	30	<u>Shale</u> , medium gray.	
		70	<u>Limestone</u> , as above.	
4970	4975	100	<u>Limestone</u> , tan, I-III VF-FA.	
4975	4985	100	<u>Limestone</u> , white-tan, IVF-FA with gray specks, fossil shadows, few fragments, white transparent chert.	
4985	4990	20	<u>Chert</u> , as above.	
		80	<u>Limestone</u> , as above.	
4990	5000	10	<u>Chert</u> , as above.	
		90	<u>Limestone</u> , as above.	
5000	5005	90	<u>Shale</u> , orange, calcareous, silty.	
		10	<u>Limestone</u> , as above.	
5005	5010	100	<u>Limestone</u> , tan, IVFA.	
5010	5015	20	<u>Limestone</u> , as above.	
		80	<u>Shale</u> , orange, silty.	
5015	5020	30	<u>Shale</u> , medium gray.	
		70	<u>Shale</u> , orange, silty.	
5020	5030	100	<u>Shale</u> , brown, green, orange.	
5030	5035	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , tan, IVFA.	
5035	5040	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , light gray, IVFA.	
5040	5065	100	<u>Shale</u> , as above.	
5065	5070	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , tan, IVFA.	

## DITCH SAMPLES

Examined by J.R. Anklam 5070 5205  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXXX</del> NOT LAGGED
5070	5075	100	<u>Shale</u> , as above.	
5075	5085	100	<u>Shale</u> , medium gray.	
5085	5090	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , light gray, IVFA.	
5090	5095	100	<u>Limestone</u> , pale gray, IVFA.	
5095	5100	60	<u>Shale</u> , medium gray.	
		40	<u>Limestone</u> , as above.	
5100	5105	100	<u>Limestone</u> , white, I-III VF-FA.	
5105	5110	60	<u>Shale</u> , medium gray.	
		40	<u>Limestone</u> , as above.	
5110	5115	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
5115	5130	100	<u>Shale</u> , gray, brown, orange.	
5130	5135	100	<u>Shale</u> , gray, green, red.	
5135	5140	100	<u>Shale</u> , medium gray, mottled brown.	
5140	5145	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , white, IVFA, very sandy.	
5145	5150	100	<u>Shale</u> , medium gray, mottled brown.	
5150	5170	100	<u>Shale</u> , medium gray, mottled brown, calcareous.	
5170	5175	70	<u>Shale</u> , medium gray, calcareous.	
		30	<u>Limestone</u> , light gray, IVFA.	
5175	5195	100	<u>Shale</u> , medium gray, mottled brown, calcareous.	
5195	5200	50	<u>Shale</u> , as above.	
		50	<u>Limestone</u> , light gray, IVFA, sandy.	
5200	5205	100	<u>Shale</u> , as above.	

DITCH SAMPLES

Examined by J.R. Anklam 5205 to 5290  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LOGGED</del> NOT LAGGED
5205	5210	100	<u>Limestone</u> , tan, IVFA, sandy.	
5210	5215	100	<u>Limestone</u> , as above, with fragments clear chert.	
5215	5220	100	<u>Shale</u> , as above.	
5220	5225	100	<u>Limestone</u> , tan, IVFA, with fragments milky white opaque chert.	
5225	5230	50	<u>Shale</u> , medium gray.	
		50	<u>Limestone</u> , light gray, IVFA.	
5230	5235	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , as above.	
5235	5240	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , as above.	
5240	5245	50	<u>Siltstone</u> , gray, very calcareous.	
		30	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
5245	5250	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , as above.	
5250	5260	60	<u>Shale</u> , medium gray, calcareous.	
		40	<u>Shale</u> , light gray, very soft, very calcareous.	
5260	5265	100	<u>Shale</u> , light gray, as above.	
5265	5270	90	<u>Limestone</u> , light brown gray, I-III VF-FA.	
		10	<u>Chert</u> , light gray, translucent.	
5270	5275	100	<u>Limestone</u> , with chert as above.	
5275	5280	100	<u>Limestone</u> , tan, IVFA, slightly sandy.	
5280	5285	100	<u>Limestone</u> , light brown, IVF-MA, with light gray translucent chert.	
5285	5290	50	<u>Shale</u> , medium gray, calcareous.	
		50	<u>Limestone</u> , as above, crinoids.	

## DITCH SAMPLES

Examined by J.R. Anklam 5290 to 5370  
B.B. Robinson to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XAREE</del> NOT LAGGED
5290	5295	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , tan, IVFA.	
5295	5300	70	<u>Shale</u> , medium gray, calcareous.	
		30	<u>Limestone</u> , light gray, III-FA.	
5300	5320	100	<u>Limestone</u> , light gray, I-III VF-FA.	
5320	5325	50	<u>Shale</u> , light gray, silty, calcareous.	
		50	<u>Limestone</u> , as above.	
5325	5330	50	<u>Shale</u> , medium gray, mottled brown, calcareous-very calcareous.	
		50	<u>Limestone</u> , tan, IVFA.	
5330	5335	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , as above.	
5335	5340	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , as above.	
5340	5345	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , tan, III-MA.	
5345	5350	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , tan, IVFA.	
5350	5355	70	<u>Limestone</u> , tan-white, I-III VF-FA.	
		30	<u>Shale</u> , as above.	
5355	5360	60	<u>Shale</u> , medium gray, mottled brown.	
		40	<u>Sandstone</u> , gray, very fine, very calcareous.	
5360	5365	40	<u>Shale</u> , as above.	
		60	<u>Sandstone</u> , as above.	
5365	5370	40	<u>Shale</u> , as above.	
		60	<u>Limestone</u> , light gray, IVFA.	

## DITCH SAMPLES

Examined by J.R. Anklam 5370 5525  
E.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXXX</del> NOT LAGGED
5370	5375	100	<u>Limestone</u> , gray, IVFA.	
5375	5380	100	<u>Limestone</u> , gray brown, IVFA.	
5380	5385	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , as above.	
5385	5390	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
5390	5400	100	<u>Shale</u> , medium gray, mottled brown.	
5400	5430	100	<u>Shale</u> , medium gray, mottled brown.	
5430	5440	100	<u>Shale</u> , light gray, slightly calcareous.	
5440	5445	100	<u>Shale</u> , light green, mottled purple.	
5445	5450	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , light gray, IMA.	
5450	5465	100	<u>Shale</u> , light green and gray.	
5465	5470	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , medium gray, III FA, argillaceous.	
5470	5495	100	<u>Shale</u> , as above.	
5495	5500	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , light gray brown, IVFA.	
5500	5505	80	<u>Shale</u> , light green and gray.	
		20	<u>Limestone</u> , white, IVFA.	
5505	5510	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , tan, IVFA.	
5510	5515	100	<u>Shale</u> , light green, mottled purple.	
5515	5525	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , tan, I-III VF-FA.	

DITCH SAMPLES

Examined by J.R. Anklam 5525 to 5615  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LOGGED</del> NOT LAGGED
5525	5530	100	<u>Limestone</u> , light gray, IVF-FA.	
5530	5535	50	<u>Shale</u> , as above.	
		50	<u>Limestone</u> , as above.	
5535	5540	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , as above.	
5540	5550	100	<u>Shale</u> , as above.	
5550	5555	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , light gray, IVFA.	
5555	5565	100	<u>Shale</u> , as above.	
5565	5570	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , light gray, IVFA.	
5570	5575	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , tan, IVFA, sandy.	
5575	5580	100	<u>Shale</u> , as above.	
5580	5585	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , light gray, very fine, angular, very calcareous.	
5585	5590	100	<u>Shale</u> , as above.	
5590	5595	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , tan, I-III VF-FA.	
5595	5600	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
5600	5610	90	<u>Shale</u> , light green, mottled brown and purple.	
		10	<u>Limestone</u> , light gray, IVFA.	
5610	5615	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , white, IVFA.	

## DITCH SAMPLES

Examined by J.R. Anklam 5615 5700  
B.B. Robinson to \_\_\_\_\_Well \_\_\_\_\_  
Field or Area \_\_\_\_\_1  
Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>MISSING</del> NOT LAGGED
5615	5620	100	<u>Shale</u> , as above.	
5620	5625	50	<u>Shale</u> , as above.	
		50	<u>Limestone</u> , medium gray brown, IVFA.	
5625	5630	100	<u>Limestone</u> , as above.	
5632	5635	80	<u>Shale</u> , as above.	
		20	<u>Limestone</u> , as above.	
5635	5640	40	<u>Shale</u> , as above, mostly light green.	
		60	<u>Limestone</u> , tan, I-III VF-FA.	
5640	5650	50	<u>Shale</u> , as above.	
		50	<u>Limestone</u> , as above.	
5650	5655	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , as above with clear chert fragments.	
5655	5660	30	<u>Shale</u> , as above.	
		70	<u>Limestone</u> , light brown, IVFA with chert as above.	
5660	5665	60	<u>Shale</u> , as above.	
		40	<u>Limestone</u> , tan, IIIIA.	
5665	5675	100	<u>Limestone</u> , as above, I-III VF-MA.	
5675	5685	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , tan, IVFA.	
5685	5690	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , as above with light brown translucent chert fragments.	
5690	5695	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , as above with chert fragments.	
5695	5700	90	<u>Limestone</u> , as above.	
		10	<u>Chert</u> , as above.	

## DITCH SAMPLES

Examined by J.R. Anklam 5700 to 5795  
B.B. Robinson to \_\_\_\_\_

Well \_\_\_\_\_  
 Field or Area \_\_\_\_\_

1  
Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>NEEDS</del> NOT LAGGED
5700	5710	100	<u>Limestone</u> , light gray, III FA, with few chert fragments, as above.	
5710	5715	100	<u>Shale</u> , medium gray, calcareous.	
5715	5720	100	<u>Limestone</u> , dark gray, III FA, very argillaceous.	
5720	5725	100	<u>Shale</u> , medium gray, very calcareous.	
5725	5730	30	<u>Shale</u> , black, very calcareous.	
		70	<u>Limestone</u> , dark gray, III FA, argillaceous.	
5730	5735	40	<u>Shale</u> , as above.	
		60	<u>Limestone</u> , as above.	
5735	5740	40	<u>Shale</u> , as above.	
		60	<u>Limestone</u> , as above.	
5740	5750	30	<u>Shale</u> , as above.	
		70	<u>Limestone</u> , as above, I-III VF-FA, slightly argillaceous in 5745-5750.	
5750	5755	100	<u>Limestone</u> , light-medium gray, I-III VF-FA.	
5755	5760	100	<u>Sandstone</u> , light gray, very fine, angular, well sorted, very calcareous.	
5760	5765	10	<u>Anhydrite</u> , white, coarse, crystalline.	
		70	<u>Shale</u> , medium grain, calcareous.	
		30	<u>Limestone</u> , tan, IVFA, anhydritic.	
5765	5780	30	<u>Anhydrite</u> , as above.	
		70	<u>Shale</u> , medium gray, calcareous.	
5780	5787	50	<u>Limestone</u> , tan, IVFA, anhydritic.	
		50	<u>Dolomite</u> , medium brown, III FA, anhydritic.	
5787	5791	100	<u>Limestone</u> , light brown, gray, I-III VF-MA, anhydritic, with one fragment dark brown, opaque chert.	
5791	5795	50	<u>Limestone</u> , white, III FA.	
		50	<u>Limestone</u> , medium brown, III FA, dolomitic.	

DITCH SAMPLES

Examined by J.R. Anklam 5795 to 5825  
B.B. Robinson to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>NEED</del> NOT LAGGED
5795	5800	100	<u>Limestone</u> , gray, I-III VF-FA.	
5800	5810	100	<u>Limestone</u> , tan-light green, I-III VF-FA, <u>very slight trace bright yellow fluorescence, very pale cut fluorescence when crushed.</u>	
5810	5815	100	<u>Limestone</u> , medium gray, brown, III-FA, <u>fluorescence and cut fluorescence, as above.</u>	
5815	5825	100	<u>Limestone</u> , as above, no fluorescence, I-III VF-FA.	

SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

CORE FROM 5788 TO 5838

CORES EXAMINED BY Langford & Knight

CORE RECORD

AREA OR FIELD Cahone Mesa

COMPANY Shell

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS
							OIL-GAS
							CORE OR DITCH
1	5788	5838	50'				See Description
	5788	5789	1	<u>Sandstone</u> , light gray, very fine, angular, well sorted, calcareous, tightly cemented.			
	5789	5790	1	<u>Sandstone</u> , as above.			
	5790	5791	1	<u>Sandstone</u> , as above.			
	5791	5792	1	<u>Sandstone</u> , as above.			
	5792	5793	1	<u>Limestone</u> , tan, IVF-FA.			
	5793	5794	1	<u>Limestone</u> , tan, IVF B <sub>2</sub> * Tr C; <u>Fluorescence along one vertical fracture.</u>			
	5794	5795	1	<u>Limestone</u> , as above, with <u>15% bright blue spotty fluorescence.</u>			
	5795	5796	1	<u>Limestone</u> , as above, with <u>bright blue fluorescence along one hairline fracture.</u>			
	5796	5797	1	<u>Limestone</u> , tan, IVF-FA with scattered fusulinids.			
	5797	5798	1	<u>Limestone</u> , light gray brown, IVFA with abundant fusulinids and forams.			
	5798	5799	1	<u>Limestone</u> , light gray brown, III F-MA.			
	5799	5800	1	<u>Limestone</u> , light gray, I-III F-M B <sub>1</sub> + tr. C with abundant fusulinids and forams.			
	5800	5801	1	<u>Limestone</u> , light gray, IVFA, stylolitic.			
	5801	5802	1	<u>Limestone</u> , light gray and brown, III VF-F B <sub>1</sub> + C <sub>1</sub> with <u>bright blue fluorescence along one vertical fracture; fusulinids.</u>			
	5802	5803	1	<u>Limestone</u> , pale gray, I-III VF-F B <sub>5</sub> * C <sub>1</sub> with <u>50% bright blue yellow fluor., medium blue yellow cut fluorescence; rare small smooth brachs.</u>			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). 5-SAND (90-100%).

NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone Mesa

CORE FROM 5788 TO 5838

CORE RECORD

COMPANY Shell

CORES EXAMINED BY \_\_\_\_\_

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS
							OIL-GAS
							CORE OR DITCH
<u>1</u>	<u>Cont.</u>						See Description
5803	5804	1		<u>Limestone</u> , as above with fluorescence as above, along one vertical fracture.			
5804	5805	1		<u>Limestone</u> , light gray, I-III VF-F B <sub>5</sub> + C <sub>2</sub> with productid brachs; <u>30% bright blue yellow spotty fluorescence, weak cut fluorescence.</u>			
5805	5806	1		<u>Limestone</u> , light gray, III M C <sub>1</sub> + B <sub>1</sub> with abundant fusulinids; <u>50% bright blue yellow spotty fluorescence, strong milky cut fluorescence.</u>			
5806	5807	1		<u>Limestone</u> , light gray, III M C <sub>5</sub> + B <sub>1</sub> + D <sub>1</sub> with rare fusulinid; <u>90-100% bright blue fluorescence, strong milky cut fluorescence.</u>			
5807	5808	1		<u>Limestone</u> , light gray, I-VFA with 50% patches C <sub>3-5</sub> + Tr. D with patches <u>fluorescence, as above.</u>			
5808	5809	1		<u>Limestone</u> , light gray, IVF-FA with 40% patches C <sub>3</sub> + B <sub>1</sub> + Tr. D; <u>70% bright blue yellow fluorescence, strong cut fluorescence.</u>			
5809	5810	1		<u>Limestone</u> , light gray, III M C <sub>3</sub> + D <sub>2</sub> , fibrous in part; <u>70% fluorescence, as above.</u>			
5810	5811	1		<u>Limestone</u> , light gray, I-III VF-F C <sub>2</sub> + D <sub>8</sub> ; <u>30% bright yellow blue fluorescence, strong cut fluorescence (mud penetrated center of core).</u>			
5811	5812	1		<u>Limestone</u> , as above, C <sub>5</sub> + D <sub>2</sub> ; <u>60% fluorescence as above (mud penetrated core)</u>			
5812	5813	1		<u>Limestone</u> , light gray, III F-M C <sub>2</sub> + D <sub>3</sub> ; <u>80% fluorescence as above; brachiopod fragments, mud as above.</u>			
5813	5814	1		<u>Limestone</u> , as above; <u>40% fluorescence, as above, mud as above.</u>			
5814	5815	1		<u>Limestone</u> , light gray, IVF C <sub>5</sub> + D <sub>5</sub> ; <u>60% fluorescence as above, mud as above.</u>			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).  
 NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

## SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone MesaCORE FROM 5788 TO 5838

## CORE RECORD

COMPANY ShellCORES EXAMINED BY Langford & KnightLEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL-GAS
							CORE OR DITCH
<u>1</u>	<u>Cont.</u>						
	5815	5816	1	<u>Limestone</u> , as above, light gray.			See Description
	5816	5817	1	<u>Limestone</u> , light gray, IM D <sub>2</sub> + Tr. C; <u>40% fluorescence</u> as above.			
	5817	5818	1	<u>Limestone</u> , light gray, I F-M C <sub>1</sub> + Tr. D; <u>30% fluorescence</u> as above.			
	5818	5819	1	<u>Limestone</u> , light brown, I-III VF-L C <sub>2</sub> + D <sub>3</sub> ; <u>70% fluorescence</u> as above, abundant irregular crystals filling D vugs.			
	5819	5820	1	<u>Limestone</u> , as above C <sub>2</sub> + D <sub>1</sub> ; <u>70% fluorescence</u> as above, small brachiopods.			
	5820	5821	1	<u>Limestone</u> , tan, I-III VF-F C <sub>5</sub> with rare crinoid fragments and small smooth brachiopods.			
	5821	5822	1	<u>Limestone</u> , light gray, I-III VF-F C <sub>2</sub> .			
	5822	5823	1	<u>Limestone</u> , light gray, I-III VF-FA with trace C; <u>one surface shows bright yellow blue fluorescence</u> , as above, spotty.			
	5823	5824	1	<u>Limestone</u> , tan, I F-M C <sub>1</sub> .			
	5824	5825	1	<u>Limestone</u> , light gray, III FA matrix with spotty C <sub>3</sub> + D <sub>1</sub> .			
	5825	5826	1	<u>Limestone</u> , tan III M-L C <sub>5</sub> + D <sub>1</sub> ; <u>70% bright yellow blue fluorescence</u> , medium-strong cut fluorescence.			
	5826	5827	1	<u>Limestone</u> , as above B <sub>3</sub> + C <sub>2</sub> .			
	5827	5828	1	<u>Limestone</u> , tan, III F-M B <sub>2</sub> .			
	5828	5829	1	<u>Limestone</u> , light gray and tan, III F-L B <sub>1</sub> .			
	5829	5830	1	<u>Dolomite</u> , tan, III M B <sub>3</sub> , anhydritic.			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).

NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone Mesa

CORE FROM 5788 TO 5838

CORE RECORD

COMPANY Shell

CORES EXAMINED BY Langford & Knight

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOV- ERED	FORMATIONAL, STRUCTURAL, AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL-GAS
							CORE OR DITCH
<u>1</u>	<u>Cont.</u>						
	5830	5831	1	<u>Dolomite</u> , tan III F-MA + Tr. B with small rounded pods white anhydrite.			See Description
	5831	5832	1	<u>Dolomite</u> , as above, B <sub>1</sub> .			
	5832	5833	1	<u>Dolomite</u> , as above, no porosity.			
	5833	5834	1	<u>Dolomite</u> , tan, III FA with anhydrite as above.			
	5834	5835	1	<u>Dolomite</u> , as above, III F B <sub>1</sub> with anhydrite; <u>20% bright yellow blue fluorescence (spotty)</u> .			
	5835	5836	1	<u>Dolomite</u> , as above, <u>60% fluorescence</u> , as above.			
	5836	5837	1	<u>Dolomite</u> , as above, with trace B.			
	5837	5838	1	<u>Dolomite</u> , as above B <sub>1</sub> .			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).  
NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

## SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone MesaCORE FROM 5838 TO 5888

## CORE RECORD

COMPANY ShellCORES EXAMINED BY Knight and LangfordLEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL-GAS
							CORE OR DITCH
2	5838	5888	50'				
	5838	5839	1	<u>Dolomite</u> , light gray, III FA with Tr. B, very calcareous with brachiopod fragments, small anhydrite inclusions.			See Description
	5839	5840	1	<u>Dolomite</u> , as above, calcareous, with abundant small smooth brachiopods; <u>60% bright blue yellow fluorescence, medium cut fluorescence, very light oil stain.</u>			
	5840	5843	2	<u>Limestone</u> , light brown gray, I-III VF-FA, stylolitic, <u>bright blue fluorescence along rare hairline fracture.</u>			
	5843	5844	1	<u>Limestone</u> , tan - light brown, III FA, dolomitic with abundant brachiopods, as above, <u>10% light blue fluorescence, no cut fluorescence, faint petroleum odor.</u>			
	5844	5845	1	<u>Limestone</u> , light gray brown, I-III VF-MA.			
	5845	5846	1	<u>Limestone</u> , medium gray, I-M-LA, very argillaceous, crinoidal.			
	5846	5847	1	<u>Limestone</u> , medium gray, I LA, argillaceous, dolomitic, very crinoidal gradational contact with shale below.			
	5847	5888	41	<u>Shale</u> , black, calcareous, minutely micaceous with very rare orbituloid brachiopod, core in shale breaks easily in approximate horizontal plane.			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).  
 NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone Mesa

CORE FROM 5888 TO 5938

CORE RECORD

COMPANY Shell

CORES EXAMINED BY Knight & Langford

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL-GAS
							CORE OR DITCH
3	5888	5938	49'				See Description
	5888	5894.6	6.6	<u>Shale</u> , black, calcareous with gradational and horizontal contact at base; <u>5894.5 bleeding oil from fine horizontal fracture.</u>			
	5894.6	5901.5	6.9	<u>Sandstone</u> , medium gray, very fine, angular, well sorted, calcareous, argillaceous.			
	5901.5	5903	1.5	<u>Dolomite</u> , dark brown gray, III VFA, very argillaceous; <u>bleeding light green oil from rare hairline fractures.</u>			
	5903	5905	2	<u>Dolomite</u> , gray brown, III FA, very argillaceous.			
	5905	5906.5	1.5	<u>Shale</u> , black micaceous.			
	5906.5	5924.7	18.2	<u>Anhydrite</u> , light-medium gray, massive with rare irregular shale stringers; irregular basal contact.			
	5924.7	5927.8	3.1	<u>Dolomite</u> , medium gray brown, III FA, argillaceous with gradational basal contact with irregular inclusions white anhydrite - <u>very faint petroleum odor</u> , no fluorescence.			
	5927.8	5930	2.2	<u>Limestone</u> , gray, I-FA, argillaceous.			
	5930.0	5930.5	.5	<u>Shale</u> , black, very calcareous.			
	5930.5	5932	1.5	<u>Limestone</u> , gray, I-FA, argillaceous.			
	5932	5932.4	.4	<u>Shale</u> , as above.			
	5932.4	5937	4.6	<u>Limestone</u> , black I-FA, very argillaceous with trace fossil debris.			

Note: All contacts seem gradational.

## SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

AREA OR FIELD Cahone MesaCORE FROM 5938 TO 5989

## CORE RECORD

COMPANY ShellCORES EXAMINED BY Knight & LangfordLEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS
							OIL-GAS
							CORE OR DITCH
<u>4</u>	<u>5938</u>	<u>5989</u>	<u>51'</u>				<u>See Description</u>
	<u>5938</u>	<u>5940</u>	<u>2</u>	<u>Sandstone</u> , light gray, very fine, angular, well sorted, calcareous.			
	<u>5940</u>	<u>5944</u>	<u>4</u>	<u>Anhydrite</u> , light gray, massive, irregularly interbedded with black shale and dark gray brown, I-III VF-FA dolomite.			
	<u>5944</u>	<u>5948</u>	<u>4</u>	<u>Dolomite</u> , medium gray, III FA.			
	<u>5948</u>	<u>5950</u>	<u>2</u>	<u>Shale</u> , dark gray, very silty, calcareous with fine micaceous and carbonaceous particles.			
	<u>5950</u>	<u>5954</u>	<u>4</u>	<u>Dolomite</u> , light gray brown, III FA, argillaceous, slightly carbonaceous.			
	<u>5954</u>	<u>5956</u>	<u>2</u>	<u>Dolomite</u> , dark brown, III FA with very weak spotty blue fluorescence, no cut fluorescence, slight petroleum odor.			
	<u>5956</u>	<u>5957</u>	<u>1</u>	<u>Dolomite</u> , light brown, III FA, slightly carbonaceous.			
	<u>5957</u>	<u>5961</u>	<u>4</u>	<u>Limestone</u> , tan, III FA, dolomitic - very dolomitic.			
	<u>5961</u>	<u>5962</u>	<u>1</u>	<u>Limestone</u> , tan, I F-LA.			
	<u>5962</u>	<u>5963</u>	<u>1</u>	<u>Limestone</u> , medium brown gray, III FA, argillaceous.			
	<u>5963</u>	<u>5964</u>	<u>1</u>	<u>Shale</u> , black, silty, micaceous.			
	<u>5964</u>	<u>5965</u>	<u>1</u>	<u>Limestone</u> , dark brown black, III FA, very argillaceous.			
	<u>5965</u>	<u>5967</u>	<u>2</u>	<u>Limestone</u> , dark gray, I F-MA, very argillaceous, abundant very small brachiopods and crinoid stems.			
	<u>5967</u>	<u>5968</u>	<u>1</u>	<u>Dolomite</u> , tan, III FA, faint pale blue fluorescence, very slight petroleum odor.			
	<u>5969</u>	<u>5971</u>	<u>2</u>	<u>Limestone</u> , light brown, IVFA, dolomitic, crinoidal.			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).

NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

SHELL OIL COMPANY

WEEK ENDING \_\_\_\_\_

CORE FROM 5938 TO 5989

CORES EXAMINED BY Knight & Langford

CORE RECORD

AREA OR FIELD Cahone Mesa

COMPANY Shell

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL-GAS
							CORE OR DITCH
<u>4</u>	<u>Cont.</u>						None
	5971	5976	5	<u>Limestone</u> , medium gray brown, III FA, argillaceous with abundant striated brachiopod fragments.			
	5976	5989	13	<u>Shale</u> , black, micaceous, calcareous.			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).  
 NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

## DITCH SAMPLES

Examined by E.M. Wright 5990 to 6460  
\_\_\_\_\_ to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>MISSING</del> NOT LAGGED
5990	6005	100	<u>Shale</u> , black, slight to very slightly calcareous (samples badly caved)	
6005	6010	90	<u>Shale</u> , as above.	
		10	<u>Limestone</u> , I VFA, tan to light brown, very slightly sandy.	
6010	6015	70	<u>Shale</u> , black, as above.	
		30	<u>Sandstone</u> , gray, fine grain, calcareous.	
6015	6020	70	<u>Shale</u> , as above.	
		30	<u>Sandstone</u> , as above.	
6020	6022	80	<u>Shale</u> , black, as above.	
		10	<u>Limestone</u> , as above.	
		10	<u>Sandstone</u> , as above.	
6022	6200	100	<u>Salt</u> , (samples caved slightly).	
6200	6220	100	<u>Salt</u> , with some interbedded milky anhydrite and black <u>shale</u> .	
6220	6320	100	<u>Salt</u> .	
6320	6350	100	<u>Salt</u> , occasional black <u>shale</u> and anhydrite cavings.	
6350	6360	80	<u>Salt</u> .	
		20	<u>Shale</u> , black, well bedded, non calcareous.	
6360	6370	80	<u>Salt</u> .	
		20	<u>Shale</u> , as above - probably interbedded.	
6370	6380	100	<u>Salt</u> .	
6380	6390	100	<u>Shale</u> , black, as above.	
6390	6400	100	<u>Shale</u> , as above.	
6400	6450	50	<u>Salt</u> .	
		50	<u>Shale</u> , black, as above.	
6450	6460	100	<u>Salt</u> .	

DITCH SAMPLES

Examined by E.M. Wright 6460 to 6880  
J.R. Anklam to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LABELED</del> NOT LAGGED
6460	6470	100	<u>Salt.</u>	
6470	6520	100	<u>Shale</u> , black, well bedded, non-calcareous.	
6520	6550	100	<u>Shale</u> , as above, some anhydrite, thin stringers?	
6550	6560	70	<u>Shale</u> , black.	
		30	<u>Salt.</u>	
6560	6630	100	<u>Salt.</u>	
6630	6640		Skip.	
6640	6650	100	<u>Salt.</u>	
6650	6690	80	<u>Shale</u> , black.	
		20	<u>Salt.</u>	
6690	6700	100	<u>Salt</u> , with occasional pyrite crystals included.	
6700	6840	100	<u>Salt.</u>	
6840	6850	80	<u>Shale</u> , black.	
		20	<u>Sandstone</u> , very fine grain, medium brown, friable, non calcareous.	
6850	6860	50	<u>Shale</u> , black.	
		40	<u>Sandstone</u> , as above.	
		10	<u>Anhydrite</u> , white, milky, occasionally pyritic.	
6860	6870	20	<u>Shale</u> , black.	
		60	<u>Sandstone</u> , as above.	
		10	<u>Anhydrite.</u>	
		10	<u>Limestone</u> , I VFA, medium brown, silty to very fine sand.	
6870	6880	70	<u>Sandstone</u> , as above.	
		30	<u>Anhydrite.</u>	

## DITCH SAMPLES

Examined by E.M. Wright 6880, 6980  
J.R. Anklam to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LAGGED</del> NOT LAGGED
6880	6890	30	<u>Sandstone</u> , as above.	
		30	<u>Limestone</u> , I VFA, slightly argillaceous, dark tan to medium gray.	
		40	<u>Anhydrite</u> , white, opaque.	
6890	6900	20	<u>Sandstone</u> , gray to medium brown, fine grained, slightly calcareous to very calcareous.	
		50	<u>Limestone</u> , I VFA, argillaceous, sandy, light tan to light gray.	
		30	<u>Anhydrite</u> .	
6900	6905	100	<u>Siltstone</u> , gray, sandy, calcareous, occasionally pyritic.	
6905	6915	70	<u>Limestone</u> , I VFA, medium tan, slightly argillaceous, somewhat sandy, anhydrite, inclusions.	
		30	<u>Anhydrite</u> , white, opaque.	
6915	6925	20	<u>Sandstone</u> , gray, as above.	
		80	<u>Dolomite</u> , light gray, I VFA, with anhydrite and pyrite inclusions, free pyrite crystals.	
6925	6935	70	<u>Dolomite</u> , as above, with abundant pyrite, occasional chert.	
		30	<u>Anhydrite</u> .	
6935	6945		Skip.	
6945	6950	50	<u>Dolomite</u> , I-III VFA, light tan, calcareous, slightly argillaceous.	
		50	<u>Anhydrite</u> , white, opaque.	
6950	6970	60	<u>Dolomite</u> , I VFA, occasional III VFA, calcareous to very calcareous.	
		40	<u>Anhydrite</u> .	
6970	6975	50	<u>Limestone</u> , I VFA, fossiliferous (?), dolomitic medium tan.	
		30	<u>Dolomite</u> , as above.	
		20	<u>Anhydrite</u> .	
6975	6980	70	<u>Limestone</u> , I VFA, very dolomitic, medium tan, rare white chert, abundant pyrite.	
		30	<u>Anhydrite</u> .	

## DITCH SAMPLES

Examined by E.M. Wright 6980 to 7045  
\_\_\_\_\_ to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>INDEXED</del> NOT LAGGED
6980	6990	100	<u>Limestone</u> , as above.	
6990	6995	20	<u>Limestone</u> , I VFA, medium tan, dolomitic in part.	
		50	<u>Dolomite</u> , I-III VFA, calcareous to very calcareous, medium tan to gray.	
		30	<u>Anhydrite</u> , white, opaque, abundant pyrite.	
6995	7000	40	<u>Dolomite</u> , I-III VFA, light tan to gray, calcareous.	
		30	<u>Shale</u> , black, well bedded.	
		30	<u>Anhydrite</u> , white, opaque, pyritic.	
7000	7005	50	<u>Limestone</u> , I-III VFA, dolomitic in part.	
		30	<u>Shale</u> , black.	
		20	<u>Anhydrite</u> , pyritic.	
7005	7015	60	<u>Dolomite</u> , I VFA, some III VFA, slightly calcareous to calcareous, light tan to light gray.	
		20	<u>Anhydrite</u> .	
		20	<u>Shale</u> , black, pyritic.	
7015	7020	40	<u>Limestone</u> , I VFA, dolomitic medium tan.	
		40	<u>Dolomite</u> , I-III VFA, calcareous.	
		20	<u>Shale</u> , black.	
7020	7025	70	<u>Shale</u> , black, dark brown, slightly calcareous.	
		30	<u>Anhydrite</u> .	
7025	7035	50	<u>Dolomite</u> , as above.	
		30	<u>Shale</u> , as above.	
		20	<u>Anhydrite</u> .	
7035	7040		Skip.	
7040	7045	30	<u>Dolomite</u> , as above.	
		70	<u>Shale</u> , black with white mottling, silty to very fine sand, calcareous.	

DITCH SAMPLES

Examined by E M Wright 7045 to 7130  
J R Anklam to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>INDEXED</del> NOT LAGGED
7045	7050		Skip.	
7050	7055	40	<u>Limestone</u> , I-III VFA, medium tan to gray, slightly dolomitic to dolomitic.	
		30	<u>Dolomite</u> , III VFA, slightly calcareous to calcareous, gray.	
		30	<u>Shale</u> , black with white inclusions (calcite).	
7055	7060		Skip.	
7060	7075	100	<u>Limestone</u> , I-III VFA, slightly dolomitic, medium brown to dark brown.	
7075	7085	100	<u>Limestone</u> , I-VFA, some III VFA, medium brown, dark brown.	
7085	7100	100	<u>Limestone</u> , I-II VFA, medium brown to light gray, occasional chert, also some anhydrite inclusions, 7090-7095, <u>trace very pale yellow fluorescence with very pale milky cut fluorescence. 7095-7100, 10% pale-medium blue-yellow fluorescence with medium yellow slight milky cut fluorescence.</u>	
7100	7115	100	<u>Limestone</u> , I-II VFA, white, occasional chert, 7100-7105, <u>15% light blue yellow fluorescence with milky yellow cut fluorescence, 7105-7110, 3% fluorescence and cut fluorescence, as above, 7110-7115, trace very pale blue yellow fluorescence and very pale milky cut fluorescence.</u>	
7115	7120	100	<u>Limestone</u> , I-II VFA, white to light pink, some chert inclusions, fossiliferous? rare chert with spicules?	
7120	7125	90	<u>Limestone</u> , I-II VFA, siliceous to slightly siliceous, some quartz crystal inclusions, <u>5% pale-medium blue-yellow fluorescence with milky yellow cut fluorescence.</u>	
		10	<u>Chert</u> , quartz, crystalline cluster, rare.	
7125	7130	100	<u>Limestone</u> , as above, <u>4% fluorescence, as above, with very pale milky cut fluorescence.</u>	

DITCH SAMPLES

Examined by E.M. Wright 7130 to 7270  
J.R. Anklam to \_\_\_\_\_

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>LAGGED</del> NOT LAGGED
7130	7135	85	<u>Limestone</u> , as above. <u>4% fluorescence, milky cut fluorescence.</u>	
		15	<u>Chert</u> , white to light tan, with calcite? spicules.	
7135	7145	80	<u>Limestone</u> , as above. <u>Trace to 3% fluorescence, milky cut fluorescence.</u>	
		20	<u>Chert</u> , as above, some calcareous inclusions.	
7145	7150	90	<u>Limestone</u> , I-II VFA, white to light tan, somewhat siliceous, also some chert inclusions.	
		10	<u>Chert</u> , light tan, with calcareous spots.	
7150	7155	100	<u>Limestone</u> , as above.	
7155	7160	80	<u>Limestone</u> , I VFA, medium tan to light gray, some chert inclusions.	
		10	<u>Shale</u> , light greenish, some purple, slightly calcareous.	
		10	<u>Chert</u> .	
7160	7165	70	<u>Limestone</u> , I VFA, medium brown, some green to purple mottling.	
		30	<u>Shale</u> , green and purple, slightly calcareous to calcareous.	
7165	7180	50	<u>Limestone</u> , I VFA, medium brown, light green and purple mottling, siliceous, chert inclusions.	
		30	<u>Shale</u> , light green and purple, calcareous to very calcareous.	
		20	<u>Chert</u> , amber to clear white.	
7180	7185	20	<u>Limestone</u> , I VFA, white, some green and purple mottling.	
		60	<u>Shale</u> , calcareous, green, purple.	
		20	<u>Chert</u> , clear, argillaceous.	
7185	7220	100	<u>Shale</u> , purple, green, some mottling, non calcareous.	
7220	7245	100	<u>Shale</u> , greenish gray, purple, some green with purple mottling.	
7245	7255	100	<u>Shale</u> , as above.	
7255	7270	70	<u>Shale</u> , as above.	
		30	<u>Limestone</u> , I-II VFA, white to light tan, some chert.	

DITCH SAMPLES

Examined by E M Wright 7270 to 7375  
J R Anklam \_\_\_\_\_ to \_\_\_\_\_  
Eskelsen

Well 1  
 Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XAGGED</del> NOT LAGGED
7270	7275	50	<u>Shale</u> , as above.	
		50	<u>Limestone</u> , I-II VFA, white to medium tan, siliceous?	
7275	7280	100	<u>Limestone</u> , as above.	
7280	7285	100	<u>Limestone</u> , white, II-I VFA, soft minor chert.	
7285	7290	100	<u>Limestone</u> , as above.	
7290	7295	100	<u>Limestone</u> , as above.	
7295	7300	100	<u>Limestone</u> , as above, <u>trace milky yellow fluorescence, pale milky yellow cut fluorescence when crushed.</u>	
7300	7305	100	<u>Limestone</u> , white II-I VFA, soft, <u>trace pale milky white fluorescence, Pale milky white cut fluorescence.</u>	
7305	7310	100	<u>Limestone</u> , as above, <u>fluorescence and cut fluorescence, as above.</u>	
7310	7315		Skip.	
7315	7320	100	<u>Limestone</u> , as above, <u>100% fluorescence and cut fluorescence, as above.</u>	
7320	7325	100	<u>Limestone</u> , as above, <u>trace fluorescence, as above.</u>	
7325	7330	100	<u>Limestone</u> , as above.	
7330	7335	100	<u>Limestone</u> , as above.	
7335	7340	100	<u>Limestone</u> , as above.	
7340	7345	50	<u>Limestone</u> , white II-I VFA, soft.	
		50	<u>Dolomite</u> , tan, I VFA, hard.	
7345	7350	100	<u>Dolomite</u> , tan III-I VF-FA, hard, siliceous, slightly calcareous.	
7350	7355	100	<u>Dolomite</u> , as above.	
7355	7360	100	<u>Dolomite</u> , as above, very calcareous.	
7360	7365	100	<u>Dolomite</u> , as above.	
7365	7370	100	<u>Limestone</u> , white-tan I VFA, dolomitic.	
7370	7375	100	<u>Limestone</u> , as above, cherty.	

## DITCH SAMPLES

Examined by Eskelsen 7375 to 7475  
\_\_\_\_\_ to \_\_\_\_\_Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>XXXXXX</del> NOT LAGGED
7375	7380	50	<u>Limestone</u> , white II VFA, soft.	
		50	<u>Dolomite</u> , tan, III-I VF-FA.	
7380	7385	50	<u>Limestone</u> , as above.	
		50	<u>Dolomite</u> , as above.	
7385	7390	100	<u>Dolomite</u> , tan III FA plus trace B <sub>1-2</sub> .	
7390	7395	100	<u>Dolomite</u> , as above.	
7395	7400		Skip.	
7400	7405	100	<u>Dolomite</u> , as above.	
7405	7410	100	<u>Dolomite</u> , as above plus Tr C <sub>1</sub> , trace bright yellow fluorescence, pale <u>milky yellow cut fluorescence</u> .	
7410	7415	100	<u>Dolomite</u> , tan III FA plus tr. B <sub>1-2</sub> , <u>fluorescence, as above</u> .	
7415	7420	100	<u>Dolomite</u> , as above, plus Tr. C <sub>1</sub> , <u>fluorescence as above</u> .	
7420	7425	100	<u>Dolomite</u> , tan III VF-FA plus Tr. B <sub>1-2</sub> , <u>fluorescence as above</u> .	
7425	7430	100	<u>Dolomite</u> , as above, 1% bright yellow fluorescence, strong <u>milky yellow cut fluorescence</u> .	
7430	7435	100	<u>Dolomite</u> , as above, <u>fluorescence, as above</u> .	
7435	7440	100	<u>Dolomite</u> , as above, <u>fluorescence, as above</u> .	
7440	7445	100	<u>Dolomite</u> , as above.	
7445	7450	100	<u>Dolomite</u> , tan III FA tr. B <sub>tr</sub> , trace spotty milky yellow fluorescence, <u>very pale yellow cut fluorescence</u> .	
7450	7455	100	<u>Dolomite</u> , as above, <u>fluorescence, as above</u> .	
7455	7460	100	<u>Dolomite</u> , as above, <u>fluorescence, as above</u> .	
7460	7465	100	<u>Dolomite</u> , tan, III VF-FA.	
7465	7470	100	<u>Dolomite</u> , as above, trace <u>shale</u> , light-medium grained, very calcareous, fossiliferous.	
7470	7475	100	<u>Dolomite</u> , as above.	

## DITCH SAMPLES

Examined by Eskelsen 7475 to 7575Well 1  
Field or Area Cahone Mesa

FROM	TO	%	SHOWS UNDERLINED	SAMPLES <del>INDEXED</del> NOT LAGGED
7475	7480	100	<u>Dolomite</u> , III VF-FA.	
7480	7485	50	<u>Dolomite</u> , as above.	
		50	<u>Limestone</u> , white, II A.	
7485	7490	100	<u>Limestone</u> , as above.	
7490	7495	100	<u>Limestone</u> , as above.	
7495	7500	100	<u>Dolomite</u> , tan, III VF-FA tr. B <sub>1</sub> .	
7500	7505	100	<u>Dolomite</u> , as above.	
7505	7510	75	<u>Dolomite</u> , as above.	
		25	<u>Limestone</u> , white, III-VF-FA.	
7510	7515	100	<u>Dolomite</u> , as above, calcareous.	
7515	7520	100	<u>Dolomite</u> , tan, III FA, Tr. B <sub>tr</sub> .	
7520	7525	100	<u>Dolomite</u> , as above.	
7525	7530	75	<u>Dolomite</u> , tan, III-I VF-FA.	
7530	7535	25	<u>Limestone</u> , tan, I VFA.	
7530	7535	100	<u>Limestone</u> , as above.	
7535	7540	100	<u>Dolomite</u> , as above.	
7540	7545	50	<u>Dolomite</u> , as above.	
		50	<u>Limestone</u> , as above.	
7545	7550	100	<u>Limestone</u> , tan, I-VFA.	
7550	7555	100	<u>Limestone</u> , light gray-tan, I-III VFA.	
7555	7560	100	<u>Limestone</u> , light gray, II-III VFA.	
7560	7565	100	<u>Limestone</u> , as above.	
7565	7570	100	<u>Limestone</u> , as above, with pyrite.	
7570	7575	100	<u>Limestone</u> , as above.	
7575	Cir. 1 Hr.		<u>Limestone</u> , light gray-tan, II A - I VFA, very cherty, trace light green shale, occasionally well rounded, quartz grains.	
	Cir. 2 Hr.			

October 15, 1956

Shell Oil Company  
33 Richards Street  
Salt Lake City, Utah

Attention: A. L. Brown

Gentlemen:

It has come to the attention of this office that you intend drilling a well in the SE SW SW of Section 14, Township 40 South, Range 26 East, SLM, San Juan County.

Under the General Rules and Regulations adopted by the Utah Oil and Gas Conservation Commission any individual or corporation intending to drill for oil and/or gas in the State of Utah must file a notice of intention to drill with this office and have said notice approved by the Commission before commencement of drilling operations except for those cases which fall under Rule A-3 of these rules and regulations.

It would appear that this well does not fall within the exception provided for under Rule A-3.

Therefore, prior to commencement of drilling operations on this well, you are requested to file a notice of intention to drill with this office and have the same approved.

Yours very truly,

OIL & GAS CONSERVATION COMMISSION

CLEON B. FEIGHT  
SECRETARY

CBF:cn



## SHELL OIL COMPANY

DESERET NEWS BUILDING  
33 RICHARDS STREET  
SALT LAKE CITY 1, UTAH

DAvis 2-0471  
TELEPHONE ~~22-0171~~

October 16, 1956

The State of Utah  
Oil and Gas Conservation Commission  
Room 140 State Capitol  
Salt Lake City, Utah

Attention Mr. Cleon B. Feight

Gentlemen:

In reply to your letter dated October 15, 1956 concerning our Cahone Mesa 1, located SE SW SW Section 14, T. 40 S., R. 26 E., S.L.M., San Juan County, Utah, we attach a carbon copy with location plat of our U.S.G.S. Notice of Intention to Drill.

The attached copy which was prepared for your approval was inadvertently sent to the U.S.G.S. District Office in Farmington, New Mexico, along with the original U.S.G.S. notice. This matter did not come to our attention until we received your letter and noted that the U.S.G.S. had returned the copy of the notice intended for your office.

We respectfully request your approval of the attached Notice of Intention to Drill for our Cahone Mesa 1 well.

Very truly yours,

R. E. Eddy  
Senior Exploitation Engineer

Attachment

October 16, 1956

Shell Oil Company  
33 Richards Street  
Salt Lake City, Utah

Gentlemen:

This is to acknowledge receipt of your notice of intention to drill Well No. Cahone Mesa 1, which is to be located 500 feet from the south line and 800 feet from the west line of Section 14, Township 40 South, Range 25 East, SEEM, San Juan County.

Please be advised that insofar as this office is concerned, approval to drill said well is hereby granted.

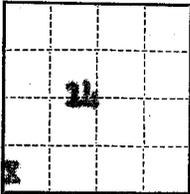
Yours very truly,

OIL & GAS CONSERVATION  
COMMISSION

GLEON B. FEIGHT  
SECRETARY

GBF:en

cc: Phil McGrath  
USGS, Farmington,  
New Mexico



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Indian Agency Window  
Rock, Arizona  
Allottee Tribal Lands - Navajo  
Lease No. L-1149-IND-9122

*Noted  
11/26/56*

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....	SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL.....	SUBSEQUENT REPORT OF REDRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	<b>X</b>
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 21, 1956

Cahone Mesa  
Well No. 1 is located 500 ft. from S line and 800 ft. from W line of sec. 14  
SW 1/4 14 10S 25E S.L.B.M.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Wildcat San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

Kelly Dushing  
The elevation of the ~~struck floor~~ above sea level is 5096 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

11-12-56 DST #1 5788-5813 (Straddle Test) (Upper Hermosa/Fenn) Initial shut in 15 min. Open 1 hr 30 min, moderate blow throughout test. Shut in 15 min. Recovered 3189' (13.2 bbl) total fluid: 90' (1.3 bbl) watery gas cut mud, and 3099' (11.9 bbl) slightly muddy gas cut salt water (very slight trace of oil). Maximum salinity 100,000 ppm (r), mud before test 12,000 ppm (r). IFF 255, IFF 1285, ISIP failed, PSIP 2065 (still rising), IP 3080. (Lower packer leaked throughout test)

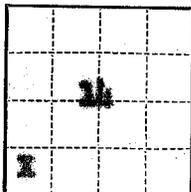
DST #2 5795-5821 (Straddle Test) (Upper Hermosa/Fenn) Initial shut in 20 min, open 1 hr 30 min, moderate blow throughout test. Shut in 15 min. Recovered 2834' (36.2 bbl) total fluid: 85' (1.2 bbl) water and gas cut mud, and 2749' (37.0 bbl) slightly muddy, gas cut, slightly sulphurous salt water. Maximum salinity 101,000 ppm (r). Mud before test 12,000 ppm (r). ISIP failed, IFF 265, IFF 1175, PSIP 1960 (still rising), IP 3070. (Lower packer leaked in initial shut in, 5 min after dropped bar, packer stopped leaking and held throughout test.)

Understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company  
Address 33 Richards Street  
Salt Lake City, Utah  
By B.W. Shepard  
B. W. Shepard  
Title Exploitation Engineer

(SUBMIT IN TRIPLICATE)

Indian Agency Navajo  
Allottee Tribal Lands  
Lease No. Z-119-100-9122



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

*Noted  
Call  
11/26/66*

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	<input checked="" type="checkbox"/>	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	
NOTICE OF INTENTION TO CHANGE PLANS.....		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF.....		SUBSEQUENT REPORT OF ALTERING CASING.....	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL.....		SUBSEQUENT REPORT OF REDRILLING OR REPAIR.....	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....		SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....		SUPPLEMENTARY WELL HISTORY.....	
NOTICE OF INTENTION TO ABANDON WELL.....			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 23, 1956

Cahone Mesa  
Well No. 1 is located 500 ft. from S line and 300 ft. from W line of sec. 14  
SW SW 14 10S 25E S.L.B.M.  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Wildcat San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~corner~~ Kelly Rushing above sea level is 5096 ft.

DETAILS OF WORK

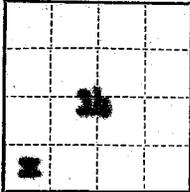
(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

CHANGES OF PLANS

To drill to a total depth of 7600' rather than 6000'.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company  
Address 33 Richards Street  
Salt Lake City, Utah  
By B W Shepard  
B. W. Shepard  
Title Exploitation Engineer



(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Indian Agency Navajo

Allottee Tribal Lands

Lease No. I-319-ND-9122

*Noted  
12/19/56*

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL	<input checked="" type="checkbox"/>		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

December 14, 1956

Well No. 1 is located 500 ft. from 100 [S] line and 100 ft. from 100 [W] line of sec. 14

SW SW 14 (¼ Sec. and Sec. No.)      10 S. (Twp.)      25 E. (Range)      S10M (Meridian)  
Wildcat (Field)      San Juan (County or Subdivision)      Utah (State or Territory)

The elevation of the ~~drill floor~~ Kelly Bushing above sea level is 5096 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Status: Total Depth: 7575'.  
Casing: 8 5/8" at 1275'.  
Hole Size: 7 7/8" from 1275' to total depth.

Proposed Work:

1. With drill pipe hung at 7400' plugged with 60 sack cement ( 7400-7200' )
2. With drill pipe hung at 6900' plugged with 50 sack cement ( 6900-6750' )
- With drill pipe hung at 6050' plugged with 75 sacks cement ( 6050-5800' )
- With drill pipe hung at 2900' plugged with 75 sacks cement ( 2900-2650' )
- With drill pipe hung at 1760' plugged with 30 sacks cement ( 1760-1660' )
- With drill pipe hung at 1280' plugged with 50 sacks cement ( 1280-1160' )
2. Run in and locate top plug.
3. Cap with a ten sack cement plug, install marker and abandon in accordance with U.S.G.S. regulations.

Verbally approved by Mr. P. T. McGrath 12-11-56.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

Address 33 Richards Street

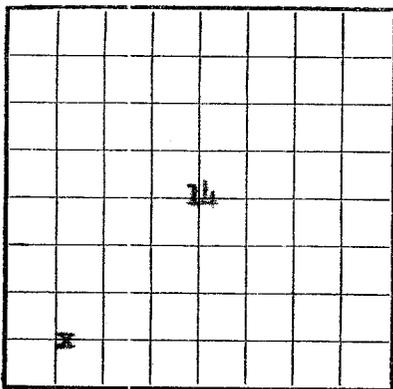
Salt Lake City, Utah

By B.W. Shepard

B. W. Shepard

Title Exploitation Engineer

U. S. LAND OFFICE **Window Rock, Ariz.**  
SERIAL NUMBER **I-149-TMD-9122**  
LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Shell Oil Company Address 33 Richards St. SALT LAKE CITY  
Lessor or Tract Federal-Tribal Lands Field Wildcat State Utah  
Cahone mesa  
Well No. 1 Sec. 14 T. 40S R. 25E Meridian 110N County San Juan  
Location 500 ft. N. of S. Line and 800 ft. E. of W. Line of Sec. 14 Elevation 5096 (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 P. W. Shepard

Date December 17, 1956 Title Exploitation Engineer

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

Commenced drilling October 3, 1956 Finished drilling December 10, 1956

OIL OR GAS SANDS OR ZONES

(Denote gas by G) NONE

No. 1, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 5, from \_\_\_\_\_ to \_\_\_\_\_  
No. 3, from \_\_\_\_\_ to \_\_\_\_\_ No. 6, from \_\_\_\_\_ to \_\_\_\_\_

IMPORTANT WATER SANDS

NONE NOTED

No. 1, from \_\_\_\_\_ to \_\_\_\_\_ No. 3, from \_\_\_\_\_ to \_\_\_\_\_  
No. 2, from \_\_\_\_\_ to \_\_\_\_\_ No. 4, from \_\_\_\_\_ to \_\_\_\_\_

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From-	To-	
8 5/8"	32	8yd		1275	Baker				Surface

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8 5/8"	1275	400	Displacement		

PLUGS AND ADAPTERS

Heaving plug—Material Cement Length \_\_\_\_\_ Depth set See attached  
Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

SHOOTING RECORD

FOLD MARK

FOLD MARK

8 5/8	1275	400	Displacement	-	-
-------	------	-----	--------------	---	---

**PLUGS AND ADAPTERS**

Heaving plug—Material \_\_\_\_\_ Cement \_\_\_\_\_ Length \_\_\_\_\_ Depth set See attached  
 Adapters—Material \_\_\_\_\_ Size \_\_\_\_\_

**SHOOTING RECORD**

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
			None			

**TOOLS USED**

Rotary tools were used from 0 feet to 7575 feet, and from - feet to - feet

Cable tools were used from - feet to - feet, and from - feet to - feet

Abandoned as a "dry hole"

**DATES**

December 16, 1956

Put to producing \_\_\_\_\_, 19\_\_\_\_

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 \_\_\_\_\_ Gallons gasoline per 1,000 cu. ft. of gas \_\_\_\_\_

Rock pressure, lbs. per sq. in. \_\_\_\_\_

**EMPLOYEES**

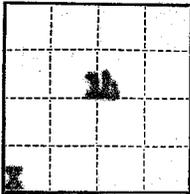
C. E. Swisher, Driller I. T. Glazebrook, Driller  
G. W. Williams, Driller \_\_\_\_\_, Driller

**FORMATION RECORD**

FROM—	TO—	TOTAL FEET	FORMATION
1710	2637	927	Chinle
2637	2777	140	Shinarump
2777	2850	73	Moenkopi
2850	4755	1905	Cutler Group
4755	5850	1095	Upper Hermosa
5850	6020	170	Paradox Member
6020	7026	1006	Salt
7026	7125	99	Lower Hermosa
7125	7230	105	Molae
7230	7333	103	Leadville
7333	7515	182	Mississippian Dolomite
7515	-	-	Guray

[OVER]





(SUBMIT IN TRIPLICATE)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Indian Agency Window Rock

Arizona

Allottee Tribal Lands - Navajo

Lease No. I-119-100-9122

*Noted  
CofS  
12/19/56*

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL.....	SUBSEQUENT REPORT OF WATER SHUT-OFF.....	
NOTICE OF INTENTION TO CHANGE PLANS.....	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING.....	
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NOTICE OF INTENTION TO SHOOT OR ACIDIZE.....	SUBSEQUENT REPORT OF ABANDONMENT.....	
NOTICE OF INTENTION TO PULL OR ALTER CASING.....	SUPPLEMENTARY WELL HISTORY.....	<b>X</b>
NOTICE OF INTENTION TO ABANDON WELL.....		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

December 17, 1956

Well No. 1 is located 500 ft. from 14 line and 800 ft. from 14 line of sec. 14

SW 14 100 75E SLM  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation of the druck floor above sea level is 5096 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

12-5-56 DW 7000-7100 (Lower Navajo/Penn) Initial shut in 2 1/2 min, open 1 hr 30 min. Immediate faint blow, nearly dead at end of test. Shut in 58 min. Recovered 31' (0.178) mud. ISIP 0, IIP 0, PIP 0, BSIP 0, IP 1197.

12-10-56 DW 7200-7300 (Mississippian) Initial shut in 20 min. Open 1 hr 30 min., immediate faint non-flammable blow increasing to weak after 1 min, increasing to moderate after 3 min, steady moderate for remainder of test. Shut in 15 min., recovered 1860' (06.10) slightly mud cut, heavily (non-flammable) gas cut water. Minimum salinity 47,000 ppm (x). Mud before test 155,000 ppm (x). ISIP 7710, IIP 190, PIP 1010, BSIP 2370 (still rising), IP 1180.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company  
Address 33 Richards Street  
Salt Lake City, Utah

By B.W. Shepard  
Title Exploitation Engineer

(SUBMIT IN TRIPLICATE)

Indian Agency Nava jo

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Tribal Lands

Lease No. I-149-IND-9122

		14	
x			

SUNDRY NOTICES AND REPORTS ON WELLS RECEIVED

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	X
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

DEC 28 1956  
U. S. GEOLOGICAL SURVEY  
FARMINGTON, NEW MEXICO

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

December 21, 1956

Cahone Mesa  
Well No. 1 is located 500 ft. from NS line and 800 ft. from W line of sec. 14

SW SW 14 40S 25E SLBM  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)  
Wildcat San Juan Utah  
(Field) (County or Subdivision) (State or Territory)

The elevation of the Kelly Bushing drill floor above sea level is 5096 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Status: Total Depth: 7575'  
Casing: 8 5/8" at 1275'  
Hole Size: 7 7/8" from 1275' to total depth

Abandonment Work:

- With drill pipe hung at 7400' plugged with 60 sacks cement (7400-7200)  
With drill pipe hung at 6900' plugged with 50 sacks cement (6900-6750)  
With drill pipe hung at 6050' plugged with 75 sacks cement (6050-5800)  
With drill pipe hung at 2900' plugged with 75 sacks cement (2900-2650)  
With drill pipe hung at 1760' plugged with 30 sacks cement (1760-1660)  
With drill pipe hung at 1280' plugged with 50 sacks cement (1280-1160)
- Located top plug at 1163'.
- Capped with a ten sack cement plug, installed marker and abandoned in accordance with U.S.G.S. regulations.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

Address 33 Richards Street

Salt Lake City, Utah

By B. W. Shepard  
B. W. Shepard

Title Exploitation Engineer



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
P. O. Box 965  
Farmington, New Mexico

March 10, 1957

Shell Oil Company  
33 Richards Street  
Salt Lake City, Utah

Re: Navajo I-149-Ind-9122

Gentlemen:

Your "Subsequent Report of Abandonment" dated December 14, 1956, covering your well No. 1 Cahone Mesa, located on subject lease in SW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 14, T. 40 S., R. 25 E., S.L.B.M., San Juan County, Utah is hereby approved.

Very truly yours,

(Orig. Sgd.) J. W. LONG  
Jerry W. Long  
Acting District Engineer

JwLong:ae