A GEOSCIENCE EXTENSION OF XCO

303/893-8138
DENVER, COLORADO

COMPANY MOBIL OIL CORPORATION
Well Name LILLIAN WILLIAMS #1
Location SEC 27 T2S R34W FINNEY Co, KANSAS St
Elevation GL 2950' KB 2965' Spud 4/1/85 Finish
Total Depth Interval Logged
Pump Stroke-Length-Pump #1 14" Pump #2 12"
Pump Liner-Diameter-Pump #1 5" Pump #2 6"

LOGGING GEOLOGISTS
DORAN S. ADAMS
DAVID W. PAVEK

COMPANY AND RIG PERSONNEL
Company Geologist LAURA FOX
Company Foreman CHARLES STEVENS
Drilling Company NRG DRILLING, INC. # 2
Tool Pusher R.E. BREWER
Type of Mud WATER/LOW SOLIDS-GELS

SERVICES PERFORMED CONVENTIONAL LOGGING UNIT WITH CONTINUOUS SAMPLING
FID TOTAL HYDROCARBON ANALYZER AND FID GAS CHROMATOGRAPH

HOLE SIZE	DEPTH
12¼"	1932'

CASING RECORD

Depth	Size	Date
1929'	9 5/8"	4/3/85

SYMBOLS

ANHYDRITE
CALCITE
CHERT
CONGLOMERATE
COAL
DOLOMITE
GYPSUM
LIMESTONE
MARLSTONE
PYRITE
SALT
SANDSTONE
SHALE
SILTSTONE

B BENTONITIC
⊥ CALCAREOUS
▬ CARBONACEOUS
? CAVINGS
DOLOMITIC
f FOSSILS
~ GLAUCONITIC
NO SAMPLES
OOLITES
SILICEOUS
? VERY POOR SAMPLES
STRINGERS

ABBREVIATIONS

CG—Connection Gas
CO—Circulate Out
DEV—Survey
DST—Drill Stem Test
LAG—8 oz. Carbide
LAT—Logged After Trip
NB—New Bit
NCB—New Core Bit
PP—Pump Pressure
RPM—Revolutions/Minute
SPM—Strokes/Minute
TG—Trip Gas
WOB—Weight On Bit

PACKER POINTS
INTERVAL DST'D
AM'T OF CORE RECOVERED
AM'T OF CORE LOST
INTERVAL CORED

Rate of Penetration
min/ft ☒ ft/hr ☐
△ DPU

DST INTERVAL
DEPTH
INTERVAL CORED

Graphic Lithology

Lithology Descriptions, Remarks and Observations

Continuous Mud Gas
(Attenuation scale is X100)
1% by vol. C1 in air = 100 units
10 UNITS 100 UNITS 1000 UNITS
.1% 1% 10%
X—X—X—Cuttings Gas—X—X—X

SHOW

Gas Chromatograph
(Attenuation scale is 100X)
(.1%) 10u (1%) 100u (10%) 1000u
C1—Methane C2—Ethane C3—Propane iC4—Isobutane nC4—Normal Butane

OPERATOR MOBIL OIL CORP LOC. SEC 27 T24S R5W

WELL LILLIAN WILLIAMS #1 JOB# 85235 PINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS 100 UNITS 1000 UNITS

.1% 1% 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ISO-BUTANE-iC4

ETHANE-C2 N-BUTANE-nC4

PROPANE-C3 .01 .1 1.0 10

BI

REED

HP53J

8 3/4"

IN @ 1932'

1940

COMMENCE LOGGING @ 2:00 PM, 4/4/85 IN THE STONE CORRAL FM.

DRILLING WITH WATER

STANDARD TWO GEOLOGIST LOGGING UNIT WITH CONTINOUS FID TOTAL HYDROCARBON ANALYZER AND FID GAS CHROMATOGRAPH

FID TOTAL HYDROCARBON ANALYZER AND FID GAS CHROMATOGRAPH ARE BOTH CALIBRATED SIMOULTANEOUSLY WITH 13.3% METHANE EQUIVALENCY

60

MOB 40

RPM 40

PP 1400

2 SPM 74.3 4

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty, grdg to sltst, n-sl calc, n-sl arg, occ mics

THA AND GC CALIBRATION W/ 1% TEST GASES

C1 9900 DIV

C2 46000 DIV

C3 15550 DIV.

iC4 9875 DIV

nC4 10000 DIV

C1

0 10U 100U 1000U

0 .1% 1% 10%

.01% .1% 1% 10%

80

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty grdg to sltst ip, n-sl calc, n-sl arg

2060

CARBIDE LAG W/ 8 ea

10.0 MIN @ 74 SPM

SH, redorng-redbrn, orng, sft-frm, sbblky-blky, mod-v slty grdg to sltst ip, n-sl calc, n-sl arg

20

OPERATOR MOBIL OIL CORP LOC. SEC 16 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85235 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

DST | DEPTH | CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% | 100 UNITS 1% | 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

WOB 40
RPM 40
PP 1400
SPM 74

40

SH, red-orng-redbrn, orng, sft-frm, sbblky-blky, mod-v slty grdg to sltst ip, n-sl calc, n-sl arg

60

TPA AND GC CALIBRATION W/ % TEST GASES
C1 9900 DIV
C2 46000 DIV
C3 15550 DIV
iC4 9675 DIV
nC4 40000 DIV

SH, red-orng-redbrn, orng, sft-frm, sbblky-blky, mod-v slty grdg to sltst, n-sl calc, n-sl arg

80

C1

2100

SH, red-orng-redbrn, orng, sft-frm, sbblky-blky, mod-v slty grdg to sltst, n-sl calc, n-sl arg

0 10U 100U 1000U 0 .01% .1% 1% 10%

0 .1% 1% 10%

20

SH, redbrn-red-orng, orng, sft-frm, sbblky-blky, mod-v slty, grdg to sltst, n-sl calc, n-sl arg

40

SH, red-orng-redbrn, sft-frm sbblky-blky, mod-v slty, grdg to sltst, n-sl calc, n-sl arg

60

OPERATOR MOBIL OIL CORP LOC. SEC 16 T24S R24W

WELL LILLIAN WILLIAMS #1 JOB# 85235 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-X-

SHOW TG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

WOB 40
RPM 120
PP 1450
SPM 80

60

SH, redorng-redbrn, sft-frm, sbblky, mod-v slty, grdg to sltst, m-sl calc, m-sl arg

2200

SAMPLE TOP: SUMNER @ 2222' (+743')

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty grdg to slt st ip, m-sl calc, m-sl arg

THA AND GC CALIBRATION w/ 4% TEST GASES

C1 9900 DIV

C2 46000 DIV

C3 45950 DIV

iC4 9875 DIV

nC4 46000 DIV

20

64

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty grdg to slt st ip, m-sl calc, m-sl arg

40

1 2 3 4

0 10U 100U 1000U 0 .01% .1% 1% 10%

60

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty grdg to slt st ip, m-sl calc, m-sl arg

0 .1% 1% 10%

80

SH, redorng-redbrn, sft-frm, sbblky-blky, mod-v slty grdg to slt st ip, m-sl calc, m-sl arg

2300

OPERATOR MOBIL OIL CORP LOC. SEC16 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85235 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

WOB 40
RPM 120
PP 1450
SPM 82

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

DRILLING WITH WATER

SAMPLE QUALITY: POOR

SH, redbrn-dkorng, sme gy, sft-slfrm, sbblky-sbplty, tr anhy, tr slty

SLTST, redbrn, frm, sbblky, sl calc, intbd/sh, n vis ϕ, NSFOC

SH, dkorng-redbrn, sft-sl frm, sbblky, sl calc, sme slty/occ grdg to sltst, occ anhy

SH , orng-redbrn, crm-gy, sft, sbblky-sbplty, sl-n calc, sme slty, tr sltst, tr anhy

SH, dkorng-redbrn, gy, sft, sbblky, n-sl calc, occ slty, tr ls strg

SH, orng-redbrn, gy-crm, sft, sbblky, n-sl calc, tr l s strg, tr slty, occ anhy

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

THA

0 10U 100U 1000U

0 .1% 1% 10%

GAS CHROMATOGRAPH

METHANE-C1
ETHANE-C2
PROPANE-C3
ISO-BUTANE-IC4
N-BUTANE-nC4

.01 .1 1.0 10

C1

THA AND GC CALIBRATION

W/ 1% TEST GASES

C1	9900	DIV
C2	16000	DIV
C3	15550	DIV
iC4	9875	DIV
nC4	10000	DIV

0 .01% .1% 1% 10%

OPERATOR MOBIL OIL CORP **LOC.** SEC 16 T24S R34W

WELL LILLIAN WILLIAMS **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☑ f/hr ☐

DST CORE DEPTH

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

60

SH, orng-redbrn, gy-orn, sft-sl frm, sbblky-sbplty, sl-n calc, tr anhy strg

80

WOB 40
RPM 120
PP 1450
SPM 80
12:01 AM, 4/5/85

SH, orng-dkorng, gy-orn, sft, sbblky, sl-n calc, tr anhy, sme slty, tr ls+anhy

2500

SAMPLE TOP: CHASE @ 2508' (+457')

SH, dkorng-redbrn, gy, sft-sl frm, sbblky, fr-n calc, sme slty, tr anhy

20

BEGIN MUD-UP

SH, redbrn-orng, gy, sl frm-sft, sbblky, n calc, tr slty, tr anhy

40

SAMPLE TOP: WINFIELD @ 2560' (+405')

60

SH, redbrn-orng, gy, sl frm-sft, n calc, sbblky, occ ls strg, occ slty, tr anhy

80

SH, redbrn-orng, gy, sl frm-sft, n calc, sbblky, sme slty/occ grdg to sltst

TRIP AND GC CALIBRATION w/ 1% TEST GASES

C1 9900 DIV
C2 16000 DIV
C3 15875 DIV
iC4 9875 DIV
nC4 10000 DIV

CARBIDE LAG 8 ea 25 MIN @ 80 SPM = 750 units

0 10U 100U 1000U 0
0 .1% 1% 10%

.01% 1% 1% 10%

C3 nC4 iC4 C2 C1

OPERATOR MOBIL OIL CORP **LOC.** SEC 16 T24S R34W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

WOB 40
RPM 120
PP 1450
SPM 80

1 2 3 4

DEPTH DRIFT CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

2600

SH, redbrn-orng, gy, sl frm-sft, n calc, sbblky, occ ls strg, sme slty, tr anhy

20

SH, gy, redbrn-orng, sl frm-sft, sbblky, calc, sme lmy/tr ls, occ anhy

40

SH, gy, redbrn-orng, sl frm-sft, sbblky, calc, occ slty/sme grdg to sltst

60

SH, gy-ltgy, redbrn, sl frm, sbblky-plty, sl calc, tr anhy, tr ls strg

80

MUD DATA @ 2705'

WT 9.2	YP 20
FV 36	PV 6
pH 8.5	FIL 60
CL 2500	CA 600

2700

20

LS, ltgy-mot gy, sft-frm, crpxl, sl arg, dkgy incl, tr sh strg, occ mnrl flor, n vis-p ϕ, NSOC

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

BY-PASS SHAKER FOR REPAIRS

0 10U 100U 1000U
0 .1% 1% 10%

GAS CHROMATOGRAPH

METHANE-C1 ISO-BUTANE-iC4
ETHANE-C2 N-BUTANE-nC4
PROPANE-C3 .01 .1 1.0 10

iC4 nC4 C3 C2 C1

THA AND GC CALIBRATION
W/ 1% TEST GASES
C1 9900 DIV iC4 9875 DIV
C2 16000 DIV nC4 10000 DIV
C3 15550 DIV

0 .01% .1% 1% 10%

iC4 nC4 C3 C2 C1

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐	DST	DEPTH	CORE	GRAPHIC LITHO	LITHOLOGY DESCRIPTION AND REMARKS	CONTINUOUS MUD GAS (back up scale X100) 10 UNITS .1% 100 UNITS 1% 1000 UNITS 10% -X-X-X-X- CUTTING GAS -X-X-X-X-X-X-	SHOW TFG	GAS CHROMATOGRAPH METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4 .01 .1 1.0 10
MUD WT 9.0 VIS 110 PP 1400 SPM 82		40			LS, ltgy, slky wh, ltbrn-tan, sft-frm, crpxl-microxl, sl-mod arg, occ sdy, occ slty, scat carb incl, abund lt yel min flor, no vis ϕ, NSOC			
		60			SAMPLE TOP: COUNCIL GROVE @ 2775' (+190')	THA AND GC CALIBRATION w/ 4% TEST GASES C1 9750 DIV C2 16000 DIV C3 19750 DIV iC4 10750 DIV nC4 11250 DIV		C3 C2 C1
		80			SH, m-dk gygn, gybrn, sbplty-sbblky, occ v slty grdg to sltst ip, sl-mod calc			
1 2 3 4		2800			ANHY, clr, trnsl, occ frost-slky, crpxl, blky, NSFOC	0 10U 100U 1000U 0 1% 1% 10%		.01% 1% 1% 10%
		20			LS, lt gy, wh, sft-frm, crpxl-microxl, m-sl arg, gen v cln, occ lg carb incl, scat lt yel min flor, no vis ϕ, NSOC	CARBIDE LAG W/ 8 cm 575 U 26.0 MIN @ 82 SPM		C3 C2 C1
		40			SH, mgy-gybrn, occ redsh, sft-frm, sbplty-blky, occ slty grdg to sltst ip, m-sl calc			C2 C3 C1
		60						

OPERATOR MOBIL OIL CORP LOC. SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85235 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-IC4 N-BUTANE-nC4

.01 .1 1.0 10

WOB 40
RPM 110
PP 1400
SPM 82

2900

20

40

60

80

3000

LS, wh, lt tan, bf, ltgy, sft-frm, crpxl-microxl, occ slty, n-sl arg, occ lg carb incl, scat lt yel min flor, no vis ϕ, NSOC

LS, wh, lt tan, bf, ltgy, sft-frm, crpxl-microxl, occ slty, n-sl arg, occ lg carb incl, scat lt yel min flor, no vis ϕ, NSOC

LS, wh ltgy, ltbrn-tan, buf, crpxl-microxl, frm, n-sl arg, occ carb incl, no vis ϕ, scat lt yel min flor, NSOC

LS, wh-ltbrn-tan, buf, frm crpxl-microxl, n-sl arg, occ lg carb incl, no vis ϕ, scat lt yel min flor, NSOC

SAMPLE TOP: ADMIRE @ 3005' (-40')

SH, m-dkgygn, dk gybrn, sft-frm, sbplty-blky, sl-mod slty grdg to sltst ip, sl-mod calc

CG

THA AND GC CALIBRATION W/ % TEST GASES

C1 9750 DIV

C2 16000 DIV

C3 46750 DIV

iC4 40750 DIV

nC4 71250 DIV

0 10U 100U 1000U

0 .1% 1% 10%

C1 C2 C3

0 .01% .1% 1% 10%

analex DIVISION OF XCO

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 12S R?W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

WOB 45
RPM 120
PP 1450
SPM 80

1 2 3 4

DST | DEPTH | CORE

20
40
60
80
3100
20
40

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

SH, m-dkgygn, dk gybrn, sft-frm, sbplty-blky, sl-mod slty grdg to sltst ip, sl-mod calc

SAMPLE TOP: WABAUNSEE @ 3148 (-483')

SH, m-dkgygn, gybrn, occ redorng, ltgy, sft-frm, sbplty-blky, sl-mod calc

LS, wh, mlky, occ slr, frm -sft, crpxl-miexl, n-sl arg, occ carb incl, no vis ϕ, occ lt yel min flor, NSOC

SH, m-dkgygn, gybrn, occ redorng, ltgy, sft-frm, sbplty-sbblky, occ slty grdg to sltst ip, sl-mod calc

LS, wh, mlky, occ trnsl, frm, crpxl-miexl, n-sl arg, occ carb incl, no vis ϕ, occ lt yel min flor, NSOC

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% | 100 UNITS 1% | 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

THA AND GC CALIBRATION
W/ 1% TEST GASES
C1 9750 DIV
C2 16000 DIV
C3 16750 DIV
IC4 10750 DIV
nC4 11250 DIV

C1
C2
C3

0 10U 100U 1000U
0 .1% 1% 10%

GAS CHROMATOGRAPH

METHANE-C1 ISO-BUTANE-IC4
ETHANE-C2 N-BUTANE-nC4
PROPANE-C3 .01 .1 1.0 10

C2 C1
C2
C3
0 .01% .1% 1% 10%

OPERATOR MOBIL OIL CORP LOC. SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85235 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☒ f/hr ☐

WOB 45
RPM 120
PP 1450
SPM 80

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

SH, gygn-dkgygn, gybrn, occ redorng, ltgy, sft-frm, sbplty-blky, occ slty grdg to sltst, sl-mod calc

LS, wh, crm, ltgy, frm, crpxl-micxl, n-sl arg, occ carb, ltyel mnrl flor, n vis ∅, NSOC

LS, crm-tan, frm-sft, crpxl-micxl, sl arg, tr anhy, tr gy sh strg, dul mnrl flor, n vis-p ∅, NSOC

LS, crm-bf, ltbrn, frm, crpxl-micxl, sl arg, tr anhy, tr dns dol strg, tr sh, dul mnrl flor, n vis-p ∅, NSOC

LS, ltgy, crm-bf, hd-frm, crpxl, sl arg, occ dns, sme anhy, dul mnrl flor, n vis-p ∅, NSOC

LS, bf-ltgy, hd, sme frm, crpxl-micxl, sl arg, tr anhy, tr calc frac fl, dul mnrl flor, NSOC

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

THA AND GC CALIBRATION
W/ 1% TEST GASES
C1 9600 DIV
C2 15875 DIV
C3 16075 DIV
iC4 10675 DIV
nC4 11125 DIV

CG CARBIDE LAG 8 oz
427 u
32 MIN @ 80 SPM
CG

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

C3 C2 C1

0 10U 100U 1000U 0 .01% .1% 1% 10%
0 .1% 1% 10%

OPERATOR MOBIL OIL CORP LOC. SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85835 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐

WOB 45
RPM 120
PP 1450
SPM 80

12:01 AM, 4/6/85

DEPTH DST CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

3300

LS, bf-ltgy, hd, sme frm, crpxl-micxl, sl arg, tr anhy, tr calc frac fl, tr sh strg, dul mnrl flor, n vis-p ϕ, NSOC

20

LS, crm-bf, ltbrn, frm, crpxl-micxl, sl arg, rr glua, dul mnrl flor, n vis ϕ, NSOC

40

LS, crm-bf, ltbrn, frm, crpxl-micxl, sl arg, sme intbd gy-gn sh, tr anhy, dul mnrl flor, n vis ϕ, NSOC

60

LS, gy, dkgy, bf, frm, crpxl-micxl, sl arg, tr intbd gy sh, dul mnrl flor, n vis-p ϕ, NSOC

80

LS, gy, dkgy, bf, frm, pred crpxl, micxl, sl arg, tr sh, dul mnrl flor, n vis-p ϕ, NSOC

3400

SH, dkgy, frm, plty-sbblky, sl-mod calc, intbd/ls

20

LS, gy-gybrn, bf, frm, micxl-crpxl, sl arg/sme shy, tr cht, occ sl dol, dul mnrl flor, n vis-p ϕ, NSOC

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

RECYCLED CARBIDE

CG

THA AND GC CALIBRATION
W/ 1% TEST GASES
C1 9600 DIV
C2 15875 DIV
C3 16075 DIV
IC4 10650 DIV
nC4 11125 DIV

0 10U 100U 1000U
0 .1% 1% 10%

GAS CHROMATOGRAPH

METHANE-C1 ISO-BUTANE-IC4
ETHANE-C2 N-BUTANE-nC4
PROPANE-C3 .01 .1 1.0 10

C2 C1

0 .01% 1% 1% 10%

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 T24S R3W

WELL LILLIAN WILLIAMS #1 **JOB#** 85035 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐

DST | DEPTH | CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% | 100 UNITS 1% | 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

WOB 45
RPM 120
PP 1450
SPM 80

40

LS, gy-dkgy, crm-bf, frm, miexl-crpxl, sl arg, tr sh strg, tr anhy, dull yel min flor, no vis ϕ, NSOC

60

THA AND GC CALIBRATION W/ 5 TEST GASES

C1	9600 DIV
C2	45875 DIV
C3	16075 DIV
iC4	10650 DIV
nC4	11125 DIV

C2

80

SH, dkgy, frm, plty-sbblky, sl-mod calc, intbd ls

C1

3500

SAMPLE TOP: SHAWNEE @ 3505' (-540')

MUD DATA @ 3510'

WT 9.4	YP 31
FV 42	PV 8
pH 7.0	FIL 48
Cl 3000	Ca 300

0 10U 100U 1000U 0 .01% 1% 10%

0 1% 1% 10%

1 2 3 4

20

SH, dkgy, frm-sft, plty-sbblky, sl-mod calc

40

LS, crm-bf, wh, frm, miexl-crpxl, occ arg, sme v cln, sl dol, lt yel min flor, n-p vis ϕ, NSOC

60

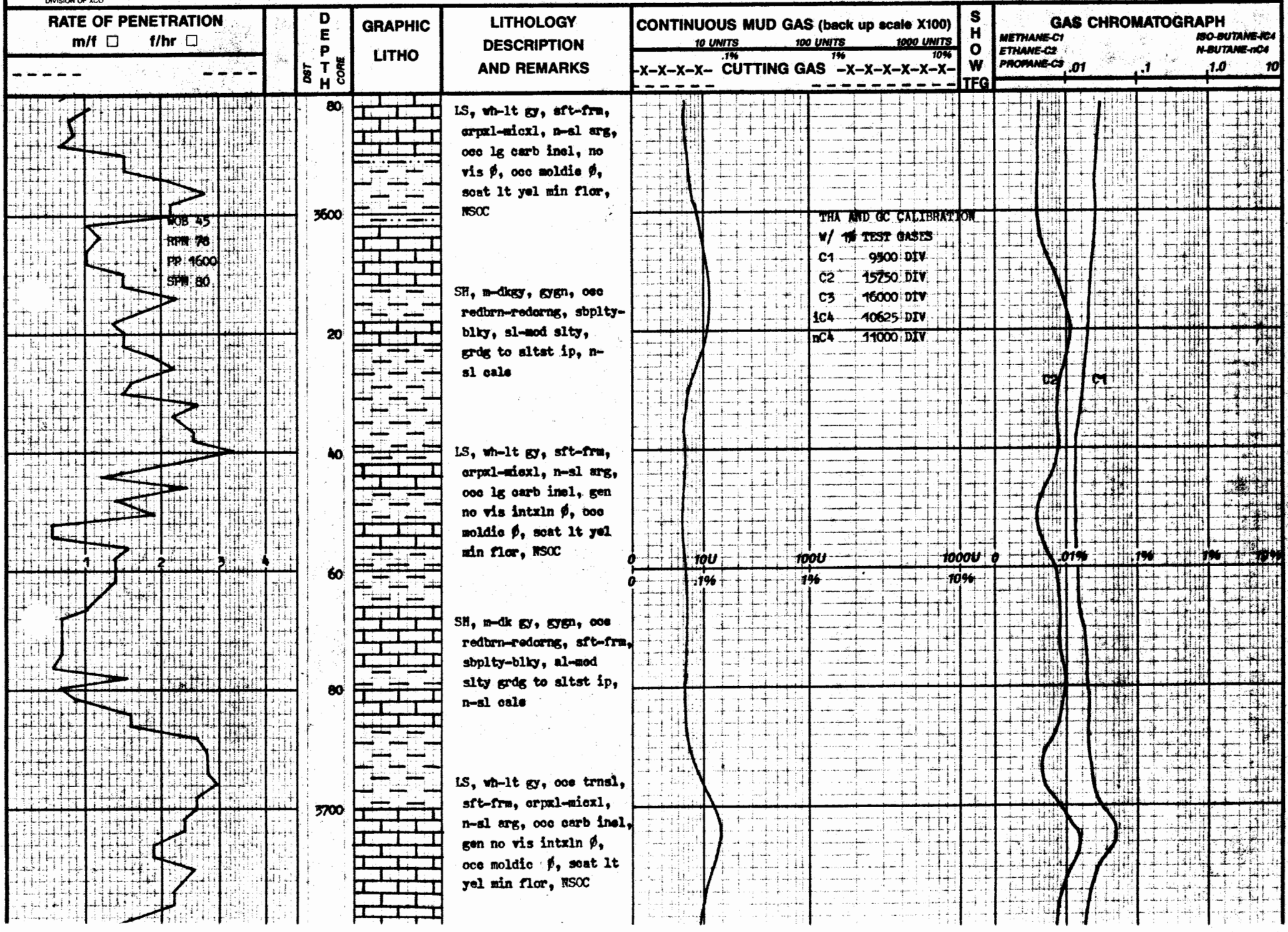
DEV 3/4°

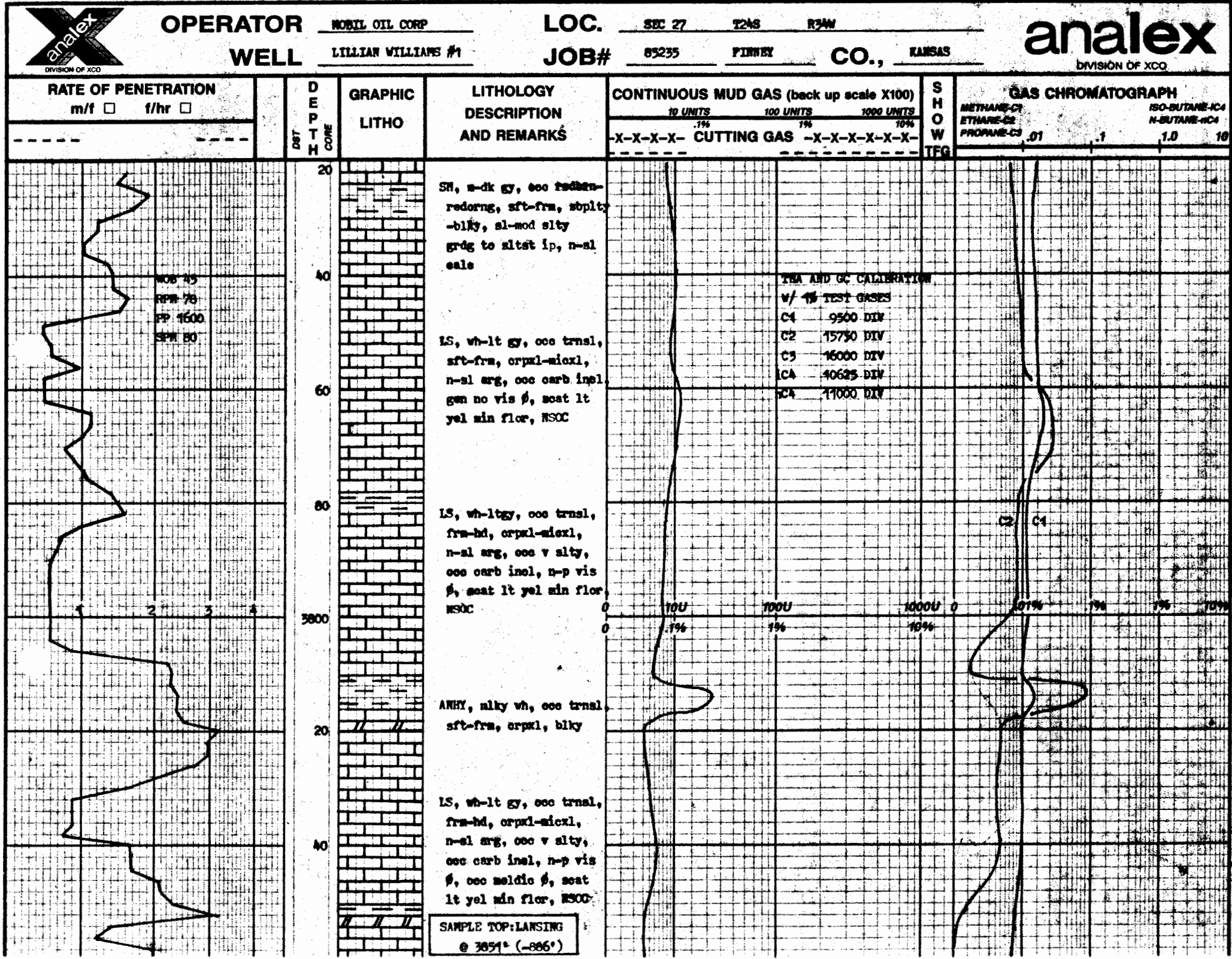
DEG

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO




OPERATOR MOBIL OIL CORP
LOC. SEC 27 T24S R34W
WELL LILLIAN WILLIAMS #1
JOB# 85235 FINNEY CO., KANSAS
analex
DIVISION OF XCO
RATE OF PENETRATION
m/f ☐ f/hr ☐
DEPTH
DST
CORE
GRAPHIC LITHO
LITHOLOGY DESCRIPTION AND REMARKS
CONTINUOUS MUD GAS (back up scale X100)
10 UNITS
100 UNITS
1000 UNITS
.1%
1%
10%
CUTTING GAS
SHOW
TFG
GAS CHROMATOGRAPH
METHANE-C1
ETHANE-C2
PROPANE-C3
ISO-BUTANE-iC4
N-BUTANE-nC4
.01
.1
1.0
10
WOB 45
RPM 78
PP 1600
SPM 80
SH, m-dk gy, occ redbrn-redorng, sft-frm, sbplty-blky, sl-mod slty grdg to sltst ip, n-sl eale
LS, wh-lt gy, occ trnsl, sft-frm, crpxl-microxl, n-sl arg, occ carb insl gen no vis ϕ, scat lt yel min flor, NSOC
THA AND GC CALIBRATION
w/ 1% TEST GASES
C1 9500 DIV
C2 15750 DIV
C3 16000 DIV
iC4 10625 DIV
nC4 11000 DIV
LS, wh-ltgy, occ trnsl, frm-hd, crpxl-microxl, n-sl arg, occ v slty, occ carb insl, n-p vis ϕ, scat lt yel min flor, NSOC
ANHY, mlky wh, occ trnsl, sft-frm, crpxl, blky
LS, wh-lt gy, occ trnsl, frm-hd, crpxl-microxl, n-sl arg, occ v slty, occ carb insl, n-p vis ϕ, occ moldic ϕ, scat lt yel min flor, NSOC
SAMPLE TOP:LANSING
@ 3851' (-866')
20
40
60
80
3800
20
40
0
10U
100U
1000U
1%
10%
C2
C1

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐	DST	DEPTH	CORE	GRAPHIC LITHO	LITHOLOGY DESCRIPTION AND REMARKS	CONTINUOUS MUD GAS (back up scale X100) 10 UNITS .1% 100 UNITS 1% 1000 UNITS 10% -X-X-X-X- CUTTING GAS -X-X-X-X-X-X-	SHOW TFG	GAS CHROMATOGRAPH METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4 .01 .1 1.0 10
WOB 45 RPM 78 PP 1600 SPM 60		60			LS, wh-ltgy, occ trnsl, frm-hd, crpxl-cryxl, n-sl arg, occ v slty, occ carb incl, fr-g moldic ϕ, gen no vis intxln ϕ, scat lt yel min fluor, NSOC	THA AND GC CALIBRATION W/ 1% TEST GASES C1 9500 DIV C2 15750 DIV C3 16000 DIV iC4 10625 DIV nC4 11000 DIV		
		3900			LS, slky wh, lt gy, bf, sft-frm, crpxl-micxl, n-sl arg, occ carb incl, fr moldic ϕ, gen no vis intxln ϕ, scat lt yel min fluor, NSOC	0 10U 100U 1000U 0 .01% .1% 1% 10%		
1 2 3 4		20						
		40			LS, slky wh-lt gy, bf, sft-frm, crpxl-micxl, n-sl arg, occ carb incl, v g moldic ϕ, scat lt yel min fluor, NSOC	0 .1% 1% 10%		
		60						
					LS, slky wh, ltgy, bf, sft-frm, crpxl, n-sl arg, occ carb inel, occ moldic ϕ, gen n-p vis intxln ϕ, scat lt yel min fluor, NSOC			
		80						

OPERATOR MOBIL OIL CORP LOC. SEC 27 T24S R34W

WELL LILLIAN WILLIAMS #1 JOB# 85295 FINNEY CO., KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐

DST DEPTH CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% 100 UNITS 1% 1000 UNITS 10%

CUTTING GAS

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-IC4 N-BUTANE-nC4

.01 .1 1.0 10

4000

LS, brn, crm, frm, crpxl-miexl, sl-occ mod arg, tr ool, dul mnrl flor, n vis-tr ool ϕ, NSOC

20

WOB 45
RPM 78
PP 1600
SPM 80

12:04 PM, 4/7/85

LS, crm-bf, wh, frm, miexl-crpxl, cln-sl arg, tr micool, tr cht, mnrl flor, n vis-p ϕ, NSOC

THA AND GC CALIBRATION W/ 1% TEST GASES

C1 9500 DIV
C2 15750 DIV
C3 16000 DIV
iC4 10625 DIV
nC4 14000 DIV

40

GEOLOGRAPH KICKED OUT

DEV 3/4°

LS, crm-bf, wh, frm, miexl-crpxl, cln-sl arg, tr mic ool, tr cht, sme intbd dkgy-gygn sh, dul mnrl flor, n vis-p ϕ, NSOC

THA

C1

60

SH, dkgy, gygn, frm, sbblky, occ sbplty, sl calc, tr carb

0 10U 100U 1000U 0 .01% .1% 1% 10%

80

SAMPLE TOP: KANSAS CITY @ 4080' (-1115')

0 .1% 1% 10%

LS, crm-vltbrn, frm, vf miexl-crpxl, sl arg-cln, occ dns, tr fos, tr cht, tr micool, yel mnrl flor, n vis-p ϕ, NSOC

4100

SH, dkgy-gygn, frm, sbblky, tr calc, occ glau, tr calc frac fl

20

LS, crm-ltbrn, brn, frm, vfmicxl-crpxl, sl arg, ool, tr pyr, cht, yel mnrl flor, n-p ϕ, NSOC

OPERATOR MOBIL OIL CORP **LOC.** SEC 27 T2AS R3AW

WELL LILLIAN WILLIAMS #1 **JOB#** 85295 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

RATE OF PENETRATION m/f ☐ f/hr ☐

DST | DEPTH | CORE

GRAPHIC LITHO

LITHOLOGY DESCRIPTION AND REMARKS

CONTINUOUS MUD GAS (back up scale X100)

10 UNITS .1% | 100 UNITS 1% | 1000 UNITS 10%

-X-X-X-X- CUTTING GAS -X-X-X-X-X-X-

SHOW TFG

GAS CHROMATOGRAPH

METHANE-C1 ETHANE-C2 PROPANE-C3 ISO-BUTANE-iC4 N-BUTANE-nC4

.01 .1 1.0 10

WOB 40
RPM 78
PP 1600
SPM 80

40
60
80
4200
20
40
60

LS, crm-wh-bf, frm, vf micxl-crpxl, sl arg-sln, occ dns, tr col-mic col, tr cht, yel mnrl flor, n vis-p ϕ, NSOC

CARBIDE LAG- 8 cs 58 MIN @ 80 SPM 255 units

THA AND GC CALIBRATION w/ 1% TEST GASES
C1 9500 DIV
C2 15750 DIV
C3 15950 DIV
iC4 10550 DIV
nC4 11000 DIV

LS, crm-wh, frm, vf micxl-crpxl, sl arg, tr pyr, occ cht, tr mic-col, occ s vug ϕ, yel mnrl flor, n vis-p ϕ, NSOC

SH, gn-gygn, dkgy, frm, sbblky, glau, tr calc

RECYCLED CARBIDE

LS, ltbrn-brn, crm, frm-hd, crpxl-vf micxl, col mic col, occ chky calc, tr cht, yel mnrl flor, p col ϕ, n vis-p intxln ϕ, NSOC

0 10U .1% 100U 1% 1000U 10% 0 .01% .1% 1% 10%

SH, blk-vdkgy, gygn-gybrn, frm, sbplty-sbblky, n calc, carb

MUD DATA @ 4245'	
WT 9.0	YP 12
FV 42	PV 14
pH 9.5	FIL 20
CL 1200	CA 100

SAMPLE TOPS:

KB	@ 2980'
SUMMER	@ 2222' (+743')
CHASE	@ 2508' (+457')
WINFIELD	@ 2560' (+405')
COUNCIL GROVE	@ 2775' (+190')
ADMIRE	@ 3005' (-40')
WABAUNSEE	@ 3148' (-183')
SHAWNEE	@ 3505' (-540')
LANSING	@ 3851' (-886')
KANSAS CITY	@ 4080' (-1115')
MARMATON	@ 4375' (-1395')
CHEROKEE	@ 4515' (-1535')
MORROW	@ 4708' (-1728')
ST. LOUIS	@ 4865' (-1885')

BIT RECORD

#	MANFC	TYPE	SIZE	FTG	HRS
1	SEC	S3J	12¼"	1862'	27
2	REED	HP55J	8 3/4"	2602'	72
3	STC	F 27	8 3/4"	576'	30½

SAMPLE TOPS:

KB	@ 2980'
SUMNER	@ 2222' (+743')
CHASE	@ 2508' (+457')
WINFIELD	@ 2560' (+405')
COUNCIL GROVE	@ 2775' (+190')
ADMIRE	@ 3005' (-40')
WABAUNSEE	@ 3148' (-183')
SHAWNEE	@ 3505' (-540')
LANSING	@ 3851' (-886')
KANSAS CITY	@ 4080' (-1115')
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ST. LOUIS	@ 4865' (-1885')

BIT RECORD

#	MANFC	TYPE	SIZE	FTG	HRS
1	SEC	S3J	12¼"	1862'	27
2	REED	HP53J	8 3/4"	2602'	72
3	STC	F 27	8 3/4"	576'	30½

analex DIVISION OF XCO

OPERATOR MOBIL OIL CORP **SEC** 27 **TWP** 24 S **RNG** 34 W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO

SHOW REPORT# ONE **Formation** MARMATON **Time** _____ **Date** _____

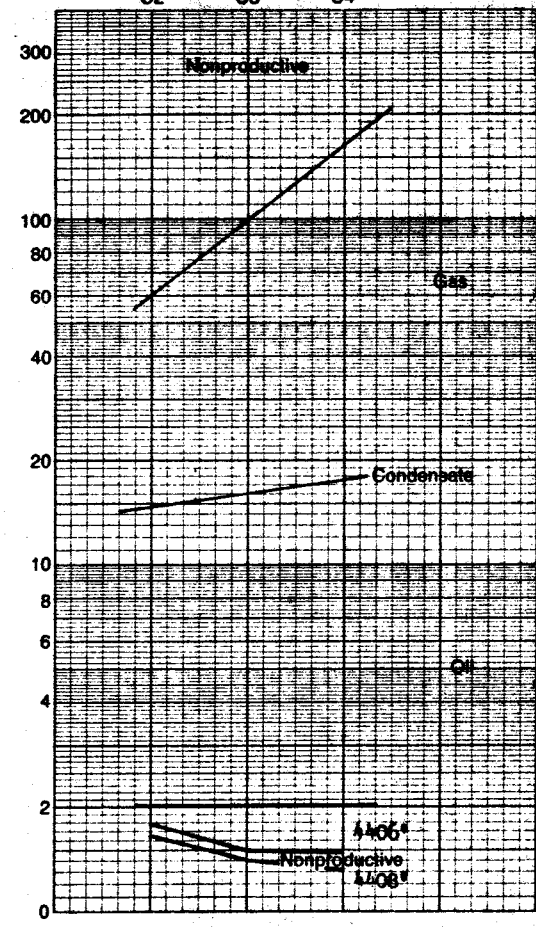
Depth Interval from 4404' **to** 4410' **with** ____ liberated ____ produced gas

Gross Ft _____ **Net Ft** _____

SHOW EVALUATION

G F P	DEPTH	MIN/FT	TOTAL GAS UNITS	TOTAL GAS % M.E.	GAS CHROMATOGRAPHY % C1	C2	C3	Σ C4	SHOW GAS MINUS BACKGROUND C1/C2	C1/C3	C1/C4
	BACKGROUND	3.5	2	.02	.009						
	4404	3.1	15	.15	.01	.005	.0078	.008	.2	.12	.125
	4406	1.7	60	.60	.04	.0198	.031	.032	1.56	1	.968
	4408	1.5	40	.40	.026	.013	.021	.022	1.31	.81	.77
	4410	3.4	20	.20	.013	.0066	.0104	.011	.6	.38	.36
	BACKGROUND	4.0	5	.05	.011						

RATIO PLOT: C1/C2 C1/C3 C1/C4



GAS RATIO EVALUATION: ____ oil ____ gas ____ cond. ____ tite X wet

LITHOLOGY TYPE: SS SH SLTST LS DOL Other _____

%: ( ) ( ) ( ) (100) ( ) ( )

Color mky wh-ltgy Grain/Xtal Size crp-mic Shape _____ Sorting _____ Cmt & Mtx _____ Acc cht, tr carb

POROSITY: n p m f g ____ intgran f-m intxln g moldic ____ frac ____ vuggy ____ other _____

STAIN: Color ltbrn ____ even ____ spotted X pinpoint ____ bleeding % in total cuttings ____

FLUORESCENCE: Color yelgold X even ____ spotted ____ pinpoint % in total cuttings ____ % mnrl 100

CHLOROTHENE CUT: Color mky yel Development fst-slw stmg Residual ltyel ring ODOR: n sl gd

CUT FLUORESCENCE: Color ____ Development ____ Residual ____ WETTABILITY TEST: + −

MUD PROPERTIES: Wt 9.0 FV 42 Fil 20 %Oil 0 Cl 1200 ph 9.5 WOB 45 RPM 78 SPM 80 PP 1600

REMARKS: _____ Bit Type reed HP53J Hrs _____ Footage 2472'

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analex DIVISION OF XCO

OPERATOR MOBIL OIL CORP **SEC** 27 **TWP** 24 S **RNG** 34 W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

SHOW REPORT# ONE **Formation** MARMATON **Time** _____ **Date** _____

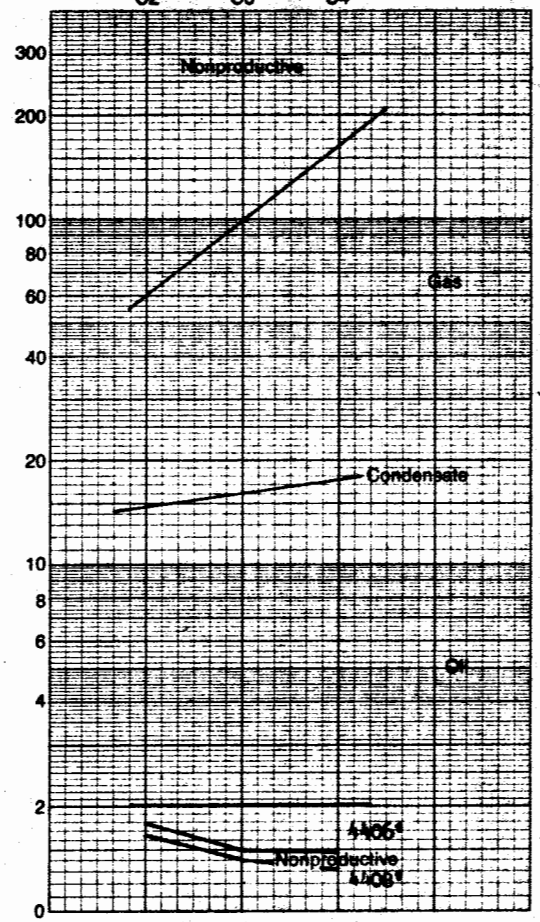
Depth Interval from 4404' **to** 4410' **with** ____ **liberated** ____ **produced gas**

Gross Ft _____ **Net Ft** _____

SHOW EVALUATION

G F P	DEPTH	MIN/FT	TOTAL GAS UNITS	TOTAL GAS % M.E.	GAS CHROMATOGRAPHY % C1	C2	C3	Σ C4	SHOW GAS MINUS BACKGROUND C1/C2	C1/C3	C1/C4
	BACKGROUND	3.5	2	.02	.009						
	4404	3.1	15	.15	.01	.005	.0078	.008	.2	.12	.125
	4406	1.7	60	.60	.04	.0198	.031	.032	1.56	1	.968
	4408	1.5	40	.40	.026	.013	.021	.022	1.31	.81	.77
	4410	3.4	20	.20	.013	.0066	.0104	.011	.6	.38	.36
	BACKGROUND	4.0	5	.05	.011						

RATIO PLOT: C1/C2 C1/C3 C1/C4



GAS RATIO EVALUATION: ____ oil ____ gas ____ cond. ____ tite X wet

LITHOLOGY TYPE: SS SH SLTST LS DOL Other _____

%: ( ) ( ) ( ) (100) ( ) ( )

Color mky wh-ltgy Grain/Xtal Size crp-mic Shape _____ Sorting _____ Cmt & Mtx _____ Acc sht, tr carb

POROSITY: n p m f g ____ intgran f-n intxln g moldic ____ frac ____ vuggy ____ other _____

STAIN: Color ltbrn ____ even ____ spotted X pinpoint ____ bleeding % in total cuttings ____

FLUORESCENCE: Color yelgold X even ____ spotted ____ pinpoint % in total cuttings ____ % mnrl 100

CHLOROTHENE CUT: Color mky yel Development fst-slw stng Residual ltyel ring ODOR: n si gd

CUT FLUORESCENCE: Color _____ Development _____ Residual _____ WETTABILITY TEST: + −

MUD PROPERTIES: Wt 9.0 FV 42 Fil 20 %Oil 0 Cl 1200 ph 9.5 WOB 45 RPM 78 SPM 80 PP 1600

REMARKS: _____ Bit Type reed HP53J Hrs _____ Footage 2472'

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DIVISION OF XCO

OPERATOR MOBIL OIL CORPORATION **SEC** 27 **TWP** 24 S **RNG** 34 W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 PINNEY **CO.,** KANSAS

analex DIVISION OF XCO

SHOW REPORT# ONE **Formation** MORROW **Time** 8:00 PM **Date** 4/8/85

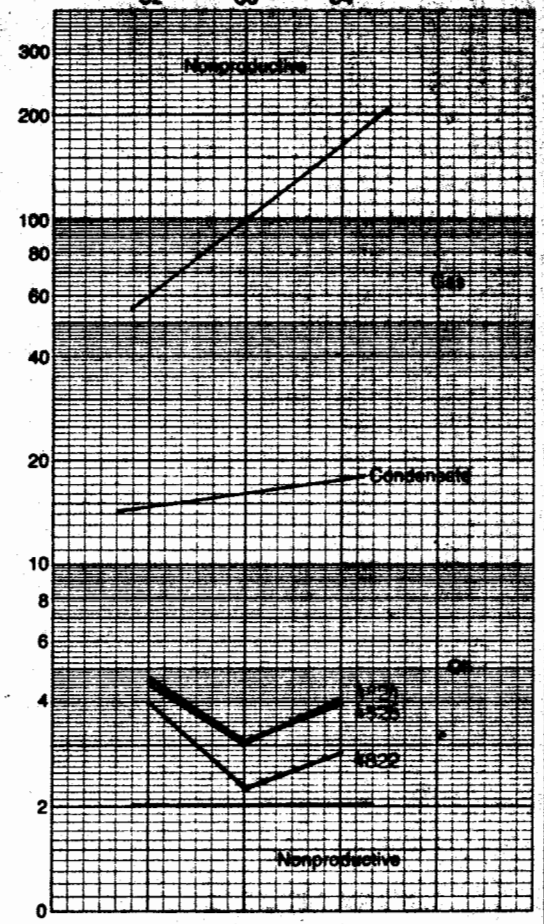
RATIO PLOT: C1/C2 C1/C3 C1/C4

Depth Interval from 4820' **to** 4826' **with** ____ **liberated** ____ **produced gas**

Gross Ft ____ **Net Ft** ____

	DEPTH	MIN/FT	TOTAL GAS UNITS	TOTAL GAS % M.E.	GAS CHROMATOGRAPHY % C1	C2	C3	≤ C4	SHOW GAS MINUS BACKGROUND C1/C2	C1/C3	C1/C4
G F P	BACKGROUND	3.0	3		.01	-	-	-			
	4820	1.5	5		.017	.0013	.0013	---			
	4822	1.2	15		.026	.004	.007	.0056	4	2.29	2.86
	4824	1.8	55		.091	.017	.026	.0204	4.7	3.1	3.97
	4826	.9	62		.102	.02	.03	.023	4.6	3.06	4
	BACKGROUND										

SHOW EVALUATION



GAS RATIO EVALUATION: X oil ____ gas ____ cond. ____ tite ____ wet

LITHOLOGY TYPE: SS SH SLTST LS DOL Other ____

%: (80) (20) ( ) ( ) ( ) ( )

Color trnsl-wh-ltbrn Grain/Xtal Size f-m gr Shape shang-sbrd Sorting mod Cmt & Mtx calc Acc glau

POROSITY: n p m f g f-m intgran ____ intxln ____ moldic ____ frac ____ vuggy ____ other ____

STAIN: Color brn-blk X even X spotted ____ pinpoint ____ bleeding % in total cuttings ____

FLUORESCENCE: Color dul yelgn ____ even X spotted ____ pinpoint % in total cuttings ____ % mnrl ____

CHLOROTHENE CUT: Color sky wh Development ring-stmg Residual vltbrn ODOR: n sl gd

CUT FLUORESCENCE: Color ____ Development ____ Residual ____ WETTABILITY TEST: + -

MUD PROPERTIES: Wt 8.9 FV 43 Fil 16 %Oil 0 Cl 1300 ph 10.5 WOB 45 RPM 28 SPM 80 PP 1600

REMARKS: ____ Bit Type STC Hrs 14 Footage 208'

F-27

analex DIVISION OF XCO

OPERATOR MOBIL OIL CORPORATION **SEC** 27 **TWP** 24 S **RNG** 34 W

WELL LILLIAN WILLIAMS #1 **JOB#** 85235 FINNEY **CO.,** KANSAS

analex DIVISION OF XCO

SHOW REPORT# ONE **Formation** MORROW **Time** 8:00 PM **Date** 4/8/85

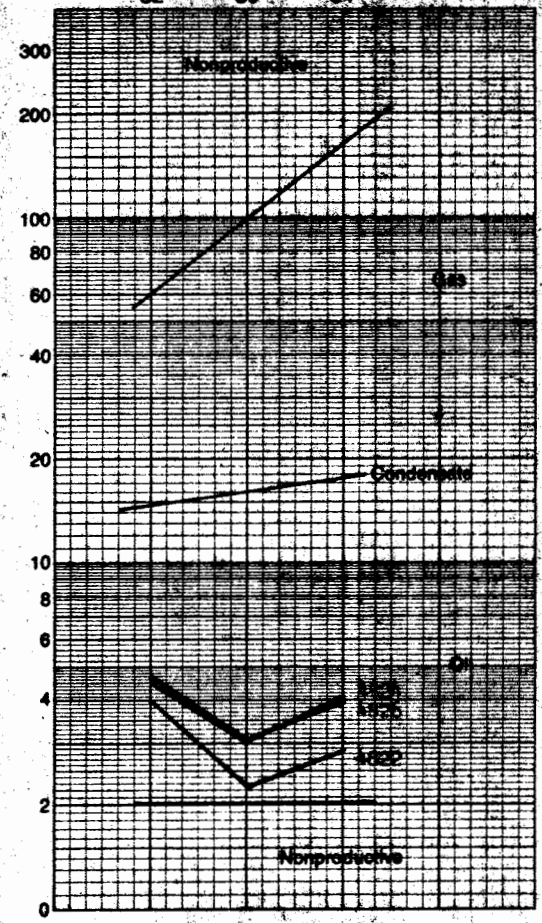
Depth Interval from 4820' **to** 4826' **with** ____ **liberated** ____ **produced gas**

Gross Ft ____ **Net Ft** ____

G F P	DEPTH	MIN/FT	TOTAL GAS UNITS	TOTAL GAS % M.E.	GAS CHROMATOGRAPHY % C1	C2	C3	≤ C4	SHOW GAS MINUS BACKGROUND C1/C2	C1/C3	C1/C4
	BACKGROUND	3.0	3		.01	-	-	-			
	4820	1.5	5		.017	.0013	.0013	-			
	4822	1.2	15		.026	.004	.007	.0056	4	2.29	2.86
	4824	1.8	35		.091	.017	.026	.0204	4.7	3.1	3.97
	4826	.9	62		.102	.02	.03	.023	4.6	3.06	4
	BACKGROUND										

SHOW EVALUATION

RATIO PLOT: C1/C2 C1/C3 C1/C4



GAS RATIO EVALUATION: X oil ____ gas ____ cond. ____ tite ____ wet

LITHOLOGY TYPE: SS SH SLTST LS DOL Other ____

%: (80) (20) ( ) ( ) ( ) ( )

Color brnsl-wh-ltbrn Grain/Xtal Size f-m gr Shape sbang-sbrd Sorting mod Cmt & Mtx calc Acc glau

POROSITY: n p m f g f-m intgran ____ intxln ____ moldic ____ frac ____ vuggy ____ other ____

STAIN: Color brn-blk X even X spotted ____ pinpoint ____ bleeding % in total cuttings ____

FLUORESCENCE: Color dul yelgn ____ even X spotted ____ pinpoint % in total cuttings ____ % mnrl ____

CHLOROTHENE CUT: Color wky wh Development ring-stag Residual vltbrn ODOR: n sl gd

CUT FLUORESCENCE: Color ____ Development ____ Residual ____ WETTABILITY TEST: + −

MUD PROPERTIES: Wt 8.9 FV 43 Fil 16 %Oil 0 Cl 1300 ph 10.5 WOB 45 RPM 78 SPM 80 PP 1600

REMARKS: ____ Bit Type STC F-27 Hrs 14 Footage 294'

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OPERATOR MOBIL OIL CORP SEC 27 TWP 24 S RNG 34 W

WELL LILLIAN WILLIAMS #1 FINNEY CO., KANSAS

analex
A GEOSCIENCE EXTENSION OF XCO

DST REPORT: DST# ONE Formation MORROW Interval 4821' To 4832'

Reason for Test OIL SHOW IN SAMPLES, 60 UNIT GAS INCREASE

Type Test CONVENTIONAL

Testing Company HALLIBURTON Tester

Water Cushion

IF 30 Minutes ½" BLOW IN 1½ MIN, BLOW OFF BOTTOM (12"BUCKET) IN 29 MIN, WEAK THROUGHOUT

ISI 60 Minutes TOOL SHUT IN

FF 60 Minutes 2" BLOW IMMEDIATELY, BLOW OFF BOTTOM (12" BUCKET) IN 11 MIN, INCR BLOW-GOOD AT END

FSI 120 Minutes TOOL SHUT IN

RECOVERY: 150' OIL AND 180' SALT WATER CUT MUD

BOTTOM HOLE SAMPLER: Pressure Recovery

RESISTIVITY DATA: Drill Pipe Recovery @ PPM Cl

Sampler @ PPM Cl

Mud Pit @ PPM Cl

PRESSURES:	Top Chart		Bottom Chart	
IH	2293	FH 2261	2233	FH 2225
IF	7	to 76	3	to 89
ISI	1226	to	1215	to
FF	93	to 129	121	to 134
FSI	1158	to	1155	to

Top Choke Bottom Choke

Bottom Hole Temperature 120° F

Remarks

OPERATOR MOBIL OIL CORP SEC 27 TWP 24 S RNG 34 W

WELL GILLIAN WILLIAMS #1 FINNEY CO., KANSAS

analex
A GEOSCIENCE EXTENSION OF XOD

DST REPORT: DST# ONE Formation MORROW Interval 4821' To 4852'

Reason for Test OIL SHOW IN SAMPLES, 60 UNIT GAS INCREASE

Type Test CONVENTIONAL

Testing Company HALLIBURTON Tester

Water Cushion

IF 30 Minutes ½" BLOW IN 1½ MIN, BLOW OFF BOTTOM (12"BUCKET) IN 29 MIN, WEAK THROUGHOUT

ISI 60 Minutes TOOL SHUT IN

FF 60 Minutes 2" BLOW IMMEDIATELY, BLOW OFF BOTTOM (12" BUCKET) IN 11 MIN, INCR BLOW-GOOD AT END

FSI 120 Minutes TOOL SHUT IN

RECOVERY: 150' OIL AND 180' SALT WATER CUT MUD

BOTTOM HOLE SAMPLER: Pressure Recovery

RESISTIVITY DATA: Drill Pipe Recovery @ PPM Cl

Sampler @ PPM Cl

Mud Pit @ PPM Cl

PRESSURES:

	Top Chart		Bottom Chart	
IH	2293	FH 2261	2233	FH 2223
IF	7 to 76		3 to 89	
ISI	1226 to		1215 to	
FF	93 to 129		121 to 134	
FSI	1158 to		1155 to	

Top Choke Bottom Choke

Bottom Hole Temperature 120° F

Remarks