

K C C
JUL 5 1994

GEOLOGIC REPORT

SINCLAIR OIL EXPLORATION & PRODUCTION

HADSON-LOW 4-18

330' fsl 329' fwl, SWSW

Sec. 3, T24S, R43W

Hamilton Country

Kansas

by

Gerald P. Ritenour

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MINERAL RIGHTS DIVISION
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3-24-43W

K C C**JUL 5 1994****WELL DATA**

Operator	Sinclair Oil Exploration and Production
Well Name	Hadson-Low 4-18
County	Hamilton
State	Kansas
Elevation	Kelly Bushing 3385' Ground Level 3376'
Location	330'FNL, 329'FWL Section 3, T24N, R43W
Contractor	Murfin, Rig 25
Toolpusher	Gus Schwartz
Casing	979' of 8 5/8", set at 990'
Stack	Hydrill Type
Mud Company	Milpark Drilling Fluids Rep. Craig Lamoureux
Mud	Water 990'-3275' LSND 3275'-5500'
Testing Company	Trilobite Testing Co.
Electrical Surveys	Gamma Ray, Spontaneous Potential, Neutron Density, Photo-density, Dual Induction, Sonic
Electric Logging	BPB, Rep. Childers
Geologic Supervision	Gerald P. Ritenour
Drilling Foreman	John Julian
Spud Date	4/17/92
Date Total Depth	4/28/92
Status	Plugged
Total Depth	Driller's 5500' Logger's 5498'

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GEOLOGIC SUMMARY

The Sinclair Oil Hadson-Low 4-18 was drilled to evaluate all possible pay zones in the Pennsylvanian to Mississippian section. A one man mud-logging unit was operated by the wellsite geologist. Unlagged cuttings samples were caught by the rig crews. The sample quality varied from poor to fair, but did not hinder the evaluation of possible pay zones.

An unexpected small mud gas show in the Wabaunsee from 3242-3252' resulted in the running of DST #1(3220-3275'). This test indicated good porosity and permeability, but only yielded salt water with a trace of gas. The Lansing-Marmaton had numerous porosity zones, none of which had mud gas or sample shows, and no DST's were run through this interval. There was an E-Log show in the porosity zone from 3899-3905', but it was believed that the higher resistivity in this interval was due the to unconnected pores the oolmoldic porosity.

The principle zone of interest, the Morrow had 18' of tight sandstone developed from 4871-4889'. This sandstone contained high amounts of feldspar, but none the characteristic glauconite of the marine facies. I was unable to determine whether or not this was a marine or nonmarine sandstone. DST #2(4660-4913') was run to test this sandstone, and recovered only minor amounts of mud. No shows were present in the rest of the well. After proper evaluation the Hadson-Low 4-18 was plugged and abandoned

FORMATION TOPS .

Formation	Sample Top	Log Top	Subsea
Day Creek			
Blaine		1026	2359
Stone Corral		1707	1678
Neva		2657	728
Pennslyvanian		2940	445
Wabaunsee	3138	3134	251
Topeka	3280	3284	101
Heebner	3420	3414	-29
Toronto		3429	-44
Lansing	3540	3548	-163
Marmaton	4080	4084	-499
Labette		4234	-849
Fort Scott	4242	4236	-851
Cherokee	4258	4253	-868
Atoka	4480	4474	-1089
Morrow	4747	4754	-1369
Keys	5002	4988	-1603
St. Genevieve ?	5060	5111	-1726
St.Louis	5194	5208	-1823
Spergen	5402	5398	-2013
Total Depth	5500	5498	

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DAILY WELL HISTORY

Date	Depth	Operation	Footage	Cost
	@0700			
4/18/92	450	Move and rig up, spud at 1930hrs, plug jet, change jets, drilling at 2200hrs,	450	
4/19/92	995	Drilling, trip to repair swivel at 1115hrs, drilling at 1245hrs Circulate for casing at 0215hrs, trip out of hole, running casing, wait on cement	545	
4/20/92	1635	Wait on cement, back off at 1345hrs nipple up, trip in, pressure test, drilling at 1950hrs	640	
4/21/92	2442	Drilling, trip to surface pipe to repair swivel at 0200hrs	807	
4/22/92	3265	Drilling at 0715hrs, work tight hole at 2715' at 1345hrs, pull 5 stands, spot premix, drilling at 1500hrs	854	40434
4/23/92	3337	Drilling, circulate for samples at 3275' at 0745hrs, mud up, short trip 8 stands, at 1630hrs, circulate, trip out at 1815hrs, pick DST tool, trip in open for DST #1 at 2105hrs, pull test at 0050hrs, trip out at and lay down tool, trip in, drilling at 0430hrs	72	48799
4/24/92	4014	Drilling	677	56406
4/25/92	4451	Drilling, repair swivel at 0315-0415hrs, drilling, trip for NB #2 at 4451' at 0530hrs	437	62698
4/26/92	4838	Trip NB#2, Gas bubble to surface, blew mud 30'?, fill hole, trip in, wash and ream 30', junk on bottom, drilling at 1130hrs	387	68300
2/27/92		Drilling, circulate for samples at 4882', from 0915-1015hrs, drilling, circulate for DST #2 at 4913' at 1130hrs, short trip 10 stands, circulate strap out(-1.50 no correction), junk basket hooked bottom surface pipe, pick up test tool, trip in, open for DST #2 at 2022hrs pull loose at 0015hrs, trip out, lay down test tool, trip in drilling at 0500hrs circulate for samples at 4955' at 0615hrs	106	75842
2/28/92	5314	Circulate for samples, drilling at 0730hrs	370'	81411

Daily Well History

Date	Depth @0700	Operation	Footage	Cost
4/29/92	5500	Drilling, circulate for logs at 5500', at 1815hrs, trip out, tight 6 to 7 stands off bottom, pull ten stands, trip in hole circulate, strap out(no correction) at 2100hrs, on bank for logs at 0030hrs, start in hole with run #1 (Sonic-Resis) at 0100hrs, finish run #1 at 0300hrs, start in hole with run #2 (Neut-Dens) at 0330hrs, finish run #2 at 0600hrs, wait on orders	186	89255
4/30/92	5500	Wait on orders, trip in hole with drill collars, lay down drill collars, trip in hole open ended, lay down drill pipe and plug, set 50 sacks at 1740' and 1020', set 10 sacks at 40', plug rat hole and mouse hole, release rig at 2300hrs		103071

MUD DATA

Date	Depth	Wt	Vis	PV	YP	Gel	WL	Ck	Sld	pH	Ca	Cl	Cost
4/18/92	459	9.8	35	8	7	8/15	nc	3	11	7	600	2600	631
4/19/92	995	9.8	44	12	14	10/22	22	2	12	10	180	3000	780
4/20/92	1604	9.7	29	water					2.2	10	80	133000	905
4/21/92	2442	9.2	27	water					2	8	60	80000	999
4/22/92	3190	9.3	35	6	11	3/10	28	2	3	8.5	260	70000	2408
4/23/92	3275	8.9	54	14	26	5/14	9	2	3.2	9	160	16000	5407
	3280	8.9	48	12	18	4/14	8.5	2	3.2	9	160	18000	
4/24/92	3960	9.3	37	12	16	4/12	15	2	5.9	9	120	18000	7105
4/25/92	4294	9.2	40	8	12	4/11	15	2	5.6	8	200	11000	9229
	4451	9.4	42	10	15	4/15	10	2	7.1	9.5	60	12000	
4/26/92	4540	9.3	41	15	19	4/14	12	2	6.4	9.0	60	12000	11025
	4780	9.3	39	14	17	3/12	10.2	2	6.3	9.5	40	13000	
4/27/92	4913	9.1	48	20	25	5/18	8.8	2	4.9	10	40	11000	12665
	4920	9.2	49	21	28	6/20	9.7	2	5.7	9.5	100	11000	
4/28/92	5260	9.2	40	14	14	3/12	8.4	2	5.7	10	60	11000	14551
	5325	9.2	41	15	13	3/11	8.5	2	5.7	10	40	11500	
4/29/92	5500	9.2	50	15	17	5/16	8.5	2	5.7	9.5	40	10000	1535

BIT RECORD

No.	Size	Manf.	Ser.#	Type	Jets	Out	In	Footage	Hrs	WOB	RPM	PP
1s	121/4	Reed	H57106	HP12J	14-14-13	995	0	995	24	20	110	1000
1	77/8	HTC	M14PD	ATJ11H	12-13-13	4451	995	3456	92.25	40	80	1000
2	77/8	HTC	M74PA	ATJ22	12-13-13	5500	4451	1049	56.75	38	80	1000

DEVIATION SURVEY

Depth	Inclination
101	1/2°
194	1/2°
464	1/2°
615	1°
734	1°
859	1°
995	1°
1481	1°
2038	3/4°
2597	1/4°
3119	3/4°
3275	1/4°
3831	1/2°
4355	3/4°
4913	3°
5500	2 1/4°

MECHANICAL DATA

Depth	RPM	WOB	PP	SPM
0-450	110	5	700	68
450-615	110	15/20	900	68/70
615-880	110	12/18	900	68/70
880-995	110	20	1000	70
995-1202	110	20	1100	68
1202-1635	100	20	1000	64
1635-2005	90+	20/25	1000	64
2005-2345	90+	30	1100	64
2345-2445	90	25	1200	66
2445-2718	90	28	900	59
2718-3275	90	35	1200	66
3275-3330	80	35	1200	67
3330-3805	80	35	1100	68
3805-4355	80	40	1100	66
4355-4913	80	40	1000	68
4913-4941	90	35	1000	64
4941-5065	80	35	1000	64
5065-5185	80	35/40	1000	67
5185-5314	80	38	1000	64/68
5314-5440	80	38	900	66
5440-5500	80	40	1000	66

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DST #1

Formation	Wabaunsee
Interval	3220-3275'
Testing Company	Trilobite Testing Company
Tester	Mark Hershartz
Type	Bottom hole conventional test with no water cushion. Used two packers. Down hole choke was .75".
Initial Flow	15 min. Opened with immediate 1" blow, built to 10" in 5 min. Dropped to 3" and remained steady
Initial Shut In	30 min. Dead
Final Flow	60 min. Opened with 1/2" blow, built to 36" in 30 min., dropped to 2" after 60min
Final Shut In	120 min. Dead
Recovery	1120' of salt water, 50000Cl ⁻ ppm
Chart Depth	PRESSURES 3230
Initial Hydrostatic	1535
Initial Flow	97-276
Initial Shut In	771
Final Flow	347-548
Final Shut In	771
Final Hydrostatic	1467
Sample Chamber	.50 cuft gas at 85psi 4000cc salt water, 45000Cl ⁻ ppm
Bottom Hole Temp.	105F ⁰

	DST #2
Formation	Morrow
Interval	4660-4913'
Testing Company	Trilobite Testing Company
Tester	Mark Hershartz
Type	Bottom hole conventional test with no water cushion. Used two packers. Down hole choke was .75".
Initial Flow	15 min. Opened with immediate 1/2" blow, remained steady
Initial Shut In	30 min. Dead
Final Flow	60 min. Opened with weak surface blow, remained steady for 20 min., intermittent blow for remainder of flow
Final Shut In	120 min. Dead
Recovery	40' mud
Chart Depth	PRESSURES 4665
Initial Hydrostatic	1988
Initial Flow	55-66
Initial Shut In	98
Final Flow	66-66
Final Shut In	109
Final Hydrostatic	1959
Sample Chamber	Plugged, trace gas, 2300cc mud
Bottom Hole Temp.	119F°

ABBREVIATION

a	angular	mudst	mudstone
abnt	abundant	occ	occasional,ly
alloc	allochem	ool	oolitic
anhy	anhydrite, anhydritic	orng	orange
argl	argillaceous	pell	pellet
bdst	boundstone	plty	platy
blk	black	packst	packstone
blkky	blocky	pr	poor
blu	blue	pyr	pyrite, pyritic
brn	brown	rd	rounded, round
cal	calcite	sa	subangular
calc	calcareous	sbblky	subblocky
carb	carbonaceous	sbfis	subfissile
chlk	chalk	sd	sandy
chlky	chalky	sdyl	sandy
cr	coarse	sft	soft
cryt	crypto	sh	shale
dens,dns	dense	sl	slight, slightly
dk	dark	slt	silt
dol	dolomite	sltst	siltstone
dolo	dolomitic	slty	silty
extrm	extremely	sm	some
f	fine	sme	some
fiss	fissile	smpl	sample
flor	fluorescence	spln	splintery
foss	fossil, fossiliferous	sprr	sparry
fr	fair	srd	subrounded
frag	fragment	ss	sandstone
freq	frequent	stn	stain
fri	friable	strmg	streaming
frm	firm	suprtd	supported
gd	good	tr	trace
gn	green	transl	translucent
gr	grain	tt	tight
granu	granular	v	very
grdg	grading	vit	vitreous
grst	grainstone	w	well
gy	gray	w/	with
gyp	gypsum, gypsiferous	wkst	wackstone
hd	hard	wxy	waxy
infreq	infrequent	xl	crystal
ip	in part	xln	crystalline
lt	light	yw	yellow
lrg	large		
mic	micro		
mica	mica, micaceous		
mod	moderately		
mott	mottled		