

45-11-4-42

THE CALIFORNIA STANDARD COMPANY

WELL HISTORY REPORT

CALSTAN TATHLINA LAKE K-10

Unit K, Section 10, Grid 60° 40' N, 117° 15'



April 23/64

THE CALIFORNIA STANDARD COMPANY

14605 - 118 Avenue,

EDMONTON, Alberta

WELL HISTORY REPORT

CALSTAN TATHLINA LAKE K-10

Unit K, Section 10, Grid 60° 40' N, 117° 15' W.

Date: 4-15-64

Signed: R.C. Richardson

R.C. RICHARDSON
District Superintendent.

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WELL HISTORY REPORT

Section I - Summary of Well Data

- a) Well name: Calstan Tathlina Lake K-10
- b) Permittee: The California Standard Company,
Medical Arts Building,
CALGARY, Alberta.
- c) Operator: The California Standard Company,
Medical Arts Building,
CALGARY, Alberta.
- d) Location: Unit K, Section 10, Grid 60° 40' N, 117° 15' W
- e) Co-ordinates: Latitude 60° 39' 40.20" North
Longitude 117° 16' 29.29" West
17.13"
- f) Permit number: # 3485
- g) Drilling Contractor: Big Horn Drilling Rig #2
- h) Drilling Authority: # 136 issued February 24, 1964
The original authority was obtained for
Tathlina Lake J-01 and later amended to
Tathlina Lake K-10.
- i) Classification: Wildcat
- j) Elevations: Ground 922' K.B. 934'
- k) Spudded: 6:30 a.m. February 27, 1964
- l) Completed Drilling: March 10, 1964
- m) Total Depth: 2799'
Plugged back to surface.
- n) Well Status: Abandoned
- o) Rig Released: 6:00 a.m. March 13, 1964
- p) Hole Side: 0 - 213' 9 7/8"
213 - 2799' 6 1/4"
- q) Casing:

<u>Size</u>	<u>Type</u>	<u>Weight</u>	<u>Set at</u>	<u>Sax of cement</u>
7"	J-55	20#	210'	110 + 2% CaCl ₂

Section II - Geological Summary

a) Formation Tops:

	Depth (Sample)	Depth IES or SGR	Elevation IES or SGR
Base of Drift	20		
Redknife-Tathlina Silts	20		
Redknife Shale		310	+ 624
Twin Falls	610	630	+ 304
Hay River	1060	1048	- 114
Slave Point	2310	2310	-1176
Watt Mountain	2475	2468	-1534
Sulphur Point	2495	2496	-1562
Presqu'ile	2590	2568	-1634

b) Cored Intervals:

Core #1 2297'-2310.7' Rec. 13.7' Hay River
Core #2 2310.7'-2320' Rec. 6.6' Slave Point

Coring and Testing by Eastland Testers.

c) Core Description: See Appendix A

d) Sample Description: See Appendix B

Section III - Engineering Summary

a) Drill Stem Tests:

DST #1 2306-2320' (Slave Point)

Valve open for 90 minutes. Fair initial blow. Good strong air blow decreasing to slow after 45 minutes. Recovered 2150' salt water. Initial shut in 30 minutes, Final shut in 60 minutes. IHP 1221; ISIP 977; FSIP 985; IFP 393; FFP 973.

b) Casing Record:

Surface casing run only.

Size	Type	Weight	Amount	Set at	Sacks of cement
7"	J-55	204	195.00'	210'	110 + 2% CaCl ₂

c) Bit Record

Number	Size	Serial	Kind	Total Hours	From	To	Bit Footage
1A	9 7/8"	720102	SEC S-3	1 1/2	0	30	30
2A	9 7/8	519440	SEC S-6	15 1/2	30	120	90
3A	9 7/8	70158	OSC HTC	8 1/2	120	213	93
1	6 1/4	32764	Smith DT26J	9 1/2	213	606	393
2	6 1/4	31959	Smith DT26S	11 1/2	606	1000	394
3	6 1/4	33045	Smith DT	10 1/2	1000	1388	388
4	6 1/4	33065	Smith DT	13 1/2	1388	1815	427
5	6 1/4	33730	Smith DT2G	13 1/2	1815	2170	355
6	6 1/4	30004	Smith DT2G	8	2170	2297	127
7	5	5-0-3	Diamond	9 1/2	2297	2320	23
8	6 1/4	28254	HTC WTRR	2 1/2	2297	2318	21
9	6 1/4	30719	Smith SVD	6 1/2	2318	2406	88
10	6 1/4	33455	Smith K2P	7	2406	2466	60
11	6 1/4	622501	SEC MLN	9	2466	2560	94
12	6 1/4	33726	Smith OT2G	7	2560	2661	101
13	6 1/4	26162	HTC OSC1G	4	2661	2712	51
14	6 1/4	622502	SEC MLN	7 1/2	2712	2799	87

d) Mud Report:

A Gel-Chemical mud was used. The following materials were used:

Magogel	25200 lbs.
Caustic	1850 "
Spersene	750 "
Tannathin	900 "
SAPP	100 "
Lime	150 "
Fibre Seal	45 sacks
Sawdust	44 sacks

e) Deviation Record:

<u>Kind</u>	<u>Depth</u>	<u>Reading</u>
Sure Shot	71	3/4°
Sure Shot	155	1/2°
Sure Shot	210	1/2°
Sure Shot	530	1/2°
Sure Shot	898	1/2°
Sure Shot	1205	3/4°
Sure Shot	1538	3/4°
Sure Shot	1840	7/8°
Sure Shot	2170	1°
Sure Shot	2466	3/4°
Sure Shot	2799	5 1/4°

f) Abandonment Plugs

Plug #1 2250-2790' 125 sacks of cement + 3% CaCl₂
 Felt plug at 2245'
 Plug #2 160-260' 40 sacks of cement + 4% CaCl₂
 Felt plug at 170'
5 sacks cement on top of casing

g) Lost Circulation Zones:

Precautionary measures were taken by adding lost circulation material while drilling in the Presqu'ile. However minor circulation problems were encountered in the Presqu'ile at a depth of 2775'.

h) Blowouts: None

Section IV - Logs

Logging by Schlumberger

Run 71 at final T.D. March 11th, 1964

Induction Electrical Log	2" = 100'	208' - 2705'
	5" = 100'	208' - 2705'

Sonic Gamma Ray Caliper Log	2" = 100'	208' - 2795'
	5" = 100'	208' - 2795'

Note: Three copies of above logs were forwarded under separate cover on March 23rd, 1964.

Section V - Analysis

a) Core Analysis

None made.

b) Water Analysis

See Appendix C.

c) Gas Analysis

None made.

APPENDIX A

CORE DESCRIPTION

CALSTAN TATHLINA LAKE K-10

LOCATION: 60° 39' 40.20"N,
117° 16' 18.13"W.

CORE DESCRIPTION

W. H. NIXON

J. A. SUTHERLAND

CALSTAN TATHLINA LAKE K-10

00° 39' 40.20"N 117° 16' 18.13"W

by: W. H. Nixon
J. A. Sutherland

Core Description

Core #1 2297-2310.7' Rec. 13.7'

2297-2308' Limestone, grey argillaceous, nodular.
2308-2310' Dolomite, medium brown grey, fine grained argillaceous.
2310-2310.7' Dolomite, light grey brown, medium crystalline. 1" vug at base otherwise tight, thin hairline vertical fractures sealed in part by calcite. Spotty oil bleeding, small vugs along open fracture faces. Top of Slave Point at 2310'.

Core #2 2310.7-2320' Rec. 6.6'

2310.7-2320' (Core badly broken up) Dolomite, light grey brown, medium crystalline. Large 6" vug at base, relatively small 1/4" vugs throughout. Spotty oil bleeding from vugs.

APPENDIX B

SAMPLE DESCRIPTION

CALSTAN TATHLINA LAKE K-10

LOCATION: 60° 39' 40.20"N,
117° 16' 18.13"W

SAMPLE DESCRIPTION

W. H. NIXON

J. A. SUTHERLAND

CALSTAN TATHELINA LAKE K-10

LOCATION: 60°39' 40.20"N, 117°16' 18.13"W

SAMPLE DESCRIPTION

0' - 20'	No Sample
20' - 30'	Limestone - very light grey and cream, finely crystalline, slightly silty, pyrite.
30' - 60'	Limestone - light grey green, fine crystalline, slightly silty and argillaceous, pyrite.
60' - 80'	Limestone - light grey green and cream, fine crystalline, slightly silty and argillaceous, pyrite.
80' - 130'	Limestone - light grey brown, to brown green and grey, slightly silty and argillaceous, pyrite.
130' - 210'	No samples
210' - 220'	Limestone - light grey, fine to medium crystalline, silty and argillaceous, fossils?, pyrite.
220' - 310'	Limestone - light grey to light grey green, fine to medium crystalline, silty and argillaceous, sparse fossils - occasional brachiopods, pyrite. Minor grey to green calcareous shale.
310' - 330'	Predominately grey green calcareous shale, minor limestone as above.
330' - 350'	Limestone - light grey green, fine to medium crystalline, fossil ?, pyrite, minor grey green calcareous shale.
350' - 410'	Siltstone - light grey green, calcareous, pyrite, minor limestone as above.
410' - 470'	Siltstone - light grey, calcareous, pyrite, minor grey green shale.
470' - 480'	No sample
480' - 560'	Siltstone - as above. (Brachiopod fragments noted in 510' sample), minor light grey limestone and grey green, calcareous shale.
560' - 590'	Shale - light grey green, waxy, minor light brown grey limestone, brachiopods noted in 590' sample.

590' - 600'	Siltstone - light grey to light grey green, calcareous, fossil?, minor shale and limestone as above.
610' - 740'	Limestone - light grey to light grey brown, very fine crystalline, silty, crinoid and brachiopods, pyrite.
740' - 910'	Limestone as above and siltstone - medium to dark grey - calcareous, (tentaculites? from 890' - 910')
910' - 1000'	Siltstone - light grey to grey brown, calcareous, (brachiopods, crinoids and bryozoa?), minor limestone as above. (Tentaculites? from 970' - 1000').
1000' - 1030'	Limestone - light grey brown, micritic, contains crinoid and brachiopods fragments, minor siltstone as above, pyrite.
1030' - 1060'	Limestone and siltstone as above and light grey green, calcareous shale (tentaculites? at 1050'), pyrite.
1060' - 1080'	Shale - light grey green, calcareous, pyrite, minor limestone as above.
1080' - 1090'	Shale as above, fossils?
1090' - 1110'	Shale - light grey green, calcareous, minor light grey mottled siltstone, pyrite, fossils?
1110' - 1130'	Siltstone as above, minor light grey green calcareous shale, crinoid columnals, pyrite.
1130' - 1240'	Shale - light grey green calcareous, minor light grey mottled siltstone, crinoids and brachiopods fragments, pyrite.
1240' - 1250'	Shale - siltstone as above, and minor grey coarsely crystalline limestone.
1250' - 1290'	Shale - light grey green, calcareous, minor light grey mottled siltstone, crinoids, pyrite.
1290' - 1590'	Shale - light grey green, calcareous, minor grey and grey brown micritic limestone, ostracods, bryozoa, (tentaculites? in 1300' sample). Minor light grey mottled siltstone, pyrite.

1590' - 1600'	Shale, siltstone as above and mottled brown grey medium crystalline limestone.
1600' - 1680'	Limestone - light brown grey, micritic, contains ostracods and crinoids, pyrite, minor siltstone and shale as above. (Brachiopods in 1650' - 1660')
1680' - 1720'	Shale - grey and light grey green, fossils? pyrite, minor limestone and siltstone as above, pyrite, crinoids in 1730' sample.
1720' - 1760'	Shale - grey and brown grey, calcareous, minor limestone and siltstone as above, fossils? pyrite.
1760' - 1800'	Shale - brown grey to light grey green, calcareous, fossils? pyrite, minor buff micritic limestone and siltstone as above.
1800' - 1830'	Shale - grey to grey brown and light grey green, calcareous, minor limestone and siltstone as above, pyrite.
1830' - 1890'	Shale - light grey green, calcareous, minor m xline buff limestone and siltstone as above, pyrite.
1890' - 1920'	Shale - grey and light grey green, calcareous, minor limestone and siltstone as above, pyrite, brachiopod fragments in 1900' sample.
1920' - 2000'	Shale - grey to light grey green and brown grey, calcareous, brachiopods, minor light grey and buff medium crystalline limestone (slightly silty), and calcareous siltstone as above.
2000' - 2020'	Shale - grey (trace rusty grey brown), calcareous.
2020' - 2040'	Shale as above, and calcareous siltstone.
2040' - 2050'	Shale as above.
2050' - 2060'	Shale and siltstone as above.
2060' - 2110'	Shale as above and minor light grey, arenaceous limestone, pyrite.
2110' - 2130'	Shale - grey, micaceous and fissile, pyrite.
2130' - 2180'	Shale - grey, grey green and brown, calcareous, micaceous, pyrite, trace oil stain in 2170' sample.

- 2180' - 2200' Shale - grey and grey brown, calcareous, micaceous, pyritic, brachiopods in 2190' sample.
- 2200' - 2220' Shale as above, with minor siltstone.
- 2220' - 2285' Shale - grey and brown, micaceous, calcareous, pyritic, trace oil 2260' - 2285'.
- 2285' - 2297' Argillaceous limestone - grey brown, finely and medium crystalline - slightly dolomitized, corals and bryozoa, pyritic.
- 2297' - 2320' See Core Description.
- 2320' - 2400' Dolomite, grey brown and white, fine to coarsely crystalline, pyritic, abundant vugs from (1/16" to 6") in diameter, oil stained in part.
- 2400' - 2420' Dolomite as above, with minor limestone - dark brown, microcrystalline with occasional algal lumps, disseminated crystals and veins of white dolomite.
- 2420' - 2480' Limestone - brown and grey brown, fine and medium crystalline, (predominately finely crystalline) - pyritic, abundant stromatoporoids - algal lumps.
- At 2470' - trace green pyritic shale, dirty white argillaceous residue. (Watt Mountain?), minor dolomite as above.
- 2480' - 2490' Limestone - grey brown, fine crystalline, recrystallized in part, minor dolomite.
- 2490' - 2510' Limestone - white, fine crystalline, vague relict lump structure, no residue.
- 2510' - 2540' Limestone - brown and cream, fine crystalline, pyritic, calcispheres? stroms, slightly dolomitized.
- 2540' - 2600' Dolomite - cream, brown and white, fine and medium crystalline, pyritic, some native sulphur crystals, minor limestone as above.
- 2600' - 2700' Dolomite - cream brown and white, medium and coarsely crystalline, well developed euhedral crystals suggest drusy structure, vugular lining, pyritic.
- 2700' - 2740' Dolomite as above, trace of brown grey algal limestone.

2740' - 2800'

Dolomite - brown, white and cream, medium and coarsely crystalline, well developed euhedral crystals suggest drusy structure - vugular lining, pyritic.

At 2780' - trace of dark brown fine crystalline dolomite.

March 17, 1964

APPENDIX C

WATER ANALYSIS

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Edmonton

Fort St. John

Calgary

WATER ANALYSIS REPORT

Field Tatchina Lake, North West Territories Well No. Calstan Tatchina Lake K-10

Operator The California Standard Company Date Received March 20, 1964

Formation Slave Point Depths 2304' - 2318'

Other pertinent data D.S.T. #1. "See Information Sheet".

Date Sampled: March 6, 1964 Lab. No. E23238

PARTS PER MILLION (MILLIGRAMS PER LITER)

Na + K	Ca	Mg	Fe	SO ₄	Cl	CO ₃	HCO ₃	OH	H ₂ S
24734	5590	1570	Present	209	52100		630		

MILLIGRAM EQUIVALENTS

1075.91	278.94	129.05		4.33	1469.22		10.33		
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MILLIGRAM EQUIVALENTS IN PERCENT

36.25	9.40	4.35		0.15	49.50		0.35		
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Total Solids in Parts per Million

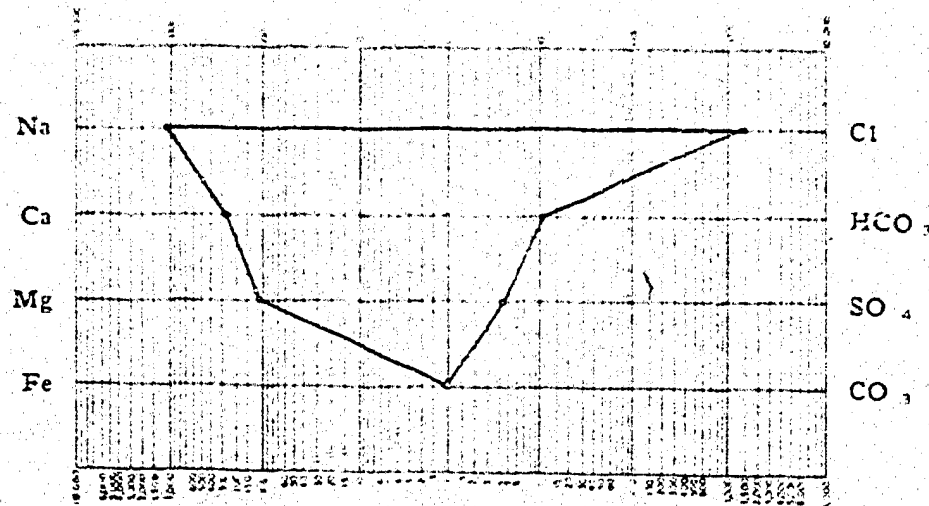
By evaporation	93,700
After ignition	80,200
Calculated	84,513
Specific Gravity	1.054
Observed pH	6.1
Resistivity	0.111 ohm meters @ 68° F.

Properties of Reaction in Percent

Primary salinity	72.50
Secondary salinity	26.80
Primary alkalinity	---
Secondary alkalinity	0.70
Chloride salinity	99.70
Sulfate salinity	0.30

Remarks and conclusions Refractive Index: 1.3510.

The sample correlates with other waters from the same approximate depth in this area.

LOGARITHMIC PATTERN
MEQ per unit

OIL AND GAS CONSERVATION BOARD (PROVINCE OF ALBERTA)

STANDARD SAMPLE INFORMATION SHEET

Lab. No. E23238
 INFORMATION TO BE FORWARDED WITH EACH SAMPLE OF WATER, OIL OR GAS (Please supply as much of the following information as possible. Please Print Clearly.)

Kind of sample (water, oil or gas): Water

Marks on sample container: 120' above tool

Sample obtained by: Stan Borowski

Date: March 6, 1964

Operator: The California Standard Company

Mailing address for results: Box 2296, Edmonton

Well name and No. Calstan Tathlina Lake K-10 Field or Area: Tathlina Lake N.W.T.

Located in: L.S.D.	Sec.	Twp.	Rge.	W	Mer.	Elev:	K.B.
						922	Grd. 934

60° 39' 45.2" N. 117° 16' 2.96" W.
 Sample obtained from (line, tubing, separator, etc.):

Pressure: (a) at point of sampling 0 psig. (b) Gas Bomb pressure NA psig.

Temperature: (a) at point of sampling -10 °F (b) Separator NA °F

Name of Zone and Formation: Slave Point

Method of Production: D.S.T. Pump. Flowing. Swabbing.

Other (specify)

If D.S.T. sample, D.S.T. results: D.S.T. #1 Interval 2304 - 2318

Recovery 2150' muddy salt water (first 800' oil flecked)

Well production at sampling time: Oil NA Bpd. Gas NA MCFD; Water NA Bpd.

Perforations or open hole interval: 2304 - 2318

Pressures: Reservoir , Tubing , Casing , Separator

REMARKS:

Initial shut in 30 min. flow 90 min. final shut in 60 min.
 I.S.I. 1008 I.F. 384 F.F. 960 F.S.I. 1008 complete in 45 min.

H. P. 1248.

Cl. content 70,000 ppm.

Stan Borowski

(Signed)

California Standard Co.
 (Company)

APPENDIX D

DST CHARTS

T.G. EASTLAND — testers Ltd.

RR. NO. 4 NORTH • EDMONTON, ALBERTA

SERVICE REPORT

TEST No. One
Date March 6/64
Ticket No. 6804

Well Name: CALSTAN TATHLINA LAKE K-10

LSD. K-10

Formation Tested: Slave Point

TYPE OF TEST: ☒ Standard ☐ Duals ☐ Straddle ☐ Casing

From: 2306' To: 2320' Tail Pipe: 14.5'

Main Hole Depth: 2320' Rat Hole Depth:

Hole Size Tested: 6 1/4" Main Hole Rat Hole

Casing Depth: 213' Size: 7" Weight:

Type of Drill Pipe: 3 1/2" IF Tubing:

Type of Packer(s): Conventional

Size of Rubber Element(s): 5 1/2"

REMARKS: Fair initial air blow. Good strong air blow. Decreased to slow after 45 minutes flow.

TEST RESULT DATA

Started in Hole: 10:00 am Tool Opened: 12:45 pm

Initial Shut-in: 30 Min. Flow Period: 90 Min.

Final Shut-in: 60 Min. Out of Hole: 6:00 pm

Choke Bottom: 1/4"

Choke Surface:

Flow Rate Mcf/day Flare Line Riser:

Mcf/day measured by:

Fluid Cushion: Max. Well Temp: °F

DRLG. FLUID: Viscosity: 48 Weight: 10.2 w.l. 9.0

FIELD (est.) CORRECTED

1242 Initial Hydrostatic Pressure psig 1221

1008 Shut-In Press. #1 After 30 Min. psig 977

384 Initial Flowing Pressure psig 393

960 Max. Flowing Pressure psig 973

1008 Shut-In Press. #2 After 60 Min. psig 985

FLUID RECOVERY: 2153 ft salt water,
(hydrogen sulphide-cut)

(Ran 14 drill collars, 4 1/2" OD, 2" ID)

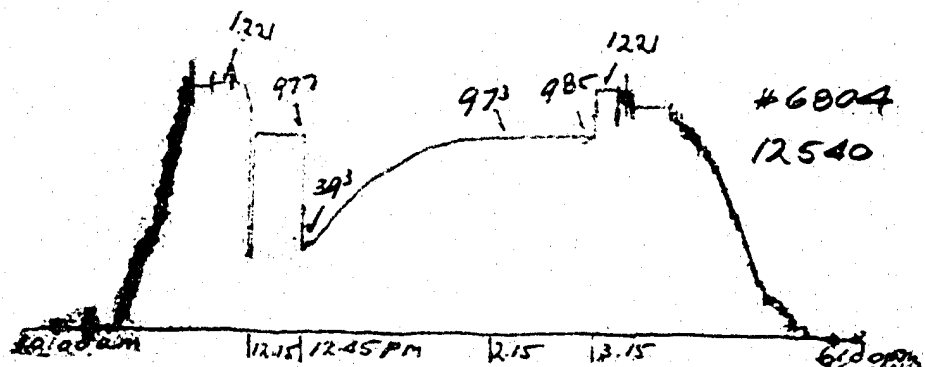
PRESENT DURING TEST

Your Representative S. N. Borowski

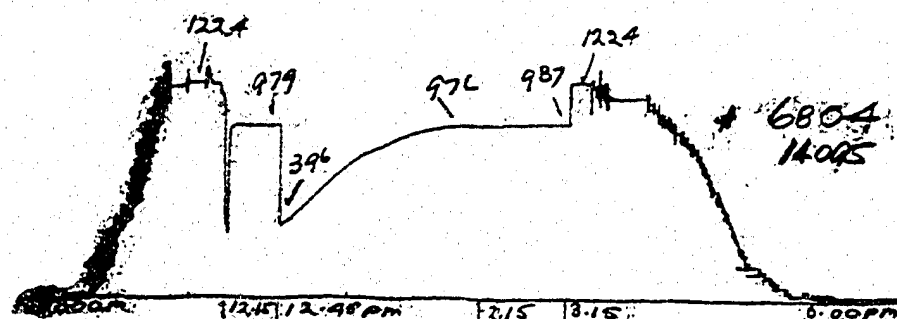
Our Operator Ted Scheffelmaier

Toolpusher A. Lakusta

Drlg. Contractor Big Horn Rig #2



RECORDER No. 12540 ELEMENT RANGE: 0-2600 P.S.I. CLOCK SPEED: 12 HRS. RECORDER DEPTH: 2307'
RECORDER No. 14095 ELEMENT RANGE: 0-3000 P.S.I. CLOCK SPEED: 12 HRS. RECORDER DEPTH: 2315'



TIME

Form No T 20

T.G. EASTLAND *testers ltd.*

DRILL STEM TEST PRESSURE REPORT

Well Name: CALSTAN TATHLINA LAKE K-10

Date: March 6, 1964

Test No. One

Ticket # 6804

Interval: 2306' to 2320'

Formation:

Slave Point

Gauge No. 12540

Depth of Element:

2307' KB

B.H. Temp. -

Cal. Equation $P_c = 1037.92 - 8.83$

Initial	Time	T	Press.
Hydro-			psig
static			1221
	12:15 p.m.	0	354
Initial	12:18	3	968
Shut-in	12:21	6	977
	12:24	9	977
	12:27	12	977
	12:30	15	977
	12:33	18	977
	12:36	21	977
	12:39	24	977
	12:42	27	977
	12:45	30	977
Flowing			293
Pressure			973
Final	2:15 p.m.	0	973
Shut-in	2:18	3	979
	2:21	6	979
	2:24	9	979
	2:27	12	980
	2:30	15	980
	2:33	18	980
	2:36	21	981
	2:39	24	981
	2:42	27	981
	2:45	30	981
	2:48	33	983
	2:51	36	983
	2:54	39	983
	2:57 p.m.	42	985
	3:00	45	984
	3:03	48	984
	3:06	51	984
	3:09	54	984
	3:12	57	985
	3:15	60	985
Final			1221
Hydro-			
static			

TOUR REPORT

CONTRACTOR

Big Horn 2

FIELD

Tatling Lake

PROPERTY

WELL No. K-10

11 P.M.

March 13

19 64

FOR 24 HOURS ENDING

12 M.

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

DRILLING ASSEMBLY		END OF MORNING TOUR				END OF DAYLIGHT TOUR				END OF AFTERNOON TOUR			
STANDS	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
DOUBLE	" D.P.				FT.				FT.				FT.
SINGLE	" O.D.				FT.				FT.				FT.
	" O.D.				FT.				FT.				FT.
DRILL COLLAR	" O.D.	NO.			FT.	NO.			FT.	NO.			FT.
REAMER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
STABILIZER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
JARS		KIND			FT.	KIND			FT.	KIND			FT.
BUMPER SUB.		KIND			FT.	KIND			FT.	KIND			FT.
BIT OR CORE BARREL					FT.				FT.				FT.
TOTAL D.P. & TOOLS					FT.				FT.				FT.
KELLY DOWN (BELOW R.B.)					FT.				FT.				FT.
DEPTH OF TOOLS					FT.				FT.				FT.
TOUR		MORNING TOUR				DAYLIGHT TOUR				AFTERNOON TOUR			
DEPTH END OF TOUR					FEET				FEET				FEET
DEPTH START OF TOUR					FEET				FEET				FEET
FOOTAGE DRILLED					FEET				FEET				FEET

DAY WORK	HOURS				HOURS				HOURS			
	2.00 A.M.	4.00 A.M.	6.00 A.M.	8.00 A.M.	10.00 A.M.	12.00 A.M.	2.00 P.M.	4.00 P.M.	6.00 P.M.	8.00 P.M.	10.00 P.M.	12.00 P.M.
PUMP PRESSURE p.s.i.												
ROTARY SPEED r.p.m.												
WEIGHT ON BIT Tons												
p.H.												
MUD WEIGHT #/gal.												
MUD VISCOSITY Sec.												
MUD CAKE 32nds cc												
WATER LOSS cc												
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR			DAYLIGHT TOUR			AFTERNOON TOUR			DEVIATION RECORD		
	Kind	Depth	Reading	Kind	Depth	Reading	Kind	Depth	Reading	Kind	Depth	Reading
DRILLER												
DERRICKMAN TOOL DRSR.												
HELPER												
HELPER												
HELPER												
FIREMAN												
TOOL WASH.												

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL	
Kind	Amount	1200	1200	WORK DONE	
TOUR 1				Rigging out.	
TOUR 2					
TOUR 3					

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Released rig at 6 A.M. March 13, 1964.

Cut off casing 4' above ground level and welded on steel plate. Welded on a 5' length of 2" pipe with the following inscription

Caled Tatling Lake K-10

Dumped 5 sacks cement on top of casing.

First truck left Enterprise at 4 A.M. March 14th and arrived on lease at 8.30 A.M. March 14

All trucks were off the back road and for the McKenzie Highway by 12.30 A.M. March 15
Last truck arrived at Enterprise at 12.30 A.M. March 15

RELEASED RIG AT 12.30 A.M. March 15, 1964

Stanley Boush
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR *Big Horn Drill*

FIELD *Well 10* PROPERTY *Cal. - ten. Lathin* WELL No. *K-10*
11 P.M.
12 M. *Mar 12* 1964

☒ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

FOR 24 HOURS ENDING

DRILLING ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. FT.	NO. FT.	NO. FT.
" D.P.	NO. FT.	NO. FT.	NO. FT.
DOUBLE " D.P.	NO. FT.	NO. FT.	NO. FT.
SINGLE " O.D.	NO. FT.	NO. FT.	NO. FT.
" O.D.	NO. FT.	NO. FT.	NO. FT.
DRILL COLLAR " O.D.	NO. FT.	NO. FT.	NO. FT.
REAMER " O.D.	NO. FT.	NO. FT.	NO. FT.
STABILIZER " O.D.	NO. FT.	NO. FT.	NO. FT.
JARS	NO. FT.	NO. FT.	NO. FT.
BUMPER SUB.	NO. FT.	NO. FT.	NO. FT.
BIT OR CORE BARREL	NO. FT.	NO. FT.	NO. FT.
TOTAL D.P. & TOOLS	NO. FT.	NO. FT.	NO. FT.
KELLY DOWN (BELOW R.B.)	NO. FT.	NO. FT.	NO. FT.
DEPTH OF TOOLS	NO. FT.	NO. FT.	NO. FT.
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	FEET	FEET	FEET
DEPTH START OF TOUR	FEET	FEET	FEET
FOOTAGE DRILLED	FEET	FEET	FEET

DAY WORK	HOURS	HOURS	HOURS
	2:00 A.M.	4:00 A.M.	6:00 A.M.
	8:00 A.M.	10:00 A.M.	12:00 A.M.
	2:00 P.M.	4:00 P.M.	6:00 P.M.
	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE p.s.i.			
ROTARY SPEED r.p.m.			
WEIGHT ON BIT Tons			
p.H.			
MUD WEIGHT #/gal.			
MUD VISCOSITY Sec.			
MUD CAKE 32nds			
WATER LOSS c.c.			
PIT VOLUME Ft.-Ins.			

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD
DRILLER	<i>R. Black</i>	<i>Ed. Carnahan</i>	<i>L. Thompson</i>	Kind
DERRICKMAN	<i>R. Thompson</i>	<i>N. Murphy</i>	<i>D. ROGSTRE</i>	Depth
TOOL DRSR.	<i>S. Schmitt</i>	<i>J. Mallard</i>	<i>W. GUAN</i>	Reading
HELPER	<i>H. Palkach</i>	<i>R. Borker</i>	<i>W. T. THOMPSON</i>	
HELPER				
HELPER				
FIREMAN	<i>R. H. Jones</i>	<i>H. Saybourne</i>		
TOOL PUSHER				

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount		
TOUR 1	1200	1215	<i>Big Sur - 1st</i>
	1215	1245	<i>Wire open end</i>
	1245	1300	<i>Hook up Howco. to plug</i>
	1300	1330	<i>Turn plug #1</i>
	1330	1400	<i>W/O.C.</i>
	1400	1415	<i>Run in to full plug w/ B bit</i>
	1415	1430	<i>Hook & lay down</i>
TOUR 2	1430	1445	<i>Lay down drill Pipe</i>
	1445	1455	<i>Run Plug #2</i>
	1455	1500	<i>W/O.C.</i>
	1500	1515	<i>Full Plug #2 Lay down drill Pipe</i>
	1515	1530	<i>Lay down Kelly, Wash B.O.P.</i>
	1530	1545	<i>TEAR OUT B.L.</i>
TOUR 3			

Felt CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

plug No 1 at 2245 after 6 hours W.O.C.

with 600b.

Abandonment plug #2 (160-260)

Mixed 40 sacks Portland cement plus 4% G.C.

to a 14.5" slurry in 3 minutes using Howco.

Preceded cement with 5 bbls fresh water. C.I.P.

10:35 A.M. March 12, 1963

Felt top of plug at 170' after 3 hours W.O.C

Abandonment plug #1 (2250-2299) Preceded cement w/ 5 bbls water

Mixed 126 sacks Portland cement plus 5% G.C.

to a 14.2" slurry from 1:08 A.M. to 1:15 A.M. Disposed

plug in 3 minutes with 2 bbls fresh water followed by

15 1/2 bbls mud. C.I.P. 1:30 A.M. March 12, 1964.

Stanley Bowers

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

Big Horn

FIELD *Fathens Lake*

PROPERTY

WELL No. *K-10*

11 P.M.

*March 11*19*69*

FOR 24 HOURS ENDING

12 M.

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

DRILLING ASSEMBLY		END OF MORNING TOUR				END OF DAYLIGHT TOUR				END OF AFTERNOON TOUR			
STANDS	" D.P.	NO.				NO.				NO.			
	" D.P.	NO.				NO.				NO.			
DOUBLE	" D.P.												
SINGLE	" O.D.												
	" O.D.												
DRILL COLLAR	" O.D.	NO. <i>16</i>				NO.				NO.			
REAMER	" O.D.	KIND				KIND				KIND			
STABILIZER	" O.D.	KIND				KIND				KIND			
JARS		KIND				KIND				KIND			
BUMPER SUB.		KIND				KIND				KIND			
BIT OR CORE BARREL													
TOTAL D.P. & TOOLS													
KELLY DOWN (BELOW R.B.)													
DEPTH OF TOOLS													
TOUR													
DEPTH END OF TOUR													
DEPTH START OF TOUR													
FOOTAGE DRILLED													

DAY WORK	HOURS				HOURS				HOURS			
	2.00 A.M.	4.00 A.M.	6.00 A.M.	8.00 A.M.	10.00 A.M.	12.00 A.M.	2.00 P.M.	4.00 P.M.	6.00 P.M.	8.00 P.M.	10.00 P.M.	12.00 P.M.
PUMP PRESSURE p.s.i.	<i>100</i>		<i>600</i>									
ROTARY SPEED r.p.m.												
WEIGHT ON BIT Tons												
p.H.	<i>9.5</i>	<i>9.5</i>	<i>9.5</i>									
MUD WEIGHT #/gal.	<i>9.5</i>	<i>9.5</i>	<i>9.5</i>									
MUD VISCOSITY /Sec.	<i>54</i>	<i>35</i>	<i>54</i>									
MUD CAKE 32nds c.c.	<i>3/32</i>		<i>11/2</i>									
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	TOUR			DEVIATION RECORD		
	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	Kind	Depth	Reading
DRILLER	<i>R. Clark</i>	<i>E. Carnahan</i>	<i>J. Thompson</i>			
DERRICKMAN	<i>R. Hedra</i>	<i>M. Murphy</i>	<i>D. Bostie</i>			
TOOL DRSR.	<i>E. Schmidt</i>	<i>L. Hallard</i>	<i>W. Gunn</i>			
HELPER	<i>R. Pakhach</i>	<i>A. Bork</i>	<i>W. Thompson</i>			
HELPER						
HELPER						
FIREMAN	<i>R. L. Truss</i>	<i>H. Laybourne</i>	<i>R. L. Truss</i>			
TOOL PUSHER						

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount			
TOUR 1		<i>12.00</i>	<i>12.15</i>	<i>Big Sea</i> <i>Wait on log truck + Circ</i> <i>Blow out Kelly</i> <i>Wait to log</i> <i>Big Sea log</i>
		<i>17.15</i>	<i>5.45</i>	
		<i>5.45</i>	<i>6.15</i>	
		<i>6.15</i>	<i>7.15</i>	
		<i>7.15</i>	<i>8.00</i>	
TOUR 2		<i>8.00</i>	<i>4.00</i>	<i>Logging</i>
TOUR 3		<i>4.00</i>	<i>5.15</i>	<i>Logging</i> <i>Wait on log truck + Circ</i> <i>Blow out Kelly</i> <i>Wait to log</i> <i>Big Sea log</i>
		<i>5.15</i>	<i>8.45</i>	
		<i>8.45</i>	<i>9.45</i>	
		<i>9.45</i>	<i>10.45</i>	
		<i>10.45</i>	<i>11.45</i>	

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

*Run Schlumberger logs as follows**IES. 2" and 5" scales from T.D. to surface casing**Spine - Gamma Caliper 1' spacing and Head sensitivity*
2" scale T.D. to 1150
5" scale T.D. to 150
*25" scale 2200 - T.D.**First IES log was a misrun, as depth control was not working properly.**Stanley Brown*

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

Big Horn Drill

FIELD

PROPERTY

WELL No. K-10

11 P.M.

12 M.

Mar 10

1964

FOR 24 HOURS ENDING

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

DRILLING ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. 37 229781 FT.	NO. 37 229781 FT.	NO. 37 229781 FT.
" D.P.	NO. 1	NO. 1	NO. 1
DOUBLE " D.P.			
SINGLE " O.D.			
" O.D.			
DRILL COLLAR " O.D.	NO. 16 46591 FT.	NO. 16 46591 FT.	NO. 16 46591 FT.
REAMER " O.D.	KIND	KIND	KIND
STABILIZER " O.D.	KIND	KIND	KIND
JARS	KIND	KIND	KIND
BUMPER SUB.			
BIT OR CORE BARREL			
TOTAL D.P. & TOOLS			
KELLY DOWN (BELOW R.B.)	3620 FT.		3620 FT.
DEPTH OF TOOLS			
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	2799 FEET	2799 FEET	2799 FEET
DEPTH START OF TOUR			
FOOTAGE DRILLED			

DAY WORK	2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE p.s.i.	500	500	500	600	600	600	600	600	600	600	600	600
ROTARY SPEED r.p.m.												
WEIGHT ON BIT Tons												
D.H.	9.5	9.5	9.5	9.4	9.4	9.5	9.5	9.4	9.4	9.4	9.4	9.4
MUD WEIGHT #/gal.	9.5	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4
MUD VISCOSITY Sec.	118	118	118	118	118	118	118	118	118	118	118	118
MUD CAKE 32nds	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32	1/32
WATER LOSS c.c.												
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION
14	6 1/2	123502	Sec. man						

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD
DRILLER	R. Clark	Ed. Cannahan	L. Thompson	Kind 5.5 Depth 2799 Reading 5 1/4
DERRICKMAN TOOL DRSR.	R. Theroux	N. Murphy	P. Bogstie	
HELPER	S. Schmidt	S. Ballant	W. Gunn	
HELPER	H. Pollock	R. Bork	W. Thompson	
HELPER				
FIREMAN	R. L. Truss	H. Laybourn		
TOOL PUSHER				

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount		
TOUR 1	1200 12 15 100 3 15 3 15 7 30 7 30 8 00	12 15 10 0 3 15 7 10 7 30 8 00	Big log Circ. wait on log truck Trip to cond. hole Circ. Survey Circ.
TOUR 2	8 30 8 30 4 00	8 30 4 00	Rig Serv Check R.O.P. Circ. wait on log trucks
TOUR 3	4 00 7 30 7 30 8 30	7 30 8 30 12 00	CIRCULATE 10 STAND TRIP CIRCULATE WAIT ON LOGGERS

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Stanley Brown

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

Big Horn Drill

FIELD *Wild Cat*PROPERTY *Watkins Lake*WELL No. *K-10*

11 P.M.

12 M.

Mar 9

1964

FOR 24 HOURS ENDING

☒ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

DRILLING ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. 37 2 2 6 6 4 5 FT.	NO. 37 2 2 6 6 4 5 FT.	NO. FT.
" D.P.	NO. FT.	NO. FT.	NO. FT.
DOUBLE " D.P.	FT.	2 3 6 FT.	FT.
SINGLE " O.D.	FT.	1 FT.	FT.
" O.D.	FT.	FT.	FT.
DRILL COLLAR " O.D.	NO. 16 4 6 5 9 1 FT.	NO. FT.	NO. FT.
REAMER " O.D.	KIND FT.	KIND FT.	KIND FT.
STABILIZER " O.D.	KIND FT.	KIND FT.	KIND FT.
JARS	KIND FT.	KIND FT.	KIND FT.
BUMPER SUB.	FT.	FT.	FT.
BIT OR CORE BARREL	FT.	FT.	FT.
TOTAL D.P. & TOOLS	FT.	FT.	FT.
KELLY DOWN (BELOW R.B.)	2000 FT.	3420 FT.	FT.
DEPTH OF TOOLS	FT.	FT.	FT.
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	2752 FEET	2799 FEET	FEET
DEPTH START OF TOUR	2708 FEET	2752 FEET	FEET
FOOTAGE DRILLED	44 FEET	47 FEET	FEET

DAY WORK	HOURS	HOURS	HOURS
PUMP PRESSURE p.s.i.	700 1 7.00 1700	700 1 7.00 1700	700 1 7.00 1700
ROTARY SPEED r.p.m.	100 8 100 100	100 8 100 100	100 8 100 100
WEIGHT ON BIT Tons	16000 1 16000 16000	16000 1 16000 16000	16000 1 16000 16000
D.H.	9.5 P 9.5 9.5	9.5 P 9.5 9.5	9.5 P 9.5 9.5
MUD WEIGHT #/gal.	9.6 P 9.5 9.5	9.4 P 9.4 9.4	9.4 P 9.4 9.4
MUD VISCOSITY Sec.	47 32 52	24 65	24 65
MUD CAKE 32nds	1/32	1/32	1/32
WATER LOSS c.c.	9.8	11.2	11.2
PIT VOLUME Ft.-ins.			

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION
13	6 1/4	26162	HTC OSC-16	4	2661	2712	51		Drill
14	6 1/4	622502	SEC. M.H.N	7	2712	2799	87		

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD
DRILLER	R. CLARK	E. Carmalan		Kind Depth Reading
DERRICKMAN TOOL DRSR.	R. THEROUX	N. Murphy		
HELPER	S. SCHMIDT	L. Hallam		
HELPER	R. BLACK	R. Bailey		
HELPER				
FIREMAN		H. Laybourn		
TOOL PUSHER				

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
TOUR 1	1200 1215 1245 330 400 800	1215 1245 330 400 800	Big Log Drill Blow out Kelly + Trip for Bit Break wire + Return to Bottom Drill
TOUR 2	800 830 830 1010 1010 340 340 4100	830 1010 340 340 4100	Big Serv. Check R.O.P. Drilling Mix mud + Sawdust, Lost Circ. Recover Circ. Drill ahead. Survey
TOUR 3	400 1200	1200	Circulate

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

1/2 tank Big tank -
Lost circulation at 2775
Mixed 10 sacks fiber seal, 5 sacks sawdust, and 5 sacks gel in 6000 ft. down hole. No returns. Pulled out 3 stands.
Mixed 35 sacks fiber seal, 19 sacks sawdust and 31 sacks gel into 175 barrels mud.
Started getting partial circulation after pumping down 25 barrels. Pumped 50 more barrels down and let mud sit for 10 min. Very slight drop in annulus. Ran stands in one at the time, circulated, then watched for fluid drop. No fluid drop.
After drilling began, lost about 20 barrels mud in 2 hours.
Lost approximately 110 barrels mud during daylight tour.

Stanley Brown
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

Big Horn Drilling

FIELD *Wild Cat*PROPERTY *W. H. Tuller*

11 P.M.

WELL No. *K-10*

FOR 24 HOURS ENDING

12 M.

Nov 8 1964☒ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

DRILLING ASSEMBLY			END OF MORNING TOUR					END OF DAYLIGHT TOUR					END OF AFTERNOON TOUR														
STANDS	"	D.P.	NO. 34	2	0	8	0	8	2	FT.	NO. 35	2	1	4	3	0	FT.	NO. 36						FT.			
	"	D.P.	NO.							FT.	NO. 1			3	0	3	4	FT.	NO. 1		2	2	3	5	5	5	FT.
DOUBLE	"	D.P.								FT.								FT.								FT.	
SINGLE	"	O.D.								FT.								FT.								FT.	
	"	O.D.								FT.								FT.								FT.	
DRILL COLLAR	" 4 3/4 O.D.		NO. 16							FT.	NO. 16							FT.	NO. 16							FT.	
REAMER	"	O.D.	KIND							FT.	KIND							FT.	KIND							FT.	
STABILIZER	"	O.D.	KIND							FT.	KIND							FT.	KIND							FT.	
JARS			KIND							FT.	KIND							FT.	KIND							FT.	
BUMPER SUB.			KIND							FT.	KIND							FT.	KIND							FT.	
BIT OR CORE BARREL										FT.								FT.								FT.	
TOTAL D.P. & TOOLS										FT.								FT.								FT.	
KELLY DOWN (BELOW R.B.)										FT.								FT.								FT.	
										FT.								FT.								FT.	
DEPTH OF TOOLS										FT.								FT.								FT.	
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DAY WORK		HOURS				HOURS				HOURS			
		2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE	psi.	700	700	700	700	700	700	700	700	800	800	800	800
ROTARY SPEED	r.p.m.	700	100	100	100	100	100	120	120				
WEIGHT ON BIT	tons	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000				
D.H.		9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
MUD WEIGHT	#/gal.	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.4	9.5	9.5	9.5	9.5
MUD VISCOSITY	Sec.	44	44	44	44	44	44	44	44	52	52	52	52
MUD CAKE	32nds	3/32	3/32	3/32	3/32	3/32	3/32	3/32	3/32	3/32	3/32	3/32	3/32
WATER LOSS	cc.	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
PIT VOLUME	Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION
11	6 1/4	622501	Sec. M.H.D.	9	2466	2560	94		Locked
12	6 1/4	33726	Smith ST26	7	2560	2661	101		Pull
13	6 1/4	26162	HTC USC 16		2661				

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	TOUR			DEVIATION RECORD		
	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	Kind	Depth	Reading
DRILLER	R. Chark	Ed Carnahan	L. Thompson			
DERRICKMAN TOOL DRSR.	R. Theroux	N. Murphy	D. Roestie			
HELPER	G. Schmidt	J. Mallard	M. Gunn			
HELPER	R. Pollock	R. Barlee	W. Thompson			
HELPER			RL. Truss			
FIREMAN						
TOOL PUSHER						

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount	12 00	12 15	
TOUR 1		12 15	6 00	Rig Severe Drilling
		6 00	6 30	Circulate and sample
		6 30	6 45	Blow out Kelly
		6 45	7 45	Wait bit
		7 45	9 00	Run in with bit
TOUR 2		8 00	8 30	Rig Serv. Check B.C.P.
Hel	1800 #	8 30	9 30	Run in w/ Bit
Sawdust	20 SLS	9 30	9 45	Break Circ.
Substance	4 SLS	9 45	4 00	Drilling
Concrete	100 #			
TOUR 3		4 00	4 15	Drill
		4 15	4 30	SER. RIG
		4 30	8 00	TRIP FOR BIT
		8 00	8 15	Break Circ. CLEAN TO BIT
		8 15	12 00	Drill

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Stanley Brown
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR R.E. HURANFIELD W.D.C.T. PROPERTY INDIAN PLANT WELL No. 1K.10
11 P.M. March 7 1964
FOR 24 HOURS ENDING 12 M.☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

DRILLING ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. 31 192521 FT.	NO. 32 195639 FT.	NO. 33 201821 FT.
" D.P.	NO.	NO.	NO.
DOUBLE " D.P.			
SINGLE " O.D.			
" O.D.			
DRILL COLLAR " O.D.	NO. 16 46591 FT.	NO. 16 46591 FT.	NO. 16 46591 FT.
REAMER " O.D.	KIND	KIND	KIND
STABILIZER " O.D.	KIND	KIND	KIND
JARS	KIND	KIND	KIND
BUMPER SUB.			
BIT OR CORE BARREL			
TOTAL D.P. & TOOLS			
KELLY DOWN (BELOW R.B.)	1500 FT.	3620 FT.	2100 FT.
DEPTH OF TOOLS			
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	2408 FEET	2458 FEET	2505 FEET
DEPTH START OF TOUR	2320 FEET	2406 FEET	2458 FEET
FOOTAGE DRILLED	86 FEET	56 FEET	47 FEET

DAY WORK	2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE p.s.i.	600	600	600		779	790	750	750			700	700
ROTARY SPEED r.p.m.					100	100	100	100			100	100
WEIGHT ON BIT Tons											16.5	16.0
D.H.	10	10	10		9.5	9.5	9.5	9.5			9.5	9.5
MUD WEIGHT #/gal.	9.8	9.8	9.8		9.7	9.5	9.5	9.5			9.4	9.4
MUD VISCOSITY Sec.	45	47	45		47	40	40	41			44	45
MUD CAKE 32nds c.c.	8.4				10.2	3/32					10.4	10.4
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FRGM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION
9	6 1/2"	30719	SMITH S.V.R.	6 1/2	2320	2406	86		FAIR.
10	6 1/4"	33455	" K.P.	6 1/2	2406	2458	56		in
10	"	"	"	7	2406	2466	60		Loss
11	"	622501	Sec. m.w.	3 3/4	2466	2505	39		in

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD
DRILLER	L. Thompson	R. Clark	St. Cameron	Kind
DERRICKMAN	P. Boggs	R. Theroux	D. Murphy	Depth
TOOL DRSR.				Reading
HELPER	W. Huran	S. Schmidt	L. Gallardo	
HELPER	W. Thompson	R. Pollock	B. Borla	
HELPER				
FIREMAN	R.L. Tress			
TOOL PUSHER				

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount		
TOUR 1			
GEL	2000	12 1/2	SER. R.C.
CAUSTIC	200	12 1/2	DRILL
TANNIN	200	6 1/2	HOLD FOR R.C.
SUPERFINE	200	8 1/2	
TOUR 2			
GEL	1000	8 00	Rig Serv + Check BOP
SPARSE	100	8 30	Run in w/Bit
CAUSTIC	100	9 45	Break Circ
TANNIN	100	9 30	Drilling
TOUR 3			
GEL	2500	4 00	Rig Serv
SPARSE	100	4 1/2	Drilling
TANNIN	100	4 1/2	Blow Kelly Trip For Bit
CAUSTIC	150	6 1/2	Run in w/Bit
SAWDUST	13545	7 3/4	Survey Break Circ. m.w. mud.
		8 1/2	Drilling
		12 00	

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR *Big Horn 2*

FIELD

PROPERTY

Isabelle Lake WELL No. K-10

11 P.M.

March

19

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

FOR 24 HOURS ENDING

12 M.

DRILLING / ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. 20 183101 FT.	NO. 183101 FT.	NO. 20 183101 FT.
" D.P.	NO.	NO.	NO.
DOUBLE " D.P.			
SINGLE " O.D.			
" O.D.			
DRILL COLLAR "4 3/4" D.	NO. 16 46591 FT.	NO. 46591 FT.	NO. 16 46591 FT.
REAMER " O.D.	KIND	KIND	KIND
STABILIZER " O.D.	KIND	KIND	KIND
JARS	KIND	KIND	KIND
BUMPER SUB.			
BIT OR CORE BARREL			
TOTAL D.P. & TOOLS			
KELLY DOWN (BELOW R.B.)	2200 FT.	2200 FT.	2400 FT.
DEPTH OF TOOLS			
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	2220 FEET	2320 FEET	2320 FEET
DEPTH START OF TOUR	2718 FEET	2320 FEET	2318 FEET
FOOTAGE DRILLED	2 FEET		2 FEET

DAY WORK	2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE p.s.i.	T		600	600	720							
ROTARY SPEED r.p.m.	R											
WEIGHT ON BIT Tons												
p.h.			1 P 9.5	7.5	10							
MUD WEIGHT #/gal.			10.3	10.3	10.3							
MUD VISCOSITY Sec.			48	52	48							
MUD CAKE 32nds												
WATER LOSS c.c.												
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Core Recovery	BIT CONDITION
7	5"	5-63	O	9 1/2	2297	2320	23	
8	6 1/4"	28755	H.T.C. N.T.A. R.R.	2 1/4	2297	2318	21	REAMER
9	6 1/4"	30219	SMITH SUR	1/2	2318	2320	2	in

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD		
				Kind	Depth	Reading
DRILLER	L. THOMPSON	R. CLARK	Ed Carmichael			
DERRICKMAN TOOL. DRSR. ☐	D. BOSTON	R. THEROUX	M. Murphy			
HELPER	W. GUNN	S. SCHMIDT	A. Halland			
HELPER	W. THOMPSON	R. Pollock	R. Barlow			
HELPER						
FIREMAN	RL. TRUSS					
TOOL PUSHER						

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
TOUR 1			SER. P.C.
Hel	1500#	12 00	CUT CORE #2
Quartz	100#	12 15	HOIST CORE
Spermac	100#	12 30	HANDLE CORE
		12 45	RUN IN w/6 1/4 BIT
		12 50	REAMER RET HOLE
		1 00	C.R.C. CONDITION HOLE
		1 05	TO TEST.
TOUR 2			Rig Serv. Check B.O.P.
	8 00	8 15	Life to Test
	8 15	8 45	Blow out Kelly
	8 45	9 00	Hoist to Test
	9 00	9 45	Make up packer
	9 45	10 45	Run in w/packer (slow)
	10 45	11 45	Rig to set packer + set packer
	11 45	12 15	Testing
TOUR 3			Hoist packer
	12 15	3 30	Rig Serv.
	3 30	4 00	Pull Packer, Break down & wash
	4 00	4 45	Lay down Core B.B.
	4 45	6 45	Clean Mud Tanks Load Test Tool
	6 45	7 45	Run in w/B.T.
	7 45	9 30	Break Circ. Stream off Shaker
	9 30	11 00	Ream Ret Hole 2' (Drilling)
	11 00	11 30	
	11 30	12 00	

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

1/3 TANK FUEL. Cut core 2 (2310-2320) Rec'd 6.6'

D.S.T. 1 (2304-2320)

Cut Ran Eastland testing tool to test Slave Point interval 2310-2320 using one conventional 4 3/4" packer, a safety joint immediately above packer, and a pump out sub. 180' above the safety joint. The overall length of the tool was 37.50'; made up of 14.50' perforated tailpipe, and 23.00' for equipment above the tailpipe. An Amerasia pressure bomb (10-2600") was run at 2318, and a 3000" pressure bomb was run at 2281. String consisted of 407' 4 3/4" drill collars and remainder of 3 1/2" drill pipe.

Valve was opened at 12.13 P.M. for a 2 minute pre flow period. Weaken blow. Shut valve at 12.15 P.M. for a 30 minute initial shut in period, and opened valve at 12.45 for a 70 minute flow period. Fair air blow, decreasing to weak in 60 minutes. Shut valve at 2.15 P.M. for a 60 minute final shut in.

Recovered 2150' of fluid made up of:

800' muddy sulfuric salt water (slightly oil flecked)

grading into 1300' muddy salt water

50' heavy mud

4 1248 ; IF 38 FF. 960

HSI 1008

HP 2080

Stanley Brown

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

B.C. HORN

FIELD WILDCAT

PROPERTY

TETHLAKE

WELL No. K.10

11 P.M.

12 M.

MAR. 5 1964

FOR 24 HOURS ENDING

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

DRILLING ASSEMBLY		END OF MORNING TOUR					END OF DAYLIGHT TOUR					END OF AFTERNOON TOUR				
STANDS	" D.P.	No. 29	1	800	14	FT.	No.	1800	14	FT.	No. 29	1	762	11	FT.	
"	" D.P.	No. 1				FT.	No.			FT.	No. 1		3103		FT.	
DOUBLE	" D.P.					FT.				FT.					FT.	
SINGLE	" O.D.					FT.				FT.					FT.	
"	" O.D.					FT.				FT.					FT.	
DRILL COLLAR	" 1 3/4 D.	No. 16		465	91	FT.	No.	436	42	FT.	No. 15		436	42	FT.	
REAMER	" O.D.	KIND				FT.	KIND			FT.	KIND				FT.	
STABILIZER	" O.D.	KIND				FT.	KIND			FT.	KIND				FT.	
JARS		KIND				FT.	KIND			FT.	KIND				FT.	
BUMPER SUB.		KIND				FT.	KIND			FT.	KIND				FT.	
BIT OR CORE BARREL						FT.				FT.			5640		FT.	
TOTAL D.P. & TOOLS						FT.				FT.					FT.	
KELLY DOWN (BELOW R.B.)				3120		FT.			1800	FT.			2600		FT.	
DEPTH OF TOOLS						FT.				FT.					FT.	
TOUR		MORNING TOUR					DAYLIGHT TOUR					AFTERNOON TOUR				
DEPTH END OF TOUR			2297			FEET		2310		FEET		2318			FEET	
DEPTH START OF TOUR			2274			FEET		2297		FEET		2280			FEET	
FOOTAGE DRILLED			163			FEET		13		FEET		7			FEET	

DAY WORK	HOURS				HOURS				HOURS			
	2.00 A.M.	4.00 A.M.	6.00 A.M.	8.00 A.M.	10.00 A.M.	12.00 A.M.	2.00 P.M.	4.00 P.M.	6.00 P.M.	8.00 P.M.	10.00 P.M.	12.00 P.M.
PUMP PRESSURE p.s.i.	800	800					1200	1200	T	1200	1200	1200
ROTARY SPEED r.p.m.	160	160					90	90	r	90	90	90
WEIGHT ON BIT Tons	15.2	15.2					10.00	10.00	1	10.00	10.00	10.00
p.H.	9.5						9.5	9.5	P	9.5	9.5	9.5
MUD WEIGHT #/gal.	10.2	10.2					10.2	10.2		10.4	10.4	10.4
MUD VISCOSITY Sec.	48	49					55	47		46	46	46
MUD CAKE 32nds	7.3						7.3	8.4		7.3	9.2	9.2
WATER LOSS c.c.	10.8											
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION
6	6 1/4	31064	SMITH-DRUG	8	2170	2297	127		DRILL.
7	5	5-63		8 1/2	2297	2318	21		in

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.
1								

SIGNATURES	MORNING TOUR			DAYLIGHT TOUR			AFTERNOON TOUR			DEVIATION RECORD		
	DRILLER	DERRICKMAN	TOOL DRSR.	DRILLER	DERRICKMAN	TOOL DRSR.	DRILLER	DERRICKMAN	TOOL DRSR.	Kind	Depth	Reading
	L. THOMPSON	R. ROBERTS		R. CLARK	R. THEROUX		Ed. Parnahan	M. Murphy				
	W. GUNN	S. SCHMIDT		S. SCHMIDT	I. Mallant		I. Mallant					
	W. THOMPSON	R. POLLOCK		R. POLLOCK	A. BORER		A. BORER					
	R. L. TRUSS											

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE	
Kind	Amount				
TOUR 1		12 10	12 15	SER. R.I.L.	
		12 15	4 10	DRILL	
		4 10	5 10	CIRC. COMPOSITION 1201	
				FOR. CORE #1	
		5 10	6 15	BLOW KELLY + HOISTING	
		6 15	6 45	SLIP 30' DRILLING LINE	
		6 45	8 00	UNLOAD + MAKE UP	
				CORE RPL.	
TOUR 2		8 00	8 30	Rig Ser. - Check BOP	
		8 30	9 45	Run in 1000 BBL line	
		9 45	10 15	Blow out Kelly: Break circ.	
		10 15	10 45	Circ. core BBL	
		10 45	4 00	Cutting core #1	
TOUR 3		4 00	4 15	Cut Core #1	
		4 15	4 30	Rig Ser.	
		4 30	5 45	Pull out Core	
		5 45	6 15	Recover Core Box Same	
		6 15	7 15	Serv Core BBL Run in Same	
		7 15	8 15	Break Circ. Circ Core BBL	
		8 15	10 00	Cut Core #2	
		10 00	11 00	Work on Pump.	

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Cut core #1 (2297-2310)
Rec'd 13.7'
11 00 12 00 Cut Core #2

Stanley Borush
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR *B.C. Horn Drill*FIELD *Wild Cat* PROPERTY *1st Kings Lake* WELL No. *K-10*
11 P.M.
12 M. *Mar 7* 1964☒ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

FOR 24 HOURS ENDING

DRILLING ASSEMBLY			END OF MORNING TOUR				END OF DAYLIGHT TOUR				END OF AFTERNOON TOUR													
STANDS	"	D.P.	NO.			FT.	NO. 27	1	2	4	4	6	2	FT.	NO. 28		1	2	0	2	16	FT.		
	"	D.P.	NO.			FT.	NO. 1			3	1	1	1	FT.	NO. 1			3	1	4	3	FT.		
DOUBLE	"	D.P.				FT.								FT.								FT.		
SINGLE	"	O.D.				FT.								FT.								FT.		
	"	O.D.				FT.								FT.								FT.		
DRILL COLLAR	"	O.D.	NO.			FT.	NO. 16			4	6	5	9	1	FT.	NO. 16			4	6	5	9	1	FT.
REAMER	"	O.D.	KIND			FT.	KIND							FT.	KIND								FT.	
STABILIZER	"	O.D.	KIND			FT.	KIND							FT.	KIND								FT.	
JARS			KIND			FT.	KIND							FT.	KIND								FT.	
BUMPER SUB.			KIND			FT.	KIND							FT.	KIND								FT.	
BIT OR CORE BARREL						FT.								FT.									FT.	
TOTAL D.P. & TOOLS						FT.								FT.				8					FT.	
KELLY DOWN (BELOW R.B.)						FT.				2	2	3	6	FT.				3	0	0	0		FT.	
DEPTH OF TOOLS						FT.								FT.									FT.	
TOUR			MORNING TOUR				DAYLIGHT TOUR				AFTERNOON TOUR													
DEPTH END OF TOUR				20	36	FEET			21	6	4	FEET					1	2	3	4	FEET			
DEPTH START OF TOUR				1	8	FEET			2	0	3	FEET					2	1	6	4	FEET			
FOOTAGE DRILLED					192	FEET				1	2	9	FEET					2	0			FEET		

DAY WORK	HOURS				HOURS				HOURS			
	2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE P.S.I.	800	800	800	800	800	800	800	800	7	800	800	800
ROTARY SPEED R.P.M.	100	100	100	100	100	100	100	100	5	100	100	100
WEIGHT ON BIT Tons	15000	15000	15000		16m	16m	16m	16m	1	16m	16m	16m
D.H.	9.0		9.0		9.5	9.5	9.5	9.5	1	9.5	9.5	9.5
MUD WEIGHT #/gal.	9.4	9.4	9.4	9.4	9.4	9.5	9.6	9.6		10.2	10.2	10.2
MUD VISCOSITY Sec.	35	38	38	39	39	40	42	43		38	48	48
MUD CAKE 32nds					1/32	10.2				1/32	10.2	10.2
WATER LOSS cc.												
PIT VOLUME Ft.-Ins.	922											

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION
5	6 1/4	33730	Smith DT 16	13 3/4	1815	2170	355		Lock
6	6 1/4	30004	"		2170	2234	4 1/2		in

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR			DAYLIGHT TOUR			AFTERNOON TOUR			DEVIATION RECORD		
										Kind	Depth	Reading
DRILLER	L. Thompson			R. Clark			Ed. Carraban			SS	2170	10
DERRICKMAN TOOL DRSR.	D. Bugstie			R. Theroux			M. Murphy				1840	7 1/8
HELPER	W. Quinn			S. Schmidt			J. Hallant					
HELPER	W. Thompson			R. Pollock			R. Borke					
HELPER												
FIREMAN	R. Truss			R. Truss								
TOOL PUSHER												

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL	
Kind	Amount			WORK DONE	
TOUR 1		1100	1215	Pig Service	
		1215	100	Drilling	
		100	115	Run Service	
1300 gal		115	615	Drilling	
200 Caustic		615	630	Work on pump	
200 Spence		630	700	Drilling	
		700	730	Mix mud	
		730	800	Drilling	
TOUR 2		800	815	Pig Serv + Check R.O.P.	
		815	1200	Drill	
		1200	1245	Core sample	
		1245	245	Drill	
		245	315	Core sample	
		315		Drill	
TOUR 3		414	414	Drilling	
Hil	900	414	444	Core Sample Pig Serv.	
Parson	50	444	734	Service Blow Kelly Trip Fore Bit	
Lamrath	50	734	744	Break Core Clean To Bottom	
		744	1204	Drilling	

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

BIL HORN

FIELD WILDCAT

PROPERTY

TERRA LAKES

WELL No.

K-10

11 P.M.

FOR 24 HOURS ENDING

12 M.

MAR. 3

1964

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☒ ROTARY

DRILLING ASSEMBLY			END OF MORNING TOUR					END OF DAYLIGHT TOUR					END OF AFTERNOON TOUR											
STANDS	"	D.P.	NO. 76				FT.	NO. 20	1	2	2	2	1	FT.	NO. 22		1	3	4	1	5	FT.		
	"	D.P.	NO. 1	1	0	0	3	1	FT.	NO. 1		2	9	5	3	FT.	NO.					FT.		
DOUBLE	"	D.P.					FT.							FT.							FT.			
SINGLE	"	O.D.					FT.							FT.							FT.			
	"	O.D.					FT.							FT.							FT.			
DRILL COLLAR	" 4 3/4 D.		NO. 16	4	6	5	9	8	FT.	NO.		4	6	5	9	8	FT.	NO. 16	4	6	5	9	1	FT.
REAMER	"	O.D.	KIND				FT.		KIND					FT.		KIND						FT.		
STABILIZER	"	O.D.	KIND				FT.		KIND					FT.		KIND						FT.		
JARS			KIND				FT.		KIND					FT.		KIND						FT.		
BUMPER SUB.			KIND				FT.		KIND					FT.		KIND						FT.		
BIT OR CORE BARREL							FT.							FT.								FT.		
TOTAL D.P. & TOOLS							FT.							FT.								FT.		
KELLY DOWN (BELOW R.B.)				3	0	0	0	FT.			1	9	1	0	FT.			3	6	2	0		FT.	
DEPTH OF TOOLS							FT.							FT.								FT.		
TOUR	MORNING TOUR							DAYLIGHT TOUR							AFTERNOON TOUR									
DEPTH END OF TOUR			1	5	0	4	FEET			1	7	3	9	FEET			1	8	4	3		FEET		
DEPTH START OF TOUR			1	3	0	5	FEET			2	5	0	4	FEET			1	7	2	8		FEET		
FOOTAGE DRILLED			1	9	9		FEET			2	3	0		FEET			1	0	9			FEET		

		HOURS				HOURS				HOURS			
		2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE	p.s.i.	150	T	750		900	700	700	700	700	T	700	250
ROTARY SPEED	r.p.m.	120	R	120		120	120	120	120	120	T	120	120
WEIGHT ON BIT	Tons	15	1	15		15	15	15	15	15	1	15	15
p.H.						9.5	9.5	9.5	9.5	9.5	P	9.5	9.5
MUD WEIGHT	#/gal.	9.7		9.6		9.7	10.2	10.1	10.1	10.2		9.8	9.8
MUD VISCOSITY	Sec.	38		39		38	32	34	38	33		30	30
MUD CAKE	32nds						2/32	12/32				11/32	11/32
WATER LOSS	c.c.												
PIT VOLUME	Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Silt Footage	Core Recovery	BIT CONDITION
3	6 1/4	33045	SMITH DT	10 3/4	2000	1388	388		FAIR.
4	6 1/4	37065	" DT	13 1/2	1388	1815	427		Good
5	6 1/4	33730	" DT 2 G	1 1/4	1815	1847	28		in

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR			DAYLIGHT TOUR			AFTERNOON TOUR			DEVIATION RECORD		
	DRILLER	DECKMAN	TOOL DRSR.	DRILLER	DECKMAN	TOOL DRSR.	DRILLER	DECKMAN	TOOL DRSR.	Kind	Depth	Reading
	L. THOMPSON			P. L. LARK			Ed. Cannahan			S.S.	1538	3 1/4
	D. BOESTIE			R. HEROUX			M. M. M. M.					
	W. GUNN			S. SCHMIDT			L. H. H. H.					
	W. THOMPSON			R. P. P. P.			R. R. R. R.					
	B. L. TRUSS											

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount			
TOUR 1		12 1/2	12 1/2	SEE RIG
GEL	1000	12 1/2	2 1/2	DRILL
CAUSTIC	100	3 1/2	4 1/2	TRIP FOR BIT
CAUSTIC	100	4 1/2	4 1/2	BREAK CIRC. CLEAN 25' TO BOTTOM
CAUSTIC	100	4 1/2	5 1/2	CLEAN MUD TANK
				DRILL 6 1/2 HOLE
TOUR 2		8 00	8 30	Big Ser. Check BOP
Gel	600 lb	8 30	9 30	Small
Caustic	100 lb	9 30	10 00	Small
Caustic	100 lb	10 00	10 00	Small
TOUR 3		4 00	4 1/4	Rig Serv
Gel	700 lb	4 1/4	7 1/4	Drilling
		7 1/4	8 00	Blow Kelly Ball out (measure)
		8 00	9 00	Make up Bit Run in Collars
		9 00	10 15	Dump mud Tanks
		10 15	10 15	Run in Steam Kelly Break Pipe
		10 15	12 00	Drilling

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

TANK FUEL

1700 Gal. at 400 P.M. IN TANK

Board tally 1312.91

Double measure 1313.94

Difference 1.03

No correction

Stanley Fowles
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

RIG HORN 2020

FIELD

PROPERTY

11 P.M.

12 M.

MAR. 2

1964

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

FOR 24 HOURS ENDING

DRILLING ASSEMBLY			END OF MORNING TOUR					END OF DAYLIGHT TOUR					END OF AFTERNOON TOUR													
STANDS	"	D.P.	NO. 3				FT.	NO.		5	4	9	6	3	FT.	NO. 13		7	9	2	7	8	FT.			
"	"	D.P.	NO. 1		3	3	6	0	5	FT.	NO.				FT.	NO. 1		3	1	4	0	FT.				
DOUBLE	"	D.P.					FT.								FT.							FT.				
SINGLE	"	O.D.					FT.								FT.							FT.				
"	"	O.D.					FT.								FT.							FT.				
DRILL COLLAR	"	O.D.	NO. 16		4	6	5	1	9	FT.	NO.		4	6	5	1	9	FT.	NO. 16		4	6	5	1	9	FT.
REAMER	"	O.D.	KIND				FT.	KIND							FT.	KIND								FT.		
STABILIZER	"	O.D.	KIND				FT.	KIND							FT.	KIND								FT.		
JARS			KIND				FT.	KIND							FT.	KIND								FT.		
BUMPER SUB.			KIND				FT.	KIND							FT.	KIND								FT.		
BIT OR CORE BARREL							FT.								FT.									FT.		
TOTAL D.P. & TOOLS							FT.								FT.									FT.		
KELLY DOWN (BELOW R.B.)					3	6	2	0	FT.			2	3	0	0	FT.			1	5	0	0	FT.			
DEPTH OF TOOLS							FT.								FT.									FT.		
TOUR			MORNING TOUR					DAYLIGHT TOUR					AFTERNOON TOUR													
DEPTH END OF TOUR					8	3	8	FEET			1	0	3	8	FEET			1	3	0	5	FEET				
DEPTH START OF TOUR					6	0	6	FEET				8	3	8	FEET			1	0	3	8	FEET				
FOOTAGE DRILLED					2	3	2	FEET				2	0	0	FEET				2	6	7	FEET				

DAY WORK	HOURS				HOURS				HOURS			
	2.00 A.M.	4.00 A.M.	6.00 A.M.	8.00 A.M.	10.00 A.M.	12.00 A.M.	2.00 P.M.	4.00 P.M.	6.00 P.M.	8.00 P.M.	10.00 P.M.	12.00 P.M.
PUMP PRESSURE p.s.i.	73				700	700	700		700	700	700	
ROTARY SPEED r.p.m.	680				100	100	100		100	110	120	
WEIGHT ON BIT Tons	15				15	15	15		16	16	16	
p.H.											10.0	
MUD WEIGHT #/gal.					9.7	9.6	10.1		9.7	9.7	9.7	
MUD VISCOSITY Sec.	39				32	33	38		35	38	38	
MUD CAKE 32nds												
WATER LOSS c.c.											11.0	
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION
2	6 1/4	31959	Smith DTCJ	11 1/2	606	1000	394		Loose
3	6 1/4	33045	11 DT		1000				

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR			DAYLIGHT TOUR			AFTERNOON TOUR			DEVIATION RECORD		
	Kind	Depth	Reading	Kind	Depth	Reading	Kind	Depth	Reading	Kind	Depth	Reading
DRILLER	LARRY THOMPSON	R. CLARK	Ed. Carmichael	SS.	898	1/2						
DERRICKMAN TOOL DRSR.	D. KASTLE	R. THERIAUX	T. M. Murphy	SS.	1205	3/4						
HELPER	W. GUNN	S. SCHMIDT	J. Hallant									
HELPER	W. THOMPSON	R. PATRICK	P. Boker									
HELPER												
FIREMAN	R. TOUSS											
TOOL PUSHER												

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount			
TOUR 1				
GEL	700	12 15	12 23	SER. RIG
CAUSTIC	200	12 23	1 00	RUN IN w/ 6 1/4 BIT
TERRAMITHIN	200	1 00	5 10	DRILL
TOUR 2				
Gel	700	8 50	8 30	Rig 1 on + Check BOP
		8 30	10 00	Drilling
		10 00	10 30	Survey
		10 30	1 30	Drilling
		1 30	2 15	Prep for Bit
		2 15	2 30	Break fire
		2 30	4 00	Drilling
TOUR 3				
Gel	1000	4 00	4 15	Rig Serv
Survey	200	4 15	7 45	Drilling
CAUSTIC	200	7 45	8 00	Work on pump
TERRAMITHIN	200	8 00	10 00	Drilling
		10 00	10 15	Survey
		10 15	12 00	Drilling

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Stanley Boush
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

BIG HORN PRG

FIELD NEEDLE PROPERTY Juddman Lake WELL No. K-10

11 P.M.

12 M.

MAR. 1

1964

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

FOR 24 HOURS ENDING

DRILLING ASSEMBLY	END OF MORNING TOUR	END OF DAYLIGHT TOUR	END OF AFTERNOON TOUR
STANDS " D.P.	NO. FT.	NO. FT.	NO. FT.
" D.P.	NO. FT.	NO. FT.	NO. FT.
DOUBLE " D.P.	NO. FT.	NO. FT.	NO. FT.
SINGLE " O.D.	NO. FT.	NO. FT.	NO. FT.
" O.D.	NO. FT.	NO. FT.	NO. FT.
DRILL COLLAR " O.D.	NO. FT.	NO. FT.	NO. FT.
REAMER " O.D.	NO. FT.	NO. FT.	NO. FT.
STABILIZER " O.D.	NO. FT.	NO. FT.	NO. FT.
JARS	NO. FT.	NO. FT.	NO. FT.
BUMPER SUB.	NO. FT.	NO. FT.	NO. FT.
BIT OR CORE BARREL	NO. FT.	NO. FT.	NO. FT.
TOTAL D.P. & TOOLS	NO. FT.	NO. FT.	NO. FT.
KELLY DOWN (BELOW R.B.)	NO. FT.	NO. FT.	NO. FT.
DEPTH OF TOOLS	NO. FT.	NO. FT.	NO. FT.
TOUR	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR
DEPTH END OF TOUR	FEET	FEET	FEET
DEPTH START OF TOUR	FEET	FEET	FEET
FOOTAGE DRILLED	FEET	FEET	FEET

DAY WORK	2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE p.s.i.					450	450	500	600	600	600		
ROTARY SPEED r.p.m.					120	120	120	120	120	120		
WEIGHT ON BIT Tons					1100	1100	1100	1500	1500	1500		
p.H.												
MUD WEIGHT #/gal.										36		
MUD VISCOSITY Sec.												
MUD CAKE 32nds												
WATER LOSS c.c.												
PIT VOLUME Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	PIT CONDITION
1	6 1/4	33764	SMITH DT 26 J	3 1/2	213	336	123		in
"	"	"	"	9 1/2	213	506	393		

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD
DRILLER	LARRY THOMPSON	R. L. TRUSS	Ed. Parronah	Kind Depth Reading
DERRICKMAN	R. BOGSTIE	R. THORNTON	M. MURPHY	
TOOL DRSR.	W. GUNN	S. SCHMIDT	J. HALL	
HELPER	W. THOMPSON	R. PALLARD	R. BAKER	
HELPER				
HELPER				
FIREMAN	RL TRUSS			
TOOL PUSHER				

MUD and CHEMICALS ADDED	From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind Amount			
TOUR 1			SER. RIL 1st DOWN COLLAR PUL IN W/ 1 1/2 BIT T-HAW OUT KELLY PRESSURING UP 2 1/2 PMS REPAIR UNION ON KELLY HOSE
TOUR 2			Rig Ser Repair union on Kelly hose Pressure up pipe joints Pressure up Hydril Drill out cement shoe Drill 6 1/4 hole Work on Kelly hose Drill
TOUR 3			Rig Ser Drilling Survey work on Kelly Drilling Blow Kelly Trip For Bit

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Pressure tested blind rams, pipe rams
and Hydril @ 750 psi. Held okay

Stanley Borowski
SIGNATURE COMPANY ENGINEER

FIELD Talbot PROPERTY Crown WELL No. R-10
11 P.M.
FOR 24 HOURS ENDING 12 M. Feb. 2^d 1964

☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

CONTRACTOR

Big Horn
WELL No. K-1

WELL No. ...A-70

FOR 24 HOURS ENDING

11 P.M.

12 M

Feb. 21

71

DRILLING ASSEMBLY			END OF MORNING TOUR					END OF DAYLIGHT TOUR					END OF AFTERNOON TOUR							
STANDS	"	D.P.	NO.					FT.	NO.					FT.	NO.					FT.
	"	D.P.	NO.					FT.	NO.					FT.	NO.					FT.
DOUBLE	"	D.P.						FT.						FT.						FT.
SINGLE	"	O.D.						FT.						FT.						FT.
	"	O.D.						FT.						FT.						FT.
DRILL COLLAR	"	O.D.	NO.					FT.	NO.					FT.	NO.					FT.
REAMER	"	O.D.	KIND					FT.	KIND					FT.	KIND					FT.
STABILIZER	"	O.D.	KIND					FT.	KIND					FT.	KIND					FT.
JARS			KIND					FT.	KIND					FT.	KIND					FT.
BUMPER SUB.			KIND					FT.	KIND					FT.	KIND					FT.
BIT OR CORE BARREL								FT.						FT.						FT.
TOTAL D.P. & TOOLS								FT.						FT.						FT.
KELLY DOWN (BELOW R.B.)								FT.						FT.						FT.
DEPTH OF TOOLS								FT.						FT.						FT.
TOUR			MORNING TOUR						DAYLIGHT TOUR						AFTERNOON TOUR					
DEPTH END. OF TOUR							FEET						FEET					213		FEET
DEPTH START OF TOUR							FEET						FEET							FEET
FOOTAGE DRILLED							FEET						FEET							FEET

[illegible][illegible][illegible]

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD		
				Kind	Depth	Reading
DRILLER	E. Cannata	L. Thompson	R. Clark			
DERRICKMAN TOOL DRSR. ☐	N. Murphy	D. Bogstie	R. Theroux			
HELPER	J. Hall	W. GUNN	S. Schmitt			
HELPER	M. Borda	W. Thompson	R. Pablock			
HELPER						
FIREMAN	R. L. Truss		R. L. Truss			
TOOL PUSHER						

[illegible]

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Stanley Borowski
SIGNATURE COMPANY ENGINEER

Stanley Borowski
SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR *Big Horn Drilling*FIELD *Wild Cat* PROPERTY *Indian Lake* WELL No. *K-10*
11 P.M. *Feb 28* 19*64*
12 M. *Feb 28* 19*64*☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

FOR 24 HOURS ENDING

DRILLING ASSEMBLY		END OF MORNING TOUR				END OF DAYLIGHT TOUR				END OF AFTERNOON TOUR			
STANDS	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
"	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
DOUBLE	" D.P.				FT.				FT.				FT.
SINGLE	" O.D.				FT.				FT.				FT.
"	" O.D.				FT.				FT.				FT.
DRILL COLLAR	" O.D.	NO. 3			90	NO. 3			148	NO. 6			177
REAMER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
STABILIZER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
JARS		KIND			FT.	KIND			FT.	KIND			FT.
BUMPER SUB.		KIND			FT.	KIND			FT.	KIND			FT.
BIT OR CORE BARREL					390				465				465
TOTAL D.P. & TOOLS					FT.				FT.				FT.
KELLY DOWN (BELOW R.B.)					2600				1000				3106
DEPTH OF TOOLS					FT.				FT.				FT.
TOUR													
DEPTH END OF TOUR					120				163				213
DEPTH START OF TOUR					81				120				163
FOOTAGE DRILLED					39				43				50

DAY WORK		HOURS				HOURS				HOURS			
		2:00 A.M.	4:00 A.M.	6:00 A.M.	8:00 A.M.	10:00 A.M.	12:00 A.M.	2:00 P.M.	4:00 P.M.	6:00 P.M.	8:00 P.M.	10:00 P.M.	12:00 P.M.
PUMP PRESSURE	p.s.i.	200	200	200	200					250			
ROTARY SPEED	r.p.m.	100	100	100	100					100			
WEIGHT ON BIT	Tons	All	All	All	=					7500			
p.H.													
MUD WEIGHT	#/gal.												
MUD VISCOSITY	Sec.	90	90	80	80		5'			80			
MUD CAKE	32nds												
WATER LOSS	c.c.												
PIT VOLUME	Ft.-ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recov'y	BIT CONDITION
2A	9 7/8	519440	S-6	15 1/2	0	120	120		in
3A	"	70159	OSC. H.T.C.	1 1/4	30	130	100		in
3A	"	70158	OSC	8 1/4	130	213	83		Good

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR	DAYLIGHT TOUR	AFTERNOON TOUR	DEVIATION RECORD		
DRILLER	<i>Ed. Carnahan</i>	<i>LARRY THOMPSON</i>	<i>R. CLARK</i>	Kind	Depth	Reading
DERRICKMAN TOOL DRSR.	<i>M. Minorsky</i>	<i>D. BOGGS</i>	<i>W. THOMPSON</i>	"	210	1/20
HELPER	<i>L. Hallant</i>	<i>W. GUNN</i>	<i>S. Schmitt</i>			
HELPER	<i>B. Burke</i>	<i>W. THOMPSON</i>	<i>R. Kottreck</i>			
HELPER						
FIREMAN	<i>R. L. Truss</i>					
TOOL PUSHER						

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount			
TOUR 1		12:04	12:14	Big Serv.
		12:14	4:09	Drilling
		4:09	4:34	Pull out To Look at Bit
		4:34	7:34	Drilling
		7:34	8:07	Work on Kelly Line
TOUR 2		8:07	5:15	Put on Kelly Line
		8:15	8:30	See R.B.
		8:30	9:00	Work on Air Lines
		9:00	10:46	Drill 976 studs
		10:46	11:15	CHANGE BITS
		11:15	3:15	Drill
		3:15	3:30	Run Surveys
		3:30	4:00	Drill
TOUR 3		4:00	4:15	Big Serv
LIME	50lb	4:15	8:00	Drilling
		8:00	8:15	Case
		8:15	8:30	Survey
		8:30	9:00	Not to run casing
		9:00	9:45	Big T. run casing - then casing
		9:45	10:15	Breaker + Case
		10:15	10:45	Cement casing

CEMENTING, TESTING, FINISHING, SPECIAL JOBS INCLUDING ENGINEERING SUMMARIES

Casing details
 Ran 6 joints (195.09') 20" 7' Mannesman casing J-55 casing and landed at 210. String was equipped with a Baker Guide Shoe, a Baker Float collar and 2 centralizers on the shoe joint. Thread lock was applied to float equip. to form a solid unit. Circulated and worked pipe for 15 minutes prior to cementing. Preceded cement with cement 10 barrels fresh water.

Cementing detail
 Cemented above string with 110 sz Portland cement + 2% CaCl₂ using HOWCO cement. Started mixing cement at 10:18 P.M. Mixed cement to a 15.5" slurry. Finished mixing at 10:27. Started displacing plug at 10:32. Bumped plug with 600 psi at 10:35 P.M. Checked floats. Held O.K. Shut in head. C.I.P. 10:35 P.M. Feb 28/64

String details
 7" Guide shoe (Baker) 1.00
 1 ft 7" Mannesman casing 31.80
 7" Baker Float collar 1.50
 5 jts. 7" 20" Mannesman csq. 163.29
 197.59
 K.B. to csq. flange 11.49
 Diff. collar 7" x 8" series 0.70
 600 Cameron csq. tool 209.78
 Landed

Circulated approx. 5 sz. cement.

Stanley Bruck
 SIGNATURE COMPANY ENGINEER

TOUR REPORT

CONTRACTOR

Big Horn Drilling

FIELD Wild Cat PROPERTY Tahlina Lake WELL No. K-10☐ DRILLING ☐ DEEPENING ☐ CABLE TOOLS
☐ REDRILLING ☐ ABANDONING ☐ ROTARY

FOR 24 HOURS ENDING

11 P.M.

12 M. Feb. 27

1964

DRILLING ASSEMBLY		END OF MORNING TOUR				END OF DAYLIGHT TOUR				END OF AFTERNOON TOUR			
STANDS	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
"	" D.P.	NO.			FT.	NO.			FT.	NO.			FT.
DOUBLE	" D.P.				FT.				FT.				FT.
SINGLE	" O.D.				FT.				FT.				FT.
"	" O.D.				FT.				FT.				FT.
DRILL COLLAR	" O.D.	NO.			FT.	NO. <u>6 1/4</u>			FT.	NO. <u>1-6 1/4</u>			FT.
REAMER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
STABILIZER	" O.D.	KIND			FT.	KIND			FT.	KIND			FT.
JARS		KIND			FT.	KIND			FT.	KIND			FT.
BUMPER SUB.		KIND			FT.	KIND			FT.	KIND			FT.
BIT OR CORE BARREL					FT.				FT.				FT.
TOTAL D.P. & TOOLS					FT.				FT.				FT.
KELLY DOWN (BELOW R.B.)					FT.				FT.				FT.
DEPTH OF TOOLS					FT.				FT.				FT.
TOUR					FT.				FT.				FT.
DEPTH END OF TOUR					FEET				FEET				FEET
DEPTH START OF TOUR					FEET				FEET				FEET
FOOTAGE DRILLED					FEET				FEET				FEET

DAY WORK		HOURS				HOURS				HOURS			
		2.00 A.M.	4.00 A.M.	6.00 A.M.	8.00 A.M.	10.00 A.M.	12.00 A.M.	2.00 P.M.	4.00 P.M.	6.00 P.M.	8.00 P.M.	10.00 P.M.	12.00 P.M.
PUMP PRESSURE	p.s.i.							<u>250</u>		<u>100</u>	<u>150</u>	<u>200</u>	<u>150</u>
ROTARY SPEED	r.p.m.			<u>120</u>				<u>130</u>		<u>100</u>	<u>100</u>	<u>100</u>	<u>100</u>
WEIGHT ON BIT	Tons			<u>ALL</u>				<u>ALL</u>		<u>2500</u>	<u>2500</u>	<u>2500</u>	<u>2500</u>
p.H.													
MUD WEIGHT	#/gal.												
MUD VISCOSITY	Sec.			<u>58</u>				<u>60</u>		<u>60</u>	<u>62</u>	<u>60</u>	<u>100</u>
MUD CAKE	32nds												
WATER LOSS	c.c.												
PIT VOLUME	Ft.-Ins.												

NO.	SIZE	SERIAL	BIT OR CORE BARREL KIND AND TYPE	TOTAL HOURS	FROM	TO	Total Bit Footage	Core Recovery	BIT CONDITION
<u>1A</u>	<u>9 3/4</u>	<u>230102</u>	<u>S.C.-53</u>	<u>1 1/2</u>	<u>0</u>	<u>30</u>	<u>30</u>		<u>in</u>
<u>2A</u>	<u>"</u>	<u>519444</u>	<u>56</u>	<u>8 3/4</u>	<u>30</u>	<u>81</u>	<u>51</u>		<u>in</u>

CUTTER NO.	TYPE	IN AT - FT.	OUT AT - FT.	CENTRE BIT No.	CATCHER No.	TYPE	IN AT - FT.	OUT AT - FT.

SIGNATURES	MORNING TOUR		DAYLIGHT TOUR		AFTERNOON TOUR		DEVIATION RECORD		
							Kind	Depth	Reading
DRILLER	<u>Ed Randall</u>		<u>2 Thompson</u>		<u>R. Clark</u>		<u>S.S.</u>	<u>71</u>	<u>3/4</u>
DERRICKMAN TOOL DRSR.	<u>A. Murphy</u>		<u>P. Boestie</u>		<u>R. Theroux</u>				
HELPER	<u>L. Ballant</u>		<u>W. Guxin</u>		<u>S. Schmidt</u>				
HELPER	<u>R. Bosler</u>		<u>W. Thompson</u>		<u>R. Pollock</u>				
HELPER			<u>F. Timmerman</u>						
FIREMAN									
TOOL PUSHER									

MUD and CHEMICALS ADDED		From	To	OTHER HOURLY OPERATING DETAIL WORK DONE
Kind	Amount			
TOUR 1				
<u>Bel</u>	<u>2400</u>	<u>12 00</u>	<u>2 00</u>	<u>Hook up mud lines Pick up Kelly</u>
<u>Concrete</u>	<u>250</u>	<u>2 00</u>	<u>6 00</u>	<u>Circ. mix mud & drill bit hole.</u>
		<u>6 00</u>	<u>6 00</u>	<u>Rig To land & land.</u>
		<u>6 00</u>	<u>8 00</u>	<u>Drill 9 3/4" Hole</u>
TOUR 2				
<u>CELL</u>	<u>12 00</u>	<u>8 00</u>	<u>9 00</u>	<u>Drill 9 3/4" Hole</u>
<u>CAUSTIC</u>	<u>100</u>	<u>9 00</u>	<u>9 00</u>	<u>SER. RIG</u>
<u>LINE</u>	<u>50</u>	<u>9 00</u>	<u>12 00</u>	<u>CHANGE SURVIVAL PACKING</u>
		<u>12 00</u>	<u>2 00</u>	<u>WELD ON SURVIVAL</u>
		<u>2 00</u>	<u>2 30</u>	<u>DASH</u>
		<u>2 30</u>	<u>4 00</u>	<u>CHANGE BITS</u>
				<u>DRILL</u>
TOUR 3				
<u>CELL</u>	<u>1500</u>	<u>4 00</u>	<u>4 15</u>	<u>Rig Ser</u>
<u>line</u>	<u>50</u>	<u>4 15</u>	<u>9 45</u>	<u>Drilling</u>
		<u>10 30</u>	<u>10 30</u>	<u>Making Mud (hole casing)</u>
		<u>10 30</u>	<u>10 45</u>	<u>Survey</u>
		<u>10 45</u>	<u>12 00</u>	<u>Drilling</u>

CEMENTING, TESTING, FISHING, SPECIAL JOB DETAILS, INCLUDING ENGINEERING SUMMARIES

Well name: Calstan Tahlina Lake K-10
Coordinates: 60° 39' 45.2" N
117° 16' 29.6" W
Ground elev: 922 K.B. to ground 12.0
K.B. elev: 934

Licence No:

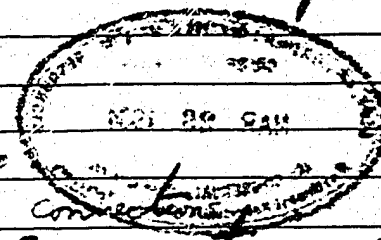
Spudded in 6.30 A.M. February 27, 1964Contractor Big Horn Rig #2

Rig equipped with Cardwell Model L drawworks, driven by
1 G.M. diesel (150 H.P.); 95' Cardwell derrick; C.D. Fly K
7 1/4" x 14" pump driven by 2 G.M. diesels (300 H.P.)

Blow out equipment consists of 10" series 900 double gate
Shaffer and 10" 900 series Hydral. All valves in Valve
line are working pressure of 3000. Shaffer can
only be closed manually, while Hydral can be closed with
accumulator, air bottles, or Baker pump, all located in Hydral
house for well bore.

Extra equipment:

1000' 13" 3 1/2" I.D. drill pipe
2700' 10" 3 1/2" light weight I.F. drill pipe
16 4 1/4" 42" drill collars w/ H.F. connections
1 6 1/4" 82" drill collar w/ H-90 connector



Stanley Borowski
SIGNATURE COMPANY ENGINEER