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COLO. OIL & GAS CONS. COMM.



WELL COMPLETION REPORT

#1-A LOUSBERG  
C-N/2 SEC. 19-9N-56W  
WELD COUNTY, COLORADO

DYCO PETROLEUM CORPORATION  
607 PHILTOWER BUILDING  
TULSA, OKLAHOMA

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SAMPLE DESCRIPTION: Depth adjusted to the Induction Log

5700-5798 Shale, black, firm, with interbedded streaks of gray siltstone

"D" SAND 5798

5798-5804 Sandstone, white, fine to medium grained, very hard and tite.

5804-5810 Sandstone, tan, fine to medium grained, fairly clean, slightly friable, poor to fair porosity, with good oil stain and good yellow fluorescence.

5810-5878 Shale, black, hard, fissile.

5878-5892 Sandstone, white to tan, fine to medium grained, clean, good light oil stain, good even yellow fluorescence, good streaming cut.

5892-5901 Sandstone, gray, very fine to fine grain, hard and tite, glauconitic, light oil stain and fluorescence.

LOG ANALYSIS: Interpreted by R. T. Higgins - Dresser Atlas

<u>Depth</u>	<u>% Porosity</u>	<u>RW</u>	<u>% Water Saturation</u>
5881-86	.17	.35	37
5886-88	10	.35	60
5888-91	14	.35	40
5891-94	11	.35	tite

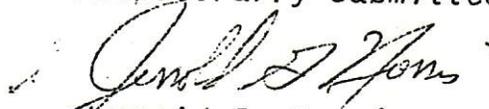
CHRONOLOGICAL HISTORY:

4-1-74 Spudded 10:00 p.m. Set surface casing  
4-2-74 Setting surface casing  
4-3-74 2350' drilling  
4-4-74 4145' drilling  
4-5-74 5100' drilling  
4-6-74 5870' circulating samples  
4-7-74 Waiting on casing

BIT RECORD:

<u>Bit No.</u>	<u>Make</u>	<u>Size</u>	<u>Type</u>	<u>Depth Out</u>	<u>Footage</u>	<u>Hours</u>
1	Smith	7-7/8"	DSJ	2975'	2884'	20-3/4
2	Smith	7-7/8"	DTJ	4145'	1170'	12-1/2
3	Smith	7-7/8"	DTJ	5039'	894'	11-1/2
4	Smith	7-7/8"	DTJ	5482'	443'	9-3/4
5	Smith	7-7/8"	DTJ	5870'	338'	11-3/4
6	Hughes	7-7/8"	OW4	5889'	19'	4-1/2

Respectfully submitted,

  
Jerrold G. Norris

JGN/In

SUMMARY OF COMPLETION

#1-A LOUSBERG  
C-N/2 SEC. 19-9N-56W  
WELD COUNTY, COLORADO

ELEVATION: 4503' G.L.  
4510' K.B.

ZERO DATUM: 7' ABOVE G.L.

HOLE SIZE: 7-7/8" FROM 88' TO T.D.

ROTARY TOTAL DEPTH: 5901' (LOGGER DEPTH)

PLUG BACK TOTAL DEPTH: 5895'

CASING RECORD: 8-5/8" CASING SET AT 87'.  
4 1/2" 10.5# CASING SET AT 5901'.

RADIO ACTIVE LOGS: CEMENT BOND, GAMMA RAY AND COLLAR LOGS.  
RA TRACER SURVEY. CEMENT TOP 5206'.

PERFORATION RECORD: 5880' THRU 5885' WITH 2/FT. 2-3/8" DML JET  
CHARGES.

TREATMENT RECORD: 500 GAL. MCA ACID THRU PERFORATIONS 5880'-  
5885'.

DYCO PETROLEUM CORPORATION  
#1-A LOUSBERG  
C N $\frac{1}{2}$  NW $\frac{1}{4}$  SEC. 19 - T9N-R56W  
WELD COUNTY, COLO.

CONTRACTOR: Gear Drilling Co., Rig #1  
TOOL PUSHER: Glen Hoppes  
GEOLOGIST: Jerrold Norris  
ELEVATIONS: 4510' K.B. 4503' G.L.  
LOCATION: C N $\frac{1}{2}$  NW $\frac{1}{4}$  (660' FNL 1320' FWL)  
SPUD DATE: 4-1-74  
SURFACE CASING: Set 8-5/8" @ 87' w/ 100 sacks cement  
CORES: None  
TESTS: None  
MUD: Chemical Gel - No oil added

LOG SURVEYS: Dresser Atlas Induction Electrolog from 87' to 5901'  
Dresser Atlas Densilog from 5690' to 5899'

INDUCTION LOG TOPS:

<u>Formation</u>	<u>Depth</u>
Niobrara -	5000'
Ft. Hays -	5286'
Carlile	5337'
Greenhorn -	5486'
Bentonite	5697'
"D" Sand -	5798' -1288
"J" Sand -	5878' -1368

TOTAL DEPTH: 5889' Driller 5901' Logger

STATUS: Set 4 1/2" casing @ 5901' w/ 175 sacks cement

## HISTORY OF COMPLETION

#1-A LOUSBERG

APRIL 7, 1974: RAN 182 JTS. 4½" OD 8RD. 10.5# J-55 SMLS. NEW CASING ST&C 5893.19'. SET AT 5901'. CEMENTED WITH 175 SACKS 50-50 POZMIX, 2% GEL, 10% SALT, ¾ OF 1% CFR-2. PRECEED CEMENT WITH 500 GAL. MUD FLUSH. PLUG DOWN 5:08 A.M. APRIL 8, 1974. HAD GOOD CIRCULATION THROUGHOUT. PLACE HALCO ROTATING WALL CLEANERS FROM 5901' THRU 5871'. PLACE HALCO 4½" CASING CENTRALIZERS AT 5868', 5802', 5739', 5663'.

### CASING DETAIL:

BOTTOM	2.16'	4½" OD 8RD. HALCO DIFFERENTIAL FILL FLOAT SHOE.
NEXT.	<u>5891.03'</u>	182 JTS. 4½" OD 8RD. 10.5# J-55 SMLS. CASING ST&C.
TOTAL	5893.19'	
ADD	<u>7.81'</u>	DIFFERENCE IN CASING TOP AND K.B.
TOTAL	5901.00'	CASING LANDING DEPTH.

APRIL 18, 1974: MOVE IN EATMON DRILLING CO. COMPLETION UNIT. RIG UP. RUN SAND PUMP. RECOVER APPROXIMATELY 10' WATERY CEMENT. RUN CEMENT BOND, GAMMA RAY AND COLLAR LOCATOR LOGS. PLUG BACK TOTAL DEPTH 5895'. GOOD CEMENT BOND FROM PBTD 5895' THRU 5500', WITH FAIR BOND TO 5300'. CEMENT TOP 5206'. SHUT WELL IN.

APRIL 19, 1974: SWAB CASING TO 2700'. PERFORATE THE INTERVAL 5885' THRU 5880' WITH 2 HOLES PER FOOT 3-1/8" DML JET CHARGES. TOTAL 11 HOLES. RUN 188 JTS. 2-3/8" OD. 8RD. 4.7# J-55 SMLS. TUBING. TUBING TAIL PIPE AT 5874' WITH PUMP SEATING NIPPLE AT 5844'.

### TUBING DETAIL:

BOTTOM	29.53'	1 JT. 2-3/8" OD 8RD 4.7# J SMLS. TUBING. EUE.
NEXT	1.00'	2-3/8" OD 8RD. EUE PUMP SEATING NIPPLE.
NEXT	<u>5833.53'</u>	187 JTS. 2-3/8" OD 8RD. EUE 4.7# J SMLS. TUBING.
TOTAL	5864.06'	

SWAB TUBING AND ANNULUS TO 4000'. SHUT WELL IN.

APRIL 20, 1974: 10 PSI. SHUT IN TUBING AND ANNULUS PRESSURE. FLUID LEVEL AT 4000'. SWAB TO BOTTOM, RECOVER AND GOOD SHOW OF GAS OFF BOTTOM.

## HISTORY OF COMPLETION

#1-A LOUSBERG

- APRIL 20, 1974: (CONTINUED) HOOK UP HALIBURTON TO ACIDIZE WITH 500 GAL. 15% MCA ACID. FILL TUBING AND ANNULUS WITH 1% KCL WATER. SPOT 500 GAL ACID ON PERFORATIONS. PRESSURE FORMATION TO 1400 PSI, TAKING FLUID. DISPLACE ACID AT 1/3 BPM RATE AT 1250 PSI. TO 1200 PSI. WITH A SLOW BREAK TO 900 PSI. ON LAST 100 GAL ACID. 850 PSI. AT END OF TREATMENT. WELL ON VACUUM IN 3 MIN. 85 BBL. LOAD WATER AND 12 BBL. ACID WATER TO RECOVER. BEGIN SWABBING LOAD FLUID AT 10:30 A.M. FLUID LOWERED TO 4400' AT 2:00 P.M. A SHOW OF GAS ON TOP OF WATER COLUMN. CONTINUE SWABBING OFF BOTTOM. RECOVER 1½-2 BBL. WATER EACH SWAB RUN, GAS UNLOADING BOTTOM OF SWAB. RECOVER ALL LOAD WATER AND ACID WATER. SHUT WELL IN.
- APRIL 21, 1974: WELL SHUT IN.
- APRIL 22, 1974: SHUT IN TUBING PRESSURE 660 PSI. SHUT IN CASING PRESSURE 600 PSI. RELEASE TUBING PRESSURE TO PIT. FLUID LEVEL 3100'. RECOVER A SHOW OF OIL ON TOP OF SWAB RUN. CONTINUE TESTING. WELL UNLOADING SMALL AMOUNT OF FLUID, SWABBED TO BOTTOM. TUBING PRESSURE 30 PSI., CASING 130 PSI. RUN A RA TRACER SURVEY. RADIO ACTIVE FLUID PENETRATED THRU PERFORATIONS AND CONCENTRATED FROM 5886' TO 5874', WITH THE BULK OF THE FLUID GOING AT 5874' TO 5880'. SWAB DOWN TO 4400' AND SHUT WELL IN.
- APRIL 23, 1974: TUBING PRESSURE 30 PSI. AND CASING PRESSURE 40 PSI. CONTINUE SWABBING BACK LOAD FLUID. FLUID LEVEL 3600'. HAD TUBING SWABBED TO BOTTOM AT 10:00 A.M. CONTINUE SWABBING 1/3 BTF/HR. OFF BOTTOM, SMALL SHOW OF GAS. SHUT WELL IN.
- APRIL 24, 1974: TUBING PRESSURE 420 PSI., CASING PRESSURE 500 PSI. TUBING BLED OFF IN 30 MIN. AND UNLOADED FLUID FOR 1HR 15 MIN. NO SHOW OF OIL. RUN SWAB, RECOVER 10' FLUID. WELL WILL UNLOAD SMALL AMOUNT OF FLUID WITH A TRACE OF OIL. TUBING PRESSURE 0, CASING 180 PSI. RELEASE COMPLETION UNIT. WELL UNLOADED 2 BTF AND DIED. SHUT WELL IN. WATER ANALYSIS:  
RESISTIVITY: .946 @ 85 DEG.  
CHLORIDES: 5300 PPM. (FORMATION WATER)

HISTORY OF COMPLETION

#1 -A LOUSBERG

APRIL 25, 1974: TUBING PRESSURE 440 PSI. CASING PRESSURE 540 PSI. OPEN TUBING ON 32/64" CHOKE. WILL UNLOAD SMALL AMOUNT OF FLUID. OPEN 10 HRS. O TUBING PSI., 220 PSI. CASING PRESSURE. SHUT WELL IN.

APRIL 26, 1974: TUBING PRESSURE 420 PSI. CASING 560 PSI. OPEN TUBING TO PIT. LEAVE WELL OPEN 11 HRS. TUBING 0 PSI. CASING 240 PSI. SHUT WELL IN.

APRIL 27, 1974: TUBING PRESSURE 560 PSI. CASING 580 PSI. OPEN WELL TO PIT. UNLOAD SMALL AMOUNT OF FLUID, EST. 3 TO 5 BBL. PERDAY. LEAVE WELL OPEN UNTIL 10:00 A.M. APRIL 29, 1974. GAS VOLUME WILL NOT BURN CONTINUALLY. SHUT WELL IN FOR PRESSURE BUILD UP.

MAY 3, 1974: SHUT IN PRESSURE: TUBING 760 PSI. CASING 980 PSI.

MAY 5, 1974: SHUT IN PRESSURE: TUBING 880 PSI. CASING 1020 PSI. OPEN WELL ON 20/64" CHOKE. FLOW TO PIT.

<u>TIME/MIN.</u>	<u>TUB/PSI</u>	<u>CAS/PSI</u>	<u>REMARKS</u>
5	620	1000	DRY GAS.
10	460	980	" "
15	270	970	" "
20	100	930	" "
25	5	875	OPEN TO FULL CHOKE
5	440	820	UNLOAD FLUID. 1 BBL.OIL, 5 BBL.WTR.
10	260	630	WET GAS (WATER)
15	150	370	" " (WATER/ TRACE OIL)
	SET ON 20/64" CHOKE		
7	245	260	DRY GAS.
12	155	165	" "
27	70	80	" "
42	40	50	" "
87	0	30	SHUT WELL IN.

SHUT IN 1.45 HRS. TUBING 40 PSI. CASING 80 PSI.

OBSERVE WELL HEAD SHUT IN PRESSURES:

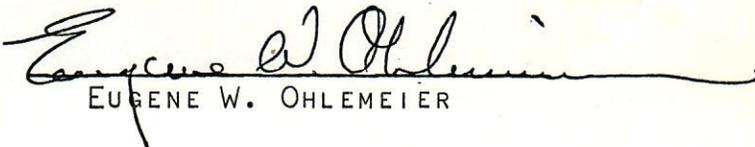
	<u>TUBING PSI.</u>	<u>CASING PSI.</u>
MAY 6, 1973:	500	500
MAY 8, 1974:	850	820
MAY 9, 1974:	970	880

HISTORY OF COMPLETION

#1-A LOUSBERG

OBSERVED WELL HEAD SHUT IN PRESSURES:

	TUBING PSI.	CASING PSI.
MAY 10, 1974:	1040	920
MAY 11, 1974:	1100	960
MAY 13, 1974:	1140	1000
MAY 14, 1974:	1140	1000
MAY 15, 1974:	1140	1010
MAY 16, 1974:	1140	1020

  
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HISTORY OF COMPLETION  
(CONTINUED)

#1-A LOUSBERG  
C-N/2 SEC. 19-9N-56W  
WELD COUNTY, COLORADO

OBSERVED WELL HEAD SHUT IN PRESSURES:

	<u>TUBING PSI</u>	<u>CASING PSI</u>	
MAY 17, 1974:	1140	1020	
MAY 18, 1974:	1140	1020	
MAY 19, 1974:	1120	1000	OPEN ON 20/64" CHOKE.
MAY 20, 1974:	0	200	UNLOAD 2 BBL. FLUID TO PIT.
MAY 21, 1974:	0	300	
MAY 22, 1974:	0	420	
MAY 23, 1974:	0	440	
MAY 24, 1974:	0	520	
MAY 25, 1974:	0	600	
MAY 26, 1974:	0	590	
MAY 27, 1974:	0	600	
MAY 28, 1974:			<p>MOVE IN EATMON DRILLING CO. UNIT. RELEASE 600 PSI. ON CASING. PULL TUBING, RUN SAND PUMP, HOLE CLEAN. RIG UP HALLIBURTON TO FRAC. FILL CASING WITH 1680 GAL. 1% KCL WATER AND 2000 GAL. GELLED KCL WATER PAD. APPROX 400' FILLUP IN CASING. FORMATION PRESSURED TO 3400 PSI. WITH A SHARP BREAK BACK TO 2300 PSI. MAINTAIN 10 BPM RATE THRU FRAC. START 20-40 MESH SAND WITH A SPEARHEAD, INCREASING CONCENTRATION TO 1# /GAL. PRESSURE DECLINED 400 PSI. WITH SAND ON FORMATION, INCREASE TO 2600 PSI. WITH A BREAK TO 2300 PSI. AND INCREASED TO 3000 PSI. AT END OF FLUSH. 2100 PSI. INSTANT SHUT DOWN PRESSURE. ON VACUUM IN 15 MIN. PLACED 9000 GAL. GELLED KCL WATER, AND 7000# 20-40 MESH SAND INTO FORMATION. 350 BBL. TOTAL LOAD WATER TO RECOVER. SHUT WELL IN UNTIL MORNING.</p>
MAY 29, 1974:			<p>FLUID LEVEL 100' FROM SURFACE, NO PRESSURE. 10' SAND FILLUP ON BOTTOM. SWAB CASING TO 600' OFF BOTTOM, CLEAN OUT 5' SAND. SWAB TO 200' OFF BOTOM, CLEAN OUT 5' SAND, HOLE CLEAN, RECOVER 83 BBL. LOAD WATER IN SWAB DOWN. CONTINUE SWABBING 8 BBL. LOAD WATER PER HOUR OFF BOTTOM. 156 BLW RECOVERED TODAY. SHUT WELL IN.</p>

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HISTORY OF COMPLETION

#1-A LOUSBERG

MAY 30, 1974:

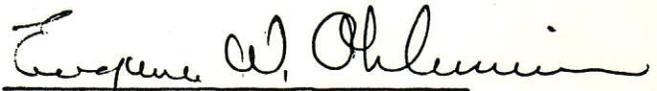
FLUID LEVEL 2800' OFF BOTTOM. 700 PSI. SHUT IN PRESSURE. RELEASE PRESSURE, RECOVER 45 BLW WITH AN OIL STAIN, SWABBED TO BOTTOM. GAS VOLUME SUFFICIENT TO UNLOAD SWAB TOOL AT SURFACE. CONTINUE SWABBING AVERAGE 6.4 BLW/HR. 1% OIL. ESTIMATE GAS 50 MCFD. RECOVER 96 BLW TODAY. 98 BLW REMAINING TO RECOVER. SHUT WELL IN.

MAY 31, 1974:

FLUID LEVEL 2800' OFF BOTTOM. 725 PSI. SHUT IN PRESSURE. RECOVER 45 BLW, WITH OIL STAIN, SWABBING TO BOTTOM. CONTINUE SWABBING AVERAGE 6.4 BLW/HR. OIL PERCENT AND GAS VOLUME APPROX. THE SAME AS THE DAY BEFORE. RECOVER 98 BLW TODAY. ALL LOAD WATER RECOVERED. SHUT WELL IN.

JUNE 1, 1974:

FLUID LEVEL 2800' OFF BOTTOM. 725 PSI. SHUT IN PRESSURE. MAKE 3 SWAB RUNS, RECOVER SAME OIL PERCENT ON TOP AND THRU REMAINING FLUID. GAS VOLUME APPROX. THE SAME. RUN TUBING AND LAY DOWN IN SINGLES. SHUT WELL HEAD IN WITH SWAGE AND VALVE. RELEASE UNIT.

  
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