



02358122

GEOLOGICAL DATA AND DRILLING AND COMPLETION PROCEDURE

FORMATION OR DATE	TOP-DEPTH INTERVAL	REMARKS OR DESCRIPTION AND RESULTS OF WORK																								
		<u>DRILL STEM TESTS</u>																								
		None																								
		<u>PERFORATIONS</u>																								
7-2-58		Perforated 4-1/2" OD casing 4960-4970'KB (Electric Log measurements) with 4 1/2" shots per foot with Lane Wells L-2 Bear Cat Kone Shots.																								
7-31-58		Reperforated 4-1/2"OD casing 4960-4970'KB (Electric Log measurements) with 4 McCullough 1/2" M-3 bullets per foot.																								
		<u>CASING COUPLING MEASUREMENTS</u>																								
		<table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>Driller</u></th> <th style="text-align: center;"><u>Lane-Wells</u></th> </tr> </thead> <tbody> <tr> <td>Top of Float Collar</td> <td style="text-align: center;">5058.10</td> <td style="text-align: center;">5064' PBTB</td> </tr> <tr> <td>First Coupling</td> <td style="text-align: center;">5028.83</td> <td style="text-align: center;">5030'</td> </tr> <tr> <td>Second Coupling</td> <td style="text-align: center;">5000.85</td> <td style="text-align: center;">5001'</td> </tr> <tr> <td>Third Coupling</td> <td style="text-align: center;">4968.60</td> <td style="text-align: center;">4973'</td> </tr> <tr> <td>Fourth Coupling</td> <td style="text-align: center;">4935.67</td> <td style="text-align: center;">4940'</td> </tr> <tr> <td>Fifth Coupling</td> <td style="text-align: center;">4902.47</td> <td style="text-align: center;">4907'</td> </tr> <tr> <td>Sixth Coupling</td> <td style="text-align: center;">4869.87</td> <td style="text-align: center;">4875'</td> </tr> </tbody> </table>		<u>Driller</u>	<u>Lane-Wells</u>	Top of Float Collar	5058.10	5064' PBTB	First Coupling	5028.83	5030'	Second Coupling	5000.85	5001'	Third Coupling	4968.60	4973'	Fourth Coupling	4935.67	4940'	Fifth Coupling	4902.47	4907'	Sixth Coupling	4869.87	4875'
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		<u>CASING SETTING</u>																								
	2.00	7-5/8" HOWCO Slip Joint Float Shoe																								
	187.00	7-5/8" OD 17.7# Spiral Weld Slip Joint R-3 Casing 5 jts																								
	189.00	Total																								
	8.00	Derrick elevation																								
	2.00	Set below surface																								
	199.00	Setting depth																								
		Cemented casing with 115 sacks (60/40) Pozmix cement, with 2% CaCl ₂ . After 18 hours tested casing with 500# pressure for 15 minutes; no drop in pressure was observed and drilling was resumed.																								
	1.65	4-1/2" 8R HOWCO Float Shoe																								
	28.15	4-1/2" OD 9.5# J-55 8R ST&C R-2 Casing																								
	2.10	4-1/2" OD HOWCO Float Collar																								
	5050.57	4-1/2" OD 9.5# J-55 8R ST&C R-2 Casing																								
	5082.47	Total																								
	8.00	Derrick elevation																								
	5090.47	Setting depth																								
		Cemented casing with 100 sacks (50/50) Pozmix cement with 2% Gel. After 18 hours, tested casing with 1150# pressure for 15 minutes. Their was no loss in pressure and operations were resumed.																								
		<u>LOGS AND SURVEYS</u>																								
		Ran Schlumberger Electric Log to bottom on 6-29-58. (Schlumberger TD 5100'KB - Drillers TD 5011'KB)																								
		Ran Schlumberger Micro-Log from 4800 to 5096' on 6-29-58.																								
		Ran Lane-Wells Gamma Ray Log from 4850 to 5064'(PBTB) on 7-2-58.																								

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15-2N-55W

FORM PO-214 SHEET 2 (8-56) 30M

GEOLOGICAL DATA AND DRILLING AND COMPLETION PROCEDURE

FORMATION OR DATE	TOP-DEPTH INTERVAL	REMARKS OR DESCRIPTION AND RESULTS OF WORK
<u>FORMATION RECORD</u>		
<u>Bottom</u>	<u>Amount</u>	
8'	8'	Derrick Elevation - Rotary bushing to ground
150'	142'	Surface sand and conglomerate
4163'	4013'	Shale
4537'	374'	Calcium, shale
4635'	98'	Shale, black
4705'	70'	Limestone
4950'	245'	Shale
4962'	12'	Sandstone
4970'	8'	Shale with sandstone streaks
4974'	4'	Siltstone
4988'	14'	Sandstone and shale
5026'	38'	Shale
5100'	74'	Sandstone and shale
<u>FORMATION TOPS</u>		
Tertiary	Surface	
Pierre	295'	
Niobrara	4164'	
Carlisle	4537'	
Greenhorn	4635'	
Graneros	4716'	
Bentonite Marker	4862'	
Dakota "D"	4951'	
Dakota "J"	5026'	
Total Depth	5100'	
<u>STRAIGHT HOLE SURVEYS</u>		
80'	0°	Sure-Shot
200'	3/4°	Sure-Shot
700'	3/4°	Sure-Shot
1200'	1°	Sure-Shot
1700'	1-1/4°	Sure-Shot
2215'	3/4°	Sure-Shot
2750'	3/4°	Sure-Shot
3250'	2°	Sure-Shot
3750'	1-1/2°	Sure-Shot
4750'	1-1/2°	Sure-Shot
4950'	1-3/4°	Sure-Shot
<u>CORE DESCRIPTION</u>		
Core No. 1	4952-4988'	Cut 36' Recovered 36'
	4952-4956-1/2	Sandstone, hard, tite with shale Laminations
	2956-1/2-4961-1/2	Sandstone, good stain, odor, fluor
	4961-1/2-4966'	Shale with sandstone stringers, fluor in sandstone
	4966-4970'	Shale with sandstone stringers, with spotted fluor
	4970-4971'	Shale, dark
	4971-4972'	Siltstone, no show
	4972-4974'	Siltstone, with shale partings
	4974-4976'	Shale with thin sandstone stringers, no show
	4976-4979'	Sandstone with shale, tite, no show
	4979-4988'	Sandstone and shale, reworked, mostly shale at bottom, no show



AJJ	
DVR	
WRS	
HHM	
JAM	
FJP	
JJD	
FILE	

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REGULATION COMMISSION

GEOLOGICAL DATA AND DRILLING AND COMPLETION PROCEDURE

FORMATION OR DATE	TOP-DEPTH INTERVAL	REMARKS OR DESCRIPTION AND RESULTS OF WORK
		<u>TUBING SETTING</u>
	28.74	2-3/8" EUE 4.7# 8R J-55 R-2 Tubing (Anchor) 1 jt
	.80	2-3/8" Seating nipple
	4942.77	2-3/8" EUE 4.7# 8R J-55 R-2 Tubing 170 jts
	<u>4972.31</u>	Total
	8.00	Derrick elevation
	<u>4980.31</u>	Total
	- 3.00	Set above surface
	<u>4977.31</u>	Setting depth
		<u>SAND-OIL TREATMENT</u>
		Broke down formation with 2800# at 8.5 bbls per minute. Mixed 10 gallon of Hy-flo in breakdown fluid. Mixed 4400# sand, 4400 gallon of lease crude oil and 250# FL-2. Dropped eight perf-pac ball sealers after first 2200# of sand. The job sanded out after 2200# sand had been pumped into formation, leaving a balance of 2200# sand in the casing. Pumping pressure before sand-out was 2300#. Pumping pressure after sand-out was 3500#. Injection rate before ball sealers hit was 8.3 bbls per minute. Injection rate after ball sealers hit was 4.0 bbls per minute.