

ORIGINAL

DST REPORT

GENERAL INFORMATION

KCC

15-071-20651

DATE : 8/1/96
CUSTOMER : RED OAK ENERGY
WELL : #1-12
ELEVATION: 3894 GR
SECTION : 12
RANGE : 43W
GAUGE SN#: 13551
TEST: 1
AUG 1 1997
COUNTY: GREELEY
RANGE : 4150
TICKET : 21691
LEASE : HOWARD
GEOLOGIST: BURNS
FORMATION: MORROW
TOWNSHIP : 17S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4985.00 ft TO: 5188.00 ft TVD: 5188.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4988.0 ft 4991.0 ft
TEMPERATURE: 180.0
DRILL COLLAR LENGTH: 357.0 ft I.D.: 2.200 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4596.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 32.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 203.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4980.0 ft SIZE: 6.750 in
PACKER DEPTH: 4985.0 ft SIZE: 6.750 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : MURFIN RIG 14
MUD TYPE : CHEMICAL
WEIGHT : 9.200 ppg
CHLORIDES : 2700 ppm
JARS-MAKE : WTC
DID WELL FLOW?: NO
VISCOSITY : 61.00 cp
WATER LOSS: 8.200 cc
SERIAL NUMBER: 414
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF BUCKET
IN 6 MINUTES - MAXIMUM 16 INCHES IN WATER. FINAL
FLOW PERIOD OPENED FAIR - 5 INCHES IN WATER -

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

DECREASED TO 2 INCHES AFTER 20 MINUTES. BOTH FLOW PERIODS SHOWED PLUGGING.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
368.0	0.0	0.0	0.0	100.0	MUD
868.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 22000 PPM

RATE INFORMATION

OIL VOLUME: 0.0000 STB
 GAS VOLUME: 0.0000 SCF
 MUD VOLUME: 5.1617 STB
 WATER VOLUME: 8.8459 STB
 TOTAL FLUID : 14.0075 STB

TOTAL FLOW TIME: 75.0000 min.
 AVERAGE OIL RATE: 0.0000 STB/D
 AVERAGE WATER RATE: 169.8403 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2477.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	554.00	554.00
INITIAL SHUT-IN	45.00		962.00
FINAL FLOW	45.00	554.00	554.00
FINAL SHUT-IN	60.00		1004.00

FINAL HYDROSTATIC PRESSURE: 2393.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2474.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	590.76	566.82
INITIAL SHUT-IN	45.00		958.13
FINAL FLOW	45.00	511.28	551.60
FINAL SHUT-IN	60.00		1011.37

FINAL HYDROSTATIC PRESSURE: 2388.00

FLUID SAMPLE REPORT

GENERAL INFORMATION

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CUSTOMER : RED OAK ENERGY
WELL : #1-12 TEST: 1
ELEVATION: 3894 GR
SECTION : 12
RANGE : 43W COUNTY: GREELEY
GAUGE SN#: 13551 RANGE : 4150

TICKET : 21691
LEASE : HOWARD
GEOLOGIST: BURNS
FORMATION: MORROW
TOWNSHIP : 17S
STATE : KS
CLOCK : 12

SAMPLE INFORMATION

PRESSURE IN SAMPLER: 400.00 PSIG BHT: 180.0 DEG F

TOTAL VOLUME OF SAMPLER: 3150.00 CC
TOTAL VOLUME OF SAMPLE: 3150.00 CC
OIL: 0.00 CC
WATER: 3150.00 CC
MUD: 0.00 CC
GAS: 0.00 CC
OTHER: 0.00 CC

RESISTIVITY

DRILLING MUD: .32 @ 65 DEGREES F CHLORIDE CONTENT: 22000.00 ppm
MUD PIT SAMPLE: 3.5 @ 65 DEGREES F CHLORIDE CONTENT: 2700.00 ppm
GAS/OIL RATIO: GRAVITY:
WHERE WAS SAMPLE DRAINED:
REMARKS:

Company: RED OAK ENERGY INC.

Well: #1-12 HOWARD

Field: TKT 21691 DST 1

[Thursday: Aug. 1, 1996]

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)

START FLOW 1				
1	0	22:16:43	0.0000	590.76
10	0	22:17:48	0.0180	596.85
19	0	22:18:53	0.0361	615.12
28	0	22:19:58	0.0541	629.91
37	0	22:21: 3	0.0721	627.28
46	0	22:22: 7	0.0900	603.75
55	0	22:23:12	0.1080	601.12
64	0	22:24:16	0.1259	602.85
73	0	22:25:21	0.1439	603.71
82	0	22:26:26	0.1619	601.95
91	0	22:27:30	0.1799	594.10
100	0	22:28:35	0.1978	589.73
109	0	22:29:40	0.2158	584.48
118	0	22:30:44	0.2338	579.24
127	0	22:31:49	0.2517	574.87
136	0	22:32:54	0.2697	571.37
145	0	22:33:59	0.2877	568.75
154	0	22:35: 3	0.3056	566.99
163	0	22:36: 8	0.3236	566.10
172	0	22:37:13	0.3416	566.09
181	0	22:38:17	0.3596	564.33
190	0	22:39:22	0.3776	564.32
199	0	22:40:27	0.3956	564.30
208	0	22:41:32	0.4135	564.28
217	0	22:42:37	0.4315	565.14
226	0	22:43:41	0.4495	565.13
235	0	22:44:46	0.4675	565.98
244	0	22:45:51	0.4855	566.84
253	0	22:46:55	0.5035	566.82
END FLOW 1				
START SHUTIN 1				
260	0	22:47:46	0.5176	587.71
262	0	22:48: 1	0.5216	597.29
271	0	22:49: 7	0.5399	674.79
280	0	22:50:12	0.5580	700.03
289	0	22:51:17	0.5761	720.92
298	0	22:52:22	0.5942	736.58
307	0	22:53:27	0.6122	749.63
316	0	22:54:32	0.6302	761.81
325	0	22:55:37	0.6483	775.73
334	0	22:56:42	0.6663	786.17
343	0	22:57:47	0.6844	797.47
352	0	22:58:52	0.7024	809.65
361	0	22:59:57	0.7204	818.35
370	0	23: 1: 1	0.7384	827.04
379	0	23: 2: 6	0.7565	835.73
388	0	23: 3:11	0.7745	843.56
397	0	23: 4:16	0.7925	850.51
406	0	23: 5:21	0.8105	857.46
415	0	23: 6:26	0.8285	864.41
424	0	23: 7:31	0.8465	871.37
433	0	23: 8:35	0.8646	877.45
442	0	23: 9:40	0.8826	882.66
451	0	23:10:45	0.9006	888.74

WESTERN TESTING CO., INC.

Company: RED OAK ENERGY INC.

Well: #1-12 HOWARD

Field: TKT 21691 DST 1

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
460	0	23:11:50	0.9186	893.95
469	0	23:12:55	0.9366	899.16
478	0	23:14: 0	0.9546	904.37
487	0	23:15: 4	0.9726	908.71
496	0	23:16: 9	0.9906	913.92
505	0	23:17:14	1.0086	917.39
514	0	23:18:19	1.0266	921.73
523	0	23:19:24	1.0446	926.94
532	0	23:20:28	1.0626	931.28
541	0	23:21:33	1.0806	934.75
550	0	23:22:38	1.0986	939.09
559	0	23:23:43	1.1166	941.69
568	0	23:24:48	1.1346	943.41
577	0	23:25:52	1.1526	946.88
586	0	23:26:57	1.1706	948.61
595	0	23:28: 2	1.1886	952.08
604	0	23:29: 7	1.2066	953.80
613	0	23:30:12	1.2246	955.53
622	0	23:31:16	1.2426	958.13
		END SHUTIN 1		
		START FLOW 2		
626	0	23:34:16	1.2926	511.28
634	0	23:35:18	1.3096	751.65
643	0	23:36:23	1.3277	771.67
652	0	23:37:27	1.3456	751.62
661	0	23:38:30	1.3630	620.09
670	0	23:39:33	1.3806	541.69
678	0	23:40:34	1.3974	722.84
687	0	23:41:39	1.4154	730.66
696	0	23:42:43	1.4334	724.55
705	0	23:43:49	1.4516	766.34
714	0	23:44:53	1.4695	761.97
723	0	23:45:58	1.4876	781.98
732	0	23:47: 3	1.5056	787.20
741	0	23:48: 4	1.5224	524.15
750	0	23:49: 9	1.5404	524.13
759	0	23:50:14	1.5585	550.25
768	0	23:51:21	1.5771	691.33
777	0	23:52:27	1.5954	757.51
786	0	23:53:31	1.6134	761.85
795	0	23:54:36	1.6314	762.70
804	0	23:55:37	1.6484	535.37
813	0	23:56:42	1.6664	532.74
821	0	23:57:44	1.6835	787.92
830	0	23:58:49	1.7017	849.74
839	0	23:59:55	1.7200	917.66
		[Friday: Aug. 2, 1996]		
848	1	0: 1: 0	1.7381	928.09
857	1	0: 2: 5	1.7561	932.43
866	1	0: 3: 8	1.7736	827.03
875	1	0: 4:12	1.7915	810.47
884	1	0: 5:14	1.8086	607.52
893	1	0: 6:18	1.8263	540.44
902	1	0: 7:22	1.8442	537.81
911	1	0: 8:27	1.8622	535.18

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[Friday: Aug. 2, 1996]

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
920	1	0: 9:32	1.8802	533.43
929	1	0:10:36	1.8982	532.54
938	1	0:11:41	1.9161	532.53
947	1	0:12:46	1.9341	531.64
955	1	0:13:46	1.9508	687.53
964	1	0:14:51	1.9688	682.29
973	1	0:15:53	1.9861	543.79
982	1	0:16:58	2.0041	550.74
991	1	0:18: 3	2.0221	551.60

END FLOW 2
START SHUTIN 2

999	1	0:19: 6	2.0398	919.13
1008	1	0:20:11	2.0578	927.82
1017	1	0:21:16	2.0758	937.39
1026	1	0:22:21	2.0938	941.73
1035	1	0:23:26	2.1118	947.81
1044	1	0:24:30	2.1298	952.15
1053	1	0:25:35	2.1479	956.49
1062	1	0:26:40	2.1658	960.83
1071	1	0:27:45	2.1839	964.30
1080	1	0:28:50	2.2019	968.64
1089	1	0:29:54	2.2199	972.10
1098	1	0:30:59	2.2379	976.44
1107	1	0:32: 4	2.2559	979.91
1116	1	0:33: 9	2.2739	982.51
1125	1	0:34:14	2.2919	986.85
1134	1	0:35:18	2.3099	989.45
1143	1	0:36:23	2.3279	989.43
1152	1	0:37:28	2.3458	992.90
1161	1	0:38:33	2.3638	993.76
1170	1	0:39:38	2.3818	995.48
1179	1	0:40:42	2.3998	996.34
1188	1	0:41:47	2.4178	998.07
1197	1	0:42:52	2.4358	998.05
1206	1	0:43:57	2.4538	998.91
1215	1	0:45: 1	2.4718	999.76
1224	1	0:46: 6	2.4898	1001.48
1233	1	0:47:11	2.5078	1001.47
1242	1	0:48:16	2.5257	1001.45
1251	1	0:49:20	2.5437	1001.44
1260	1	0:50:25	2.5617	1001.42
1269	1	0:51:30	2.5797	1001.41
1278	1	0:52:35	2.5977	1002.26
1287	1	0:53:39	2.6157	1002.24
1296	1	0:54:44	2.6337	1003.09
1305	1	0:55:49	2.6516	1003.08
1314	1	0:56:54	2.6696	1003.06
1323	1	0:57:58	2.6876	1003.92
1332	1	0:59: 3	2.7056	1004.77
1341	1	1: 0: 8	2.7236	1004.75
1350	1	1: 1:13	2.7416	1006.47
1359	1	1: 2:17	2.7596	1008.19
1368	1	1: 3:22	2.7776	1009.04
1377	1	1: 4:27	2.7956	1009.03

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[Friday: Aug. 2, 1996]

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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1386	1	1: 5:32	2.8135	1009.88
1395	1	1: 6:36	2.8315	1010.73
1404	1	1: 7:41	2.8495	1011.59
1413	1	1: 8:46	2.8675	1011.57
1422	1	1: 9:51	2.8855	1011.56
1431	1	1:10:55	2.9035	1011.54
1440	1	1:12: 0	2.9214	1011.52
1449	1	1:13: 5	2.9394	1011.51
1458	1	1:14:10	2.9574	1011.49
1467	1	1:15:14	2.9754	1011.48
1476	1	1:16:19	2.9934	1011.46
1485	1	1:17:24	3.0114	1011.45
1494	1	1:18:29	3.0294	1011.43
1503	1	1:19:33	3.0473	1011.42
1512	1	1:20:38	3.0653	1011.40
1521	1	1:21:43	3.0833	1011.39
1530	1	1:22:48	3.1013	1011.37

WESTERN TESTING CO., INC.



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 21691

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation 3894 G2 Formation Morrow Eff. Pay Ft.

District Colby Date Aug 1 1996 Customer Order No.

COMPANY NAME Red Oak Energy Inc

ADDRESS 200 W Douglas Suite 510 Wichita KS

LEASE AND WELL NO Howard #1-12 COUNTY Greeley STATE KS Sec 12 Twp 17s Rge 7E

Mail Invoice To Same Co. Name Address #1-12 HOWARD No. Copies Requested

Mail Charts To Same Address No. Copies Requested

Formation Test No. 1 Interval Tested From 4985 ft. to 5188 ft. Total Depth 5188 ft.

Packer Depth 4980 ft. Size 6 3/4 in. Packer Depth = ft. Size = in.

Packer Depth 4985 ft. Size 6 3/4 in. Packer Depth = ft. Size = in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4988 ft. Recorder Number 13551 Cap. 4150

Bottom Recorder Depth (Outside) 4991 ft. Recorder Number 13268 Cap. 4150

Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Murfin Rig 14 Drill Collar Length 357 I. D. 2.2 in.

Mud Type Chemical Viscosity 61 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 8.2 cc. Drill Pipe Length 4596 I. D. 3.5 in.

Chlorides 2700 P.P.M. Test Tool Length 32 ft. Tool Size 5 1/2 OD in.

Jars: Make Western Serial Number 414 Anchor Length 203 ft. Size 5 1/2 OD in.

Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7/8 in. Tool Joint Size 4 1/2 XH in.

Blow: IFP - Strong blow, bottom of bucket in 6 min, max 16" in water

FFP - Opened fair - 5" in water, decreased to 2" after 20 min

Recovered 368 ft. of mud

Recovered 868 ft. of water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 2200 P.P.M. Sample Jars used Remarks: Both flows showed plugging

Time On Location 6 35 AM Time Pick Up Tool 7 25 AM Time Off Location 6 01 AM

Time Set Packer(s) 10 15 AM Time Started Off Bottom 1 15 AM Maximum Temperature 180

Initial Hydrostatic Pressure (A) 2477 P.S.I. 2474

Initial Flow Period Minutes 30 (B) 554 P.S.I. to (C) 554 P.S.I.

Initial Closed In Period Minutes 45 (D) 962 P.S.I.

Final Flow Period Minutes 46 (E) 554 P.S.I. to (F) 554 P.S.I.

Final Closed In Period Minutes 60 (G) 1004 P.S.I.

Final Hydrostatic Pressure (H) 2393 P.S.I. 2388

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By Joe Burns Signature of Customer or his authorized representative

Western Representative Mike Schubert

FIELD INVOICE

Open Hole Test	\$ 700
Misrun	\$
Straddle Test	\$
Jars	\$ 55
Selective Zone	\$
Safety Joint	\$ 15
Standby	\$
Evaluation	\$
Shale Packer	\$ 215
Circ. Sub.	\$
Mileage	\$
Fluid Sampler	\$ 200
Extra Charts	\$



Fluid Sample Report

Date Aug 1 1992 Ticket No. 21691
 Company Red Oak
 Well Name & No. #1-12 Howard DST No. 1
 County Greeley State KS
 Sampler No. 2 Test Interval 4985 - 5188

Pressure in Sampler 400 PSIG BHT 180 OF

Total Volume of Sampler 3150 cc.
 Total Volume of Sample: 3150 cc.
 Oil: — cc.
 Water: 3150 cc.
 Mud: — cc.
 Gas: — cu. ft.
 Other: —

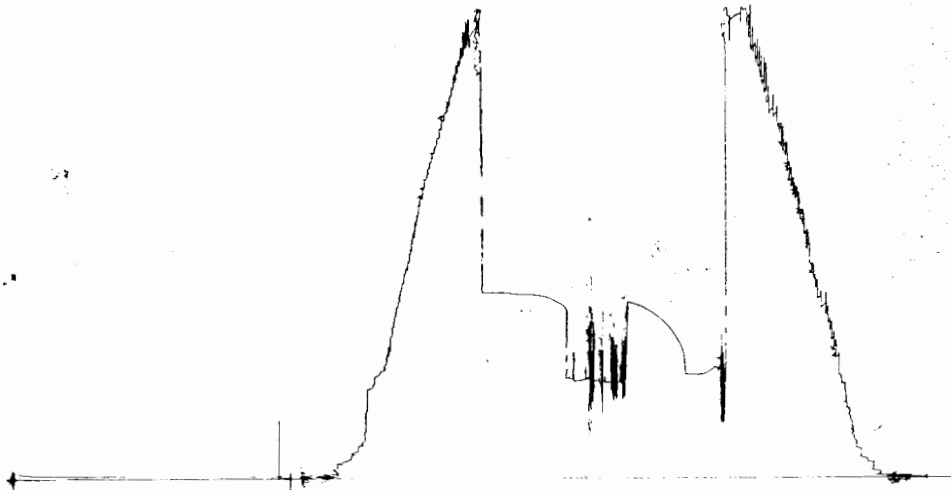
Resistivity

Water: 32 @ 65° of Chloride Content 2200 ppm.
 Mud Pit Sample 3.5 @ 65° of Chloride Content 2700 ppm.
 Gas/Oil Ratio — Gravity — °API @ — OF

Where was sample drained —

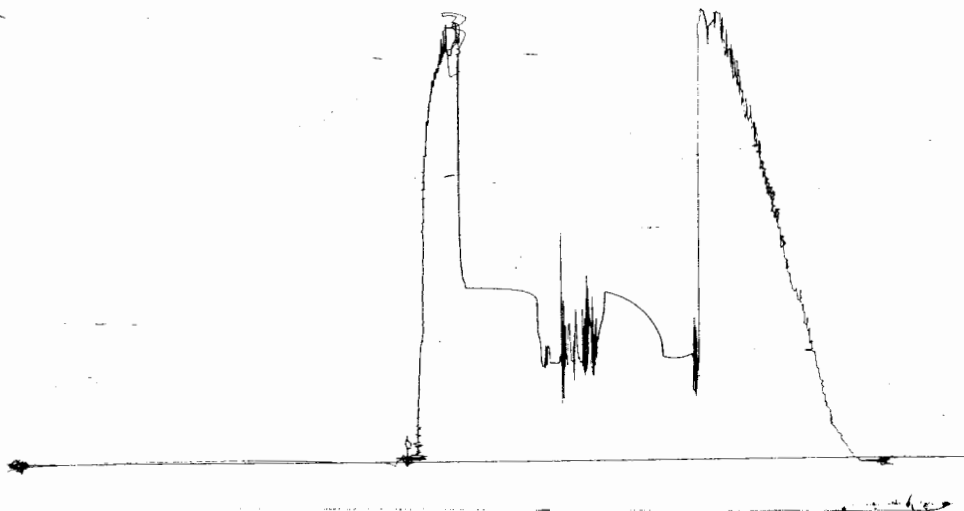
Remarks: —

1355T KT 21691
I



Inside Recorder

1326 KT 21691
O



Outside Recorder