

Ritchie Exploration, Inc.
Durler 14B No.1
2200' FNL and 1120' FWL
110'N & 130'E of SE SW NW
Sec 14 T27S R24W
Ford County, Kansas

Geological Report
by

Macklin M. Armstrong, P.G.
License Number 743

Scale 1:240 Imperial

Well Name: Durler 14B No. 1
 Surface Location: Sec 14 T27S R24W
 Bottom Location: 2200' FNL and 1120' FWL
 API: 15-057-20884
 License Number: 4767
 Spud Date: 3/22/2013 Time: 3:00 PM
 Region: Ford County, Kansas
 Drilling Completed: 4/1/2013 Time: 1:27 PM
 Surface Coordinates:
 Bottom Hole Coordinates:
 Ground Elevation: 2452.00ft
 K.B. Elevation: 2462.00ft
 Logged Interval: 3400.00ft To: 5120.00ft
 Total Depth: 5120.00ft
 Formation: Mississippi
 Drilling Fluid Type: Chemical/Fresh Water Gel

OPERATOR

Company: Ritchie Exploration, Inc.
 Address: 8100 East 22nd Street North, No. 700
 Wichita, Kansas 67278
 Contact Geologist: Mike Engelbrecht
 Contact Phone Nbr: 316-691-9500
 Well Name: Durler 14B No. 1
 Location: Sec 14 T27S R24W
 Pool: Oil, Gas
 State: Kansas
 API: 15-057-20884
 Field: Wildcat
 Country: USA

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude: 99° 55' 15.790" Latitude: 37° 42' 01.216"
 N/S Co-ord:
 E/W Co-ord:

CONTRACTOR

Contractor: Val Energy
 Rig #: 1
 Rig Type: Mud rotary
 Spud Date: 3/22/2013 Time: 3:00 PM
 TD Date: 4/1/2013 Time: 1:27 PM
 Rig Release: 4/2/2013 Time: 9:00 AM

ELEVATIONS

K.B. Elevation: 2462.00ft Ground Elevation: 2452.00ft
 K.B. to Ground: 10.00ft

NOTES

Date	Depth at 7 am	Activity
3-22-13	MIRU	Spud at 3:00 pm
3-23-13	369	WOC
3-24-13	1670	Drilling
3-25-13	2790	Drilling
3-26-13	3360	Drilling
3-27-13	3910	Drilling
3-28-13	4390	Drilling
3-29-13	4750	Drilling
3-30-13	4825	Drilling
3-31-13	4939	TIH after DST No. 2
4-01-13	5023	Drilling
4-02-13	5120	P & A

Surface Casing: 8 5/8" 24# at 369'
 Production Casing: None set

Deviation: 369' - 1/4°, 41' - 1°, 4810' - 1/4°, 5120' - 1°

Bit Record:	Make	Size	Type	Depth In	Depth Out	Hours
JZ	Make	7 7/8"	HA20Q	369	4810	123 1/2
JZ	Make	7 7/8"	HF41BN	4810	5120	22 1/2

Drill Stem Tests:

DST No. 1 4784 to 4810 Formation: Pawnee
 30-45-45-60
 Recovery: 275' Water (Chl 90,000 ppm)
 IHP 2270 FHP 2260
 IFP 13-69 FFP 71-129
 ISIP 1066 FSIP 986
 Temp 119°

DST No. 2 4875 to 4939 Formation: Huck
 30-45-45-60
 Recovery: 15' Mud
 IHP 2409 FHP 2400
 IFP 12-16 FFP 12-16
 ISIP 80 FSIP 110
 Temp 113°

DST No. 3 4936 to 5013 Formation: Mississippi
 30-45-45-60
 Recovery: 2300' GIP
 105' Mud
 IHP 2445 FHP 2422
 IFP 21-34 FFP 40-63
 ISIP 932 FSIP 930
 Temp 114°

Formation	Sample	E-Log	Datum	Well 1	Well 2	Well 3
Anhydrite	1472	1471	+991	+18	+17	+36
B/Anhydrite	1510	1512	+950	+15	+16	+37
Stotler	3477	3476	-1014	+3	+20	+41
Heebner	4131	4128	-1666	+15	+27	+40
Toronto	4150	4146	-1684	+16	+28	+39
Douglas	4205	4202	-1740	+20	+25	+22
Brown Lime	4237	4234	-1772	+21	+32	+38
Lansing	4245	4242	-1780	+21	+34	+39
Muncie Creek	4443	4444	-1978	+7	+15	+30
Stark	4572	4570	-2108	+13	+15	+30
Hustpuckney	4614	4611	-2149	+16	+13	+27
B/Kansas City	4654	4652	-2190	+10	+20	+24
Marmaton	4719	4717	-2255	+9	+4	+18
Altamont	4742	4740	-2278	+8	+4	+16
Pawnee	4794	4794	-2322	+8	+2	+11
Fort Scott	4827	4826	-2364	+7	+5	+13
Cherokee Shale	4840	4839	-2377	+6	+6	+13
Huck	4922	4921	-2459	+10	+8	+2
Atoka	4935	4934	-2472	+8	+6	+7
Morrow Shale	4945	4944	-2482	+5	+3	+3
Mississippi	4977	4976	-2514	+7	+7	-4
Total Depth	5120	5121	-2659			

Well 1: Pickrell Drilling Company Doll F No. 1 C SW NW Sec 15 T27S R24W
 Well 2: Ritchie Exploration, Inc. Potosi No. 2 1662' FNL and 355' FWL Sec 13 T27S R24W
 Well 3: Ritchie Exploration, Inc. Ford Yard-KSR No. 1X 2676' FNL and 630' FWL Sec 12 T27S R24W

Due to the results of the Drill Stem Tests and the electric log calculations, it was decided to plug this test well.

Respectfully submitted,
Macklin M. Armstrong

ROCK TYPES

Cht vari	Dolsec	shale, grn	Carbon Sh
Dolprim	Lmst fw7>	shale, gry	Shcol

ACCESSORIES

MINERAL ▲ Chert, dark P Pyrite ~ Varicolored chert ▲ Chert White	FOSSIL F Fossils < 20% ◊ Oolite ◊ Oomoldic	STRINGER --- Chert --- Shale	TEXTURE C Chalky
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OTHER SYMBOLS

DST
 DST Int
 DST alt
 Core

Printed by GEOstrip VC Striplog version 4.0.7.0 (www.grsi.ca)



