315114

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KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

ORIGINAL

Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 33640
Name: Haas Petroleum, LLC
Address 1: 11551 Ash Street, # 205
Address 2:
City: Leawood State: KS Zip: 66211 +
Contact Person: Mark Haas
Phone: (913) 499-8373
CONTRACTOR: License # 33557
Name: Skyy Drilling, LLC
Wellsite Geologist: GGR, Inc.
Purchaser: Plains Marketing, L.P.

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☑ Oil ☐ WSW ☐ SWD ☐ SIOW
☐ Gas ☐ D&A ☐ ENHR ☐ SIGW
☐ OG ☐ GSW ☐ Temp. Abd.
☐ CM (Coal Bed Methane)
☐ Cathodic ☐ Other (Core, Expl., etc.):

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:
☐ Deepening ☐ Re-perf. ☐ Conv. to ENHR ☐ Conv. to SWD
☐ Conv. to GSW
☐ Plug Back: Plug Back Total Depth
☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

February 7, 2012	February 16, 2012	February 18, 2012
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 207-28039-00-00
Spot Description:
SW - NW - SE - Sec. 35 Twp. 23 S. R. 14 ☑ East ☐ West
1,650 Feet from ☐ North / ☑ South Line of Section
2,310 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☐ SW
County: Woodson
Lease Name: Massey Well #: 6 HP
Field Name: Winterscheid
Producing Formation: Mississippian
Elevation: Ground: 1131 Kelly Bushing:
Total Depth: 1720 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☐ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from: 0'
feet depth to: 40' w/ 20 sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: ppm Fluid volume: bbls
Dewatering method used:
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

AFFIDAVIT
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature:
Title: Operator Date: March 2, 2012

KCC Office Use ONLY
☑ Letter of Confidentiality Received
Date: 3/5/12 - 3/5/14
☐ Confidential Release Date:
☑ Wireline Log Received
☑ Geologist Report Received
☐ UIC Distribution
ALT ☐ I ☑ II ☐ III Approved by: NJ Date: 3-8-12

Side Two

Operator Name: Haas Petroleum, LLC Lease Name: Massey Well #: 6 HP

Sec. 35 Twp. 23 S. R. 14 ☑ East ☐ West County: Woodson

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

Electric Log Submitted Electronically ☐ Yes ☑ No
(If no, Submit Copy)

List All E. Logs Run:

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum

CASING RECORD ☐ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4	8 5/8		40'	Regular	20	
Lonstring	6 3/4	4 1/2	9.5#	1715'	60/40 Poz	225	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

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TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)* ☐ Other *(Specify)*	

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

Skyy Drilling, L.L.C.
Park Place – Becker Building
11551 Ash Street, Suite # 205
Leawood, Kansas 66221
Office (913) 499-8373
Fax (913) 766-1310

March 1, 2012

Company:	Haas Petroleum, LLC 11551 Ash Street, # 205 Leawood, Kansas 66211
Lease:	Massey - # 6 HP
County:	Woodson
Spot:	SW NW SE Sec 35, Twp 23, SR 14 E
Spud Date:	February 7, 2012
API:	15-207-28039-00-00
TD:	1720'

2/6/12:	Build location. Dig pits. Move in rig #2. Rig up. Start to pump water.
2//7/12:	Start up. Finish pumping water. Spud 12 ¼ surface. Drilled from 0' to 15' – shut down for repairs.
2/8/12:	Start up. Continue drilling on surface hole. Drilled from 15' to 41' TD. At TD 40' – cir hole clean. Trip out bit. Rig and ran 40' of 8 5/8 casing. Rig to cement. Cement casing with 20 sacks cement. Shut down for evening, wait on cement to set up.
2/9/12:	Start up. Nipple up. Trip in hole with 6 ¾ PDC bit. Drilled out approx. 5' cement. Under surface drilling @ 10:00 AM. Drilled from 40' to 459'.
2/10/12:	Start up. Trip back in hole. Drilled from 459' to 764'. Pull 4 stand's – shut down for weekend.
2/13/12:	Start up. Trip back in hole with bit. Back to drilling @ 12:00. Drilled from 764' to 1105'.
2/14/12:	At 1105' trip out of hole and re tally pipe. Trip back in hole. Drilled from 1105' to 1314'. Mud up @ 1230'.
2/15/12:	Drilled from 1314' to 1720' TD. Top Miss @ 1650'.
2/16/12:	AT TD 1720' cir hole clean. Mix mud for log. Short trip – 12 stands. Trip back bottom. Cir hole one hour. Rig & lay down drill pipe and collars. Rig up loggers and log hole. After logging shut down.
2/17/12:	Rig up to run casing. Ran 1715' of 4 ½ casing. Rig up cementers, cement and casing. Plug down @ 4:00.

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CONSOLIDATED
Oil Well Services, LLC

ENTERED

TICKET NUMBER 36279
LOCATION Eureka KS
FOREMAN Shannon Feck

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT

CEMENT API # 15-207-28039

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
2-17-12	3451	massey 6-HP	35	23 S	14 E	woodson

CUSTOMER: Haas Petroleum LLC

MAILING ADDRESS: 11551 Ash St Ste 205

CITY: Leawood | STATE: KS | ZIP CODE: 66211

Skyy DRLG

TRUCK #	DRIVER	TRUCK #	DRIVER
445	Dave G		
479	Merle R		
637	Allen B		

JOB TYPE Longstring | HOLE SIZE 6 3/4" | HOLE DEPTH 1720' | CASING SIZE & WEIGHT 4 1/2 @ 9.5#
CASING DEPTH 1715' K.B | DRILL PIPE — | TUBING — | OTHER —
SLURRY WEIGHT 12.8-13.2 | SLURRY VOL 61 Bbl | WATER gal/sk 7.0 | CEMENT LEFT in CASING 10'
DISPLACEMENT 28.5 Bbl | DISPLACEMENT PSI 650 | MIX PSI Bumped Plug to 1100 | RATE 5 BPM

REMARKS: Rig up to 4 1/2" Casing, Break Circulation with 10 Bbl water, mixed 225 sks 60/40 pozmix cement with 5# Kolseal/sk 1# phenoseal/sk & 4% gel. Shut down wash out pump & lines & displace with 28.5 Bbl water. Final Pumping Pressure of 650 psi, bumped plug to 1100 psi. Wait two minutes & release pressure. Plug held good. Good Circulation @ all times. 12 Bbl Cement Slurry to pit, Job Complete

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"Thanks Shannon & Crew"

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	1030.00	1030.00
5406	45	MILEAGE	4.00	180.00
1131	225 SKS	60/40 pozmix Cement	12.55	2823.75
1118B	775 #	Gel @ 4%	.21	162.75
1110A	1125 #	Kol-Seal @ 5#/SK	.46	517.50
1107A	225 #	Phenoseal @ 1#/SK	1.29	290.25
5407A	9.7 Tons	Ton mileage bulk Truck	1.34	584.91
5502C	4 HRS	80 Bbl Vac Truck	90.00/Hour	360.00
1123	3000 gals	City water	16.50/1000 gal	49.50
4404	1	4 1/2 Rubber Plug	45.00	45.00
4310	1	4 1/2 baffle Plate	63.00	63.00
			Sub Total	6106.66
		7.3%	SALES TAX	288.48
			ESTIMATED TOTAL	6395.14

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Ravin 3737

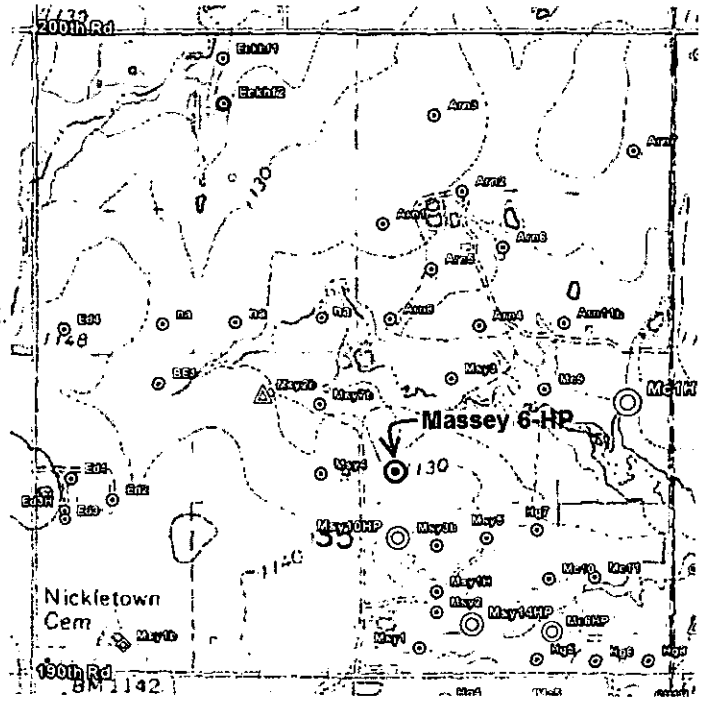
AUTHORIZTION [signature] TITLE Tool Pusher DATE 2/17/12

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form

Geological Wellsite Report

By David Griffin, RG
GGR (Griffin Geological Resources), Inc.
February 21, 2012

Well Info: Massey 6-HP, Producer
SW NW SE/4
1650' fsl, 2310' fel
Section 35, T23S-R14E
Woodson County, KS
API No. 15-207-28039
GPS Coordinates:
W-95.838217, N38.000726
Datum: KB 1135', GL1131' est.
RTD: 1720', KB
Status: Pipe Set



Operator: Haas Petroleum, LLC
11551 Ash Street, Suite 205
Leawood, Kansas 66211
Operator License No.: 33640
Mark Haas, President

Contractor: Skyy Drilling, Rig #2, 4' KB
Yates Center, Kansas, 66865
Contractor License No.: 33557
Owner: Mark Haas

Objectives: Primary objective, evaluate the Dolomite First Porosity Break of the Mississippian
Secondary objective, evaluate the Upper Squirrel Sandstone

Drilling Notes:

February 7, 2012, Spud, Set $8\frac{5}{8}$" Surface Casing
February 16, 2012, Reached Total Depth of 1720', KB
One $6\frac{3}{4}$" PDC Bit
Native fresh water mud to 1255', Chemical Gel Mud 1255' to TD

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Geological Supervision:

David Griffin, RG, provided wellsite supervision on February 14, 15, and 16, 2012. Drilling was witnessed from 1255' to 1720', samples were microscopically examined from 1255' to 1720'.

Cement Co.: Consolidated Oil Well Service Co., Contractor License No.: 33961

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Geological Datums:

Haas Petroleum, LLC Massey 6-HP SW NW SE/4 Sec. 35-T23S-R14E				Brummet et al Massey 5 NE SW SE/4 Sec. 35-T23S-R14E	
Zones of Interest	Open-Hole Log Tops KB Elev. 1135'		STRC COMP	Driller's Log GL Elev. 1123'	
	Depth	Subsea		Depth	Subsea
Base Kansas City	929	206		na	
Cherokee	1260	-125	+4	1252	-129
Upper Squirrel SS	1266	-131	+1	1255	-132
Base SS	1277	-142		1262	-139
Lower Squirrel SS	absent			absent	
V-Shale (Base Ardmore LS)	1366	-231		na	
Chert	1623	-488		na	
Top Mississippian	1629	-494	0	1617	-494
Miss. Dolomite, Pay Zone	1636	-501	+4	1629	-506
Base Pay Zone	1650	-515		DNP	
Rotary Total Depth	1720	-585		1633	-510

Structural Comparisons:

Structural comparison of the Top of the Mississippian Dolomite Pay Zone indicates that Massey 6-HP is 4' high to Massey 5, a producer lying ~940' to the southeast.

Logs, Gas Detection, Cores, DST's:

An open-hole log was ran by Tucker Wireline Services, total gas detection was performed from 1255' to 1720', no cores or DST's were obtained for this well.

Descriptions of Oil Show Zones:

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Upper Squirrel SS

1266' to 1277', GL, (-131'), 8' of Porosity

Sandstone, dark gray, very fine grained, good porosity from 1266' to 1270' and 1273' to 1277', good odor, very good show of heavy free oil rinsing from samples and bleeding into sample bag; 40%, siltstone, gray, sandy, no show. Total gas readings reached a maximum of 64 units above back ground levels. Saltwater calculations averaged in the low to mid 40% throughout the porosity zones. The Upper Squirrel sandstone has good potential for pay zone.

Mississippian Dolomite, Pay Zone

1632' to 1650', KB, (-501'), 12' Potential Pay

*1632' to 1640', Very Good Pay Zone Potential
Dolomite, 70%, tan, very fine to fine crystalline, fair to good intercrystalline and vugular porosity, strong oil odor, very good to excellent show of light gravity free oil rinsing from samples and in sample bags, 70% medium to bright fluorescence; Chert, 20%, light gray, sharp, no show in chert. Saltwater calculations ranged from 58.0% to 75.7%. Total gas reading elevated 15 units above back ground levels.

1640' to 1643', Not Pay Zone
Dolomite, tan to minor light brown, very fine to fine crystalline, fair porosity, slight odor, fair show of oil in 3% of sample, trace show of free oil overall rinsing from samples and in sample bags, 3-5% bright fluorescence; Chert, 20%, light gray, sharp.

1643' to 1646', Not Pay Zone
Dolomite, 60% tan, very fine to fine crystalline, fair to good porosity, good show of free oil in 10% of sample, 10% bright fluorescence; Chert, 20%, light gray, sharp.

*1646' to 1650', Very Good Pay Zone Potential
Dolomite, 70%, tan to light tannish-gray, very fine to fine crystalline, fair to good intercrystalline and fair to very good vugular porosity, strong oil odor, very good to excellent show of light gravity free oil rinsing from samples and in sample bags; 70% medium to bright fluorescence; Chert, 20%, light gray, sharp. Saltwater calculations are not accurate in this zone since it is too thin. Total gas readings did not rise above background levels.

Very Good potential for pay zone lies from 1632' to 1640', and 1646' to 1650', KB.

Summary:

Massey 6-HP contained Upper Squirrel Sandstone from 1266' to 1270' and 1273' to 1277' with a very good show of heavy free oil. The Upper Squirrel has good potential for pay zone. The Mississippian Dolomite contained 12' of potential pay zone from 1632' to 1640' and 1646' to 1650' with very good to excellent shows of light gravity free oil. The dolomite pay zone was 4' high to Massey 5, a producer 940' to the southeast. $4\frac{1}{2}$" production casing was set to ~1700' test the Mississippian Dolomite.

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Recommendations:

It is recommended that the Mississippian Dolomite be perforated from 1632' to 1639', KB (1625' to 1632', GL) and from 1647.5' to 1650.5', KB, (1640.5' to 1643.5', GL) and swab tested naturally. Acid treatment should be performed if fluid volume is not sufficient.

Respectfully Submitted,

DAVID B. GRIFFIN LICENSED 498 KANSAS GEOLOGIST

David Griffin, RG, President
GGR (Griffin Geological Resources), Inc.
Lawrence, Kansas

Attachment: Sample Log

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Massey 6-HP

Upper Squirrel Sandstone

Model = Archie

PARAMETERS		ZN	DEPTH	THICK	RT	PHI	RWA	RO	MA	SW	BVW	VSH	PAY	FLOW
X		1	1255	0.5	7.42	22.8%	0.52					1.053	0	
Y		2	1255.5	0.5	7.84	18.4%	0.37	2.53	2.47	56.8%	0.104	0.806	0	
A	1	3	1256	0.5	8.63	11.9%	0.19	5.52	2.01	79.9%	0.095	0.565	0	
M	1.8	4	1256.5	0.5	10.1	7.3%	0.09	13.31	1.69	115.1%	0.084	0.315	0	
N	2	5	1257	0.5	12.2	5.1%	0.06	25.40	1.55	144.4%	0.074	0.189	0	
RW	0.12	6	1257.5	0.5	14.6	4.3%	0.05	34.73	1.52	154.2%	0.066	0.217	0	
CTHK	776.5	7	1258	0.5	15.4	4.6%	0.06	30.10	1.58	139.7%	0.065	0.296	0	
AVPHI	0.17	8	1258.5	0.5	13.6	5.4%	0.07	23.26	1.62	130.8%	0.070	0.331	0	
FTOIL	8.09	9	1259	0.5	10.9	5.9%	0.07	19.87	1.59	135.3%	0.079	0.394	0	
PAYFEET	70	10	1259.5	0.5	8.63	7.2%	0.07	13.81	1.62	128.5%	0.091	0.701	0	
P		11	1260	0.5	7.13	10.1%	0.12	7.38	1.79	101.7%	0.103	1.450	0	
Q		12	1260.5	0.5	6.25	14.4%	0.19	3.91	2.04	79.1%	0.114	2.579	0	
R		13	1261	0.5	5.74	18.0%	0.26	2.63	2.25	67.7%	0.122	3.387	0	
DMIN		14	1261.5	0.5	5.53	19.5%	0.29	2.28	2.34	64.3%	0.125	3.178	0	
DMAX		15	1262	0.5	5.57	19.2%	0.28	2.35	2.32	64.9%	0.124	2.273	0	
GL		16	1262.5	0.5	5.84	18.3%	0.27	2.56	2.29	66.1%	0.121	1.452	0	
TD		17	1263	0.5	6.35	17.3%	0.27	2.83	2.26	66.7%	0.119	0.959	0	
BHT		18	1263.5	0.5	7.07	15.7%	0.25	3.36	2.20	69.0%	0.113	0.711	0	
ST		19	1264	0.5	7.99	14.4%	0.24	3.92	2.17	70.0%	0.101	0.613	0	
RMF		20	1264.5	0.5	8.99	14.2%	0.27	4.04	2.21	67.0%	0.095	0.636	0	
RMFT		21	1265	0.5	9.92	15.1%	0.33	3.60	2.34	60.3%	0.091	0.668	0	
		22	1265.5	0.5	10.5	16.2%	0.40	3.17	2.46	54.9%	0.089	0.637	0.04	
CUT-OFFS		23	1266	0.5	10.8	16.9%	0.44	2.95	2.53	52.1%	0.088	0.606	0.04	
PHICUT	0.16	24	1266.5	0.5	11	17.7%	0.48	2.72	2.60	49.8%	0.088	0.636	0.04	
SWCUT	0.6	25	1267	0.5	11.1	18.4%	0.52	2.54	2.67	47.8%	0.088	0.669	0.05	
VSHCUT	0.7	26	1267.5	0.5	11.3	19.0%	0.57	2.39	2.73	46.0%	0.087	0.649	0.05	
BVWCUT	0.1	27	1268	0.5	11.8	19.0%	0.59	2.39	2.76	45.1%	0.086	0.619	0.05	
		28	1268.5	0.5	12.4	18.9%	0.62	2.42	2.78	44.1%	0.083	0.619	0.05	
Colors:	ON	29	1269	0.5	13.2	18.8%	0.65	2.43	2.81	43.0%	0.081	0.650	0.05	
		30	1269.5	0.5	13.9	18.0%	0.63	2.64	2.77	43.6%	0.078	0.698	0.05	
		31	1270	0.5	14.4	16.8%	0.58	2.98	2.68	45.6%	0.077	0.678	0.05	
		32	1270.5	0.5	14.5	16.4%	0.56	3.10	2.65	46.3%	0.076	0.640	0.04	
		33	1271	0.5	14.3	16.8%	0.57	2.99	2.68	45.7%	0.077	0.679	0.05	
		34	1271.5	1.5	14.1	16.9%	0.57	2.95	2.68	45.8%	0.077	0.756	0	
		35	1272	2.5	13.9	16.7%	0.55	3.02	2.65	46.6%	0.078	0.791	0	
		36	1272.5	3.5	13.8	16.8%	0.55	2.99	2.66	46.5%	0.078	0.761	0	
		37	1273	4.5	13.8	17.6%	0.60	2.75	2.73	44.6%	0.078	0.678	0.44	
		38	1273.5	5.5	13.8	18.6%	0.67	2.48	2.82	42.4%	0.079	0.541	0.59	
		39	1274	6.5	13.6	19.3%	0.70	2.33	2.87	41.3%	0.080	0.447	0.73	
		40	1274.5	7.5	13.3	19.9%	0.72	2.20	2.91	40.7%	0.081	0.449	0.88	
		41	1275	8.5	12.8	20.6%	0.74	2.07	2.95	40.2%	0.083	0.445	1.05	
		42	1275.5	9.5	12.1	20.9%	0.73	2.00	2.95	40.6%	0.085	0.475	1.18	
		43	1276	10.5	11.4	21.1%	0.69	1.98	2.92	41.8%	0.088	0.577	1.29	
		44	1276.5	11.5	10.5	21.0%	0.63	1.99	2.87	43.5%	0.091	0.676	1.36	
		45	1277	12.5	9.62	20.1%	0.54	2.16	2.73	47.4%	0.095	0.769	0	
		46	1277.5	13.5	8.86	18.3%	0.42	2.55	2.53	53.6%	0.098	0.919	0	
		47	1278	14.5	8.24	17.1%	0.34	2.88	2.39	59.1%	0.101	1.054	0	
		48	1278.5	15.5	7.77	16.8%	0.31	2.99	2.33	62.0%	0.104	1.069	0	
		49	1279	16.5	7.48	17.3%	0.32	2.82	2.36	61.4%	0.106	0.996	0	
		50	1279.5	17.5	7.33	18.9%	0.36	2.42	2.47	57.4%	0.108	0.935	0	
		51	1280	18.5	7.28	20.4%	0.42	2.10	2.58	53.7%	0.110	0.901	0	
		52	1280.5	19.5	7.29	21.0%	0.44	2.00	2.63	52.4%	0.110	0.872	0	
		53	1281	20.5	7.3	20.7%	0.43	2.04	2.61	52.9%	0.110	0.854	0	
		54	1281.5	21.5	7.32	20.1%	0.41	2.15	2.57	54.1%	0.109	0.870	0	
		55	1282	22.5	7.34	19.9%	0.40	2.19	2.55	54.6%	0.109	0.873	0	
		56	1282.5	23.5	7.35	20.2%	0.41	2.15	2.57	54.0%	0.109	0.846	0	
		57	1283	24.5	7.33	20.4%	0.42	2.09	2.59	53.4%	0.109	0.863	0	
		58	1283.5	25.5	7.29	20.6%	0.42	2.06	2.60	53.2%	0.110	0.879	0	
		59	1284	26.5	7.22	20.7%	0.42	2.04	2.60	53.2%	0.110	0.852	0	
		60	1284.5	27.5	7.14	20.4%	0.41	2.09	2.57	54.1%	0.111	0.883	0	
		61	1285	28.5	7.07	20.1%	0.39	2.15	2.54	55.1%	0.111	0.925	0	
		62	1285.5	29.5	7.04	19.3%	0.37	2.31	2.48	57.3%	0.111	0.965	0	
		63	1286	30.5	7.06	18.3%	0.33	2.54	2.40	60.0%	0.110	1.058	0	
		64	1286.5	31.5	7.1	17.7%	0.32	2.70	2.36	61.6%	0.109	1.161	0	
		65	1287	32.5	7.15	17.7%	0.32	2.72	2.36	61.7%	0.109	1.180	0	
		66	1287.5	33.5	7.19	18.1%	0.33	2.60	2.40	60.1%	0.109	1.137	0	
		67	1288	34.5	7.22	18.5%	0.35	2.50	2.43	58.9%	0.109	1.086	0	
		68	1288.5	35.5	7.24	18.7%	0.35	2.45	2.45	58.2%	0.109	1.052	0	
		69	1289	36.5	7.23	19.3%	0.37	2.33	2.49	56.7%	0.109	1.061	0	
		70	1289.5	37.5	7.22	19.3%	0.37	2.33	2.49	56.8%	0.109	1.080	0	
		71	1290	38.5	7.2	18.7%	0.35	2.45	2.44	58.3%	0.109	1.109	0	

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Massey 6-HP

Mississippian Dolomite

Model = Archie

PARAMETERS	
X	
Y	
A	1
M	2
N	2
RW	0.11
CTHK	62.5
AVPHI	0.16
FTOIL	0.58
PAYFEET	9
P	
Q	
R	
DMIN	
DMAX	
KB	
TD	
BHT	
ST	
RMF	
RMFT	

CUTOFFS	
PHICUT	0.15
SWCUT	0.65
VSHCUT	0.8
BVWCUT	0.07

Colors:

RSH
PHISH

Lat-Long to UTM
LONG
LAT
UTMZONE
PRJZONE
UTM X
UTM Y

SIM PARAMETERS
GR PAY
NET PAY
PAY TOP
AVG. PHI
PERM X
PERM Y
PERM Z
OIL SAT.
WTR SAT.
INT PR

LANDGRID
TWN
SEC
Ft North
Ft South
Ft East
Ft West

CROSS SECTION
DATUM 1
DATUM 2
No. of Prf

Perf1 Top
Perf1 Bot

ZN	DEPTH	THK	RT	PHI	RWA	RO	MA	SW	BVW	VSH	PAY
1	1620	0.5	9.88	18.7%	0.35	3.13	2.69	56.3%	0.106	1.407	0
2	1620.5	0.5	9.72	26.4%	0.68	1.58	3.36	40.3%	0.106	1.281	0
3	1621	0.5	9.3	37.4%	1.30	0.79	4.51	29.1%	0.109	1.061	0
4	1621.5	0.5	8.93	43.7%	1.71	0.58	5.32	25.4%	0.111	0.955	0
5	1622	0.5	8.76	39.6%	1.37	0.70	4.73	28.3%	0.112	1.029	0
6	1622.5	0.5	8.84	31.3%	0.87	1.12	3.78	35.6%	0.112	1.071	0
7	1623	0.5	9.09	24.9%	0.56	1.78	3.17	44.3%	0.110	0.983	0
8	1623.5	0.5	9.33	21.8%	0.45	2.31	2.92	49.7%	0.109	0.896	0
9	1624	0.5	9.54	21.1%	0.42	2.48	2.87	51.0%	0.107	0.854	0
10	1624.5	0.5	9.8	19.4%	0.37	2.92	2.74	54.8%	0.106	0.809	0
11	1625	0.5	10.27	16.0%	0.26	4.28	2.48	64.6%	0.103	0.758	0
12	1625.5	0.5	11.01	13.9%	0.21	5.67	2.34	71.8%	0.100	0.826	0
13	1626	0.5	11.82	14.5%	0.25	5.25	2.42	66.7%	0.096	1.096	0
14	1626.5	0.5	12.19	15.8%	0.31	4.38	2.55	60.0%	0.095	1.392	0
15	1627	0.5	11.61	16.6%	0.32	3.99	2.59	58.7%	0.097	1.551	0
16	1627.5	0.5	10.17	16.4%	0.27	4.07	2.51	63.3%	0.104	1.510	0
17	1628	0.5	8.5	15.2%	0.20	4.77	2.31	74.9%	0.114	1.346	0
18	1628.5	0.5	7.15	14.6%	0.15	5.18	2.17	85.1%	0.124	1.142	0
19	1629	0.5	6.15	15.8%	0.15	4.40	2.18	84.6%	0.134	0.818	0
20	1629.5	0.5	5.47	17.8%	0.17	3.48	2.26	79.7%	0.142	0.477	0
21	1630	0.5	5.06	18.1%	0.17	3.34	2.24	81.3%	0.147	0.270	0.02
22	1630.5	0.5	4.9	17.2%	0.14	3.72	2.16	87.1%	0.150	0.195	0
23	1631	0.5	4.98	16.8%	0.14	3.90	2.14	88.5%	0.149	0.191	0
24	1631.5	0.5	5.28	17.4%	0.16	3.62	2.22	82.8%	0.144	0.200	0.01
25	1632	0.5	5.77	18.2%	0.19	3.31	2.33	75.7%	0.138	0.212	0.02
26	1632.5	0.5	6.46	18.8%	0.23	3.13	2.43	69.6%	0.130	0.251	0.03
27	1633	0.5	7.31	18.9%	0.26	3.09	2.52	65.0%	0.123	0.332	0
28	1633.5	0.5	8.34	18.4%	0.28	3.24	2.56	62.3%	0.115	0.406	0
29	1634	0.5	9.34	18.0%	0.30	3.38	2.59	60.2%	0.109	0.402	0
30	1634.5	0.5	9.83	17.3%	0.29	3.67	2.56	61.1%	0.106	0.308	0
31	1635	0.5	9.39	16.4%	0.25	4.09	2.46	66.0%	0.108	0.221	0.03
32	1635.5	0.5	8.23	17.0%	0.24	3.82	2.43	68.1%	0.116	0.198	0.03
33	1636	0.5	7.06	18.8%	0.25	3.13	2.49	66.6%	0.125	0.201	0.03
34	1636.5	0.5	6.17	21.2%	0.28	2.45	2.59	63.0%	0.134	0.190	0.04
35	1637	0.5	5.81	23.5%	0.31	1.99	2.72	59.5%	0.140	0.186	0.05
36	1637.5	0.5	5.29	24.9%	0.33	1.78	2.78	58.0%	0.144	0.210	0.05
37	1638	0.5	5.08	25.3%	0.32	1.72	2.79	58.2%	0.147	0.229	0.05
38	1638.5	0.5	4.82	24.7%	0.29	1.80	2.70	61.2%	0.151	0.194	0.05
39	1639	0.5	4.49	23.8%	0.25	1.95	2.58	65.8%	0.157	0.161	0.04
40	1639.5	0.5	4.16	22.9%	0.22	2.09	2.47	70.9%	0.163	0.166	0.03
41	1640	0.5	3.85	21.2%	0.17	2.44	2.29	79.6%	0.169	0.167	0.02
42	1640.5	0.5	3.62	20.2%	0.15	2.71	2.18	85.5%	0.174	0.154	0
43	1641	0.5	3.46	20.8%	0.15	2.54	2.20	85.1%	0.178	0.150	0
44	1641.5	0.5	3.31	22.6%	0.17	2.15	2.29	80.6%	0.182	0.166	0
45	1642	0.5	3.16	23.6%	0.18	1.97	2.33	79.0%	0.187	0.211	0
46	1642.5	0.5	3.06	22.2%	0.15	2.23	2.21	85.4%	0.190	0.266	0
47	1643	0.5	3.05	19.9%	0.12	2.77	2.06	95.7%	0.190	0.275	0
48	1643.5	0.5	3.18	18.9%	0.11	3.07	2.02	98.7%	0.185	0.248	0
49	1644	0.5	3.46	18.8%	0.12	3.10	2.07	94.5%	0.178	0.242	0
50	1644.5	0.5	3.88	18.9%	0.14	3.07	2.14	88.0%	0.168	0.265	0
51	1645	0.5	4.35	18.0%	0.14	3.38	2.15	88.2%	0.159	0.268	0
52	1645.5	0.5	4.78	15.5%	0.11	4.58	2.02	97.8%	0.152	0.228	0
53	1646	0.5	5.11	12.8%	0.08	6.72	1.87	114.7%	0.147	0.184	0
54	1646.5	0.5	5.29	12.1%	0.08	7.48	1.84	118.6%	0.144	0.162	0
55	1647	0.5	5.32	13.8%	0.10	5.77	1.96	104.1%	0.144	0.147	0
56	1647.5	0.5	5.17	16.7%	0.14	3.97	2.15	87.6%	0.146	0.120	0
57	1648	0.5	4.84	19.6%	0.19	2.85	2.33	76.7%	0.151	0.100	0.02
58	1648.5	0.5	4.43	21.6%	0.21	2.36	2.41	73.0%	0.158	0.098	0.03
59	1649	0.5	4.03	21.7%	0.19	2.33	2.36	76.0%	0.165	0.104	0.03
60	1649.5	0.5	3.75	20.9%	0.16	2.52	2.25	82.0%	0.171	0.111	0
61	1650	0.5	3.61	20.1%	0.15	2.73	2.18	85.6%	0.175	0.122	0
62	1650.5	0.5	3.59	19.6%	0.14	2.80	2.15	86.4%	0.176	0.168	0
63	1651	0.5	3.67	19.4%	0.14	2.91	2.14	88.1%	0.173	0.245	0
64	1651.5	0.5	3.79	18.7%	0.13	3.15	2.11	91.2%	0.170	0.295	0
65	1652	0.5	3.94	18.2%	0.13	3.31	2.10	91.6%	0.167	0.308	0
66	1652.5	0.5	4.06	17.9%	0.13	3.42	2.10	91.8%	0.165	0.299	0
67	1653	0.5	4.18	17.6%	0.13	3.56	2.09	92.3%	0.162	0.273	0
68	1653.5	0.5	4.27	16.9%	0.12	3.87	2.06	95.2%	0.161	0.228	0
69	1654	0.5	4.33	16.4%	0.12	4.09	2.03	97.2%	0.159	0.201	0
70	1654.5	0.5	4.37	16.2%	0.11	4.22	2.02	98.7%	0.159	0.215	0
71	1655	0.5	4.4	16.1%	0.11	4.27	2.02	98.5%	0.158	0.255	0
72	1655.5	0.5	4.46	16.3%	0.12	4.14	2.04	95.4%	0.157	0.269	0
73	1656	0.5	4.58	16.3%	0.12	4.16	2.05	95.9%	0.155	0.237	0
74	1656.5	0.5	4.77	16.0%	0.12	4.32	2.05	95.2%	0.152	0.244	0
75	1657	0.5	5.1	15.6%	0.12	4.51	2.07	94.0%	0.147	0.293	0
76	1657.5	0.5	5.59	14.9%	0.12	4.98	2.06	94.4%	0.140	0.267	0
77	1658	0.5	6.32	12.7%	0.10	6.80	1.96	103.3%	0.132	0.191	0
78	1658.5	0.5	7.29	9.9%	0.07	11.26	1.81	124.3%	0.123	0.175	0
79	1659	0.5	8.57	8.2%	0.06	16.46	1.74	135.6%	0.113	0.226	0
80	1659.5	0.5	9.96	8.1%	0.06	16.93	1.79	130.4%	0.105	0.246	0
81	1660	0.5	11.25	7.8%	0.07	17.92	1.82	126.2%	0.099	0.188	0
82	1660.5	0.5	12.12	6.7%	0.05	24.50	1.74	134.2%	0.095	0.110	0
83	1661	0.5	12.53	5.7%	0.04	33.98	1.65	144.7%	0.094	0.073	0
84	1661.5	0.5	12.54	6.0%	0.05	30.56	1.68	135.1%	0.094	0.118	0
85	1662	0.5	12.23	7.7%	0.07	18.43	1.84	122.8%	0.095	0.232	0
86	1662.5	0.5	11.83	9.8%	0.11	11.57	2.00	95.7%	0.097	0.309	0
87	1663	0.5	10.94	10.8%	0.13	9.40	2.07	92.7%	0.100	0.272	0
88	1663.5	0.5	10.44	11.0%	0.13	9.07	2.06	93.2%	0.103	0.186	0
89	1664	0.5	10.35	11.0%	0.13	9.07	2.06	93.6%	0.103	0.129	0
90	1664.5	0.5	10.69	11.4%	0.14	8.49	2.11	89.1%	0.101	0.105	0
91	1665	0.5	11.35	12.2%	0.17	7.38	2.20	80.7%	0.098	0.101	0
92	1665.5	0.5	11.9	11.8%	0.16	7.94	2.19	81.7%	0.096	0.102	0
93	1666	0.5	11.99	9.4%	0.11	12.34	1.99	101.5%	0.096	0.086	0
94	1666.5	0.5	11.64	6.8%	0.05	23.82	1.73	143.1%	0.097	0.083	0
95	1667	0.5	11.23	5.5%	0.03	36.56	1.59	180.4%	0.099	0.147	0
96	1667.5	0.5	10.89	6.3%	0.04	27.85	1.66	159.3%	0.101	0.259	0
97	1668	0.5	10.52	8.4%	0.07	15.72	1.84	122.2%	0.102	0.370	0
98	1668.5	0.5	10.03	10.2%	0.10	10.57	1.98	102.7%	0.105	0.544	0
99	1669	0.5	9.54	11.4%	0.12	8.40	2.06	98.3%	0.107	0.771	0
100	1669.5	0.5	9.24	12.7%	0.15	6.84	2.15	88.0%	0.109	0.886	0
101	1670	0.5	9.27	13.3%	0.16	6.20	2.20	81.8%	0.109	0.927	0
102	1670.5	0.5	9.72	13.5%	0.18	6.08	2.23	79.1%	0.106	1.028	0
103	1671	0.5	10.51	14.0%	0.21	5.63	2.32	73.2%	0.102	1.107	0
104	1671.5	0.5	11.55	14.3%	0.24	5.41	2.39	68.4%	0.098	1.110	0
105	1672	0.5	12.78	13.9%	0.25	5.69	2.41	66.7%	0.093	1.088	0
106	1672.5	0.5	14.02	14.1%	0.28	5.54	2.47	62.9%	0.089	1.063	0
107	1673	0.5	15.18	15.0%	0.34	4.88	2.60	56.7%	0.085	1.054	0
108	1673.5	0.5	16.11	15.7%	0.40	4.49	2.69	52.8%	0.083	1.062	0
109	1674	0.5	16.62	15.1%	0.38	4.83	2.65	53.9%	0.081	1.057	0
110	1674.5	0.5	16.73	14.2%	0.34	5.49	2.57	57.3%	0.081	1.054	0
111	1675	0.5	16.58	13.7%	0.31	5.89	2.52	59.6%	0.081	-10.093	0
112	1675.5	0.5	16.25	13.3%	0.29	6.25	2.47	62.0%	0.082	-10.093	0
113	1676	0.5	15.86	13.2%	0.28	6.32	2.45	63.1%	0.083	-10.093	0
114	1676.5	0.5	15.42	13.0%	0.26	6.55	2.42	65.2%	0.084	-10.093	0
115	1677	0.5	14.86	12.2%	0.22	7.37	2.33	70.4%	0.086	-10.093	0
116	1677.5	0.5	14.19	11.9%	0.20	7.77	2.28	74.0%	0.088	-10.093	0
117	1678	0.5	13.51	12.6%	0.21	6.98	2.32	71.9%	0.090	-10.093	0
118	1678.5	0.5	12.9	13.7%	0.24	5.87	2.40	67.4%	0.092	-10.093	0
119	1679	0.5	12.45	14.0%	0.24	5.60	2.41	67.1%	0.094	-10.093	0
120	1679.5	0.5	12.21	13.3%	0.21	6.27	2.33	71.6%	0.095	-10.093	0
121	1680	0.5	12.18	12.4%	0.19	7.14	2.26	76.6%	0.095	-10.093	0
122	1680.5	0.5	12.24	12.4%	0.19	7.17	2.26	76.5%	0.095	-10.093	0
123	1681	0.5	12.22	12.8%	0.20	6.72	2.29	74.2%	0.095	-10.093	0
124	1681.5	0.5	12.17	13.1%	0.21	6.45	2.31	72.8%	0.095	-10.093	0
125	1682	0.5	12.21	13.1%	0.21	6.40	2.32	72.4%	0.095	-10.093	0

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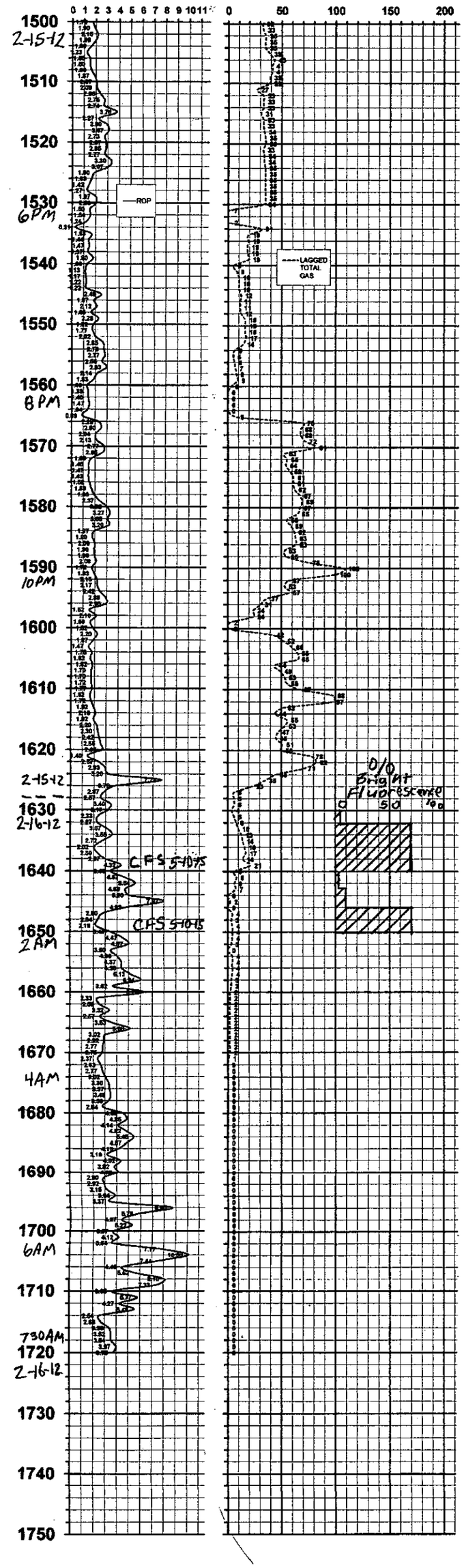
Depth	David Griffin, GGR Inc., Lawrence, KS		Lithology	Shows	Well: Massey 6-HP	Pg. 2 of 2
	Penetration Rate (ROP)	Lagged Total Gas			Location: SW NW SE/4, 1650' fsl & 2310' fel, Section 35-T23S-R14E, Wdn Co.	Datum/Elev. KB 1135'
	Min./Foot	Units			Sample Descriptions (Lagged)	Tops/Remarks



sh, vlg to vdg

sh, mostly blk, mingy, sh, vlg

sh, vlg, g, minor vdg

sh, gy to vdkgy, min bk, 20%

sh, mstly bk, carb

sh, ltgy-tan, 30%, gy to bk 65%
SS, 5%, lam, vf, silty, NS, prØ

sh, vdkgy to bk, min ltgy-tn

sh, vdg to bk

coal
sh, vdkgy to bk, carbonaceous

sh, AA, silty strks

coal
sh, ltgy, bk, 40%

sh, vltgy, 70%; shly slts 15%, ltgy-tn
sh, bk, 15%, coal also
cht, <1%, vlg, shp; slts, 60%, lt tn-gy, sdy; sh, 20% vlg-dk gy, sh, bk, 10%, NS

1629-32, Dol, lt gy-tn, vf xln, prØ, NS; Dol, 3%, tn, fxln, gd vug Ø, gd sFO; gd odor, gd show, tr Free Oil, cht, 20%

1632-40, Dol, tn, 70%, Vf-fxln, fr-gd vug Ø
* Pay Zone fr-gd ix Ø, strong odor, VGd-Exc SFO rinsing tin smpl bag, cht, 20%
lt gy, shp, NS

1640-43, Dol, tn to Bn (minor), fr Ø, frshow in ~3%
cht, 20%, vlg to o-wh, shp

1643-46, Dol, tn, 60%, NS; 10%, w/gd Ø+ GSFO, Fr odor; cht 20%

1646-50, Dol, 70%, tn to lt tn-gy, fr-gd ix Ø, fr-
** Pay Zone Vgd vug Ø, Strg odor, v-gd-Exc SFO
cht, 30%, qtz xtals

1650-55, Dol, lt tn-gy, fr Ø, poor show; cht, 20-50%, qtz xtals

Dol, lt tn-gy, calc, fr Ø, min glauc; LS 10-20%, tn f-mxln, pr Ø, NS

slt st, dk gy, vf-f sdy, qtz, tr Ø, abd carb, fr Ø, NS

Dol, tn to vlg; fxln, gd Ø, minor dk bn earthy stain, No odor; cht 10%; LS, 10%
lt tn-gy, f-m xln, tr glauc, NS

Dol, vlt gy to lt tn-gy, v min shly pale tn-gy
fr-gd Ø, vf-fxln, cht, 10%

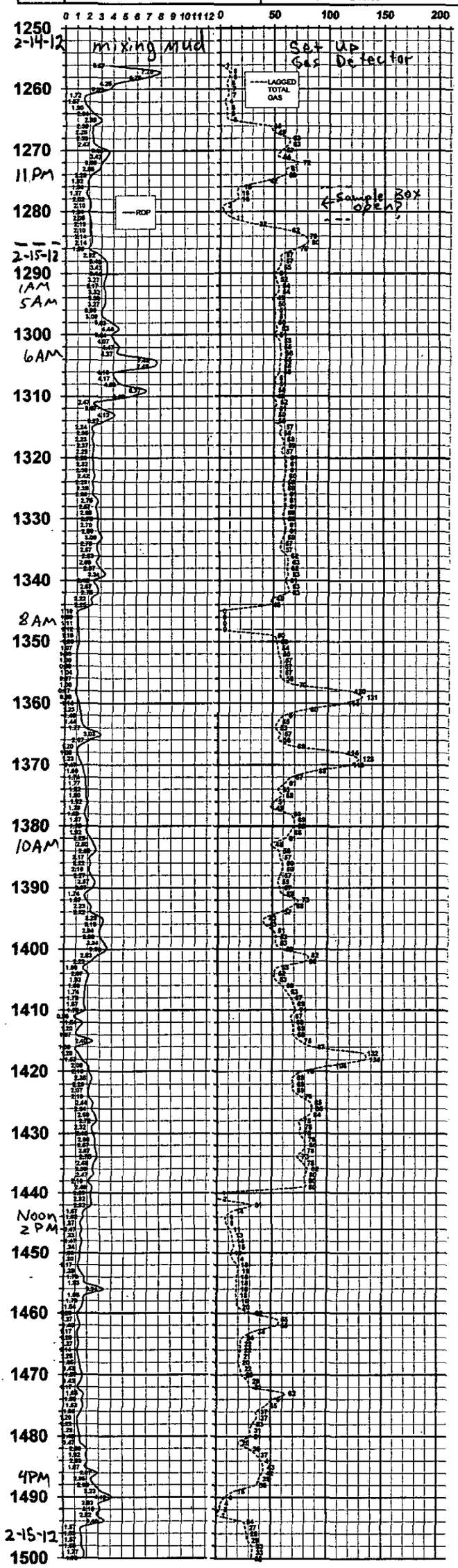
LS, lt tn-gy to gy, pyr mottling, grnstone
pr Ø, cht o-w to tn, 10%, NS

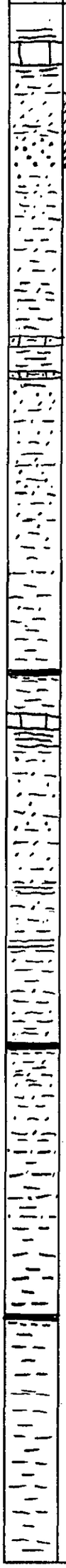
cht, 60%, o-w to tn, w/ tan specs, shp,
Dol, 25%, lt tn-gy, gd vug Ø, NS
LS, 15%, gnstn, gy to dk bn, f-mxln
pr Ø, NS

Open-Hole Log Ran by Tucker Wireline
2-16-12

Chert
1623 (-488)
Mississippi Dol
1629 (-494)
Miss Dol, Pay Zn
1636 (-501)
Base Pay Zone
1650 (-515)
RTD
1720 (-585)

Depth	David Griffin, GGR Inc., Lawrence, KS		Lithology	Shows	Well: Massey 6-HP	Pg. 1 of 2
	Penetration Rate (ROP) Min./Foot	Lagged Total Gas Units			Location: SW NW SE/4, 1650' fsl & 2310' fel, Section 35-T23S-R14E, Wdn Co.	Datum/Elev. KB 1135'
					Sample Descriptions (Lagged)	Tops/Remarks





Operator: Haas Petroleum, LLC

Drlg Contr: Skyy Drilling, LLC, Rig 2

API No.: 15-207-28039

SS, dk gyish, vf gn, fr-gd ø, vgd odor, vg show Hvy Free Oil; sltst, ltgy, lmy vgd Bleeding

ss, AA, vsh Hvy Oil, vg Bleed

siltst, gy, sdy, abd carb, NS

sltst, gy, mtc + sh, gy, silty

sltst + sh, AA

sh, dk gy, mtc

LS, ltgy, slty, pyr,

LS, AA, sdy

SS, ltgy, slty, pr-fr ø, mtc, NS
intbd w/ sh, gy, sdy, slt + mtc

sh, gy, sdy, slty, mtc

sh, dk gy, vf slty, min mtc

sh, dk, gy, pltly stly

sh, gy to vdgy

sh, dk gy to vdgy

coal

sh, gy to vlgy

LS, tn-gy, micrite to f x lu, pr ø, NS

sh, blk, coaly

siltst, ltgy, ptly sdy, ptly v. calc, fr ø, NS

sltst, gy, sli sdy, mtc

sh, vdkgy

sh, bk

sh, gy to vdkgy, sltst beds

sh, gy silt AA, siderite 50%, dk tn claystn, 10%

coal

siltst, vlg, claystn 15% tan

sh, dk gy, s + mtc

sh, dk gy, clayey

claystn, dkb

coal, sh, bk

sh, vlg to vdgy

sh, bk

GL 1131' est

6¾" PDC Bit

Cherokee 1260 (-125)

u. Squirrel SS 1266 (-131)

~1292'

Work On Rig

V-Shale (Bse Ardmlo) 1366 (-231)

Mix More Mud