ORIGINAL

### Kansas Corporation Commission Oil & Gas Conservation Division

Form ACO-1 September 1999 Form Must Be Typed

# WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

Operator: License #	API No. 15 - 207- 27185-00-00
Name:_Haas Petroleum, LLC	County: Woodson
Address:800 West 47th Street, Suite #409	NE_SW_SW_SW_Sec. 7 Twp. 24 S. R. 14 ▼ East West
City/State/Zip: Kansas City, MO 64112	462 feet from \$\int \text{\$\sigma} / \$N\$ (circle one) Line of Section
Purchaser: Shell Trading U. S. Company	feet from (E) / W (circle one) Line of Section
Operator Contact Person: Mark Haas	Footages Calculated from Nearest Outside Section Corner:
Phone: (_816) _531.5922	(circle one) NE (SE) NW SW
Contractor: Name: Skyy Drilling, LLC	Lease Name: Dye Well #: 37
License: 33557	Field Name: Winterschied
Wellsite Geologist: David Griffin, RG.	Producing Formation: Mississippian Dolomite
Designate Type of Completion:	Elevation: Ground: 1102' Kelly Bushing: 1109'
New Well Re-Entry Workover	Total Depth: 1727' Plug Back Total Depth: 1718'
OilSWDSIOWTemp. Abd.	Amount of Surface Pipe Set and Cemented at44 Feet
Gas _✓ ENHR SIGW	Multiple Stage Cementing Collar Used? Yes ✓ No
Dry Other (Core, WSW, Expl., Cathodic, etc)	If yes, show depth setFeet
If Workover/Re-entry: Old Well Info as follows:	If Alternate II completion, cement circulated from 1718
Operator:	fact done surface/ 150 av and
Well Name:	A1+2 - DIa - 130 09
Original Comp. Date: Original Total Depth:	Drilling Fluid Management Plan
Deepening Re-perf Conv. to Enhr./SWD	(Data must be collected from the Reserve Pit)
Plug Back Plug Back Total Depth	Chloride contentppm Fluid volumebbls
Commingled Docket No.	Dewatering method used
Dual Completion Docket No	Location of fluid disposal if hauled offsite:
Other (SWD of Enhr.3) Docket No. <u>E28939</u>	Operator Name:
Other (SWD the Ellin.)	Lease Name: License No.:
June 16, 2007         June 18, 2007         September 10, 2007           Spud Date or         Date Reached TD         Completion Date or	Quarter Sec TwpS. R East West
Spud Date or Date Reached TD Completion Date or Recompletion Date	County: Docket No.:
Kansas 67202, within 120 days of the spud date, recompletion, workow Information of side two of this form will be held confidential for a period of	th the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, wer or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. 12 months if requested in writing and submitted with the form (see rule 82-3-s and geologist well report shall be attached with this form. ALL CEMENTING s. Submit CP-111 form with all temporarily abandoned wells.
	late the oil and gas industry have been fully complied with and the statements
herein are complete and correct to the best of my knowledge.	Maureen Elton
Signature: Thance Little My Ap	otary Public State of Kansas pt Expires 9 18 0 0 KCC Office Use ONLY
Agent December 19 9908	
1 Cortis	Letter of Confidentiality Received
Subscribed and sworn to before me this 1824 day of	If Denied, Yes Date:
2008	Wireline Log Received  RECEIVED  Geologist Report Received ANSAS CORPORATION COMM
Notary Public: Hauree ( )	LIIC Distribution
9/10/21	Jong V. 1230 DEC 22 2008
Date Commission Expires: 1111 20/0	
	CONSERVATION DIVISION WICHITA, KS

perator Name: Haa	s Petroleum, LLC			Leas	e Name:_	Dye		Well #:37			
Sec. 7 Twp. 24 S. R. 14 ✓ East West					ty:Wood						
sted, time tool oper emperature, fluid red	now important tops a n and closed, flowing covery, and flow rates s surveyed. Attach fi	and shut-i if gas to s	n pressures, v surface test, alc	hether song with	shut-in pre	ssure reached s	tatic level, hydros	static pressur	es, botto	m hole	
rill Stem Tests Take		Ye:	s 🗸 No		L	og Formatio	n (Top), Depth ar	nd Datum	<b>(</b>	Sample	
amples Sent to Geo	ological Survey	Ye:	s 🗸 No		Nam	е		Тор	İ	Datum	
Cores Taken  Electric Log Run (Submit Copy)					Missi	ssippian Dolomi	te	1648'	(	539)	
ist All E. Logs Run:										i.	
Dual Inductior Dual Compen	n sated Porosity	′									
		Report	CASING F		✓ Ne	w Used	on, etc.				
Purpose of String	ng Size Hole Size Casing Drilled Set (In O.D.)		Weigh		Setting Depth	Type of Cement	# Sacks Used			Type and Percent Additives	
Surface	12 1/4"	8 5/8"		20.5#		44'	Class "A"	35	2% CaCl2, 2% G		
Production	6 3/4"	4 1	/2"	9	.5#	1718'	60/40 Poz Mix	150	8%	6 gel	
			ADDITIONAL	CEMENT	ING / SOL	JEEZE RECORD					
Purpose:  —— Perforate  —— Protect Casing  —— Plug Back TD  —— Plug Off Zone	Depth Top Bottom	Туре	of Cement		s Used	ACCEC III. OO III.	Type and Pe	ercent Additives	3		
Shots Per Foot			O - Bridge Plugs		9		ture, Shot, Cement		rd .	Depth	
4 SPF	1645-1658'	Toolage of L	acii iiileivai i ciii	·		1200 gal. 15%				1645-1658'	
TUBING RECORD	Size 2 3/8"	Set At		Packer 1605		Liner Run	Yes No				
Date of First, Resumer	d Production, SWD or E	inhr.	Producing Meth	od	Flowing	g Pumpin	g Gas Lift	Oth	er <i>(Explair</i>	1)	
Estimated Production Per 24 Hours	Oil	Bbls.	Gas I	Mcf	Wate	er Bb	ols. G	as-Oil Ratio		Gravity	
Disposition of Gas	METHOD OF C	COMPLETIO	N			Production Interv	/al	KAN	343 CUR	ECEIVEL PORATION COM	
Vented Sold (If vented, So	Used on Lease ubmit ACO-18.)		Open Hole Other (Specil	<b>√</b> Pe	rf. [	Dually Comp.	Commingled		DEC	2 2 2008	

## CONSOCIDATED OIL WELL SERVICES, LLC P.O. BOX 884, CHANUTE, KS 66720 620-431-9210 OR 800-467-8676

TICKET NUMBER	1	7	4	7	2	
LOCATION EureKA						-
FOREMAN STALL	_	<u> </u>				

## TREATMENT REPORT & FIELD TO

			CEMEN	it			
DATE	CUSTOMER#	WELL NAME & NU	IMBER	SECTION TOWNS		RANGE	COUNTY
6-/6-07 CUSTOMER	3451	Dye #37		>	24	14	( ) 10 .
				er (p. 1881) er er er (p. 1811)		77.524.44.44.44.73	Woodsor
MAILING ADDR	Troleum, LI			TRUCK#	DRIVER	TRUCK#	DRIVER
				485	Alan		
_800 L	1esT 472	576409	ł	515	Jim	1	
CITY		STATE ZIP CODE	7		31.17	<del></del>	<del> </del>
Kansus	City	MO 64112				<u> </u>	<del>                                     </del>
JOB TYPE_ <u>Su</u>	Mace	HOLE SIZE 128	HOLE DEPTH	46'	CASING SIZE 9 1	VEICUT 96-	_l
CASING DEPTH	44'	DRILL PIPE	TURING		CASING SIZE & Y		
SLURRY WEIGH	IT	SLURRY VOL	WATER anti-	1.		OTHER	
DISPLACEMENT	24	DISPLACEMENT PSI	WATER gails	K	CEMENT LEFT in	CASING_5	
DEMARKS		Ing.: Rig up To	_ MIX PSI		RATE		
2'4 bbls	CC-27U MATIZ	ts Regular Cement. Shut Casing ob Cumplete Rig	down,	ed cement	Returns :	ro surfac	2
		Thank	You				
ACCOUNT CODE	QUANTITY	or UNITS D	ESCRIPTION of	SERVICES or PRO	DDUCT	UNIT PRICE	TOTAL
54015		PUMP CHARG					
5496	3-		3E			65000	250.00
2706	30	MILEAGE				3.30	99.00

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	650.00	250.00
5406	30	MILEAGE	3.30	99.00
1/045	35 s ks	Regular Classit Coment	12.30	427.00
1102	66#	Regular Chass' A' Cement	•67	43.55
///8A	<u> 45 #</u>	Gel 2%	.15	9.75
5407	1.64 7001	Jon Whage Bulk Truck	MIC	28500
			KANSAS CORRO	CEIVED
			DEC	2 200 <b>8</b>
			CONSE	ION DIVISION
		6.3%	Sub Total SALES TAX	<i>1514.</i> 30 30-86
		0.11.21	ESTIMATED	30-40

714151

AUTHORIZATION Colled by Ben

CONSOLIDATED OIL WELL SERVICES, WC
P.O. BOX 884, CHANUTE, KS 66720
620-431-9210 OR 800-467-8676

TICKET NUMBER	17473
LOCATION Eur	nelsa
FOREMAN_ST	eve Akead

### TREATMENT REPORT & FIELD TICKET CEMENT

DATE	CUSTOMER#	WE	LL NAME & NUM	MBER	SECTION	IOWNSHIP	RANGE	COUNT
6-19.03	3451	Dyes	37		7	24	14	Woodson
CUSTOMER	·			j				
MAILING ADDRE	Troleum . 2	۲۲		_	TRUCK #	DRIVER	TRUCK#	DRIVER
					485	Plan		
800 W	UT 47 13	Te. 409			439	Jamid		
CITY		STATE	ZIP CODE		441	Jaff		
Kansas Ci		Ma.			452-763	Sim		
JOB TYPE <b>Lar</b>	29 Siling	HOLE SIZE	24	_ HOLE DEPTH	1/727	CASING SIZE & V	VEIGHT 4/6	9.5 *
CASING DEPTH	1718'	DRILL PIPE_		TUBING	•		OTHER	
SLURRY WEIGH	IT <u>/ 3.4</u>	SLURRY VOL		WATER gal/s	ik	CEMENT LEFT in	CASING /2'	
DISPLACEMENT	27.34	DISPLACEME	NT PSIGOO	MIX POI BUO	no Plug 1/00 \$	RATE		
REMARKS:	Tafry Meet	ina: Ria	up To 4%	Casino	Break Ci	rulation wit	L Footh	
Puma 101	bbls Ecash	water a	head Mi	x /Serske	10/40 Dez	mix CemenT	4.15%	a/ 7-:1
in with 5	osks Thick	SAT CAN	145 616	# Kakseal	2.0/26 47	13-4 9 cr/ga	lin lace	\
Pumo +2:	001 - Rela-	es Plus	Disale		2734 1	ls Fresh Wo	an was	1.04/
Park as	1 # 0	Oi Co	A- 12-3	( 15 2	4 74 00	a Fresh Wa	lec Finla	1 Jumping
- ALLES LATE	600 /34	opples.	47 //46-	wait 2n	in Kelia	se Pressur	, Play h	e/d.
Food Cen	rent Ketur	a To Suc	Face - 176	66/5 Ta	Pit Jol	Complete	Rig dow	<b>7.</b>
					· · · · · · · · · · · · · · · · · · ·	•		
		·		******				
			Thank	Yvan				

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401	1	PUMP CHARGE	840.00	840.00
5406	30	MILEAGE	3.30	99.00
//3 1	/503Ks	60/40 Poz-Mix Cement	9.80	1470.00
1/18A	10007	8% Ge/	.15	150.00
//07	38#	4 Flo Leal Per/sk	1.90	72.20
1126	50 5Ks	Thickset Cement	15.40	770.00
///oA	750 <sup>-‡</sup>	Kolseul 5" Parisk	-38	95.00
5407A	9.2700	Ton Mileuge Bulk Truck	1.10	303.60
5501 C	3605	Water Transport	100.00	300.00
1123	5000 gallens	City water	12.80 Fee	64.00
4401	1	4's Top Rubber Plug	40.00	40.00
4310		4/2 BOSF/2 P/079	25.00	25.00
4103		41/2 Cernent Basket	190.00	190.00
			Subtatal	4418.80
		6.3%	SALES TAX	181.31
		314178	ESTIMATED TOTAL	4600.01

AUTHORIZATION Called by Ben

TITLE CO. R. P. RECEIVED DATE KANSAS CORPORATION COMMISSION

1502 W. 27th Terrace Lawrence. Kansas 66046

Ph. (785) 842-3665 Cell (785) 766-0099 Fax (785) 856-3935

## **Geological Wellsite Report**

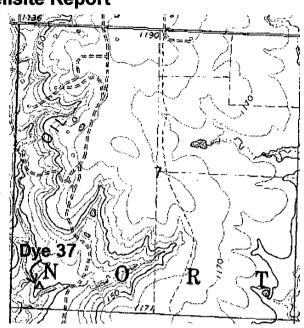
June 22, 2007

Haas Petroleum, LLC 800 W. 47th St, Suite 409 Kansas City, MO 64112 Attn: Mark Haas

EnerJex Resources, Inc. 7300 W. 110<sup>th</sup> St., 7<sup>th</sup> Floor Overland Park, KS 66210 Attn: Brad Kramer

RE:

Geological Wellsite Report Dye No. 37, Injector Well NE SW SW SW4 Section 7, T24S - R14E Woodson County, Kansas



The following report on the subject well includes detailed information and geological data based on microscopic examination of rotary drill cuttings and drill bit rate of penetration from 1250' to a total depth of 1727' below the kelly bushing. A detailed log that plots drilling time, sample cuttings description and the geological tops is included. Subsea corrected geological tops were based on an estimated kelly bushing elevation of 1109', which is 7' above the estimated topo ground level elevation of approximately 1102'. For relative comparison, the GL elevation of Dye 37 was instrument measured to be nearly flat to the GL elevation of Dve 29. It is now believed that the surveyed elevation of Dye 29 was in error and is about 5 feet higher than reported by surveyor.

## **Daily Progress**

June 16, 2007; Spud Well, Set approximately 41' of 8 5/8-inch surface casing.

June 17, 2007; Drill from 41' to 97'.

June 18, 2007; Drill from 97' to TD at 1727'

June 19, 2007; Set and cement 4 1/2-inch casing.

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GONGERVATION DIVISION WICHITA, KS

### Well Information

Well Name:

Dye No. 37

Elev.: Topo Est. GL 1102', KB 1109'

Location:

NE SW SW SW4 (from topo) 468' fsl, 593' fwl (from topo) Section 7, T 24S-R 14E Woodson County, Kansas

**GPS lat long Coord:** N37.96839, W-95.92001

API No.:

15-207-27185-00-00

Field:

Winterschied

Operator:

Haas Petroleum, LLC

**Contact Person:** 

Mark Haas

**Drilling Co.:** 

Skyy Drilling

Yates Center, Kansas, 66865 KS Operator License No.: 33557

**Drilling Co. Owner:** 

Mark Haas

**Tool Pusher:** 

Ben Harrell

**Cement Co.:** 

Consolidated Oil Well Service Co. KS Operator License No.: 04996

Status:

Pending Completion

**Spud Date:** 

June 16, 2007

**Driller Total Depth:** 

1727' KB

Date Reached TD:

June 18, 2007

**Open-Hole Log Total Depth:** 

1723' KB

**Surface Casing:** 

Hole drilled with 12 1/4" bit, 41' of 8 5/8",

Cemented with approximately 30 sacks of class "A" cement with 2% gel

and 3% CaCl<sub>2</sub> on June 16, 2007.

**Drilling Notes:** 

First well with new 5-row (Ulterra) PDC 6%-inch Bit

(6) 5 3/4-inch drill collars

3½" by 31' (average length) drill pipe Mud pump, 2-Cylinder, 6" x 12" stroke Drilling time provided from 1250' to TD

Sample travel time to surface (lag), approx. 1 min. per 125 to 150 feet

**Mud Program:** 

Native fresh water mud to 1200', fresh water gel mud from 1200' to TD

Fudd Mud, Inc. provided daily monitoring of chemical drilling mud,

Preferred properties: 33 to 36 vis, 8.9 to 9.4 wt.

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### **Geological Supervision:**

David Griffin, RG, provided wellsite supervision on June 18 and June 19, 2007 for depths from 1250' to 1727' TD and for open-hole logging. Samples microscopically examined for the entire interval.

### **Logs and Cores:**

Open-hole density, porosity, and dual induction logs were ran for this well by Log-Tech. A cased-hole gamma-ray neutron log will later be obtained for correlation and perforation considerations. No cores were cut for this well.

### **Geological Datums:**

Dye No.37	Dye 28				
NE SW SW SW4, Sec. 7	KB Sam	ple Depth	KB Lo	g Depth	NE SW SW4
Topo KB Elev. 1109	Depth	Subsea	Depth	Subsea	Topo GL Elev. 1110, GRN Log, Subsea
Ireland SS, Gas?	206	903	207	902	917
Base of Kansas City Group			941	168	177
Cherokee Group	1268	-159	1267	-158	-146
U. Squirrel SS	1275	-166	1274	-165	-150
Ardmore LS	1373	-264	1373	-264	-257
Cattleman SS	1383	-274	1383	-274	-268
Blk Shale Marker, BV Zone	1491	-382	1490	-381	-357
Chat Conglomerate	1608	-499	1610	-501	-492
Mississippian LS	1619	-510	1621	-512	-508
Miss. Dol, Pay Zone	1648	-539	1651	-542	-521
Miss. LS 'B'	1711	-602	NA	NA	
Total Depth	1727	-618	1723	-614	-613

### **Structural Comparisons:**

Structural comparison of subsea corrected geological sample tops for Dye No. 37 to Dye No. 28, an injector well lying 705' to the northeast indicates that the top of the Mississippian limestone was 2' lower in structure and the top of the dolomite pay zone was 18' lower in structure.

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CONSIGAVATION DIVISION WICHITA, KS

### **Hydrocarbon Shows and Saltwater Calculations:**

Douglas Group; Ireland Sandstone, Open-Hole Log tops, 206' to 211' and 214' to 218', Open-Hole Log indicates hydrocarbons present. At 210', porosity is 21% and Sw calculates to be 56%. Since no oil show or odor was detected in the samples, it is believed the hydrocarbon log response is most likely from gas. With the formation being so shallow and penetrated by many older wells that were likely poorly cemented at this depth, the rock pressure is probably very low and probably non-commercial. If the zone was properly cemented off and limited leakage has occurred, the zone has some potential to make gas.

Cherokee Group; Upper Squirrel Sandstone, Open-Hole Log tops 1275' to 1278', Slight show of tar, no odor, no bleeding, no fluorescence. Best porosity is about 14% and Sw calculates to be 100%, zone is non-commercial.

Cherokee Group; Cattleman Sandstone, Open-Hole Log tops 1383' to 1393', Zone had a good odor at first with a fair show of fairly heavy (25 to 30 gravity?) oil. Best porosity is 15% with Sw estimated to be near 90%, most likely non-commercial. This zone continues to be closely looked at in all wells.

Mississippian; Limestone, Open–Hole Log tops from 1618' to 1637', Samples show a fair to good odor in fair moldic vugular porosity, 5% to 40% of the cuttings are bright green fluorescent, fair to good odor, slight fluorescence scum showing of oil washes out of sample, slight fluorescent scum on sample bags from bleeding. Best oil show zone has 6% porosity with 80% Sw probably with low permeability; therefore it is most likely non-commercial.

**Mississippian; Dolomite**, Open-Hole Log tops indicate the best potential pay zone lies from 1651' to 1654', 1657' to 1660' and from 1662' to 1666', with a very good showing of oil in the samples in these intervals, 40% and 70% of the cuttings respectively are bright green fluorescent (see sample log), very good odor, both zones bleed good fluorescent streams of oil into the wash water and the inside of the sample bags have a very good showing of fluorescence from bleeding oil. The three zones above have porosity that averages approximately 14% to 17% with Sw saturations calculated to be in the mid-70's when using an RW value of 0.11 and M value of 2.

## Sample Observations of Major Zones of Interest

#### ireland Sandstone:

205' to 220', Sample

Sandstone, very light gray to clear, very fine grained, sub-angular quartz, very good to excellent porosity, interbedded with gray micaceous siltstone, no show of oil, odor or fluorescence.

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**Upper Squirrel Sandstone:** 

1275' to 1278', Sample

DEC 7 2 2008

Wichita, KS

Dye No. 37

June 22, 2007

Sandstone, gray, laminated, very fine grained, quartz, siltstone in upper part, fair porosity, slight show of tar, no bleeding, no odor, not fluorescent, micaceous.

### **Bartlesville Sandstone:**

### 1522' to 1540', (Sample)

Sandstone, light gray, very fine to fine grained, sub-angular, sandstone appears to be mostly laminations and thin Interbeds, carbonaceous, silty, minor mica, no show of oil, odor, or fluorescence.

### Mississippian:

#### Limestone

### 1619' to 1637', (Sample)

Limestone, upper 7' is light to dark brown and weathered, lower portion is fresh cream color, fine crystalline, fair to medium crystalline porosity, thin beds of quartz silty sandstone, very fine to medium grained well rounded quartz sand, most grains are very fine sand and coarse silt, fair vugular porosity from 1628' to 1637' with a fair free oil show in moldic and vugular porosity, 5% to 40% cuttings are bright green fluorescent in this zone, good odor, slight fluorescence scum on wash water and on sample bags, there may be some gray shale with the siltstone.

#### Sandstone

### 1637' to 1643', (Sample)

Sandstone, clear to very light gray, very fine grained with coarse siltstone, fair porosity, glassy due to recrystallization, fair to good odor, slight sow of oil, oil does not bleed from sample, 20% of the cuttings are fluorescent.

### Dolomite, Pay Zone

### Best Pay 1648' to 1654' and 1660' to 1663', (Sample)

Dolomite, calcareous, tan to brown, very fine to fine crystalline, fair to good crystalline sucrosic porosity, good vugular porosity, some larger vugs have been replaced with large clear dolomite crystals, best vugular zone from 1660' to 1663' (Sample), very good odor, very good showing of oil, 15% to 70% of the cuttings are bright green fluorescent, very good scum of oil on wash water and on sample bags, cherty from 1663 to 1680, a zone of very fine gray Sandstone lies from 1654 to 1657, clear quartz, poor to fair porosity, the better porosity has a fair oil show, the interval from 1648' to 1668' has varying amounts of oil showing.

### **Recommendations:**

This well had an approximate 15' thick pay zone section from 1648' to 1663' (sample), with very good free light gravity oil shows from 1648' to 1654' and from 1660' to 1663'. The top of the dolomite pay zone was 19' structurally lower than in Dye No. 28. Based on the sample observations, 4 1/2-inch casing was set and cemented. Dye No. 37 should be useful as an injector.

Based on the log responses, saltwater calculations and sample observations, it is recommended that the Mississippian Dolomite be perforated from 1651' to 1665' (KB, Open-Hole Log) and stimulated with acid for intended use as an injector well.

Respectfully Submitted,

David B. Griffin, RG **Consulting Geologist** 

Attachment: Drilling Time, Sample Description and Geological Tops Log

Dye No. 37													
Mississippian Dolomite													
Model = Archie	ZN	DEPTH	TUV	Wot.	PHI	RWA	RO	MA	SW	BVW	VSH	PAY	FLO
PARAMETERS	1	1620		21.6	1(0) (8)%	0.21	11.07	2.29	71.6%			PAT	FLU
X Y	2	1620.5	_	21.7	3) (0)4%;	0.21	13.69	2.29		0.071	2 17 10 17	0	
<b>A</b> 1	<u>-2</u>	1621	0.5	22	8. FR	0.17	16.81	2.11	87.4%		1 120	0	-
M 2				22.3	7.8%	0.13	18.87	2.07	99.39%		0.882		
N 2		1622		22.7	7 3%	0.13	19.18	2.07	94.9%		0.880		
RW 0.11	6	1622.5		23.1	7. <b>3%</b>	0.14	18.19	2.09	<b>36.8%</b>		0.843	-	
CTHK 70.5		1623	_	23.5	326	0.16	16.55	2.14	£4.0%		0.797		<del> </del>
AVPHI 0.12		1623.5		23.9	8.5%	0.18	15.00	2.19	79.2%		0.777		<b></b>
FTOIL 1.11	9	1624		24.6	8.8%	0.19	14.29	2.22	76.2%		A STATE OF STREET		
PAYFEET 28.5		1624.5	<u> </u>	25.6	A.G.W.	0.19	15.03	2.22	76.7%	L	0.841		
P 8581	11	1625	0.5	26.7	7996	0.17	17.71	2.16	3A.49%	0.064	0.839	0	
Q 4.4	12	1625.5	0.5	28.2	6.9%	0.13	23.21	2.07	90,9%	0.062	0.725	0	
R 2	13	1626	0.5	29.7	5.9%	0.10	31.78	1.98	105149%	0.061	0.560	0	
DMIN 1620	14	1626.5	0.5	31.5	5.2%	0.09	40.21	1.92	1113.07%	0.059	0.446	0	
DMAX 1690	15	1627	0.5	33.3	5.0%	0.08	43.23	1.91	113.9%	0.057	0.390	0	
KB 1109	16	1627.5		35.1	5.2%	0.09	41.07	1.95	1003.17%	0.056	0.364	0	
<b>TD</b> 1727		1628		36.8	5.49%	0.11	37.36	2.00	100.7%	0.055	0.384	0	
BHT 90			0.5	38.2	5.7%	0.12	34.23	2.04	94.6%	0.054	0.441	0	
<b>ST</b> 75		1629	0.5	39	5.5%	0.13	32.51	2.06	91 3%	0.053	0.468	0	
RMF 1.4		<del> </del>		39.3	5.9%	0.14	31.78	2.08	69.9%	0.053	0.451	0	
RMFT 75		1630	_	39.4	60%	0.14	30.43	2.09	97.9%	0.053	0.441	0	
	22	1630.5		39.7	62%	0.15	28.20	2.12	04.3%	0.053	0.451	0	ļ
\$5, jiir (9) #15 <b>\$</b>	23	1631		40.6	6.4%	0.17	26.97	2.15	OH .5%	0.052	0.463	0	
PHICAUN 9.1	24	<del> </del>		42.4	6.3%	0.17	27.60	2.16	30 7%	0.051	0.477	0	
BAACAFA. C. 4		1632		45	6 19%	0.17	29.21	2.15	<b>:0.6%</b>	0.049	0.495	0	
AKARIOTH DA				48.1	5.9%	0.17	31.65	2.15	. 01.1%	0.048	0.465	0	
E IO THURSTANAS		1633		51.8	5.5%	0.16	36.38	2.12	<b>69.0%</b>	0.046	0.368	0	ļ
New Court	28			56.1	5.0%	0.14	44.18	2.08	33,7%	0.044		0	ļ
Colors: ON	29	1634	_	60.4	4.5%	0.12	54.31	2.03	Q4).0%	0.043	0.190	0	
	30	1634.5		64.1	41%	0.11	64.50	2.00	100.3%	0.041	0.166	0	ļ
RSH	31	1635		66.8	3,9%	0.10	70.71	1.98	1029%	0.041	0.193	0	
PHISH	32			68.5	4.0%	0.11	69.30	2.00	100.6%	0.040	0.269	0	ļ
	33	1636		68.5	42%	0.12	61.84	2.03	95.0%	0.040	0.348	0	<u> </u>
	34	1636.5		65.2	4.6%	0.14	53.07	2.07	96.2%	0.041	0.369	0	
	35			57.9	5.0%	0.14	44.11	2.09	37.3% 39. 501	0.044	0.329	0	-
	36	+		48.5	5.7%	0.16	33.80	2.13	88.5%	0.048	0.296	0	
	37	1638		39.8	6.6%	0.19	23.49	2.20	76.8%	0.053	0.332	0	ļ
rong Riskonorio mili	38	1	0.5	33.3	8:3% 0.00%	0.23	15.90	2.30	69.1%		0.445	0	1
rove Foxe	39 40	1639		28.7	9.9%	0.28	11.32	2.40	62.9%	0.062	0.590	,	L.
PULTONE PULTONE	40	1639.5 1640			11.2% 12.0%	0.32	8.81	2.48	59.1%	0.066	0.692	0.02	
PRUZONE	42	<del></del>		S. 10 4 5 3.	12.5%	0.33	7.58 7.09	2.51 2.51	58.0% 58.9%	· · · · · · · · · · · · · · · · · · ·	0.690	0.03	
Dorder Co	42	1641			100	0.29	7.16	2.47	61.3%		0.674	0.03	
YIII. W	43				12.4% 11.9%	0.29	7.18	2.47	65.1%		0.660	0.02	
Simple 12	45				11.2%		8.74			0.077	0.640		
SIM PARAVIETERS		1642.5			10.8%	0.23		2.29			0.617		
CREPAN	47				11.0%		9.06			0.079		-	
Ciet Pay	48				11.7%		8.05			0.079			
PAY TOP	49			2 7 1 1 1 1 1 1 1 1 1	12.2%	0.26	7,34				0.549	-	
ANCE PHO	50	·			12.2%	0.26	7.34	2.40		0.080		-	
नेबरका 🗴	51	1645			11.7%	0.23	7.99	2.34		0.081		-	
ABRIL V	52				10.8%		9.34	2.24		0.083		-	
PERM. K					9.7%	0.14	11.70	2.11	37/9%			-	-
OIL SYATE	54			And the second	8.7%	0.11	14.64	1.99					
Will SAIL	55			13.2		0.09	16.56	1.91					
INTERN	56	<del>                                     </del>		12.3		0.08	16.11	1.89					<b>—</b>
	57	1648	0.5	11.6	<b>3.0%</b>	0.09	14.09		110.3%	0.097			_
MANDGRID					9.6%	0.10	12.16	1.96		0.100			
IWN	59	1649			10.1%	0.11	10.80		1012.19%	0.103	0.404	.0	
PANDERIID IWXI SEC Belliotii	60	1	-		10.7%	0.11	9.54	2.01	98.5%	0.106	0.407	0	
Et North	61				11.7%		8.05		92.7%	0.108	0.396	0	
ALSOUTH ALERSI ALWEST	62	<del>  </del>		1.0	12.9%	0.15	6.59			0.111			
ALES)	63				14.2%		5.43	_			0.503		
RaWest	64		_		15.5%	0.20	4.56		73.8%	0.115	0.551	0.02	
	65				16.6%		4.01			0.117			
CROSS SECTION	66			10. 11. 12.	16.8%		3.89				0.537	_	
DATUM 1	67	1	-		16.2%		4.17				0.516	-	
DATUM 2	68				15.4%		4.64				0.509		
No. of Prf	69	<del> </del>			14.7%		5.11		88.6%			-	

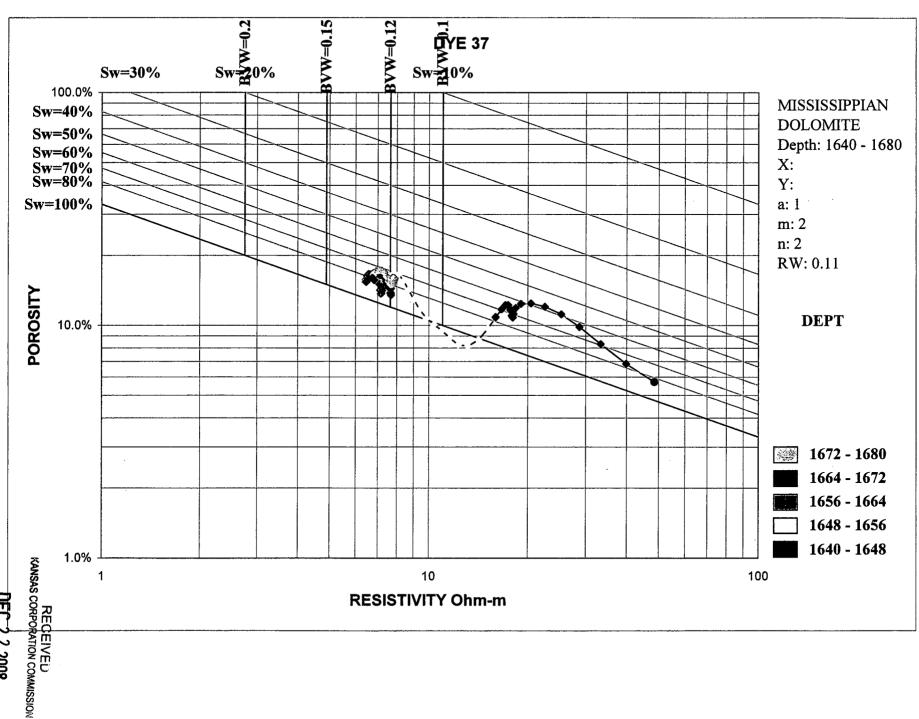
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DEC ? 2 2008

76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0 0 0
71 1655 0.5 7.18 13.7% 0.14 5.83 2.11 90.1% 0.124 0.480 72 1655.5 0.5 7.15 13.7% 0.13 5.87 2.10 90.6% 0.124 0.469 73 1656 0.5 7.14.2% 0.14 5.47 2.13 87.7% 0.124 0.478 74 1656.5 0.5 7.04 15.1% 0.16 4.81 2.20 82.6% 0.125 0.505 75 1657 0.5 6.8 16.1% 0.18 4.24 2.27 78.1% 0.126 0.513 76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0
73 1656 0.5 7 14.2% 0.14 5.47 2.13 87.7% 0.124 0.478 74 1656.5 0.5 7.04 15.1% 0.16 4.81 2.20 82.6% 0.125 0.505 75 1657 0.5 6.96 16.1% 0.18 4.24 2.27 78.1% 0.126 0.513 76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	
74 1656.5 0.5 7.04 15.1% 0.16 4.81 2.20 32 32 0.125 0.505 75 1657 0.5 6.96 16.1% 0.18 4.24 2.27 78.1% 0.126 0.513 76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0
75 1657 0.5 6.96 16.1% 0.18 4.24 2.27 76.1% 0.126 0.513 76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	
75 1657 0.5 6.96 16.1% 0.18 4.24 2.27 78.1% 0.126 0.513 76 1657.5 0.5 6.87 16.6% 0.19 4.00 2.30 76.3% 0.127 0.510 77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0
77 1658 0.5 6.8 16.5% 0.19 4.03 2.29 77.0% 0.127 0.549 78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0.02
78 1658.5 0.5 6.72 16.5% 0.18 4.05 2.28 77.6% 0.128 0.639	0.02
	0.02
79  1659  0.5 8665 816 656 0.18  3.98  2.29  77.4%   0.129  0.728	0.02
	0.02
	0.02
81 1660 0.5 6.49 16.3% 0.17 4.13 2.25 79.7% 0.705	0
82 1660.5 0.5 6.44 15.8% 0.16 4.42 2.20 82.8% 0.48 0.635	0
83 1661 0.5 6.43 15.4% 0.15 4.64 2.17 85.9% 0.571	0
84 1661.5 0.5 6.47 15.4% 0.15 4.63 2.18 84.6% 6 38 0.530	0
85 1662 0.5 6.56 15.9% 0.17 4.36 2.22 81.6% 0.130 0.511	0
	0.02
	0.02
	0.02
	0.02
\$ 75 M \$ 32 M \$ 52 M \$	0.02
	0.02
93 1666 0.5 7.56 146% 0.16 5.18 2.20 62.8% 0.121 0.367	0.02
94 1666.5 0.5 7.64 13.8% 0.15 5.79 2.14 87.1% 0.120 0.393	0
95 1667 0.5 7.67 13.5% 0.14 6.04 2.12 88.7% 0.120 0.426	0
96 1667.5 0.5 7.68 13.8% 0.15 5.80 2.14 86.9% 0.120 0.442	0
97 1868 0.5 7.67 14.4% 0.16 5.29 2.19 8330% 0.120 0.456	0
	0.02
	0.02
11 23 357 472 472 472 472 472 472 472 472 472 47	0.02
101 1670 0.5 7.84 16.0% 0.20 4.29 2.33 74.0% 0.118 0.486	0.02
102 1670.5 0.5 7.87 15.9% 0.20 4.33 2.33 74.1% 0.118 0.444	0.02
	0.02
	0.02
	0.02
	0.02
	0.02
	0.02
1	0.02
	0.02
	0.02
	0.02
(3.24) (3.25) (3.25) (3.25)	0.02
	0.02
(7/3) 20 (1/4) - 1/4 (1/4) - 1	0.02
117 1678 0.5 6.82 15.7% 0.17 4.48 2.23 81.0% 0.127 0.591	0.02
3/3/8/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3	0.02
	0.02
\$100 \tau \tau \tau \tau \tau \tau \tau \tau	0.02
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.02
3/25/14/2017/2017/2017	0.02
123 1681 0.5 7.94 14.8% 0.17 5.04 2.24 79.6% 0.118 0.496	0.02
124 1681.5 0.5 8 03 14 1% 0.16 5.52 2.19 82 9% 0.117 0.529	0
125 1682 0.5 8 13 13 6% 0.15 5.99 2.15 85 8% 0.116 0.585	0
126 1682.5 0.5 8.24 13 1% 0.14 6.39 2.13 83 0% 0.116 0.657	0
127 1683 0.5 8.37 12.8% 0.14 6.76 2.10 89.9% 0.115 0.723	0
128 1683.5 0.5 8.51 12.4% 0.13 7.20 2.08 92.0% 0.114 0.744	0
129 1684 0.5 8.7 11.9% 0.12 7.76 2.05 94.5% 0.112 0.710	0
130 1684.5 0.5 8.99 11.4% 0.12 8.40 2.03 66.7% 0.111 0.641	0
131 1685 0.5 9.4 10.9% 0.11 9.24 2.01 99.1% 0.108 0.554	0
132 1685.5 0.5 9.88 10.3% 0.11 10.34 1.98 102.3% 0.106 0.508	0
133 1686 0.5 10.3 100% 0.10 11.06 1.97 103.5% 0.103 0.567	0
135 1687 0.5 11.2 10.9% 0.13 9.24 2.09 91.0% 0.099 0.762	0
136 1687.5 0.5 11.7 11.3% 0.15 8.57 2.14 85.7% 0.099 0.769	0
137 1688 0.5 12.3 11.1% 0.15 8.94 2.14 85.4% 0.097 0.783	0
138 1688.5 0.5 12.8 10.4% 0.14 10.26 2.10 89.4% 0.093 0.824	0
139 1689 0.5 13.3 94.9 0.12 12.51 2.03 97.0% 0.091 0.815	0
	o
1	0
140   1689.5   0.5 13.6   8.4%   0.10   15.53   1.95 108.9%   0.090   0.706     141   1690   0.5 13.6   7.8%   0.08   17.98   1.89   1144.8%   0.090   0.558	

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DEC 2 2 2008



Depth	Lithology	ဟ	Drilling Time in Minutes per Foot  Rate of Penetration Decreases  Well No: Dye No.37  Location: NESWSWSW	Pg./ of 2 Datum/Elev.
	olog	Shows		KB 1109 7000
1250	9y -	VS.	5 10 15 20 25 30 Sample Descriptions	Remarks
	117		5h, Blk, coal + race	
6-18-07			<del>▗▊▗▎▄▐▗▄▐▗▄▐▗▄▐▄▄▊▄▊</del> ▄▊▄▊▞▊▘▊▞▊▘▋▞▍▘▋▘▊▕▊▘▊▘▊▘▊	
1030AM			Mind ap	
	17		shale, Blk	Cherokel 1268(-159)
		slight	Siltstone, gray, nard, micaceous	1268(-159) U Squirrel SS
:	7.57	Show	Siltstone, gray, nard, micaceous 10% ss vasad, gy, frp, slishtsh far No Odor	1275(-166)
	:	rar		, w , o ( , o = , )
			siltst, AA, Shigyi min. ss/amvsti showter, driller rptd sliodor	
			none now.	
		1	Shale, gy, silty, mica, carb	
1300		ł	sh, gy, min-siH	
		ļ	LS, gray, Prøns	•
			\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
	= -		ss, Itay, v figud, wellcom.pr frø Nsor o dor,	
	: 7:		NS or o dor,	
	72.77		sh, gg, si/ty, mica, carb, tewsslam	
	<del></del>	1	sh, dkgy, silty, catb, micq	
			1am shaley SS, NS	
		1		
	<i></i>	1		
1350				
1000	)	Ì	HILL AA	
		j	shigy to blk	
		1	Coal	,
		1		
		ł		ArdmoreLS
	111	1	╽ <del>┇┋╤┩╶┨╶╎╶╎╶┦╂╎┼</del> ┼╂┼┼┼╂┼┼┼┠┼┼┼╏ <sup>┎</sup> ╸	1373 (-264)
		Cair	11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	_
٠		fair show of free		Cattleman 55 1383(-274)
	ويزيرنه	free	af thee oil, 25-30 Apris	/383(-2/4)
	***	P "'	some tight, prob. Non-loman	
			No Finor Shight odkay	
1400				
			Coal	
		•	sh, Itag-dkgy	
		Ì	<del>┍┩╶┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈┈</del>	
			treal	
			Ls, brown, dense	
	1			
			shi gray w/siltst.lamuf.grad	
			C04)	
1450			4	•
			54, gy; 5i/tst/am,	
			<del>┇┇┍┆╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒╒</del>	
			shigy to Vak gy, some blk 4	
			tan claystone	
l				
1			+r, LS, olkgy	
l				
I			Shigs-blk, tanclay	
6-18-07			coaly	0.11.:11 1
0-10-01			Shigginicalsilty to blk	<u>Bartlesville Loue</u> 1491(-382) BIK Sh.Marker
L.II - 1/30 I				17711(-562)
2:45PM 1500	<u> </u>	1	<u></u>	2 1 1 Km. 10-

	·   <u>-</u>	1	Drilling Time in Minutes per Foot Well No: Dge No. 37 Rate of Penetration Decreases Location: NESUSWSW4	Pg. 2 of 2
Depth	Lithology	ဋ	Rate of Penetration Decreases Location: NESUSWSW4	Datum/Elev. KB 1/D9 Topo
	log	Shows		Remarks
1500	<u> </u>	S	5 10 15 20 25 30 Sample Descriptions  5h, gy-b/k, s)/ty mice	- Containe
6-18-07			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1000 AM	-[	·	54, AA	
			SS. Itaray, vf-fand, subang.	
	1.1		55, It gray, vt-fgnd, subang. fr ø, no or odor, mostly lam.	
	* * *	<u>-</u>	AA	
	<u></u>		Sh, AA, few SS laminae	
			coal	
8			Shible	
1550			Sh, 1+gy-gy, pyrite, fewss	
			10m	
			sh, vollegy to b/le	
			Sh, Volley & B1/2	
			sh, volkg y to blk	
			Coal, trace sh, vdkgy to blk	
			sh, vdkgy to b/k	
			coal,	
			Shivdkgy to 6/k	
11.00			f coal, trace	
1600		1	Shale, ay to tangu, wax y, clayey	
	1 4			Chat Cal.
	Aja		Chat, conglomerate? sdy siltst matrix, s% chertwh, shgy-bk	1608(-499)
	OAOA		20% chert, who gy and sdy sittstone	Miss. LS
	老进		GES 5 10/20 Sq. male LS, tan to dk brn, weathered, fxtlm	1619 (-510)
	17:4	fair	No show or Odor  No show or Odor  So Gream, to V. It gay, f-med x+1m, pelletal,  So Gream, to V. It gay, f-med x+1m, pelletal,  So Si show of washing out, modifying p  16 28-1637  Foss.	
	7.	show,	Slishow of washing out, moldiques &	
		fair		
	<del>12.13</del>	Show,	SS, and silt, 413, clr-vltgy, frø, glassy,	
	建建		Dol, It tannish gy, viculitie, fr p, sliodor,	Miss. Dol Pay
1650	10/0/0	231	72564	1648 (-539)
	中心	155	The state of the s	, , , ,
	/A / A	7.04 011	Vugs Inplaces, v. good odor, washing Streams of oil. vgd to exc scum oil on  1 545 4/10/20	
	0/2° %	Show	exc, vig & at 1/6 60-62 wived oil show	
j j	4//4		DC57 Pag 16 78-54, 1600-1603	
	478	7	Ool, gytantogray, vfxtln, frxtlng fr-gd vny Ø, NS, Cherty 1663-80, few siltstone bedg will the oils how	
			_1_+1, 1	
	44		LS, V. Itgy, f-cse x+In, soft, fr-gd &, No show or odor	
	77			
	77		Dol, It sy to ay bn, mostly I + gy, some shaley,	
1700	/_		Dol, dk gray is 6 brn, NS	
1700	艺艺		Dolomitic shale dkgybru	
	11/1		Dol, dkgy-bn,	Miss.LS'B'
	1/161		LS, creamet v /tgy w/gymo ft/ing, grainstone, foss, chert, white	
	77		grainstont, toss, chert, walk	1711 (-602)
6-18-07			LS, AA tannishag to gray ish born	
11:30P.	ZA			Total Depth
				1727(-618)
			<u>┼┼┼┼╂┼┾┾╗╏╏</u> ╤╅╂┼╫┼╂┼┼╂	
		<u> </u>		
] ]				
1750				