## KOLAR Document ID: 1418559

Confident	tiality Re	equested:
Yes	No	

#### KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

Form ACO-1 January 2018 Form must be Typed Form must be Signed All blanks must be Filled

# WELL COMPLETION FORM

WELL	HISTORY -		WELL &	IEASE
VVELL	nisioni ·	DESCRIP		LEASE

OPERATOR: License #	API No.:
Name:	Spot Description:
Address 1:	
Address 2:	Feet from Dorth / South Line of Section
City: State: Zip:+	Feet from East / West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxx) (e.gxxx.xxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
	Producing Formation:
Oil WSW SWD Gas DH EOR	Elevation: Ground: Kelly Bushing:
	Total Vertical Depth: Plug Back Total Depth:
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used?
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set: Feet
Operator:	If Alternate II completion, cement circulated from:
Well Name:	feet depth to:w/sx cmt.
Original Comp. Date: Original Total Depth:	
Deepening Re-perf. Conv. to EOR Conv. to SWD	Drilling Fluid Management Plan
Plug Back Liner Conv. to GSW Conv. to Producer	(Data must be collected from the Reserve Pit)
	Chloride content: ppm Fluid volume: bbls
Commingled Permit #:	Dewatering method used:
Dual Completion Permit #:	
SWD         Permit #:	Location of fluid disposal if hauled offsite:
EOR         Permit #:           GSW         Permit #:	Operator Name:
	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R East _ West
Recompletion Date Reached TD Completion Date of Recompletion Date	County: Permit #:

#### 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.

# Submitted Electronically

KCC Office Use ONLY
Confidentiality Requested
Date:
Confidential Release Date:
Wireline Log Received Drill Stem Tests Received
Geologist Report / Mud Logs Received
UIC Distribution
ALT I II III Approved by: Date:

#### KOLAR Document ID: 1418559

Operator Nar	ne:			Lease Name:	Well #:
Sec	Twp	S. R	East West	County:	

Page Two

**INSTRUCTIONS:** Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken (Attach Additional Sh	acate)	Y	′es 🗌 No			og Formatio	n (Top), Depth a	and Datum	Sample			
Samples Sent to Geolo			⁄es 🗌 No	1	Name	Э		Тор	Datum			
Cores Taken Electric Log Run Geologist Report / Mud List All E. Logs Run:		□ Y □ Y	Yes ☐ No Yes ☐ No Yes ☐ No									
		Rep	CASING ort all strings set-c		] Ne	w Used rmediate, productio	on. etc.					
Purpose of String	Size Hole Drilled	Siz	ze Casing et (In O.D.)	Weight Lbs. / Ft.			Type of Cement	# Sacks Used	Type and Percent Additives			
[			ADDITIONAL	CEMENTING /	SQU	EEZE RECORD						
Purpose:	Depth Top Bottom	Туре	e of Cement	# Sacks Use	d		Type and	Percent Additives				
Protect Casing Plug Back TD Plug Off Zone												
<ol> <li>Did you perform a hydra</li> <li>Does the volume of the</li> <li>Was the hydraulic fracture</li> </ol>	total base fluid of the	hydraulic fr	acturing treatment		-	☐ Yes ns? ☐ Yes ☐ Yes	No (If No, s	kip questions 2 ar kip question 3) ill out Page Three				
Date of first Production/Inj Injection:	jection or Resumed Pr	oduction/	Producing Meth	iod:		Gas Lift 🗌 O	ther <i>(Explain)</i>					
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wate	er Bb	ls.	Gas-Oil Ratio	Gravity			
DISPOSITIO	N OF GAS:		Ν	IETHOD OF COM	MPLE	TION:		PRODUCTIC Top	DN INTERVAL: Bottom			
Vented Sold (If vented, Subn	Used on Lease		Open Hole		-	·	nit ACO-4)	юр	Bollom			
	foration Perform Top Botto		Bridge Plug Type	Bridge Plug Set At		Acid,		hot, Cementing Squeeze Record and Kind of Material Used)				
TUBING RECORD:	Size:	Set At:		Packer At:								

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	GLAVES 2
Doc ID	1418559

# Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	20	263	Class A		2% gel, 3% CC
Production	7.875	5.5	15.5	4627	SMD/ EA- 2	175	1/4#/sk flocele, 7#/sk gilsonite

SWI	FT			CHARGE T ADDRESS	O: Lason E.	ginering		-			TICKET ()	31450
Service	s, Inc.	•		CITT, STA	E, ZIF CODE						1	i i
SERVICE LOCATIONS		WELL/PROJE		LEAS	Glaves	COUNTY/PARISH	STATE	CITY		-	DATE 5-1-18	OWNER Same
2		TICKET TYPE	CONTRAC	TOR	Deilling	RIG NAME/NO.	SHIPPE				ORDER NO.	
3		WELL TYPE				B PURPOSE		WELL PERMI			WELL LOCATION	
4. REFERRAL LOCAT	ION		FRUCTION	<u>  D</u> e	relapment C	ement 8% "Shal	low Surting				Ubica - 21	Lu Einto
PRICE		/ REFERENCE/ NUMBER			DESCR	IPTION			QTY.	1	UNIT PRICE	AMOUNT
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			1		Service Chan	me Cement			165	sks	<sup>ر</sup> ا	200
582		<u> </u>	1		Minimum Di	aginge Charge				ea	25010	250100
LEGAL TERMS: the terms and cor	Customer her	reby acknowledg	es and agi	rees to	REMIT PAY		SUR OUR EQUIPMENT PER WITHOUT BREAKDOW	FORMED	REE UNDECIDED	DISAGR	PAGE TOTAL	4287 75
but are not limite							WE UNDERSTOOD AN			-	10% DKC	-428 78
LIMITED WARRA	ANTY provision	1S.			SWIFT SER	VICES, INC.	MET YOUR NEEDS? OUR SERVICE WAS				the	2853 97
MUST BE SIGNED BY C START OF WORK 2B D			ORIO		P.O. B(		PERFORMED WITHOUT DELAY?				Nes.	
X 1.		A			NESS CITY		CALCULATIONS SATISFACTORILY?				NC5 6.50	15935
DATE SIGNED	un 1	TIME SIGNED		А.М. Р.М.	785-79		ARE YOU SATISFIED V				TOTAL	4018 132
	CUSTO		NCE OF M		AND SERVICES The	customer hereby ackno					ed on this ticket.	4018 000
SWIFT OPERATOR	5	Kuchn		APPRO		······						Thank You!

JOBLO	ĎG					SWIF	T Seri	vices.	Inc.		DATE 5-1-18	PAGE NO.
CUSTOM	ER		WELL NO.	n		LEASE	C 1		JOB TYPE		TICKET NO #314	
Laco	n Englar	caina			100		staves	1	Surface			150
CHART NO.	TIME	(BPM)	VOLUME (BBL) (GAL)	T	MPS C	TUBING	URE (PSI)	-	DESCRIPTION OF	OPERATIC	N AND MATERIALS	
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Thank You!	Τ			AFTROVAL		
	ed on this ticket.	ges receipt of the materials and services listed on this ticket.	ledges receipt of the ma	OF MATERIALS AND SERVICES The customer hereby acknowled		
780,83	TOTAL			785-798-2300		DATE SIGNED
35839	12.5%		WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?	P.O. BOX 466 NESS CITY, KS 67560	ODS.	MUST DE SIGNED BY CUSTOMEN OF GOODS. START OF WORK OR DELIVERY OF GOODS.
9346	104 LUY		MET YOUR NEEDS? OUR SERVICE WAS PERFORMED WITHOUT DELAY?	INC.	ons.	LIMITED WARRANTY provisions
			our Equipment Performed Without Breaxdown? We understood and	REMIT PAYMENT TO:	the terms and conditions on the reverse side hereof which include, but are not limited to, <b>PAYMENT, RELEASE. INDEMNITY, and</b>	the terms and conditions on the but are not limited to, PAYME
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					INVOICE INSTRUCTIONS	REFERRAL LOCATION
- 26		WELL PERMIT NO.	' 52" WELL PE	ELL CATEGORY JOB PURPOSE	WELL TYPE	A
	OHDEH NO.	Fan	VICT LOCA	Saithing in the manual of the saithing in the saithing is a saithi		ω N
OWNER	80	a	STATE CITY U	LEASE S COUNTY/PARISH	CONTRACTOR	1. ALAN CITY REPUICE NOCATIONS
<sup>م</sup>	PAGE 1			CITY, STATE, ZIP CODE		Services, Inc
1396	TICKET 031396	·	-	SS LARDEN ENGINEERING	CHARGE TO: ADDRESS	SWIFT

	583	. 581														uía -	29	J821	REFERENCE	Services	INS
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JOBLO	)G					SWIF	T Serv	ices. Inc. DATE PAGENO.
CUSTOM	ER Eng>	upp char	WELL NO.	ŧ.	2		Skves	JOB TYPE convert long string TICKET NO. 31396
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)		MPS C	PRESSU	RE (PSI)	DESCRIPTION OF OPERATION AND MATERIALS
				,			0,0,0,0	125 5 & 5 M Davat w/ 7 # Slocele 100 EA.2 count w/ Giban te \$ \$# flocele 5 ± x 155 # costry 4628' shoe je 43.18 PORT COUNE 1997'
								100 EA.2 count of Giban to \$ \$# Abale
								5 1 × 15,5# costing 4628' shoet 43.18
								PORT COLLAR 1997'
	0000							on loc TPK-114
					ļ			RUKNing 55 casing
	0115							RUNNing-5to" casing Drop bell - circulate - ROTATE
	6215	4	12				100	Pano 500 gel mudflush
		4	20				100	Paup 500 gel modiflush Paup 20 661 KCL glauh
			7					Plug RH - MH BOSK - 203 (500 anart)
		<u> </u>			<u> </u>			,
	0233	4	38				100	Mix Shill quit 755 0 Mix EA-2 cut 105t e 15,3 ppg
		4	23				100	Mix 2A-2 ant 105 @ 15,3 ppg
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				 				Drop latch down plug- wash out pupt line
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	0328						200	Displace plug
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SWI	FT			CHAR ADDR	ESS	Larson E	ngdacering							тіскет Ü		5
Service	s, Inc.			CITY,	STAT	E, ZIP CODE			_					PAGE	OF	
SERVICE OCATION 1. 2.	sity 115	WELL/PROJE	CT NO.		EASE	Glaves Well Scauter	COUNTY/PARISH		STATE 155 SHIPPED VIA					DATE S-11-18 ORDER NO.	OWNER	
3. 4. REFERBAL LOCAT	ION						BPURPOSE concil 5/2" F	ort Coll		WELL PE	<u>たら</u> RMIT N			VELL LOCATION	ny Eintr	 >
PRICE REFERENCE	SECONDARY F		AC LOC	COUNTIN ACCT	G DF	DESCR	IPTION			QTY.	U/M	OTY.	U/M	UNIT PRICE	AMOU	NT
_575_							Trk # 112					30	mi	500	150	0
<u>576 D</u> 330			┼╫			Pump Change SMD Cama		ller					jab skis	_ <u>1300</u> _@ 16_ <sup>25</sup>	1300	<u>्र</u> ाड्य
_276						Flocele	· · · · · · · · · · · · · · · · · · ·		-	44	16	50	lbs	2 50	125	- 00
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_583						Drayage	J			22350	165	<u>3</u> 35.25	TM	00 185	284	96
LEGAL TERMS: the terms and cor	nditions on the re	verse side here	eof whicl	h include,		REMIT PAY	MENT TO:	OUR EQUIPA WITHOUT BR	REAKDOWN	ORMED	AGREE		DISAGRE	PAGE TOTAL	5100	2
but are not limite			INDEIMN	ill r, and		SWIFT SERV	/ICES_INC	WE UNDERS MET YOUR I OUR SERVIC	VEEDS?					102. Qise		102
MUST BE SIGNED BY C START OF WORK OR D	CUSTOMER OR CUSTO DELIVERY OF GOODS.	DMER'S AGENT PRI	IOR TO		1	P.O. BC		PERFORMED WE OPERAT AND PERFO	RMED JOB			-		Ness	4590	5.19
X						NESS CITY	, KS 67560	CALCULATIC SATISFACTO	ORILY?					65 N	173	5.83
DATE SIGNED				A.M. P.M.		785-798	3-2300				YES NOT W		-	- TOTAL	47164	f 02
		ER ACCEPTA	NCE OF			AND SERVICES The c	customer hereby ack	nowledges	recelpt	of the mat	erials	and service	es liste	d on this ticket.		
SWIFT OPERATOR		Buchy		AP	PRO	/AL									Thank Yo	)u!

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JOBLC	ĴG					SWIF	T Seri	vices. Inc.	DATE PAGE NO.
CUSTOM			WELL NO.	)		LEASE	lawas	JOB TYPE Port Collag DESCRIPTION OF OPERAT	TICKET NO 43/515
CHART	TIME	RATE	VOLUME	-	MPS	PRESSU	JRE (PSI)	DESCRIPTION OF OPERAT	
NO.		(BPM)	(BBL) (GAL)	T	C	TUBING	CASING		
	0945							On location	21/8"x51/2"
·····					 			P.C - 1998 '	
	1005	Ø	Ø		V	/	1000	Puressure Test	* Hold *
								Open P.C.	
	1010	21/2	4	/		250		Injection Rule	
	1015	31/2	95	V		400		mix 170 sts SMD Circulate compate to s	1/4# Flo @ 11.2 ppg scurfore - 20 sts
	1040	31/2	7	ン		500		Displace Coment	
	1045	Ø	Ø	/		1000		Close P.C.	Test *Hold *
								Run 5 Jts	
	1055	3	20		~		30D	Reverse Clean	
								wash up truck	
·								#170.sks SM #20.sks	D/4# Flo tokal* to pit *
	081							Job Complete	
		·						TL.	k You
								Dave D	h You Preston Kirby



# DRILL STEM TEST REPORT

# Prepared For: Larson Engineering, Inc.

562 W. State Rd 4 Olmitz, KS 67564

ATTN: Vern Schrag

### Glaves #2

#### 11-16s-26w Ness,KS

 Start Date:
 2018.05.06 @ 19:52:00

 End Date:
 2018.05.07 @ 02:45:00

 Job Ticket #:
 64005
 DST #: 1

Trilobite Testing, Inc 1515 Commerce Parkway Hays, KS 67601 ph: 785-625-4778 fax: 785-625-5620

RILOBITE	DRILL STEM TE	ST REP	ORT				
	Larson Engineering, Inc.		11-	-16s-26w	Ness	s,KS	
ESTING , IN	562 W. State Rd 4		Gla	aves #2			
	Olmitz, KS 67564		Job	Ticket: 64	4005	DST	ſ#:1
	ATTN: Vern Schrag		Tes	st Start: 20	018.05.	06 @ 19:52:0	0
GENERAL INFORMATION:	-						
Formation:MississippiDeviated:NoWhipstockTime Tool Opened:22:01:40Time Test Ended:02:45:00	ft (KB)		Tes	ster:		ntional Bottom Gerhard	Hole (Initial)
Total Depth: 4545.00 ft (KB)	<b>4545.00 ft (KB) (TVD)</b> TVD) ble Condition: Fair		Ref	erence ⊟e KB t	evation to GR/C	2610	.00 ft (KB) .00 ft (CF) .00 ft
Serial #:         8653         Inside           Press@RunDepth:         352.85 psig           Start Date:         2018.05.00           Start Time:         19:52:0           TEST COMMENT:         IF- 5- 1" blow;           ISI-15- No blow         FF- 30- BOB in           FSI- 60- No blow         Start	End Date: End Time: built to 15"; BOB in 5 min back 6 min; Built to 55"	2018.05.07 02:45:00	Capacity Last Cali Time On Time Off	b.: Btm:		8000 2018.05 5.06 @ 22:01 5.06 @ 23:54	:20
Pressure v							
PTCSSIRC V V 8003 Pessure	S. LINNC #053 Temperature	Time	Pressure	Temp		IMMARY otation	
	- 130	(Min.)	(psig)	(deg F)			
			2295.06	116.62		Hydro-static	
		1 6	73.75 123.66	116.16 124.60		To Flow (1) In(1)	
1930		23	987.54			Shut-In(1)	
			130.53			To Flow (2)	
		52 (B)	352.85	129.99		ln(2) Shut-ln(2)	
500 500 500 500 500 500 500 500		ີ່ 112 ງິ່ງ 113	970.58 2118.87	126.71 126.72		Hydro-static	
9974 6Sun May 2016 Time (H							
Length (ft) Description	Volume (bbl)			Ga Choke (i	s Rate	Pressure (psig)	Gas Rate (Mcf/d)
Length (π)         Description           375.00         GOMCW 20%G 30%C	. ,			Споке (	niciles)	riessure (psig)	Gas reale (MICT/d)
120.00 GOWCM 40%G 20%C							
250.00 HOCM 10%G 40%O 5							
	0.01						
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(I)		DRILL STEM T	ES	T REPO	ORT				
	RILOBITE	Larson Engineering, Inc.			11-	16s-26v	v Ness	s,KS	
	ESTING , INC.	562 W. State Rd 4 Olmitz, KS 67564				ves #2			
						Ticket: 6		_	Г#: 1
		ATTN: Vern Schrag			Test	t Start: 2	2018.05.	06 @ 19:52:0	00
GENERAL IN	IFORMATION:								
Formation: Deviated: Time Tool Opene Time Test Endeo		ft (KB)			Tes Tes Unit	ter:	Conver Cade G 65	ntional Bottom Serhard	ı Hole (Initial)
Total Depth:	<b>4464.00 ft (KB) To 45</b> 45.00 ft (KB) (TV	/D)			Refe	erence E		2610	.00 ft (KB) .00 ft (CF)
Hole Diameter:	7.88 inchesHole	e Condition: Fair				KB	to GR/C	XF: 10	.00 ft
Serial #: 86 Press@RunDep Start Date: Start Time:	-	@ 4468.00 ft (KB) End Date: End Time:	2	2018.05.07 02:45:00	Capacity Last Calil Time On Time Off	o.: Btm:		8000 2018.05	.00 psig .07
	ISI-15- No blow I FF- 30- BOB in 6 FSI- 60- No blow Pressure vs. T	min; Built to 55" back			PF	RESSU	RF SI	IMMARY	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PER Presure PER PRESURA PER P	BOB Tempenare	- 130 - 120 - 110 - 100 pereture (deg F) - 50 - 70 - 60	Time (Min.)	Pressure (psig)	Temp (deg F)	Anr	otation	
	Recovery					Ga	as Rate	es	
Length (ft)	Description	Volume (bbl)	]			Choke	(inches)	Pressure (psig)	Gas Rate (Mcf/d)
	GOMCW 20%G 30%O 40		$\downarrow$						
	GOWCM 40%G 20%O 20 HOCM 10%G 40%O 50%		+						
200.00		M 3.51							
			+						
			1						
ļļ		4	-+						

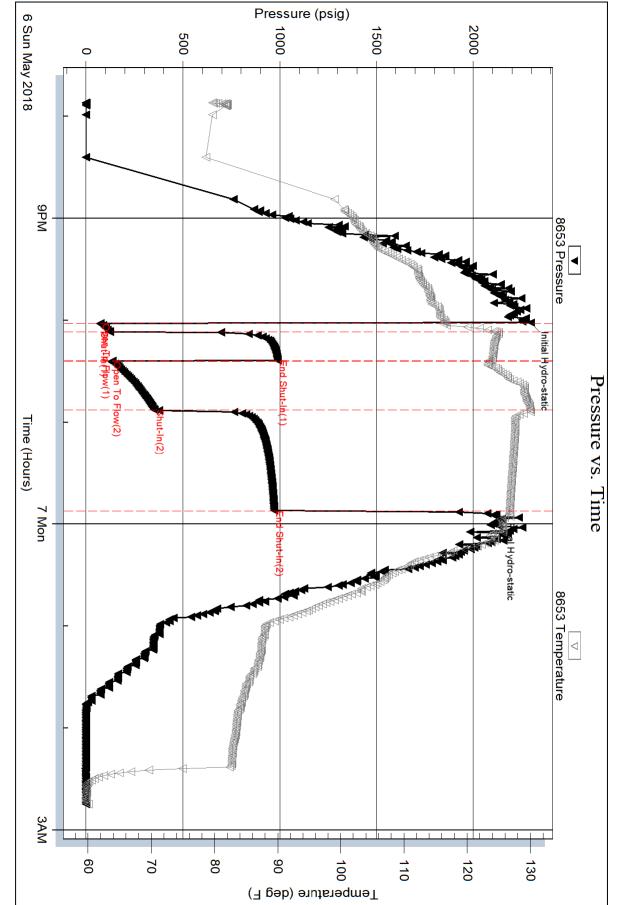
	RILOE	RITE				REPOR	I	TOOL DIAGR
			Larson	Engineering	, Inc.		11-16s-26w Ness,	۲S
	EST	T <b>ING</b> , INC	562 W. 3	State Rd 4			Glaves #2	
			Olmitz, ł	KS 67564			Job Ticket: 64005	DST#:1
			ATTN:	Vern Schra	ag		Test Start: 2018.05.06	6 @ 19:52:00
Tool Informatio	on		ļ					
Drill Pipe:	Length:	4447.00 ft	Diameter:	3.80 i	nches Volume:	62.38 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	-	0.00 ft	Diameter:	0.00 i	nches Volume:	0.00 bbl	Weight set on Pack	er: 25000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 i	nches Volume:	0.00 bbl	Weight to Pull Loose	e: 120000.0 lb
Drill Ding Above !	VD.	6.00 ft			Total Volume:	62.38 bbl	Tool Chased	0.00 ft
Drill Pipe Above I Depth to Top Pac		6.00 ft					String Weight: Initia	
Depth to Bottom		4404.00 ft					Fina	l 60000.00 lb
Interval between		95.00 ft						
Tool Length:		118.00 ft						
Number of Packe	ers:	2	Diameter:	6.75 i	nches			
T								
Tool Comments: Tool Descriptio	on	Le	ngth (ft)	Serial No.	Position	Depth (ft) Ad	ccum. Lengths	
Tool Descripti		Le	• • •	Serial No.	Position		ccum. Lengths	
<b>Tool Descripti</b> d Change Over Su		Le	1.00	Serial No.	Position	4442.00	ccum. Lengths	
<b>Tool Descripti</b> d Change Over Su Shut In Tool		Le		Serial No.	Position		ccum. Lengths	
<b>Tool Descriptio</b> Change Over Su Shut In Tool Hydraulic tool		Le	1.00 5.00	Serial No.	Position	4442.00 4447.00	ccum. Lengths	
<b>Tool Descripti</b> Change Over Su Shut In Tool Hydraulic tool Safety Joint		Le	1.00 5.00 5.00	Serial No.	Position	4442.00 4447.00 4452.00	ccum. Lengths	Bottom Of Top Packe
<b>Tool Descriptio</b> Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer		Le	1.00 5.00 5.00 3.00	Serial No.	Position	4442.00 4447.00 4452.00 4455.00		Bottom Of Top Packe
<b>Tool Descriptio</b> Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer		Le	1.00 5.00 5.00 3.00 5.00	Serial No.	Position	4442.00 4447.00 4452.00 4455.00 4460.00		Bottom Of Top Packe
<b>Tool Descriptio</b> Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb		Le	1.00 5.00 5.00 3.00 5.00 4.00	Serial No.	Position	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations		Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00	8653	Position	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00		Bottom Of Top Packe
Tool Descriptio Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Recorder		Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 0.00			4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Recorder Perforations	b	Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 0.00 13.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Recorder Perforations Change Over Su	b	Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 13.00 1.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4482.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Recorder Perforations Change Over Su	b	Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 0.00 13.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Recorder Recorder Perforations Change Over Su Drill Pipe Perforations	b	Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 0.00 13.00 1.00 63.00 10.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4482.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Packer Stubb Perforations Recorder Perforations Change Over Su Drill Pipe	b	Le	1.00           5.00           5.00           3.00           5.00           3.00           5.00           4.00           1.00           3.00           0.00           13.00           1.00           63.00           1.00           1.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4481.00 4482.00		Bottom Of Top Packe
Tool Description Change Over Su Shut In Tool Hydraulic tool Safety Joint Packer Packer Stubb Perforations Recorder Perforations Change Over Su Drill Pipe Perforations	b	Le	1.00 5.00 5.00 3.00 5.00 4.00 1.00 3.00 0.00 0.00 13.00 1.00 63.00 10.00	8653	Inside	4442.00 4447.00 4452.00 4455.00 4460.00 4464.00 4465.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4468.00 4450.00 4555.00	23.00	Bottom Of Top Packe

ACR-		DRI	LL STEM TEST REPO	RT	FLUID SUMMARY
	RILOBITE	Larson	Engineering, Inc.	11-16s-26w Ness,K	(S
	ESTING , INC.		State Rd 4 KS 67564	<b>Glaves #2</b> Job Ticket: 64005	DST#:1
		ATTN:	Vern Schrag	Test Start: 2018.05.06	@ 19:52:00
Mud and C	ushion Information				
Mud Type: 0	Gel Chem		Cushion Type:	Oil API:	deg API
Mud Weight:	9.00 lb/gal		Cushion Length:	ft Water Sal	linity: 30000 ppm
Viscosity:	76.00 sec/qt		Cushion Volume:	bbl	
Water Loss:	7.99 in <sup>3</sup>		Gas Cushion Type:		
Resistivity:	ohm.m		Gas Cushion Pressure:	psig	
Salinity: Filter Cake:	3000.00 ppm inches				
Recovery I	nformation				
			Recovery Table		
	Leng	th	Description	Volume bbl	
		375.00	GOMCW 20%G 30%O 40%W 10%M	5.260	
		120.00	GOWCM 40%G 20%O 20%W 20%M	1.683	
		250.00	HOCM 10%G 40%O 50%M	3.507	
	Total Length:	745	.00 ft Total Volume: 10.450	bbl	
	Num Fluid Samp	les: 0	Num Gas Bombs: 0	Serial #:	
	Laboratory Nan		Laboratory Location:		
	Recovery Com				
		.36	6 @60 deg		

Printed: 2018.05.08 @ 13:55:26

Ref. No: 64005





Glaves #2

Serial #: 8653

Inside

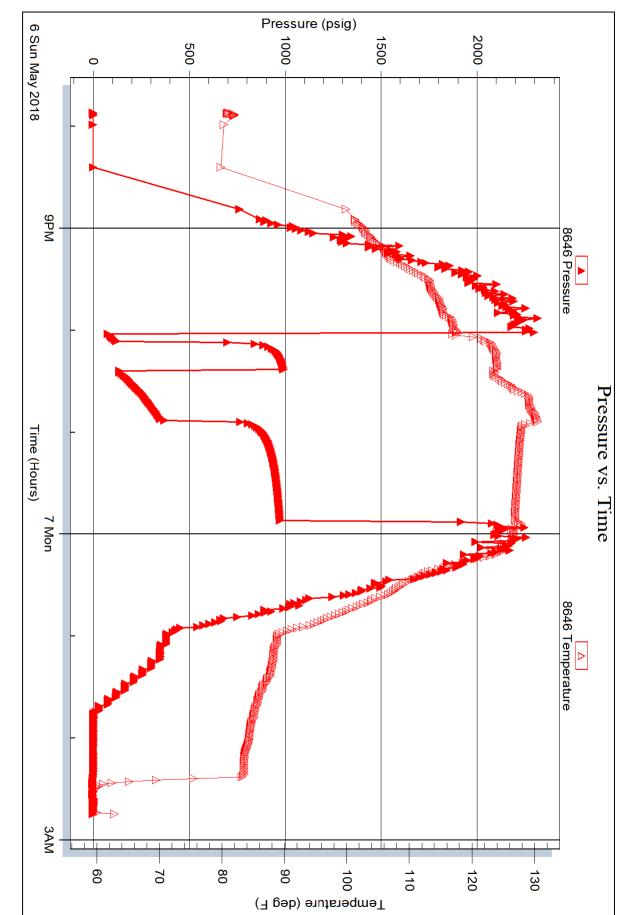
Larson Engineering, Inc.

DST Test Number: 1

Printed: 2018.05.08 @ 13:55:26

Ref. No: 64005





Outside Larson Engineering, Inc.

Serial #: 8646

Glaves #2

DST Test Number: 1

RILOBITE		Test Ticket
410 ESTING INC. 1515 Commerce Parkway	• Hays, Kansas 67601	<b>NO.</b> 64005
Well Name & No. Calaves #2	,Test No	1 Date 5-0/0-18
Company Lucson Engineering. I	ACElevation	<u>2670 KB 2610 GL</u>
Address 5/02 W. Stake	RD 4 Olmitz,	16 675/04
Co. Rep/Geo. Very Schrag		outhoring #18
Location: Sec//Twp65	_RgeCo/	ess State Ks
Interval Tested 4464-4545	Zone Tested Mississ	
Anchor Length	_ Drill Pipe Run	7 <sup>-1</sup> Mud Wt. <u>9. 2</u>
Top Packer Depth59	Drill Collars Run	Vis(a
Bottom Packer Depth	Wt. Pipe Run	
Total Depth 4545	Chlorides 3000	_ppm System LCM
Blow Description <u>IF - F / B</u>	low Built to	15"; BOB in 5min
IST - NO BLOW	Block	
FF- BOBIN	6 min: Built 10	55"
FST- NO Blow	back	
Rec_375 Feet of GOMCW	<i>70</i> %gas	30 %oil 40 %water 10 %mud
Rec_ 120 Feet of GOUCM	40 %gas	20% oil 20 % water 26 % mud
Rec_ 250 Feet of HOCM	// %gas	40 %oil %water 50 %mud
Rec Feet of	%gas	%oil %water %mud
Rec Feet of	%gas	%oil %water %mud
Rec Total BHT	Gravity API RW	6 @ (00 °F Chlorides 30, 000 ppm
(A) Initial Hydrostatic2295	<b>G</b> Test1150	T-On Location 18: 40-
(B) First Initial Flow 73	Q jars	T-Started <u>19:52</u>
(C) First Final Flow 123	Salety Joint 75	T-Open
(D) Initial Shut-In	Circ Sub	T-Pulled 23:53
(E) Second Initial Flow 130	Hourly Standby	T-Out 02:40
(F) Second Final Flow	1 121 Am	Comments
(G) Final Shut-In G70	O Sampler	
(H) Final Hydrostatic	C Straddie	
	Shale Packer	
Initial Open	Extra Packer	
Initial Shut-In5	C Extra Recorder	
Final Flow	Day Standby	
Final Shut-In		
	Accessibility	MP/DST Diec't
F	C Accessibility Sub Total	MP/DST Disc't

Tribbite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffared or sustained directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the tate shall be paid for all cost by the party for whom the test is made.

	WELLSITE GEOLOGIST'S REPORTWERNON C. SCHRAG CONSULTANT GEOLOGISTWERNON C. SCHRAG CONSULTANT GEOLOGISTScale 1:240 (5''=100') Imperial
Well Name:	GLAVES #2
	NW NE NW SW SEC 11-16S-26W API: 15-135-26001 Region: Ness Co., KS
Spud Date:	May 1, 2018 Drilling Completed: May 7, 2018
Surface Coordinates:	1140' FNL & 1800' FWL
Bottom Hole	
Coordinates: Ground Elevation (ft):	2610' K.B. Elevation (ft): 2620'
Logged Interval (ft):	
	Chemical Premix (Displaced)
	Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com
Compony	OPERATOR:
	Larson Engineering Inc. 562 West State Road 4
	Olmitz, KS 67564-8561
	DRILLING CONTRACTOR:
Southwind Drilling Co., Rig	<b>j #8</b>
DP 4.5" XH (16.6#): DC 6-1	/4" x 2-3/8" x 489.27', Kelly 40.00', Tool Joint 5.5" ; Bit: Varel HE29H, 7-7/8",
	n 60-70, WOB 35k; Kelly Bushing 10' above ground level; Bill Sanders (tool

CASING:

Ran 6 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 250', set @ 263' KB.

5-1/2" 15.5# R3 LTC 8rd csg. Tallied 4630.58', set @ 4627' KB.

### **CIRCULATION SYSTEM:**

Continental EMSCO D-375, duplex, 6 x 14, 58 spm, 320 gpm, Chemical, premix, displaced 3795', earth pits, MudCo/Service Mud, Inc., Jason Whiting

# GAS DETECTION SYSTEM:

USB-1208LS-41, portable hot-wire, Delphian 3.0 volt catalytic bead conbustible gas detector.

### **OPEN HOLE LOGS:**

DN, DI (SP), ML, No Sonic; 5" detail LTD-3600; 2" DI to suface casing; Pioneer Wireline, Hays, KS, Log total depth (4629') was five feet long to rotary total depth (4624').

# DRILL STEM TESTS:

Trilobite Testing, Inc., Hays, KS, Paul Simpson, Cade Gerhard.

0       ROP       15       0       Hot-Wire       100         0       Hot-Wire       100       Hot-Wire       100         0       Hot-Wire       100       Hot-Wire       100	ROP ROP (min/ft) Five Ten	DST	Lithology	Porosity and Show	Depth	Geological Descriptions	F	G (un ifty ne	iits)	т	otal	Gas	5	 
					0		0				Hot-	Wire		

												$\rightarrow$	
2													
				-3820	: MUD	-CO:	VIS 74	, WT 8	3.7, FIL	- 8.0, C	CHL 2k		
Сой			LS: It-md grayish brown; vf-xtal; dense to chalky &										
			argill. in part; no apparent porosity, N.S.										
			LS: grayish brown; vf-xtal; minor opaq. chert, no apparent porosity; N.S.						_				
CON			LS: grayish brown; vf-xtal; dense to chalky & argill. in part; no visible porosity; N.S.										
			LS: It brown to grayish brown; vf-xtal; trc fos chert,										
			chalky in part; rough textured with scattered pin-pt porosity; N.S.						_				
A HEEBNER			HEEBNER 3882 (-1262) Shale: black, carbon., many chips 3910.										
cộn			LS: dense; indistinct.						_				
		3900	Shale: gray, green; calcareous & marly in part.										
			LS: It brown, vf-xtal; dense with chalky portions, tro										
			opaq. chert, scattered vug porosity, N.S., incr dull fluor 3940.										
			Shale: gray, green;										
			LANSING 3926 (-1306) LS: It brown; vf-xtal; dense to chalky in part; minor white opaq. chert; no visible porosity; N.S.						_				
START DIGITAL ROP				~									
		3950	LS: as above, slightly darker brown; N.S.						_				
con			Shale: dk gray. Shale: greenish-gray, calcareous, v-silty in part.										
B-ZONE			LS: It brown; vf-xtal; few fine grains, sli fos., no										
			visible porosity; N.S.	ł					_				
-D-ZONE			LS: It grayish brown; vf-xtal; dense; sli chalky in	₹									
			part; sli fos., trc nacreum; no visible porosity; N.S.	Z							<b>—</b> T	EST	
0 ROP 15		000	Shale: green, 4030.					Hot-	Wire				100
<b>}</b>			LS: It brown; vf-xtal; sli chalky; scattered spar; rough textured, possible coarse vug porosity; N.S.										
			LS: It brown; vf-xtal; dense to chalky in part; sli. granular; poor apparent porosity; N.S.										
			LS: as above w/trc fos-moldic por., N.S.						_				
G-ZONE			LS: It brown; vf-xtal; trc coarse spar; md-crs oomoldic; fair-good oom porosity; N.S., 4060.		Ê				_				
									_				
		4050	LS: white to It brown; mic-vf xtal; chalky; no visible porosity; N.S.		E								
			LS: It grayish-brown; vf-xtal; oolitic to oomoldic in		}								
			part; fair oom porosity; N.S. LS: It brown; vf-xtal; dense; no visible porosity; N.S.										
			יישט אונאנאין איז אנמו, ערואכ, ווט אואוטופ porosity; N.S.		ł								
			MUNCIE CREEK 4082 (-1462) Shale: black, mot. green in part; carbon.; 4100. LS: md gray-brn; vf-xtal; dense; fos; semi-trans		}								
			LS: md gray-brn; vf-xtal; dense; fos; semi- trans., smokey chert; N.S., 4110. Shale: green, waxy.		Ŧ								
		8	LS: It brown; vf-xtal; trc vf-spar; trc white, opaq. chert; mostly dense to sli. chalky; no visible porosity; N.S.		丰								
		7			ł								
			LS: It brown to grayish brn; vf-xtal; dense, platey; minor opaq. chert; poor por., N.S.		Ę	58	3.25 SF	PM, 32	0 GPN	BIDE À 1, RES 128.66	P 39.2		
	•		LS: It brown to grayish brown; vf-xtal; few chips		ц 7	>	29/1	3 UNI	T CAR	BIDE			
			md-xtal druse w/spotted dry stains & fluor.; no visible oil; < 1% 4150.		ł				_				
			Shale: green, gray;		}								
CON J-J-ZONE			LS: It brown; vf-xtal; mostly dense; trc poor oomoldic & int xtal porosity; 1 chip dry stain, 4180.		3		CARB	IDE R	ECYC	LE 48	MIN		
			LS: It grayish brown; vf-xtal; dense, blocky to platey;		Ŧ								
STARK			no visible porosity; N.S. STARK SH 4164 (-1544) Shale: black; carbon.; v-sli. gas; trc 4190, 4200.		Į				_				
			LS: dk gray-brn; vf-xtal; dense; N.S. LS: lt grayish brown; vf-xtal; dense; trc semi- trans.		7								
• <b>CON</b>			chert; no visible porosity; N.S.		Ţ	VIS 5	3		_				
			LS: grayish-brown; vf-xtal; dense; opaque cherts; minor chalk; no visible porosity; N.S.		ł				_				
HUSH			HUSHPUCKNEY 4298 (-1578) Shale: black, carbon.; few gas bubbles; 4230.		Ę								
0 <b>RO</b> ₽ 15		·	LS: gray-brn; vf-xtal; dense; N.S. Shale: grays;	0	ł			Hot-	Wire				100
			LS: It brown; vf-xtal; dense, platey; no visible porosity; dull fluor.; N.S.		ł								
вкс			Shale: gray, green; calcareous.		ł				_				
	•		LS: It gray; vf-xtal; mostly dense; trc fine int xtal porosity w/spotted to sat. dry stains, looks tight; v-weak fluor., no visible oil; < 1% 4250.		¥								
			Shales: green, gray; mixed w/platey, dense lime;		++								
					子				_				_
		0											
		4250	LS: It brown; vf-xtal; dense, platey; no visible										
			porosity; N.S.										
			porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652)										
			porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S.										
			porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes;										
			porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S.										
		00	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous.										
			porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part;										
			porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no										
			porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S.									Image: Section (Section (	
		4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip										
		4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above.										
		4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above.										
		4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above.										
		4350 4350	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above.										
		4350 4350	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S.									<	
		4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARIMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It mod brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S.										
		4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S.										
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S.										
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: no stiy gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S.									<	
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: it gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: it gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: dk gray to black; carbonaceous in part; washes 4440 gray.										
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: it gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: no stly gray; vf-xtal; dense; no visible porosity; N.S. LS: nostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime;										
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: dk gray to black; carbonaceous in part; washes 4440 gray. <b>FT. SCOTT 4424 (-1804)</b> LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. LS: grayish brn; vf-xtal; fine vug porosity, sptd It-dry										
		4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. LS: grayish brn; vf-xtal; fine vug porosity, sptd It-dry stain, even HC fluor., no visible oil; 1-2% of 4460.					AS 20	/13				
		4450 44200 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It black; carbonaceous. LS: It black; carbonaceous. LS: It prown to gray; vf-xtal; dense; sli chalky in					AS 20	/13				
		4450 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S.				GAS SI	AS 20	/13				
		4450 4400 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It black; carbonaceous. LS: It black; carbonaceous. LS: It prown to gray; vf-xtal; dense; sli chalky in				GAS SI	AS 20	/13				
		4450 4450 4300 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: it gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. <b>FT. SCOTT 4424 (-1804)</b> LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. LS: grayish brn; vf-xtal; fine vug porosity, sptd It-dry stain, even HC fluor., no visible oil; 1-2% of 4460. <b>CHER. SH 4450 (-1830)</b> Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S.				GAS SI	AS 20	/13			I    I      I	
		4450 4450 4300 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARIMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: it gray; vf-xtal; mostly dense to sli chalky, 1 chip wifine vug por, spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. <b>FT. SCOTT 4424 (-1804)</b> LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. <b>CHER. SH 4450 (-1830)</b> Shale: black; carbonaceous. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: th torown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S.				CAS S	AS 200	24/18			I      I <tdi< td=""> <tdi< td="">      I&lt;</tdi<></tdi<>	
		4450 4450 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wifine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. <b>FT. SCOTT 4424 (-1804)</b> LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. <b>CHEP, SH 4450 (-1830)</b> Shale: black; carbonaceous. LS: thrown; vf-xtal; fine vug porosity, sptd It-dry stain, even HC fluor, no visible oil; 1-2% of 4460. <b>CHEP, SH 4450 (-1830)</b> Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S.				CAS S	AS 200	24/18				
		4500 4450 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARIMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: it gray; vf-xtal; mostly dense to sli chalky, 1 chip wifine vug por, spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. <b>FT. SCOTT 4424 (-1804)</b> LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. <b>CHER. SH 4450 (-1830)</b> Shale: black; carbonaceous. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: th torown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S.				MUD-CCHL 3H	AS 200	/13 24/18 5 76, V	WT 9.2 4464 5-15-	1-454 30-60	5:	
		4500 4450 4450 4450 4300	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely golitic; trc fine gom porosity; N.S. Shale: green, gray, mottled margon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wfine vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It mob rown; vf-xtal; dense; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: It gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shale: gray; mixed w/lime; Shale: gray; mixed w/lime; Shale: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: traysish-bm; vf-xtal; fine vug porosity; w/spotted HC fluor & It stains; no visible oil; 4450. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S.				MUD-CCHL 3P	AS 200	/13 24/18 5 76, \	WT 9.2 4464 5-15- W, 12 :: 987	1-454 30-60 20' G(	5: ), NC OWC	
		4500 4450 4450 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wifine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: grey; mixed w/lime; Shale: gray; mixed w/lime; LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor, no visible oil; 1-2% of 4460. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in par				MUD-CC CHL 3P OST # 30B I 3B, 37 550' H	AS 200	/13 24/18 5 76, \	WT 9.2 4464 5-15- W, 12 :: 987	1-454 30-60 20' G(	5: ), NC OWC	
		4500 4450 4450 4400 4350 4300	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wfine vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT.SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor & It stains; no visible oil; 4450. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: it brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown; vf-xtal; fine sug porosity, sptd It-dry stain, even HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: it brown to gray; vf-xtal; dense visoft chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: marcon, marly, washes 4520 samp red. MISS, DOL. 4518 (-1898) Dol: calcitic, md-brown to gray; vf-xtal; fair int xtal & coarse vug				MUD-CC CHL 3P OST # 30B I 3B, 37 550' H	AS 200	/13 24/18 5 76, \	WT 9.2 4464 5-15- W, 12 :: 987	1-454 30-60 20' G(	5: ), NC OWC	
		4500 4450 4450 4400 4350 4300 4300 4300	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip w/fine vug por., spotted dry stain, weak fluor., no visible oil, 4350. Shale: green, gray; mixed w/lime LS: It mot brown; vf-xtal; dense; platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 4450. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green Shale: maroon, marly, washes 4520 samp red. MISS. DOL. 4518 (-1898) DOI: calcitic, md-brown to gray; vf-f xtal; few grains; dense matrix w/md-crs vug porosity; crush SSO, saturated				MUD-CC CHL 3P OST # 30B I 3B, 37 550' H	AS 200	/13 24/18 24/18 IISS: AIN, OMC I; SIF 0-352	WT 9.2 4464 5-15- W, 12 :: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4500 4500 4450 4450 4400 4350 4300 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wfine vug por., spotted dry stain, weak fluor., no visible of assoc. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: gray to brown; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT.SCOTT 4424 (-1804) LS: tragvish-brn; vf-xtal; fine, sli drusy vug porosity w/spotted HC fluor & It stains; no visible oil; 1-2% of 4460. CHER.SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown; vf-xtal; dense w/soft chalky portions; no visible porosity; N.S. LS: It brown; vf-xtal; dense w/soft chalky portions; no visible porosity; N.S. LS: It brown; vf-xtal; dense w/soft chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green Shale: maroon, marly, washes 4520 samp red. <b>MISS. DOL. 4518 (-1898)</b> Dol: chalk; Dol: chalk; DOL 4518 (-1898) Dol: chalk; DDL 4518 (-1896) Dol: chalk; DDL 4518 (-1896) Dol: chalk; DDL 4518 (-1897)				GAS SI VIS VIS DOST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		50 4500 4450 4450 4450 4450	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray; w/limes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wfifne vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray: mixed w/lime; Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOT 4424 (-1804) LS: It grayish-brn; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: black: carbonaceous. LS: thrown; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: black; carbonaceous. LS: thrown; vf-xtal; fine vug porosity, sptd It-dry stain, even HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown; vf-xtal; dense w/soft chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal				MUD-CC CHL 3P OST # 30B I 3B, 37 550' H	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		450 4500 4450 4450 4450 4350 4350 4350 4	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; iense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wifne vug por, spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shale:: gray to brown; vf-xtal; dense; no visible porosity; N.S. Shale:: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4400 gray. Tr SCOTT 4424 (-1804) LS: It grayish-brr; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER: SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: horown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green Shale: marcon, marfy, washes 4520 samp red. MISS. DOL. 4518 (-1898) Dol: calcitic, md-brown to				GAS SI VIS VIS DOST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		450 4550 4450 4450 4450 4350 4350 4350 4	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It prown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wfine vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed wilime LS: It gray to brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed wilime; Shale: dk gray to black; carbonaceous in part; washes 440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: maroon, marly, washes 4520 samp red. <b>MISS. DOL. 4518 (-1898)</b> Dol: calcitic, md-brown to gray; vf-xtal; few grains; dense matrix wind-crs vug porosity; crush SSO, saturated db whordy stains & HC fluor; is microsoft				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		450 4550 4500 4450 4450 4450 4350 4300 430	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely oolitic; trc fine oom porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sli chalky, 1 chip wifne vug por, spotted fry stain, weak fluor, no visible on osity; N.S. Shale: green, gray; mixed willime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: no sty gray; vf-xtal; dense; no visible porosity; N.S. Shale: gray; mixed willime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: grayish brn; vf-xtal; fine vug porosity, sptd It-dry stain, even HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; to chalky in part; no visible porosity; N.S. LS: htorown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: thrown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: thrown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: thrown;				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		450 4550 4500 4450 4450 4450 4350 4300 430	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; finely colitic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It pray: vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray: vf-xtal; mostly dense to sli chalky, 1 chip wfine vug por., spotted dry stain, weak fluor., no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-md brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: mostly gray: vf-xtal; dense; no visible porosity; N.S. LS: mostly gray: vf-xtal; dense; no visible porosity; N.S. Shale:: gray to brown; vf-xtal; dense; no visible porosity; N.S. Shale:: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 440 gray. FT. SCOTT 4424 (-1804) LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. DShale: green Shale: marcon, marly, washes 4520 samp				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		450 450 450 4450 4400 4350 4350 4300	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray: vf-xtal; mostly dense to sli chalky, 1 chip wifine vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed w/lime LS: It-mod brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: as above. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed w/lime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 44224 (-1604) LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. CShale: green Shale: maroon, marly, washes 4520 samp red. M				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 20 HOW	24/18 24/18 24/18 UNIT	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4600 4550 4500 4500 4450 4400 4400 4350 4300 430	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green, gray; mixed wilime LS: It mobrown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed wilime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 20 HOW	/13 24/18 24/18 S 76, \ IISS: AIN, OMC I; SIF ISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, AIN,	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4600 4550 4500 4500 4450 4400 4400 4350 4300 430	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> L5: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray, mottled maroon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; dense to chalky in part; no visible orosity; N.S. LS: as above. LS: It gray; vf-xtal; dense to chalky in part; no visible orosity; N.S. LS: as above. LS: It gray; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: try dray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shale:: gray; mixed wilime; Shale:: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 4450. CHER, SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense wisoft chalky or part; pol; brown sugar; I-m xtal; dense wisoft chalky or part; pol; brown sugar; I-m xtal; dense; maybe 10%. Dol/Dol LS: It gr				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 200	/13 24/18 24/18 S 76, \ IISS: AIN, OMC I; SIF ISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, AIN,	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4600 4550 4500 4500 4450 4400 4400 4350 4300 430	porosity; N.S. Shale: green, gray; as above. MARMATON 4272 (-1652) LS: It brown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. Shale: green, gray; wilimes; LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green, gray; mixed wilime LS: It mobrown; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray; vf-xtal; dense, platey; sli chalky in part; no visible porosity; N.S. LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; looks dirty; no visible porosity; N.S. Shales: gray; mixed wilime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. LS: It grayish-bm; vf-xtal; fine, sli drusy vug porosity wispotted HC fluor, no visible oil; 1-2% of 4460. CHER. SH 4450 (-1830) Shale: black; carbonaceous. LS: It brown to gray; vf-xtal; dense; sli chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky				GAS SI VIS VIS DST # BB, 37 50' H 3-123	AS 200	/13 24/18 24/18 S 76, \ IISS: AIN, OMC I; SIF ISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, AIN,	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4600 4550 4500 4500 4450 4400 4350 4350 43	porosity; N.S. Shale: green, gray; as above. <b>MARMATON 4272 (-1652)</b> LS: It brown; vf-xtal; finely colltic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; finely colltic; trc fine com porosity; N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray; vf-xtal; mostly dense to sil chalky, 1 chip wine vug por, spotted dry stain, weak fluor, no visible oil, 4360. Shale: green, gray; mixed wilime LS: It gray to brown; vf-xtal; dense; platey; sil chalky in part; no visible porosity; N.S. LS: mostly gray; vf-xtal; dense; no visible porosity; N.S. Shales: gray; mixed wilime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT.SCOTT 4424 (-1804) LS: It grayish-bm; vf-xtal; fine, sil drusy yug porosity wispotted fC fluor & It stains; no visible oil; 4450. LS: grayish-bm; vf-xtal; fine yug porosity, sptd It-dry stain, even HC fluor, no visible oil; 1-2% of 4460. CHER. SH 4450 (-1830) Shale: back; carbonaceous. LS: It brown to gray; vf-xtal; dense; sil chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense visott chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It prown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It gray to brown; f-m xtal; fine vg anoresot porosity; even bright HC				AAS SI VIS 000 I 300 I 3	AS 200	/13 24/18 24/18 S 76, \ IISS: AIN, OMC I; SIF ISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, AIN,	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	
		4600 4550 4500 4500 4450 4400 4350 4350 43	porosity: N.S. Shale: green, gray; as above. <b>MARIMATON 4272 (-1652)</b> LS: It brown; vf-xtal; finely collic; trc fine com porosity: N.S. Shale: green, gray; willmes; LS: It brown; vf-xtal; finely collic; trc fine com porosity: N.S. Shale: green, gray, mottled marcon in part; calcareous. LS: It brown; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: as above. LS: It gray: vf-xtal; dense to chalky in part; no visible porosity; N.S. Shale: green, gray; mixed wilime LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. Shale: green, gray; mixed wilime LS: It gray to brown; vf-xtal; dense; no visible porosity; N.S. Shales: gray: mixed wilime; Shale: dk gray to black; carbonaceous in part; washes 4440 gray. FT. SCOTT 4424 (-1804) LS: It grayish briv; vf-xtal; dense; in ovisible oil; 4450. LS: grayish briv; vf-xtal; fine vug porosity; wispotted HC fluor & It stains; no visible oil; 4450. LS: grayish briv; vf-xtal; fine sui drusy vug porosity wispotted HC fluor & It stains; no visible oil; 4450. LS: grayish briv; vf-xtal; dense; sil chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense; sil chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense; sil chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense wisot chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense visit chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense visit chalky portions; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense visit chalky in part; no visible porosity; N.S. Dol: Calitie, md-brown to gray; vf-xtal; dense to chalky in part; no visible porosity; N.S. LS: It brown to gray; vf-xtal; dense to chalky in part; porisity; even bright HC fluor; so So, storng door at trap, sat. dk bm dry stains, >50% of 45m. Dol/Dol LS: gray to brown; f-m xtal; fuor, is decreas				AAS SI VIS ON IND-C CHL 31 30B I 38B, 33 550' H 3-123 CTOR	AS 200	/13 24/18 24/18 S 76, \ IISS: AIN, OMC I; SIF ISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, OMC I; SIF IISS: AIN, AIN,	WT 9.2 4462 5-15- W, 12 2: 987	1-454 30-60 20' G( '-970,	5: ), NC OWC	