

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS REGISTRATION DIVISION

4/23/14 Form ACO-1
June 2009
Form Must Be Typed
Form must be Signed
All blanks must be Filled

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

OPERATOR: License # 32811
Name: Osage Resources, L.L.C.
Address 1: 6209 N. State Rd 61
Address 2: _____
City: Hutchinson State: KS Zip: 67502 + 8608
Contact Person: Brooke C. Walter
Phone: (620) 860-2224
CONTRACTOR: License # 33132
Name: Dan D Drilling
Wellsite Geologist: Curtis Covey
Purchaser: _____

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

If Workover/Re-entry: Old Well Info as follows:
Operator: _____
Well Name: _____
Original Comp. Date: _____ Original Total Depth: _____
 Deepening Re-perf. Conv. to ENHR Conv. to SWD
 Conv. to GSW
 Plug Back: _____ Plug Back Total Depth _____
 Commingled Permit #: _____
 Dual Completion Permit #: _____
 SWD Permit #: _____
 ENHR Permit #: _____
 GSW Permit #: _____
3/13/2012 3/29/2012
Spud Date or Date Reached TD Completion Date or
Recompletion Date Recompletion Date

API No. 15 - 007-23839-0100
Spot Description: _____
NE NW NW NE Sec. 19 Twp. 33 S. R. 14 East West
180 Feet from North / South Line of Section
2,282 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Barber
Lease Name: Osage No. Well #: 19-04H
Field Name: Aetna Gas Area
Producing Formation: Mississippian
Elevation: Ground: 1793 Kelly Bushing: 1808
Total Depth: 9283 Plug Back Total Depth: _____
Amount of Surface Pipe Set and Cemented at: 235 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: _____ Feet
If Alternate II completion, cement circulated from: _____
feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: _____ ppm Fluid volume: _____ bbls
Dewatering method used: _____
Location of fluid disposal if hauled offsite: _____
Operator Name: _____
Lease Name: _____ License #: _____
Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West
County: APR 23 2014 Permit #: _____
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INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market Street, Kansas City, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

AFFIDAVIT
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.
Signature: Brooke C. Walter
Title: Geological Technician Date: 4/23/2012

KCC Office Use ONLY
 Letter of Confidentiality Received
Date: 4-23-12 to 4-23-14
 Confidential Release Date: _____
 Wireline Log Received
 Geologist Report Received
 UIC Distribution
ALT I II III Approved by: NS Date: 5-1-12

Operator Name: Osage Resources, L.L.C. Lease Name: Osage No. Well #: 19-04H
 Sec. 19 Twp. 33 S. R. 14 East West County: Barber

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Electric Log Run <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run: Density/Neutron, Induction, Sonic, Geo-Perf, Geo Report	<input checked="" type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Name</td> <td style="width:20%;">Top</td> <td style="width:20%;">Datum</td> </tr> <tr> <td>Stark</td> <td>4566</td> <td>MSL</td> </tr> <tr> <td>BKC</td> <td>4693</td> <td>MSL</td> </tr> <tr> <td>Marmaton</td> <td>4762</td> <td>MSL</td> </tr> <tr> <td>Mississippian</td> <td>5009</td> <td>MSL</td> </tr> </table>	Name	Top	Datum	Stark	4566	MSL	BKC	4693	MSL	Marmaton	4762	MSL	Mississippian	5009	MSL
Name	Top	Datum														
Stark	4566	MSL														
BKC	4693	MSL														
Marmaton	4762	MSL														
Mississippian	5009	MSL														

CASING RECORD <input checked="" type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Conductor Surface	26 17.5	20 13.375	90 48.0	41 235	4 yds grout Class A	NA 200	NA 3% CaCl ₂ , 1/4 #/sx celloflake
Intermediate	8.75	7	26	5088	ASC	200	0.25% defoamer, 10% salt, 0.5% CFR, 0.8% FLA-322 & 1/4#sx celloflake
Production	6.125	4.5	11.6	9268	CP-100	725	10% salt, 0.75% CFR, 0.25% defoamer, 0.1% WCA

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth
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TUBING RECORD: Size: _____ Set At: _____ Packer At: _____		Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. _____		Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____
Estimated Production Per 24 Hours	Oil Bbls. _____ Gas Mcf _____ Water Bbls. _____	Gas-Oil Ratio _____ Gravity _____

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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ALLIED CEMENTING CO., LLC. 037946

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT: Liberati, KS

DATE <u>3-14-2012</u>	SEC. <u>19</u>	TWP. <u>33S</u>	RANGE <u>14W</u>	3-13 CALLED OUT <u>8:00pm</u>	3-13 ON LOCATION <u>11:30</u>	3-14 JOB START <u>1:30 AM</u>	3-14 JOB FINISH <u>2:15 AM</u>
OS99e LEASE	WELL # <u>19-04H</u>		LOCATION <u>160 & Deerhead Rd, South to</u>		COUNTY <u>Barton</u>	STATE <u>KS</u>	
OLD OR <input checked="" type="radio"/> NEW (Circle one)			C927 hole, 1 essr, 6 south				

CONTRACTOR Dgn D #5
 TYPE OF JOB Surface
 HOLE SIZE 17 1/2 T.D. 255'
 CASING SIZE 13 3/8 DEPTH 250'
 TUBING SIZE _____ DEPTH _____
 DRILL PIPE _____ DEPTH _____
 TOOL _____ DEPTH _____
 PRES. MAX _____ MINIMUM _____
 MEAS. LINE _____ SHOE JOINT _____
 CEMENT LEFT IN CSG. 20'
 PERFS. _____
 DISPLACEMENT 36 bbls of fresh water

OWNER OS99e Resources
 CEMENT
 AMOUNT ORDERED 200sf Class B + 3%cc
2% Gal + 44# Flosses

EQUIPMENT
 PUMP TRUCK CEMENTER Derin E
 # 456-541 HELPER Cesr
 BULK TRUCK
 # 381-250 DRIVER Derrik G.
 BULK TRUCK
 # _____ DRIVER _____

COMMON	<u>Class B 200sf</u>	@	<u>16.25</u>	<u>3250.00</u>
POZMIX		@		
GEL	<u>45x</u>	@	<u>21.25</u>	<u>95.60</u>
CHLORIDE	<u>75x</u>	@	<u>58.20</u>	<u>407.40</u>
ASC		@		
Flosses	<u>562</u>	@	<u>2.70</u>	<u>135.00</u>
HANDLING	<u>213</u>	@	<u>2.25</u>	<u>479.25</u>
MILEAGE	<u>213/11/25</u>			<u>585.75</u>
TOTAL				<u>4942.40</u>

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REMARKS:
Pipe on bottom & basic circulation
Pump 3 bbls water shear, mix 200sf
of cement, displace 36 bbls of fresh
water, shut in, cement & circulate

SERVICE

DEPTH OF JOB	<u>250'</u>			
PUMP TRUCK CHARGE			<u>1125.00</u>	
EXTRA FOOTAGE		@		
MILEAGE	<u>25</u>	@	<u>7.00</u>	
MANIFOLD		@		
Light vehicle	<u>25</u>	@	<u>4.00</u>	
TOTAL				<u>1466.00</u>

CHARGE TO: OS99e Resources
 STREET _____
 CITY _____ STATE _____ ZIP _____

PLUG & FLOAT EQUIPMENT

	@			
	@			
	@			
	@			
TOTAL				

To Allied Cementing Co., LLC.
 You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME X
 SIGNATURE X Raymond Tamm
Thank you!!!

SALES TAX (If Any) _____
 TOTAL CHARGES 6342.40
 DISCOUNT _____

Net \$ 5073.92
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BASIC

energy services, L.P.

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TREATMENT REPORT

Customer Osage Resources, LLC Lease No. _____ Date 4-1-12
 Lease Osage Well # 19-04H
 Field Order # _____ Station Pratt, Kansas Casing 11.6Lb Depth 9283 Feet County Barber State Kansas
 Type Job C.N.W. - Hang Liner Formation _____ Legal Description 19-335-14W

PIPE DATA		PERFORATING DATA		CEMENT USED		TREATMENT RESUME		
Casing Size <u>11.6Lb</u>	Tubing Size <u>11.6Lb</u>	Shots/Ft <u>20</u>	From <u>0</u>	To <u>20</u>	Rate <u>13Lb/Gal</u>	Press <u>1.98</u>	ISIP <u>5 Min</u>	
Depth <u>9283 Feet</u>	Depth <u>9283 Feet</u>	From <u>0</u>	To <u>20</u>	To <u>20</u>	Max <u>11.12 Gal/stk</u>	Friction <u>1.08</u>	Reducer <u>10 Min</u>	
Volume <u>71.09 Bbl</u>	Volume <u>71.09 Bbl</u>	From <u>0</u>	To <u>20</u>	To <u>20</u>	Avg <u>7.58</u>	Friction <u>1.08</u>	Reducer <u>10 Min</u>	
Max Press <u>3,000 P.S.I.</u>	Max Press <u>3,000 P.S.I.</u>	From <u>0.258</u>	To <u>0.258</u>	To <u>0.258</u>	Avg <u>1.18</u>	Friction <u>1.08</u>	Reducer <u>15 Min</u>	
Well Connection <u>either top or bottom</u>	Annulus Vol <u>11.6Lb</u>	From <u>0</u>	To <u>15.6Lb</u>	To <u>15.6Lb</u>	HHP Used <u>5.43 Gal</u>	Friction <u>1.24</u>	Reducer <u>15 Min</u>	
Plug Depth <u>9283 Feet</u>	Packer Depth <u>9283 Feet</u>	From <u>0</u>	To <u>0</u>	To <u>0</u>	Flush <u>104 Bbl</u>	Friction <u>1.24</u>	Reducer <u>15 Min</u>	

Customer Representative Raymond Station Manager David Scott Treater Clarence R. Messick
 Service Units
 Driver Names
 Messick Mattal Pierson Young

Time P.M.	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
1:30					Trucks on location and hold safety meeting. Drilling broke down upon arrival.
5:00					Drilling rig start to run Drill pipe.
9:20					Liner in well. Circulate for 45 minutes.
10:20					Release ball to set liner packer.
10:21	3,000			5	Set liner packer with Mud Flush Fresh water.
	1,000		12	5	Start Mud Flush.
			27	5	Start Fresh water spacer.
10:30	500		34	5	Start Mixing 20 sacks Premium Scavenger cement.
			190		Start Mixing 705 sacks Premium Cement
					Stop pumping. Shut in well. Wash pump & lines with sugar water. Release 3 1/2" Drill pipe plug. Open Well.
11:00	200			3	Start Sugar and 2% clay max Displacement.
	200		10	3	Start 2% clay max Displacement.
11:04	1,000		33		Land Drill pipe plug and shear casing plug.
11:07	1,800				Start Casing Displacement.
11:36	900		104.5		Plug down. Did not see plug land. Open release. No returns.
11:39	1,400				Pressure up and Burst Dist. Pump sugar water out of casing.
			3		Pull 1 Joint of Drill pipe.
11:53					Start to Reverse out.
			95		Pump truck Broke down. Hook up well to rig dump.

10244 NE Hiway 61 • P.O. Box 8613 • Pratt, KS 67124-8613 • (620) 672-1201 • Fax (620) 672-5383

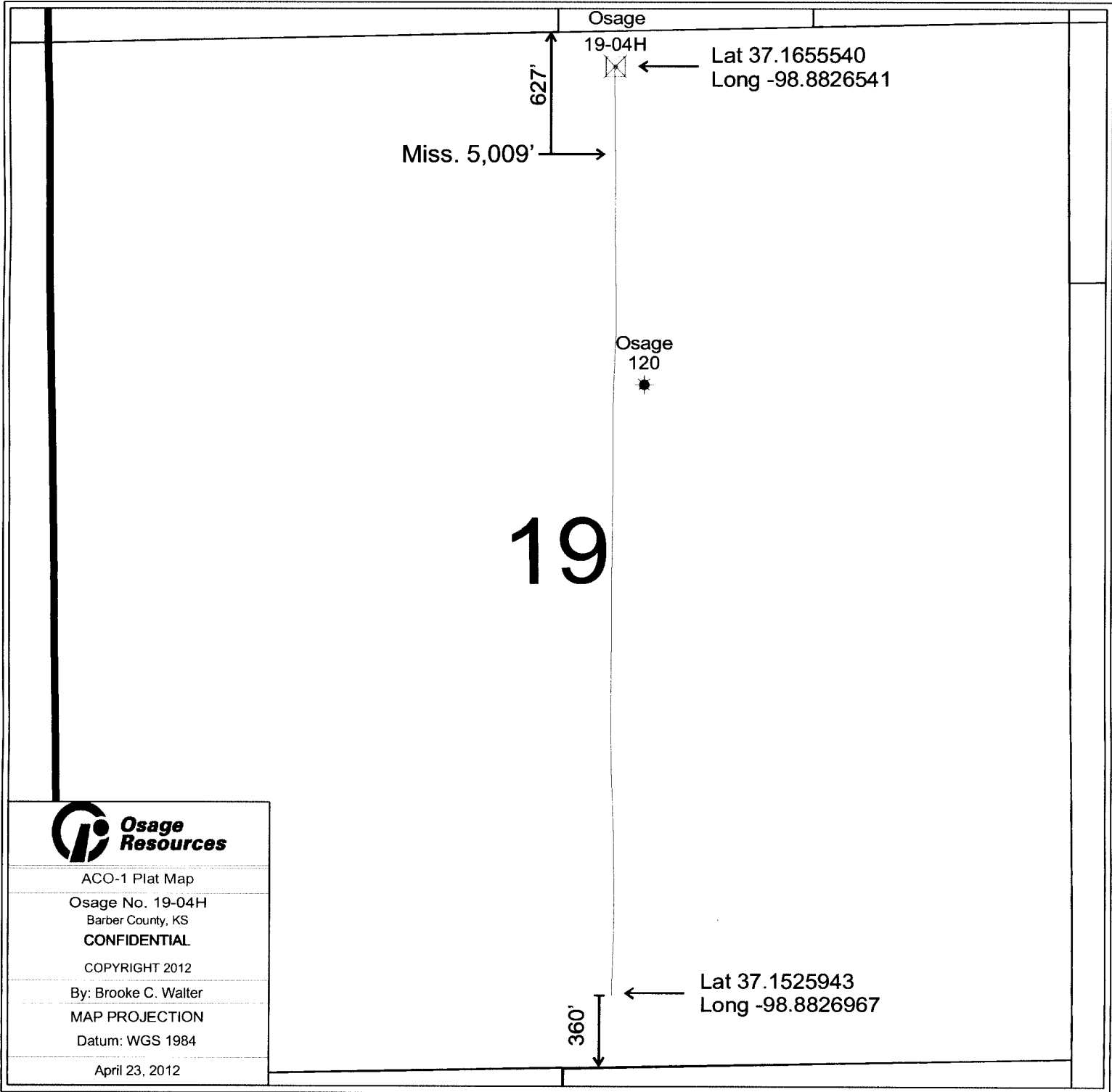
12:29 Wash up pump truck 1:30 Job Complete. Thank You, Clarence, Mitre, Steve, Jesse

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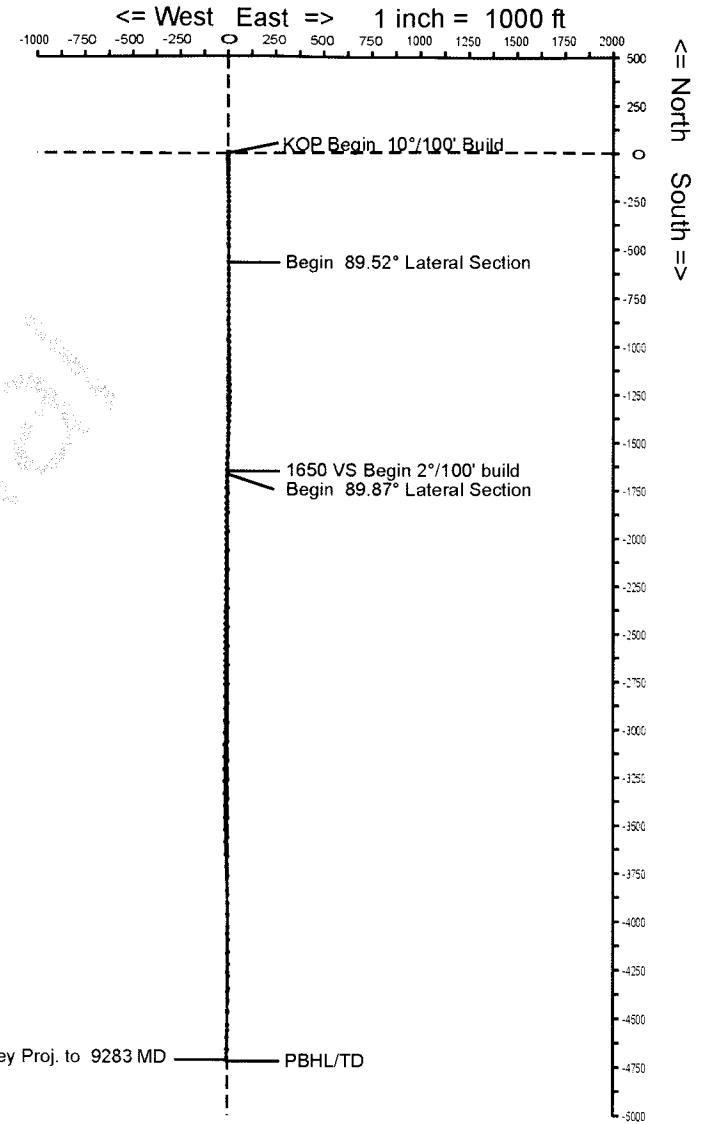
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Osage Resources

Osage 19-04H



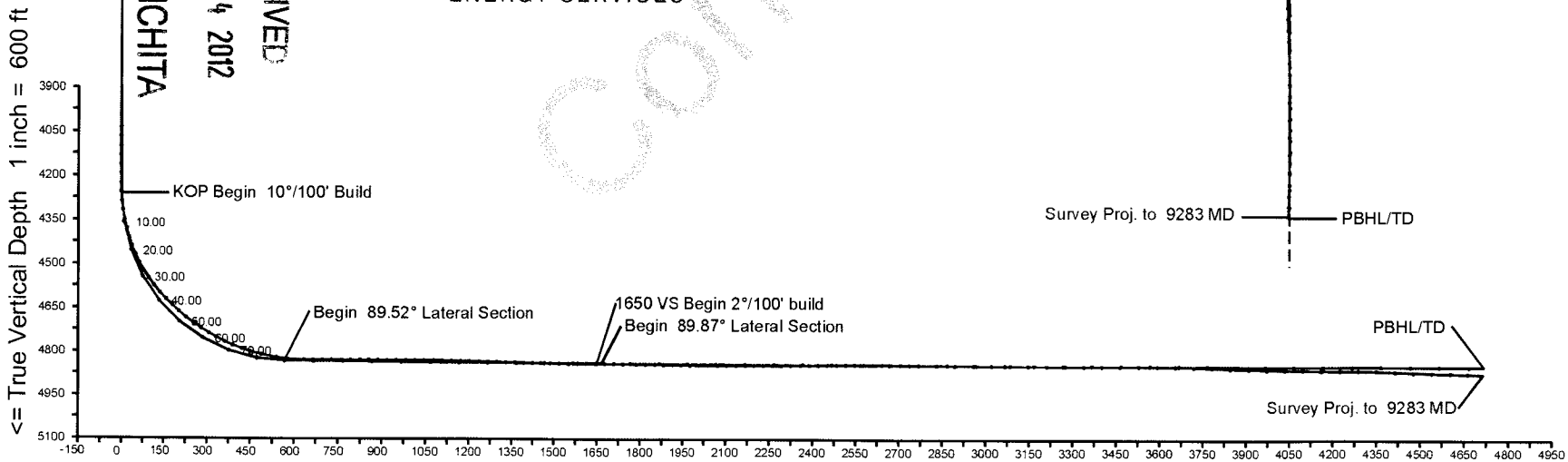
WELL PROFILE DATA rev0							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
4260	0.00	180.00	4260	0	0	0.00	KOP Begin 10°/100' Build
5155	89.52	180.00	4833	-568	0	10.00	Begin 89.52° Lateral Section
6237	89.52	180.00	4842	-1650	0	0.00	1650 VS Begin 2°/100' build
6255	89.87	180.00	4842	-1667	0	2.00	Begin 89.87° Lateral Section
9312	89.87	180.00	4849	-4725	0	0.00	PBHL/TD

WELL PROFILE DATA svys							
MD	Inc.	Azi.	TVD	N/-S	E/-W	DLS	Comment
9283	89.00	181.60	4872	-4717	-7	0.00	Survey Proj. to 9283 MD

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Vertical Section on 180 deg azimuth with reference 0.00 N, 0.00 E

Calmena Energy Services

Company: Osage Resources
 Well: Osage 19-04 H
 Location: Barber County, Kansas

Date: 31-Mar-2012
 Surveys
 Page 1
 Job# : 6408

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 180.00° Az (feet)	Comments
Surface Location								
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1508.00	0.20	67.40	1508.00	1.01	2.43	0.01	-1.01	
2010.00	0.10	219.10	2010.00	1.01	2.96	0.06	-1.01	
2516.00	0.10	301.80	2516.00	0.90	2.31	0.03	-0.90	
3021.00	0.30	230.60	3020.99	0.29	0.91	0.06	-0.29	
3524.00	0.50	313.50	3523.98	0.97	-1.70	0.11	-0.97	
4038.00	0.20	245.70	4037.98	2.14	-4.14	0.09	-2.14	
4067.00	0.20	235.40	4066.98	2.09	-4.23	0.12	-2.09	
4099.00	0.20	76.20	4098.98	2.07	-4.22	1.23	-2.07	
4130.00	0.20	119.40	4129.98	2.06	-4.12	0.48	-2.06	
4162.00	0.10	94.20	4161.98	2.03	-4.04	0.37	-2.03	
4193.00	0.30	107.60	4192.97	2.00	-3.94	0.66	-2.00	
4225.00	0.30	150.50	4224.97	1.90	-3.82	0.69	-1.90	
4256.00	2.20	174.40	4255.97	1.24	-3.72	6.22	-1.24	
4288.00	5.50	180.10	4287.89	-0.90	-3.66	10.37	0.90	
4319.00	8.70	182.20	4318.65	-4.73	-3.76	10.35	4.73	
4351.00	11.70	184.30	4350.14	-10.39	-4.09	9.45	10.39	
4382.00	14.60	184.50	4380.32	-17.42	-4.64	9.36	17.42	
4414.00	17.90	181.40	4411.04	-26.36	-5.07	10.66	26.36	
4445.00	21.10	178.20	4440.26	-36.70	-5.01	10.88	36.70	
4477.00	24.80	177.60	4469.72	-49.17	-4.55	11.59	49.17	
4508.00	28.30	178.20	4497.45	-63.01	-4.05	11.32	63.01	
4540.00	31.80	178.80	4525.14	-79.03	-3.63	10.98	79.03	
4572.00	35.50	179.60	4551.78	-96.76	-3.39	11.64	96.76	
4602.00	39.20	179.50	4575.62	-114.95	-3.25	12.33	114.95	
4633.00	42.70	179.20	4599.03	-135.27	-3.02	11.31	135.27	
4665.00	45.00	178.30	4622.11	-157.43	-2.53	7.45	157.43	
4696.00	46.90	178.20	4643.66	-179.70	-1.85	6.13	179.70	
4727.00	49.00	178.40	4664.42	-202.70	-1.17	6.79	202.70	
4759.00	51.10	179.80	4684.97	-227.23	-0.78	7.37	227.23	

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Calmena Energy Services

Company: Osage Resources
 Well: Osage 19-04 H
 Location: Barber County, Kansas

Date:31-Mar-2012
 Surveys
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 Job# : 6408

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 180.00° Az (feet)	Comments
4791.00	53.70	180.70	4704.49	-252.58	-0.90	8.42	252.58	
4822.00	56.70	180.60	4722.18	-278.03	-1.19	9.68	278.03	
4854.00	60.00	180.20	4738.97	-305.27	-1.38	10.37	305.27	
4885.00	62.10	179.80	4753.98	-332.39	-1.37	6.87	332.39	
4917.00	65.00	179.30	4768.23	-361.04	-1.15	9.17	361.04	
4948.00	67.60	178.80	4780.69	-389.42	-0.68	8.52	389.42	
4980.00	71.40	179.00	4791.89	-419.38	-0.10	11.89	419.38	
5012.00	74.40	179.60	4801.30	-449.96	0.27	9.54	449.96	
5051.00	76.90	180.70	4810.96	-487.74	0.17	6.97	487.74	
5104.00	80.20	180.30	4821.48	-539.67	-0.28	6.27	539.67	
5136.00	82.90	179.50	4826.19	-571.32	-0.23	8.79	571.32	
5168.00	87.00	179.20	4829.00	-603.19	0.14	12.85	603.19	
5199.00	90.40	179.80	4829.71	-634.18	0.41	11.14	634.18	
5231.00	89.40	179.90	4829.76	-666.18	0.49	3.14	666.18	
5263.00	89.30	180.20	4830.12	-698.17	0.46	0.99	698.17	
5294.00	89.20	179.80	4830.53	-729.17	0.46	1.33	729.17	
5326.00	90.00	180.00	4830.75	-761.17	0.52	2.58	761.17	
5358.00	90.30	179.70	4830.67	-793.17	0.60	1.33	793.17	
5390.00	90.50	179.50	4830.45	-825.17	0.82	0.88	825.17	
5421.00	89.60	179.50	4830.42	-856.17	1.10	2.90	856.17	
5453.00	89.40	179.40	4830.70	-888.16	1.40	0.70	888.16	
5484.00	89.70	179.50	4830.94	-919.16	1.70	1.02	919.16	
5516.00	89.60	179.60	4831.14	-951.16	1.95	0.44	951.16	
5548.00	89.50	179.50	4831.39	-983.16	2.20	0.44	983.16	
5580.00	90.00	179.40	4831.53	-1015.16	2.51	1.59	1015.16	
5611.00	89.80	179.00	4831.58	-1046.15	2.94	1.44	1046.15	
5643.00	89.00	179.10	4831.92	-1078.15	3.47	2.52	1078.15	
5674.00	88.80	179.00	4832.51	-1109.14	3.99	0.72	1109.14	
5706.00	89.10	178.60	4833.10	-1141.13	4.66	1.56	1141.13	
5738.00	89.00	178.20	4833.63	-1173.11	5.55	1.29	1173.11	

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Calmena Energy Services

Company: Osage Resources
 Well: Osage 19-04 H
 Location: Barber County, Kansas

Date:31-Mar-2012
 Surveys
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 Job# : 6408

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/W (feet)	DLS (deg/100')	VS @ 180.00° Az (feet)	Comments
5769.00	88.60	178.90	4834.28	-1204.09	6.33	2.60	1204.09	
5801.00	88.70	180.10	4835.03	-1236.08	6.61	3.76	1236.08	
5833.00	88.70	179.80	4835.76	-1268.07	6.64	0.94	1268.07	
5864.00	88.30	180.60	4836.57	-1299.06	6.53	2.88	1299.06	
5896.00	88.20	182.00	4837.55	-1331.04	5.81	4.38	1331.04	
5928.00	88.50	182.70	4838.47	-1363.00	4.50	2.38	1363.00	
5959.00	88.70	182.70	4839.23	-1393.95	3.04	0.65	1393.95	
5991.00	88.90	183.10	4839.90	-1425.91	1.42	1.40	1425.91	
6022.00	89.00	182.90	4840.46	-1456.86	-0.20	0.72	1456.86	
6054.00	89.00	182.10	4841.02	-1488.82	-1.60	2.50	1488.82	
6086.00	89.20	182.10	4841.53	-1520.80	-2.77	0.63	1520.80	
6117.00	89.60	181.90	4841.85	-1551.78	-3.85	1.44	1551.78	
6149.00	89.70	181.60	4842.05	-1583.76	-4.83	0.99	1583.76	
6180.00	89.80	181.50	4842.18	-1614.75	-5.67	0.46	1614.75	
6212.00	89.70	181.30	4842.32	-1646.74	-6.45	0.70	1646.74	
6244.00	89.90	181.50	4842.43	-1678.73	-7.23	0.88	1678.73	
6275.00	89.70	181.30	4842.54	-1709.72	-7.99	0.91	1709.72	
6307.00	89.40	181.00	4842.79	-1741.71	-8.63	1.33	1741.71	
6353.00	89.70	180.20	4843.15	-1787.71	-9.11	1.86	1787.71	
6385.00	89.70	180.10	4843.32	-1819.71	-9.20	0.31	1819.71	
6417.00	89.60	180.00	4843.52	-1851.71	-9.23	0.44	1851.71	
6448.00	89.00	179.60	4843.90	-1882.70	-9.12	2.33	1882.70	
6480.00	88.90	179.90	4844.48	-1914.70	-8.98	0.99	1914.70	
6511.00	89.30	179.90	4844.97	-1945.69	-8.92	1.29	1945.69	
6543.00	89.50	179.80	4845.30	-1977.69	-8.84	0.70	1977.69	
6575.00	89.80	179.90	4845.50	-2009.69	-8.76	0.99	2009.69	
6606.00	89.60	179.80	4845.66	-2040.69	-8.68	0.72	2040.69	
6638.00	89.70	180.20	4845.86	-2072.69	-8.68	1.29	2072.69	
6670.00	89.60	180.30	4846.05	-2104.69	-8.82	0.44	2104.69	
6701.00	89.70	180.60	4846.24	-2135.69	-9.06	1.02	2135.69	

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Calmena Energy Services

Company: Osage Resources
 Well: Osage 19-04 H
 Location: Barber County, Kansas

Date: 31-Mar-2012
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 Job# : 6408

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N-S (feet)	E-W (feet)	DLS (deg/100')	VS @ 180.00° Az (feet)	Comments
6733.00	89.80	180.40	4846.38	-2167.69	-9.34	0.70	2167.69	
6765.00	90.00	180.60	4846.44	-2199.68	-9.62	0.88	2199.68	
6796.00	89.90	180.10	4846.46	-2230.68	-9.81	1.64	2230.68	
6828.00	89.90	180.50	4846.52	-2262.68	-9.97	1.25	2262.68	
6859.00	90.20	180.60	4846.49	-2293.68	-10.27	1.02	2293.68	
6891.00	90.00	180.30	4846.44	-2325.68	-10.52	1.13	2325.68	
6923.00	90.80	180.60	4846.21	-2357.68	-10.77	2.67	2357.68	
6954.00	91.00	180.30	4845.73	-2388.67	-11.02	1.16	2388.67	
6986.00	91.20	180.70	4845.11	-2420.67	-11.30	1.40	2420.67	
7018.00	90.70	180.20	4844.58	-2452.66	-11.55	2.21	2452.66	
7049.00	90.70	180.00	4844.20	-2483.66	-11.60	0.65	2483.66	
7081.00	90.70	180.00	4843.81	-2515.66	-11.60	0.00	2515.66	
7112.00	90.70	180.30	4843.43	-2546.65	-11.68	0.97	2546.65	
7144.00	90.20	180.00	4843.18	-2578.65	-11.77	1.82	2578.65	
7176.00	89.70	180.20	4843.21	-2610.65	-11.82	1.68	2610.65	
7208.00	89.60	180.10	4843.41	-2642.65	-11.91	0.44	2642.65	
7239.00	89.70	180.20	4843.60	-2673.65	-11.99	0.46	2673.65	
7271.00	89.30	180.10	4843.87	-2705.65	-12.07	1.29	2705.65	
7303.00	89.40	180.10	4844.24	-2737.65	-12.13	0.31	2737.65	
7334.00	89.80	180.30	4844.45	-2768.65	-12.24	1.44	2768.65	
7398.00	89.80	180.40	4844.68	-2832.65	-12.63	0.16	2832.65	
7461.00	89.60	180.20	4845.01	-2895.64	-12.96	0.45	2895.64	
7525.00	90.00	180.70	4845.23	-2959.64	-13.46	1.00	2959.64	
7588.00	89.60	180.80	4845.45	-3022.63	-14.28	0.65	3022.63	
7651.00	89.60	180.90	4845.89	-3085.63	-15.22	0.16	3085.63	
7714.00	89.50	180.10	4846.38	-3148.62	-15.77	1.28	3148.62	
7778.00	89.70	179.70	4846.83	-3212.62	-15.66	0.70	3212.62	
7841.00	89.40	179.70	4847.33	-3275.62	-15.33	0.48	3275.62	
7905.00	90.10	179.40	4847.61	-3339.61	-14.82	1.19	3339.61	
7968.00	90.00	179.10	4847.55	-3402.61	-14.00	0.50	3402.61	

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Calmena Energy Services

Company: Osage Resources
 Well: Osage 19-04 H
 Location: Barber County, Kansas

Date: 31-Mar-2012
 Surveys
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 Job# : 6408

MD (feet)	Inclination (degrees)	Azimuth (degrees)	TVD RKB (feet)	N/S (feet)	E/W (feet)	DLS (deg/100')	VS @ 180.00° Az (feet)	Comments
8031.00	90.20	179.10	4847.44	-3465.60	-13.01	0.32	3465.60	
8094.00	90.30	179.10	4847.17	-3528.59	-12.02	0.16	3528.59	
8158.00	90.20	179.00	4846.89	-3592.58	-10.96	0.22	3592.58	
8221.00	88.90	177.60	4847.38	-3655.55	-9.09	3.03	3655.55	
8285.00	87.90	177.20	4849.17	-3719.46	-6.19	1.68	3719.46	
8348.00	88.20	178.50	4851.31	-3782.38	-3.83	2.12	3782.38	
8412.00	87.40	177.90	4853.77	-3846.30	-1.82	1.56	3846.30	
8475.00	88.60	178.80	4855.97	-3909.23	-0.01	2.38	3909.23	
8538.00	89.50	179.60	4857.01	-3972.21	0.87	1.91	3972.21	
8601.00	89.60	179.50	4857.51	-4035.21	1.37	0.22	4035.21	
8664.00	89.30	179.50	4858.11	-4098.20	1.92	0.48	4098.20	
8728.00	88.90	179.40	4859.12	-4162.19	2.53	0.64	4162.19	
8791.00	89.50	179.80	4860.00	-4225.19	2.97	1.14	4225.19	
8854.00	89.70	180.30	4860.44	-4288.18	2.92	0.85	4288.18	
8917.00	87.50	180.50	4861.98	-4351.16	2.48	3.51	4351.16	
8981.00	87.60	180.80	4864.71	-4415.10	1.75	0.49	4415.10	
9044.00	88.00	181.50	4867.13	-4478.04	0.49	1.28	4478.04	
9107.00	88.90	182.00	4868.83	-4540.98	-1.43	1.63	4540.98	
9171.00	88.90	181.60	4870.06	-4604.94	-3.44	0.62	4604.94	
9230.00	89.00	181.60	4871.14	-4663.91	-5.09	0.17	4663.91	
9283.00	89.00	181.60	4872.07	-4716.88	-6.57	0.00	4716.88	Survey proj

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