



PostRock

### AUTHORIZATION FOR EXPENDITURE - PROJECT REQUEST FORM

D13 / 57

<b>COMPANY</b>	PostRock MidContinent, LLC	<b>PROJECT AFE #</b>	D13 / 57
<b>SSI #</b>	636750	<b>PROJECT TYPE</b>	
<b>WELL NAME</b>	STICH, WILLIAM A 20-24	<b>CAPITAL</b>	X
<b>PHYSICAL LOCATION</b>	NW NE SEC 20 28S-19E	<b>OPERATING</b>	
<b>COUNTY</b>	NEOSHO	<b>SUPPLEMENTAL</b>	
<b>PROVINCE / STATE</b>	KS	<b>BUDGET GROUP</b>	CB NEW DRILL
<b>PROJECT TYPE</b>	DRILLING		

**PROJECT DESCRIPTION / PURPOSE:**

The PostRock Development Team recommends the drilling and completion of the Stich, William A 20-24 as an injector well in the Stich oil field. After the initial drilling and completion of several wells in the oil zone, oil volumes showed productive enough to continue to expand. To increase the daily volume of the wells along with increasing the overall EUR from the zone, it was decided to drill a water injection well into the formation and test if a waterflood would prove beneficial for the area.

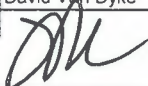

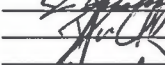
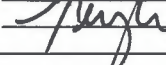
The injector will be one of two injectors in the field that are in a inverted 5-spot pattern. The injectors are lined down the middle of the thickest section to insure maximum sweep of oil.

The injection well will drilled and cased with 5.5" casing and have lined 2 7/8" tubing with a nickel packer. The injection lines will be 3/4" Schedule 120 PVC pipe; the PVC pipe is capable of pressures up to 770 psi (475 psi required) and costs less than \$1.00 per foot. The injection line will be connected to a manifold where all the injectors and any additional future injection wells can be added and a metering valve will be used to control the flow to the individual wells. The injection pump will be a Kimray glycol pump; the pumps are capable of moving the low volumes at the high pressures required.

Economics were run assuing the 5-acre, 5-spot waterflood injector would add 2,000 bbls or reserves to the area over 8 years.

ECONOMIC ANALYSIS		TOTAL COST	WORKING INTEREST	NET COST TO PSTR
Dev. Cost Gross	\$2.80 \$ / Net	\$ 73,187.46	100.0%	\$ 73,187.46
IRR	72.13% %	<b>Distribution List:</b>		
Undiscounted Payout	1.64 years	Terry Carter	Troy Combs	Linda Mitchell
PV10 / Investment	1.29	Clark Edwards	Jennifer Beal	Larry Graham
Cumulative Cash Flow	\$205,076.00	Jeff Buterbaugh	Michael Cassillo	Johnathan Niccum
Price Deck	June NYMEX	David Van Dyke	Doug Klaassen	Jenae Judge
		Clayton Deering	Mark Garretson	
		Marvin Lacy	Janet Hollister	

RESERVE REPORT INFO	
Total Reserves	5.811 MBBLs
Type Curve	CB Waterflood

<b>PREPARED BY:</b>	David Van Dyke	<b>APPROVALS:</b>	<b>DATE:</b>
<b>ACCOUNTING REVIEW</b>	 6/27	Initiator:	6-27-13
<b>Reviewed by:</b>			6/27/13
<b>COMMENTS:</b>			6-27-13
			6-27-13



PostRock

### AUTHORIZATION FOR EXPENDITURE - PROJECT COST FORM

<b>COMPANY</b>	PostRock MidContinent, LLC	<b>DATE:</b>	6/24/2013
<b>SSI #</b>	636750		
<b>WELL NAME</b>	STICH, WILLIAM A 20-24		
<b>PHYSICAL LOCATION</b>	NW NE SEC 20 28S-19E		
<b>COUNTY</b>	NEOSHO		
<b>PROVINCE / STATE</b>	KS		
<b>PROJECT TYPE</b>	DRILLING		

ACCOUNTING CODE	CATEGORY NAME	CATEGORY COST
101	Drilling Service	\$11,038.32
105	Surface Damages	\$492.42
107	Location Preparation	\$3,958.31
116	Casing Surface	\$462.47
201	Completion Service	\$27,074.35
209	Contractor Flowline	\$3,148.75
211	Downhole Equipment	\$8,760.48
212	Electrical Equipment	\$4,967.99
213	Flowline Materials	\$2,500.00
215	Fence & Gates	\$516.74
216	Wellhead Equipment	\$10,000.00
243	Flowline ROW/Easement	\$267.63
	<b>AFE Costs Total</b>	<b>\$73,187.46</b>
	<b>LOE Costs Total</b>	<b>\$0.00</b>
	<b>TOTAL COST</b>	<b>\$73,187.46</b>

STICH WILLIAM A 20-24  
636750

DATE : 06/26/2013  
TIME : 16:37:59  
DBS : PSTR  
SETTINGS : PSTRO613  
SCENARIO : PSTRO613

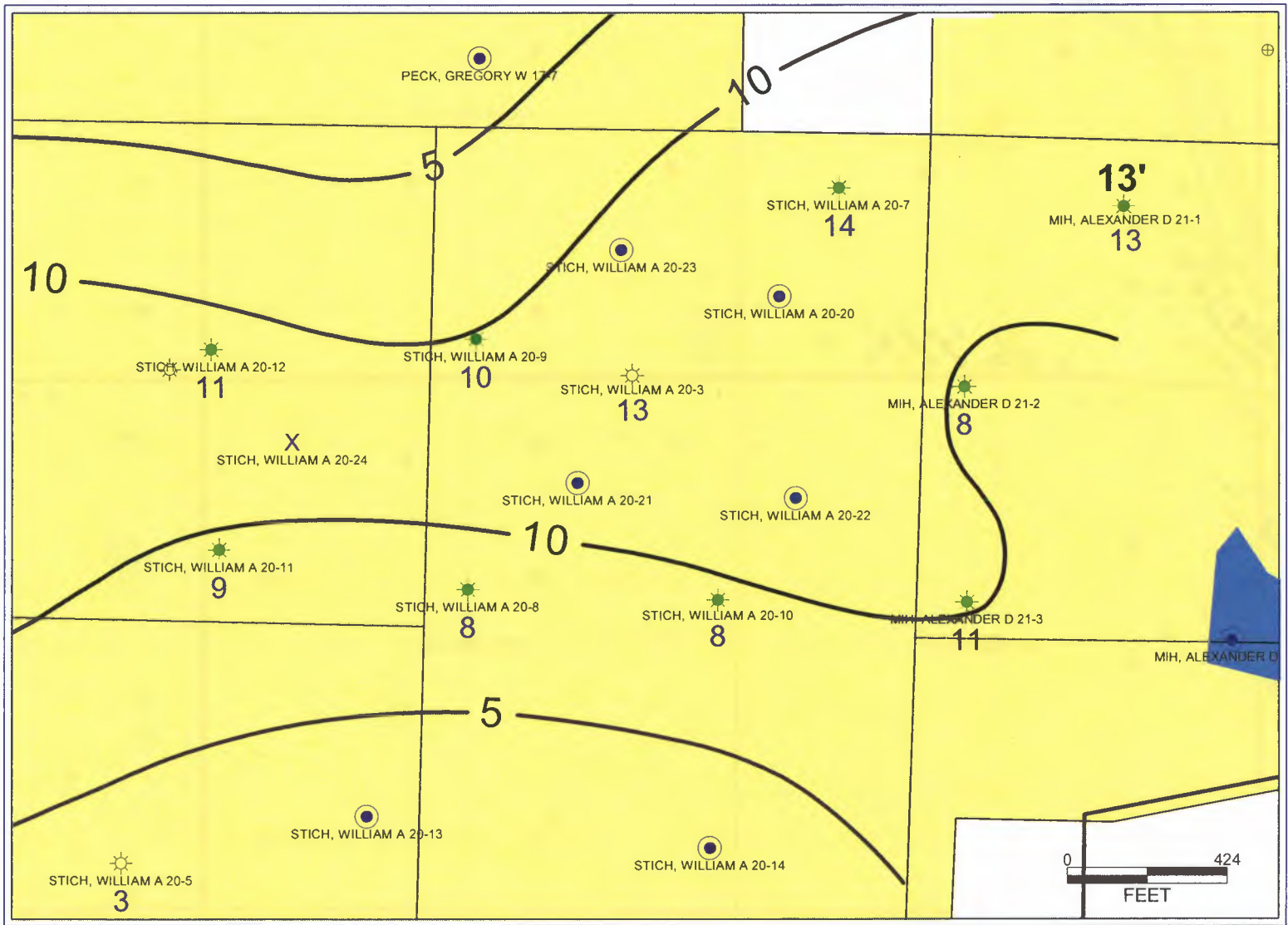
RESERVES AND ECONOMICS

AS OF DATE: 06/2013

--END-- MO-YEAR	GROSS OIL PRODUCTION ---MMBLS---	GROSS GAS PRODUCTION ---MMCF---	NET OIL PRODUCTION ---MMBLS---	NET GAS PRODUCTION ---MMCF---	NET OIL PRICE ---\$/BBL---	NET GAS PRICE ---\$/MCF---	NET OIL SALES -----M\$-----	NET GAS SALES -----M\$-----	TOTAL NET SALES -----M\$-----
06-2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
07-2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
08-2013	0.174	0.000	0.146	0.000	86.000	0.000	12.536	0.000	12.536
09-2013	0.135	0.000	0.113	0.000	86.000	0.000	9.697	0.000	9.697
10-2013	0.104	0.000	0.087	0.000	86.000	0.000	7.501	0.000	7.501
11-2013	0.081	0.000	0.067	0.000	86.000	0.000	5.802	0.000	5.802
12-2013	0.062	0.000	0.052	0.000	86.000	0.000	4.488	0.000	4.488
12-2014	0.569	0.000	0.476	0.000	83.000	0.000	39.494	0.000	39.494
12-2015	0.452	0.000	0.378	0.000	80.000	0.000	30.215	0.000	30.215
12-2016	0.381	0.000	0.318	0.000	78.000	0.000	24.838	0.000	24.838
12-2017	0.333	0.000	0.278	0.000	77.000	0.000	21.411	0.000	21.411
12-2018	0.297	0.000	0.248	0.000	76.000	0.000	18.884	0.000	18.884
12-2019	0.270	0.000	0.226	0.000	75.000	0.000	16.927	0.000	16.927
12-2020	0.248	0.000	0.208	0.000	75.000	0.000	15.563	0.000	15.563
12-2021	0.230	0.000	0.193	0.000	75.000	0.000	14.444	0.000	14.444
S TOT	3.337	0.000	2.790	0.000	79.507	0.000	221.800	0.000	221.800
AFTER	2.474	0.000	2.069	0.000	75.000	0.000	155.145	0.000	155.145
TOTAL	5.811	0.000	4.858	0.000	77.588	0.000	376.945	0.000	376.945

--END-- MO-YEAR	AD VALOREM TAX -----M\$-----	PRODUCTION TAX -----M\$-----	DIRECT OPER EXPENSE -----M\$-----	INTEREST PAID -----M\$-----	CAPITAL REPAYMENT -----M\$-----	EQUITY INVESTMENT -----M\$-----	FUTURE NET CASHFLOW -----M\$-----	CUMULATIVE CASHFLOW -----M\$-----	CUM. DISC. CASHFLOW -----M\$-----
06-2013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
07-2013	0.000	0.000	0.000	0.000	0.000	73.187	-73.187	-73.187	-72.608
08-2013	0.188	0.325	0.273	0.000	0.000	0.000	11.750	-61.437	-61.089
09-2013	0.145	0.251	0.273	0.000	0.000	0.000	9.027	-52.410	-52.309
10-2013	0.113	0.194	0.273	0.000	0.000	0.000	6.921	-45.489	-45.632
11-2013	0.087	0.150	0.273	0.000	0.000	0.000	5.292	-40.197	-40.566
12-2013	0.067	0.116	0.273	0.000	0.000	0.000	4.031	-36.166	-36.738
12-2014	0.592	1.023	3.276	0.000	0.000	0.000	34.603	-1.563	-5.444
12-2015	0.453	0.783	3.276	0.000	0.000	0.000	25.703	24.140	15.675
12-2016	0.373	0.643	3.276	0.000	0.000	0.000	20.546	44.686	31.016
12-2017	0.321	0.555	3.276	0.000	0.000	0.000	17.259	61.945	42.729
12-2018	0.263	0.489	3.276	0.000	0.000	0.000	14.836	76.781	51.881
12-2019	0.254	0.438	3.276	0.000	0.000	0.000	12.959	89.740	59.147
12-2020	0.233	0.403	3.276	0.000	0.000	0.000	11.650	101.391	65.085
12-2021	0.217	0.374	3.276	0.000	0.000	0.000	10.578	111.968	69.986
S TOT	3.327	5.745	27.573	0.000	0.000	73.187	111.968	111.968	69.986
AFTER	2.327	4.018	55.692	0.000	0.000	0.000	93.108	205.076	94.079
TOTAL	5.654	9.763	83.265	0.000	0.000	73.187	205.076	205.076	94.079

	OIL	GAS		P.W. %	P.W., M\$
GROSS WELLS	1.0	0.0	LIFE, YRS.	5.00	133.721
GROSS ULT., MB & MMF	5.811	0.000	DISCOUNT %	8.00	107.520
GROSS CUM., MB & MMF	0.000	0.000	UNDISCOUNTED PAYOUT, YRS.	9.00	100.471
GROSS RES., MB & MMF	5.811	0.000	DISCOUNTED PAYOUT, YRS.	10.00	94.079
NET RES., MB & MMF	4.858	0.000	UNDISCOUNTED NET/INVEST.	15.00	69.451
NET REVENUE, M\$	376.945	0.000	DISCOUNTED NET/INVEST.	20.00	52.768
INITIAL PRICE, \$	86.000	0.000	RATE-OF-RETURN, PCT.	30.00	31.550
INITIAL N.I., PCT.	83.600	0.000	INITIAL W.I., PCT.	40.00	18.488
				100.00	-12.018
				300.00	-30.953





# Well Proposal

6/18/2013

YEAR 2013	SSI NUMBER 636750	API NUMBER	GID NUMBER 20100794	PSTR LEASE 479	EXPIRATION DATE HBP
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PROSPECT AREA Thayer	WELL NAME STICH, WILLIAM A 20-24	WELL TYPE			
		DEV	Y	2013	SWD 0

WELL LOCATION					
COUNTY, ST	SEC	TWP	RGE	LOC QTR	LOC FTG
NEOSHO COUNTY, KS	20	28S	19E	NW NE	865 FNL & 1590 FEL

OBJECTIVES CATTLEMAN 650 FT	ELOGS REQUIRED GR/CNDL/DIL ALL LOGS. TD-SURFACE CASING	GAS CONTENT DATA REQUIRED N
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TOPO/SURVEY EVALUATION 920 FT	TOTAL DEPTH - PROJECTED 770 FT	TD PERMITTED 1000 FT
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SURFACE CASING 8 5/8 @ 20 FT+/-	PROD CASING 5.5"	HOLE SIZE 7 7/8"	POOLING LSE & POOL	PHASE 2013:PH02013
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SUMMARY 0	COMMENTS Injection Well
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## LAND

IS THIS LOCATION AT LEAST 330' FOR GAS WELL, OR 165' FOR OIL WELL TO THE NEAREST LEASE LINE?  YES  NO NET PSTR NRI \_\_\_\_\_

LEASE ALLOWS POOLING  YES  NO PSTR W 1.00

LEASE ACRES \_\_\_\_\_ PRIMARY TERM OF LEASE ENDS \_\_\_\_\_ OTHER W/O \_\_\_\_\_

SPACING \_\_\_\_\_ POOLED LEASES \_\_\_\_\_

LOCATION EXCEPTION \_\_\_\_\_ INCREASED DENSITY \_\_\_\_\_

DRILLING TITLE OPINION \_\_\_\_\_ SURFACE DAMAGES \_\_\_\_\_ PAID TO \_\_\_\_\_

WILLIAM + PATRICIA STICH  
SURFACE OWNER'S NAME

15305 JACKSON ROAD, CHANUTE, KS 66720  
ADDRESS

620.763.2511  
PHONE

LETTER AGREEMENT MAILED \_\_\_\_\_ OPERATING AGREEMENT MAILED \_\_\_\_\_ SWD AGREEMENT \_\_\_\_\_

DATE RETURNED \_\_\_\_\_ DATE RETURNED \_\_\_\_\_ WELL NAME \_\_\_\_\_

OTHER CONSIDERATIONS \_\_\_\_\_

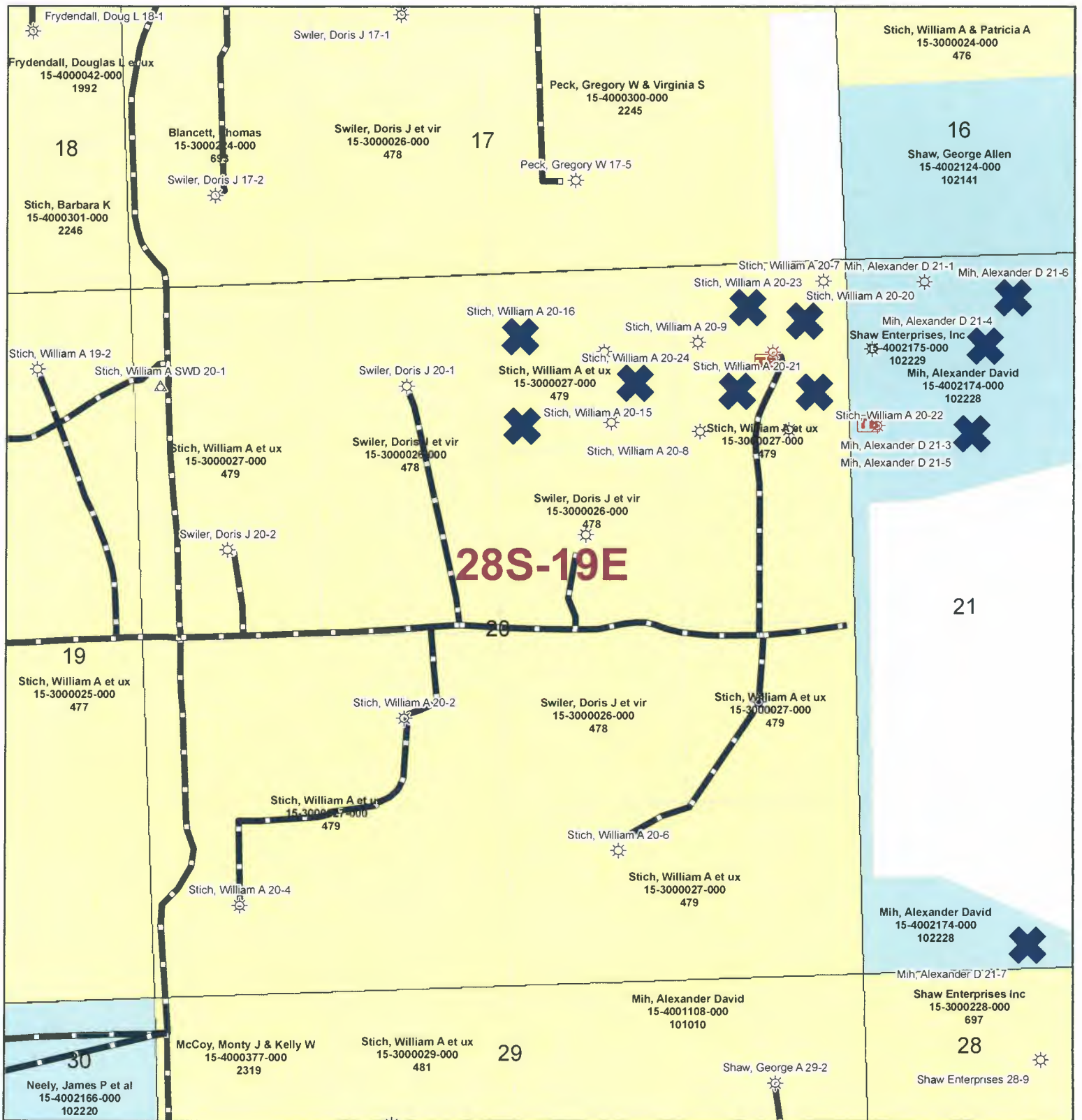
DVD [Signature] 6/18/2013  
PROPOSAL INITIATED BY DATE

APPROVALS [Signature] 6-19-13  
APPROVED DATE

GEOLOGY APPROVED \_\_\_\_\_ DATE \_\_\_\_\_ RES ENGINEERING APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

PROD ENG APPROVED \_\_\_\_\_ DATE \_\_\_\_\_ PROPOSAL INITIATED BY \_\_\_\_\_ DATE \_\_\_\_\_





Stich, William A 20-24  
 865' FNL 1590' FEL  
 20-28S-19E  
 Neosho County, KS  
 1" = 1,000'

Prepared by:  
 Cory S. Hledik  
 6-19-2013







Stich, William A 20-24  
 865' FNL 1590' FEL  
 20-28S-19E  
 Neosho County, KS  
 1" = 1,000'

Prepared by:  
 Cory S. Hledik  
 6-19-2013

