

Berexco Wellington KGS #2-32

650 ft at 7 am 3-22-15

drilling cement plug at base of surface casing

- Spudded well 7 am on Friday 3-20-15 with Fossil Drilling Rig #3
- Drilled 140 ft and set conductor pipe
- 12 ¾ inch hole to 650 ft. (depth of surface casing)
- Samples will be caught from base of conductor pipe to TD
- Halliburton ran GR, SP, Caliper, Φ neutron, Φ density, p-wave sonic, microlog, Array resistivity to 650 ft. prior to running surface casing

Fossil Drilling

RIG # 3 12 2 DATE 3-22-15

OPERATOR: Berexco

CONTACT:

WELL NAME/LOC: Wellington KGS #2-32 COUNTY: Summit

DEPTH: 650' 45' 7:00 AM FEET MADE: FOUNDATION:

CURRENT OPERATIONS: Drilling

KEY SERVICES: 1' at 250' at

MUD PROPERTIES: WT 9.5 CMX 1/4 #

VIS 4.5 OIL 3.6% PM

SP 10 SAND 10

SP 3.5 SOLIDS 6.1

GEL 15/46 LCM 2

PH 9.0 SEM

HL 4.0 SP

Mod. Costs Daily 4,333.14 Cost 3,020.43

BIT INFORMATION: CBL CALCULON VOLUME

BIT RECORD: Bit # 2 MAKE/MODEL/SIZE: Vahlb Teeth 125

In at 140' Out at 650' MADE 510' In 1173' hours

RPM 120 W.D.B. 10' 000 RPM-144

TIME BREAKDOWNS (LAST 24 HOURS):

DRILLING	5	hrs	LOADING	2 1/4	hrs
TRIP	1 1/2	hrs	RUN CASING	1 1/2	hrs
RIG CHECK	1/4	hrs	CEMENT CASING	1/2	hrs
SET PITS		hrs	WAITING ON CEMENT	10	hrs
CIRC FOR SAMPLES		hrs	WAITING ON ORDERS		hrs
CIRC TO CLEAR HOLE	3 1/2	hrs	CELLAR WORK	1/2	hrs
CONNECTION	1	hrs	SDOP		hrs
TESTING		hrs	MOVE IN A RIG UP / RIG DOWN		hrs
FEET LOGS		hrs	RECESS		hrs
RIG REPAIRS		hrs	Drilling	34	hrs
DECKLE REPAIRS MADE		hrs		24	hrs
					Total hrs

CASING CEMENTING OF LAST CIRC: Run 15 Spz 2.5A Size 400 Cement 47,320 lbs

ADDITIONAL INFORMATION: INFO DATE/TIME: ID DATE/TIME:

FUELING ORDERS: FROM DATE TIME

1st FLOOR		
2nd FLOOR		
3rd FLOOR		
4th FLOOR		
5th FLOOR		
MOVIE HOLE		
WAT HOLE		
CEMENT BY		
TRUCK #		
DATE COMPLETE		

Fuel Log Table:

Yesterday's Fuel Level	48"
Current Fuel Level	42"
Fuel Used	66 gal
Oil Level	10"
Water Oil	16"
So wt	25"

Berexco Wellington KGS #2-32

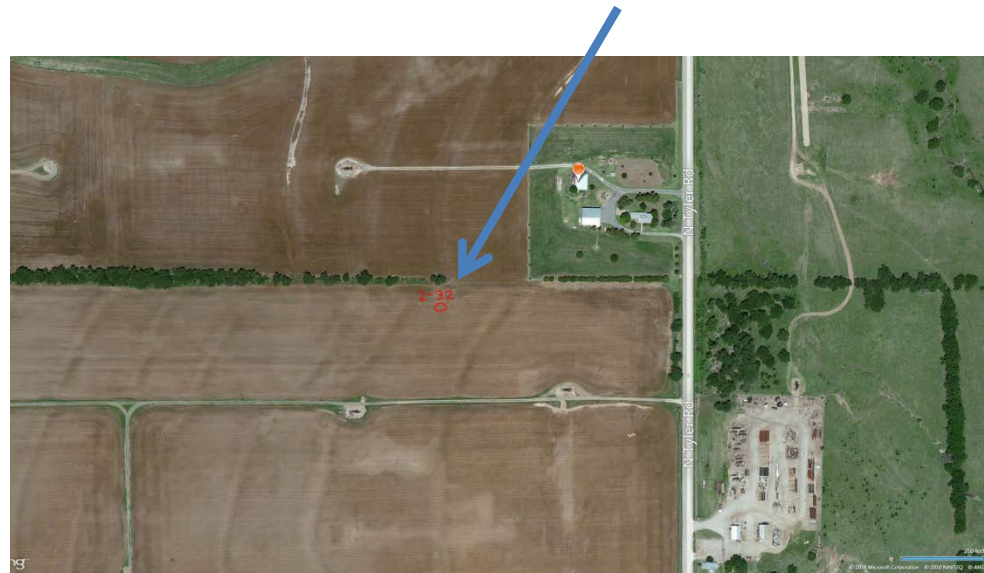
Wellington KGS 2-32
NE NW NE SE 32-31S-1W
Sumner County, KS
API Number: 15-191-22770

Estimated Tops:

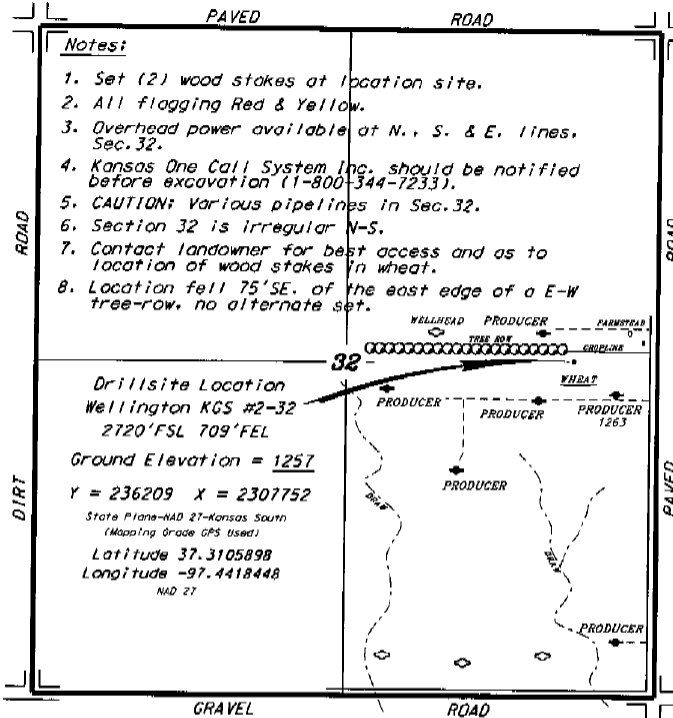
Topeka1990'
Heebner 2410
Stalnaker2690'
LKC3040'
BKC 3275'

Elevation: 1257' GL, 1269' KB

Pawnee..... 3455'
Cherokee Shale 3510'
2680' from South line of Section
Mississippi..... 3660'
709' from East line of Section Total Depth
..... 3815'



BEREXCO, LLC
WELLINGTON KGS LEASE
E. 1/2, SECTION 32, T31S, R1W
SUMNER COUNTY, KANSAS

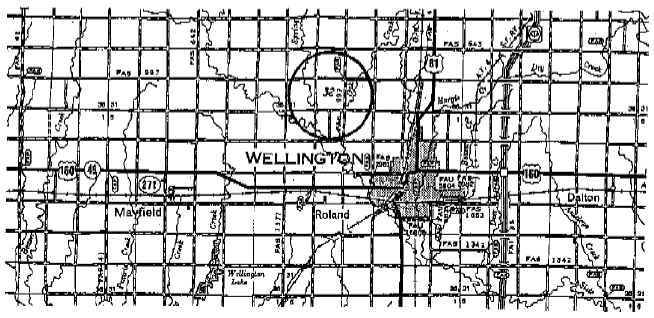


* Increase and change in location on this plan is for use only. Contract language Tenant and county road department for access.

Notes:

1. Set (2) wood stakes at location site.
2. All flagging Red & Yellow.
3. Overhead power available at N., S. & E. lines, Sec. 32.
4. Kansas One Call System Inc. should be notified before excavation (1-800-344-7233).
5. CAUTION: Various pipelines in Sec. 32.
6. Section 32 is irregular N-S.
7. Contact landowner for best access and as to location of wood stakes in wheat.
8. Location fell 75' SE. of the east edge of a E-W tree-row, no alternate set.

Drillsite Location
Wellington KGS #2-32
2720' FSL 709' FEL
Ground Elevation = 1257
Y = 236209 X = 2307752
 State Plane-NAD 27-Kansas South
 (Mapping Grade GPS Used)
Latitude 37.3105898
Longitude -97.4418448
 NAD 27

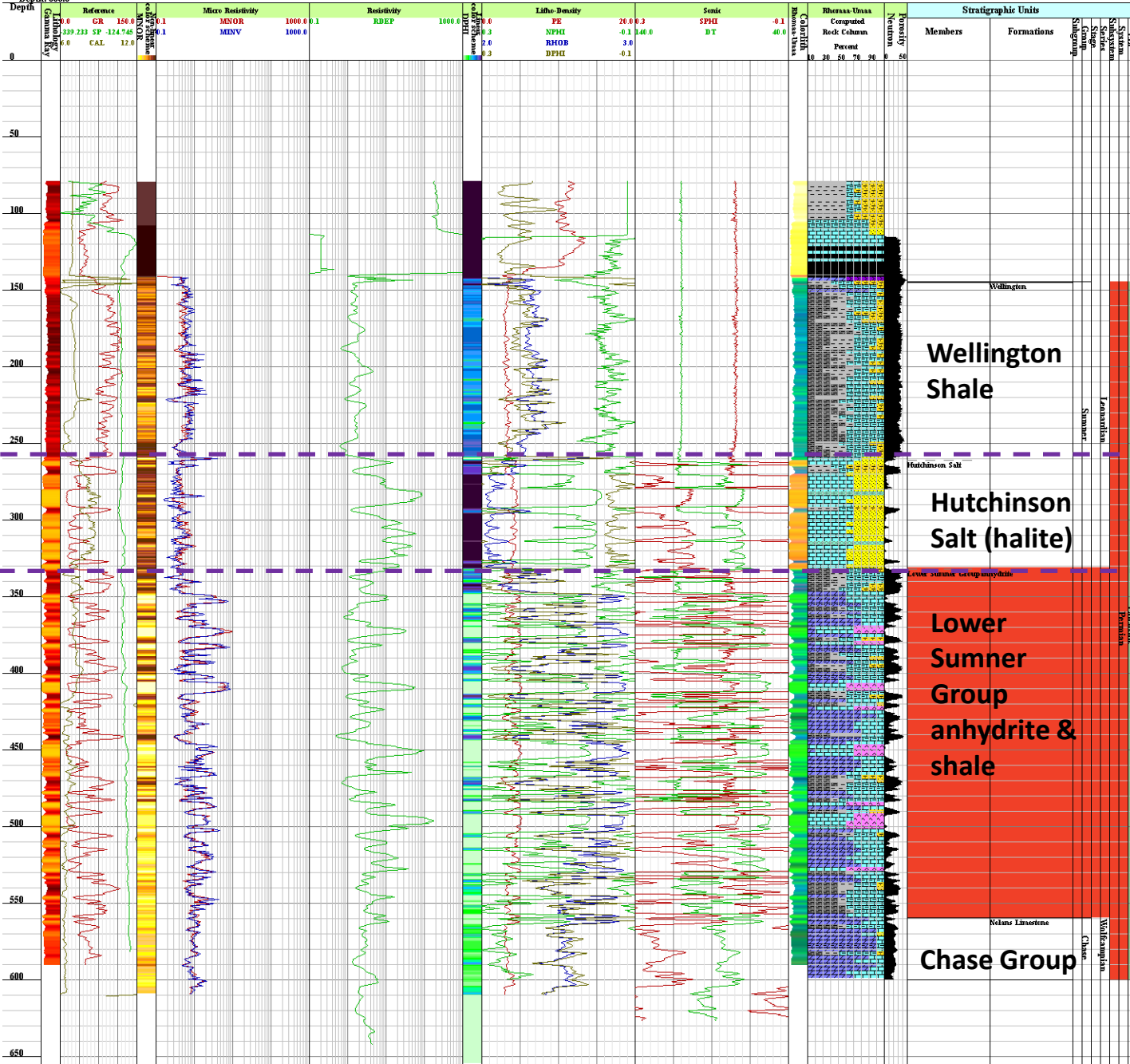


* Elevation data is based upon the best mass and photostatic available to us and upon a regular section of land containing 640 acres.
 * Accurate section lines were determined using the corner corners of some of adjacent surveys and using in the center of Section 32 the section corners which establish the correct section lines. All subsequent sections the location of the drilling location in the section is based on the corner corners of the section 32 and section 31. This plan and all other wellhead locations show all holes, costs and expenses and all activities released from any liability from the operator or management company.
 * Elevations derived from National Geodetic Vertical Datum.

Date **March 10, 2015**

Anticipated schedule

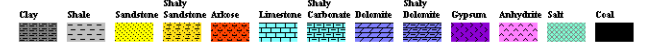
- Tuesday
 - reach core point at top of Mississippian
- Wednesday
 - coring
- Thursday
 - drilling to TD and running *Drill Stem Test*
- Friday
 - Logging TD to base of surface casing.



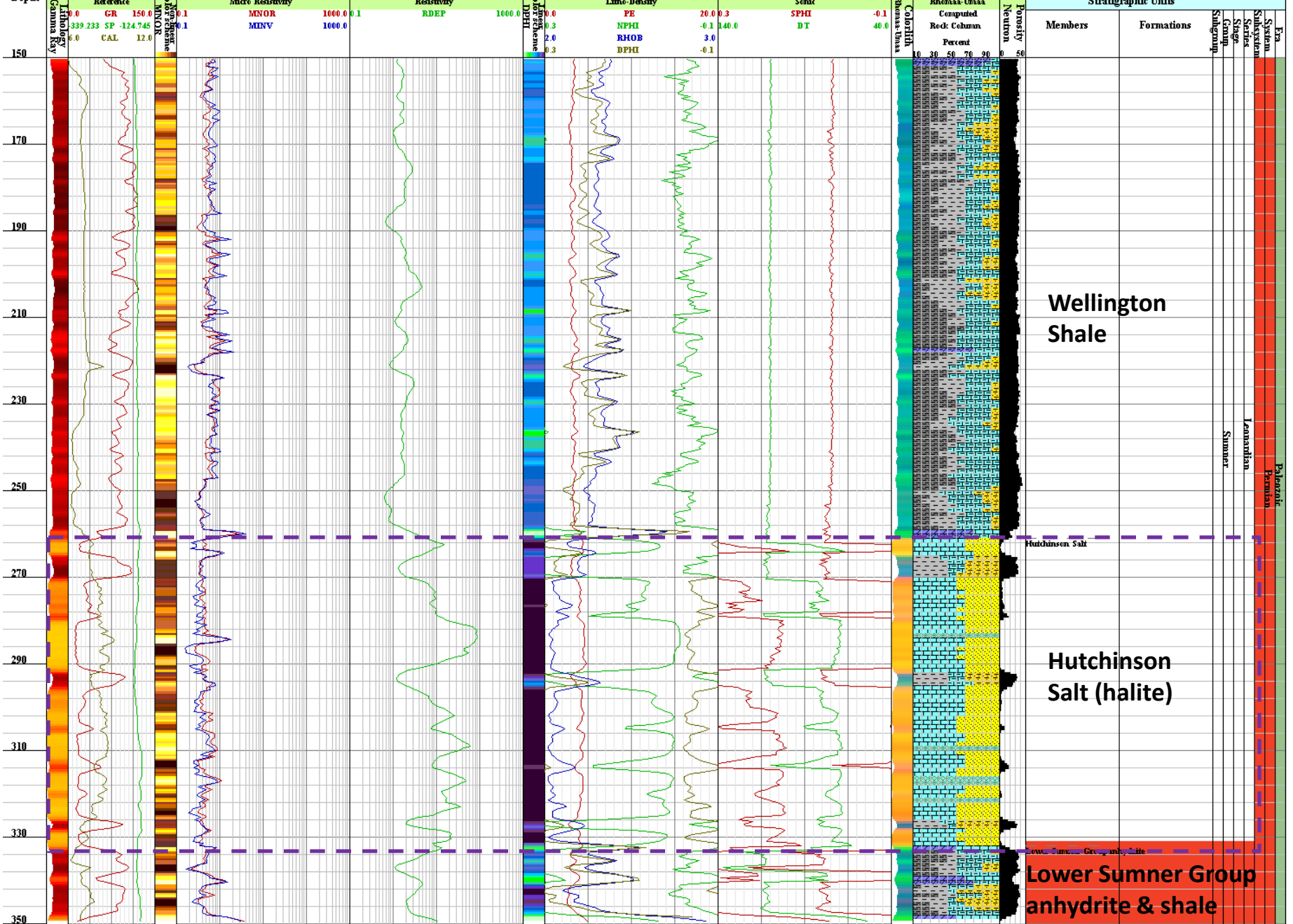
Base conductor pipe



Base Surface Casing



Depth: 600.0



Wellington Shale

Hutchinson Salt

Hutchinson Salt (halite)

Lower Sumner Group anhydrite & shale

Permian
Sumner
Leonardian

- Clay
- Shale
- Sandstone
- Shaly Sandstone
- Arkose
- Limestone
- Shaly Carbonate
- Dolomite
- Shaly Dolomite
- Gypsum
- Anhydrite
- Salt
- Coal

Gamma ray and sample log cross section between KGS #1-32, KGS #1-28, and SW-2 (shallow water well) datum = ground level

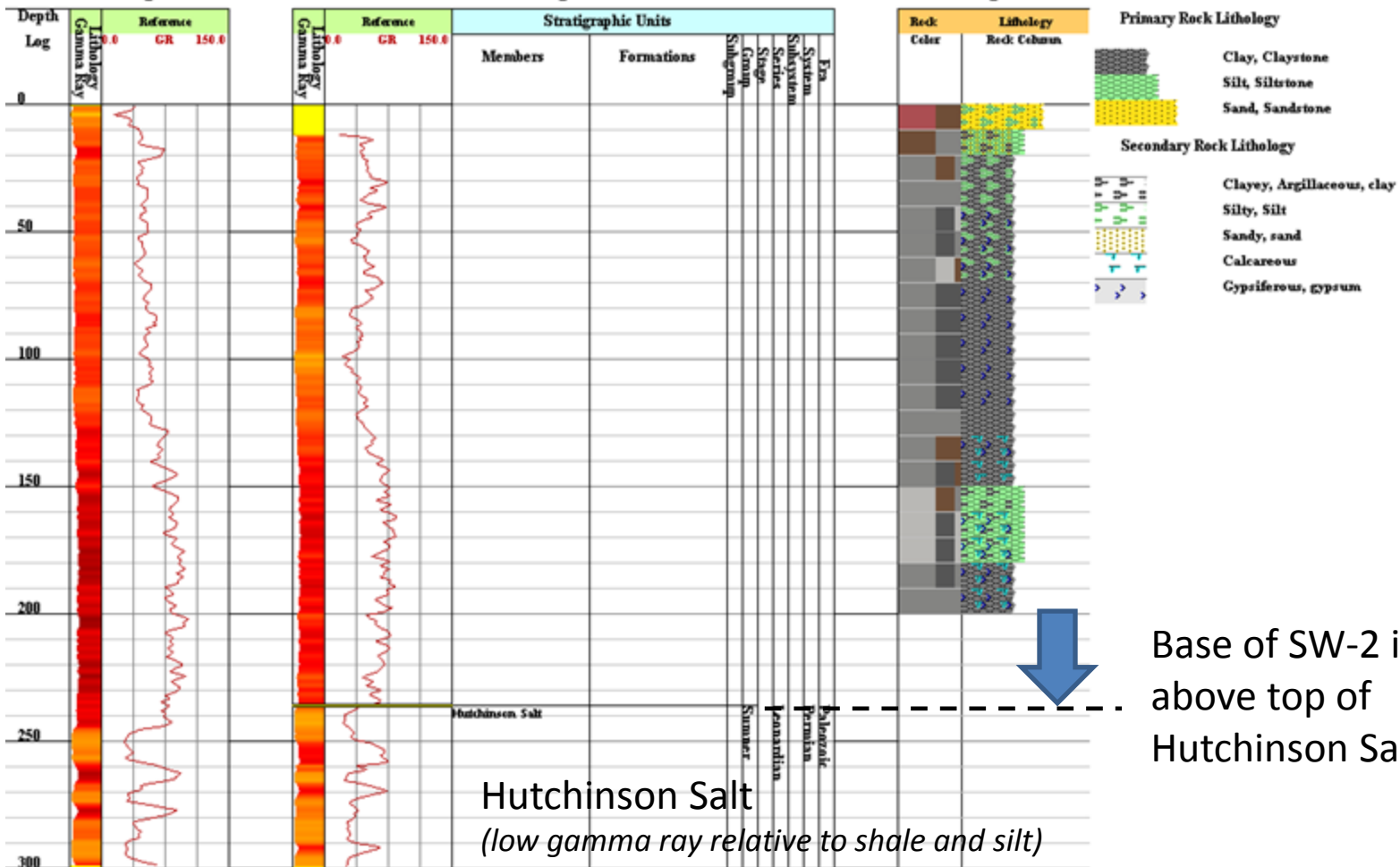


WELLINGTON KGS 1-32
15-191-22591
Lat: 37.3154
Long: -97.4424
Elev: (GL) 1259.0

Wellington KGS 1-28
15-191-22590
Lat: 37.3194
Long: -97.4333
Elev: (GL) 1257.0

Lat: 0.0
Long: 0.0
Elev: (DF) 0.0

SW-2



For KCC Use:
 Effective Date: 03/23/2015
 District # 2
 SGA? Yes No

KANSAS CORPORATION COMMISSION 1245593
 OIL & GAS CONSERVATION DIVISION

Form C-1
 March 2010
 Form must be Typed
 Form must be Signed
 All blanks must be Filled

NOTICE OF INTENT TO DRILL

Must be approved by KCC five (5) days prior to commencing well
 Form KSONA-1, Certification of Compliance with the Kansas Surface Owner Notification Act, MUST be submitted with this form.

Expected Spud Date: 03/19/2015
 month day year

OPERATOR: License# 34318
 Name: BEREXCO LLC
 Address 1: 2020 N. Bramblewood
 Address 2:
 City: Wichita State: KS Zip: 67206 + 1094
 Contact Person: Dana Wreath
 Phone: 316-265-3311

CONTRACTOR: License# 34484
 Name: Fossil Drilling, Inc.

Well Drilled For:	Well Class:	Type Equipment:
<input type="checkbox"/> Oil	<input checked="" type="checkbox"/> Enh Rec	<input checked="" type="checkbox"/> Mud Rotary
<input type="checkbox"/> Gas	<input type="checkbox"/> Storage	<input type="checkbox"/> Pool Ext.
	<input type="checkbox"/> Disposal	<input type="checkbox"/> Wildcat
<input type="checkbox"/> Seismic	<input type="checkbox"/> # of Holes	<input type="checkbox"/> Other
<input type="checkbox"/> Other:		<input type="checkbox"/> Cable

If OWWO: old well information as follows:
 Operator:
 Well Name:
 Original Completion Date: Original Total Depth:

Directional, Deviated or Horizontal wellbore? Yes No
 If Yes, true vertical depth:
 Bottom Hole Location:
 KCC DKT #:

Top of salt at 225 feet. OK to run surface casing through salt section once conductor is set.

AFFIDAVIT

The undersigned hereby affirms that the drilling, completion and eventual plugging of this well will comply with K.S.A. 55 et. seq.
 It is agreed that the following minimum requirements will be met:

1. Notify the appropriate district office *prior* to spudding of well;
2. A copy of the approved notice of intent to drill *shall be* posted on each drilling rig;
3. The minimum amount of surface pipe as specified below *shall be set* by circulating cement to the top; in all cases surface pipe *shall be set* through all unconsolidated materials plus a minimum of 20 feet into the underlying formation.
4. If the well is dry hole, an agreement between the operator and the district office on plug length and placement is necessary *prior to plugging*;
5. The appropriate district office will be notified before well is either plugged or production casing is cemented in;
6. If an ALTERNATE II COMPLETION, production pipe shall be cemented from below any usable water to surface within **120 DAYS** of spud date.
 Or pursuant to Appendix "B" - Eastern Kansas surface casing order #133,891-C, which applies to the KCC District 3 area, alternate II cementing must be completed within 30 days of the spud date or the well shall be plugged. *In all cases, NOTIFY district office* prior to any cementing.

Submitted Electronically

For KCC Use ONLY
 API # 15 - 15-191-22770-00-00
 Conductor pipe required 80 feet
 Minimum surface pipe required 220 feet per ALT. I II
 Approved by: Rick Hestermann 03/18/2015
 This authorization expires: 03/18/2016
 (This authorization void if drilling not started within 12 months of approval date.)
 Spud date: Agent:

Remember to:

- File Certification of Compliance with the Kansas Surface Owner Notification Act (KSONA-1) with Intent to Drill;
- File Drill Pit Application (form CDP-1) with Intent to Drill;
- File Completion Form ACO-1 within 120 days of spud date;
- File acreage attribution plat according to field proration orders;
- Notify appropriate district office 48 hours prior to workover or re-entry;
- Submit plugging report (CP-4) after plugging is completed (within 60 days);
- Obtain written approval before disposing or injecting salt water.
- If well will not be drilled or permit has expired (See: authorized expiration date) please check the box below and return to the address below.

Well will not be drilled or Permit Expired Date:
 Signature of Operator or Agent:

32 31 1 m

1245593

Side Two

For KCC Use ONLY
 API # 15 - 15-191-22770-00-00

IN ALL CASES PLOT THE INTENDED WELL ON THE PLAT BELOW

In all cases, please fully complete this side of the form. Include items 1 through 5 at the bottom of this page.

Operator: BEREXCO LLC
 Lease: Wellington KGS
 Well Number: 2-32
 Field: Wellington

Location of Well: County: Sumner
 2680 feet from N / S Line of Section
 709 feet from E / W Line of Section
 Sec. 32 Twp. 31 S. R. 1 E / W

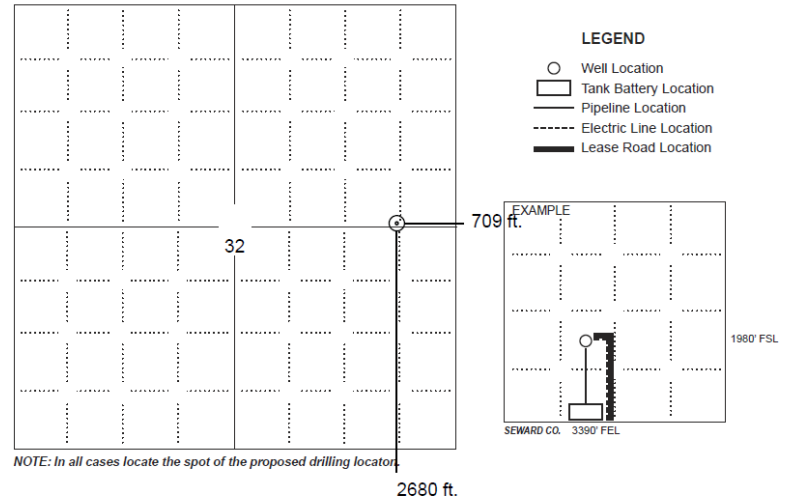
Number of Acres attributable to well:
 QTR/QTR/QTR/QTR of acreage: NE - NW - NE - SE

Is Section: Regular or Irregular

If Section is Irregular, locate well from nearest corner boundary.
 Section corner used: NE NW SE SW

PLAT

Show location of the well. Show footage to the nearest lease or unit boundary line. Show the predicted locations of lease roads, tank batteries, pipelines and electrical lines, as required by the Kansas Surface Owner Notice Act (House Bill 2032).
 You may attach a separate plat if desired.



NOTE: In all cases locate the spot of the proposed drilling location
 2680 ft.
 709 ft.

In plotting the proposed location of the well, you must show:

1. The manner in which you are using the depicted plat by identifying section lines, i.e. 1 section, 1 section with 8 surrounding sections, 4 sections, etc.
2. The distance of the proposed drilling location from the south / north and east / west outside section lines.
3. The distance to the nearest lease or unit boundary line (in footage).
4. If proposed location is located within a prorated or spaced field a certificate of acreage attribution plat must be attached: (CO-7 for oil wells; CG-8 for gas wells).
5. The predicted locations of lease roads, tank batteries, pipelines, and electrical lines.

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



APPLICATION FOR SURFACE PIT

Submit in Duplicate

Operator Name: BEREXCO LLC		License Number: 34318	
Operator Address: 2020 N. Bramblewood		Wichita KS 67206	
Contact Person: Dana Wreath		Phone Number: 316-265-3311	
Lease Name & Well No.: Wellington KGS 2-32		Pit Location (QQQQ): NE _ NW _ NE _ SE	
Type of Pit: <input type="checkbox"/> Emergency Pit <input type="checkbox"/> Burn Pit <input type="checkbox"/> Settling Pit <input checked="" type="checkbox"/> Drilling Pit <input type="checkbox"/> Workover Pit <input type="checkbox"/> Haul-Off Pit <small>(If W/P Supply API No. or Year Drilled)</small>	Pit is: <input checked="" type="checkbox"/> Proposed <input type="checkbox"/> Existing If Existing, date constructed: _____ Pit capacity: 7000 (bbbls)	Sec. 32 Twp. 31 R. 1 <input type="checkbox"/> East <input checked="" type="checkbox"/> West 2680 Feet from <input type="checkbox"/> North / <input checked="" type="checkbox"/> South Line of Section 709 Feet from <input checked="" type="checkbox"/> East / <input type="checkbox"/> West Line of Section Sumner County	
Is the pit located in a Sensitive Ground Water Area? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Chloride concentration: _____ mg/l <small>(For Emergency Pits and Settling Pits only)</small>	
Is the bottom below ground level? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Artificial Liner? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	How is the pit lined if a plastic liner is not used? Mud seal with Bentonite Clay in freshwater drilling mud, native mud and clay.	
Pit dimensions (all but working pits): Length (feet) 100 Width (feet) 100 Depth from ground level to deepest point: 4 (feet)		<input type="checkbox"/> N/A: Steel Pits <input type="checkbox"/> No Pit	
If the pit is lined give a brief description of the liner material, thickness and installation procedure.		Describe procedures for periodic maintenance and determining liner integrity, including any special monitoring.	
Distance to nearest water well within one-mile of pit: N/A feet Depth of water well _____ feet		Depth to shallowest fresh water _____ feet. Source of information: <input type="checkbox"/> measured <input type="checkbox"/> well owner <input type="checkbox"/> electric log <input checked="" type="checkbox"/> KDWR	
Emergency, Settling and Burn Pits ONLY: Producing Formation: _____ Number of producing wells on lease: _____ Barrels of fluid produced daily: _____ Does the slope from the tank battery allow all spilled fluids to flow into the pit? <input type="checkbox"/> Yes <input type="checkbox"/> No		Drilling, Workover and Haul-Off Pits ONLY: Type of material utilized in drilling/workover: Freshwater Bentonite/chemical mud. Number of working pits to be utilized: 2 <small>Allow evaporation of liquid until bottom of pit is dry, then push in sides and backfill with drill cuttings in place. Finally level to contour of surrounding terrain, as close as possible to its natural state.</small> Abandonment procedure: _____ Drill pits must be closed within 365 days of spud date.	
Submitted Electronically			

KCC OFFICE USE ONLY

Liner Steel Pit RFAC RFAS

Date Received: 03/17/2015 Permit Number: 15-191-22770-00-00 Permit Date: 03/18/2015 Lease Inspection: Yes No

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



CERTIFICATION OF COMPLIANCE WITH THE
KANSAS SURFACE OWNER NOTIFICATION ACT

This form must be submitted with all Forms C-1 (Notice of Intent to Drill); CB-1 (Cathodic Protection Borehole Intent); T-1 (Request for Change of Operator Transfer of Injection or Surface Pit Permit); and CP-1 (Well Plugging Application). Any such form submitted without an accompanying Form KSONA-1 will be returned.

Select the corresponding form being filed: C-1 (Intent) CB-1 (Cathodic Protection Borehole Intent) T-1 (Transfer) CP-1 (Plugging Application)

OPERATOR: License # 34318
Name: BEREXCO LLC
Address 1: 2020 N. Bramblewood
Address 2: _____
City: Wichita State: KS Zip: 67206 + 1094
Contact Person: Dana Wreath
Phone: (316) 265-3311 Fax: (316) 681-4731
Email Address: dwreath@berexco.com

Well Location:
NE _ NW _ NE _ SE Sec. 32 Twp. 31 S. R. 1 East West
County: Sumner
Lease Name: Wellington KGS Well #: 2-32
If filing a Form T-1 for multiple wells on a lease, enter the legal description of the lease below:

Surface Owner Information:

Name: Jack Glaves
Address 1: Board of Trade Bldg.
Address 2: 155 N. Market, Suite 1050
City: Wichita State: KS Zip: 67202 + 1829

When filing a Form T-1 involving multiple surface owners, attach an additional sheet listing all of the information to the left for each surface owner. Surface owner information can be found in the records of the register of deeds for the county, and in the real estate property tax records of the county treasurer.

If this form is being submitted with a Form C-1 (Intent) or CB-1 (Cathodic Protection Borehole Intent), you must supply the surface owners and the KCC with a plat showing the predicted locations of lease roads, tank batteries, pipelines, and electrical lines. The locations shown on the plat are preliminary non-binding estimates. The locations may be entered on the Form C-1 plat, Form CB-1 plat, or a separate plat may be submitted.

Select one of the following:

I certify that, pursuant to the Kansas Surface Owner Notice Act (House Bill 2032), I have provided the following to the surface owner(s) of the land upon which the subject well is or will be located: 1) a copy of the Form C-1, Form CB-1, Form T-1, or Form CP-1 that I am filing in connection with this form; 2) if the form being filed is a Form C-1 or Form CB-1, the plat(s) required by this form; and 3) my operator name, address, phone number, fax, and email address.

I have not provided this information to the surface owner(s). I acknowledge that, because I have not provided this information, the KCC will be required to send this information to the surface owner(s). To mitigate the additional cost of the KCC performing this task, I acknowledge that I must provide the name and address of the surface owner by filling out the top section of this form and that I am being charged a \$30.00 handling fee, payable to the KCC, which is enclosed with this form.

If choosing the second option, submit payment of the \$30.00 handling fee with this form. If the fee is not received with this form, the KSONA-1 form and the associated Form C-1, Form CB-1, Form T-1, or Form CP-1 will be returned.

Submitted Electronically

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

BEREXCO, LLC
 WELLINGTON KGS LEASE
 E. 1/2, SECTION 32, T31S, R1W
 SUMNER COUNTY, KANSAS



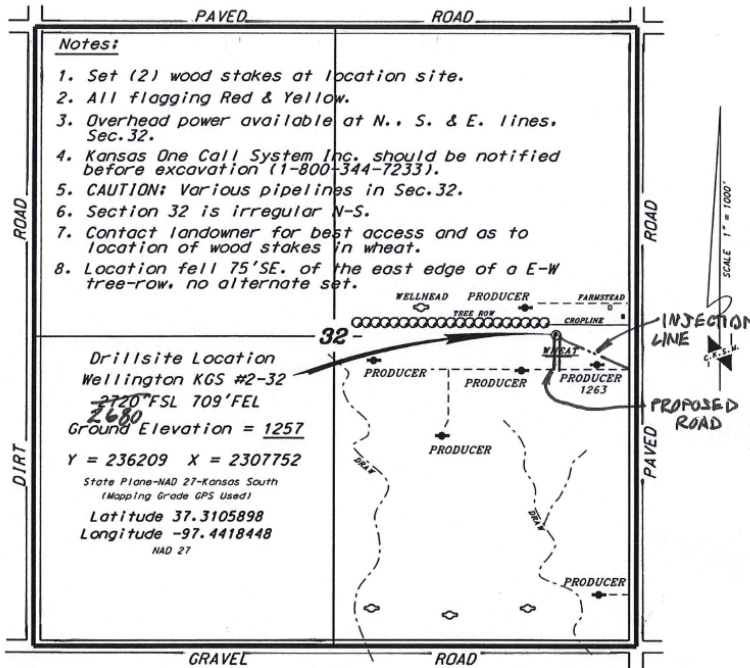
Conservation Division
 266 N. Main St., Ste. 220
 Wichita, KS 67202-1513

Phone: 316-337-6200
 Fax: 316-337-6211
<http://kcc.ks.gov/>

Shari Feist Albrecht, Chair
 Jay Scott Emler, Commissioner
 Pat Apple, Commissioner

Sam Brownback, Governor

*Ingress and egress to location as shown on this plan is for usage only and may not be legally owned by tenant and county road department for access.



NOTICE TO OPERATORS FILING INTENT TO DRILL FOR DISPOSAL OR ENHANCED RECOVERY INJECTION WELLS. (CLASS II INJECTION WELL)

The attached approved Notice of Intent to Drill indicates the proposed well is to be used for injection. An approved "Intent to Drill" does not approve injection authority as a Class II Injection Well in Kansas.

Before any well is used for injection purposes, the operator must file an application for injection authority in accordance with K.A.R. 82-3-401 and provide notice in accordance with K.A.R. 82-3-402. The Conservation Division must issue a written permit granting the application before commencement of injection.

The Conservation Division requirements and restrictions associated with Class II Injection are identified in K.A.R. 82-3-400 et seq of our regulations. Associated regulations governing drilling, completion and injection applications may be found in K.A.R. 82-3-135, Table I, Table II, in the Cedar Hills Sandstone Moratorium, (Docket #156,397-C), and the Eastern Kansas Surface Casing Order, (Docket #133,891-C).

If you have questions regarding the approval of injection authority, an injection application may be filed as a "Design Approval" before actual drilling and completion of the well occurs. If you have any questions or concerns regarding Class II injection wells or regulations, call the Underground Injection Control Department at 316-337-6200.

Failure to obtain commission approval before beginning injection is punishable by a penalty, shut-in of the well or both.



*Controlling data is based upon the best maps and photographs available to us and upon a regular section of land containing 640 acres.
 *Approximate section lines were determined using the normal standard of care of oilfield surveyors practicing in the state of Kansas. The section corners, which establish the precise section lines, were not necessarily located, and the exact location of the drillsite location in the section is not guaranteed. Therefore, the operator securing this service and occupying this plot and all other parties relying thereon agree to hold Central Kansas Oilfield Services, Inc., its officers and employees harmless from all losses, costs and expenses and civil penalties related from any liability from incidental or consequential damages.
 *Elevations derived from National Geodetic Vertical Datum.

Date March 10, 2015

CENTRAL KANSAS OILFIELD SERVICES, INC. (620)792-1977

Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513

Shari Feist Albrecht, Chair
Jay Scott Emler, Commissioner
Pat Apple, Commissioner



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Sam Brownback, Governor

March 18, 2015

Dana Wreath
BEREXCO LLC
2020 N. Bramblewood
Wichita, KS 67206-1094

Re: Drilling Pit Application
Wellington KGS 2-32
SE/4 Sec.32-31S-01W
Sumner County, Kansas

Dear Dana Wreath:

District staff has inspected the above referenced location and has determined that the reserve pit shall be constructed **without slots**, the bottom shall be flat and reasonably level, and the free fluids must be removed. The fluids are to be removed from the reserve pit within 2 weeks of completion of drilling operations.

If production casing is set all completion fluids shall be removed from the working pits daily. NO completion fluids or non-exempt wastes shall be placed in the reserve pit.

The fluids should be taken to an authorized disposal well. Please call the District Office at (316) 630-4000 when the fluids have been removed. Please file form CDP-5 (August 2008), Exploration and Production Waste Transfer, through KOLAR within 30 days of fluid removal.

A copy of this letter should be posted in the doghouse along with the approved Intent to Drill. If you have any questions or concerns please feel free to contact the District Office at (316) 630-4000.

A) 15- Seismic Array (Sept 2014) – Miller, ERS
CGPS & InSAR (Sept 2014) & 3D seismic interp.
 – KU/KGS -Taylor, Schwab,
 & Tsoflias, Bidgoli

C) Drill Arbuckle Monitoring Well (Fall 2015) - Berexco

D) Equip KGS 2-28 for MVA & KGS 1-28 for CO₂ Injection (~October 2015 to March 2016)
 – LBNL (Daley, Freifeld), Berexco
 -- Distributed Fiber Optic Arrays, pending, EPRI (Trautz)

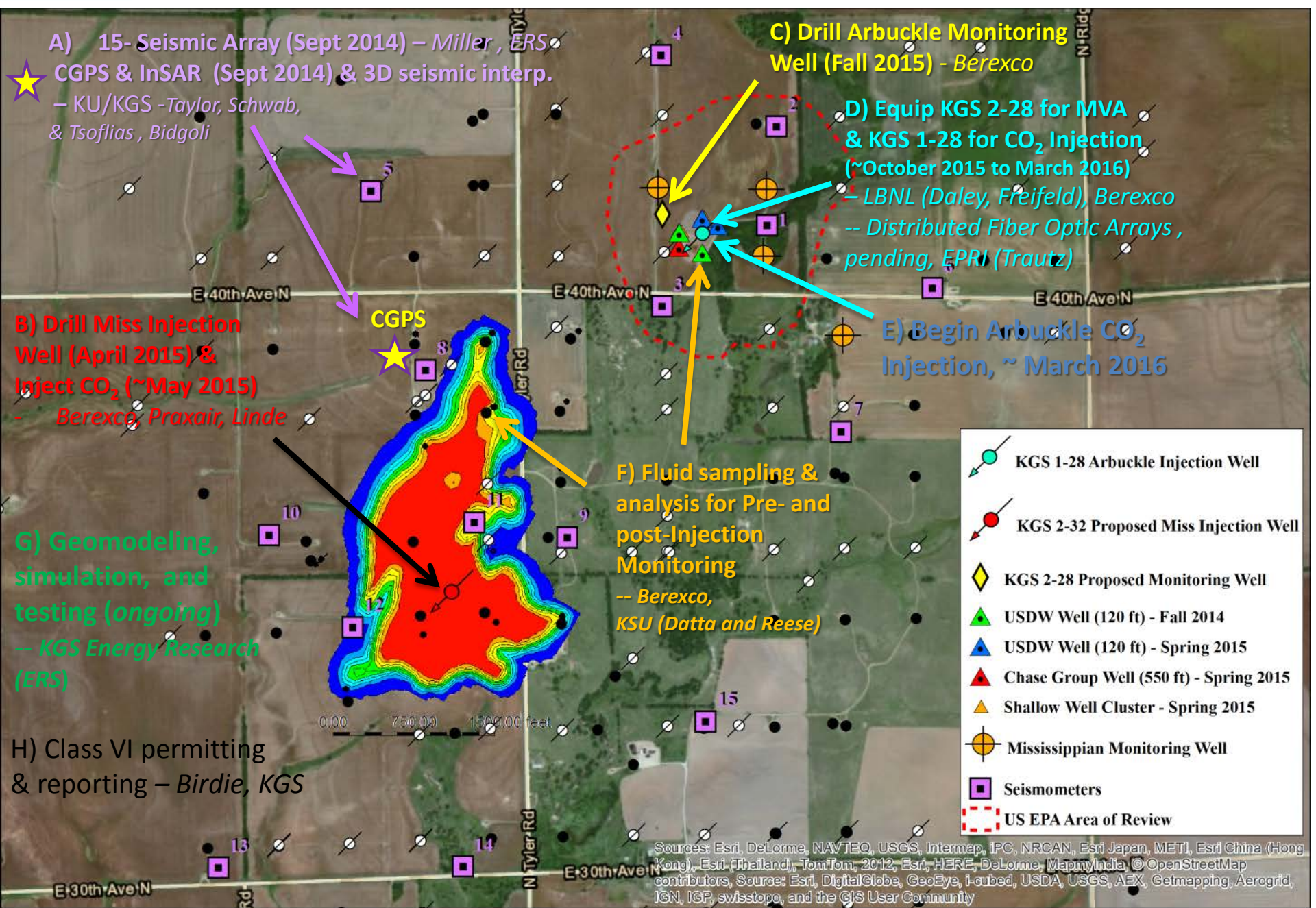
E) Begin Arbuckle CO₂ Injection, ~ March 2016

F) Fluid sampling & analysis for Pre- and post-Injection Monitoring
 -- Berexco, KSU (Datta and Reese)

B) Drill Miss Injection Well (April 2015) & Inject CO₂ (~May 2015)
 -- Berexco, Praxair, Linde

G) Geomodeling, simulation, and testing (ongoing)
 -- KGS Energy Research (ERS)

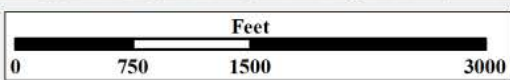
H) Class VI permitting & reporting – Birdie, KGS



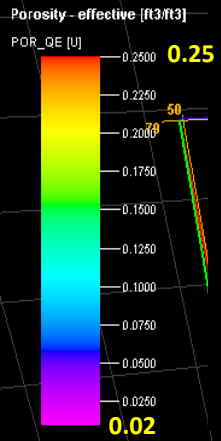
- KGS 1-28 Arbuckle Injection Well
- KGS 2-32 Proposed Miss Injection Well
- KGS 2-28 Proposed Monitoring Well
- USDW Well (120 ft) - Fall 2014
- USDW Well (120 ft) - Spring 2015
- Chase Group Well (550 ft) - Spring 2015
- Shallow Well Cluster - Spring 2015
- Mississippian Monitoring Well
- Seismometers
- US EPA Area of Review

Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2012, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

MVA Activity at Wellington CO₂ injection site
Sumner County, Kansas
Twn 31S - R 1W



Sources: USGS, Kansas Geological Survey, Kansas Corporation Commission, DASC.
 Map Created October 14, 2014



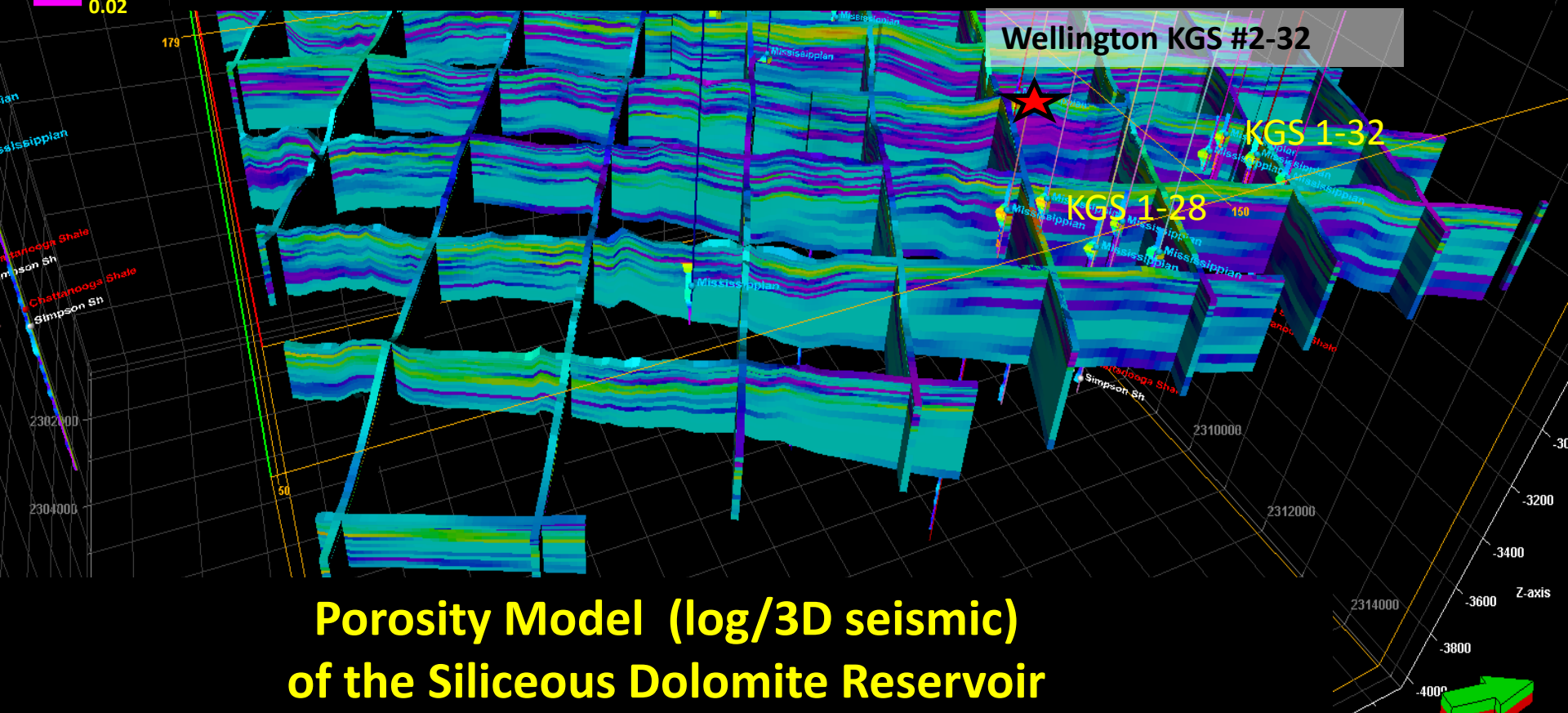
Milestone 3. Site Characterization of the Mississippian Reservoir for CO₂-EOR

Porosity Inversion of the 3D Seismic Wellington Field

Total Miss thickness ~400 ft including caprock

Pay <50 ft at top (warmer colors)

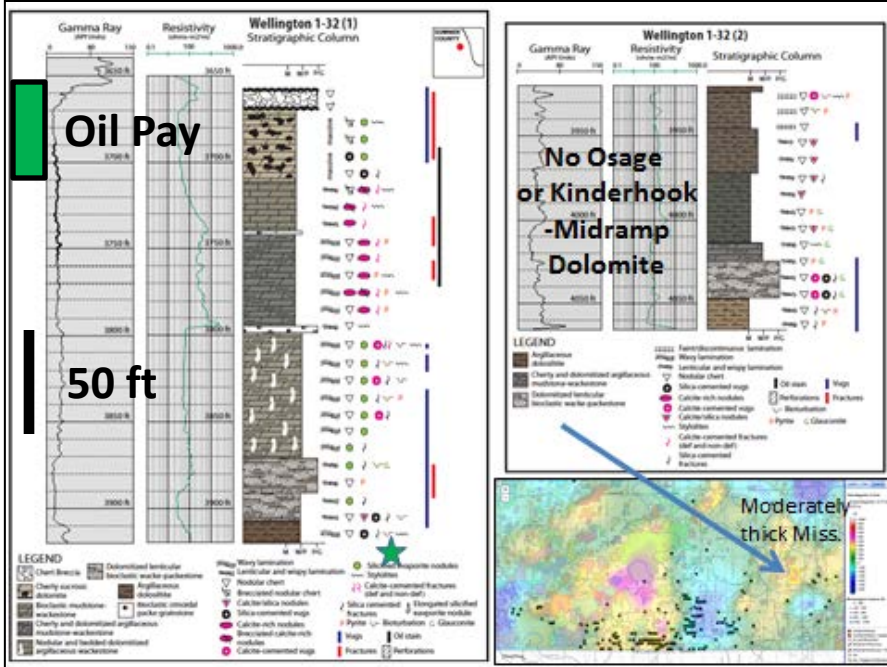
Complex westward offlapping geometries of porous lithofacies -- Looking SW



**Porosity Model (log/3D seismic)
of the Siliceous Dolomite Reservoir
Upper Mississippian, Wellington Field**

Rush, KGS

Milestone 3. Site Characterization of the Mississippian



Cherty Sucrosic Dolomite

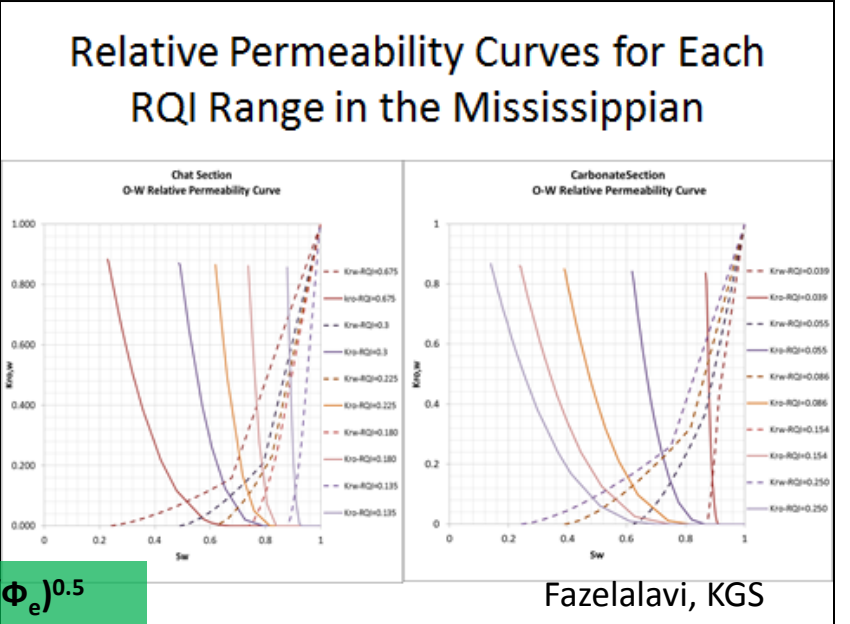
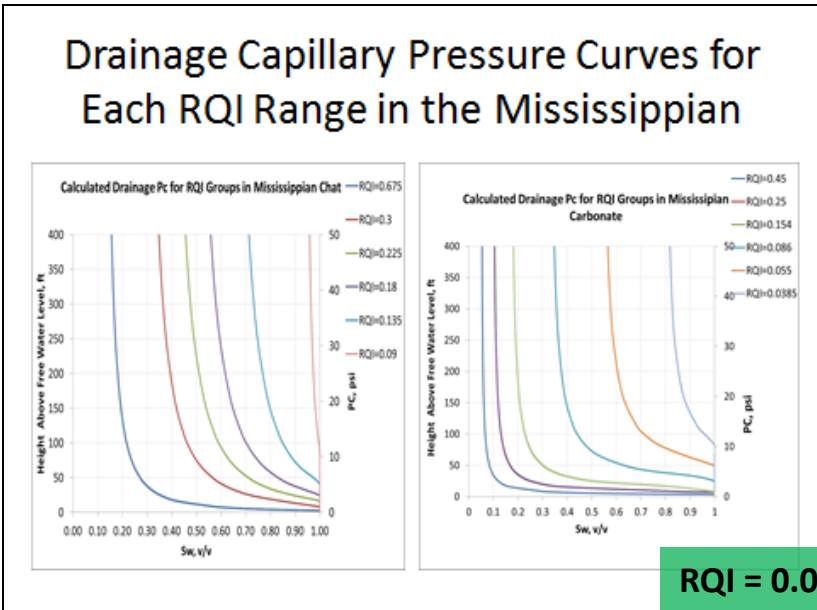
Sedimentary Features Have Been Masked During Dolomitization

A

B

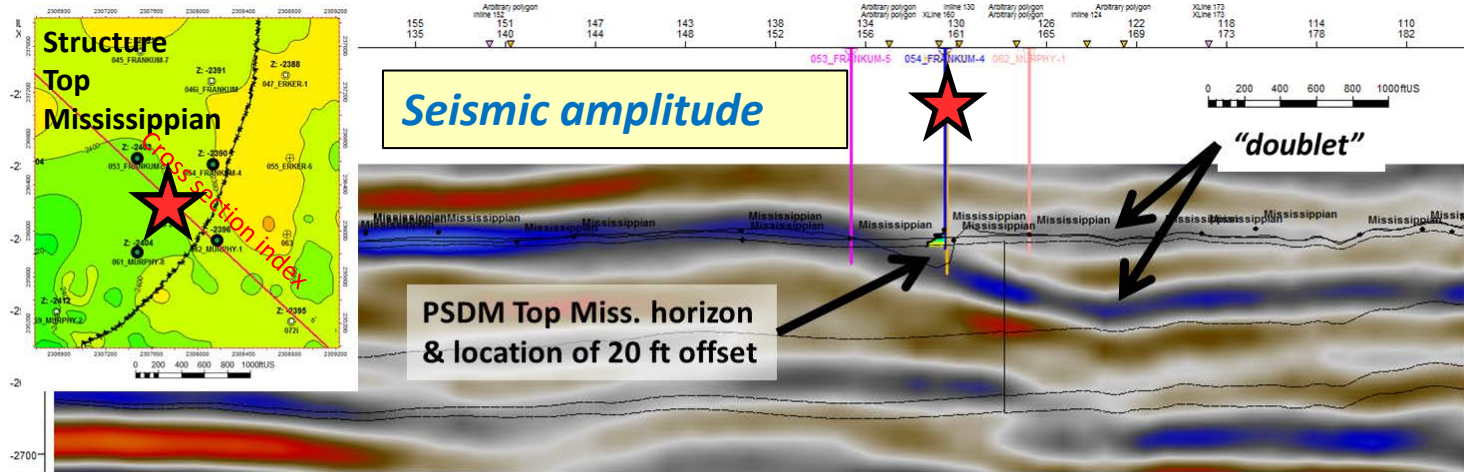
Convolved dark gray chert nodules are scattered in the matrix and appear autobrecciated

Montalvo, KU & Barker, KSU



NW-SE PSDM Seismic Profile Mississippian Oil Reservoir

Projected Through 5-Spot Injection (CO₂-EOR) & Wellington KGS #2-32 (star)



NW

SE

