



KANSAS CORPORATION COMMISSION 1101881  
OIL & GAS CONSERVATION DIVISION

Form ACO-1  
June 2009

Form Must Be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34662  
Name: Tug Hill Operating, LLC  
Address 1: 550 BAILEY AVE, STE 510  
Address 2:  
City: FT. WORTH State: TX Zip: 76107 +  
Contact Person: Winnie Scott  
Phone: ( 817 ) 632-3400  
CONTRACTOR: License # 34670  
Name: Patterson-UTI Drilling Company LLC  
Wellsite Geologist: NA  
Purchaser:  
Designate Type of Completion:  
 New Well  Re-Entry  Workover  
 Oil  WSW  SWD  SIOW  
 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 #:  
07/15/2012 08/19/2012 10/17/2012  
Spud Date or Date Reached TD Completion Date or Recompletion Date

API No. 15 - 15-097-21729-01-00  
Spot Description:  
S2 S2 SW SW Sec. 8 Twp. 27 S. R. 20  East  West  
200 Feet from  North /  South Line of Section  
660 Feet from  East /  West Line of Section  
Footages Calculated from Nearest Outside Section Corner:  
 NE  NW  SE  SW  
County: Kiowa  
Lease Name: Einsel Well #: 1-8H  
Field Name: Martin  
Producing Formation: Mississippi  
Elevation: Ground: 2297 Kelly Bushing: 23  
Total Depth: 9575 Plug Back Total Depth: 9575  
Amount of Surface Pipe Set and Cemented at: 895 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: 18000 ppm Fluid volume: 1300 bbls  
Dewatering method used: Evaporated  
Location of fluid disposal if hauled offsite:  
Operator Name:  
Lease Name: License #:  
Quarter Sec. Twp. S. R.  East  West  
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

Letter of Confidentiality Received  
Date: 11/19/2012  
 Confidential Release Date:  
 Wireline Log Received  
 Geologist Report Received  
 UIC Distribution  
ALT  I  II  III Approved by: NAOMI JAMES Date: 11/20/2012



1101881

Operator Name: Tug Hill Operating, LLC Lease Name: Einsel Well #: 1-8H  
 Sec. 8 Twp. 27 S. R. 20  East  West County: Kiowa

**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  Yes  No  
 (Attach Additional Sheets)

Samples Sent to Geological Survey  Yes  No

Cores Taken  Yes  No

Electric Log Run  Yes  No

Electric Log Submitted Electronically  Yes  No  
 (If no, Submit Copy)

Log Formation (Top), Depth and Datum  Sample

Name	Top	Datum
Cherokee	-2480	SS
Mississippi	-2564	SS
Viola	-2955	SS

List All E. Logs Run:

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
Surface	12.25	9.6250	36	895	Class A	350	
Intermediate	8.75	7	26	5473	Class A	200	
Liner	6.1250	4.5	11.6	9575	Class H	450	

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
..... Perforate				
..... Protect Casing	-			
..... Plug Back TD				
..... 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
5	5580 - 9510	700,000# 20/40 white sand / 8000# 100 mesh	5580 - 9510

TUBING RECORD:	Size: <u>2.8750</u>	Set At: <u>5013</u>	Packer At: <u>5013</u>	Liner Run: <input checked="" 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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease (If vented, Submit ACO-18.)	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. (Submit ACO-5) <input type="checkbox"/> Commingled (Submit ACO-4) <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: <u>5580 - 9510</u>
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Well Name: Einsel 1-8H

Contractor/Rig: Patterson-UTI 172

State: KS

County: Kiowa

SHL: 200 FSL & 660 FWL

Township:

As Run

GL Elev: 2297 KB: KB Elev:

BHL: 330' FNL & 660' FWL

AFE: 12-0121

Permit/API Number: 15-097-21729-01-00

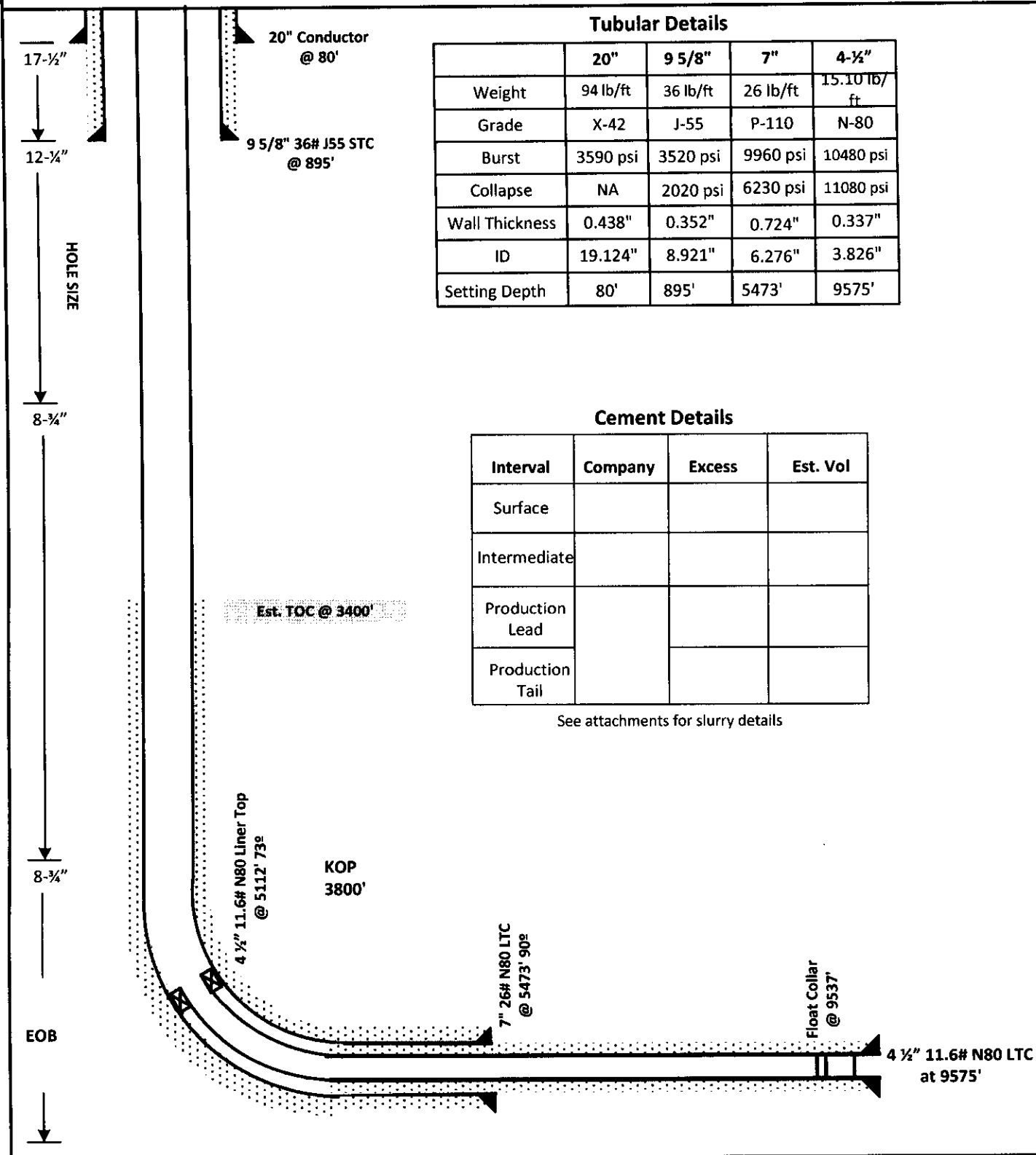
Tubular Details

	20"	9 5/8"	7"	4-1/2"
Weight	94 lb/ft	36 lb/ft	26 lb/ft	15.10 lb/ft
Grade	X-42	J-55	P-110	N-80
Burst	3590 psi	3520 psi	9960 psi	10480 psi
Collapse	NA	2020 psi	6230 psi	11080 psi
Wall Thickness	0.438"	0.352"	0.724"	0.337"
ID	19.124"	8.921"	6.276"	3.826"
Setting Depth	80'	895'	5473'	9575'

Cement Details

Interval	Company	Excess	Est. Vol
Surface			
Intermediate			
Production Lead			
Production Tail			

See attachments for slurry details



**EAST COAST DIRECTIONAL DRILLING SPECIALIST**  
**SURVEY CALCULATION REPORT**

Minimum Curvature Method

Target KBTVD: 4,829 Feet  
 Target Angle: 91.00 Degrees  
 Section Plane: 0.04 Degrees  
 Total Declination Correction: 6.18 Degrees  
 Bit to Survey Offset: 49 Feet

Operator: **Tug Hill**  
 Lease Name: Kiowa County, KS  
 Job Number: 1085  
 Comments: Kiowa County, KS  
 Survey Company: **East Coast DDS**



Survey Number	Measured Depth-ft	Drift (Deg.)	Azimuth (Deg.)	Course Length	TVD (Ft.)	Vertical Section	+N/-S (Ft.)	+E/-W (Ft.)	BUR	DLS	KBTVD	+Above	+ Right
												-Below	- Left
												Target	Line
Gyro	50	0.30	123.32	50	50.0	-0.1	-0.1	0.1	0.6	0.6	50.0	4779.0	0.1
2	100	0.26	153.16	50	100.0	-0.2	-0.2	0.3	-0.1	0.3	100.0	4729.0	0.3
3	150	0.45	129.15	50	150.0	-0.5	-0.5	0.5	0.4	0.5	150.0	4679.0	0.5
4	200	0.32	117.50	50	200.0	-0.7	-0.7	0.7	-0.3	0.3	200.0	4629.0	0.8
5	250	0.32	109.03	50	250.0	-0.8	-0.8	1.0	0.0	0.1	250.0	4579.0	1.0
6	300	0.26	91.41	50	300.0	-0.8	-0.8	1.3	-0.1	0.2	300.0	4529.0	1.3
7	350	0.27	79.04	50	350.0	-0.8	-0.8	1.5	0.0	0.1	350.0	4479.0	1.5
8	400	0.47	70.44	50	400.0	-0.7	-0.7	1.8	0.4	0.4	400.0	4429.0	1.8
9	450	0.75	62.55	50	450.0	-0.5	-0.5	2.3	0.6	0.6	450.0	4379.0	2.3
10	500	1.14	60.40	50	500.0	-0.1	-0.1	3.0	0.8	0.8	500.0	4329.0	3.0
11	550	1.50	58.45	50	550.0	0.5	0.5	4.0	0.7	0.7	550.0	4279.0	4.0
12	600	1.84	60.15	50	599.9	1.2	1.2	5.2	0.7	0.7	600.0	4229.0	5.2
13	650	1.78	62.08	50	649.9	2.0	2.0	6.6	-0.1	0.2	650.0	4179.0	6.6
14	700	1.48	61.80	50	699.9	2.7	2.7	7.9	-0.6	0.6	700.0	4129.0	7.9
15	750	1.33	59.76	50	749.9	3.3	3.3	8.9	-0.3	0.3	749.9	4079.1	8.9
16	800	1.41	57.04	50	799.9	3.9	3.9	10.0	0.2	0.2	799.9	4029.1	10.0
17	848	1.74	56.97	48	847.9	4.6	4.6	11.1	0.7	0.7	847.9	3981.1	11.1
MWD	970	1.90	65.60	122	969.8	6.5	6.5	14.5	0.1	0.3	969.9	3859.1	14.5
19	1058	1.20	111.50	88	1057.8	6.7	6.7	16.7	-0.8	1.6	1057.9	3771.1	16.6
20	1089	2.50	120.70	31	1088.7	6.3	6.3	17.5	4.2	4.3	1088.9	3740.1	17.5
21	1119	3.30	102.60	30	1118.7	5.8	5.7	18.9	2.7	4.0	1118.8	3710.2	18.9
22	1151	3.70	102.00	32	1150.6	5.3	5.3	20.8	1.3	1.3	1150.7	3678.3	20.8
23	1243	5.60	91.30	92	1242.3	4.6	4.6	28.2	2.1	2.3	1242.4	3586.6	28.2
24	1335	5.80	90.90	92	1333.9	4.5	4.4	37.4	0.2	0.2	1334.0	3495.0	37.4
25	1427	4.60	84.50	92	1425.5	4.7	4.7	45.7	-1.3	1.4	1425.6	3403.4	45.7
26	1519	2.90	81.00	92	1517.3	5.5	5.4	51.7	-1.8	1.9	1517.4	3311.6	51.7
27	1611	1.50	82.60	92	1609.2	6.0	5.9	55.2	-1.5	1.5	1609.3	3219.7	55.2
28	1703	1.10	141.60	92	1701.2	5.4	5.4	56.9	-0.4	1.4	1701.3	3127.7	56.9
29	1795	0.80	148.10	92	1793.2	4.2	4.2	57.8	-0.3	0.3	1793.3	3035.7	57.8
30	1887	0.50	129.80	92	1885.2	3.4	3.4	58.4	-0.3	0.4	1885.2	2943.8	58.4
31	1982	0.30	99.70	95	1980.2	3.1	3.1	59.0	-0.2	0.3	1980.2	2848.8	59.0
32	2076	0.30	112.40	94	2074.2	3.0	2.9	59.5	0.0	0.1	2074.2	2754.8	59.5
33	2171	0.20	139.80	95	2169.2	2.7	2.7	59.8	-0.1	0.2	2169.2	2659.8	59.8
34	2266	0.30	151.70	95	2264.2	2.4	2.4	60.0	0.1	0.1	2264.2	2564.8	60.0
35	2361	0.60	226.30	95	2359.2	1.8	1.8	59.8	0.3	0.6	2359.2	2469.8	59.8
36	2455	0.80	245.70	94	2453.2	1.2	1.2	58.8	0.2	0.3	2453.2	2375.8	58.8
37	2550	0.90	254.20	95	2548.2	0.8	0.7	57.5	0.1	0.2	2548.2	2280.8	57.5
38	2645	1.10	249.30	95	2643.1	0.2	0.2	55.9	0.2	0.2	2643.1	2185.9	55.9
39	2740	0.30	242.80	95	2738.1	-0.2	-0.3	54.9	-0.8	0.8	2738.1	2090.9	54.9
40	2833	0.20	243.00	93	2831.1	-0.4	-0.4	54.5	-0.1	0.1	2831.1	1997.9	54.5
41	2928	0.30	305.80	95	2926.1	-0.3	-0.4	54.2	0.1	0.3	2926.1	1902.9	54.2
42	3023	0.40	280.80	95	3021.1	-0.12	-0.2	53.6	0.1	0.2	3021.1	1807.9	53.6
43	3118	0.30	254.00	95	3116.1	-0.1	-0.2	53.1	-0.1	0.2	3116.1	1712.9	53.1
44	3212	0.30	319.70	94	3210.1	0.0	0.0	52.7	0.0	0.3	3210.1	1618.9	52.7
45	3307	0.30	294.80	95	3305.1	0.3	0.2	52.3	0.0	0.1	3305.1	1523.9	52.3
46	3402	0.30	11.20	95	3400.1	0.6	0.6	52.1	0.0	0.4	3400.1	1428.9	52.1

**EAST COAST DIRECTIONAL DRILLING SPECIALIST**  
**SURVEY CALCULATION REPORT**

Minimum Curvature Method



Operator: **Tug Hill**  
 Lease Name: **Kiowa County, KS**  
 Job Number: **1085**  
 Comments: **Kiowa County, KS**  
 Survey Company: **East Coast DDS**

Target KBTVD: **4,829 Feet**  
 Target Angle: **91.00 Degrees**  
 Section Plane: **0.04 Degrees**  
 Total Declination Correction: **6.18 Degrees**  
 Bit to Survey Offset: **49 Feet**

Survey Number	Measured Depth-ft	Drift (Deg.)	Azimuth (Deg.)	Course Length	TVD (Ft.)	Vertical Section	+N/-S (Ft.)	+E/-W (Ft.)	BUR	DLS	KBTVD	+Above -Below Target	+ Right - Left Line
47	3496	0.40	26.80	94	3494.1	1.2	1.1	52.3	0.1	0.1	3494.1	1334.9	52.3
48	3591	0.60	2.60	95	3589.1	2.0	1.9	52.5	0.2	0.3	3589.1	1239.9	52.5
49	3686	0.50	9.30	95	3684.1	2.9	2.8	52.6	-0.1	0.1	3684.2	1144.8	52.6
50	3780	0.70	21.10	94	3778.1	3.8	3.8	52.8	0.2	0.2	3778.2	1050.8	52.8
51	3875	0.70	24.40	95	3873.1	4.9	4.8	53.3	0.0	0.0	3873.2	955.8	53.3
52	3970	0.50	18.20	95	3968.1	5.8	5.8	53.7	-0.2	0.2	3968.2	860.8	53.7
53	4064	0.60	17.90	94	4062.1	6.7	6.6	53.9	0.1	0.1	4062.2	766.8	53.9
54	4159	0.40	32.40	95	4157.1	7.4	7.4	54.3	-0.2	0.2	4157.2	671.8	54.3
55	4254	0.50	39.20	95	4252.1	8.0	8.0	54.7	0.1	0.1	4252.2	576.8	54.7
56	4348	0.80	46.80	94	4346.1	8.8	8.7	55.4	0.3	0.3	4346.2	482.8	55.4
57	4379	3.30	21.30	31	4377.1	9.8	9.7	55.9	8.1	8.4	4377.2	451.8	55.9
58	4411	7.10	16.60	32	4408.9	12.5	12.5	56.8	11.9	11.9	4409.1	419.9	56.8
59	4442	10.40	16.20	31	4439.6	17.0	17.0	58.2	10.6	10.6	4439.8	389.2	58.1
60	4474	14.30	15.90	32	4470.8	23.6	23.6	60.0	12.2	12.2	4471.2	357.8	60.0
61	4505	17.90	14.60	31	4500.6	31.9	31.9	62.3	11.6	11.7	4501.1	327.9	62.3
62	4537	21.70	12.90	32	4530.7	42.4	42.4	64.9	11.9	12.0	4531.4	297.6	64.8
63	4568	25.60	12.00	31	4559.1	54.6	54.5	67.5	12.6	12.6	4560.0	269.0	67.5
64	4600	29.30	11.50	32	4587.5	69.0	69.0	70.5	11.6	11.6	4588.7	240.3	70.5
65	4631	33.10	10.50	31	4614.0	84.8	84.7	73.6	12.3	12.4	4615.5	213.5	73.5
66	4663	36.80	9.00	32	4640.2	102.9	102.8	76.7	11.6	11.9	4642.0	187.0	76.6
67	4694	40.50	7.80	31	4664.4	122.0	122.0	79.5	11.9	12.2	4666.5	162.5	79.4
68	4726	44.40	7.00	32	4688.0	143.4	143.4	82.3	12.2	12.3	4690.5	138.5	82.2
69	4757	48.20	6.10	31	4709.4	165.7	165.6	84.8	12.3	12.4	4712.3	116.7	84.7
70	4789	52.00	4.90	32	4730.0	190.1	190.1	87.2	11.9	12.2	4733.3	95.7	87.0
71	4820	55.50	3.20	31	4748.3	215.1	215.0	88.9	11.3	12.1	4752.0	77.0	88.8
72	4852	59.90	1.60	32	4765.4	242.1	242.0	90.0	13.8	14.4	4769.6	59.4	89.9
73	4883	61.50	0.70	31	4780.6	269.1	269.0	90.6	5.2	5.7	4785.2	43.8	90.4
74	4915	61.30	0.60	32	4795.9	297.2	297.1	90.9	-0.6	0.7	4801.1	27.9	90.7
75	4946	61.10	0.60	31	4810.8	324.4	324.3	91.2	-0.6	0.6	4816.5	12.5	91.0
76	4978	60.90	1.20	32	4826.3	352.4	352.3	91.6	-0.6	1.8	4832.5	-3.5	91.4
77	5009	61.60	1.10	31	4841.2	379.5	379.5	92.2	2.3	2.3	4847.9	-18.9	91.9
78	5041	65.40	0.30	32	4855.5	408.2	408.1	92.5	11.9	12.1	4862.6	-33.6	92.2
79	5072	69.20	359.20	31	4867.5	436.7	436.7	92.4	12.3	12.7	4875.1	-46.1	92.1
80	5104	73.10	358.70	32	4877.8	467.0	467.0	91.8	12.2	12.3	4886.0	-57.0	91.5
81	5135	77.20	358.50	31	4885.7	497.0	496.9	91.1	13.2	13.2	4894.4	-65.4	90.8
82	5167	79.20	358.10	32	4892.3	528.3	528.2	90.2	6.3	6.4	4901.5	-72.5	89.8
83	5198	81.10	357.00	31	4897.6	558.8	558.7	88.9	6.1	7.1	4907.3	-78.3	88.5
84	5230	83.30	355.90	32	4901.9	590.4	590.4	86.9	6.9	7.7	4912.2	-83.2	86.5
85	5262	85.30	355.00	32	4905.1	622.2	622.1	84.4	6.3	6.8	4916.0	-87.0	83.9
86	5293	87.30	354.40	31	4907.1	653.0	652.9	81.5	6.5	6.7	4918.5	-89.5	81.1
87	5325	89.00	354.20	32	4908.1	684.8	684.7	78.3	5.3	5.3	4920.1	-91.1	77.9
88	5356	89.40	354.40	31	4908.6	715.6	715.6	75.3	1.3	1.4	4921.1	-92.1	74.8
89	5388	89.50	354.20	32	4908.9	747.5	747.4	72.1	0.3	0.7	4921.9	-92.9	71.6
90	5420	89.50	354.00	32	4909.2	779.3	779.2	68.8	0.0	0.6	4922.8	-93.8	68.3
91	5545	90.90	353.60	125	4908.7	903.5	903.5	55.3	1.1	1.2	4924.5	-95.5	54.7
92	5637	92.10	356.90	92	4906.3	995.2	995.1	47.7	1.3	3.8	4923.7	-94.7	47.0

**EAST COAST DIRECTIONAL DRILLING SPECIALIST**  
**SURVEY CALCULATION REPORT**

Minimum Curvature Method

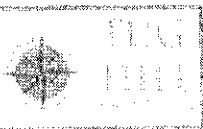
Operator: **Tug Hill**  
 Lease Name: **Kiowa County, KS**  
 Job Number: **1085**  
 Comments: **Kiowa County, KS**  
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 Bit to Survey Offset: **49 Feet**

Survey Number	Measured Depth-ft	Drift (Deg.)	Azimuth (Deg.)	Course Length	TVD (Ft.)	Vertical Section	+N/-S (Ft.)	+E/-W (Ft.)	BUR	DLS	KBTVD	+Above -Below Target	+ Right - Left Line
93	5729	90.70	359.10	92	4904.1	1087.1	1087.0	44.5	-1.5	2.8	4923.0	-94.0	43.7
94	5822	90.40	358.50	93	4903.2	1180.0	1180.0	42.5	-0.3	0.7	4923.8	-94.8	41.7
95	5914	91.30	358.90	92	4901.8	1272.0	1272.0	40.4	1.0	1.1	4924.0	-95.0	39.6
96	6006	89.30	0.50	92	4901.3	1364.0	1364.0	40.0	-2.2	2.8	4925.1	-96.1	39.0
97	6098	89.30	359.50	92	4902.5	1456.0	1455.9	40.0	0.0	1.1	4927.9	-98.9	38.9
98	6191	89.20	358.60	93	4903.7	1548.9	1548.9	38.4	-0.1	1.0	4930.7	-101.7	37.3
99	6283	93.30	0.60	92	4901.7	1640.9	1640.9	37.8	4.5	5.0	4930.3	-101.3	36.6
100	6377	92.10	359.70	94	4897.2	1734.8	1734.8	38.0	-1.3	1.6	4927.5	-98.5	36.8
101	6469	91.70	359.70	92	4894.2	1826.7	1826.7	37.5	-0.4	0.4	4926.1	-97.1	36.3
102	6561	92.30	359.70	92	4891.0	1918.7	1918.7	37.1	0.7	0.7	4924.5	-95.5	35.7
103	6653	92.80	359.90	92	4886.9	2010.6	2010.6	36.7	0.5	0.6	4922.0	-93.0	35.3
104	6745	91.80	359.80	92	4883.2	2102.5	2102.5	36.5	-1.1	1.1	4919.9	-90.9	35.0
105	6837	92.80	359.30	92	4879.5	2194.4	2194.4	35.8	1.1	1.2	4917.8	-88.8	34.2
106	6929	91.60	0.40	92	4876.0	2286.3	2286.3	35.5	-1.3	1.8	4915.9	-86.9	33.9
107	7021	92.50	0.60	92	4872.7	2378.3	2378.3	36.3	1.0	1.0	4914.2	-85.2	34.7
108	7113	91.80	1.20	92	4869.2	2470.2	2470.2	37.8	-0.8	1.0	4912.3	-83.3	36.1
109	7207	90.50	0.70	94	4867.3	2564.2	2564.1	39.3	-1.4	1.5	4912.1	-83.1	37.5
110	7302	89.00	0.20	95	4867.8	2659.2	2659.1	40.1	-1.6	1.7	4914.2	-85.2	38.2
111	7396	89.10	359.10	94	4869.3	2753.1	2753.1	39.5	0.1	1.2	4917.4	-88.4	37.6
112	7491	90.70	358.80	95	4869.5	2848.1	2848.1	37.8	1.7	1.7	4919.2	-90.2	35.8
113	7585	91.30	359.10	94	4867.8	2942.1	2942.1	36.0	0.6	0.7	4919.2	-90.2	34.0
114	7679	90.50	358.80	94	4866.4	3036.1	3036.0	34.3	-0.9	0.9	4919.4	-90.4	32.2
115	7774	90.00	358.10	95	4865.9	3131.0	3131.0	31.8	-0.5	0.9	4920.6	-91.6	29.6
116	7868	91.80	358.60	94	4864.5	3225.0	3224.9	29.0	1.9	2.0	4920.8	-91.8	26.8
117	7963	91.40	358.90	95	4861.8	3319.9	3319.9	27.0	-0.4	0.5	4919.8	-90.8	24.7
118	8057	90.20	357.90	94	4860.5	3413.8	3413.8	24.4	-1.3	1.7	4920.1	-91.1	22.0
119	8152	88.60	357.10	95	4861.5	3508.7	3508.7	20.2	-1.7	1.9	4922.7	-93.7	17.8
120	8246	88.40	358.00	94	4864.0	3602.6	3602.6	16.2	-0.2	1.0	4926.8	-97.8	13.7
121	8341	88.00	357.00	95	4866.9	3697.5	3697.5	12.1	-0.4	1.1	4931.5	-102.5	9.5
122	8434	87.30	357.80	93	4870.8	3790.3	3790.3	7.8	-0.8	1.1	4936.9	-107.9	5.2
123	8530	87.60	357.60	96	4875.0	3886.1	3886.1	4.0	0.3	0.4	4942.9	-113.9	1.3
124	8624	88.70	358.10	94	4878.1	3980.0	3980.0	0.5	1.2	1.3	4947.5	-118.5	-2.3
125	8719	89.00	359.10	95	4880.0	4074.9	4074.9	-1.9	0.3	1.1	4951.1	-122.1	-4.7
126	8813	90.70	359.10	94	4880.2	4168.9	4168.9	-3.3	1.8	1.8	4953.0	-124.0	-6.2
127	8908	91.00	359.20	95	4878.8	4263.9	4263.9	-4.7	0.3	0.3	4953.2	-124.2	-7.7
128	9002	90.10	0.30	94	4877.9	4357.9	4357.9	-5.2	-1.0	1.5	4954.0	-125.0	-8.2
129	9097	89.80	0.60	95	4878.0	4452.9	4452.9	-4.4	-0.3	0.4	4955.7	-126.7	-7.5
130	9191	89.50	0.80	94	4878.6	4546.9	4546.9	-3.3	-0.3	0.4	4957.9	-128.9	-6.4
131	9286	91.00	0.60	95	4878.2	4641.9	4641.9	-2.1	1.6	1.6	4959.2	-130.2	-5.3
132	9381	90.20	0.80	95	4877.2	4736.9	4736.9	-0.9	-0.8	0.9	4959.8	-130.8	-4.2
133	9475	90.60	0.50	94	4876.5	4830.8	4830.8	0.1	0.4	0.5	4960.8	-131.8	-3.2
134	9529	91.50	0.40	54	4875.5	4884.8	4884.8	0.6	1.7	1.7	4960.8	-131.8	-2.9
PTB	9578	92.00	0.40	49	4874.0	4933.8	4933.8	0.9	1.0	1.0	4960.1	-131.1	-2.5





# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H			AFE Number 12-0121		Report Date 6/16/2012	
Country USA	State KS	County Kiowa	Field Martin		Lease 200' FSL 660' FWL/SW SW	
API / IPO UWI Kiowa			Orig KB Elev (ft)	Ground Elevation (ft) 2297.0		KB-GRD (ft) -2297.0
Qtr/Qt, Block, Sec, Town, Range .8,27S,20W				Spud Date 7/15/2012		Rig Release Date 8/19/2012

## Daily Operations

24 Hour Summary  
Set Cellar ring, Drill 30" hole F/ O' T/ 100'. P/U & RIH w/ 20" welded conductor w/ 2" line pipe welded on side for cementing. MIRU Allied cementing PJSM. Pump 125 sks cement, getting 100% returns then broke down and u-tubed up conductor. Shut down cementing, will top off w/ 1" in morning. RU on SWD and cement.

24 Hr Forecast  
Drill mouse hole, run 16" and cement. Top off 20"

Operations At Report Time  
Wait on daylight

Daily Total (Cost) \$11240.00	Cum Daily Total (cost) \$257092.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor Jay Lewis	Supervisor Phone 570-560-2611
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## Time Log

## Mud Checks

Type	Depth (ft)	Source	Density (lb/gal)	Funnel Viscosity (sq)	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)	PV(cp)	YP (lb/100R <sup>2</sup> )	pH			
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100R <sup>2</sup> )	Gel 30 min (lb/100R <sup>2</sup> )	Gel 10 sec (lb/100R <sup>2</sup> )	Gel 10 min (lb/100R <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Slab (V)	MBT (lb/bbl)

## Bit Record

## BHA

## Drilling Parameters

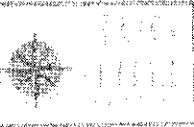
Start Depth (ft)	End Depth (ft)	Cum Depth Drilled (ft) 0	Total ROP (ft/hr) NaN	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGas Inj (ft <sup>3</sup> /min)	Drilling Time (hr)	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 0.00	SPP (psi)	Flow Rate (gpm)	TFA (Incl Noz) (in <sup>2</sup> )	Weight on Bit (lb)	String Wt (lb)

## Pump Operations

## Hydraulic Data

## Survey Data





# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H			AFE Number 12-0121		Report Date 6/17/2012	
Country USA	State KS	County Kiowa	Field Martin		Lease 200' FSL 660' FWL/SW SW	
API / IFO UWI Kiowa		Orig KB Elev (ft)		Ground Elevation (ft) 2297.0		KB-GRD (ft) -2297.0
Qtr/Qty, Block, Sec, Town, Range 8, 27S, 20W				Spud Date 7/15/2012		Rig Release Date 8/19/2012

## Daily Operations

24 Hour Summary  
Crew to location. PJSM. Drill mouse hole F/ 0' T/ 73'. Weld and rih with 16" mouse hole to 73' with 2" line pipe welded down side for cementing. Rih w/ 1" to 50' Mix and pump 300 sks class A w/ 2% CC. Circulated cement to top on conductor and mouse hole. 3 BBL excess to fill cellar. Wash up, weld plates on top.

24 Hr Forecast  
WOC

Operations At Report Time  
WOC

Daily Total (Cost) \$22645.00	Cum Daily Total (cost) \$279737.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor Jay Lewis	Supervisor Phone 570-560-2611
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## Time Log

## Mud Checks

Type	Depth (ftKB)	Source	Density (lb/gal)	Funnel Viscosity (s/qt)	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)		PV(cp)	YP (lb/100ft <sup>2</sup> )	pH		
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

## BHA

## Drilling Parameters

Start Depth (ftKB)		End Depth (ftKB)		Cum Depth Drilled (ft) 0		Total ROP (ft/hr) NaN		Drilling Torque		
Motor RPM (rpm)	RPM (rpm)	QGae Inj (ft <sup>3</sup> /min)		Drilling Time (hr)		Rotating Time (hr)		Circulation Time (hr)		
Cum Drilling Time (hr) 0.00		SPP (psi)		Flow Rate (gpm)		TFA (incl Noz) (in <sup>2</sup> )		Weight on Bit (lbf)		String Wt (lbf)

## Pump Operations

## Hydraulic Data

## Survey Data

# ALLIED CEMENTING CO., INC.

KB  
26812

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

SERVICE POINT:  
Liberal KS

DATE <u>8-7-17</u>	SEC <u>✓</u>	TWP <u>27</u>	RANGE <u>20</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>FINSEL</u>	WELL # <u>1-814</u>	LOCATION <u>Mullinville SW N</u>		COUNTY <u>Rawl</u>	STATE <u>KS</u>		
OLD OR (NEW) (Circle one)		<u>NEW</u>				<u>1.08</u>	<u>7.3</u>

CONTRACTOR <u>Patterson Oil 17</u>	OWNER <u>SAME</u>
TYPE OF JOB _____	CEMENT _____
HOLE SIZE <u>7" 1 1/2"</u>	T.D. _____
CASING SIZE <u>7" 2 1/4"</u>	DEPTH <u>5473'</u>
TUBING SIZE _____	DEPTH _____
DRILL PIPE _____	DEPTH _____
TOOL _____	DEPTH _____
PRES. MAX _____	MINIMUM _____
MEAS. LINE _____	SHOE JOINT <u>16.45'</u>
CEMENT LEFT IN CSG. <u>46.45'</u>	
PERFS. <u>NA</u>	
DISPLACEMENT <u>207.7</u>	

PUMP TRUCK # <u>531/541</u>	CEMENTER <u>Bob Dugan</u>
BULK TRUCK # <u>420/528</u>	HELPER <u>RUBIN CHAMBERLAIN</u>
BULK TRUCK # _____	DRIVER <u>JEREMY GONZALEZ (TWS)</u>
BULK TRUCK # _____	DRIVER _____

COMMON <u>200 A</u>	@ <u>16.25</u>	<u>3250.00</u>
POZMIX _____	@ _____	_____
GEL _____	@ _____	_____
CHLORIDE _____	@ _____	_____
ASC _____	@ _____	_____
<u>Just Amt</u>	@ _____	_____
<u>Loop Seal 4</u>	@ <u>34.20</u>	<u>136.80</u>
<u>CLUS 376LB</u>	@ <u>3.00</u>	<u>1128.00</u>
<u>SALT (100) 4</u>	@ <u>53.95</u>	<u>215.80</u>
<u>GEL (75)</u>	@ <u>21.35</u>	<u>1487.75</u>
<u>Super Flush 500gal</u>	@ <u>1.27</u>	<u>635.00</u>
HANDLING <u>733</u>	@ <u>2.10</u>	<u>1539.30</u>
MILEAGE <u>362</u>	@ <u>2.35</u>	<u>850.70</u>
		<b>TOTAL <u>6734.55</u></b>

REMARKS:  
  
Thank You!

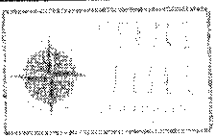
SERVICE	
DEPTH OF JOB <u>5473'</u>	
PUMP TRUCK CHARGE	<u>2675.00</u>
EXTRA FOOTAGE	@ _____
MILEAGE <u>35</u>	@ <u>7.00</u> <u>245.00</u>
MANIFOLD <u>Head</u>	@ <u>2.00</u> <u>70.00</u>
TUBING <u>35</u>	@ <u>2.70</u> <u>94.50</u>
<b>TOTAL <u>3280</u></b>	

CHARGE TO: Tog Hill  
STREET \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
FINSEL AFE# 12-0121  
1-814 Code# 830.18

To Allied Cementing Co., Inc.  
You are hereby requested to rent cementing equipment and furnish cementer and helper 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 & understand the "TERMS AND CONDITIONS" listed on the reverse side.

PLUG & FLOAT EQUIPMENT	
<u>1- Plug S-W</u>	@ _____ <u>85.00</u>
<b>TOTAL <u>85.00</u></b>	
TAX <u>399.90</u>	
TOTAL CHARGE <u>1099.5</u>	<u>10099.35</u>
DISCOUNT <u>35</u>	<u>3534.80</u> IF PAID IN 30 DAYS
<u>7564.55</u>	

SIGNATURE Curtis Turner PRINTED NAME \_\_\_\_\_



# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H			AFE Number 12-0121		Report Date 8/8/2012	
Country USA	State KS	County Kiowa	Field Martin		Lease 200' FSL 660' FWL/SW SW	
API / IPC UWI Kiowa			Orig KB Elev (ft)	Ground Elevation (ft) 2297.0	KB-GRD (ft) -2297.0	
Otr/Qtr, Block, Sec, Town, Range 8,27S,20W				Spud Date 7/15/2012	Rig Release Date 8/19/2012	

## Daily Operations

24 Hour Summary  
 RAN 121 JOINTS OF 7" N-80 LTC CASING THROUGH CURVE AND SET @ 5470' W/ MANDREL CASING HANGER. RIG DOWN CASERS, RIG UP ALLIED CEMENTERS AND PUMP 200 SX, 51.3 BBL OF AMD, 10% SALT, 4% GEL, 4 C-45, 2% GYPSEAL, DISPLACE W/ 207.2 BBL OF FRESH WATER. BUMPED PLUG 600#. TOOK TO 1100#. GOOD LIFT PRESSURE. WAIT ON CEMENT 4 HRS. WHILE CLEANING PITS. INSTALL PACKOFF & TEST TO 5000#. HELD. PICKUP BHA AND TEST MWD & MOTOR. INSTALL HUGHES PDC BIT & TIH. PICKUP 51 JOINTS OF ADDITIONAL DRILLPIPE, AGITATOR AND SHOCK SUB. HWDP. TRIP TO FLOAT EQUIPMENT @ 5425' AND TEST CASING TO 1500#. DRILL FLOAT EQUIP. AND CEMENT

Water: Frac pit full.

24 Hr Forecast  
 ROTATE & SLIDE DRILL LATERAL AS NEEDED

Operations At Report Time  
 DRILL FLOAT EQUIPMENT AND CEMENT

Daily Total (Cost) \$69985.00	Cum Daily Total (cost) \$1501274.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor CURTIS TURNER	Supervisor Phone 713-821-3942
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## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	10:30	4.50	5487.0	5487.0	RCSG	RUN 7" N-80 26# CASING, SET @ 5470'ND RIG DOWN CASERS.
10:30	11:00	0.50	5487.0	5487.0	COND	CIRCULATE 7" CASING
11:00	14:00	3.00	5487.0	5487.0	CMNT	RIG UP CEMENTERS AND CEMENT
14:00	18:30	4.50	5487.0	5487.0	WOC	WOC AND SET PACKOFF & TEST TO 5000#
18:30	19:00	0.50	5487.0	5487.0	LUBE	RIG SERVICE
18:00	5:30	10.50	5487.0	5487.0	DIR	PICKUP BHA, SCRIBE MOTOR, TEST
5:30	6:00	0.50	5487.0	5487.0	TEST	TEST CASING TO 1500#

## Mud Checks

Type	Depth (ftKB) 5487.0	Source	Density (lb/gal) 8.400	Funnel Viscosity (s/qt) 30.000	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl) 3.000	Mud Lost (Surf) (bbl) 0.000	PV (cp)	YP (lb/100ft <sup>2</sup> )	pH			
Vis Brpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
3	8.75	Hughes	DP506F	7140229	3,769.0	In Hole	9,578.0
4	8.75	Hughes	TIP	5204744	2,300.0	2,300.0	0.0
5	8.75	Hughes	MXD-25DXS	5157477	1,059.0	1,389.0	330.0
6	8.75	Hughes	DP606X	7139138	1,389.0	In Hole	9,578.0

## BHA

BHA #	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection

## Drilling Parameters

Start Depth (ftKB) 5487.0	End Depth (ftKB) 5487.0	Cum Depth Drilled (ft) 0.0	Total ROP (ft/hr) #Error	Drilling Torque
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# ALLIED OIL & GAS SERVICES, LLC 053876

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

SERVICE POINT:  
*Medicine Lodge KS*

DATE <u>08-17-12</u>	SEC. <u>08</u>	TWP. <u>27s</u>	RANGE <u>20W</u>	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
LEASE <u>Etniel</u>	WELLS <u>1-8 H</u>	LOCATION <u>Mullinville S, 2K, 2, N, W</u>	COUNTY <u>Ford</u>	STATE <u>KS</u>			
OLD OR NEW (Circle one)			1.06		7.95		

CONTRACTOR Patterson UTI #172 OWNER Tughill

TYPE OF JOB Production Lease

HOLE SIZE 6 7/8 I.D.

CASING SIZE 4K DEPTH 9575

TUBING SIZE DEPTH

DRILL PIPE 4 DEPTH

TOOL DEPTH

PRES. MAX 3300 MINIMUM

MEAS. LINE SHOE JOINT 40

CEMENT LEFT IN CSO. 40

PERFS.

DISPLACEMENT 114 Bbls Fresh H<sub>2</sub>O

CEMENT AMOUNT ORDERED 450 sk Class H + 3# Kalcat + 1% FL-160 + .25% SA-51 + .1% C-30 + Dechman

COMMON <u>Class H</u>	<u>450 sk @ 19.25</u>	<u>8662.50</u>
POZMIX	0	
GBL	0	
CHLORIDE	0	
ASC	0	
Kalcat	<u>1850 @ .89</u>	<u>1201.50</u>
SA-51	<u>101 @ 16.95</u>	<u>1674.95</u>
C-30	<u>42 @ 4.10</u>	<u>172.20</u>
FL-160	<u>42.5 @ 17.20</u>	<u>7310.00</u>
Dechman	<u>63 @ 8.90</u>	<u>560.70</u>

EQUIPMENT

PUMP TRUCK CEMENTER D. Felso /

# 548-545 HELPER D. Franklin /

BULK TRUCK DRIVER B. Boak /

# 561-553 DRIVER

BULK TRUCK DRIVER

HANDLING <u>492.6</u>	0	<u>2.70</u>	<u>1034.16</u>
MILEAGE <u>75.35</u>	0		<u>1821.25</u>
TOTAL			<u>22437.50</u>

REMARKS:

See Job Log

Set Stand at 3100', Pump 450 sk Cement

Disp. w/ 114 Bbls, Remainder of 140 Bbls

Circ. Approx 20 Bbls Cement

YHX

SERVICE

DEPTH OF JOB <u>9579'</u>		
PUMP TRUCK CHARGE		<u>4950.00</u>
EXTRA FOOTAGE	0	
MILEAGE <u>75</u>	0	<u>7.00</u>
MANIFOLD <u>1/4</u>	0	
<u>Light Vehicle 35</u>	0	<u>4.00</u>
TOTAL		<u>5335.00</u>

CHARGE TO: Tughill

STREET

CITY STATE ZIP

Code # 830.18

AFF # 12-0121

To: Allied Oil & Gas Services, 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 Curtis Turner

SIGNATURE Curtis Turner

PLUG & FLOAT EQUIPMENT

	0	
	0	
	0	
	0	
	0	

SALES TAX (If Any) <u>1556.94</u>	
TOTAL CHARGES <u>27772.90</u>	
DISCOUNT <u>35</u> <u>9720.32</u> IF PAID IN 30 DAYS	
<u>Net 18052.03</u>	



# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H		AFE Number 12-0121		Report Date 8/17/2012	
Country USA	State KS	County Kiowa	Field Martin		Lease 200' FSL 660' FWL/SW SW
API / IPO UWI Kiowa		Orig KB Elev (ft)	Ground Elevation (ft) 2297.0		KB-GRD (ft) -2297.0
Qtr/Qty, Block, Sec, Town, Range .8, 27S, 20W				Spud Date 7/15/2012	Rig Release Date 8/19/2012

## Daily Operations

24 Hour Summary  
FINISH 2ND WIPER TRIP IN THE HOLE, PUMP SWEEP, CIRC 2 BOTTOMS UPS, PUMP LUBE PILL, TOH, RIG UP CALIBER CASING CREW, HELD SAFETY MEETING, PICKUP 116 JOINTS OF 4 1/2" 11.6# N-80 4429' OF LINER, 8 STANDS OF DRILLPIPE, 20 STANDS OF HEAVY WEIGHT DRILLPIE, THEN DP.

24 Hr Forecast  
RUN 4 1/2" LINER TO BOTTOM @ 9578' HANG LINER & CEMENT

Operations At Report Time  
TRIP IN HOLE W/ 4 1/2" 11.6# N-80 LINER

Daily Total (Cost) \$155186.00	Cum Daily Total (cost) \$2172502.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor CURTIS TURNER	Supervisor Phone 713-821-3942
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## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	9:00	3.00	9578.0	9578.0	COND	PUMP SWEEP, CIRC 2 BU, PUMP LUBE PILL
9:00	13:30	4.50	9578.0	9578.0	TOH	TRIP OUT OF HOLE
13:30	15:00	1.50	9578.0	9578.0	CSDL	CUT DRILLING LINE
15:00	15:30	0.50	9578.0	9578.0	LUBE	RIG SERVICE
15:30	19:30	4.00	9578.0	9578.0	TOH	TOH TO PICKUP LINER
19:30	4:30	9.00	9578.0	9578.0	RCSG	RIG UP CASERS & PICKUP 4 1/2 LINER
4:30	6:00	1.50	9578.0	9578.0	TIH	TIH W/ HEAVY WEIGHT DRILLPIPE

## Mud Checks

Type WATER	Depth (ftKB) 9578.0	Source SUCTION	Density (lb/gal) 8.600	Funnel Viscosity (sl/qt) 31.000	Filtrate (mL/30min)			
HTHP Filtrate (mL/30min)	Mud Lost Hole (bbl) 0.000	Mud Lost (Surf) (bbl) 0.000	PV(cp) 2.000	YP (lb/100ft <sup>2</sup> ) 4.000	pH 8.400			
Vis 6rpm	Lime (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> ) 1.000	Gel 10 min (lb/100ft <sup>2</sup> ) 1.000			
Calcium (mg/L) 120.000	Ca Cl (wt%)	Solids (%) 1.400	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
					0.0	In Hole	9,578.0

## BHA

BHA #	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection

## Drilling Parameters

Start Depth (ftKB) 9578.0	End Depth (ftKB) 9578.0	Cum Depth Drilled (ft) 0.0	Total ROP (ft/hr) #Error	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGAs Inj (ft <sup>3</sup> /min)	Drilling Time (hr) 0.00	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 390.50	SPP (psi)	Flow Rate (gpm) 481.00	TFA (incl Noz) (in <sup>2</sup> )	Weight on Bit (lbf)	String Wt (lbf)

## Pump Operations

# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H		AFE Number 12-0121		Report Date 8/18/2012	
Country USA	State KS	County Kiowa	Field Martin		Lease 200' FSL 660' FWL/SW SW
API / IPO UWI Kiowa		Orig KB Elev (ft)	Ground Elevation (ft) 2297.0		KB-GRO (ft) -2297.0
Qtr/Clr, Block, Sec, Town, Range 8,27S,20W			Spud Date 7/15/2012	Rig Release Date 8/19/2012	

## Daily Operations

24 Hour Summary  
 Ran 116 joints of 4.5 11.6# N-80 LINER, SET SHOE @ 9575', AND TOP OF LINER @ 5112'.  
 CIRCULATE, RIG UP ALLIED CEMENTERS, HELD SAFETY MEETING, CEMENT 4.5" LINER W/ 450SX, ( 112 BBLs.) OF CLASS H 13.8#, + 3# PER SACK  
 KOLSEAL, 1% FL-160, 0.25% SA51, 0.1% C20 + 0.14%, DISPLACED W/ 114 BBL, SET LINER, CIRC. 15 BBLs OF CEMENT TO SURFACE, RELEASE LINER,  
 TEST LINER TO 1500# ( HELD ). RIG DOWN CEMENTERS, RIG UP LAYDOWN MACHINE, LAYDOWN DRILLPIPE, HEAVY WEIGHT DRILLPIPE, RIGDOWN  
 LAYDOWN MACHINE, RIG UP BOP RAM AND NIPPLE DOWN, PRESENT OPERATIONS- NIPPLE DOWN BOP

24 Hr Forecast  
 Start RDMO

Operations At Report Time  
 Reporting RDMO started

Daily Total (Cost) \$58804.00	Cum Daily Total (cost) \$2231306.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor CURTIS TURNER	Supervisor Phone 713-821-3942
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## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	9:00	3.00	9578.0	9578.0	RCSCG	run 4.5" liner
9:00	10:00	1.00	9578.0	9578.0	COND	circulate
10:00	14:00	4.00	9578.0	9578.0	CMNT	cement 4.5" liner and rigdown
14:00	20:30	6.50	9578.0	9578.0	POOH	laydown dp
20:30	23:00	2.50	9578.0	9578.0	TIH	trip in hole w/ pipe left in derrick
23:00	5:00	6.00	9578.0	9578.0	POOH	laydown dp
5:00	6:00	1.00	9578.0	9578.0	NUND	nipple down
6:00	6:00	0.00				

## Mud Checks

Type water	Depth (ftKB) 9578.0	Source suction	Density (lb/gal) 8.600	Funnel Viscosity (s/qt) 29.000	Filtrate (mL/30min)			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)	PV(cp)	YP (lb/100ft <sup>2</sup> )	pH			
Vis 6rpm	Limn (lb/bbl)	Gel 30 min (lb/100ft <sup>2</sup> )	Gel 30 min (In/100ft <sup>2</sup> )	Gel 10 sec (lb/100ft <sup>2</sup> )	Gel 10 min (lb/100ft <sup>2</sup> )			
Calcium (mg/L)	Ca CL (wt%)	Solids (%)	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

Bit Number	Size	Make	Model	Serial No.	Depth In	Depth Out	Footage
					0.0	In Hole	9,578.0

## BHA

BHA # 9	Item Number	Component Type	OD	ID	Length	Cumulative Length	Fishing Neck	Top Connection

## Drilling Parameters

Start Depth (ftKB) 9578.0	End Depth (ftKB) 9578.0	Cum Depth Drilled (ft) 0.0	Total ROP (ft/hr) #Error	Drilling Torque	
Motor RPM (rpm)	RPM (rpm)	QGAS Inj (ft <sup>3</sup> /min)	Drilling Time (hr) 0.00	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 390.50	SPP (psi)	Flow Rate (gpm) 481.00	TFA (incl Noz) (in <sup>2</sup> )	Weight on Bit (lbf)	String Wt (lbf)

# ALLIED CEMENTING CO., LLC. 32686

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

SERVICE POINT:

*Medicine Lodge*  
7-17-12

DATE <i>7-16-12</i>	SEC. <i>8</i>	TWR. <i>27</i>	RANGE <i>20</i>	CALLED OUT <i>5:30</i>	ON LOCATION <i>7:30 PM</i>	JOB START <i>8:00 AM</i>	JOB FINISH <i>3:00 AM</i>
LEASE <i>Einzel</i>	WELL # <i>1-8 H</i>	LOCATION <i>Mullinville Ks., 5N, 2W, 2N</i>			COUNTY <i>Kiowa</i>	STATE <i>Ks.</i>	
OLD OR NEW (Circle one)				<i>10.01</i>		<i>7.3</i>	

CONTRACTOR *Patterson #172* OWNER *Tug Hill*

TYPE OF JOB *Surface*

HOLE SIZE *12 1/4* ID. *9.06*

CASING SIZE *9 5/8* DEPTH *275*

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX *700* MINIMUM

MEAS. LINE SHOE JOINT *41.32*

CEMENT LEFT IN CSG. *41.32*

PERFS.

DISPLACEMENT *6.7*

CEMENT AMOUNT ORDERED *200# 172 cc + 22# SMS + 2# Gyp + 1# Glasal*

*150# x ChesA + 22# cc*

COMMON	<i>350.5x</i>	@	<i>16.25</i>	<i>5687.50</i>
POZMIX		@		
GEL		@		
CHLORIDE	<i>10.5x</i>	@	<i>58.20</i>	<i>582.00</i>
ASC		@		
<i>Gypseal</i>	<i>4.5x</i>	@	<i>31.20</i>	<i>136.80</i>
<i>SMS</i>	<i>326</i>	@	<i>3.00</i>	<i>1128.00</i>
<i>Floresal</i>	<i>50#</i>	@	<i>2.70</i>	<i>135.00</i>
HANDLING	<i>378</i>	@	<i>2.10</i>	<i>793.80</i>
MILEAGE	<i>605/2.35</i>			<i>1422.93</i>
TOTAL				<i>9886.03</i>

EQUIPMENT

PUMP TRUCK CEMENTER *Don Grilley 1*

# *518-645* HELPER *Eddie Piper 2*

BULK TRUCK

# *471-553* DRIVER *Tony Lantz 3*

BULK TRUCK

# DRIVER

REMARKS:

*See Cement log*

*Thanks*

CHARGE TO: *Tug Hill*

STREET

CITY STATE ZIP

SERVICE

DEPTH OF JOB *906'*

PUMP TRUCK CHARGE		<i>1,125.00</i>
EXTRA FOOTAGE	<i>606 @ .95</i>	<i>575.70</i>
MILEAGE	<i>85 @ 7.00</i>	<i>595.00</i>
MANIFOLD & Head	@	<i>200.00</i>
Light/Veh.	<i>35 @ 4.00</i>	<i>140.00</i>
TOTAL		<i>2,285.70</i>

*95/8* PLUG & FLOAT EQUIPMENT

<i>1 Rubber Plug</i>	@	<i>158.00</i>
	@	
	@	
	@	
	@	
TOTAL		<i>158.00</i>

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 Curtis TURNER*

SIGNATURE *X Curtis Turner* 7-17-12

SALES TAX (If Any) *571.39*

TOTAL CHARGES *12329.78*

DISCOUNT *4315.08* IF PAID IN 30 DAYS

NET *8013.70*



# Daily Drilling Report

11/19/2012 9:41 AM

## Well Information

Well Einsel 1-8H		AFE Number 12-0121		Report Date 7/17/2012	
Country USA	State KS	County Kiowa	Field Martin	Lease 200' FSL 660' FWL/SW SW	
API / IRO UWI Kiowa		Ong KB Elev (ft)	Ground Elevation (ft)	KB-GRD (ft)	
Qtr/Qtr, Block, Sec, Town, Range .8,27S,20W		Spud Date 7/15/2012	Rig Release Date 8/19/2012		

## Daily Operations

24 Hour Summary  
work on flowline, rig service. Drill 7' 581'-906', td @ 906' @ 1:00pm, make wiper trip, TOOH, RIG UP CASERS, HELD SAFETY MEETING, RUN 21 JOINTS OF 9 5/8" 36# J-55 LT&C CASING & SET AT 892' KB, RIG DOWN CASERS, HELD SAFETY MEETING W/ CEMENTERS, RIG UP ALLIED CEMENTERS & PUMP 200 sks, of 2% sms + 2% gyp + 1/4# floeal, tail in w/ 150 sks of class A cement + 2% cc, displaced w/ 67 bbls of water. plug down @ 3:00 am... full returns to surface, 30 bbls of cement to surface to pits. Rig down cementers, rig up Vaughn energy and run GYRO., gyro didnt show deviation that survey tool showed. Gyro showed deviation @ 1.74 degree @ 848'. rig down Gyro. cutoff and weld on casing head.

### 24 Hr Forecast

finish welding on casing head, Nipple up BOP & test, Pickup BHA and drillout

Operations At Report Time  
welding on casing head

Daily Total (Cost) \$78929.00	Cum Daily Total (cost) \$377534.00	Total AFE (Cost) \$0.00
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## Daily Contacts

Wellsite Supervisor Curtis Turner	Supervisor Phone 713-821-3941
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## Time Log

Start Time	End Time	Hours	Log Start Depth	Log End Depth	Activity Code	Description
6:00	7:30	1.50	581.0	581.0		work to unplug flowline
7:30	8:00	0.50	581.0	581.0		rig service
8:00	9:00	1.00	581.0	750.0		drilling
9:00	9:30	0.50	750.0	750.0		wireline survey @ 750. 1.5 degree
9:30	12:00	2.50	750.0	906.0		drilling
12:00	12:30	0.50	906.0	906.0		wireline survey @ 906'. 2.9 degree
12:30	13:00	0.50	906.0	906.0		pump sweep and circ
13:00	15:30	2.50	906.0	906.0		make wiper trip
15:30	16:00	0.50	906.0	906.0		circulate
16:00	19:00	3.00	906.0	906.0		TOOH to run casing
19:00	20:00	1.00	906.0	906.0		rig up casers & laydown truck, Held safety meeting
20:00	0:30	4.50	906.0	906.0		run 21 jnts of 9 5/8" casing.. set @ 892' kb
0:30	1:00	0.50	906.0	906.0		rig down casers.
1:00	1:30	0.50	906.0	906.0		rig up cementers
1:30	3:00	1.50	906.0	906.0		cement 9 5/8" surface casing
3:00	3:30	0.50	906.0	906.0		rig down cementers
3:30	4:00	0.50	906.0	906.0		rig up Vaughn and RUN GYRO.
4:00	6:00	2.00	906.0	906.0		Cutoff conductor. weld on casing head.
6:00	8:00	0.00	906.0			

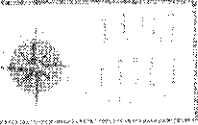
## Mud Checks

Type water based	Depth (ftKB) 750.0	Source	Density (lb/gal) 8.900	Formel Viscosity (stqt) 32.000	Filtrate (mL/30min) 32.000			
HTHP Filtrate (ml/30min)	Mud Lost Hole (bbl)	Mud Lost (Surf) (bbl)	PV(cp) 3.000	YP (lb/100ft³) 7.000	pH 9.700			
Vis Spm	Lime (lb/bbl) 0.050	Gel 30 min (lb/100ft³)	Gel 30 min (lb/100ft³)	Gel 10 sec (lb/100ft³) 5.000	Gel 10 min (lb/100ft³) 10.000			
Calcium (mg/L) 80.000	Ca CL (wt%)	Solids (%) 3.500	LGS (%)	Sand (%)	Percent Oil (%)	Oil Water Ratio 98.500	Electric Stab (V)	MBT (lb/bbl)

## Bit Record

BHA
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# Daily Drilling Report

11/19/2012 9:41 AM

## Drilling Parameters

Start Depth (RKB) 581.0	End Depth (RKB) 906.0	Cum Depth Drilled (R) 325.0	Total ROP (ft/hr) 92.86	Drilling Torque	
Motor RPM (rpm)	RPM (rpm) 110.00	QGas Inj (ft <sup>3</sup> /min)	Drilling Time (hr) 3.50	Rotating Time (hr)	Circulation Time (hr)
Cum Drilling Time (hr) 9.50	SPP (psi)	Flow Rate (gpm) 0.00	TFA (incl Noz) (in <sup>3</sup> )	Weight on Bit (lbf) 25.00	String Wt (lbf)

## Pump Operations

## Hydraulic Data

## Survey Data

Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



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

Sam Brownback, Governor

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist-Albrecht, Commissioner

November 19, 2012

Winnie Scott  
Tug Hill Operating, LLC  
550 BAILEY AVE, STE 510  
FT. WORTH, TX 76107

Re: ACO1  
API 15-097-21729-01-00  
Einsel 1-8H  
SW/4 Sec.08-27S-20W  
Kiowa County, Kansas

Dear Production Department:

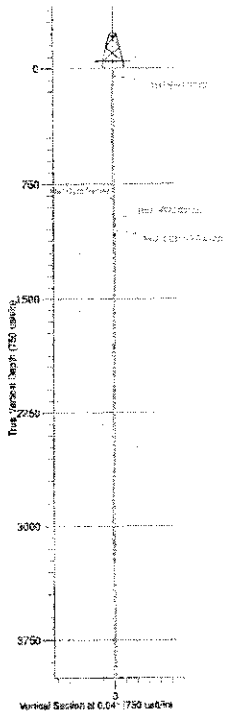
We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Winnie Scott

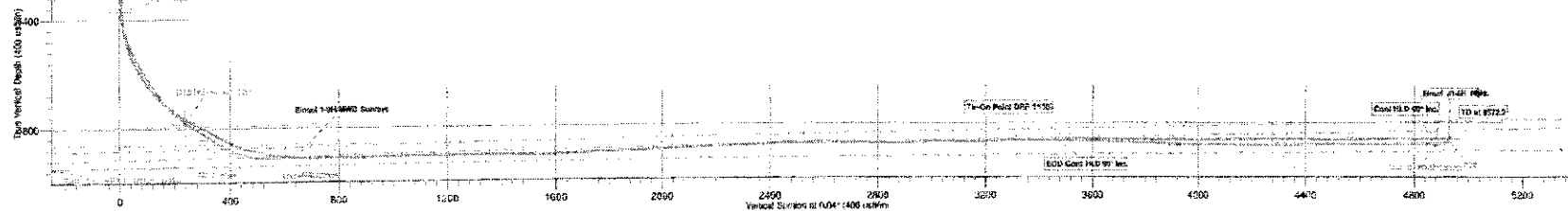
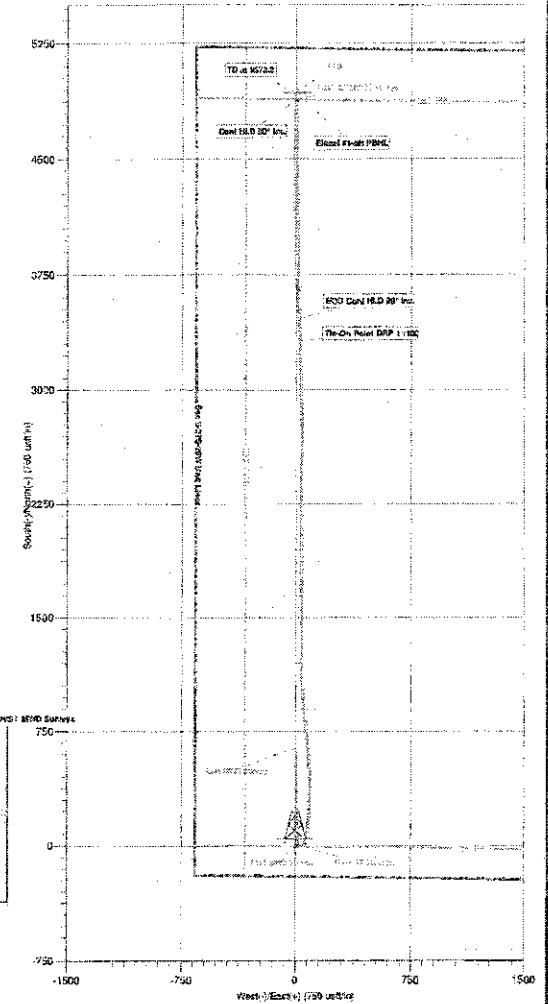
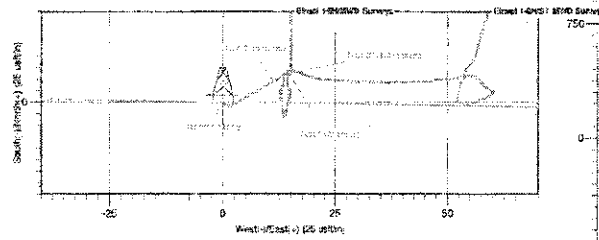
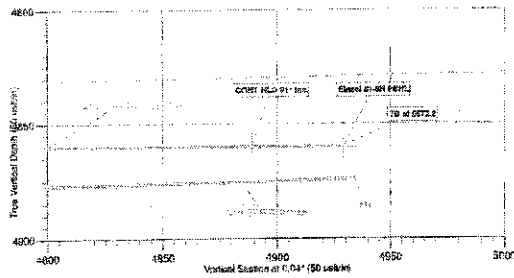


Tug Hill Operating LLC  
 Project: Kiowa County, KS  
 Site: Sec 8-T27S-R20W  
 Well: Elnesl 1-01  
 Wellbore: Original Wellpath  
 Design: Plan #7 537  
 Lat: 37° 42' 20.062 N  
 Long: 98° 32' 18.624 W  
 Prod. G.L.: 2285.0  
 KB: WELL @ 2619.Dustft (Original Well Elev)

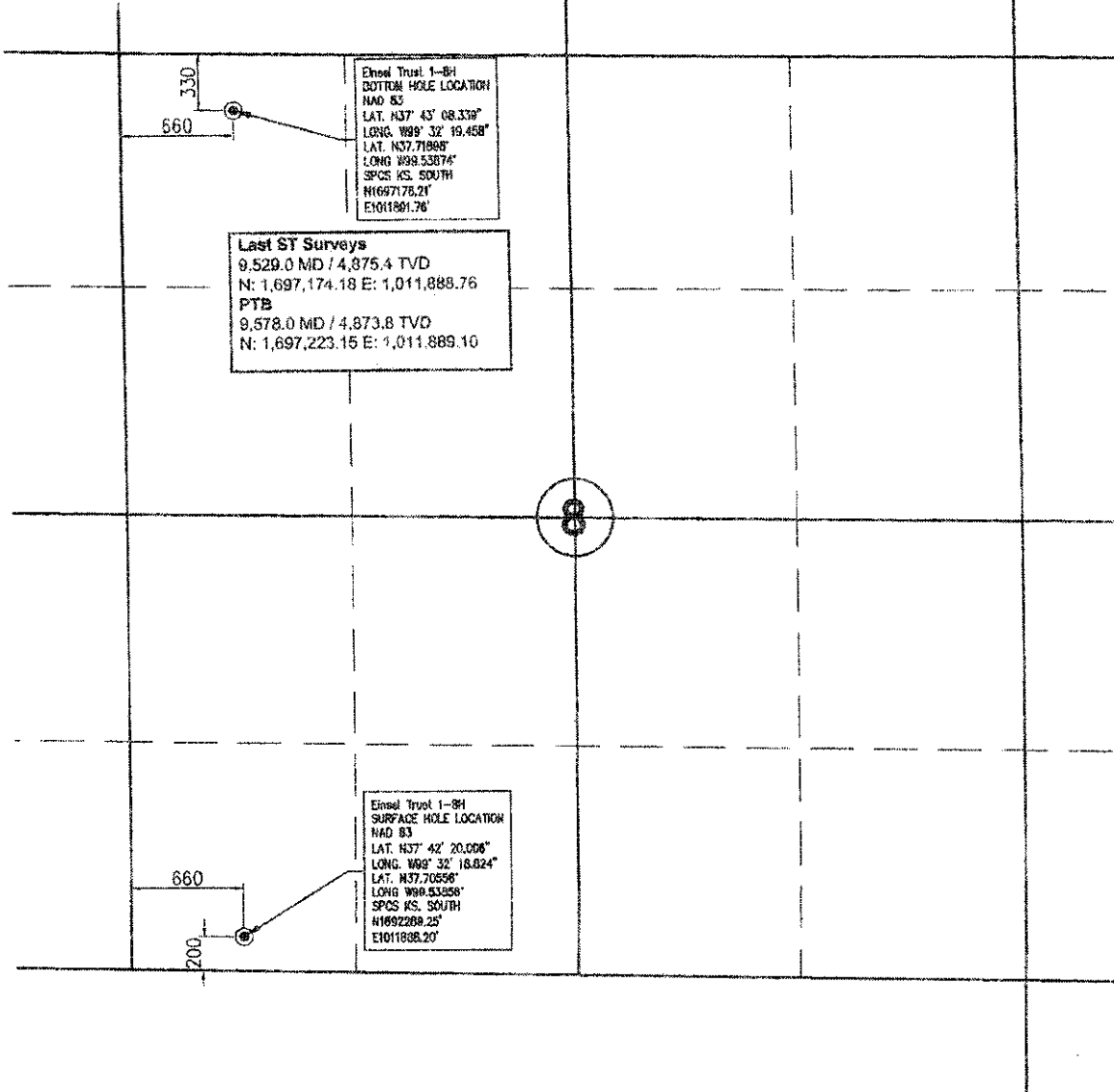


Converts to Grid North  
 True North: 6.181°  
 Magnetic North: 6.181°  
 Magnetic Fluct  
 Strength: 2008.7007  
 Dip Angle: 85.57°  
 Date: 7/8/2012  
 Model: IGMP2010

WELL DETAILS: Elnesl 1-01								
		Ground Level:		2285.0				
W-E	N-S	Northing	Easting	Latitude	Longitude			
49.5	0.0	1892289.25	101469.25	37° 42' 20.062 N	98° 32' 18.624 W			
0.0	0.0							
WELLBORE TARGET DETAILS (LATA/GMS)								
Name	TVD	N-S	E-W	Latitude	Longitude			
COMT HLD 91" Imp.	4260.0	4260.0	3.6	37° 42' 0.349 N	98° 32' 18.427 W			
Elnesl 07-01 PSH	4255.0	4255.0	3.2	37° 42' 0.355 N	98° 32' 18.458 W			
SECTION DETAILS								
MD	Inc	At	TVD	N-S	E-W	Dip	TFace	WSet
7043.0	01.00	355.90	2811.7	5316.0	27.0	0.23	0.00	2320.0
8112.0	02.00	320.34	2390.0	3408.0	24.5	0.94	183.00	2460.0
8332.0	00.00	339.16	4055.0	4630.0	3.6	0.00	0.00	4260.0
8372.0	00.00	350.76	4558.0	4628.0	3.8	0.00	0.00	4260.0
							COMT HLD 91" Imp.	
							Striped P1-01 PENH	
FORMATION TOP DETAILS								
TVDPath	RDPain	Formation	DipAngle	QCDI				
4165.0	4165.0	Hessner	-1.00	0.84				
4167.0	4168.0	Dodge	-1.00	0.01				
4252.0	4256.0	Lansing	-1.00	0.04				
4700.0	4696.0	Cherokee	-1.00	0.04				
4890.0	4832.0	Stacrespan	-1.00	0.64				
4874.1	4938.0	Stacrespan	-1.00	0.64				
4884.1	4822.0	Stacrespan	-1.00	0.04				
Target Line: 4650 @ EWS 0' Lipdz								
Old Target Line: 4915 @ 0'WS 11' Lipdz								



**WELL STAKE-OUT SURVEY**



**Last ST Surveys**  
 9,529.0 MD / 4,875.4 TVD  
 N: 1,697,174.18 E: 1,011,889.76  
**PTB**  
 9,578.0 MD / 4,873.8 TVD  
 N: 1,697,223.15 E: 1,011,889.10

**Einsel Trust 1-8H SURFACE HOLE LOCATION**  
 NAD 83  
 LAT. N37° 42' 20.006"  
 LONG. W99° 32' 18.024"  
 LAT. N37.70554"  
 LONG. W99.538168"  
 SPCS KS. SOUTH  
 N1692288.25'  
 E1011889.20'

**Einsel Trust 1-8H BOTTOM HOLE LOCATION**  
 NAD 83  
 LAT. N37° 43' 08.339"  
 LONG. W99° 32' 19.458"  
 LAT. N37.71968"  
 LONG. W99.53874"  
 SPCS KS. SOUTH  
 N1697178.21'  
 E1011891.76'



Lease Name: Einsel Trust  
 Well No. 1-8H  
 Surface El. at stake: 2295 NAVD88  
 Well location Co./State: Kiowa Co. Kansas  
 Well location Section: 8-T27S-R20W

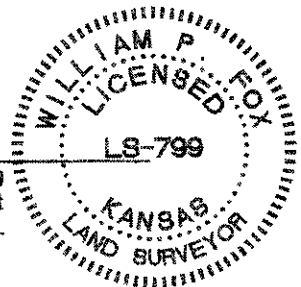
Alternate Datums  
 Horiz. Datum NAD27  
 Einsel Trust #1-8H Surface Hole Lat. N37.70554' Long. W99.538168'

SURVEY DATUMS (shown on drawing)  
 Horiz. Datum NAD83(CORS96)  
 Vert. Datum NAVD88(GEIOD09)  
 Ks. SPCS South Zone (US Feet)

State of Kansas }  
 Sedgwick County }SS

This is to certify that this map or plat and the survey on which it is based was made by me or under my direct supervision and that to the best of knowledge and belief, this is a true and correct exhibit of said Survey. The wells shown hereon were staked April 4, 2012 at the coordinate location noted.

William P. Fox LS 799  
 This survey is valid only if print  
 bears Surveyor's seal signed in blue ink.



POE & ASSOCIATES, INC.  
 CONSULTING ENGINEERS  
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<http://kcc.ks.gov/>

Sam Brownback, Governor

Mark Sievers, Chairman  
Thomas E. Wright, Commissioner  
Shari Feist-Albrecht, Commissioner

November 20, 2012

Winnie Scott  
Tug Hill Operating, LLC  
550 BAILEY AVE, STE 510  
FT. WORTH, TX 76107

Re: ACO-1  
API 15-097-21729-01-00  
Einsel 1-8H  
SW/4 Sec.08-27S-20W  
Kiowa County, Kansas

Dear Winnie Scott:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 07/15/2012 and the ACO-1 was received on November 20, 2012 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department