Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1260375

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 35053
Name: Tapstone Energy, LLC
Address 1: PO BOX 1608
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73101 + 1608
Contact Person: Monica Aguilar
Phone: (405) 702-5457
CONTRACTOR: License # 34500
Name: Nomac Drilling, LLC
Wellsite Geologist: Tammy Alcorn
Purchaser: Targa Resources

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
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

7/3/2015	7/16/2015	8/3/2015
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-077-22150-01-00
Spot Description:
S2 - S2 - SW - SW Sec. 23 Twp. 34 S. R. 9 ☐ East ☑ West
225 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

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Harper
Lease Name: Hazel 23-34-9 Well #: 1H
Field Name:
Producing Formation: Mississippi Lime
Elevation: Ground: 1275 Kelly Bushing: 1297
Total Vertical Depth: 4616 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 810 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: Permit #:

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☑ **Confidentiality Requested**
Date: 08/10/2015
☑ **Confidential Release Date:** 08/09/2017
☑ **Wireline Log Received**
☐ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ I ☐ II ☐ III **Approved by:** NAOMI JAMES **Date:** 08/18/2015

[redacted]

1260375

Operator Name: Tapstone Energy, LLC Lease Name: Hazel 23-34-9 Well #: 1H

Sec. 23 Twp. 34 S. R. 9 ☐ East ☑ West County: Harper

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

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

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☑ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

MWD/Gamma Ray

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum
Base Heebner	3494	-2197
Lansing	3780	-2483
Cottage Grove	4078	-2773
Oswego Limestone	4460	-3068
Cherokee Group	4625	-3159
Verdigris Limestone	4694	-3193
Mississippi Lime	4916	-3285

CASING RECORD ☑ New ☐ 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	12.250	9.625	36.0	810	Cl C	470	2% CC & .25#/sx Celloflake
Intermediate	8.750	7.000	26.0	5132	Cl A & Cl H	230	.4% FL-17
Liner	6.125	4.500	11.6	8962	None	0	None

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	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☑ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☑ Yes ☐ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☑ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

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

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run:
	2.875	4899	4899	☑ Yes ☐ No

Date of First, Resumed Production, SWD or ENHR. 8/7/2015

Producing Method: ☐ Flowing ☐ Pumping ☑ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☑ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☑ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
5132-8962

Form	ACO1 - Well Completion
Operator	Tapstone Energy, LLC
Well Name	Hazel 23-34-9 1H
Doc ID	1260375

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.250	9.625	36.0	810	Cl C	470	2% CC & .25#/sx Celloflake
Intermediate	8.750	7.000	26.0	5132	Cl A & Cl H	230	.4% FL-17
Liner	6.125	4.500	11.6	8962	None	0	None

TAPSTONE ENERGY

Harper County, KS
Hazel 23-34-9
Hazel 23-34-9 1H
OH

Survey: ProDirectional

Survey Report

16 July, 2015

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Project Harper County, KS

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site Hazel 23-34-9

Site Position:		**Northing:**	145,404.00 usft	**Latitude:**	37° 3' 56.78 N
From:	Map	**Easting:**	2,066,610.00 usft	**Longitude:**	98° 16' 18.22 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.14 °

Well Hazel 23-34-9 1H

Well Position	**+N/-S**	0.00 usft	**Northing:**	145,404.00 usft	**Latitude:**	37° 3' 56.78 N
	+E/-W	0.00 usft	**Easting:**	2,066,610.00 usft	**Longitude:**	98° 16' 18.22 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	1,297.00 usft	**Ground Level:**	1,275.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/22/2015	4.13	65.28	51,672

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	2.890

Survey Program **Date** 7/16/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
829.00	8,962.00	ProDirectional (OH)	ProMWD	MWD - Standard

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
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Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.000	145,404.00	2,066,610.00
829.00	0.40	170.100	828.99	-2.82	-2.85	0.50	2.89	170.100	145,401.15	2,066,610.50
892.00	0.10	261.100	891.99	-3.05	-3.08	0.48	3.11	171.112	145,400.92	2,066,610.48
987.00	0.30	251.800	986.99	-3.15	-3.17	0.16	3.17	177.056	145,400.83	2,066,610.16
1,082.00	0.60	258.300	1,081.99	-3.37	-3.34	-0.56	3.39	189.513	145,400.66	2,066,609.44
1,176.00	0.80	244.900	1,175.98	-3.80	-3.72	-1.64	4.07	203.731	145,400.28	2,066,608.36
1,271.00	0.50	265.600	1,270.98	-4.16	-4.04	-2.65	4.83	213.293	145,399.96	2,066,607.35
1,365.00	0.50	237.900	1,364.97	-4.45	-4.29	-3.41	5.47	218.484	145,399.71	2,066,606.59
1,460.00	0.60	264.100	1,459.97	-4.77	-4.56	-4.25	6.23	223.023	145,399.44	2,066,605.75
1,554.00	0.70	248.700	1,553.96	-5.08	-4.82	-5.28	7.14	227.617	145,399.18	2,066,604.72
1,650.00	0.50	237.500	1,649.96	-5.56	-5.25	-6.18	8.11	229.615	145,398.75	2,066,603.82
1,744.00	0.40	221.900	1,743.95	-6.05	-5.72	-6.74	8.84	229.695	145,398.28	2,066,603.26
1,839.00	0.40	231.100	1,838.95	-6.53	-6.17	-7.22	9.50	229.472	145,397.83	2,066,602.78
1,933.00	0.40	224.400	1,932.95	-6.99	-6.61	-7.71	10.16	229.361	145,397.39	2,066,602.29
2,027.00	0.10	194.200	2,026.95	-7.32	-6.93	-7.96	10.55	228.951	145,397.07	2,066,602.04
2,120.00	0.30	165.800	2,119.95	-7.63	-7.24	-7.92	10.73	227.544	145,396.76	2,066,602.08
2,214.00	0.10	181.400	2,213.95	-7.95	-7.56	-7.86	10.91	226.094	145,396.44	2,066,602.14
2,308.00	0.30	172.500	2,307.95	-8.27	-7.89	-7.83	11.11	224.775	145,396.11	2,066,602.17
2,403.00	0.30	154.900	2,402.95	-8.74	-8.36	-7.69	11.36	222.605	145,395.64	2,066,602.31
2,497.00	0.20	101.600	2,496.94	-8.98	-8.62	-7.42	11.37	220.749	145,395.38	2,066,602.58
2,592.00	0.10	224.000	2,591.94	-9.07	-8.71	-7.32	11.38	220.044	145,395.29	2,066,602.68
2,685.00	0.30	120.100	2,684.94	-9.24	-8.89	-7.17	11.42	218.868	145,395.11	2,066,602.83
2,779.00	0.10	45.300	2,778.94	-9.29	-8.96	-6.89	11.30	217.589	145,395.04	2,066,603.11
2,874.00	0.10	167.700	2,873.94	-9.31	-8.98	-6.82	11.27	217.210	145,395.02	2,066,603.18
2,969.00	0.20	96.800	2,968.94	-9.40	-9.08	-6.64	11.25	216.160	145,394.92	2,066,603.36
3,062.00	0.50	27.500	3,061.94	-9.04	-8.74	-6.29	10.77	215.733	145,395.26	2,066,603.71
3,156.00	0.50	59.500	3,155.94	-8.45	-8.17	-5.74	9.98	215.121	145,395.83	2,066,604.26

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
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Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
3,248.00	0.30	49.200	3,247.94	-8.06	-7.81	-5.22	9.39	213.752	145,396.19	2,066,604.78
3,344.00	0.30	7.400	3,343.93	-7.63	-7.39	-4.99	8.92	214.039	145,396.61	2,066,605.01
3,437.00	0.20	320.600	3,436.93	-7.27	-7.03	-5.07	8.66	215.790	145,396.97	2,066,604.93
3,533.00	0.20	19.700	3,532.93	-6.99	-6.74	-5.12	8.46	217.202	145,397.26	2,066,604.88
3,625.00	0.20	127.000	3,624.93	-6.92	-6.68	-4.93	8.31	216.428	145,397.32	2,066,605.07
3,719.00	0.30	223.900	3,718.93	-7.20	-6.96	-4.97	8.55	215.543	145,397.04	2,066,605.03
3,811.00	1.30	11.000	3,810.93	-6.35	-6.11	-4.94	7.86	218.962	145,397.89	2,066,605.06
3,843.00	4.90	20.700	3,842.87	-4.69	-4.47	-4.39	6.27	224.444	145,399.53	2,066,605.61
3,874.00	8.20	13.800	3,873.67	-1.26	-1.09	-3.39	3.56	252.228	145,402.91	2,066,606.61
3,905.00	10.60	5.200	3,904.25	3.76	3.90	-2.61	4.69	326.249	145,407.90	2,066,607.39
3,936.00	13.00	2.100	3,934.59	10.10	10.23	-2.22	10.46	347.751	145,414.23	2,066,607.78
3,967.00	15.20	2.500	3,964.66	17.65	17.77	-1.91	17.87	353.850	145,421.77	2,066,608.09
3,999.00	16.90	4.100	3,995.41	26.50	26.60	-1.40	26.64	356.989	145,430.60	2,066,608.60
4,031.00	19.20	5.100	4,025.83	36.41	36.48	-0.60	36.49	359.060	145,440.48	2,066,609.40
4,063.00	21.70	4.100	4,055.81	47.58	47.63	0.29	47.63	0.351	145,451.63	2,066,610.29
4,095.00	24.10	2.200	4,085.29	60.03	60.06	0.97	60.07	0.921	145,464.06	2,066,610.97
4,127.00	27.00	1.400	4,114.16	73.83	73.85	1.39	73.86	1.082	145,477.85	2,066,611.39
4,157.00	30.00	1.900	4,140.52	88.14	88.16	1.81	88.18	1.176	145,492.16	2,066,611.81
4,188.00	32.80	2.400	4,166.98	104.29	104.30	2.42	104.32	1.328	145,508.30	2,066,612.42
4,219.00	34.80	3.500	4,192.74	121.53	121.52	3.31	121.56	1.560	145,525.52	2,066,613.31
4,249.00	36.70	3.800	4,217.08	139.05	139.01	4.43	139.08	1.824	145,543.01	2,066,614.43
4,281.00	38.50	3.500	4,242.43	158.58	158.49	5.67	158.59	2.048	145,562.49	2,066,615.67
4,307.00	40.50	3.600	4,262.50	175.11	175.00	6.69	175.13	2.190	145,579.00	2,066,616.69
4,339.00	43.20	4.000	4,286.33	196.46	196.30	8.11	196.47	2.366	145,600.30	2,066,618.11
4,370.00	45.50	4.000	4,308.50	218.12	217.91	9.62	218.13	2.528	145,621.91	2,066,619.62
4,402.00	47.90	4.400	4,330.44	241.40	241.14	11.33	241.40	2.690	145,645.14	2,066,621.33
4,433.00	50.50	3.900	4,350.70	264.86	264.54	13.02	264.86	2.819	145,668.54	2,066,623.02

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Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
4,464.00	52.50	2.800	4,369.99	289.12	288.76	14.44	289.12	2.863	145,692.76	2,066,624.44
4,495.00	54.80	2.600	4,388.37	314.09	313.70	15.61	314.09	2.849	145,717.70	2,066,625.61
4,527.00	57.20	2.500	4,406.26	340.61	340.20	16.79	340.61	2.826	145,744.20	2,066,626.79
4,557.00	59.50	2.500	4,422.00	366.15	365.71	17.91	366.15	2.803	145,769.71	2,066,627.91
4,588.00	60.20	3.000	4,437.57	392.95	392.49	19.19	392.96	2.800	145,796.49	2,066,629.19
4,619.00	60.90	2.700	4,452.81	419.95	419.45	20.54	419.95	2.803	145,823.45	2,066,630.54
4,650.00	61.30	2.600	4,467.79	447.09	446.56	21.79	447.09	2.794	145,850.56	2,066,631.79
4,681.00	62.00	2.100	4,482.51	474.37	473.82	22.91	474.37	2.768	145,877.82	2,066,632.91
4,712.00	62.20	1.700	4,497.02	501.76	501.20	23.82	501.76	2.721	145,905.20	2,066,633.82
4,743.00	62.60	1.100	4,511.38	529.22	528.66	24.49	529.23	2.652	145,932.66	2,066,634.49
4,774.00	63.00	0.700	4,525.55	556.78	556.23	24.92	556.79	2.565	145,960.23	2,066,634.92
4,805.00	64.00	0.600	4,539.38	584.50	583.97	25.24	584.52	2.474	145,987.97	2,066,635.24
4,836.00	65.60	1.900	4,552.58	612.54	612.01	25.85	612.56	2.419	146,016.01	2,066,635.85
4,868.00	67.40	2.200	4,565.34	641.88	641.34	26.90	641.90	2.402	146,045.34	2,066,636.90
4,899.00	69.80	2.500	4,576.65	670.74	670.17	28.08	670.76	2.400	146,074.17	2,066,638.08
4,930.00	72.90	3.000	4,586.56	700.11	699.51	29.49	700.13	2.414	146,103.51	2,066,639.49
4,961.00	75.40	2.900	4,595.03	729.92	729.29	31.03	729.95	2.436	146,133.29	2,066,641.03
4,992.00	78.10	3.400	4,602.14	760.10	759.41	32.69	760.12	2.465	146,163.41	2,066,642.69
5,024.00	80.60	3.600	4,608.05	791.54	790.80	34.61	791.56	2.506	146,194.80	2,066,644.61
5,055.00	83.00	3.600	4,612.47	822.22	821.42	36.53	822.23	2.547	146,225.42	2,066,646.53
5,089.00	85.90	3.300	4,615.76	856.05	855.20	38.57	856.07	2.582	146,259.20	2,066,648.57
5,151.00	88.40	2.700	4,618.84	917.97	917.03	41.81	917.98	2.610	146,321.03	2,066,651.81
5,182.00	88.70	2.900	4,619.62	948.96	947.98	43.32	948.97	2.617	146,351.98	2,066,653.32
5,214.00	89.00	3.200	4,620.27	980.96	979.93	45.03	980.97	2.631	146,383.93	2,066,655.03
5,246.00	89.30	3.100	4,620.74	1,012.95	1,011.88	46.78	1,012.96	2.647	146,415.88	2,066,656.78
5,277.00	89.70	3.100	4,621.01	1,043.95	1,042.83	48.46	1,043.96	2.661	146,446.83	2,066,658.46
5,309.00	90.20	2.900	4,621.04	1,075.95	1,074.79	50.14	1,075.96	2.671	146,478.79	2,066,660.14

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
5,340.00	90.60	2.500	4,620.82	1,106.95	1,105.75	51.60	1,106.96	2.672	146,509.75	2,066,661.60
5,372.00	91.40	2.200	4,620.27	1,138.94	1,137.72	52.91	1,138.95	2.663	146,541.72	2,066,662.91
5,402.00	91.40	2.100	4,619.53	1,168.93	1,167.69	54.03	1,168.94	2.649	146,571.69	2,066,664.03
5,432.00	90.50	2.800	4,619.03	1,198.93	1,197.66	55.32	1,198.94	2.644	146,601.66	2,066,665.32
5,463.00	90.50	2.400	4,618.76	1,229.92	1,228.63	56.72	1,229.94	2.643	146,632.63	2,066,666.72
5,492.00	90.50	2.700	4,618.51	1,258.92	1,257.60	58.01	1,258.93	2.641	146,661.60	2,066,668.01
5,522.00	90.30	2.500	4,618.30	1,288.92	1,287.57	59.37	1,288.93	2.640	146,691.57	2,066,669.37
5,553.00	90.30	2.600	4,618.14	1,319.92	1,318.53	60.75	1,319.93	2.638	146,722.53	2,066,670.75
5,583.00	89.80	2.800	4,618.11	1,349.92	1,348.50	62.16	1,349.93	2.639	146,752.50	2,066,672.16
5,613.00	89.10	2.500	4,618.40	1,379.92	1,378.47	63.55	1,379.93	2.640	146,782.47	2,066,673.55
5,644.00	89.20	2.300	4,618.86	1,410.91	1,409.44	64.85	1,410.93	2.634	146,813.44	2,066,674.85
5,675.00	89.40	2.300	4,619.24	1,441.91	1,440.41	66.09	1,441.92	2.627	146,844.41	2,066,676.09
5,705.00	89.50	2.300	4,619.53	1,471.91	1,470.38	67.30	1,471.92	2.621	146,874.38	2,066,677.30
5,735.00	89.80	2.400	4,619.71	1,501.90	1,500.36	68.53	1,501.92	2.615	146,904.36	2,066,678.53
5,765.00	89.90	2.600	4,619.79	1,531.90	1,530.33	69.84	1,531.92	2.613	146,934.33	2,066,679.84
5,795.00	89.80	2.800	4,619.87	1,561.90	1,560.30	71.25	1,561.92	2.615	146,964.30	2,066,681.25
5,825.00	89.70	3.100	4,620.00	1,591.90	1,590.26	72.79	1,591.92	2.621	146,994.26	2,066,682.79
5,856.00	90.10	3.400	4,620.05	1,622.90	1,621.21	74.55	1,622.92	2.633	147,025.21	2,066,684.55
5,887.00	90.40	3.400	4,619.92	1,653.90	1,652.15	76.39	1,653.92	2.647	147,056.15	2,066,686.39
5,917.00	90.40	3.500	4,619.71	1,683.90	1,682.10	78.19	1,683.91	2.662	147,086.10	2,066,688.19
5,947.00	90.20	3.700	4,619.55	1,713.90	1,712.04	80.08	1,713.91	2.678	147,116.04	2,066,690.08
5,977.00	89.20	3.800	4,619.71	1,743.89	1,741.97	82.04	1,743.90	2.696	147,145.97	2,066,692.04
6,008.00	89.30	4.000	4,620.11	1,774.88	1,772.90	84.15	1,774.89	2.717	147,176.90	2,066,694.15
6,038.00	89.30	4.400	4,620.48	1,804.87	1,802.81	86.35	1,804.88	2.742	147,206.81	2,066,696.35
6,069.00	89.60	4.400	4,620.78	1,835.86	1,833.72	88.72	1,835.87	2.770	147,237.72	2,066,698.72
6,099.00	90.20	4.600	4,620.83	1,865.85	1,863.63	91.08	1,865.85	2.798	147,267.63	2,066,701.08
6,129.00	90.50	4.800	4,620.65	1,895.83	1,893.53	93.54	1,895.84	2.828	147,297.53	2,066,703.54

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
6,160.00	90.20	3.900	4,620.46	1,926.82	1,924.44	95.89	1,926.82	2.852	147,328.44	2,066,705.89
6,190.00	90.60	4.100	4,620.25	1,956.82	1,954.36	97.98	1,956.82	2.870	147,358.36	2,066,707.98
6,221.00	91.30	4.300	4,619.73	1,987.80	1,985.28	100.25	1,987.80	2.891	147,389.28	2,066,710.25
6,252.00	90.60	4.300	4,619.22	2,018.79	2,016.18	102.57	2,018.79	2.912	147,420.18	2,066,712.57
6,282.00	89.80	3.800	4,619.12	2,048.78	2,046.11	104.69	2,048.78	2.929	147,450.11	2,066,714.69
6,312.00	89.80	3.700	4,619.22	2,078.78	2,076.04	106.65	2,078.78	2.941	147,480.04	2,066,716.65
6,342.00	90.20	4.000	4,619.22	2,108.78	2,105.98	108.67	2,108.78	2.954	147,509.98	2,066,718.67
6,372.00	90.50	3.700	4,619.04	2,138.77	2,135.91	110.68	2,138.77	2.966	147,539.91	2,066,720.68
6,403.00	90.80	3.500	4,618.69	2,169.77	2,166.84	112.63	2,169.77	2.975	147,570.84	2,066,722.63
6,433.00	89.70	3.500	4,618.55	2,199.76	2,196.79	114.46	2,199.77	2.983	147,600.79	2,066,724.46
6,464.00	89.00	3.000	4,618.91	2,230.76	2,227.74	116.22	2,230.76	2.986	147,631.74	2,066,726.22
6,494.00	89.60	3.000	4,619.27	2,260.76	2,257.69	117.79	2,260.76	2.987	147,661.69	2,066,727.79
6,524.00	90.50	2.800	4,619.25	2,290.76	2,287.65	119.31	2,290.76	2.985	147,691.65	2,066,729.31
6,553.00	91.10	2.900	4,618.84	2,319.76	2,316.61	120.75	2,319.76	2.984	147,720.61	2,066,730.75
6,584.00	90.80	2.900	4,618.33	2,350.75	2,347.57	122.32	2,350.75	2.983	147,751.57	2,066,732.32
6,614.00	89.40	2.400	4,618.28	2,380.75	2,377.54	123.70	2,380.75	2.978	147,781.54	2,066,733.70
6,644.00	88.20	2.500	4,618.90	2,410.74	2,407.50	124.99	2,410.74	2.972	147,811.50	2,066,734.99
6,674.00	88.00	2.400	4,619.90	2,440.73	2,437.46	126.27	2,440.73	2.965	147,841.46	2,066,736.27
6,705.00	88.20	2.200	4,620.93	2,471.71	2,468.42	127.51	2,471.71	2.957	147,872.42	2,066,737.51
6,735.00	89.10	2.700	4,621.63	2,501.70	2,498.38	128.79	2,501.70	2.951	147,902.38	2,066,738.79
6,766.00	89.80	2.800	4,621.93	2,532.69	2,529.34	130.28	2,532.70	2.949	147,933.34	2,066,740.28
6,796.00	90.20	2.300	4,621.93	2,562.69	2,559.31	131.61	2,562.70	2.944	147,963.31	2,066,741.61
6,826.00	90.40	2.700	4,621.77	2,592.69	2,589.28	132.92	2,592.69	2.939	147,993.28	2,066,742.92
6,856.00	90.50	2.600	4,621.54	2,622.69	2,619.25	134.31	2,622.69	2.935	148,023.25	2,066,744.31
6,886.00	90.60	2.800	4,621.25	2,652.69	2,649.22	135.72	2,652.69	2.933	148,053.22	2,066,745.72
6,917.00	90.70	2.900	4,620.90	2,683.69	2,680.18	137.26	2,683.69	2.932	148,084.18	2,066,747.26
6,948.00	91.20	3.000	4,620.38	2,714.68	2,711.13	138.86	2,714.68	2.932	148,115.13	2,066,748.86

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
6,978.00	91.20	2.700	4,619.76	2,744.68	2,741.09	140.35	2,744.68	2.931	148,145.09	2,066,750.35
7,008.00	90.70	2.800	4,619.26	2,774.67	2,771.05	141.79	2,774.67	2.929	148,175.05	2,066,751.79
7,039.00	90.90	3.000	4,618.83	2,805.67	2,802.01	143.36	2,805.67	2.929	148,206.01	2,066,753.36
7,069.00	91.30	3.000	4,618.25	2,835.66	2,831.96	144.93	2,835.66	2.930	148,235.96	2,066,754.93
7,099.00	90.00	2.800	4,617.91	2,865.66	2,861.92	146.45	2,865.66	2.929	148,265.92	2,066,756.45
7,130.00	88.80	2.700	4,618.23	2,896.66	2,892.88	147.93	2,896.66	2.927	148,296.88	2,066,757.93
7,160.00	88.70	2.700	4,618.89	2,926.65	2,922.84	149.35	2,926.65	2.925	148,326.84	2,066,759.35
7,191.00	89.20	2.800	4,619.46	2,957.65	2,953.80	150.83	2,957.65	2.923	148,357.80	2,066,760.83
7,221.00	89.60	2.300	4,619.77	2,987.64	2,983.77	152.17	2,987.64	2.919	148,387.77	2,066,762.17
7,252.00	91.30	2.500	4,619.53	3,018.64	3,014.74	153.47	3,018.64	2.914	148,418.74	2,066,763.47
7,283.00	92.60	1.600	4,618.47	3,049.62	3,045.70	154.57	3,049.62	2.905	148,449.70	2,066,764.57
7,313.00	92.70	1.400	4,617.09	3,079.58	3,075.66	155.36	3,079.58	2.892	148,479.66	2,066,765.36
7,343.00	91.70	1.300	4,615.93	3,109.54	3,105.63	156.06	3,109.54	2.877	148,509.63	2,066,766.06
7,373.00	90.90	1.400	4,615.25	3,139.53	3,135.61	156.77	3,139.53	2.862	148,539.61	2,066,766.77
7,403.00	90.00	2.400	4,615.02	3,169.52	3,165.59	157.77	3,169.52	2.853	148,569.59	2,066,767.77
7,434.00	89.40	2.700	4,615.18	3,200.52	3,196.56	159.14	3,200.52	2.850	148,600.56	2,066,769.14
7,464.00	89.30	2.400	4,615.52	3,230.52	3,226.53	160.48	3,230.52	2.847	148,630.53	2,066,770.48
7,494.00	91.20	2.400	4,615.39	3,260.51	3,256.50	161.74	3,260.51	2.843	148,660.50	2,066,771.74
7,524.00	90.40	2.800	4,614.97	3,290.51	3,286.47	163.10	3,290.51	2.841	148,690.47	2,066,773.10
7,555.00	89.50	3.100	4,615.00	3,321.51	3,317.42	164.69	3,321.51	2.842	148,721.42	2,066,774.69
7,585.00	91.50	2.900	4,614.74	3,351.51	3,347.38	166.26	3,351.51	2.843	148,751.38	2,066,776.26
7,616.00	90.90	3.600	4,614.09	3,382.50	3,378.32	168.02	3,382.50	2.847	148,782.32	2,066,778.02
7,645.00	88.90	3.900	4,614.14	3,411.49	3,407.26	169.92	3,411.49	2.855	148,811.26	2,066,779.92
7,677.00	89.10	3.700	4,614.70	3,443.49	3,439.19	172.04	3,443.49	2.864	148,843.19	2,066,782.04
7,708.00	91.50	4.000	4,614.53	3,474.48	3,470.11	174.12	3,474.48	2.872	148,874.11	2,066,784.12
7,740.00	91.70	4.300	4,613.64	3,506.46	3,502.02	176.43	3,506.46	2.884	148,906.02	2,066,786.43
7,772.00	90.90	4.500	4,612.91	3,538.44	3,533.91	178.89	3,538.44	2.898	148,937.91	2,066,788.89

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
7,803.00	89.80	5.000	4,612.72	3,569.42	3,564.81	181.45	3,569.42	2.914	148,968.81	2,066,791.45
7,834.00	91.80	5.100	4,612.29	3,600.39	3,595.68	184.18	3,600.39	2.932	148,999.68	2,066,794.18
7,866.00	90.40	4.500	4,611.68	3,632.37	3,627.56	186.86	3,632.37	2.949	149,031.56	2,066,796.86
7,898.00	89.50	4.500	4,611.71	3,664.36	3,659.46	189.37	3,664.36	2.962	149,063.46	2,066,799.37
7,930.00	91.30	4.200	4,611.48	3,696.34	3,691.37	191.80	3,696.35	2.974	149,095.37	2,066,801.80
7,961.00	92.20	4.100	4,610.54	3,727.32	3,722.27	194.04	3,727.33	2.984	149,126.27	2,066,804.04
7,991.00	91.60	3.100	4,609.54	3,757.30	3,752.20	195.92	3,757.31	2.989	149,156.20	2,066,805.92
8,023.00	91.00	2.100	4,608.81	3,789.29	3,784.15	197.37	3,789.30	2.986	149,188.15	2,066,807.37
8,054.00	89.80	1.000	4,608.60	3,820.28	3,815.14	198.21	3,820.29	2.974	149,219.14	2,066,808.21
8,086.00	89.00	1.800	4,608.93	3,852.27	3,847.13	198.99	3,852.27	2.961	149,251.13	2,066,808.99
8,117.00	88.30	1.800	4,609.66	3,883.26	3,878.11	199.97	3,883.26	2.952	149,282.11	2,066,809.97
8,149.00	89.10	2.200	4,610.39	3,915.24	3,910.08	201.08	3,915.24	2.944	149,314.08	2,066,811.08
8,180.00	90.20	2.100	4,610.58	3,946.24	3,941.05	202.25	3,946.24	2.938	149,345.05	2,066,812.25
8,212.00	89.80	1.800	4,610.58	3,978.23	3,973.04	203.33	3,978.24	2.930	149,377.04	2,066,813.33
8,243.00	90.50	1.900	4,610.50	4,009.23	4,004.02	204.34	4,009.23	2.921	149,408.02	2,066,814.34
8,275.00	90.30	2.300	4,610.27	4,041.23	4,036.00	205.51	4,041.23	2.915	149,440.00	2,066,815.51
8,306.00	89.20	2.800	4,610.41	4,072.22	4,066.97	206.89	4,072.22	2.912	149,470.97	2,066,816.89
8,338.00	89.20	3.100	4,610.86	4,104.22	4,098.92	208.53	4,104.22	2.912	149,502.92	2,066,818.53
8,369.00	91.30	3.300	4,610.72	4,135.22	4,129.87	210.26	4,135.22	2.915	149,533.87	2,066,820.26
8,400.00	91.30	2.900	4,610.02	4,166.21	4,160.82	211.94	4,166.21	2.916	149,564.82	2,066,821.94
8,432.00	90.20	2.800	4,609.60	4,198.21	4,192.77	213.53	4,198.21	2.915	149,596.77	2,066,823.53
8,463.00	89.10	3.400	4,609.79	4,229.21	4,223.73	215.21	4,229.21	2.917	149,627.73	2,066,825.21
8,494.00	88.00	3.600	4,610.57	4,260.19	4,254.66	217.10	4,260.19	2.921	149,658.66	2,066,827.10
8,526.00	87.80	3.500	4,611.75	4,292.17	4,286.58	219.08	4,292.17	2.926	149,690.58	2,066,829.08
8,557.00	89.90	3.500	4,612.37	4,323.16	4,317.51	220.97	4,323.16	2.930	149,721.51	2,066,830.97
8,588.00	90.80	4.000	4,612.18	4,354.16	4,348.44	223.00	4,354.16	2.936	149,752.44	2,066,833.00
8,620.00	89.40	4.700	4,612.12	4,386.14	4,380.35	225.43	4,386.15	2.946	149,784.35	2,066,835.43

Company:	TAPSTONE ENERGY	**Local Co-ordinate Reference:**	Well Hazel 23-34-9 1H
Project:	Harper County, KS	**TVD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Site:	Hazel 23-34-9	**MD Reference:**	GL 1275' + 22' KB @ 1297.00usft (Nomac 7)
Well:	Hazel 23-34-9 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	Well_Planner1

Survey

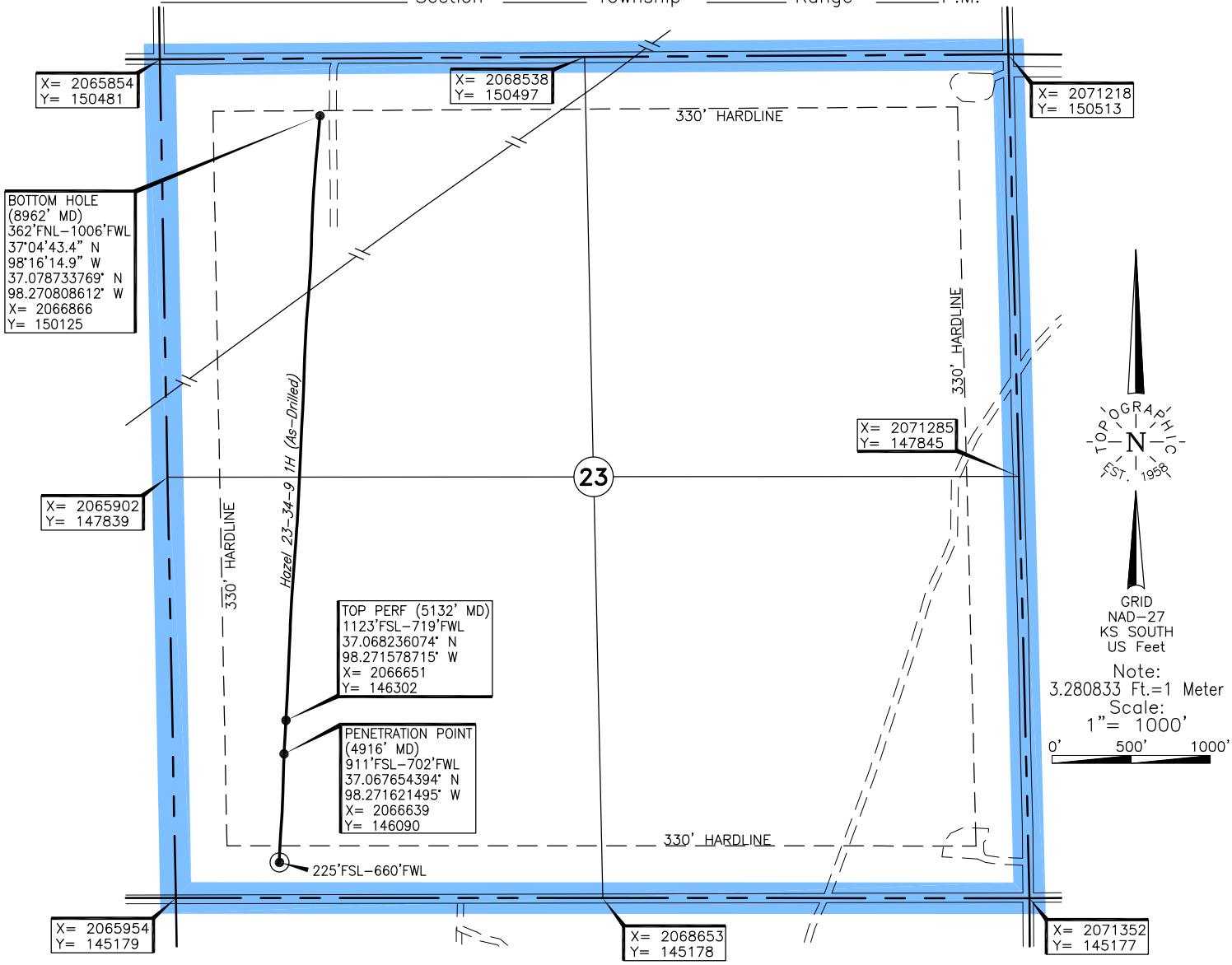
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	V. Sec (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	Northing (usft)	Easting (usft)
8,651.00	90.60	5.100	4,612.12	4,417.12	4,411.24	228.07	4,417.13	2.960	149,815.24	2,066,838.07
8,683.00	90.50	5.400	4,611.82	4,449.10	4,443.10	231.00	4,449.10	2.976	149,847.10	2,066,841.00
8,714.00	89.10	5.900	4,611.92	4,480.06	4,473.95	234.05	4,480.07	2.995	149,877.95	2,066,844.05
8,746.00	89.70	5.300	4,612.26	4,512.02	4,505.79	237.18	4,512.03	3.013	149,909.79	2,066,847.18
8,777.00	89.80	5.400	4,612.39	4,542.99	4,536.66	240.07	4,543.01	3.029	149,940.66	2,066,850.07
8,809.00	90.00	5.100	4,612.45	4,574.96	4,568.52	242.99	4,574.98	3.045	149,972.52	2,066,852.99
8,840.00	88.70	4.800	4,612.80	4,605.94	4,599.41	245.67	4,605.96	3.057	150,003.41	2,066,855.67
8,872.00	90.20	4.600	4,613.11	4,637.92	4,631.30	248.29	4,637.95	3.069	150,035.30	2,066,858.29
8,908.00	89.90	5.100	4,613.08	4,673.90	4,667.17	251.33	4,673.93	3.082	150,071.17	2,066,861.33
Last Survey: 8908'MD / 4613.08'TVD										
8,962.00	89.90	5.100	4,613.17	4,727.86	4,720.95	256.13	4,727.90	3.106	150,124.95	2,066,866.13
PTB: 8962'MD										

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
8,908.00	4,613.08	4,667.17	251.33	Last Survey: 8908'MD / 4613.08'TVD
8,962.00	4,613.17	4,720.95	256.13	PTB: 8962'MD

TOPOGRAPHIC LAND SURVEYORS
6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. LS-99, Exp. Dec. 31, 2015

HARPER County, Kansas
225'FSL - 660'FWL Section 23 Township 34S Range 9W P.M.



Operator: TAPSTONE ENERGY
Lease Name: HAZEL 23-34-9 Well No.: 1H

ELEVATION:
1275' Gr. at Stake

Topography & Vegetation Loc. fell in slightly rolling pasture, ±186' North of E-W fence

Good Drill Site? Yes

Reference Stakes or Alternate Location
Stakes Set None

Best Accessibility to Location From South off county road

Distance & Direction
from Hwy Jct or Town From Anthony, KS, go ±12.5 mi. West, then ±6.0 mi. South,
then ±1.0 mi. West to the SW Cor. of Sec. 23-T34S-R9W

This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy.

DATUM: NAD-27
LAT: 37°03'56.8"N
LONG: 98°16'18.2"W
LAT: 37.065769847° N
LONG: 98.271726135° W
STATE PLANE
COORDINATES: (US Feet)
ZONE: KS SOUTH
X: 2066610
Y: 145404

248163
Invoice # 244659
Date of Drawing: Jul. 23, 2015
Date Staked: May 21, 2015
JP

FINAL AS-DRILLED PLAT

AS-DRILLED INFORMATION
FURNISHED BY TAPSTONE ENERGY

Job Data Sheet

O-Tex Pumping, LLC

COMPANY		PROJECT NUMBER	AFE/WORK ORDER	DATE
Tapstone Energy		SOK 5186	0	7/3/2015
CONTRACTOR	Owner		LEGAL DESCRIPTION	API
Nomac #7	Same		23/34S/9W	15-077-22150-01-00
LEASE & WELL #		COUNTY	STATE	MILEAGE
Hazel 23-34-9 1H		Harper	Kansas	100

DIRECTIONS

ANTHONY,KS- 12.5 MILES WEST- 6 MILES SOUTH- 1 MILE WEST

Pumping Services

☑ Surface ☐ Intermediate ☐ Long String ☐ Plug Back

☐ Squeeze ☐ Acid ☐ PTA ☐ Other ( ) H2S

Casing Size	Casing Weight	Thread	Tbng/DP Size	Thread	Plug. Cont.	Swage	Top Plug	Bottom Plug	% Excess
9⅝"	36#	LTC			YES	YES	YES	NO	150%

Number and Type Units	Casing Depth	Hole Depth	Hole Size
Pump Truck & Bulk Materials	800'	800'	12¼"

Remarks	Est. BHST	Tubing Depth	Depth-TVD	Mud Weight/Type
	80°			WBM

Materials

	# of Sacks	Type		Additives
LEAD 112.17	470	Premium Plus (Class C)		2% Calcium Chloride - ¼pps Cello-Flake
H2O TO MIX 70.95	Weight PPG 14.80	Yield Ft3/Sk 1.34	Water Gal/Sk 6.34	
TAIL 0.00	# of Sacks	Type		Additives
H2O TO MIX 0.00	Weight PPG	Yield Ft3/Sk	Water Gal/Sk	
TOP OUT	# of Sacks	Type		Additives
H2O TO MIX	Weight PPG	Yield Ft3/Sk	Water Gal/Sk	
	ACID	Type		Additives
	Inhibitor	Surfactant	clay cont.	TAKE 50 # Sugar
Spacer or Flush	Quantity 20 BBL	Type Fresh Water		Additives
Spacer or Flush	Quantity	Type		Additives
Other	Quantity	Type		Additives

Crew Called

Cementer	Pumper	Bulky	Bulky	Bulky

CEOL

9 5/8" 8RD SWAGE, SW, DW, BALE RACK

Sales Items

Casing Size 9⅝"	Casing Weight 36#	Thread LTC	
Guide Shoe	Float Shoe	Float Collar	Insert Float Valve
Centralizers - Number	Size	Type	
Wall Cleaners - Number	Type	MSC (DV Tool)	MSC Plug Set
Limit Clamps	Thread lock	Other	
Remarks			

Customer Rep.	Cell Phone	Office Phone	Fax	Time of Call
0	0			

Call Taken By	Date Ready	Location Time
Robert Burris		
Crew Called	Yard Time	

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 5186	07/04/15

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Tapstone Energy	0

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Hazel 23-34-9	1H	0	Mike Hall

EMP NAME							
Mike Hall		0					
Joe Colonnese							
Donnie Brown							
0.00							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 80 Pressure _____

Retainer Depth _____ Total Depth 800

	Called Out	On Location	Job Started	Job Completed
Date	7/3/2015	7/4/2015	7/4/2015	7/4/2015
Time		0530	0910	1100

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing		36#	9⅝"		Surface	800	1,500
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			12¼"		Surface	800	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	WBM	Density	9	Lb/Gal	
Disp. Fluid	Fresh Water	Density	8.33	Lb/Gal	
Spacer type	Fresh Wate	BBL.	10	8.33	
Spacer type		BBL.			
Acid Type		Gal.		%	
Acid Type		Gal.		%	
Surfactant		Gal.		In	
NE Agent		Gal.		In	
Fluid Loss		Gal/Lb		In	
Gelling Agent		Gal/Lb		In	
Fric. Red.		Gal/Lb		In	
MISC.		Gal/Lb		In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
7/4	5.0
Total	5.0

Operating Hours

Date	Hours
7/4	1.0
Total	1.0

Description of Job

0

Pressures

MAX 1,500 PSI AVG. 200

Average Rates in BPM

MAX 6 BPM AVG 4

Cement Left in Pipe

Feet 46' Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	470	Premium Plus (Class C)	2% Calcium Chloride - ¼pps Cello-Flake	6.34	1.34	14.80
2	0	0	0	0.00	0.00	0.00
3	0	0	0	0.00	0.00	0.00

Summary

Preflush		Type:		Preflush: BBl	10.00	Type:	Fresh Water
Breakdown		MAXIMUM	1,500 PSI	Load & Bkdn: Gal - BBl	N/A	Pad:Bbl -Gal	N/A
		Lost Returns-N	NO/FULL	Excess /Return BBl	55	Calc.Disp Bbl	60
		Actual TOC	SURFACE	Calc. TOC:	SURFACE	Actual Disp.	60.00
Average		Bump Plug PSI:	500	Final Circ. PSI:	400	Disp:Bbl	60.00
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry BBl	112.0		
				Total Volume BBl	182.00		

CUSTOMER REPRESENTATIVE _____

SIGNATURE

JOB LOG

PROJECT NUMBER: SOK 5186	TICKET DATE: 07/04/15		
COMPANY: Tapstone Energy	COUNTRY: USA	STATE: Kansas	COUNTY: Harper
LEASE NAME: Hazel 23-34-9 1H Well No.	EMPLOYEE NAME: Mike Hall	CUSTOMER REP:	
FIELD:	SEC / TWP / RNG: 23/34S/9W	TICKET AMOUNT: #REF!	
API/UWI #: 15-077-22150-01-00	JOB PURPOSE:	WELL TYPE: Oil & Gas	

	Time	Rate (BPM)	Volume (BBL)(GAL)		Press.(PSI) CSG.	Tbg	Job Description / Remarks
7/4/15	0530						Arrived On Location
	0600						Safety Meeting
	0910				2,000		Test Pumps & Lines
	0920	4.0	20				Pump Fresh Water Spacer
	0925	5.0	112.0				Mix & Pump Cement @ 14.8 ppg.
	0945						Shut Down/Drop Plug
	0950	5.0					Start Displacement
	1000	3.0	50.0				Slow To Land Plug
	1005	3.0	60.0				Land Plug
	1010						Check Floats W/ 1/4 BBL. Back
7/4/15	1100						Job Complete
							Full Returns Entire Job
							55 BBLS. Back To Surface
							Supervisor Signature
Bumped Plug	Final lift Psi	Floats Held	PSI ON CSG		CEMENT		X
YES	400	YES	900.0		SURFACE		

Job Data Sheet

O-Tex Pumping, LLC

COMPANY	PROJECT NUMBER	AFE/WORK ORDER	DATE
Tapstone Energy	SOK 5195	0	7/8/2015
CONTRACTOR	**Owner**	**LEGAL DESCRIPTION**	**API**
Nomac #7	Same	23/34S/9W	15-077-22150-01-00
LEASE & WELL #	**COUNTY**	**STATE**	**MILEAGE**
Hazel 23-34-9 1H	Harper	Kansas	100

DIRECTIONS

BYRON OK - TAKE HWY 58 NORTH TO STATE LINE - NORTH 4 MILES - 1 MILE EAST

Pumping Services

☐ Surface ☑ Intermediate ☐ Long String ☐ Plug Back
☐ Squeeze ☐ Acid ☐ PTA ☐ Other ( ) H2S

Casing Size	Casing Weight	Thread	Tbng/DP Size	Thread	Plug Cont	Swage	Top Plug	Bottom Plug	% Excess
7"	26#	LTC			YES	YES	YES	NO	40%

Number and Type Units	Casing Depth	Hole Depth	Hole Size
Pump Truck & Bulk Materials	5,095	5,095	8¾"

Remarks	Est. BHST	KOP	Depth-TVD	Mud Weight/Type
	155			9.2ppg WBM

Materials

	# of Sacks	Type		Additives
LEAD 35.86	140	50/50 Poz Premium		4% Gel - 0.4% FL-17
H2O TO MIX	Weight PPG	Yield Ft3/Sk	Water Gal/Sk	
22.97	13.60	1.43	6.89	
TAIL 15.91	# of Sacks	Type		Additives
	90	Premium H		0.4% FL-17
H2O TO MIX 11.38	Weight PPG	Yield Ft3/Sk	Water Gal/Sk	
	15.60	1.18	5.31	
	# of Sacks	Type		Additives
	Weight PPG	Yield Ft3/Sk	Water Gal/Sk	
	ACID	Type		Additives
	Inhibitor	Surfactant	clay cont	*****TAKE 7" TOP & BOTTOM PLUG*****
Spacer or Flush	Quantity 20 bbls	Type Mudwash		Additives 200#s SAPP - 5 gallons Plexaid 803
Displace	Quantity	Type		Additives
Other	Quantity	Type		Additives

Crew Called

Cementer	Pumper	Bulky	Bulky	Bulky

CEOL

7" 8RD SWAGE, SW, DW, BALE RACK

Sales Items

Casing Size	Casing Weight	Thread	
7"	26#	LTC	
Guide Shoe	Float Shoe	Float Collar	Insert Float Valve
Centralizers - Number	Size	Type	
Wall Cleaners - Number	Type	MSC (DV Tool)	MSC Plug Set
Limit Clamps	Thread lock	Other	
Remarks			

Customer Rep.	Cell Phone	Office Phone	Fax	Time of Call
0	0			

Call Taken By	Date Ready	Location Time
Jared Sisco		
Crew Called	Yard Time	
0		

O-TEX PUMPING LLC

FIELD RECIEPT

Project Number: **SOK 5195**

Service Location Fairview, Oklahoma
Service Address 601 Industrial Blvd 73737

Phone number 580-227-2727

Service Date:	7/10/2015	Well Name:	Hazel 23-34-9	JOB TYPE	Job Type
Customer	Tapstone Energy	Well Number:	1H	CASING SIZE	Intermediate
Address:		County:	Harper		Serv. Sup.
City		State:	Kansas		Mike Hall
St		API #	15-077-22150-01-00		Page 1of 1
Customer Rep	0	AFE #	0		
Phone	0	PERMIT #		Pump 1 #	A245501-Serva
		Contract Number	SSC-2015-0003	Pump 2 #	0

REF #	DESCRIPTION	U OF MEAS.	UNIT PRICE	QUAN	GROSS	%DISC	disc	NET
ML001	Pickup Mileage	per mile/ per Unit	$ 4.26	100.0	$426.00	75%	$319.50	$106.50
ML002	Pump Truck/Heavy Vehicle Mileage	per mile/ per Unit	$ 7.32	100.0	$732.00	75%	$549.00	$183.00
ML003	Bulk Cement Delivery/Return	per Ton-Mile	$ 2.95	520.0	$1,534.00	75%	$1,150.50	$383.50
MX001	Bulk Material Mixing Service Charge	per cuft	$ 3.27	239.0	$781.53	75%	$586.15	$195.38
CC006	Pump Charge 5001-6000'	(per 4 hrs)	$ 4,671.81	1.0	$4,671.81	75%	$3,503.86	$1,167.95
ML014	Fuel Surcharge *	per unit perjob	$ 653.40	1.0	$653.40	100%	$653.40	$0.00
AE014	Environmental Fee*	per job	$ 228.69	1.0	$228.69	100%	$228.69	$0.00
PC003	Employee/Supervsor Retention/perdiem	per job	$ 1,306.80	4.0	$5,227.20	75%	$3,920.40	$1,306.80
JM001	Data Acquisition System	Per Job	$ 1,437.48	1.0	$1,437.48	75%	$1,078.11	$359.37
AE003	Circulation Equipment(40' of equipment)	per job	$ 1,633.50	1.0	$1,633.50	75%	$1,225.13	$408.38
AE002	Cement Head with manifold	per job	$ 1,176.12	1.0	$1,176.12	75%	$882.09	$294.03
CL011	7" Top Rubber Plug	Each	$ 203.28	1.0	$203.28	35%	$71.15	$132.13
CL012	7" Bottom Rubber Plug	Each	$ 440.44	1.0	$440.44	35%	$154.15	$286.29
CSB002	50/50 Poz with Premium (Includes 2% Gel)	per sk	$ 22.28	140.0	$3,119.20	72%	$2,245.82	$873.38
CP002	H (Premium Cement) (94 lbs/ft3)	per sk	$ 30.80	90.0	$2,772.00	72%	$1,995.84	$776.16
CP005	GEL	per lb	$ 0.68	235.0	$159.80	72%	$115.06	$44.74
CPC29	FL-17 Fluid Loss Additive 80-140F	per lb	$ 40.00	81.0	$3,240.00	72%	$2,332.80	$907.20
PS008	Mud Wash	per gal	$ 2.04	840.0	$1,713.60	72%	$1,233.79	$479.81
CC015	Pump Charge Additional Hours	per hour/per unit	$ 588.06	4.0	$2,352.24	75%	$1,764.18	$588.06
AE012	Bulk Unit Additional Hours	Per unit/per hour	$ 130.68	4.0	$522.72	75%	$392.04	$130.68
					$33,025.01		$24,401.65	$8,623.36

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: _____

JOB LOG

PROJECT NUMBER: SOK 5195	TICKET DATE: 07/10/15		
COMPANY: Tapstone Energy	COUNTRY: USA	STATE: Kansas	COUNTY: Harper
LEASE NAME: Hazel 23-34-9 1H (Well No.)	EMPLOYEE NAME: Mike Hall	CUSTOMER REP:	
FIELD:	SEC / TWP / RNG: 23/34S/9W	TICKET AMOUNT: 7,904.62	
API/UWI #: 15-077-22150-01-00	JOB PURPOSE: Intermediate	WELL TYPE: Oil & Gas	

	Time	Rate (BPM)	Volume (BBL)(GAL)		Press.(PSI) CSG.	Tbg	Job Description / Remarks
7/10/15	0100						Arrived On Location
	0200						Safety Meeting
	0710				5,000		Test Pumps & Lines
	0720	5.0	20		500		Mix & Pump Mudwash Spacer
	0727	5.0	35.0		600		Mix & Pump Lead Cement @ 13.6 ppg.
	0732	5.0	18.0		600		Mix & Pump Tail Cement @ 15.6 ppg.
	0738						Shut Down/Drop Plug
	0740	7.0			300		Start Displacement
	0808	3.0	182.0		700		Slow To Land Plug
	0813	3.0	192.0		1,200		Land Plug
	0820						Check Floats W/ 1/2 BBL. Back
7/10/15	0900						Job Complete
							Top Of Cement @ 4,200'
							Top Of Tail Cement @ 4,850'
							Supervisor Signature

Bumped Plug	Final lift Psi	Floats Held	PSI ON CSG		CEMENT SURFACE		X
YES	700	YES	1200.0				

JOB SUMMARY

PROJECT NUMBER	TICKET DATE
SOK 5195	07/10/15

COUNTY	State	COMPANY	CUSTOMER REP
Harper	Kansas	Tapstone Energy	0

LEASE NAME	Well No.	JOB TYPE	EMPLOYEE NAME
Hazel 23-34-9	1H	Intermediate	Mike Hall

EMP NAME							
Mike Hall		0					
Joe Colonnese							
Donnie Brown							
Jared Green							

Form. Name _____ Type: _____

Packer Type _____ Set At 0

Bottom Hole Temp. 155 Pressure _____

Retainer Depth _____ Total Depth 5095

	Called Out	On Location	Job Started	Job Completed
Date	7/9/2015	7/10/2015	7/10/2015	7/10/2015
Time		0100	0710	0900

Tools and Accessories

Type and Size	Qty	Make
Auto Fill Tube	0	IR
Insert Float Va	0	IR
Centralizers	0	IR
Top Plug	0	IR
HEAD	0	IR
Limit clamp	0	IR
Weld-A	0	IR
Texas Pattern Guide Shoe	0	IR
Cement Basket	0	IR

Well Data

	New/Used	Weight	Size	Grade	From	To	Max. Allow
Casing		26#	7"		Surface		5,000
Liner							
Liner							
Tubing			0				
Drill Pipe							
Open Hole			8¾"		Surface	5,095	Shots/Ft.
Perforations							
Perforations							
Perforations							

Materials

Mud Type	WBM	Density 9	Lb/Gal	
Disp. Fluid	Fresh Water	Density 8.33	Lb/Gal	
Spacer type	Fresh Wate	BBL. 20		8.33
Spacer type	Caustic	BBL. 10		8.40
Acid Type		Gal.	%	
Acid Type		Gal.	%	
Surfactant		Gal.	In	
NE Agent		Gal.	In	
Fluid Loss		Gal/Lb	In	
Gelling Agent		Gal/Lb	In	
Fric. Red.		Gal/Lb	In	
MISC.		Gal/Lb	In	

Perfpac Balls _____ Qty. _____

Other _____

Other _____

Other _____

Other _____

Other _____

Hours On Location

Date	Hours
7/10	8.0
Total	8.0

Operating Hours

Date	Hours
7/10	1.0
Total	1.0

Description of Job

Intermediate

Pressures

MAX 5,000 PSI AVG. 500

Average Rates in BPM

MAX 8 BPM AVG 4.5

Cement Left in Pipe

Feet 85' Reason SHOE JOINT

Cement Data

Stage	Sacks	Cement	Additives	W/Rq.	Yield	Lbs/Gal
1	140	50/50 Poz Premium	4% Gel - 0.4% FL-17	6.89	1.43	13.60
2	90	Premium H	0.4% FL-17	5.31	1.18	15.60
3	0	0	0	0.00	0.00	0.00

Summary

Preflush	10	Type:	Caustic	Preflush:	BBl	30.00	Type: Mudwash
Breakdown		MAXIMUM	5,000 PSI	Load & Bkdn:	Gal - BBl	N/A	Pad:Bbl -Gal N/A
		Lost Returns-N	NO/FULL	Excess /Return	BBl	N/A	Calc.Disp Bbl 192
		Actual TOC	4212'	Calc. TOC:		4212'	Actual Disp. 192.00
Average		Bump Plug PSI:	1,200	Final Circ.	PSI:	700	Disp:Bbl 192.00
ISIP _____	5 Min. _____	10 Min _____	15 Min _____	Cement Slurry	BBl	53.0	
				Total Volume	BBl	275.00	

CUSTOMER REPRESENTATIVE _____

SIGNATURE

SERVICE ORDER CONTRACT

Customer Name Tapstone Energy Ticket Number SOK 5195

Lease & Well Number Hazel 23-34-9 1H Date 7/10/2015

As consideration, The Above Named customer Agrees:
O-TEX Pumping L.L.C. shall not be responsible for and customer shall secure O-Tex pumping against any liability for damage to property of customer and of the well owner (if different from customer), unless caused by the willful misconduct or gross negligence of O-Tex pumping, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage.

O-Tex makes no guarantee to the effectiveness of the products, supplies, or materials, nor of the results of any treatment or services. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, O-Tex personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others except where due to O-Tex gross negligence or willful misconduct in the preparation or furnishing it.

Invoices payable NET 30 days following the date on the invoice.

Upon customers default in payment of the customers account by the last day of the month following the month in which the invoice is dated. Customer agrees to pay interest thereon after at the highest lawful contract rate applicable but never to exceed 18% per annum in the event it becomes necessary to employ an attorney to enforce collection of said account. Customer agrees to pay all collection costs and attorney fees in the amount of 25% of the unpaid account.

Service order: I authorize work to begin per service instructions in accordance with terms and conditions printed on this form and represent that I have authority to accept and sign this order.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: _____

SERVICE COMPANY:	O-Tex	DATE RECORDED:	07/10/2015
TICKET NO:	SOK 5195	JOB NO:	SOK 5195
CUSTOMER NAME:	Tapstone Energy	UNIT DESCRIPTION:	Nomac 7
WELL NAME:	Hazel 23349 1H	UNIT NOTES:	7" Intermediate
WELL LOCATION:	Harper County	FILE NAME:	Tapstone Energy_Hazel 23349 1H_15_07_10_#1.csv

O-Tex Pumping, LL