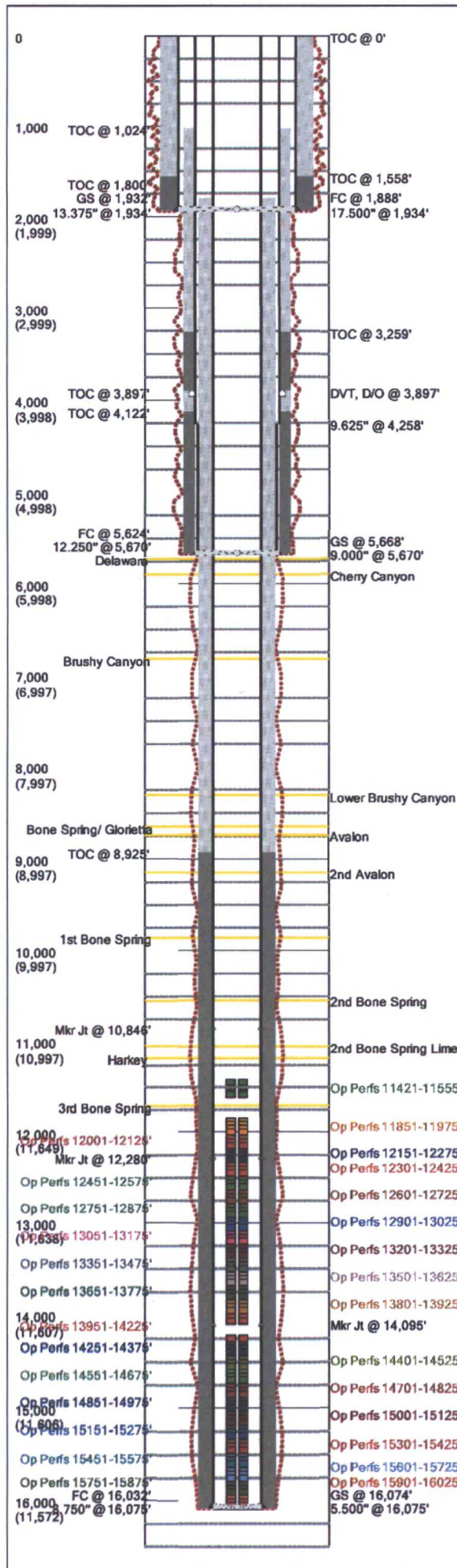


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30-025-42351

HOBBS OGD
FEB 13 2017
RECEIVED

Field Name		Lease Name		Well No.
East Marathon Road		Igloo 19 State		3H
County		State	API No.	
Lea		New Mexico	30025423570000	
Version	Version Tag			
1 Completed				
GL (ft)	KB (ft)	Section	Township/Block	Range/Survey
3,693.0	3,720.0	19	20S	35E /
Operator		Well Status	Latitude	Longitude
Caza Oil and Gas, Inc		✓ Completed	32.551930 N	103.493879 W
Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
200	FSL	1800	FEL	Section
Prop Num			Spud Date	Comp. Date
313780			8/15/2016	11/4/2016
Additional Information				
OGRID	Well Type	Pool Name and Number	Lease No. and Bond No.	
249099	Horizontal, Oil	Lea-Bone Spring, South 37580		
Prepared By		Updated By	Last Updated	
Steve Morris		Steve Morris	1/24/2017 9:31 AM	

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
8/15/2016	17.500	0	1,934	
8/19/2016	12.250	1,934	5,670	
9/5/2016	8.750	5,670	16,075	

Tubular Summary

Date	Description	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)
8/16/2016	Surface Casing	13.375	54.50	J55	0	1,934
8/20/2016	Intermediate Casing	9.625	40.00	J55	0	4,258
8/20/2016	Intermediate Casing	9.000	40.00	L80	4,258	5,670
9/6/2016	Production Casing	5.500	20.00	P110	0	16,075

Casing Cement Summary

C	Date	No. Sx	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
	8/16/2016	1,191	13.375	0	1,558	Circulated 490sx to surface
	8/16/2016	350	13.375	1,558	1,934	
	8/20/2016	812	9.625	1,024	3,259	No cement returns TOC 1024' - Temp log
	8/20/2016	150	9.625	3,259	3,897	
	8/20/2016	303	9.625	3,897	4,122	
	8/20/2016	365	9.625	4,122	5,670	
	9/7/2016	835	5.500	1,800	8,925	TOC 1800' CBL
	9/7/2016	820	5.500	8,925	16,075	

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)
8/16/2016	FC	13.375	0.000	1,888	0
8/16/2016	GS	13.375	0.000	1,932	0
8/20/2016	DVT, D/O	9.625	0.000	3,897	0
8/20/2016	FC	9.625	0.000	5,624	0
8/20/2016	GS	9.625	0.000	5,668	0
9/6/2016	Mkr Jt	5.500	0.000	10,846	10,866
9/6/2016	Mkr Jt	5.500	0.000	12,280	12,300
9/6/2016	Mkr Jt	5.500	0.000	14,095	14,115
9/6/2016	FC	5.500	0.000	16,032	0
9/6/2016	GS	5.500	0.000	16,074	0

Perforation Summary

C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
	10/26/2016	Open	3rd Bone Spring	11,421	11,555	128
	10/26/2016	Open	3rd Bone Spring	11,851	11,975	128
	10/26/2016	Open	3rd Bone Spring	12,001	12,125	128
	10/26/2016	Open	3rd Bone Spring	12,151	12,275	128
	10/26/2016	Open	3rd Bone Spring	12,301	12,425	128
	10/26/2016	Open	3rd Bone Spring	12,451	12,575	128
	10/25/2016	Open	3rd Bone Spring	12,601	12,725	128
	10/25/2016	Open	3rd Bone Spring	12,751	12,875	128
	10/25/2016	Open	3rd Bone Spring	12,901	13,025	128
	10/25/2016	Open	3rd Bone Spring	13,051	13,175	128
	10/25/2016	Open	3rd Bone Spring	13,201	13,325	128
	10/25/2016	Open	3rd Bone Spring	13,351	13,475	128

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C	Date	Perf. Status	Formation	OA Top (MD ft)	OA Bottom (MD ft)	Shots
	10/25/2016	Open	3rd Bone Spring	13,501	13,625	128
	10/24/2016	Open	3rd Bone Spring	13,651	13,775	128
	10/24/2016	Open	3rd Bone Spring	13,801	13,925	128
	10/24/2016	Open	3rd Bone Spring	13,951	14,225	128
	10/24/2016	Open	3rd Bone Spring	14,251	14,375	128
	10/24/2016	Open	3rd Bone Spring	14,401	14,525	128
	10/24/2016	Open	3rd Bone Spring	14,551	14,675	156
	10/24/2016	Open	3rd Bone Spring	14,701	14,825	128
	10/23/2016	Open	3rd Bone Spring	14,851	14,975	128
	10/23/2016	Open	3rd Bone Spring	15,001	15,125	128
	10/23/2016	Open	3rd Bone Spring	15,151	15,275	128
	10/23/2016	Open	3rd Bone Spring	15,301	15,425	128
	10/23/2016	Open	3rd Bone Spring	15,451	15,575	128
	10/23/2016	Open	3rd Bone Spring	15,601	15,725	128
	10/22/2016	Open	3rd Bone Spring	15,751	15,875	128
	10/22/2016	Open	3rd Bone Spring	15,901	16,025	128

Formation Tops Summary

Formation	Top (TVD ft)	Comments
Delaware	5,719	
Cherry Canyon	5,890	
Brushy Canyon	6,821	
Lower Brushy Canyon	8,307	
Bone Spring/ Glorietta	8,645	
Avalon	8,737	
2nd Avalon	9,140	
1st Bone Spring	9,854	
2nd Bone Spring	10,539	
2nd Bone Spring Lime	11,039	
Harkey	11,164	
3rd Bone Spring	11,517	

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Field Name		Lease Name		Well No.	County	State		API No.	
East Marathon Road		Igloo 19 State		3H	Lea	New Mexico		30025423570000	
Version	Version Tag				Spud Date		Comp. Date	GL (ft)	KB (ft)
1	Completed				8/15/2016		11/4/2016	3,693.0	3,720.0
Section	Township/Block		Range/Survey		Dist. N/S (ft)	N/S Line	Dist. E/W (ft)	E/W Line	Footage From
19	20S		35E		200	FSL	1,800	FEL	Section
Operator			Well Status			Latitude		Longitude	Prop Num
Caza Oil and Gas, Inc			Completed			32.551930 N		103.493879 W	313780
OGRID		Well Type			Pool Name and Number			Lease No. and Bond No.	
249099		Horizontal, Oil			Lea-Bone Spring, South 37580				
Last Updated		Prepared By				Updated By			
01/24/2017 9:31 AM		Steve Morris				Steve Morris			
Additional Information									

Hole Summary

Date	O.D. (in)	Top (MD ft)	Bottom (MD ft)	Comments
8/15/2016	17.500	0	1,934	
8/19/2016	12.250	1,934	5,670	
9/5/2016	8.750	5,670	16,075	

Tubular Summary

Date	Description	No. Jts	O.D. (in)	Wt (lb/ft)	Grade	Top (MD ft)	Bottom (MD ft)	Comments
8/16/2016	Surface Casing	46	13.375	54.50	J55	0	1,934	
8/20/2016	Intermediate Casing	92	9.625	40.00	J55	0	4,258	
8/20/2016	Intermediate Casing	34	9.000	40.00	L80	4,258	5,670	
9/6/2016	Production Casing	370	5.500	20.00	P110	0	16,075	

Casing Cement Summary

C	Date	No. Sx	Yield (ft ³ /sk)	Vol. (ft ³)	Csg. O.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
	8/16/2016	1,191	1.74	2,072	13.375	0	1,558	13.5ppg 4% CaCl ₂ =1/4pps celloflake=2/10% c-41p	Circulated 490sx to surface
	8/16/2016	350	1.34	469	13.375	1,558	1,934	14.8ppg 2% CaCl ₂	
	8/20/2016	812	2.10	1,705	9.625	1,024	3,259	12.6ppg, 6% gel+5% salt(BWOC)+ 6%STE+2/c-41P+.25pps cellof	No cement returns TOC 1024' - Temp log
	8/20/2016	150	1.33	200	9.625	3,259	3,897	14.8ppg 1% CaCl ₂	
	8/20/2016	303	2.10	636	9.625	3,897	4,122	12.6ppg, 6% gel+5% salt(BWOC)+ 6%STE+2/10% c-41P+.25pps c	
	8/20/2016	365	1.33	485	9.625	4,122	5,670	14.8ppg 1% CaCl ₂	
	9/7/2016	835	2.79	2,330	5.500	1,800	8,925	11ppg	TOC 1800' CBL
	9/7/2016	820	2.20	1,804	5.500	8,925	16,075	14.5ppg	

Tools/Problems Summary

Date	Tool Type	O.D. (in)	I.D. (in)	Top (MD ft)	Bottom (MD ft)	Description	Comments
8/16/2016	Float Collar	13.375	0.000	1,888	0		
8/16/2016	Guide Shoe	13.375	0.000	1,932	0		
8/20/2016	DV tool (drilled out)	9.625	0.000	3,897	0		
8/20/2016	Float Collar	9.625	0.000	5,624	0		
8/20/2016	Guide Shoe	9.625	0.000	5,668	0		
9/6/2016	Marker Joint	5.500	0.000	10,846	10,866		
9/6/2016	Marker Joint	5.500	0.000	12,280	12,300		
9/6/2016	Marker Joint	5.500	0.000	14,095	14,115		
9/6/2016	Float Collar	5.500	0.000	16,032	0		
9/6/2016	Guide Shoe	5.500	0.000	16,074	0		

Perforation Summary

C	Date	Perf. Status	Formation		Comments	
	10/22/2016	Open	3rd Bone Spring		4,914bbls comprised of 2,471bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 26,000# 40/70 White and 182,120# Prolite 40/70. AR-61bpm MaxR-67bpm. AP-7531# MaxP-8409#. ISIP-4272#	
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
16,021		16,025	8	32	60	
15,981		15,985	8	32	60	
15,941		15,945	8	32	60	
15,901		15,905	8	32	60	
C	Date	Perf. Status	Formation		Comments	
	10/22/2016	Open	3rd Bone Spring		6,683bbls comprised of 4,141bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 20,000# 40/70 White and 204,900# Prolite 40/70. AR-59bpm MaxR-63bpm. AP-7503#. MaxP-8416#. ISIP-4435#	
Top (MD ft)		Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
15,871		15,875	8	32	60	
15,831		15,835	8	32	60	
15,791		15,795	8	32	60	
15,751		15,755	8	32	60	
C	Date	Perf. Status	Formation		Comments	

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C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	5,200bbls comprised of 2,620bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,000# 40/70 White and 237,140# Prolite 40/70. AR-61bpm MaxR-69bpm. AP-7638#. MaxP-8454#. ISIP-4687#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15,721	15,725	8	32	60	
	15,681	15,685	8	32	60	
	15,641	15,645	8	32	60	
	15,601	15,605	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	5,720bbls comprised of 2,974bbls 16# Justice, 24bbls Rhino NSF, and 71bbls 15% HCL. Pumped 20,000# 40/70 White and 266,240# Prolite 40/70. AR-59bpm MaxR-69bpm. AP-7396#. MaxP-8087#. ISIP-4794#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15,571	15,575	8	32	60	
	15,531	15,535	8	32	60	
	15,491	15,495	8	32	60	
	15,451	15,455	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	5,582bbls comprised of 2,861bbls 16# Justice, 24bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,020# 40/70 White and 272,700# Prolite 40/70. AR-64bpm MaxR-72bpm. AP-7575#. MaxP-8458#. ISIP-4691#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15,421	15,425	8	32	60	
	15,381	15,385	8	32	60	
	15,341	15,345	8	32	60	
	15,301	15,305	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	5,800bbls comprised of 3,046bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 19,000# 40/70 White and 270,800# Prolite 40/70. AR-59bpm MaxR-62bpm. AP-7601#. MaxP-8661#. ISIP-4500#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15,271	15,275	8	32	60	
	15,231	15,235	8	32	60	
	15,191	15,195	8	32	60	
	15,151	15,155	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	5,042bbls comprised of 2,500bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 19,000# 40/70 White and 219,700# Prolite 40/70. AR-70bpm MaxR-73bpm. AP-7814#. MaxP-8513#. ISIP-4544#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	15,121	15,125	8	32	60	
	15,081	15,085	8	32	60	
	15,041	15,045	8	32	60	
	15,001	15,005	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/23/2016	Open	3rd Bone Spring	4,909bbls comprised of 2,371bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 189,100# Prolite 40/70. AR-71bpm MaxR-73bpm. AP-7660#. MaxP-8450#. ISIP-4529# Pumped Spectrum Tracer Services oil soluble tracer		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,971	14,975	8	32	60	
	14,931	14,935	8	32	60	
	14,891	14,895	8	32	60	
	14,851	14,855	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	5,663bbls comprised of 2,968bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,000# 40/70 White and 268,600# Prolite 40/70. AR-76bpm MaxR-78bpm. AP-7608#. MaxP-8305#. ISIP-4490#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,821	14,825	8	32	60	
	14,781	14,785	8	32	60	
	14,741	14,745	8	32	60	
	14,701	14,705	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	5,687bbls comprised of 2,967bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 18,000# 40/70 White and 272,8200# Prolite 40/70. AR-73bpm MaxR-81bpm. AP-7910#. MaxP-8520#. ISIP-4576#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,671	14,675	8	32	60	
	14,631	14,635	8	32	60	
	14,591	14,595	8	32	60	
	14,551	14,555	32	60		

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C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	5,662bbls comprised of 2,807bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 22,000# 40/70 White and 265,080# Prolite 40/70. AR-72bpm MaxR-82bpm. AP-7767#. MaxP-8622#. ISIP-4538#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,521	14,525	8	32	60	
	14,481	14,485	8	32	60	
	14,441	14,445	8	32	60	
	14,401	14,405	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	5,117bbls comprised of 2,402bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 167,920# Prolite 40/70. AR-72bpm MaxR-81bpm. AP-7859#. MaxP-8603#. ISIP-4541#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,371	14,375	8	32	60	
	14,331	14,335	8	32	60	
	14,291	14,295	8	32	60	
	14,251	14,255	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	3,936bbls comprised of 1,288bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 87,920# Prolite 40/70. AR-77bpm MaxR-82bpm. AP-7153#. MaxP-8511#. ISIP-4409#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	14,221	14,225	8	32	60	
	14,031	14,035	8	32	60	
	13,991	13,995	8	32	60	
	13,951	13,955	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	2,830bbls comprised of 1,965bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 39,260# Prolite 40/70 and 99,840# Prolite 20/40. AR-73bpm MaxR-81bpm. AP-7240#. MaxP-7829#. ISIP-4437#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,921	13,925	8	32	60	
	13,881	13,885	8	32	60	
	13,841	13,845	8	32	60	
	13,801	13,805	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/24/2016	Open	3rd Bone Spring	2,263bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 44,060# Prolite 40/70 and 150,78# Prolite 20/40. AR-71bpm MaxR-78bpm. AP-7274#. MaxP-7794#. ISIP-4300#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,771	13,775	8	32	60	
	13,731	13,735	8	32	60	
	13,691	13,695	8	32	60	
	13,651	13,655	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,792bbls comprised of 2,907bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 37,840# Prolite 40/70 and 196,640# Prolite 20/40. AR-74bpm MaxR-76bpm. AP-7099#. MaxP-7482#. ISIP-4638# Pumped Spectrum Tracer Services oil soluble tracer		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,621	13,625	8	32	60	
	13,581	13,585	8	32	60	
	13,541	13,545	8	32	60	
	13,501	13,505	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,853bbls comprised of 2,977bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 34,620# Prolite 40/70 and 193,500# Prolite 20/40. AR-73bpm MaxR-76bpm. AP-7176#. MaxP-8226#. ISIP-4718#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,471	13,475	8	32	60	
	13,431	13,431	8	32	60	
	13,391	13,395	8	32	60	
	13,351	13,355	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,850bbls comprised of 2,966bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 39,000# Prolite 40/70 and 199,400# Prolite 20/40. AR-74bpm MaxR-76bpm. AP-7246#. MaxP-8200#. ISIP-4769#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,321	13,325	8	32	60	
	13,281	13,285	8	32	60	
	13,241	13,245	8	32	60	
	13,201	13,205	8	32	60	
C	Date	Perf. Status	Formation	Comments		

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C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,892bbls comprised of 3,009bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 32,000# Prolite 40/70 and 183,200# Prolite 20/40. AR-72bpm MaxR-75bpm. AP-7177#. MaxP-8217#. ISIP-4581#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,171	13,175	8	32	60	
	13,131	13,135	8	32	60	
	13,091	13,095	8	32	60	
	13,051	13,055	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,787bbls comprised of 2,923bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 23,060# Prolite 40/70 and 190,080# Prolite 20/40. AR-73bpm MaxR-78bpm. AP-7237#. MaxP-8213#. ISIP-4672#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	13,021	13,025	8	32	0	
	12,981	12,985	8	32	60	
	12,941	12,945	8	32	60	
	12,901	12,905	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,796bbls comprised of 2,932bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 29,140# Prolite 40/70 and 194,620# Prolite 20/40. AR-75bpm MaxR-77bpm. AP-7219#. MaxP-7744#. ISIP-4643# Pumped Spectrum Tracer Services oil soluble tracer		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,871	12,875	8	32	60	
	12,831	12,835	8	32	60	
	12,791	12,795	8	32	60	
	12,751	12,755	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/25/2016	Open	3rd Bone Spring	3,818bbls comprised of 3,007bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 35,000# Prolite 40/70 and 189,400# Prolite 20/40. AR-74bpm MaxR-75bpm. AP-7172#. MaxP-7539#. ISIP-4700#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,721	12,725	8	32	60	
	12,681	12,685	8	32	60	
	12,641	12,645	8	32	60	
	12,601	12,605	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/26/2016	Open	3rd Bone Spring	3,401bbls comprised of 2623bbls 16# Justice, 17bbls Rhino NSF, and 32bbls 15% HCL. Pumped 35,000# Prolite 40/70 and 152,120# Prolite 20/40. AR-75bpm MaxR-76bpm. AP-6821#. MaxP-7301#. ISIP-120#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,571	12,575	8	32	60	
	12,531	12,535	8	32	60	
	12,491	12,495	8	32	60	
	12,451	12,455	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/26/2016	Open	3rd Bone Spring	3,787bbls comprised of 2958bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 36,020# Prolite 40/70 and 189,000# Prolite 20/40. AR-76bpm MaxR-78bpm. AP-6647#. MaxP-7270#. ISIP-4294#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,421	12,425	8	32	60	
	12,381	12,385	8	32	60	
	12,341	12,345	8	32	60	
	12,301	12,305	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/26/2016	Open	3rd Bone Spring	3,750bbls comprised of 2967bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 36,020# Prolite 40/70 and 191,000# Prolite 20/40. AR-75bpm MaxR-75bpm. AP-6734#. MaxP-7296#. ISIP-4200#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,271	12,275	8	32	60	
	12,231	12,235	8	32	60	
	12,191	12,195	8	32	60	
	12,151	12,155	8	32	60	
C	Date	Perf. Status	Formation	Comments		
	10/26/2016	Open	3rd Bone Spring	3,776bbls comprised of 3006bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 37,000# Prolite 40/70 and 189,220# Prolite 20/40. AR-73bpm MaxR-76bpm. AP-6722#. MaxP-8399#. ISIP-4383#		
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	12,121	12,125	8	32	60	
	12,081	12,085	8	32	60	
	12,041	12,045	8	32	0	
	12,001	12,005	8	32	60	
C	Date	Perf. Status	Formation	Comments		

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C	Date	Perf. Status	Formation		Comments	
	10/26/2016	Open	3rd Bone Spring		3,702bbls comprised of 2957bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 33,000# Prolite 40/70 and 187,440# Prolite 20/40. AR-70bpm MaxR-76bpm. AP-7062#. MaxP-8606#. ISIP-4402#	
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11,971	11,975	8	32	60	
	11,931	11,935	8	32	60	
	11,891	11,895	8	32	60	
	11,851	11,855	8	32	60	
C	Date	Perf. Status	Formation		Comments	
	10/26/2016	Open	3rd Bone Spring		6,705bbls comprised of 5959bbls 16# Justice, 17bbls Rhino NSF, and 119bbls 15% HCL. Pumped 20,060# Prolite 40/70 and 134,920# Prolite 20/40. AR-54bpm MaxR-71bpm. AP-7954#. MaxP-8614#. ISIP-7189#	
	Top (MD ft)	Bottom (MD ft)	SPF	Shots	Phasing (deg)	Interval Comments
	11,551	11,555	8	32	60	
	11,536	11,540	8	32	60	
	11,526	11,530	8	32	60	
	11,421	11,425	8	32	60	

Formation Top Summary

Formation Name	Top(TVD ft)	Comments
Delaware	5,719	
Cherry Canyon	5,890	
Brushy Canyon	6,821	
Lower Brushy Canyon	8,307	
Bone Spring/ Glorietta	8,645	
Avalon	8,737	
2nd Avalon	9,140	
1st Bone Spring	9,854	
2nd Bone Spring	10,539	
2nd Bone Spring Lime	11,039	
Harkey	11,164	
3rd Bone Spring	11,517	

Well History Summary

Date	Comments
8/10/2016	Wait on Bison Trucking. Set Mud Tanks, Mud Pumps, 3 Motor, Mixing House, Vfd House & Motor Package, Shakers, Gas Buster, Water Tank, & Trailer Houses. 20% On Locatoin 20% Set in estimated spud 8/12/16. Wati on daylight. DDC \$72,598 CDC \$156,224
8/11/2016	Wait on Bison Trucking. Set subs & center over hole, Install new bridle raising line, Put together & Set derrick on floor, Raise a-frame, Install monkey board, Set diesel tank, & Part houses, Set 2 more trailer houses, Rig up solids control equipment. 75% On Location 75% Set in estimated spud 8/12/16. Wait on daylight. DDC \$18,378 CDC \$174,602
8/12/2016	String up blocks, Set dog house, Dress derrick, Install mud lines in derrick, Change out cables to raise sub's. Spool up draw works, Inspect derrick and Raise derrick. Prepare to raise sub, set in TM-80, standpipe manifold. Raise sub. Install handrails, prepare floor. Install Top Drive, secure Top Drive Track. DES solids control and continue to rig up their equipment. Set in frac tanks for fresh water and brine water. Hook up all Pason equipment. Set grass hopper, set flowline stand and install mudline valves to sub. Install back walking feet. DDC \$74,678 CDC \$242,988
8/13/2016	Remove end off of shaker manifold and clean out cuttings and cement it was packed full 1" gap on top. Set Catwalk, Install v-door, Bop's, Stairs, Install Flowline, Plug Wires in on wire tray, Install skid beams, R/u floor, Finish rigging up back yard & mud pits, Install saver sub & TIW on top drive. Install walking feet. Fill mud pits with fresh water. Canrig doing performance test on Top Drive, TM80 and mud pumps. Remove end off of shaker manifold and clean out cuttings and cement. Dress out derrick board. Hook up cameras. Slip drill line back, Pressure test surface equipment with mud pumps @ report time. NOTIFIED NEW MEXICO OCD-Talked to Maxey Brown. 8-13-16 at 5:30 am DDC \$36,657 CDC \$279,645
8/14/2016	SPUD 6:00 PM 8-13-15. Nabors did not have right tong head to make up bit. Had to hot shot head f/m -80 busted a hose. Repair hose. Trouble shoot software that run's t/m-80 & top drive due to neither will make up a stand. Rig repair: Electrical short in Top Drive cable coming off of Dog House electrical plug board. Can-rig technician on the way to rig. Pumping on hole but cannot move Top Drive. P/U BHA #1, Drill F/140' T/1,197' DDC \$28,849 CDC \$308,494
8/15/2016	Rig repair: Electrical short in Top Drive cable coming off of Dog House electrical plug board. Can-rig technician on the way to rig. Pumping on hole but cannot move Top Drive. Drill F/ 1,196'-1,934'. TD 17 1/2" surface hole @ 6:30pm. Circulate 3x bottoms. Pump 70 high sweeps. Trip out of hole to run surface casing. Lay down surface BHA. Clean and prepare rig floor to run surface casing. Held PJSM with Nabors rig crew and Byrd casing crew. Run 13 3/8" Surface casing to 1,100'. DDC \$34,391 CDC \$343,425
8/16/2016	Run 13 3/8" Surface casing & set @ 1934'. Held safety meeting with Basic cementers & nabors rig crew & R/U cement head. Circulate BTMs up through cement head. Pump Surface cement / Lead: 1191 sks-yield-1.74 /13.5ppg, 4% CaCl2=1/4pps cello-flake=2/10% c-41p /Tail: 350 sks-1.34 yield /14.8ppg 2% CaCl2. Displaced with 292 bbls fresh water. Bumped plug @ 650psi & pressured up to 1130psi & held for 5 min's. Bleed psi back to truck and got 2.5 bbls back. Floats held. Got 152 bbls cement back to surface - 490 sks. R/D Basic cementers & wait on cement. Cut casing and conductor pipe and prepare for casing wellhead. Welded base plate to wellhead and installed. Weld casing wellhead in place. Nipple up BOP: Install DSA and spool, set in BOP, hook up HCR & check valve, kill line, rotating head nipple. Adjust cumulative costs to include conductor and pre-mob location costs. DDC \$133,683 CDC \$528,021

Date	Comments
8/17/2016	<p>Finish rigging up BOP, hook up HCR & check valve, kill line, rotating head nipple. Turn buckles, Center stack, R/U MidCentral, Test choke, Pumps, T/D, Blind & Pipe rams 5000/High 250/Low, Test Annular 3500/High & 250/Low, Test floor valves 5000/High & 250/Low, All test ok Test csg. 1000 psi for 30 min. test ok. P/U BHA #2, Motor, Bit, Scribe motor, P/U mwd, SAFETY MAN ON LOCATION. Fix Hydraulic line on top drive. Trip in hole with BHA #2 to 1864'. Drill out shoe track: Tag cement @ 1864', tag plug @ 1889', Displace fresh water from hole with 10# brine. Drig/Rot 12 1/4" hole F/1934' T/2123' (189' @ 76 fph) WOB/20-40 RPM/30-80 SPP/1600 GPM/700 Mtr-RPM/112 DIFF/750-900 TQ/10-11k Flow/100%. Rig Service 1/2 hr. Mud pumps pressuring up and blowing pop-off, trouble shoot problem and found that the Top Drive actuator's anti rotational device guard was hanging up on bracket and would not let the actuator valve open up. Got the guard loose and continued to drill. 1 1/2 hrs. (Nabors called for new actuator to be sent out). Drig/Rot 12 1/4" hole F/2123' T/2884' (761' @ 127 fph) WOB/20-40 RPM/80 SPP/1925 GPM/700 Mtr-RPM/112 DIFF/750-900 TQ/10-11k Flow/100%.</p> <p>DDC \$54,419 CDC \$573,724</p>
8/18/2016	<p>Drig/Rot 12 1/4" hole F/2884' T/2986' (116' @ fph) WOB/25-30 RPM/70-90 SPP/1700 GPM/480- Mtr-RPM/77 DIFF-350-600 TQ/10-11k Flow/100%. Drill/Slide F/2986 T/3001 (15' @ 30' fph) WOB/20-30 SPP/2100 GPM/700 Mtr-RPM/112 DIFF/350 Flow/100% TF/300M. Drig/Rot 12 1/4" hole F/3001' T/3548' (547' @ 107 fph) WOB/45-50 RPM/80-85 SPP/2150 GPM/700 Mtr-RPM/112 DIFF/900-1110 TQ/10-16k Flow/100%. Drig/Rot 12 1/4" hole F/3563' T/3701' (138' @ 92 fph) WOB/45-50 RPM/80-85 SPP/2150 GPM/700 Mtr-RPM/112 DIFF/900-1110 TQ/10-16k Flow/100%. SERVICE RIG. Hyrd i-bhop on todrive was leaking. Rack 1 std back in derrick. R/U Circ Swedge & Pump 350-gpm rpm's-20 and repair leak. Drig/Rot 12 1/4" hole F/3701' T/4029' (328' @ 218 fph) WOB/45-50 RPM/80-85 SPP/2150 GPM/700 Mtr-RPM/112 DIFF/900-1110 TQ/10-16k Flow/100%. Drig/Rot 12 1/4" hole F/4029' T/4304' (275' @ 183 fph) WOB/25-30 RPM/70-90 SPP/2900 GPM/480- Mtr-RPM/77 DIFF-350-600 TQ/10-11k Flow/90%. Drill/Slide F/4304' T/4319' (15' @ 30' fph) WOB/20-30 SPP/2100 GPM/700 Mtr-RPM/112 DIFF/350 Flow/80% TF/45M. Drig/Rot 12 1/4" hole F/4319' T/4683' (364' @ 104 fph) WOB/25-30 RPM/70-90 SPP/2900 GPM/480- Mtr-RPM/77 DIFF-350-600 TQ/10-11k Flow/70%. Drill/Slide F/4683' T/4698' (15' @ 30' fph) WOB/20-30 SPP/2100 GPM/650 Mtr-RPM/104 DIFF/350 Flow/50% TF/80M. Mixing LCM and pumped in, clogged up mud pump screens on suction, took pump apart and cleaned screens. Drig/Rot 12 1/4" hole F/4698' T/5000' (302' @ 87 fph) WOB/15-30 RPM/70-90 SPP/2900 GPM/480- Mtr-RPM/77 DIFF-350-600 TQ/10-11k Flow/0%. Stop drilling and trying to get surveys.</p> <p>DDC \$50,778 CDC \$624,502</p>
8/19/2016	<p>Trouble shoot mwd & Circ hole 400 GPM -30 RPM'S. TOH F/5,000' T/O with bha #2 to change out mwd tool. C/O MWD TOOL. TIH with bha #2 F/O T/800'. Test MWD Tool & Install Rot Head. TIH With bha #2 F/800 T/4750'. Fill pipe & take survey. Well on a vacuum MWD tool would not cut off. Wait on pipe to drain & Pump up survey. Good Survey. Continue TIH With bha #2 F/4750 T/5000'. Drig/Rot 12 1/4" hole F/5,000' T/5,156' (156' @ 78 fph) WOB/15-30 RPM/75 SPP/2900 GPM/440- Mtr-RPM/70 DIFF-350-600 TQ/10-11k Flow/0%. Fill pipe & take survey. Well on a vacuum MWD tool would not cut off. Wait on pipe to drain & Pump up survey. Good Survey. Drig/Rot 12 1/4" hole F/5156' T/5345' (189' @ 76 fph) WOB/15-30 RPM/75 SPP/2900 GPM/440- Mtr-RPM/70 DIFF-350-600 TQ/10-11k Flow/0%. Fill pipe & take survey. Well on a vacuum MWD tool would not cut off. Wait on pipe to drain & Pump up survey. Good Survey. Drig/Rot 12 1/4" hole F/5,534' T/5,670' TD 12 1/4" hole (136' @ 68 fph) WOB/15-30 RPM/75 SPP/2900 GPM/440 Mtr-RPM/70 DIFF-350-600 TQ/10-11k Flow/0%. Pumping vis sweeps while drilling. Fill pipe & take survey. Well on a vacuum MWD tool would not cut off. Wait on pipe to drain & Pump up survey. Good Survey. Trip out of hole and prep to run 9 5/8" intermediate casing from 5,670' to 260'. Lay down 8" drill collars and BHA.</p> <p>DDC \$42,479 CDC \$666,980</p>
8/20/2016	<p>Continue laying down 8" drill collars and BHA #2. Hold safety meeting with rig crew & Byrd's casing crew. R/U Byrd's casing crew. Run 9.625" inter. Casing F/Shoe T/5,670'. Install packer & DV tool @ setting Depth of 3,897'. Land 9.625 casing hanger in well head with 175k. Hold safety meeting with rig crew & Basic Cementer's crew. & R/U Cement head. Circulate 1 hole capacity of 9.625' Inter. Casing. Pump Intermediate cement 1st stage / Lead: 303 sks-yield-2.1 /12.6ppg, 6% gel+5%salt (BWOC)+ 6%STE+2/10c-41P+.25pps cello-flake. Tail: 365 sks-1.33 yield /14.8ppg 1% CaCl2. Displace with 427 bbls. Would not pressure up enough to bump plug. Tried 6 attempts to set plug trying different pump rates without success, over displace by 24 bbls. Shut down & decision made to pressure up to set packer. Pressured up to 2,920 psi to insure packer was set. Total of 28 bbls over displacement after setting packer. (No returns throughout the job). Decision was made to drop opening dart for DV Tool. Wait for dart to set in tool. Open DV Tool with 610 psi. Stop pump and pressure held at 240 psi. Shut in cement head and put mud pumps on line to pump down pipe. Got returns at 13 bbls and circulated btm up. Pump Intermediate cement 2nd stage / Lead: 812 sks-yield-2.1 /12.6ppg, 6% gel+5%salt (BWOC)+ 6%STE+2/c-41P+.25pps cello-flake. Tail: 150 sks-1.33 yield /14.8ppg 1% CaCl2. Displace with 312 bbls. (Over displaced by 12 bbls). Bump plug and pressured up to 2500 psi to seat closing plug. Held pressure for 3 min's, release pressure and got 1 bbl back. Good returns throughout the 2nd stage job, no cement to surface. Called for temperature survey. Wait for wireline logs.</p> <p>DDC \$254,645 CDC \$921,625</p>
8/21/2016	<p>Wait on cement & wireline truck. R/U & Run high temp bond log. TOC @ 1,024' down from surface. Called OCD to get the ok to drill out. Back out of landing joint & Install pack off. Test pack off T/5,000 psi & hold for 15 mins. Test good. P/U BHA #3 & Install EM Survey tool. TIH with BHA #3 F/Bit T/3,702'. Test casing: fill pipe and circulate. Test 9.625" casing to 1,500 psi for 30 minutes. Good test. Drill out DV tool: tag cement @ 3865', drill out DV Tool @ 3,894' with 10-15K wob, 25 rpm, 410 gpm. TIH with BHA #3 F/3,702' T/ 5,500'. Tag cement @ 5,500'. Drill hard cement from 5,500' to 5,552', 10-15K wob, 25 rpm, 475 gpm. Drill out shoe track, hard cement to 5,670'. Tag float collar @ 5,626'. Drig/Rot 8.75" hole F/5670' T/5991' (321' @ 91.7 fph) WOB/15-35 RPM/70 SPP/1570 GPM/470- Mtr-RPM/117 DIFF-450-600 TQ/10-11k Flow/ 100%. Drill/Slide F/5991' T/6003' (12' @ 30' fph) WOB/20-30 SPP/1535 GPM/470 Mtr-RPM/117 DIFF/419 Flow/100% TF/40.0M. Drig/Rot 8.75" hole F/5,991' T/6,130' (139' @ 139 fph) WOB/15-35 RPM/70 SPP/1570 GPM/470- Mtr-RPM/117 DIFF-450-600 TQ/10-11k Flow/ 100%.</p> <p>DDC \$31,992 CDC \$953,617</p>
8/22/2016	<p>Drig/Rot 8.75" hole F/6130' T/6181' (51' @ 102 fph) WOB/35 RPM/75 SPP/1570 GPM/470- Mtr-RPM/117 DIFF-450-600 TQ/14-16k Flow/ 100%. Drill/Slide F/6181' T/6196' (15' @ 30' fph) WOB/20-30 SPP/1535 GPM/470 Mtr-RPM/117 DIFF/419 Flow/100% TF/160M. Drig/Rot 8.75" hole F/6,196' T/7,318' (1122' @ 132 fph) WOB/35 RPM/75 SPP/1570 GPM/470- Mtr-RPM/117 DIFF-450-600 TQ/14-16k Flow/ 100%. Drill/Slide F/7318' T/7333' (15' @ 30' fph) WOB/20-30 SPP/1535 GPM/470 Mtr-RPM/117 DIFF/419 Flow/100% TF/130M. Drig/Rot 8.75" hole F/7,333' T/7,412' (53' @ 132 fph) WOB/35 RPM/75 SPP/1570 GPM/470- Mtr-RPM/117 DIFF-450-600 TQ/14-16k Flow/ 100%. Service rig. Drig/Rot 8.75" hole F/7412' T/8075' (663' @ 111 fph) WOB/35 RPM/75 SPP/2118 GPM/521- Mtr-RPM/130 DIFF-450-600 TQ/14-16k Flow/ 100%. Service Rig. Drig/Rot 8.75" hole F/8,075' T/8,738' (663' @ 121 fph) WOB/25-35 RPM/75 SPP/2280 GPM/521- Mtr-RPM/130 DIFF-450-600 TQ/14-16k Flow/ 100%.</p> <p>DDC \$34781 CDC \$988,396</p>
8/23/2016	<p>Drig/Rot 8.75" hole F/8,738' T/9,000' (262' @ 65' fph) WOB/25-35 RPM/75 SPP/2280 GPM/550- Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Rot 8.75" hole F/9000' T/9,304' (304' @ 86' fph) WOB/25-35 RPM/50 SPP/2280 GPM/550- Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drill/Slide F/9304' T/9324' (24' @ 48' fph) WOB/20-30 SPP/2280 GPM/550 Mtr-RPM/130 DIFF/419 Flow/100% TF/130M. Mud motor stalling out with 2-5K WOB, Circulate 2x bottoms up and pump 2 sweeps. Shakers are clean. Trip out of hole from 9,978' to BHA. L/D BHA #3.</p> <p>DDC \$29,900 CDC \$1,018,298</p>
8/24/2016	<p>Continue laying down BHA #3 & EM tool. P/U BHA #4 new bit & motor, scribe motor & Install MWD tool. TIH with BHA #4 F/Bit T/9,300'. Service rig. Wash & Ream F/9,300 T/9,978' Gpm's-550 Rpm's-50. Drig/Rot 8.75" hole F/9,978' T/10,202' (224' @ 56' fph) WOB/15-35 RPM/50 SPP/2520 GPM/550- Mtr-RPM/143 DIFF-350-500 TQ/14-16k Flow/ 100%. Rig Service. Drill/Slide F/10,202' T/10,222' (20' @ 40' fph) WOB/20-30 SPP/2350 GPM/550 Mtr-RPM/143 DIFF/419 Flow/100% TF/100M. Drig/Rot 8.75" hole F/10,222' T/10,581' (359' @ 90' fph) WOB/15-35 RPM/60 SPP/2720 GPM/550- Mtr-RPM/143 DIFF-350-500 TQ/14-16k Flow/ 100%. Drill/Slide F/10,581' T/10,596' (15' @ 30' fph) WOB/20-30 SPP/2450 GPM/550 Mtr-RPM/143 DIFF/419 Flow/100% TF/40M. Drig/Rot 8.75" hole F/10,596' T/10,770' (174' @ 70' fph) WOB/15-35 RPM/60 SPP/2720 GPM/550- Mtr-RPM/143 DIFF-350-500 TQ/14-16k Flow/ 100%. Drill/Slide F/10,770' T/10,800' (30' @ 30' fph) WOB/20-30 SPP/2450 GPM/550 Mtr-RPM/143 DIFF/419 Flow/100% TF/0.0M. Drig/Rot 8.75" hole F/10,800' T/10,980' (180' @ 72 fph) WOB/15-35 RPM/60 SPP/2710 GPM/550- Mtr-RPM/143 DIFF-350-500 TQ/14-16k Flow/ 100%.</p> <p>DDC \$77,769 CDC \$1,096,068</p>

Date	Comments
8/25/2016	Drig/Rot 8.75" hole F/10,980' T/11,317' (337' @ 84 fph) WOB/15-35 RPM/60 SPP/2710 GPM/550- Mtr-RPM/143 DIFF-350-500 TQ/14-16k Flow/100%. Pump high vis sweep & circ 2 btm's up. TOOH with BHA #4 due to ROP F/11,317' T/11,014'. Iron Roughneck -TM-80 broke down. Wait on mechanic and parts to arrive to location. Unable to release TM-80 from around drill pipe (4 hrs). Release TM-80 and pull back. TOOH using Tongs and pipe spinners from 11,014' to 3,003'. Rig service and test TM-80. TM-80 repaired, TOOH with TM-80 from 3003' to 1,394. Work on Top Drive. TOOH from 1394' to surface. Working BHA, pull MWD tool and L/D and check tool. P/U to motor. Motor drained ok, motor is good. Change out bit. Bit is cored out. P/U MWD tool. TIH to 5,378'. Slip and cut drill line. DDC \$52,072 CDC \$1,148,137
8/26/2016	Continue cutting drill line. Continue TIH with BHA #5 F/5,378' T/11,3 GPM/505- Mtr-RPM/131 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Rot 8.75" hole F/11,317' T/11,695' (378' @ 50.4 fph) WOB/25 RPM/60 SPP/2410 GPM/505- Mtr-RPM/131 DIFF-350-500 TQ/14-16k Flow/ 100%. Circulate 2x bottoms up pumping vis sweeps, shakers are clean. TOOH from 11,695' to 110'. Drain motor, break bit & L/D BHA #5. Pilot Hole TD: 11,695' DDC \$33,048 CDC \$1,181,137
8/27/2016	Tripping in hole to condition wellbore for whip stock from 651' to 4800'. Continue laying down BHA #5. R/U to run 2.7/8" tubing 6.5# RUN 500' of 2.7/8 tubing F/O T/500' 1st jnt orange peeled & 2nd 2 slot. P/U Schlumberger whip stock & VES UBHO sub & Scribe whip stock. TIH with whip stock @ 2 Min's per std F/500 T/10,602', tagged up at 10,602'. Fill pipe and tried to wash down easy to not damage tail pipe with no success. Decision made to TOOH with whip stock. Will PU tri-cone bit and TIH to condition wellbore. Lay out whip stock and 2 7/8" tubing. Pick up Security Tri-cone bit, bit sub, X-over sub, 21 jts 5" HWDP. Tripping in hole to condition wellbore for whip stock from 651' to 4800'. DDC \$32,203 CDC \$1,213,388
8/28/2016	Tripping in hole to condition wellbore for whip stock from 651' to 10,500'. Wash & ream F/10,500' T/11,200'. Circulate & Condition mud while bringing viscosity up to 38 & water loss down to 22. TOH with BHA #6 to pick up whip stock. Lay down bit, bit sub & x-over sub. Pick up 520' of 2.7/8 6.5# tubing with float sub, pick up Schlumberger whip stock and scribe to VES's UBHO sub. TIH with whip stock @ 2 Min's per std from 520' to 10,950' filling pipe every 30 stds. DDC \$42,715 CDC \$1,256,103
8/29/2016	R/U & Run VES gyro T/10,950'. Orient tool to 358 Gyro TF & POOH & R/D VES wireline. Drop 3/4 ball wait 30 mins. Set anchor with 2500 psi. Push test with 25k 3 times. Burst disc with 3800 psi. Drop 1.1/4 ball wait 30 mins. Shear away with 2600 psi. R/U basic cementer's & hold safety meeting. Pump 39 bbls of 17pgg cement Yield-1. Displaced with 188 bbls of 9.5 brine. Pull away from whip & Rack back 5 stds in derrick. F/10,950' T/10,450'. Circ BTM'S up with 500-GPM. TOOH to pick up Curve BHA f/ 10,450 to 5,545'. Slip and cut drill line. TOOH f/ 5,545' to surface. Lay down running tool and VES UBHO sub. Wait on weather: Severe lightening, strong wind and heavy rain. Pick up Curve BHA: Tri-cone bit, motor, UBHO sub, 2 NMDC's & X-over sub. TIH: p/u 12 stands 5" DP, 7 stands HWDP, 5" DP f/ 99' t/10,950'. DDC \$149,201 CDC \$1,405,304
8/30/2016	Building trough to kick off whip stock. Drill/Slide F/10,950' T/11,010' (60' @ 17' fph) WOB 30-45 SPP/2450 GPM/600 Mtr-RPM/150 DIFF/100-300 Flow/100% TF/high side. Service rig. Drill/Slide F/11,010' T/11,150' (140' @ 10 fph) WOB 30-45 SPP/2450 GPM/600 Mtr-RPM/150 DIFF/100-300 Flow/100% TF/high side. TOOH due to pressure spikes and no ROP. TOOH F/11,150' T/2,100'. DDC \$175,090 CDC \$1,497,894
8/31/2016	TOOH due to pressure spikes and no ROP. TOOH F/2100' T/bit. Drain motor break bit. Dial motor down F/2.38" T/2.12" M/U new bit Scribe motor. TIH with bha #7 F/O T/10,950'. Orient motor to wash through whip & curve F/10,950' T/11,150'. Drill/Slide F/11,150' T/11,344' (194' @ 35.3 fph) WOB 30-45 SPP/2150 GPM/500 Mtr-RPM/130 DIFF/100-300 Flow/100% TF/high side and service rig. Inspect draw works. Drill/Slide F/11,344' T/11,628' (284' @ 29.9 fph) WOB 30-45 SPP/2150 GPM/500 Mtr-RPM/130 DIFF/100-300 Flow/100 TF/high Rot total of 152'. DDC \$34,217 CDC \$1,532,111
9/1/2016	Drill/Slide F/11,628' T/11,818' (190' @ 42' fph) WOB 30-45 SPP/2100 GPM/500 Mtr-RPM/130 DIFF/100-300 Flow/100% TF/high. Slide F/11,633' T/11,678' - Slide F/11,691' T/11,723' - Slide F/11,733' T/11,771' - Slide F/11,793' T/11,818' - Slide F/11,843' T/11,866'. Rig service. Drill/Slide F/11,818' T/12,006' (188' @ 21' fph) WOB 30-45 SPP/2100 GPM/500 Mtr-RPM/130 DIFF/100-300 Flow/100% TF/high. Circulate and condition hole. Prepare to trip out of hole. TOOH F/12066 T/bit Due to build rates. L/D bit & motor. P/U new motor & bit. Motor bend 2.77 DDC \$36,170 CDC \$1,568,281
9/2/2016	TIH F/bit T/10,950 with BHA #9 curve assembly, dial motor up to 2.77". Fill pipe. Orient motor & wash through whip stock F/11,950' T/11,050'. TIH F/11,050' T/11,250' tight hole. Drill/Slide F/12,006' T/12,135' (129' @ 16.1' fph) WOB 30-45 SPP/2100 GPM/400-500 Mtr-RPM/116-145 DIFF/100-300 Flow/100% TF/high. Circulate and condition hole. Circulate 2x bottoms up, shakers are clean. TOOH to pick up lateral assembly f/12,135' to 1200'. DDC \$32,062 CDC \$1,568,343
9/3/2016	TOOH to pick up Lateral assembly f/1,200' to bit'. Break bit & motor L/D same. P/U new bit & motor, scribe motor & install mwd tool. TIH with Lateral assembly F/bit ' to 5000'. Cut drill line. TIH with Lateral assembly F/5000' T/11,337'. Wash through curve F/11,337' T/12,136'. Drig/Rot 8.75" lateral section F/12,135' T/12,296' (161' @ 64 fph) WOB/30 RPM/70 SPP/2880 GPM/580- Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Slide 8.75" lateral section F/12,296' T/12,316' (20' @ 40 fph) WOB/12 RPM/0 SPP/2650 GPM/580- Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Rot 8.75" lateral section F/12,316' T/12,485' (169' @ 84.5 fph) WOB/30 RPM/70 SPP/2880 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Slide 8.75" lateral section F/12,485' T/12,497' (12' @ 24 fph) WOB/21 RPM/0 SPP/2335 GPM/580 Mtr-RPM/130 DIFF-350 TQ/14-16k Flow/ 100%. Drig/Rot 8.75" lateral section F/12,497' T/12,769' (272' @ 77.7 fph) WOB/35 RPM/70 SPP/2780 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/14-16k Flow/ 100%. Drig/Slide 8.75" lateral section F/12,769' T/12,779' (10' @ 10 fph) WOB/26 RPM/0 SPP/2490 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/ 100%. Drig/Rot 8.75" lateral section F/12,779' T/13065' (71' @ fph) WOB/35 RPM/70 SPP/2750 GPM/580 Mtr-RPM/130 DIFF/350-500 TQ/14-16k Flow/ 100%. Drig/Slide 8.75" lateral section F/13065' T/13075' (20' @ 10 fph) WOB/26 RPM/0 SPP/2490 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/ 100%. DDC \$63,083 CDC \$1,663,426
9/4/2016	Drig/Rot 8.75" lateral section F/13,075' T/13,343' (268' @ 90 fph) WOB/35 RPM/70 SPP/2780 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/23-26k Flow/ 100%. Drig/Slide 8.75" lateral section F/13,343' T/13,353' (10' @ 20 fph) WOB/26 RPM/0 SPP/2780 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/ 100%. Drig/Rot 8.75" lateral section F/13,353' T/13,432' (79' @ 158 fph) WOB/35 RPM/70 SPP/2750 GPM/580 Mtr-RPM/130 DIFF/350-500 TQ/24-26k Flow/ 100%. Drig/Rot 8.75" lateral section T/15,230' (161' @ 107.3 fph) WOB/38 RPM/70 SPP/2910 GPM/580 Mtr-RPM/130 DIFF/350-600 TQ/23-26k Flow/ 100% DDC \$145,042 CDC \$1,808,467

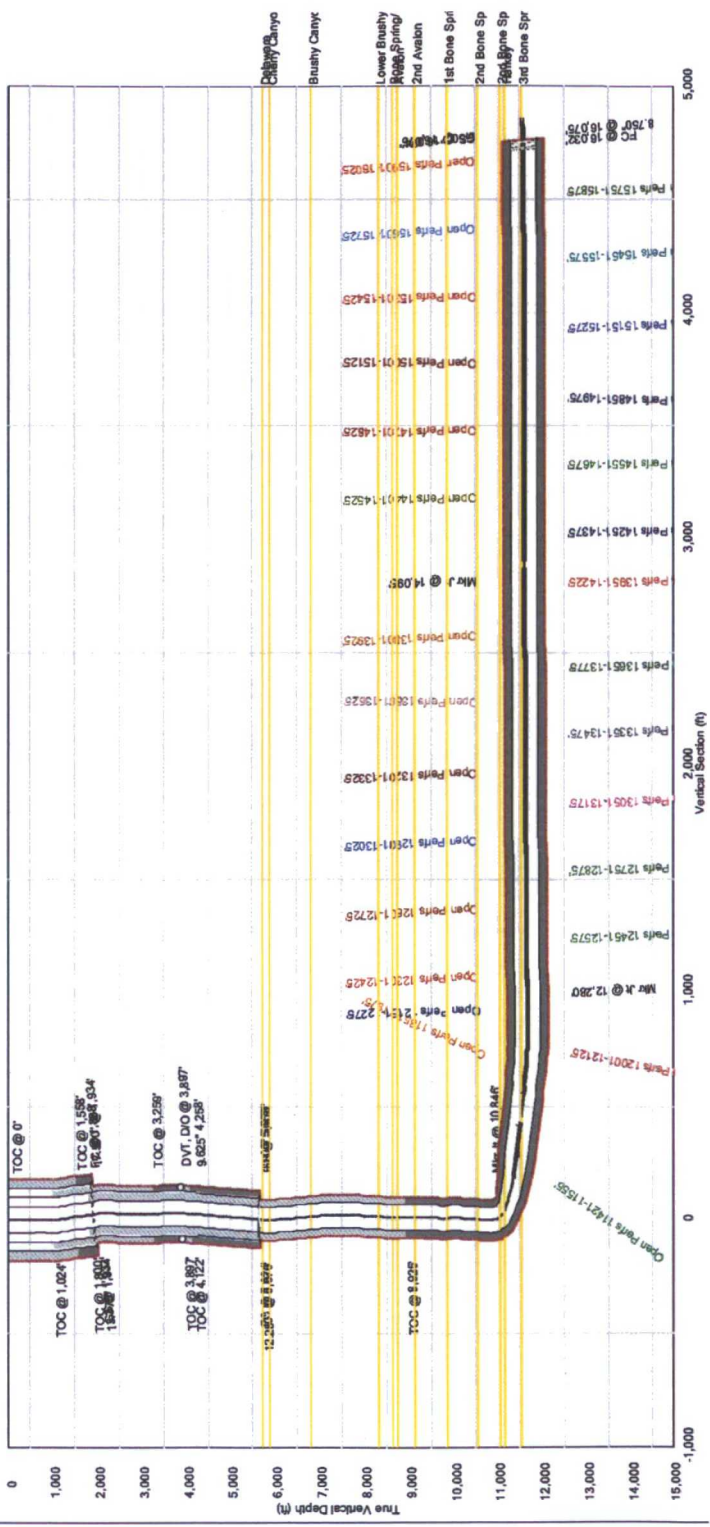
Date	Comments
9/5/2016	<p>Drig/Rot 8.75" lateral section F/15,230' T/15,336' (106' @ 106 fph) WOB/35 RPM/70 SPP/2780 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/23-26k Flow/ 100%. Drig/Slide 8.75" lateral section F/15,336' T/15,356' (30' @ 30 fph) WOB/26 RPM/0 SPP/2780 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/ 100%. Drig/Rot 8.75" lateral section F/15,356' T/15,623' (267' @ 89 fph) WOB/35 RPM/70 SPP/2750 GPM/580 Mtr-RPM/130 DIFF/350-500 TQ/24-26k Flow/ 100%. Drig/Slide 8.75" lateral section F/15,623' T/15,643' (20' @ 40 fph) WOB/26 RPM/0 SPP/2790 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/ 100%. Drig/Slide 8.75" lateral section F/15,720' T/15,750' (30' @ 20' fph) WOB/26 RPM/0 SPP/2790 GPM/580 Mtr-RPM/130 DIFF-350-500 TQ/9-16k Flow/100%. Drig/Rot 8.75" lateral section F/15,750' T/16,075' (325' @ 81.3 fph) WOB/30 RPM/70 SPP/3250 GPM/580 Mtr-RPM/130 DIFF/350-500 TQ/23-26k Flow/ 100%. C & C hole: Pump 4x Hi vis sweeps: pump 10 bbls wait 10 min & pump 10 bbls. Wait for sweep to clear bit and then pump the next tandem sweep. TOOH to run 5.5" production casing from 16,075' to 2,170'.</p> <p>DDC \$30,522 CDC \$1,838,989</p>
9/6/2016	<p>TOOH to run 5.5" production casing from 2,100' to bit. L/D BHA #9 lateral assembly. Clean floor & hold safety meeting with Nabor's, Byrd's casing crew, & TQ turn hand. R/U casing crew & TQ turn. Run 5.5" 20# production casing F/shoe T/16,075', filling pipe every 40 joints. At 16,075' P/U wt 280K, S/O wt 165K. Rig down casing equipment. Fill pipe and circulate. Wait on Halliburton cementers.</p> <p>DDC \$76,067 CDC \$1,915,056</p>
9/7/2016	<p>Fill pipe and circulate. NOTIFIED NEW MEXICO OCD Spoke with Maxie Brown at 6:00 AM. Wait on Halliburton cementers. Halliburton showed @ 9:00 am last load of cement to location was 12:30 pm with 12 hour delay. R/U cementer's and pump production cement as follows: Space/ 20 bbls #11, Lead= 415 bbl's-835 sks w/ yield 2.79 , Tail= 315 bbl's #14.5-820 sks-yield 2.2. Displacement w/355 bbls of 8.4 fresh water. Slowed pump's down @ 345 gone to 3 bpm psi 2300. Bumped plug @ 355 bbls gone & pressured up to 2900 psi & held for 5 min's, bleed psi back to truck 3.5 bbls floats held. Rig down cementing equipment. Nipple down BOP equipment, BOP wrangler would not lift BOP from stack. CanRig tech call to location repair BOP wrangler. Rig down time (7 hrs total): Rig up nipple down crew winches for assistance to lift up BOP. Lifted up BOP stack and prepare to set slips. Set slips with 125K on slips and cut off pipe. Rig down nipple down crews winches. Prepare rig to walk over to Igloo 19 State 4H. Held PJSM with crews on walking rig to next well. Trying to walk rig, Hydraulic walking feet will pick rig up but will not move rig forward</p> <p>DDC \$430,208 CDC \$2,345,264</p>
9/28/2016	<p>From 9/12/16 to current: Add on to existing battery. Installed 2 additional 500bbl steel tanks, 2-1440 3ph sep, 2-36x30 VRT, 1 circ pump. Set and filled 100 500bbl frac tanks, and 1-60,000bbl poseidon frac pit. Added a 250x250 pad to the Igloo 19-2 location to set equipment. Trenched and welded 2-3" coated flowlines and 1-2" SDR-11 poly buyback line. Rigged btry for install of VRU.</p> <p>CDC \$2,345,264 DCC \$284,173 CCC \$284,173 TWC \$2,629,437</p>
9/29/2016	<p>Prepping for completion. Met w/ Key to layout frac tank placement on location. Canary installed 10k frac valve, flow cross, and 6 port goathead. Routabouts installed fuel line for VRU at btry. Rolled 5gal per tank biocide.</p> <p>CDC \$2,345,264 DCC \$7,769 CCC \$291,942 TWC \$2,637,206</p>
9/30/2016	<p>Meet service companies on location to discuss frac set up. Add additional tanks on location to accommodate surfactant and flowback. Frac valve and goathead delivered to location. #3H- 6 port goathead w/ 4" 1002 connections with a flow cross with a 3" and 2" connection on a 10k frac valve all from Canary. Frac date moved to 15th.</p> <p>CDC \$2,345,264 DCC \$3,478 CCC \$295420 TWC \$2,640,684</p>
10/1/2016	<p>Sweatt blading off location and Hobbs anchor setting anchors for well. Banta ditching across location to install 3" buried flowline and hookup riser.</p> <p>CDC \$2,345,264 DCC \$7,303 CCC \$302,723 TWC \$2,647,987</p>
10/2/2016	<p>Contact service companies and inform them of move of frac date. Confirm w/ S&R compression on the delivery of the VRU to the battery tomorrow</p> <p>CDC \$2,345,264 DCC \$3,478 CCC \$306,201 TWC \$2,651,465</p>
10/3/2016	<p>Prepping for completion. Move in 25 working tanks, 2 acid tanks, 2 surfactant tanks, 3 tanks for coil, and 5 flowback tanks. 1 flowback tank has a gas buster. Banta making final welds for flowline on location. 84hp VRU from S&R compression delivered to btry. Offload with a crane and set inside containment. Banta hooking up VRU. Will be able to start unit in the morning.</p> <p>CDC \$2,345,624 DCC \$16,729 CCC \$322,930 TWC \$2,668,194</p>
10/4/2016	<p>GE Wireline RU to run cased hole logs. Ran 5 1/2" 20# gauge ring to 11,400'. POH. RU B&R kill truck. Log from 11,300' to surface pulling the following log suite: GR, CCL, Pulse Neutron, and CBL w/ 2500 psi pressure. Top of Cement @ 1,800'. RD GE off of wellhead. Install nightcap on goat head. Hauled in material to plumb braden head to surface and fill in cellar and mouse hole.</p> <p>CDC \$27,039 DCC \$27,039 CCC \$350,239 TWC \$2,695,237</p>
10/5/2016	<p>Titan energy service delivered 10" lay flat and transfer pumps to 19-2 location for preset up for frac job. Will not start rental until the 14th. Wait on frac.</p> <p>CDC \$2,345,264 DCC \$3,070 CCC \$353,309 TWC \$2,698,303</p>
10/6/2016	<p>Welders finished final stub of flowline on location. Banta plumbed in braden head and backfilled cellar and mouse hole. B&R pressured tested csg w/ chart to 7500psi held for 5min. Met w/ Liberty/SanGel rep to layout location for frac equipment. Wait on frac.</p> <p>CDC \$2,345,264 DCC \$4,088 CCC \$357,397 TWC \$2,702,391</p>

Date	Comments
10/7/2016	Wait on frac CDC \$2,345,264 DCC \$16,601 CCC \$373,998 TWC \$2,718,993
10/8/2016	Wait on frac CDC \$2,345,264 DCC \$3,070 CCC \$377,068 TWC \$2,722,063
10/9/2016	Wait on frac CDC \$2,345,264 DCC \$3,070 CCC \$380,138 TWC \$2,725,133
10/10/2016	Wait on frac. Purge and hydrotest flowline to 600psi. Chart showed no leak off. Backfill ROW ditch. Contacted Liberty lift to get gas lift design based on data sheet and surveys. CDC \$2,345,264 DCC \$3,070 CCC \$383,208 TWC \$2,728,203
10/11/2016	Wait on frac. Offload 2 transports of Rhino Nano surfactant into Acid frac tank. Keane Coil tbg unit arrived on location to start RU for clean out and TCP 1st stage. SDFD CDC \$2,345,264 DCC \$3,370 CCC \$386,578 TWC \$2,731,573
10/12/2016	Prepping for completion. MIRU Keane 2" CTU. PU 4 5/8" junk mill and Titan Supermax motor from ThruTbg solutions. TIH to PBTD. Did not encounter any fill or drag. Tag @ 16,033'. TOH. No and Thru Tbg circ sub. TIH Shoot Perfs for 1st stage as follows: 16,025' (10holes), 15,985' (10holes), 15,945' (8holes), 15,905' (holes). All perfs were 0.42" holes with 60deg phasing. Pressured up on guns to 4000psi before 1st gun fired. Pick up to 15,890'. Pump down 67bbls 15% acid from Liberty acid transport. With 53bbls pumped shut in flowline at 5100psi. Pumped acid into perfs @ 2bpm. With 15bbls on pressure broke back to 4700psi. Continue breaking while displacing acid. SD. TOH. No drag. Visually inspect guns had fired. RD off of wellhead. Put night cap back on top of tree. CDC \$2,345,264 DCC \$36,060 CCC \$422,638 TWC \$2,767,633
10/13/2016	Prepping for completion. Wait on frac. CDC \$2,345,264 DCC \$5,618 CCC \$428,256 TWC \$2,773,251
10/14/2016	Prepping for completion. MIRU Liberty frac speed. Respot coil. RU Haliburton flowback. RU Trident water transfer. Will frac the Igloo 19 #4H first. Held prefrac meeting on location with all pertinent vendors to discuss the upcoming jobs. CDC \$2,345,264 DCC \$34,412 CCC \$462,668 TWC \$2,805,663
10/15/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$3,370 CCC \$466,038 TWC \$2,809,033
10/16/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$4,066 CCC \$470,104 TWC \$2,813,099
10/17/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$3,477 CCC \$473,581 TWC \$2,816,576
10/18/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$6,463 CCC \$480,044 TWC \$2,823,039
10/19/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$3,477 CCC \$483,521 TWC 2,826,516
10/20/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$4,120 CCC \$487,641 TWC \$2,830,636

Date	Comments
10/21/2016	Wait on frac crew to finish frac on the Igloo #4H to start completion. CDC \$2,345,264 DCC \$3,477 CCC \$491,118 TWC \$2,834,113
10/22/2016	MIRU Liberty frac crew and Cased Hole Solutions wireline crew. Start frac on 1st set of perfs 16,025', 15,985', 15,945', 15,905'. 4 clusters 8 holes per cluster. 32 holes 0.42" hole. Frac 1st stage w/ 4,914bbls comprised of 2,471bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 26,000# 40/70 White and 182,120# Prolite 40/70. AR-61bpm MaxR-67bpm. AP-7531# MaxP-8409#. ISIP-4272#. Set plug @ 15,890' and shoot 2nd set of perfs @ 15,875', 15,835', 15,795', & 15,755'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 2nd stage w/ 6,683bbls comprised of 4,141bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 20,000# 40/70 White and 204,900# Prolite 40/70. AR-59bpm MaxR-63bpm. AP-7503#. MaxP-8416#. ISIP-4435#. CDC \$2,345,264 DCC \$260,277 CCC \$751,395 TWC \$3,119,393
10/23/2016	Set plug @ 15,740' and shoot 3rd set of perfs @ 15,725', 15,685', 15,645', 15,605'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 3rd stage w/ 5,200bbls comprised of 2,620bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,000# 40/70 White and 237,140# Prolite 40/70. AR-61bpm MaxR-69bpm. AP-7638#. MaxP-8454#. ISIP-4687#. Set plug @ 15,590' and shoot 4th set of perfs @ 15,575', 15,535', 15,495', 15,455'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 4th stage w/ 5,720bbls comprised of 2,974bbls 16# Justice, 24bbls Rhino NSF, and 71bbls 15% HCL. Pumped 20,000# 40/70 White and 266,240# Prolite 40/70. AR-59bpm MaxR-69bpm. AP-7396#. MaxP-8087#. ISIP-4794#. Pumped Spectrum Tracer Services oil soluble tracer in stage 4. Set plug @ 15,440' and shoot 5th set of perfs @ 15,425', 15,385', 15,345', 15,305'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 5th stage w/ 5,582bbls comprised of 2,861bbls 16# Justice, 24bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,020# 40/70 White and 272,700# Prolite 40/70. AR-64bpm MaxR-72bpm. AP-7575#. MaxP-8458#. ISIP-4691#. Set plug @ 15,290' and shoot 6th set of perfs @ 15,275', 15,235', 15,195', 15,155'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 6th stage w/ 5,800bbls comprised of 3,046bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 19,000# 40/70 White and 270,800# Prolite 40/70. AR-59bpm MaxR-62bpm. AP-7601#. MaxP-8661#. ISIP-4500#. Set plug @ 15,140' and shoot 7th set of perfs @ 15,125', 15,085', 15,045', 15,005'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 7th stage w/ 5,042bbls comprised of 2,500bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 19,000# 40/70 White and 219,700# Prolite 40/70. AR-70bpm MaxR-73bpm. AP-7814#. MaxP-8513#. ISIP-4544#. Set plug @ 14,990' and shoot 7th set of perfs @ 14,975', 14,935', 14,895', 14,855'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 8th stage w/ 4,909bbls comprised of 2,371bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 189,100# Prolite 40/70. AR-71bpm MaxR-73bpm. AP-7660#. MaxP-8450#. ISIP-4529#. Pumped Spectrum Tracer Services oil soluble tracer in stage 8. CDC \$2,345,264 DCC \$22,272 CCC \$773,667 TWC \$3,142,665
10/24/2016	Set plug @ 14,840' and shoot 9th set of perfs @ 14,825', 14,785', 14,745', 14,705'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 9th stage w/ 5,663bbls comprised of 2,968bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 21,000# 40/70 White and 268,600# Prolite 40/70. AR-76bpm MaxR-78bpm. AP-7608#. MaxP-8305#. ISIP-4490#. Set plug @ 14,690' and shoot 10th set of perfs @ 14,675', 14,635', 14,595', 14,555'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 10th stage w/ 5,687bbls comprised of 2,967bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 18,000# 40/70 White and 272,8200# Prolite 40/70. AR-73bpm MaxR-81bpm. AP-7910#. MaxP-8520#. ISIP-4576#. Set plug @ 14,540' and shoot 11th set of perfs @ 14,525', 14,485', 14,445', 14,405'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 11th stage w/ 5,662bbls comprised of 2,807bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 22,000# 40/70 White and 265,080# Prolite 40/70. AR-72bpm MaxR-82bpm. AP-7767#. MaxP-8622#. ISIP-4538#. Set plug @ 14,390' and shoot 12th set of perfs @ 14,375', 14,335', 14,295', 14,255'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 12th stage w/ 5,117bbls comprised of 2,402bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 167,920# Prolite 40/70. AR-72bpm MaxR-81bpm. AP-7859#. MaxP-8603#. ISIP-4541#. Pumped Spectrum Tracer Services oil soluble tracer in stage 12. Set plug @ 14,390' and shoot 12th set of perfs @ 14,375', 14,335', 14,295', 14,255'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 12th stage w/ 5,117bbls comprised of 2,402bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 167,920# Prolite 40/70. AR-72bpm MaxR-81bpm. AP-7859#. MaxP-8603#. ISIP-4541#. Set plug @ 14,240' and shoot 13th set of perfs @ 14,225', 14,035', 13,995', 13,955'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 13th stage w/ 3,936bbls comprised of 1,288bbls 16# Justice, 36bbls Rhino NSF, and 71bbls 15% HCL. Pumped 23,000# 40/70 White and 87,920# Prolite 40/70. AR-77bpm MaxR-82bpm. AP-7153#. MaxP-8511#. ISIP-4409#. Set plug @ 13,940' and shoot 14th set of perfs @ 13,925', 13,885', 13,845', 13,805'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 14th stage w/ 2,830bbls comprised of 1,965bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 39,260# Prolite 40/70 and 99,840# Prolite 40/70. AR-73bpm MaxR-81bpm. AP-7240#. MaxP-7829#. ISIP-4437#. Set plug @ 13,790' and shoot 15th set of perfs @ 13,775', 13,735', 13,695', 13,655'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 15th stage w/ 3,186bbls comprised of 2,263bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 44,060# Prolite 40/70 and 150,78# Prolite 20/40. AR-71bpm MaxR-78bpm. AP-7274#. MaxP-7794#. ISIP-4300# CDC \$2,345,264 DCC \$23,272 CCC \$796,939 TWC \$3,165,937
10/25/2016	Set plug @ 13,640' and shoot 16th set of perfs @ 13,625', 13,585', 13,545', 13,505'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 16th stage w/ 3,792bbls comprised of 2,907bbls 16# Justice, 19bbls Rhino NSF, and 71bbls 15% HCL. Pumped 37,840# Prolite 40/70 and 196,640# Prolite 20/40. AR-74bpm MaxR-76bpm. AP-7099#. MaxP-7482#. ISIP-4638# Pumped Spectrum Tracer Services oil soluble tracer in stage 16. Set plug @ 13,490' and shoot 17th set of perfs @ 13,475', 13,435', 13,395', 13,355'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 17th stage w/ 3,853bbls comprised of 2,977bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 34,620# Prolite 40/70 and 193,500# Prolite 20/40. AR-73bpm MaxR-76bpm. AP-7176#. MaxP-8226#. ISIP-4718# Set plug @ 13,490' and shoot 17th set of perfs @ 13,475', 13,435', 13,395', 13,355'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 17th stage w/ 3,853bbls comprised of 2,977bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 34,620# Prolite 40/70 and 193,500# Prolite 20/40. AR-73bpm MaxR-76bpm. AP-7176#. MaxP-8226#. ISIP-4718# Set plug @ 13,340' and shoot 18th set of perfs @ 13,325', 13,285', 13,245', 13,205'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 18th stage w/ 3,850bbls comprised of 2,966bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 39,000# Prolite 40/70 and 199,400# Prolite 20/40. AR-74bpm MaxR-76bpm. AP-7246#. MaxP-8200#. ISIP-4769# Set plug @ 13,190' and shoot 19th set of perfs @ 13,175', 13,135', 13,095', 13,055'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 19th stage w/ 3,892bbls comprised of 3,009bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 32,000# Prolite 40/70 and 183,200# Prolite 20/40. AR-72bpm MaxR-75bpm. AP-7177#. MaxP-8217#. ISIP-4581# Set plug @ 13,040' and shoot 20th set of perfs @ 13,025', 12,985', 12,945', 12,905'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 20th stage w/ 3,787bbls comprised of 2,923bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 23,060# Prolite 40/70 and 190,080# Prolite 20/40. AR-73bpm MaxR-78bpm. AP-7237#. MaxP-8213#. ISIP-4672# Set plug @ 12,890' and shoot 21st set of perfs @ 12,875', 12,835', 12,795', 12,755'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 21st stage w/ 3,796bbls comprised of 2,932bbls 16# Justice, 19bbls Rhino NSF, and 36bbls 15% HCL. Pumped 29,140# Prolite 40/70 and 194,620# Prolite 20/40. AR-75bpm MaxR-77bpm. AP-7219#. MaxP-7744#. ISIP-4643# Pumped Spectrum Tracer Services oil soluble tracer in stage 21. Set plug @ 12,740' and shoot 22nd set of perfs @ 12,725', 12,685', 12,645', 12,605'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 22nd stage w/ 3,818bbls comprised of 3,007bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 35,000# Prolite 40/70 and 189,40# Prolite 20/40. AR-74bpm MaxR-75bpm. AP-7172#. MaxP-7539#. ISIP-4700#. CDC \$2,345,264 DCC \$23,272 CCC \$820,211 TWC \$3,189,209

Date	Comments
10/26/2016	<p>Set plug @ 12,590' and shoot 23rd set of perms @ 12,575', 12,535', 12,495', 12,455'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 23rd stage w/ 3,401bbls comprised of 2623bbls 16# Justice, 17bbls Rhino NSF, and 32bbls 15% HCL. Pumped 35,000# Prolite 40/70 and 152,120# Prolite 20/40. AR-75bpm MaxR-76bpm. AP-6821#. MaxP-7301#. ISIP-120# Set plug @ 12,440' and shoot 24th set of perms @ 12,425', 12,385', 12,345', 12,305'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 24th stage w/ 3,787bbls comprised of 2958bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 36,060# Prolite 40/70 and 189,000# Prolite 20/40. AR-76bpm MaxR-78bpm. AP-6647#. MaxP-7270#. ISIP-4294# Set plug @ 12,290' and shoot 25th set of perms @ 12,275', 12,235', 12,195', 12,155'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 25th stage w/ 3,750bbls comprised of 2967bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 36,020# Prolite 40/70 and 191,000# Prolite 20/40. AR-75bpm MaxR-75bpm. AP-6734#. MaxP-7296#. ISIP-4200# Set plug @ 12,140' and shoot 26th set of perms @ 12,125', 12,085', 12,045', 12,005'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 26th stage w/ 3,776bbls comprised of 3006bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 37,000# Prolite 40/70 and 189,220# Prolite 20/40. AR-73bpm MaxR-76bpm. AP-6722#. MaxP-8399#. ISIP-4383# Set plug @ 11,990' and shoot 27th set of perms @ 11,975', 11,935', 11,895', 11,855'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 27th stage w/ 3,702bbls comprised of 2957bbls 16# Justice, 17bbls Rhino NSF, and 36bbls 15% HCL. Pumped 33,000# Prolite 40/70 and 187,440# Prolite 20/40. AR-70bpm MaxR-76bpm. AP-7062#. MaxP-8606#. ISIP-4402# Set plug @ 11,570' and shoot 28th set of perms @ 11,555', 11,540', 11,530', 11,425'. 4 clusters 8 holes per cluster. 32 holes total. 0.42" EH w/ 42" penetration. Frac 28th stage w/ 6,705bbls comprised of 5959bbls 16# Justice, 17bbls Rhino NSF, and 119bbls 15% HCL. Pumped 20,060# Prolite 40/70 and 134,920# Prolite 20/40. AR-54bpm MaxR-71bpm. AP-7954#. MaxP-8614#. ISIP-7189# RD frac crew and wireline. TLTR-121,083. Total Sand pumped into formation 276,040# 40/70 White - 3,428,280# 40/70 Ceramic - 2,631,340# 20/40 Ceramic. 69,977 gals. 15% HCL</p> <p>CDC \$2,345,264 DCC \$2,085,690 CCC \$2,905,901 TWC \$5,274,899</p>
10/27/2016	<p>Wait on WSU for drill out</p> <p>CDC \$2,345,264 DCC \$23,097 CCC \$2,928,998 TWC \$5,297,996</p>
10/28/2016	<p>Wait on WSU for drill out</p> <p>CDC \$2,345,264 DCC \$101,250 CCC \$3,030,248 TWC \$5,399,246</p>
10/29/2016	<p>Wait on WSU for drill out. WSU moved off of #4H at 8pm. Moved over reverse unit and pit. Set additional gas buster tank. Moved over 2 3/8" PH6. Trucked out 380jts 2 7/8" L-80. Ordered 5k hydraulic bop and hydril. RU WSU. ND frac stack. NU BOP and hydril. PU TTS motor and mill on 2 3/8" PH6 xo to 2 7/8". TIH</p> <p>CDC \$2,345,264 DCC \$23,788 CCC \$3,054,036 TWC \$5,423,024</p>
10/30/2016	<p>Tag kill plug. Drill kill plug and 8 boss hog frac plugs. Plugs milling up in 10min avg. Pumping sweep every 2 plugs and circ for 1 hr every 4 plugs. Continue cleaning out hole</p> <p>CDC \$2,345,264 DCC \$23,788 CCC \$3,077,824 TWC \$5,446,822</p>
10/31/2016	<p>Tag kill plug. Drill kill plug and 12 boss hog frac plugs. Plugs milling up in 30min avg. Pumping sweep every 2 plugs and circ for 1 hr every 4 plugs. Continue cleaning out hole</p> <p>CDC \$2,345,264 DCC \$26,033 CCC \$3,103,857 TWC \$5,472,855</p>
11/1/2016	<p>Drill plugs 23-27. Pump sweep every 2 plugs. TIH to PBD. Circulate 2 bottoms up. Start TOH. At 12,000' RU Red Zone frac pump and displaced down the backside w/ 250bbls at 8bpm @ 5400psi. RD Red Zone. Shut well in at manifold. Continue TOH. Got to curve and start rotating jts out.</p> <p>CDC \$2,345,264 DCC \$23,893 CCC \$3,127,750 TWC \$5,496,748</p>
11/2/2016	<p>TOH w/ drill string. RU Great White snubbing unit. Start snubbing last 100 jts of 2 3/8" PH6out of the hole. Had down time waiting on new set of elevators and changing out wore out rams on the bop.</p> <p>CDC \$2,345,264 DCC \$35,121 CCC \$3,162,871 TWC \$5,531,869</p>
11/3/2016	<p>Finish LD 2 3/8" tbg. RD snubbing unit. RU Renegade Wireline. RIH w/ Arrow set 5 1/2" pkw/ 2.31F profile nipple. Ran 2-4' perforated subs w/ Mule shoe w/ blade and magnum pump out disk on bottom. Set pkr @ 11,160'. RD wireline. RIH w/ 2 7/8" 8rd L-80 tbg. Run Liberty gas lift valves at the following intervals: 11,018', 10,949', 10,485', 9896', 9340', 8747', 8258', 7704', 7147', 6589', 6065', 5511', 4857', 3817', 2219'. Space out tubing with 1-8" pup jt. ND BOP. NU production tree. RD WSU. RU flowback on tree. RU reverse unit and pump out ceramic disk @ 4500psi. Establish injection rate through pkr. SD. RD reverse unit and turn well over to flow back.</p> <p>CDC \$2,345,264 DCC \$196,650 CCC \$3,359,521 TWC \$5,728,518</p>
11/4/2016	<p>Well is flowing back on 16/64 choke at 1450 psi. Flowing 0 BOPH total oil recovered 0 bbls Flowing 30 BWPH total water recovered 1718 bbls. Total left to recover 119,365 bbls. Total percent recovered 1.41%</p> <p>CDC \$2,345,264 DCC \$9,897 CCC \$3,369,418 TWC \$5,738,415</p>
11/5/2016	<p>Well is flowing back on 17/64 choke at 1325psi. Flowing 0 BOPH total oil recovered 0 bbls Flowing 30 BWPH total water recovered 2532 bbls. Total left to recover 118,551 bbls. Total percent recovered 2.09%</p> <p>CDC \$2,345,264 DCC \$7,008 CCC \$3,376,426 TWC \$5,745,423</p>

Field Name		Lease Name		Well No.		County		State		API No.		Version		Version Tag		Spud Date		Comp. Date		G.L. (ft)		K.B. (ft)	
East Marathon Road		Igloo 19 State		3H		Lea		New Mexico		30025423570000		1		Completed		8/15/2016		11/4/2016		3,693.0		3,720.0	
Sec.		Township/Block		Range/Survey		Dist. N/S (ft)		Dist. E/W (ft)		EW Line		Footage From		Latitude		Longitude		Well Status		PropNum		Operator	
19		20S		35E		200 FSL		1800 FEL						32.561930 N		103.493879 W		Completed		313780		Caza Oil and Gas, Inc	
Last Updated		Prepared By		Updated By		Additional Information																	
1/24/2017 9:31:14 AM		Steve Morris		Steve Morris																			



Field Name		Lease Name		Well No.	API No.		Version	Version Tag		
East Marathon Road		Igloo 19 State		3H	30025423570000		1	Completed		
Section	Township/Block		Range/Survey		County		State		GL (ft)	KB (ft)
19	20S		35E		Lea		New Mexico		3,693.0	3,720.0
Target N (-S) (ft)		Target E (-W) (ft)		Latitude		Longitude		Operator		Well Status
4756.061		-193.098		32.551930 N		103.493879 W		Caza Oil and Gas, Inc		Completed
Additional Information										

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
187.0	0.3	107.6	187.0	-0.2	-0.1	0.5	0.16
251.0	0.4	83.8	251.0	-0.2	-0.2	0.8	0.27
374.0	0.5	118.8	374.0	-0.5	-0.4	1.7	0.23
496.0	0.6	78.1	496.0	-0.6	-0.5	2.8	0.32
591.0	0.7	73.1	591.0	-0.4	-0.2	3.9	0.12
652.0	1.1	72.7	652.0	-0.2	0.0	4.8	0.66
744.0	1.2	85.9	744.0	0.1	0.4	6.6	0.31
836.0	0.6	85.2	835.9	0.2	0.5	8.0	0.65
928.0	0.3	130.7	927.9	0.0	0.4	8.7	0.48
1,021.0	0.6	97.2	1,020.9	-0.2	0.1	9.4	0.42
1,112.0	0.7	38.4	1,111.9	0.1	0.5	10.2	0.71
1,204.0	1.8	26.1	1,203.9	1.8	2.3	11.2	1.22
1,299.0	2.5	29.2	1,298.8	4.9	5.4	12.8	0.75
1,394.0	3.1	24.6	1,393.7	8.9	9.6	14.9	0.67
1,488.0	2.5	29.7	1,487.6	12.9	13.6	17.0	0.69
1,583.0	1.5	43.2	1,582.6	15.6	16.4	18.9	1.16
1,678.0	1.3	58.2	1,677.5	17.0	17.8	20.6	0.44
1,772.0	1.9	67.2	1,771.5	18.0	19.0	23.0	0.69
1,867.0	3.5	56.9	1,866.4	20.1	21.2	26.9	1.75
1,970.0	5.5	52.3	1,969.1	24.5	25.9	33.4	1.97
2,063.0	3.1	57.2	2,061.8	28.4	30.0	39.0	2.61
2,158.0	1.8	100.2	2,156.7	29.4	31.1	42.7	2.28
2,252.0	1.9	97.8	2,250.7	28.8	30.7	45.7	0.13
2,347.0	1.1	118.6	2,345.6	28.0	30.0	48.0	1.01
2,442.0	1.2	122.8	2,440.6	27.0	29.0	49.7	0.14
2,537.0	0.6	147.6	2,535.6	26.0	28.1	50.8	0.74
2,633.0	0.4	148.4	2,631.6	25.3	27.4	51.2	0.21
2,727.0	0.7	136.4	2,725.6	24.6	26.7	51.8	0.34
2,822.0	0.8	133.5	2,820.6	23.6	25.8	52.7	0.11
2,917.0	0.4	228.6	2,915.6	23.0	25.1	52.9	0.97
3,012.0	1.5	280.2	3,010.6	23.0	25.1	51.4	1.36
3,107.0	1.5	285.5	3,105.5	23.7	25.7	49.0	0.15
3,201.0	1.5	294.1	3,199.5	24.6	26.5	46.7	0.24
3,296.0	1.5	294.7	3,294.5	25.7	27.5	44.4	0.02
3,390.0	1.3	296.8	3,388.4	26.8	28.5	42.4	0.22
3,485.0	1.3	304.1	3,483.4	28.0	29.6	40.5	0.17
3,579.0	1.4	284.2	3,577.4	28.9	30.5	38.5	0.51
3,673.0	2.1	280.1	3,671.3	29.6	31.1	35.7	0.76
3,768.0	1.8	259.3	3,766.3	29.8	31.1	32.5	0.80
3,862.0	2.0	255.4	3,860.2	29.2	30.4	29.5	0.25
3,957.0	1.8	249.6	3,955.2	28.4	29.5	26.5	0.29
4,052.0	2.0	243.1	4,050.1	27.2	28.2	23.6	0.31
4,146.0	2.1	238.9	4,144.1	25.7	26.6	20.7	0.19
4,241.0	2.6	241.5	4,239.0	23.9	24.7	17.3	0.54
4,336.0	1.7	242.1	4,333.9	22.4	23.0	14.1	0.95
4,430.0	1.6	236.6	4,427.9	21.1	21.6	11.8	0.20
4,525.0	1.7	232.3	4,522.9	19.6	20.0	9.6	0.17
4,620.0	1.7	230.4	4,617.8	17.9	18.2	7.4	0.06
4,715.0	0.9	206.9	4,712.8	16.4	16.7	6.0	1.00
4,903.0	1.1	209.7	4,900.8	13.6	13.8	4.4	0.11
5,093.0	1.2	200.0	5,090.7	10.2	10.3	2.8	0.11
5,282.0	1.1	199.9	5,279.7	6.7	6.8	1.5	0.05
5,471.0	1.1	222.5	5,468.6	3.7	3.7	-0.3	0.23
5,620.0	0.7	226.4	5,617.6	2.1	2.0	-1.9	0.27
5,732.0	0.9	233.2	5,729.6	1.2	1.0	-3.1	0.20

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
5,827.0	1.0	247.1	5,824.6	0.5	0.3	-4.5	0.26
5,922.0	0.9	259.8	5,919.6	0.1	-0.2	-6.0	0.24
6,017.0	0.8	321.3	6,014.6	0.5	0.2	-7.1	0.92
6,112.0	1.1	334.1	6,109.6	1.9	1.5	-8.0	0.38
6,207.0	0.8	15.6	6,204.6	3.3	3.0	-8.2	0.77
6,302.0	1.1	23.5	6,299.5	4.8	4.5	-7.6	0.34
6,397.0	1.1	22.0	6,394.5	6.4	6.2	-6.9	0.03
6,491.0	1.0	26.6	6,488.5	8.0	7.7	-6.2	0.14
6,586.0	1.0	21.1	6,583.5	9.5	9.2	-5.6	0.10
6,681.0	0.9	4.0	6,678.5	11.0	10.8	-5.2	0.32
6,775.0	0.9	3.7	6,772.5	12.4	12.2	-5.1	0.01
6,870.0	1.0	347.6	6,867.5	14.0	13.8	-5.2	0.30
6,964.0	1.0	0.5	6,961.4	15.6	15.4	-5.4	0.24
7,060.0	0.9	334.1	7,057.4	17.2	16.9	-5.7	0.46
7,154.0	0.8	333.3	7,151.4	18.4	18.2	-6.3	0.11
7,249.0	0.8	319.6	7,246.4	19.6	19.3	-7.1	0.20
7,343.0	0.8	98.7	7,340.4	19.9	19.7	-6.9	1.59
7,438.0	1.0	110.9	7,435.4	19.5	19.3	-5.4	0.29
7,531.0	0.8	115.1	7,528.4	18.9	18.7	-4.1	0.23
7,626.0	0.7	96.9	7,623.4	18.5	18.4	-2.9	0.27
7,721.0	0.7	115.2	7,718.4	18.1	18.1	-1.8	0.23
7,816.0	0.4	137.2	7,813.4	17.6	17.6	-1.0	0.38
7,911.0	0.4	170.6	7,908.4	17.0	17.0	-0.8	0.24
8,006.0	0.8	163.8	8,003.4	16.0	16.0	-0.5	0.43
8,101.0	0.4	168.6	8,098.4	15.1	15.1	-0.3	0.42
8,196.0	0.5	173.7	8,193.4	14.3	14.3	-0.2	0.11
8,290.0	0.5	168.4	8,287.3	13.5	13.5	0.0	0.05
8,385.0	0.7	177.0	8,382.3	12.5	12.5	0.1	0.23
8,480.0	0.3	180.1	8,477.3	11.7	11.7	0.1	0.42
8,574.0	0.9	210.5	8,571.3	10.8	10.8	-0.3	0.70
8,669.0	0.6	220.6	8,666.3	9.8	9.8	-1.0	0.34
8,788.0	0.9	245.4	8,785.3	9.0	8.9	-2.2	0.37
8,883.0	0.9	267.1	8,880.3	8.7	8.6	-3.7	0.36
8,976.0	1.1	273.9	8,973.3	8.8	8.6	-5.3	0.25
9,071.0	1.0	259.6	9,068.3	8.8	8.5	-7.0	0.29
9,166.0	1.2	265.2	9,163.3	8.6	8.3	-8.8	0.24
9,259.0	1.5	267.5	9,256.2	8.6	8.2	-11.0	0.33
9,354.0	0.5	150.2	9,351.2	8.2	7.7	-12.0	1.88
9,449.0	0.4	220.1	9,446.2	7.6	7.1	-12.0	0.55
9,543.0	0.4	228.8	9,540.2	7.2	6.7	-12.5	0.06
9,637.0	0.7	250.6	9,634.2	6.8	6.3	-13.3	0.38
9,732.0	0.6	231.5	9,729.2	6.3	5.8	-14.2	0.25
9,827.0	1.0	282.2	9,824.2	6.2	5.6	-15.4	0.82
9,952.0	0.9	281.1	9,949.2	6.7	6.0	-17.4	0.08
10,047.0	1.2	273.7	10,044.2	7.0	6.2	-19.2	0.35
10,142.0	1.1	251.4	10,139.1	6.9	6.0	-21.0	0.48
10,237.0	0.4	234.4	10,234.1	6.4	5.5	-22.2	0.77
10,331.0	0.6	179.5	10,328.1	5.8	4.9	-22.4	0.53
10,426.0	1.1	190.8	10,423.1	4.4	3.5	-22.6	0.55
10,521.0	1.1	208.6	10,518.1	2.7	1.8	-23.2	0.36
10,616.0	1.0	177.8	10,613.1	1.1	0.1	-23.6	0.60
10,710.0	1.1	195.0	10,707.1	-0.6	-1.6	-23.8	0.35
10,805.0	0.4	195.7	10,802.1	-1.8	-2.8	-24.1	0.74
10,900.0	0.7	222.1	10,897.1	-2.5	-3.5	-24.6	0.41
11,009.0	9.8	343.6	11,005.6	6.0	4.9	-27.7	9.34
11,057.0	8.9	7.6	11,052.9	13.7	12.5	-28.3	8.27
11,099.0	14.2	14.8	11,094.1	21.8	20.7	-26.6	13.05
11,150.0	22.4	11.7	11,142.4	37.2	36.3	-23.0	16.19
11,198.0	27.4	8.6	11,186.0	57.0	56.2	-19.5	10.76
11,246.0	31.5	6.5	11,227.8	80.2	79.6	-16.4	8.81
11,293.0	35.3	4.3	11,267.0	105.8	105.4	-14.0	8.48
11,341.0	41.5	1.7	11,304.6	135.5	135.1	-12.5	13.35
11,388.0	44.6	359.9	11,338.9	167.5	167.2	-12.1	7.09
11,436.0	49.1	358.1	11,371.8	202.5	202.2	-12.7	9.77
11,483.0	54.2	356.4	11,400.9	239.4	239.0	-14.5	11.22
11,531.0	58.8	355.4	11,427.4	279.4	278.9	-17.4	9.74

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	Coordinate N (-S) (ft)	Coordinate E (-W) (ft)	DLS (deg/100 ft)
11,577.0	59.3	355.3	11,451.1	318.8	318.2	-20.6	1.10
11,625.0	58.7	354.3	11,475.8	359.9	359.2	-24.3	2.18
11,672.0	59.0	353.8	11,500.1	400.0	399.2	-28.5	1.11
11,720.0	60.0	353.9	11,524.5	441.3	440.3	-32.9	2.09
11,767.0	60.7	354.2	11,547.7	482.1	480.9	-37.1	1.59
11,815.0	62.4	355.0	11,570.6	524.2	523.0	-41.1	3.83
11,862.0	63.4	357.1	11,592.0	566.0	564.7	-44.0	4.51
11,910.0	65.0	357.1	11,612.9	609.2	607.9	-46.2	3.33
11,957.0	65.5	357.8	11,632.6	651.9	650.5	-48.1	1.72
11,989.0	68.0	357.9	11,645.2	681.3	679.9	-49.2	7.82
12,004.0	69.8	357.5	11,650.6	695.3	693.9	-49.7	12.26
12,019.0	72.1	357.2	11,655.5	709.5	708.0	-50.4	15.45
12,035.0	74.7	356.6	11,660.0	724.8	723.3	-51.2	16.64
12,050.0	76.7	355.8	11,663.8	739.3	737.8	-52.2	14.30
12,066.0	79.1	355.6	11,667.1	755.0	753.4	-53.4	15.05
12,083.0	82.1	356.4	11,669.9	771.7	770.2	-54.5	18.25
12,141.0	90.5	356.4	11,673.6	829.5	827.9	-58.2	14.48
12,236.0	92.0	356.6	11,671.5	924.5	922.7	-64.0	1.59
12,330.0	92.5	359.3	11,667.9	1,018.4	1,016.5	-67.3	2.92
12,425.0	93.3	359.2	11,663.1	1,113.3	1,111.4	-68.6	0.85
12,520.0	92.0	357.8	11,658.7	1,208.1	1,206.3	-71.0	2.01
12,614.0	92.8	357.9	11,654.7	1,302.1	1,300.1	-74.6	0.86
12,709.0	93.4	357.7	11,649.6	1,396.9	1,394.9	-78.2	0.67
12,804.0	91.7	357.5	11,645.4	1,491.8	1,489.7	-82.2	1.80
12,898.0	92.1	357.2	11,642.2	1,585.8	1,583.6	-86.5	0.53
12,993.0	93.0	357.0	11,638.0	1,680.7	1,678.4	-91.3	0.97
13,088.0	91.9	357.9	11,634.0	1,775.6	1,773.2	-95.5	1.50
13,183.0	92.1	357.7	11,630.6	1,870.5	1,868.0	-99.2	0.30
13,277.0	92.6	357.5	11,626.8	1,964.4	1,961.9	-103.1	0.57
13,372.0	92.4	358.0	11,622.6	2,059.4	2,056.7	-106.9	0.57
13,467.0	92.0	359.3	11,619.0	2,154.3	2,151.6	-109.1	1.43
13,561.0	89.8	359.7	11,617.5	2,248.2	2,245.6	-109.9	2.38
13,656.0	90.4	358.9	11,617.4	2,343.2	2,340.6	-111.1	1.05
13,751.0	91.5	358.8	11,615.8	2,438.1	2,435.6	-113.0	1.16
13,846.0	92.3	358.5	11,612.6	2,533.1	2,530.5	-115.2	0.90
13,941.0	91.6	357.8	11,609.4	2,628.0	2,625.4	-118.3	1.04
14,035.0	92.2	357.1	11,606.3	2,721.9	2,719.2	-122.5	0.98
14,130.0	89.5	355.9	11,604.9	2,816.9	2,814.0	-128.3	3.11
14,225.0	89.4	355.7	11,605.8	2,911.9	2,908.8	-135.2	0.24
14,320.0	90.4	355.8	11,605.9	3,006.8	3,003.5	-142.3	1.06
14,414.0	90.4	355.8	11,605.3	3,100.7	3,097.2	-149.1	0.00
14,509.0	91.3	356.1	11,603.9	3,195.7	3,192.0	-155.8	1.00
14,604.0	89.7	357.3	11,603.1	3,290.7	3,286.8	-161.3	2.11
14,698.0	89.9	357.8	11,603.4	3,384.7	3,380.7	-165.3	0.57
14,793.0	90.8	358.8	11,602.8	3,479.7	3,475.7	-168.2	1.42
14,887.0	88.6	357.4	11,603.3	3,573.6	3,569.6	-171.3	2.77
14,982.0	88.0	357.1	11,606.1	3,668.6	3,664.5	-175.8	0.71
15,077.0	90.1	357.7	11,607.7	3,763.6	3,759.4	-180.1	2.30
15,172.0	91.1	357.9	11,606.7	3,858.6	3,854.3	-183.8	1.07
15,266.0	92.1	358.0	11,604.1	3,952.5	3,948.2	-187.1	1.07
15,361.0	91.1	358.4	11,601.4	4,047.5	4,043.1	-190.1	1.13
15,456.0	92.3	358.4	11,598.6	4,142.4	4,138.0	-192.8	1.26
15,551.0	93.5	358.7	11,593.8	4,237.3	4,232.9	-195.2	1.30
15,645.0	93.4	0.1	11,588.1	4,331.1	4,326.7	-196.2	1.49
15,739.0	92.1	0.3	11,583.6	4,424.9	4,420.6	-195.8	1.40
15,834.0	91.5	0.7	11,580.6	4,519.7	4,515.5	-195.0	0.76
15,928.0	93.2	0.5	11,576.8	4,613.5	4,609.4	-194.0	1.82
16,015.0	94.5	0.3	11,570.9	4,700.2	4,696.2	-193.4	1.51
16,075.0	94.5	0.3	11,566.2	4,760.0	4,756.1	-193.1	0.00