

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMLC028784C
2. Name of Operator COG OPERATING LLC Contact: KELLY J HOLLY E-Mail: kholly@concho.com		6. If Indian, Allottee or Tribe Name
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVE MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-685-4384	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 13 T17S R29E Mer NMP NWNW 240FNL 490FWL		8. Well Name and No. BURCH KEELY UNIT 930H
		9. API Well No. 30-015-40969
		10. Field and Pool, or Exploratory BURCH KEELY; GLORIETA-UPPE
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original A PD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

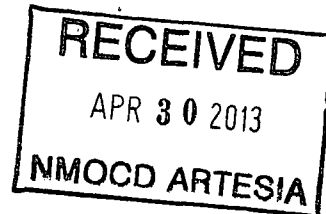
COG Operating LLC respectfully requests permission to change the TVD, MD and Landing Point for this well.

FROM:
TVD 4781'
MD 9105'
Landing Point 4850'

TO:
TVD 4881'
MD 9181'
Landing Point 4950'

Accepted for record
4/30/2013
NMOC

Original COAs still stand



14. I hereby certify that the foregoing is true and correct.

Electronic Submission #204955 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Carlsbad
Committed to AFMSS for processing by JOHNNY DICKERSON on 04/24/2013 ()

Name (Printed/Typed) KELLY J HOLLY

Title PERMITTING TECH

Signature (Electronic Submission)

Date 04/22/2013

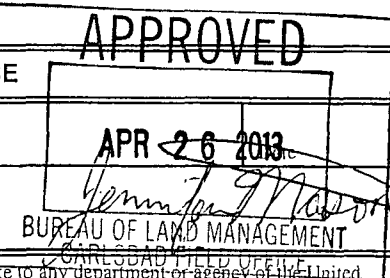
THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office



Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Additional data for EC transaction #204955 that would not fit on the form

32. Additional remarks, continued

Attached is the revised Directional Plan and Anticollision Report.

COG Operating LLC

Eddy County, New Mexico

Burch Keely Unit

Burch Keely Unit 930H

Wellbore #1

Plan #2

Sperry Drilling Services

Ellipse Separation

Anticollision Report

19 April, 2013

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Reference Design: Burch Keely Unit - Burch Keely Unit 930H - Wellbore #1 - Plan #2

Well Coordinates: 669,803.50 N, 591,706.40 E (32° 50' 27.67" N, 104° 02' 05.08" W)

Datum Height: GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3)

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Version: 2003.16 Build: 431

HALLIBURTON

Anticollision Report for Burch Keely Unit 930H - Plan #2

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Burch Keely Unit - Burch Keely Unit #509 - Wellbore #1 - Surveys

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
100.00	100.00	0.00	0.00	0.09	87.93	87.93	-31.31	1,054.87	0.12	1,055.33	1,055.12	91.70	5,049.782
173.26	173.26	0.00	0.00	0.26	160.26	160.26	-30.98	1,054.84	0.29	1,055.29	1,054.74	91.68	1,927.739
200.00	200.00	0.00	0.00	0.32	186.54	186.54	-30.87	1,054.84	0.36	1,055.30	1,054.62	91.68	1,560.263
300.00	300.00	0.00	0.00	0.54	284.65	284.65	-30.55	1,054.98	0.61	1,055.43	1,054.28	91.66	920.354
400.00	400.00	0.00	0.00	0.77	383.40	383.39	-30.60	1,055.27	0.76	1,055.71	1,054.19	91.66	692.106
500.00	500.00	0.00	0.00	0.99	484.92	484.92	-31.34	1,055.54	0.85	1,056.01	1,054.16	91.70	572.815
600.00	600.00	0.00	0.00	1.22	582.33	582.33	-32.08	1,055.80	0.99	1,056.29	1,054.09	91.74	478.563
700.00	700.00	0.00	0.00	1.44	678.22	678.21	-32.47	1,056.39	1.19	1,056.92	1,054.29	91.76	401.923
800.00	800.00	0.00	0.00	1.67	771.00	770.98	-32.30	1,057.45	1.41	1,058.06	1,054.99	91.75	344.248
900.00	900.00	0.00	0.00	1.89	862.88	862.84	-31.56	1,059.22	1.63	1,059.96	1,056.44	91.71	300.898
1,000.00	1,000.00	0.00	0.00	2.12	959.85	959.77	-30.35	1,061.70	1.87	1,062.49	1,058.51	91.64	266.990
1,100.00	1,100.00	0.00	0.00	2.34	1,064.24	1,064.13	-29.22	1,064.20	2.00	1,064.84	1,060.50	91.57	245.361
1,200.00	1,200.00	0.00	0.00	2.56	1,168.92	1,168.78	-29.41	1,066.11	2.03	1,066.67	1,062.07	91.58	232.151
1,300.00	1,300.00	0.00	0.00	2.79	1,256.00	1,255.82	-31.39	1,067.86	2.07	1,068.77	1,063.91	91.68	219.896
1,400.00	1,400.00	0.00	0.00	3.01	1,345.04	1,344.77	-34.30	1,070.80	2.13	1,072.18	1,067.03	91.83	208.378
1,500.00	1,500.00	0.00	0.00	3.24	1,441.05	1,440.64	-37.55	1,074.73	2.21	1,076.39	1,070.94	92.00	197.588
1,600.00	1,600.00	0.00	0.00	3.46	1,541.63	1,541.09	-40.50	1,078.84	2.32	1,080.57	1,074.81	92.15	187.337
1,700.00	1,700.00	0.00	0.00	3.69	1,637.00	1,636.33	-43.27	1,083.02	2.43	1,085.07	1,078.96	92.29	177.843
1,800.00	1,800.00	0.00	0.00	3.91	1,738.57	1,737.72	-47.05	1,087.65	2.58	1,089.78	1,083.32	92.48	168.764
1,900.00	1,900.00	0.00	0.00	4.14	1,845.20	1,844.20	-50.92	1,091.91	2.73	1,093.93	1,087.10	92.67	160.254
2,000.00	2,000.00	0.00	0.00	4.36	1,948.92	1,947.80	-54.22	1,095.63	2.89	1,097.67	1,090.48	92.83	152.466
2,100.00	2,100.00	0.00	0.00	4.59	2,048.58	2,047.35	-57.19	1,098.99	3.05	1,101.19	1,093.61	92.98	145.323
2,200.00	2,200.00	0.00	0.00	4.81	2,141.01	2,139.67	-60.27	1,102.39	3.22	1,105.06	1,097.10	93.13	138.935
2,300.00	2,300.00	0.00	0.00	5.04	2,238.96	2,237.44	-64.46	1,106.60	3.40	1,109.58	1,101.24	93.33	132.964
2,400.00	2,400.00	0.00	0.00	5.26	2,346.76	2,345.08	-68.75	1,110.84	3.60	1,113.76	1,105.00	93.54	127.209
2,500.00	2,500.00	0.00	0.00	5.49	2,450.36	2,448.55	-72.56	1,114.28	3.80	1,117.30	1,108.14	93.73	121.934
2,600.00	2,600.00	0.00	0.00	5.71	2,551.15	2,549.23	-76.07	1,117.48	3.99	1,120.70	1,111.13	93.89	117.098
2,700.00	2,700.00	0.00	0.00	5.94	2,651.94	2,649.91	-79.16	1,120.63	4.19	1,124.04	1,114.06	94.04	112.611
2,800.00	2,800.00	0.00	0.00	6.16	2,745.57	2,743.44	-82.43	1,123.74	4.37	1,127.61	1,117.22	94.20	108.617
2,900.00	2,900.00	0.00	0.00	6.39	2,844.14	2,841.85	-86.72	1,127.32	4.57	1,131.55	1,120.76	94.40	104.841
3,000.00	3,000.00	0.00	0.00	6.61	2,945.85	2,943.40	-91.16	1,130.96	4.78	1,135.46	1,124.25	94.61	101.261

Anticollision Report for Burch Keely Unit 930H - Plan #2

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Burch Keely Unit - Burch Keely Unit #509 - Wellbore #1 - Surveys

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
3,100.00	3,100.00	0.00	0.00	6.84	3,044.20	3,041.59	-95.58	1,134.45	4.99	1,139.37	1,127.74	94.82	97.987
3,200.00	3,200.00	0.00	0.00	7.06	3,139.84	3,137.05	-99.97	1,138.09	5.19	1,143.56	1,131.52	95.02	94.985
3,300.00	3,300.00	0.00	0.00	7.28	3,243.15	3,240.17	-104.93	1,142.02	5.41	1,147.78	1,135.32	95.25	92.053
3,400.00	3,400.00	0.00	0.00	7.51	3,347.33	3,344.15	-110.30	1,145.61	5.64	1,151.70	1,138.80	95.50	89.271
3,500.00	3,500.00	0.00	0.00	7.73	3,451.19	3,447.83	-115.60	1,148.71	5.87	1,155.18	1,141.85	95.75	86.638
3,600.00	3,600.00	0.00	0.00	7.96	3,550.22	3,546.72	-119.97	1,151.72	6.08	1,158.65	1,144.90	95.95	84.228
3,700.00	3,700.00	0.00	0.00	8.18	3,649.37	3,645.74	-124.02	1,154.72	6.29	1,162.09	1,147.91	96.13	81.948
3,800.00	3,800.00	0.00	0.00	8.41	3,746.06	3,742.32	-127.37	1,158.00	6.50	1,165.84	1,151.24	96.28	79.841
3,900.00	3,900.00	0.00	0.00	8.63	3,847.43	3,843.57	-130.67	1,161.51	6.72	1,169.65	1,154.61	96.42	77.802
4,000.00	4,000.00	0.00	0.00	8.86	3,950.27	3,946.30	-134.18	1,164.82	6.94	1,173.22	1,157.76	96.57	75.843
4,100.00	4,100.00	0.00	0.00	9.08	4,054.10	4,050.04	-137.24	1,167.95	7.16	1,176.56	1,160.65	96.70	73.962
4,200.00	4,200.00	0.00	0.00	9.31	4,181.46	4,177.36	-139.00	1,170.61	7.42	1,178.87	1,162.48	96.77	71.911
4,300.00	4,300.00	0.00	0.00	9.53	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,180.46	1,163.73	96.78	70.566
4,400.00	4,400.00	0.00	0.00	9.76	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,189.24	1,172.29	96.78	70.148
4,500.00	4,499.54	-3.93	6.90	9.96	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,199.04	1,181.89	-22.50	69.915
4,600.00	4,595.74	-17.14	30.11	10.16	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,199.53	1,182.55	-22.48	70.667
4,700.00	4,685.34	-37.13	69.40	10.44	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,190.37	1,173.82	-16.09	71.932
4,800.00	4,765.93	-55.76	125.33	10.88	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,170.80	1,154.90	-9.89	73.638
4,900.00	4,834.63	-71.68	196.01	11.58	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,140.93	1,125.82	-6.00	75.484
5,000.00	4,888.92	-84.31	278.85	12.64	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,101.08	1,086.77	-3.17	76.918
5,100.00	4,926.81	-93.18	370.80	14.10	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,051.69	1,038.03	-0.75	77.004
5,200.00	4,946.90	-97.96	468.49	15.90	4,237.00	4,232.89	-139.23	1,170.97	7.53	993.28	979.94	1.66	74.472
5,300.00	4,949.43	-98.71	568.36	17.93	4,237.00	4,232.89	-139.23	1,170.97	7.53	927.23	913.69	3.46	68.499
5,400.00	4,947.68	-98.48	668.34	20.13	4,237.00	4,232.89	-139.23	1,170.97	7.53	864.18	850.26	3.46	62.116
5,500.00	4,945.93	-98.25	768.33	22.45	4,237.00	4,232.89	-139.23	1,170.97	7.53	808.61	794.27	3.46	56.395
5,600.00	4,944.18	-98.02	868.31	24.86	4,237.00	4,232.89	-139.23	1,170.97	7.53	762.17	747.37	3.46	51.471
5,700.00	4,942.43	-97.78	968.30	27.33	4,237.00	4,232.89	-139.23	1,170.97	7.53	726.61	711.30	3.46	47.448
5,800.00	4,940.68	-97.55	1,068.28	29.86	4,237.00	4,232.89	-139.23	1,170.97	7.53	703.57	687.72	3.46	44.388
5,900.00	4,938.93	-97.32	1,168.27	32.42	4,237.00	4,232.89	-139.23	1,170.97	7.53	694.31	677.90	3.46	42.301
5,914.74	4,938.67	-97.28	1,183.00	32.80	4,237.00	4,232.89	-139.23	1,170.97	7.53	694.16	677.66	3.46	42.070
6,000.00	4,937.18	-97.08	1,268.25	35.01	4,237.00	4,232.89	-139.23	1,170.97	7.53	699.37	682.37	3.46	41.142
6,100.00	4,935.43	-96.85	1,368.24	37.62	4,237.00	4,232.89	-139.23	1,170.97	7.53	718.45	700.85	3.46	40.814

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Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
6,200.00	4,933.68	-96.62	1,468.22	40.26	4,237.00	4,232.89	-139.23	1,170.97	7.53	750.49	732.26	3.46	41.183
6,300.00	4,931.93	-96.39	1,568.20	42.91	4,237.00	4,232.89	-139.23	1,170.97	7.53	793.90	775.05	3.46	42.100
6,400.00	4,930.18	-96.15	1,668.19	45.57	4,237.00	4,232.89	-139.23	1,170.97	7.53	846.96	827.45	3.46	43.427
6,500.00	4,928.43	-95.92	1,768.17	48.24	4,237.00	4,232.89	-139.23	1,170.97	7.53	907.96	887.80	3.46	45.039
6,600.00	4,926.68	-95.69	1,868.16	50.92	4,237.00	4,232.89	-139.23	1,170.97	7.53	975.42	954.60	3.46	46.841
6,700.00	4,924.93	-95.45	1,968.14	53.61	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,048.09	1,026.59	3.46	48.756
6,800.00	4,923.18	-95.22	2,068.13	56.30	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,124.97	1,102.79	3.46	50.729
6,900.00	4,921.43	-94.99	2,168.11	59.00	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,205.24	1,182.38	3.46	52.720
7,000.00	4,919.68	-94.76	2,268.09	61.70	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,288.28	1,264.72	3.46	54.699
7,100.00	4,917.93	-94.52	2,368.08	64.41	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,373.58	1,349.33	3.46	56.649
7,200.00	4,916.18	-94.29	2,468.06	67.13	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,460.74	1,435.79	3.46	58.555
7,300.00	4,914.43	-94.06	2,568.05	69.84	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,549.46	1,523.81	3.46	60.409
7,400.00	4,912.68	-93.82	2,668.03	72.56	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,639.47	1,613.12	3.46	62.205
7,500.00	4,910.93	-93.59	2,768.02	75.28	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,730.58	1,703.52	3.46	63.941
7,600.00	4,909.18	-93.36	2,868.00	78.01	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,822.63	1,794.85	3.46	65.615
7,700.00	4,907.42	-93.13	2,967.99	80.73	4,237.00	4,232.89	-139.23	1,170.97	7.53	1,915.47	1,886.98	3.46	67.228
7,800.00	4,905.67	-92.89	3,067.97	83.46	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,009.00	1,979.79	3.46	68.781
7,900.00	4,903.92	-92.66	3,167.95	86.19	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,103.13	2,073.20	3.46	70.274
8,000.00	4,902.17	-92.43	3,267.94	88.92	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,197.77	2,167.12	3.46	71.710
8,100.00	4,900.42	-92.19	3,367.92	91.65	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,292.87	2,261.50	3.46	73.090
8,200.00	4,898.67	-91.96	3,467.91	94.39	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,388.37	2,356.27	3.46	74.417
8,300.00	4,896.92	-91.73	3,567.89	97.12	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,484.22	2,451.40	3.46	75.694
8,400.00	4,895.17	-91.50	3,667.88	99.86	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,580.39	2,546.84	3.46	76.921
8,500.00	4,893.42	-91.26	3,767.86	102.59	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,676.84	2,642.56	3.46	78.102
8,600.00	4,891.67	-91.03	3,867.85	105.33	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,773.54	2,738.53	3.46	79.238
8,700.00	4,889.92	-90.80	3,967.83	108.07	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,870.46	2,834.73	3.46	80.332
8,800.00	4,888.17	-90.57	4,067.81	110.81	4,237.00	4,232.89	-139.23	1,170.97	7.53	2,967.59	2,931.13	3.46	81.386
8,900.00	4,886.42	-90.33	4,167.80	113.55	4,237.00	4,232.89	-139.23	1,170.97	7.53	3,064.91	3,027.71	3.46	82.401
9,000.00	4,884.67	-90.10	4,267.78	116.29	4,237.00	4,232.89	-139.23	1,170.97	7.53	3,162.39	3,124.46	3.46	83.379
9,100.00	4,882.92	-89.87	4,367.77	119.03	4,237.00	4,232.89	-139.23	1,170.97	7.53	3,260.03	3,221.37	3.46	84.323

Anticollision Report for Burch Keely Unit 930H - Plan #2

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Burch Keely Unit - Burch Keely Unit 505 - Wellbore #1 - Wellbore #1

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre		Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
		+N/-S (ft)	+E/-W (ft)				+N/-S (ft)	+E/-W (ft)					
100.00	100.00	0.00	0.00	0.09	100.36	100.36	9.71	-159.79	0.11	160.09	159.89	-86.52	792.188
200.00	200.00	0.00	0.00	0.32	201.54	201.54	9.52	-159.20	0.37	159.49	158.81	-86.58	231.507
300.00	300.00	0.00	0.00	0.54	302.94	302.93	9.56	-157.76	0.63	158.07	156.90	-86.53	135.032
400.00	400.00	0.00	0.00	0.77	402.89	402.86	10.06	-155.88	0.88	156.23	154.59	-86.31	95.087
500.00	500.00	0.00	0.00	0.99	502.86	502.80	11.07	-153.99	1.12	154.41	152.30	-85.89	73.131
600.00	600.00	0.00	0.00	1.22	603.20	603.11	12.32	-151.96	1.37	152.49	149.90	-85.36	58.986
700.00	700.00	0.00	0.00	1.44	703.96	703.84	13.87	-149.50	1.62	150.19	147.13	-84.70	48.989
800.00	800.00	0.00	0.00	1.67	805.12	804.93	15.60	-146.34	1.89	147.25	143.70	-83.92	41.442
900.00	900.00	0.00	0.00	1.89	906.64	906.36	16.82	-142.17	2.16	143.30	139.25	-83.25	35.405
1,000.00	1,000.00	0.00	0.00	2.12	1,005.72	1,005.35	17.53	-137.98	2.36	139.20	134.73	-82.76	31.138
1,100.00	1,100.00	0.00	0.00	2.34	1,105.35	1,104.90	18.02	-134.20	2.41	135.49	130.74	-82.35	28.515
1,200.00	1,200.00	0.00	0.00	2.56	1,203.58	1,203.09	18.18	-131.46	2.44	132.74	127.73	-82.13	26.508
1,300.00	1,300.00	0.00	0.00	2.79	1,303.54	1,303.01	16.80	-129.33	2.49	130.45	125.17	-82.60	24.697
1,400.00	1,400.00	0.00	0.00	3.01	1,404.02	1,403.40	13.23	-127.10	2.56	127.84	122.26	-84.06	22.923
1,500.00	1,500.00	0.00	0.00	3.24	1,502.92	1,502.11	7.34	-125.20	2.65	125.43	119.54	-86.65	21.307
1,549.08	1,549.08	0.00	0.00	3.35	1,550.00	1,549.08	4.15	-124.95	2.70	125.02	118.98	-88.10	20.698
1,600.00	1,600.00	0.00	0.00	3.46	1,600.15	1,599.12	0.73	-125.20	2.76	125.21	119.00	-89.66	20.185
1,700.00	1,700.00	0.00	0.00	3.69	1,701.89	1,700.65	-5.62	-125.18	2.87	125.31	118.78	-92.57	19.191
1,800.00	1,800.00	0.00	0.00	3.91	1,801.41	1,800.02	-11.04	-124.42	2.99	124.91	118.04	-95.07	18.193
1,802.14	1,802.14	0.00	0.00	3.92	1,803.53	1,802.14	-11.14	-124.41	2.99	124.91	118.04	-95.12	18.174
1,900.00	1,900.00	0.00	0.00	4.14	1,901.93	1,900.43	-15.67	-123.95	3.12	124.94	117.72	-97.21	17.316
2,000.00	2,000.00	0.00	0.00	4.36	2,002.43	2,000.82	-20.37	-122.68	3.27	124.37	116.79	-99.43	16.409
2,100.00	2,100.00	0.00	0.00	4.59	2,102.24	2,100.47	-25.69	-121.18	3.43	123.87	115.92	-101.97	15.570
2,200.00	2,200.00	0.00	0.00	4.81	2,202.21	2,200.25	-31.70	-119.19	3.60	123.33	114.99	-104.89	14.786
2,217.01	2,217.01	0.00	0.00	4.85	2,219.00	2,217.00	-32.64	-118.91	3.63	123.31	114.91	-105.35	14.670
2,300.00	2,300.00	0.00	0.00	5.04	2,300.82	2,298.68	-37.46	-117.96	3.78	123.78	115.05	-107.62	14.179
2,400.00	2,400.00	0.00	0.00	5.26	2,400.75	2,398.43	-43.31	-117.37	3.96	125.11	115.99	-110.26	13.708
2,500.00	2,500.00	0.00	0.00	5.49	2,500.49	2,498.01	-48.91	-116.49	4.14	126.36	116.83	-112.77	13.259
2,600.00	2,600.00	0.00	0.00	5.71	2,600.33	2,597.60	-55.89	-115.37	4.33	128.22	118.27	-115.85	12.893
2,700.00	2,700.00	0.00	0.00	5.94	2,699.18	2,696.22	-62.59	-114.34	4.53	130.41	120.05	-118.70	12.583
2,800.00	2,800.00	0.00	0.00	6.16	2,798.85	2,795.64	-69.54	-114.08	4.73	133.68	122.89	-121.37	12.388
2,900.00	2,900.00	0.00	0.00	6.39	2,898.81	2,895.36	-76.53	-113.49	4.94	136.96	125.74	-124.00	12.202

Anticollision Report for Burch Keely Unit 930H - Plan #2

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Burch Keely Unit - Burch Keely Unit 505 - Wellbore #1 - Wellbore #1

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
3,000.00	3,000.00	0.00	0.00	6.61	2,999.10	2,995.42	-83.26	-112.88	5.14	140.33	128.67	-126.41	12.035
3,100.00	3,100.00	0.00	0.00	6.84	3,098.32	3,094.45	-89.42	-112.51	5.35	143.83	131.73	-128.48	11.891
3,200.00	3,200.00	0.00	0.00	7.06	3,198.22	3,194.13	-95.93	-112.26	5.56	147.78	135.24	-130.52	11.788
3,300.00	3,300.00	0.00	0.00	7.28	3,298.53	3,294.27	-101.77	-112.31	5.77	151.67	138.70	-132.18	11.691
3,400.00	3,400.00	0.00	0.00	7.51	3,399.20	3,394.82	-106.65	-112.65	5.97	155.21	141.81	-133.43	11.576
3,500.00	3,500.00	0.00	0.00	7.73	3,498.37	3,493.87	-111.51	-112.94	6.18	158.83	144.99	-134.63	11.475
3,600.00	3,600.00	0.00	0.00	7.96	3,598.48	3,593.84	-116.75	-113.07	6.39	162.64	148.36	-135.92	11.387
3,700.00	3,700.00	0.00	0.00	8.18	3,698.16	3,693.40	-121.86	-113.27	6.59	166.51	151.78	-137.09	11.310
3,800.00	3,800.00	0.00	0.00	8.41	3,797.97	3,793.07	-126.93	-113.80	6.80	170.61	155.45	-138.12	11.253
3,900.00	3,900.00	0.00	0.00	8.63	3,899.47	3,894.45	-131.81	-113.82	7.02	174.25	158.64	-139.19	11.167
4,000.00	4,000.00	0.00	0.00	8.86	3,998.31	3,993.20	-136.24	-113.50	7.22	177.45	161.41	-140.20	11.064
4,100.00	4,100.00	0.00	0.00	9.08	4,101.26	4,096.08	-139.88	-114.01	7.43	180.50	164.03	-140.82	10.955
4,200.00	4,200.00	0.00	0.00	9.31	4,204.84	4,199.65	-140.99	-114.47	7.63	181.61	164.71	-140.93	10.746
4,300.00	4,300.00	0.00	0.00	9.53	4,304.75	4,299.56	-140.87	-115.04	7.81	181.87	164.56	-140.76	10.507
4,400.00	4,400.00	0.00	0.00	9.76	4,405.26	4,400.07	-140.73	-115.24	8.00	181.89	164.17	-140.69	10.264
4,401.09	4,401.09	0.00	0.00	9.76	4,406.35	4,401.16	-140.73	-115.24	8.00	181.89	164.31	99.66	10.344
4,500.00	4,499.54	-3.93	6.90	9.96	4,504.36	4,499.17	-140.94	-115.24	8.19	183.55	165.58	101.87	10.214
4,600.00	4,595.74	-17.14	30.11	10.16	4,601.00	4,595.80	-141.08	-115.16	8.37	190.96	172.64	108.66	10.419
4,700.00	4,685.34	-37.13	69.40	10.44	4,617.00	4,611.80	-141.10	-115.15	8.40	224.22	205.77	113.93	12.153
4,800.00	4,765.93	-55.76	125.33	10.88	4,617.00	4,611.80	-141.10	-115.15	8.40	298.10	279.36	110.90	15.900
4,900.00	4,834.63	-71.68	196.01	11.58	4,617.00	4,611.80	-141.10	-115.15	8.40	388.96	369.33	92.92	19.817
5,000.00	4,888.92	-84.31	278.85	12.64	4,617.00	4,611.80	-141.10	-115.15	8.40	485.03	465.94	57.17	25.415
5,100.00	4,926.81	-93.18	370.80	14.10	4,617.00	4,611.80	-141.10	-115.15	8.40	581.09	564.90	27.20	35.892
5,200.00	4,946.90	-97.96	468.49	15.90	4,617.00	4,611.80	-141.10	-115.15	8.40	674.37	659.82	12.30	46.334
5,300.00	4,949.43	-98.71	568.36	17.93	4,617.00	4,611.80	-141.10	-115.15	8.40	763.52	749.19	6.66	53.285
5,400.00	4,947.68	-98.48	668.34	20.13	4,617.00	4,611.80	-141.10	-115.15	8.40	853.51	838.77	6.66	57.880
5,500.00	4,945.93	-98.25	768.33	22.45	4,617.00	4,611.80	-141.10	-115.15	8.40	945.52	930.30	6.66	62.138
5,600.00	4,944.18	-98.02	868.31	24.86	4,617.00	4,611.80	-141.10	-115.15	8.40	1,039.00	1,023.27	6.66	66.047
5,700.00	4,942.43	-97.78	968.30	27.33	4,617.00	4,611.80	-141.10	-115.15	8.40	1,133.60	1,117.31	6.66	69.616
5,800.00	4,940.68	-97.55	1,068.28	29.86	4,617.00	4,611.80	-141.10	-115.15	8.40	1,229.05	1,212.18	6.66	72.865
5,900.00	4,938.93	-97.32	1,168.27	32.42	4,617.00	4,611.80	-141.10	-115.15	8.40	1,325.17	1,307.69	6.66	75.819
6,000.00	4,937.18	-97.08	1,268.25	35.01	4,617.00	4,611.80	-141.10	-115.15	8.40	1,421.83	1,403.72	6.66	78.507

Anticollision Report for Burch Keely Unit 930H - Plan #2

Closest Approach 3D Proximity Scan on Current Survey Data (Highside Reference)

Offset Design: Burch Keely Unit - Burch Keely Unit 505 - Wellbore #1 - Wellbore #1

Scan Range: 0.00 to 9,181.21 ft. Measured Depth.

Scan Radius is 9,999.98 ft. Clearance Factor cutoff is Unlimited. Max Ellipse Separation is Unlimited

Uncertainty Data for Reference Well					Uncertainty Data for Comparison Well					Separation (Ref. > Comp.)			
Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Measured Depth (ft)	Vertical Depth (ft)	Ellipse Centre +N/-S (ft)	Ellipse Centre +E/-W (ft)	Ellipse Major Axis/2	Between Centres (ft)	Between Ellipsoids (ft)	Relative Highside Bearing	Clearance Factor
6,100.00	4,935.43	-96.85	1,368.24	37.62	4,617.00	4,611.80	-141.10	-115.15	8.40	1,518.92	1,500.16	6.66	80.956
6,200.00	4,933.68	-96.62	1,468.22	40.26	4,617.00	4,611.80	-141.10	-115.15	8.40	1,616.36	1,596.93	6.66	83.189
6,300.00	4,931.93	-96.39	1,568.20	42.91	4,617.00	4,611.80	-141.10	-115.15	8.40	1,714.10	1,693.99	6.66	85.232
6,400.00	4,930.18	-96.15	1,668.19	45.57	4,617.00	4,611.80	-141.10	-115.15	8.40	1,812.09	1,791.28	6.66	87.103
6,500.00	4,928.43	-95.92	1,768.17	48.24	4,617.00	4,611.80	-141.10	-115.15	8.40	1,910.28	1,888.78	6.66	88.822
6,600.00	4,926.68	-95.69	1,868.16	50.92	4,617.00	4,611.80	-141.10	-115.15	8.40	2,008.66	1,986.44	6.66	90.405
6,700.00	4,924.93	-95.45	1,968.14	53.61	4,617.00	4,611.80	-141.10	-115.15	8.40	2,107.18	2,084.24	6.66	91.867
6,800.00	4,923.18	-95.22	2,068.13	56.30	4,617.00	4,611.80	-141.10	-115.15	8.40	2,205.84	2,182.18	6.66	93.219
6,900.00	4,921.43	-94.99	2,168.11	59.00	4,617.00	4,611.80	-141.10	-115.15	8.40	2,304.62	2,280.22	6.66	94.472
7,000.00	4,919.68	-94.76	2,268.09	61.70	4,617.00	4,611.80	-141.10	-115.15	8.40	2,403.49	2,378.36	6.66	95.638
7,100.00	4,917.93	-94.52	2,368.08	64.41	4,617.00	4,611.80	-141.10	-115.15	8.40	2,502.46	2,476.58	6.66	96.724
7,200.00	4,916.18	-94.29	2,468.06	67.13	4,617.00	4,611.80	-141.10	-115.15	8.40	2,601.50	2,574.88	6.66	97.737
7,300.00	4,914.43	-94.06	2,568.05	69.84	4,617.00	4,611.80	-141.10	-115.15	8.40	2,700.62	2,673.25	6.66	98.685
7,400.00	4,912.68	-93.82	2,668.03	72.56	4,617.00	4,611.80	-141.10	-115.15	8.40	2,799.79	2,771.68	6.66	99.573
7,500.00	4,910.93	-93.59	2,768.02	75.28	4,617.00	4,611.80	-141.10	-115.15	8.40	2,899.03	2,870.15	6.66	100.407
7,600.00	4,909.18	-93.36	2,868.00	78.01	4,617.00	4,611.80	-141.10	-115.15	8.40	2,998.31	2,968.68	6.66	101.191
7,700.00	4,907.42	-93.13	2,967.99	80.73	4,617.00	4,611.80	-141.10	-115.15	8.40	3,097.64	3,067.25	6.66	101.930
7,800.00	4,905.67	-92.89	3,067.97	83.46	4,617.00	4,611.80	-141.10	-115.15	8.40	3,197.02	3,165.86	6.66	102.627
7,900.00	4,903.92	-92.66	3,167.95	86.19	4,617.00	4,611.80	-141.10	-115.15	8.40	3,296.43	3,264.51	6.66	103.285
8,000.00	4,902.17	-92.43	3,267.94	88.92	4,617.00	4,611.80	-141.10	-115.15	8.40	3,395.87	3,363.19	6.66	103.909
8,100.00	4,900.42	-92.19	3,367.92	91.65	4,617.00	4,611.80	-141.10	-115.15	8.40	3,495.35	3,461.90	6.66	104.499
8,200.00	4,898.67	-91.96	3,467.91	94.39	4,617.00	4,611.80	-141.10	-115.15	8.40	3,594.86	3,560.64	6.66	105.060
8,300.00	4,896.92	-91.73	3,567.89	97.12	4,617.00	4,611.80	-141.10	-115.15	8.40	3,694.39	3,659.40	6.66	105.592
8,400.00	4,895.17	-91.50	3,667.88	99.86	4,617.00	4,611.80	-141.10	-115.15	8.40	3,793.95	3,758.19	6.66	106.098
8,500.00	4,893.42	-91.26	3,767.86	102.59	4,617.00	4,611.80	-141.10	-115.15	8.40	3,893.52	3,856.99	6.66	106.581
8,600.00	4,891.67	-91.03	3,867.85	105.33	4,617.00	4,611.80	-141.10	-115.15	8.40	3,993.13	3,955.82	6.66	107.040
8,700.00	4,889.92	-90.80	3,967.83	108.07	4,617.00	4,611.80	-141.10	-115.15	8.40	4,092.75	4,054.67	6.66	107.479
8,800.00	4,888.17	-90.57	4,067.81	110.81	4,617.00	4,611.80	-141.10	-115.15	8.40	4,192.38	4,153.53	6.66	107.898
8,900.00	4,886.42	-90.33	4,167.80	113.55	4,617.00	4,611.80	-141.10	-115.15	8.40	4,292.04	4,252.41	6.66	108.299
9,000.00	4,884.67	-90.10	4,267.78	116.29	4,617.00	4,611.80	-141.10	-115.15	8.40	4,391.71	4,351.30	6.66	108.683
9,100.00	4,882.92	-89.87	4,367.77	119.03	4,617.00	4,611.80	-141.10	-115.15	8.40	4,491.40	4,450.21	6.66	109.050

Anticollision Report for Burch Keely Unit 930H - Plan #2

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	9,181.21	Plan #2	MWD

Ellipse error terms are correlated across survey tool tie-on points.

Calculated ellipses incorporate surface errors.

Separation is the actual distance between ellipsoids.

Distance Between centres is the straight line distance between wellbore centres.

Clearance Factor = Distance Between Profiles / (Distance Between Profiles - Ellipse Separation).

All station coordinates were calculated using the Minimum Curvature method.

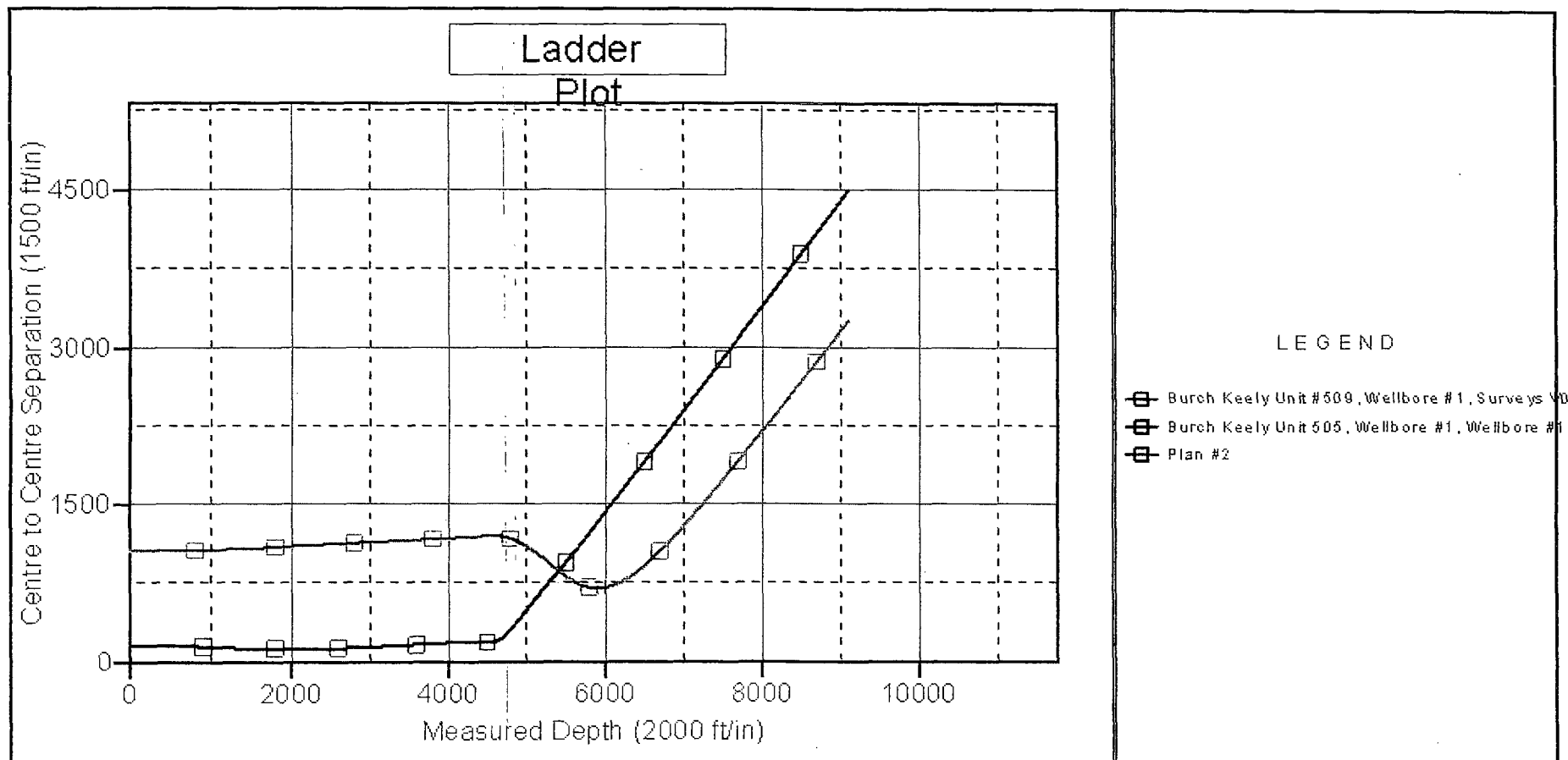
Anticollision Report for Burch Keely Unit 930H - Plan #2

Direction and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3). Northing and Easting are relative to Burch Keely Unit 930H.

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001.

Central Meridian is -104.00°, Grid Convergence at Surface is: 0.16°.



Project: Eddy County, New Mexico
 Site: Burch Keely Unit
 Well: Burch Keely Unit 930H
 Wellbore: Wellbore #1
 Plan: Plan #2
 Rig: Silver Oak #3

Surface Hole Location
240FNL & 490' FWL
Section 13: T17S- R29E Unit D

Bottom Hole Location
340' FNL & 340' FEL
Section 13: T17S- R29E Unit A

SURFACE LOCATION

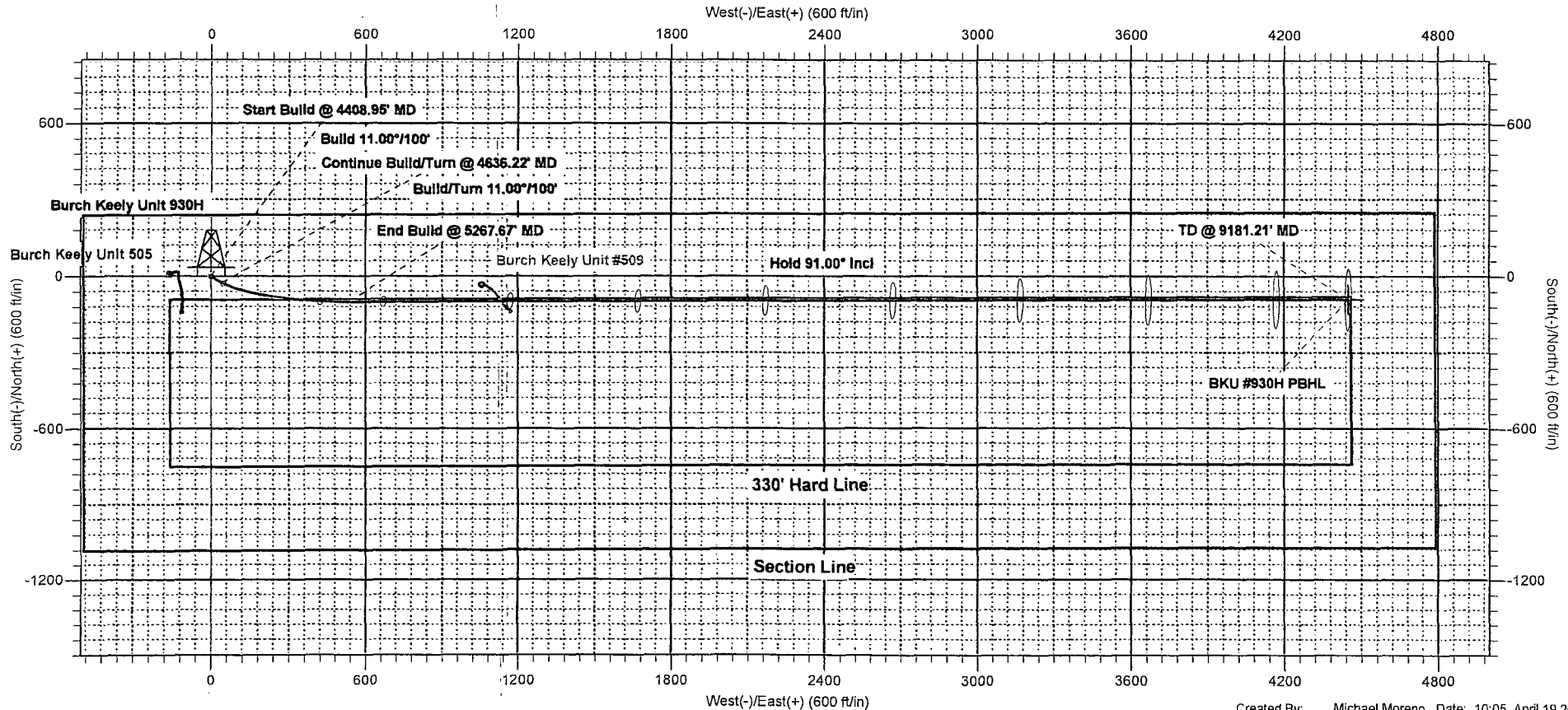
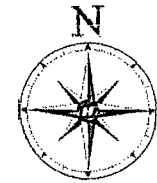
US State Plane 1927 (Exact solution)
 New Mexico East 3001
 Elevation: GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3)
 Northing: 669803.50 Easting: 591706.40 Latitude: 32° 50' 27.669 N Longitude: 104° 2' 5.079 W

To convert a Magnetic Direction to a Grid Direction, Add 7.57°

Magnetic Model: BGGM2012 Date: 17-Apr-13
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BKU #930H PBHL	4781.50	-89.68	4448.96	669713.82	596155.36	Point



Project: Eddy County, New Mexico
 Site: Burch Keely Unit
 Well: Burch Keely Unit 930H
 Wellbore: Wellbore #1
 Plan: Plan #2
 Rig: Silver Oak #3

SURFACE LOCATION

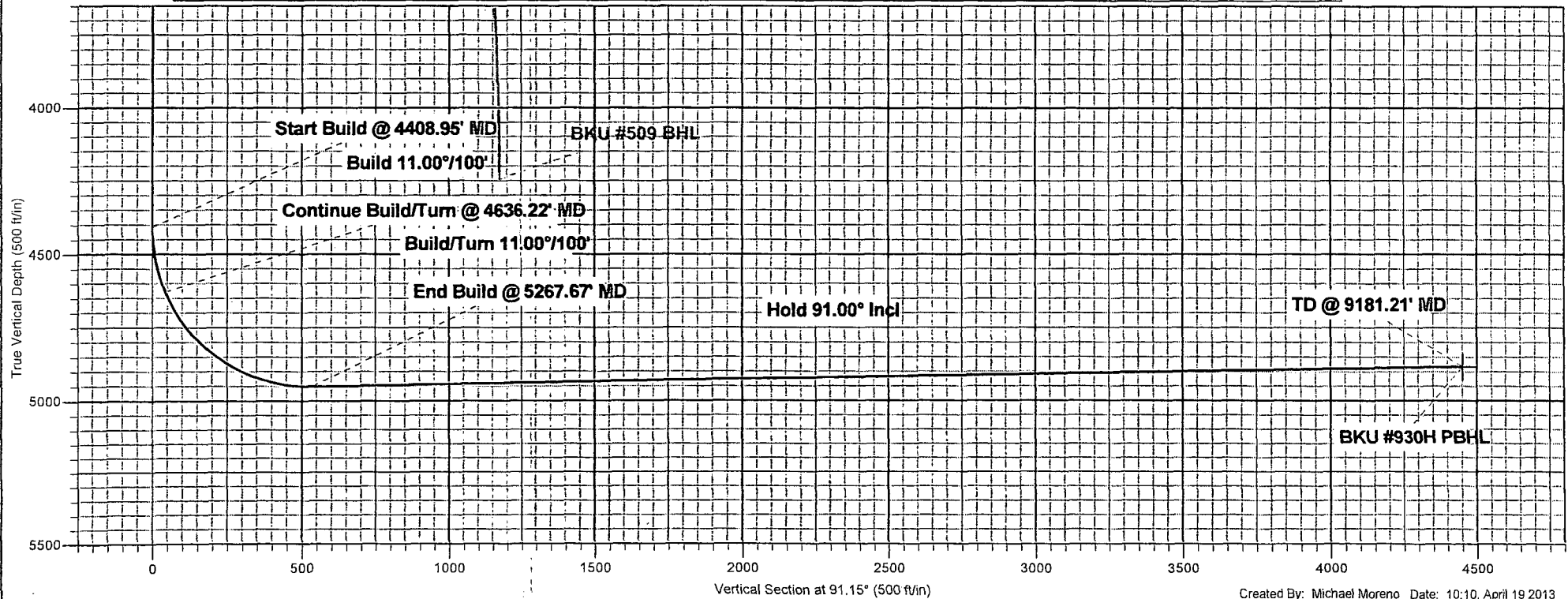
US State Plane 1927 (Exact solution)
 New Mexico East 3001
 Elevation: GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3)
 Northing 669803.50 Easting 591706.40 Latitude 32° 50' 27.669 N Longitude 104° 2' 5.079 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4408.95	0.00	0.00	4408.95	0.00	0.00	0.00	0.00	0.00	Start Build
4636.22	25.00	119.65	4629.08	-24.14	42.41	11.00	119.65	42.89	Continue Build/Turn
5267.67	91.00	89.87	4950.00	-98.79	536.03	11.00	-32.03	537.92	End Build
9181.21	91.00	89.87	4881.50	-89.68	4448.96	0.00	0.00	4449.86	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BKU #930H PBHL	4881.50	-89.68	4448.96	669713.82	596155.36	32° 50' 26.654 N	104° 1' 12.935 W



COG Operating LLC

Eddy County, New Mexico

Burch Keely Unit

Burch Keely Unit 930H

Wellbore #1

Plan: Plan #2

Sperry Drilling Services Standard Report

19 April, 2013

Well Coordinates: 669,803.50 N, 591,706.40 E (32° 50' 27.67" N, 104° 02' 05.08" W)

Ground Level: 3,633.00 ft

Local Coordinate Origin:	Centered on Well Burch Keely Unit 930H
Viewing Datum:	GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3)
TVDs to System:	N
North Reference:	Grid
Unit System:	API - US Survey Feet

Version: 2003.16 Build: 431

HALLIBURTON

Plan Report for Burch Keely Unit 930H - Plan #2

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N/S (ft)	E/W (ft)	Vertical Section (ft)	Dogleg Rate (%/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00
4,408.95	0.00	0.00	4,408.95	0.00	0.00	0.00	0.00
Star Build @ 4408.95 MD Build @ 11.00/100							
4,450.00	4.52	119.65	4,449.96	-0.80	1.41	1.42	11.00
4,500.00	10.02	119.65	4,499.54	-3.93	6.90	6.98	11.00
4,550.00	15.52	119.65	4,548.28	-9.39	16.50	16.68	11.00
4,600.00	21.02	119.65	4,595.74	-17.14	30.11	30.45	11.00

Plan Report for Burch Keely Unit 930H - Plan #2

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N/S (ft)	E/W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,636.22	25.00	119.65	4,629.08	-24.14	42.41	42.89	11.00
Continue Build/Turn @ 4636.22 MDL Build/Turn 11.00%/100'							
4,650.00	26.30	117.84	4,641.50	-27.01	47.64	48.18	11.00
4,700.00	31.16	112.46	4,685.34	-37.13	69.40	70.14	11.00
4,750.00	36.18	108.42	4,726.94	-46.74	95.38	96.30	11.00
4,800.00	41.32	105.26	4,765.93	-55.76	125.33	126.43	11.00
4,850.00	46.52	102.69	4,801.94	-64.10	158.98	160.24	11.00
4,900.00	51.77	100.53	4,834.63	-71.68	196.01	197.41	11.00
4,950.00	57.06	98.67	4,863.72	-78.44	236.09	237.62	11.00
5,000.00	62.37	97.01	4,888.92	-84.31	278.85	280.49	11.00
5,050.00	67.70	95.51	4,910.02	-89.23	323.89	325.62	11.00
5,100.00	73.04	94.12	4,926.81	-93.18	370.80	372.60	11.00
5,150.00	78.39	92.80	4,939.14	-96.09	419.15	421.00	11.00
5,200.00	83.75	91.54	4,946.90	-97.96	468.49	470.37	11.00
5,250.00	89.11	90.30	4,950.01	-98.76	518.37	520.25	11.00
5,267.67	91.00	89.87	4,950.00	-98.79	536.03	537.92	11.00
End Build @ 5267.67 MDL Hold 91.00% Incl							
5,300.00	91.00	89.87	4,949.43	-98.71	568.36	570.23	0.00
5,400.00	91.00	89.87	4,947.68	-98.48	668.34	670.19	0.00
5,500.00	91.00	89.87	4,945.93	-98.25	768.33	770.15	0.00
5,600.00	91.00	89.87	4,944.18	-98.02	868.31	870.11	0.00
5,700.00	91.00	89.87	4,942.43	-97.78	968.30	970.07	0.00
5,800.00	91.00	89.87	4,940.68	-97.55	1,068.28	1,070.03	0.00
5,900.00	91.00	89.87	4,938.93	-97.32	1,168.27	1,169.99	0.00
6,000.00	91.00	89.87	4,937.18	-97.08	1,268.25	1,269.95	0.00
6,100.00	91.00	89.87	4,935.43	-96.85	1,368.24	1,369.91	0.00
6,200.00	91.00	89.87	4,933.68	-96.62	1,468.22	1,469.87	0.00
6,300.00	91.00	89.87	4,931.93	-96.39	1,568.20	1,569.83	0.00
6,400.00	91.00	89.87	4,930.18	-96.15	1,668.19	1,669.79	0.00
6,500.00	91.00	89.87	4,928.43	-95.92	1,768.17	1,769.75	0.00
6,600.00	91.00	89.87	4,926.68	-95.69	1,868.16	1,869.71	0.00
6,700.00	91.00	89.87	4,924.93	-95.45	1,968.14	1,969.67	0.00
6,800.00	91.00	89.87	4,923.18	-95.22	2,068.13	2,069.62	0.00
6,900.00	91.00	89.87	4,921.43	-94.99	2,168.11	2,169.58	0.00
7,000.00	91.00	89.87	4,919.68	-94.76	2,268.09	2,269.54	0.00
7,100.00	91.00	89.87	4,917.93	-94.52	2,368.08	2,369.50	0.00
7,200.00	91.00	89.87	4,916.18	-94.29	2,468.06	2,469.46	0.00
7,300.00	91.00	89.87	4,914.43	-94.06	2,568.05	2,569.42	0.00
7,400.00	91.00	89.87	4,912.68	-93.82	2,668.03	2,669.38	0.00
7,500.00	91.00	89.87	4,910.93	-93.59	2,768.02	2,769.34	0.00
7,600.00	91.00	89.87	4,909.18	-93.36	2,868.00	2,869.30	0.00
7,700.00	91.00	89.87	4,907.42	-93.13	2,967.99	2,969.26	0.00
7,800.00	91.00	89.87	4,905.67	-92.89	3,067.97	3,069.22	0.00
7,900.00	91.00	89.87	4,903.92	-92.66	3,167.95	3,169.18	0.00
8,000.00	91.00	89.87	4,902.17	-92.43	3,267.94	3,269.14	0.00
8,100.00	91.00	89.87	4,900.42	-92.19	3,367.92	3,369.10	0.00
8,200.00	91.00	89.87	4,898.67	-91.96	3,467.91	3,469.06	0.00
8,300.00	91.00	89.87	4,896.92	-91.73	3,567.89	3,569.02	0.00
8,400.00	91.00	89.87	4,895.17	-91.50	3,667.88	3,668.98	0.00
8,500.00	91.00	89.87	4,893.42	-91.26	3,767.86	3,768.93	0.00
8,600.00	91.00	89.87	4,891.67	-91.03	3,867.85	3,868.89	0.00

Plan Report for Burch Keely Unit 930H - Plan #2

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	N/S (ft)	E/W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8,700.00	91.00	89.87	4,889.92	-90.80	3,967.83	3,968.85	0.00
8,800.00	91.00	89.87	4,888.17	-90.57	4,067.81	4,068.81	0.00
8,900.00	91.00	89.87	4,886.42	-90.33	4,167.80	4,168.77	0.00
9,000.00	91.00	89.87	4,884.67	-90.10	4,267.78	4,268.73	0.00
9,100.00	91.00	89.87	4,882.92	-89.87	4,367.77	4,368.69	0.00
9,181.21	91.00	89.87	4,881.50	-89.68	4,448.96	4,449.86	0.00
TD @ 9181.21' MD							

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/S (ft)	+E/W (ft)	
4,408.95	4,408.95	0.00	0.00	Start Build @ 4408.95' MD
4,408.95	4,408.95	0.00	0.00	Build 11.00°/100'
4,636.22	4,629.08	-24.14	42.41	Continue Build/Turn @ 4636.22' MD
4,636.22	4,629.08	-24.14	42.41	Build/Turn 11.00°/100'
5,267.67	4,950.00	-98.79	536.03	End Build @ 5267.67' MD
5,267.67	4,950.00	-98.79	536.03	Hold 91.00° Incl
9,181.21	4,881.50	-89.68	4,448.96	TD @ 9181.21' MD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	+N/S (ft)	+E/W (ft)	Start TVD (ft)
User	No Target (Freehand)	91.15	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	9,181.21	Plan #2	MWD

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/S (ft)	+E/W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BKU #930H PBHL - plan hits target center - Point	0.00	0.00	4,881.50	-89.68	4,448.96	669,713.82	596,155.36	32° 50' 26.654 N	104° 1' 12.935 W

North Reference Sheet for Burch Keely Unit - Burch Keely Unit 930H - Wellbore #1

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to Grid North Reference.

Vertical Depths are relative to GE 3633' + KB 18' @ 3651.00ft (Silver Oak #3). Northing and Easting are relative to Burch Keely Unit 930H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 3001 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is 104° 20' 0.000 W°, Longitude Origin: 0° 0' 0.000 E°, Latitude Origin: 0° 0' 0.000 N°

False Easting: 500,000.00ft, False Northing: 0.00ft, Scale Reduction: 0.99991872

Grid Coordinates of Well: 669,803.50 ft N, 591,706.40 ft E

Geographical Coordinates of Well: 32° 50' 27.67" N, 104° 02' 05.08" W

Grid Convergence at Surface is: 0.16°

Based upon Minimum Curvature type calculations, at a Measured Depth of 9,181.21ft
the Bottom Hole Displacement is 4,449.86ft in the Direction of 91.15° (Grid).

Magnetic Convergence at surface is: -7.57° (17 April 2013, , BGGM2012)

