

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCODD-113
HOBBS GCD

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.

MAY 19 2014

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

RECEIVED

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other	2. Name of Operator CIMAREX ENERGY CO.	Contact: DEYSI FAVELA E-Mail: dfavela@cimarex.com	5. Lease Serial No. NMNM43562
3a. Address 600 N. MARIENFELD MIDLAND, TX 79701	3b. Phone No. (include area code) Ph: 432-620-1964	9. API Well No. 30-025-41243	6. If Indian, Allottee or Tribe Name
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 29 T25S R33E NWNW 330FNL 540FWL 500	10. Field and Pool, or Exploratory WC BONE SPRING	11. County or Parish, and State LEA COUNTY, NM	7. If Unit or CA/Agreement, Name and/or No.
8. Well Name and No. CASCADE 29 FEDERAL 5H			

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 Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A PD
	☐ 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 recomple 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 recompletion 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.)

Cimarex Energy respectfully requests changes to the APD:

BHL Move,

Approved: 1210
BHL 330' FSL & 970' FWL

Proposed:
BHL 330' FSL & 1100' FWL

Original Cons Still Stand

RECEIVED
MAY 12 2014
NMOCD ARTESIA

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

Electronic Submission #242642 verified by the BLM Well Information System
For CIMAREX ENERGY CO., sent to the Hobbs
Committed to AFMSS for processing by JIM AMOS on 04/22/2014 ()

Name (Printed/Typed) DEYSI FAVELA

Title DRILLING TECH

Signature (Electronic Submission)

Date 04/17/2014

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 ****

MSS/OCD 5/20/2014

MAY 20 2014

APPROVED
MAY 20 2014
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

HOBBS OCD
MAY 19 2014

DISTRICT I
1025 N. French Dr., Hobbs, NM 88240
Phone (505) 394-0101 Fax: (505) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone (505) 748-1283 Fax: (505) 748-0720
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-0170 Fax: (505) 334-0170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3420 Fax: (505) 476-3420

RECEIVED

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-41243		WC Bone Spring
Property Code	Property Name	Well Number
	CASCADE 29 FEDERAL	5H
GRID No.	Operator Name	Elevation
215099	CIMAREX ENERGY CO.	3422

Surface Location

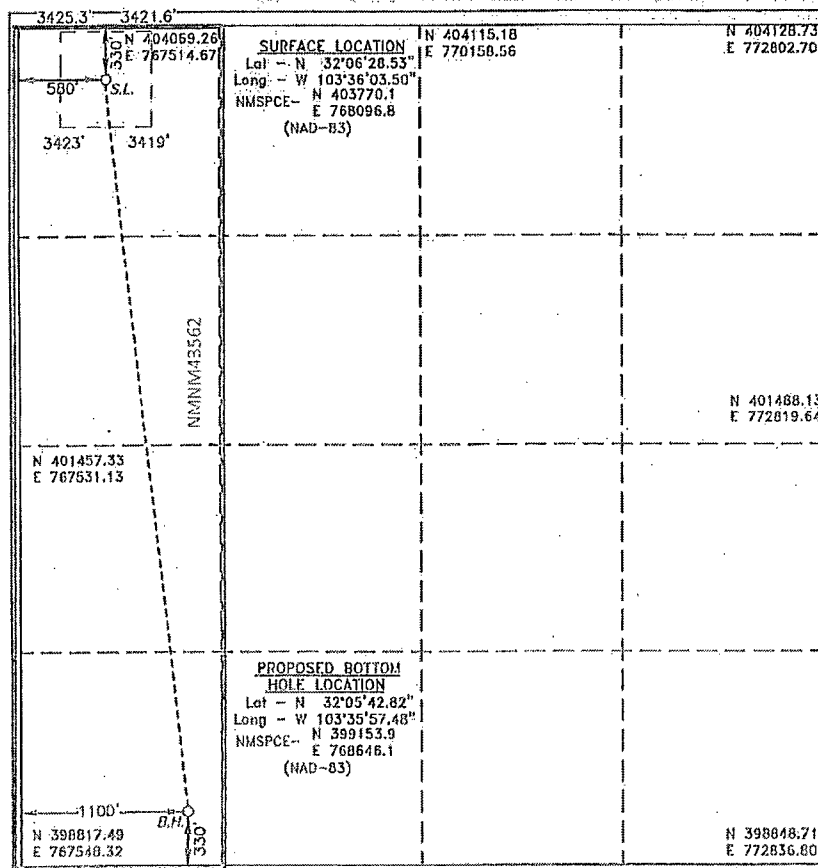
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	29	25 S	33 E		330	NORTH	580	WEST	LEA

Bottom Hole Location If Different From Surface

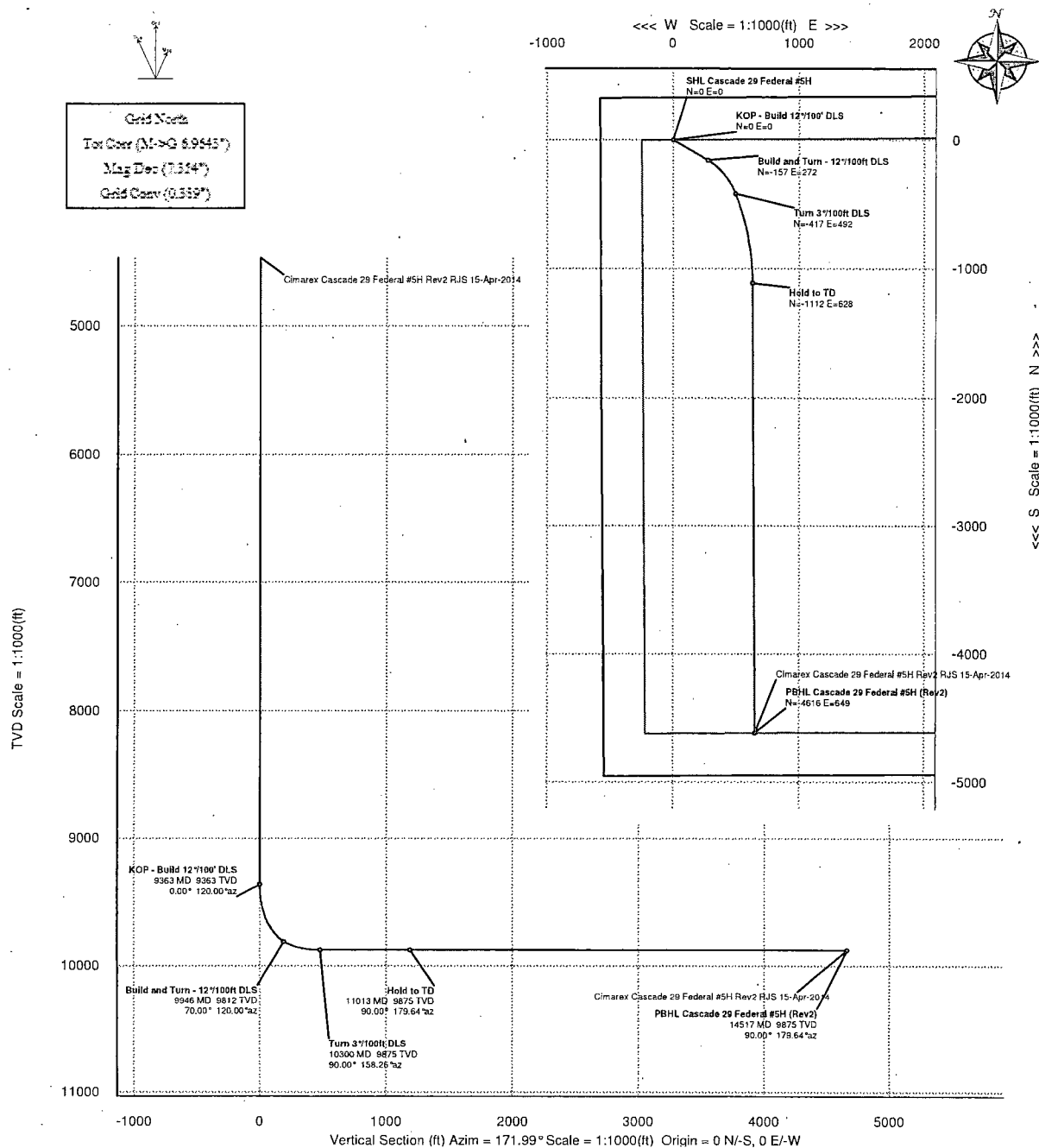
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	29	25 S	33 E		330	SOUTH	1100	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Deysi Favela</i> 4/15/2014 Signature Date Deysi Favela Printed Name dfavela@cimarex.com Email Address SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision and that the same is true and correct to the best of my belief. <i>GARY L. JONES</i> Signature & Seal of Professional Surveyor DATE SURVEYED: DECEMBER 2, 2012 W.S. NO. 27558 Certificate No. Gary L. Jones 7977 DASIN SURVEYS
---	---

WELL		FIELD		STRUCTURE		
Cascade 29 Federal #5H		NM Lea County		TBD		
Magnetic Parameters		Site/Trace Location		Viscosecans		
Model	BOGM 2013	Core	58.8937°	Date	April 15, 2014	
		Lat	N 32° 48.532'	Nothing	NAD83 New Mexico State Plane, Eastern Zone, US Feet	
		Mag Dec	7.354°	Scale	1:1000000	
		East	W 103.36, 3.563'	Grid Zone	Q 18S	
		East	788096.80 US	Scale East	0.99999794	
		Plan	Reel 28 Federal #5H	Site	Cascade 28 Federal #5H	
			Site Date	November 08, 2013	Ground Level	34221 above MSL



		Critical Points						
<u>Critical Point</u>	<u>MD</u>	<u>INCL</u>	<u>AZIM</u>	<u>TVD</u>	<u>VSEC</u>	<u>N(-) / S(-)</u>	<u>E(+) / W(-)</u>	<u>DLS</u>
SHL Cascade 29 Federal #5H	0.00	0.00	120.00	0.00	0.00	0.00	0.00	
KOP - Build 12°/100' DLS	9362.88	0.00	120.00	9362.88	0.00	0.00	0.00	0.00
Build and Turn - 12°/100ft DLS	9946.21	70.00	120.00	9811.55	193.45	-157.08	272.07	12.00
Turn 3°/100ft DLS	10300.11	90.00	158.26	9875.00	481.00	-416.56	491.76	12.00
Hold to TD	11012.91	90.00	179.64	9875.00	1188.67	-1112.10	627.56	3.00
PBHL Cascade 29 Federal #5H	14517.24	90.00	179.64	9875.00	4661.80	-4616.36	649.32	0.00



Cimarex Cascade 29 Federal #5H Rev2 RJS 15-Apr-2014 Proposal Report
100' Interpolated
(Non-Def Plan)



Report Date: April 15, 2014 - 02:10 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: TBD / Cimarex Cascade 29 Federal #5H
Well: Cimarex Cascade 29 Federal #5H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Cascade 29 Federal #5H Rev2 RJS 15-Apr-2014
Survey Date: November 08, 2012
Tort / AHD / DDI / ERD Ratio: 133.835' / 4877.596 ft / 5.982 / 0.494
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 6' 28.53248", W 103° 36' 3.50328"
Location Grid N/E Y/X: N 403770.100 ftUS, E 768096.800 ftUS
CRS Grid Convergence Angle: 0.3893°
Grid Scale Factor: 0.99996798

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 171.993° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3422.000 ft above MSL
Seabed / Ground Elevation: 3422.000 ft above MSL
Magnetic Declination: 7.354°
Total Gravity Field Strength: 998.4759mgn (9.80665 Based)
Total Magnetic Field Strength: 48238.062 nT
Magnetic Dip Angle: 59.987°
Declination Date: April 15, 2014
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.3893°
Total Corr Mag North->Grid North: 6.9643°
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
SHL Cascade 29 Federal #5H	0.00	0.00	120.00	0.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	N/A
	100.00	0.00	120.00	100.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	200.00	0.00	120.00	200.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	300.00	0.00	120.00	300.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	400.00	0.00	120.00	400.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	500.00	0.00	120.00	500.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	600.00	0.00	120.00	600.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	700.00	0.00	120.00	700.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	800.00	0.00	120.00	800.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	900.00	0.00	120.00	900.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1000.00	0.00	120.00	1000.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1100.00	0.00	120.00	1100.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1200.00	0.00	120.00	1200.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1300.00	0.00	120.00	1300.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1400.00	0.00	120.00	1400.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1500.00	0.00	120.00	1500.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1600.00	0.00	120.00	1600.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1700.00	0.00	120.00	1700.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1800.00	0.00	120.00	1800.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	1900.00	0.00	120.00	1900.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2000.00	0.00	120.00	2000.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2100.00	0.00	120.00	2100.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2200.00	0.00	120.00	2200.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2300.00	0.00	120.00	2300.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2400.00	0.00	120.00	2400.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2500.00	0.00	120.00	2500.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2600.00	0.00	120.00	2600.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2700.00	0.00	120.00	2700.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00
	2800.00	0.00	120.00	2800.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53 W 103 36 3.50		0.00	0.00	0.00

4/16/2014 1:41 PM Page 2 of 4

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	8400.00	0.00	120.00	8400.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	8500.00	0.00	120.00	8500.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	8600.00	0.00	120.00	8600.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	8700.00	0.00	120.00	8700.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	8800.00	0.00	120.00	8800.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	8900.00	0.00	120.00	8900.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	9000.00	0.00	120.00	9000.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	9100.00	0.00	120.00	9100.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	9200.00	0.00	120.00	9200.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	9300.00	0.00	120.00	9300.00	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
KOP - Build 12"/100' DLS	9362.88	0.00	120.00	9362.88	0.00	0.00	0.00	403770.10	768096.80	N 32 6 28.53	W 103 36 3.50	0.00	0.00	0.00
	9400.00	4.45	120.00	9399.96	0.89	-0.72	1.25	403769.38	768098.05	N 32 6 28.53	W 103 36 3.49	1.44	120.00	12.00
	9500.00	16.45	120.00	9498.12	12.04	-9.78	16.93	403760.32	768113.73	N 32 6 28.43	W 103 36 3.31	19.55	120.00	12.00
	9600.00	28.45	120.00	9590.37	35.52	-28.84	49.95	403741.26	768146.75	N 32 6 28.24	W 103 36 2.92	57.68	120.00	12.00
	9700.00	40.45	120.00	9672.68	70.29	-57.08	98.86	403713.03	768195.65	N 32 6 27.96	W 103 36 2.36	114.15	120.00	12.00
	9800.00	52.45	120.00	9741.45	114.84	-93.25	161.51	403676.85	768258.31	N 32 6 27.60	W 103 36 1.63	186.50	120.00	12.00
	9900.00	64.45	120.00	9793.67	167.22	-135.78	235.18	403634.32	768331.98	N 32 6 27.17	W 103 36 0.78	271.57	120.00	12.00
Build and Turn - 12"/100ft DLS	9946.21	70.00	120.00	9811.55	193.45	-157.08	272.07	403613.02	768368.86	N 32 6 26.96	W 103 36 0.35	314.16	120.00	12.00
	10000.00	72.67	126.20	9828.78	226.94	-184.91	314.72	403585.20	768411.51	N 32 6 26.68	W 103 35 59.86	365.02	120.44	12.00
	10100.00	78.10	137.26	9854.07	300.70	-249.27	386.71	403520.84	768483.49	N 32 6 26.04	W 103 35 59.03	460.08	122.81	12.00
	10200.00	83.95	147.87	9869.70	386.60	-327.59	446.58	403442.52	768543.36	N 32 6 25.26	W 103 35 58.34	553.85	126.26	12.00
	10300.00	89.99	158.25	9875.00	480.89	-416.46	491.72	403353.65	768588.50	N 32 6 24.38	W 103 35 57.82	644.38	130.26	12.00
Turn 3"/100ft DLS	10300.11	90.00	158.26	9875.00	481.00	-416.56	491.76	403353.55	768588.54	N 32 6 24.38	W 103 35 57.82	644.48	130.27	12.00
	10400.00	90.00	161.26	9875.00	578.61	-510.27	526.31	403259.85	768623.10	N 32 6 23.45	W 103 35 57.42	733.06	134.11	3.00
	10500.00	90.00	164.26	9875.00	677.30	-605.77	555.95	403164.35	768652.73	N 32 6 22.50	W 103 35 57.09	822.21	137.46	3.00
	10600.00	90.00	167.26	9875.00	776.69	-702.68	580.55	403067.44	768677.33	N 32 6 21.54	W 103 35 56.81	911.48	140.44	3.00
	10700.00	90.00	170.26	9875.00	876.52	-800.75	600.05	402969.38	768696.83	N 32 6 20.57	W 103 35 56.59	1000.63	143.15	3.00
	10800.00	90.00	173.26	9875.00	976.51	-899.71	614.39	402870.42	768711.16	N 32 6 19.59	W 103 35 56.43	1089.47	145.67	3.00
	10900.00	90.00	176.26	9875.00	1076.38	-999.28	623.52	402770.86	768720.30	N 32 6 18.60	W 103 35 56.33	1177.85	148.04	3.00
	11000.00	90.00	179.26	9875.00	1175.87	-1099.19	627.44	402670.95	768724.22	N 32 6 17.61	W 103 35 56.30	1265.66	150.28	3.00
Hold to TD	11012.91	90.00	179.64	9875.00	1188.67	-1112.10	627.56	402658.04	768724.34	N 32 6 17.49	W 103 35 56.30	1276.95	150.56	3.00
	11100.00	90.00	179.64	9875.00	1274.98	-1199.19	628.10	402570.95	768724.88	N 32 6 16.62	W 103 35 56.30	1353.72	152.36	0.00
	11200.00	90.00	179.64	9875.00	1374.09	-1299.18	628.72	402470.96	768725.50	N 32 6 15.63	W 103 35 56.30	1443.32	154.18	0.00
	11300.00	90.00	179.64	9875.00	1473.20	-1399.18	629.34	402370.96	768726.12	N 32 6 14.65	W 103 35 56.30	1534.21	155.78	0.00
	11400.00	90.00	179.64	9875.00	1572.31	-1499.18	629.96	402270.97	768726.74	N 32 6 13.66	W 103 35 56.30	1626.16	157.21	0.00
	11500.00	90.00	179.64	9875.00	1671.42	-1599.18	630.59	402170.98	768727.36	N 32 6 12.67	W 103 35 56.30	1719.01	158.48	0.00
	11600.00	90.00	179.64	9875.00	1770.53	-1699.18	631.21	402070.98	768727.99	N 32 6 11.68	W 103 35 56.30	1812.63	159.62	0.00
	11700.00	90.00	179.64	9875.00	1869.64	-1799.17	631.83	401970.99	768728.61	N 32 6 10.69	W 103 35 56.30	1906.89	160.65	0.00
	11800.00	90.00	179.64	9875.00	1968.75	-1899.17	632.45	401870.99	768729.23	N 32 6 9.70	W 103 35 56.30	2001.71	161.58	0.00
	11900.00	90.00	179.64	9875.00	2067.86	-1999.17	633.07	401771.00	768729.85	N 32 6 8.71	W 103 35 56.30	2097.01	162.43	0.00
	12000.00	90.00	179.64	9875.00	2166.97	-2099.17	633.69	401671.00	768730.47	N 32 6 7.72	W 103 35 56.30	2192.73	163.20	0.00
	12100.00	90.00	179.64	9875.00	2266.08	-2199.17	634.31	401571.01	768731.09	N 32 6 6.73	W 103 35 56.30	2288.62	163.91	0.00
	12200.00	90.00	179.64	9875.00	2365.19	-2299.17	634.93	401471.01	768731.71	N 32 6 5.74	W 103 35 56.30	2385.23	164.56	0.00
	12300.00	90.00	179.64	9875.00	2464.30	-2399.16	635.55	401371.02	768732.33	N 32 6 4.75	W 103 35 56.30	2481.92	165.16	0.00
	12400.00	90.00	179.64	9875.00	2563.41	-2499.16	636.17	401271.02	768732.95	N 32 6 3.76	W 103 35 56.31	2578.86	165.72	0.00
	12500.00	90.00	179.64	9875.00	2662.52	-2599.16	636.80	401171.03	768733.57	N 32 6 2.77	W 103 35 56.31	2676.03	166.23	0.00
	12600.00	90.00	179.64	9875.00	2761.63	-2699.16	637.42	401071.03	768734.19	N 32 6 1.78	W 103 35 56.31	2773.40	166.71	0.00
	12700.00	90.00	179.64	9875.00	2860.74	-2799.16	638.04	400971.04	768734.82	N 32 6 0.79	W 103 35 56.31	2870.95	167.16	0.00
	12800.00	90.00	179.64	9875.00	2959.85	-2899.15	638.66	400871.04	768735.44	N 32 5 59.80	W 103 35 56.31	2968.67	167.58	0.00
	12900.00	90.00	179.64	9875.00	3058.96	-2999.15	639.28	400771.05	768736.06	N 32 5 58.81	W 103 35 56.31	3066.53	167.97	0.00
	13000.00	90.00	179.64	9875.00	3158.07	-3099.15	639.90	400671.06	768736.68	N 32 5 57.82	W 103 35 56.31	3164.52	168.33	0.00
	13100.00	90.00	179.64	9875.00	3257.18	-3199.15	640.52	400571.06	768737.30	N 32 5 56.83	W 103 35 56.31	3262.64	168.68	0.00
	13200.00	90.00	179.64	9875.00	3356.29	-3299.15	641.14	400471.07	768737.92	N 32 5 55.84	W 103 35 56.31	3360.87	169.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
	13300.00	90.00	179.64	9875.00	3455.40	-3399.14	641.76	400371.07	768738.54	N 32 5 54.85	W 103 35 56.31	3459.20	169.31	0.00
	13400.00	90.00	179.64	9875.00	3554.51	-3499.14	642.38	400271.08	768739.16	N 32 5 53.86	W 103 35 56.31	3557.62	169.60	0.00
	13500.00	90.00	179.64	9875.00	3653.62	-3599.14	643.01	400171.08	768739.78	N 32 5 52.88	W 103 35 56.31	3656.13	169.87	0.00
	13600.00	90.00	179.64	9875.00	3752.73	-3699.14	643.63	400071.09	768740.40	N 32 5 51.89	W 103 35 56.31	3754.71	170.13	0.00
	13700.00	90.00	179.64	9875.00	3851.84	-3799.14	644.25	399971.09	768741.03	N 32 5 50.90	W 103 35 56.31	3853.37	170.38	0.00
	13800.00	90.00	179.64	9875.00	3950.95	-3899.13	644.87	399871.10	768741.65	N 32 5 49.91	W 103 35 56.32	3952.10	170.61	0.00
	13900.00	90.00	179.64	9875.00	4050.06	-3999.13	645.49	399771.10	768742.27	N 32 5 48.92	W 103 35 56.32	4050.89	170.83	0.00
	14000.00	90.00	179.64	9875.00	4149.17	-4099.13	646.11	399671.11	768742.89	N 32 5 47.93	W 103 35 56.32	4149.74	171.04	0.00
	14100.00	90.00	179.64	9875.00	4248.28	-4199.13	646.73	399571.11	768743.51	N 32 5 46.94	W 103 35 56.32	4248.64	171.24	0.00
	14200.00	90.00	179.64	9875.00	4347.39	-4299.13	647.35	399471.12	768744.13	N 32 5 45.95	W 103 35 56.32	4347.59	171.44	0.00
	14300.00	90.00	179.64	9875.00	4446.50	-4399.12	647.97	399371.12	768744.75	N 32 5 44.96	W 103 35 56.32	4446.59	171.62	0.00
	14400.00	90.00	179.64	9875.00	4545.61	-4499.12	648.59	399271.13	768745.37	N 32 5 43.97	W 103 35 56.32	4545.63	171.80	0.00
	14500.00	90.00	179.64	9875.00	4644.72	-4599.12	649.22	399171.14	768745.99	N 32 5 42.98	W 103 35 56.32	4644.72	171.97	0.00
PBHL Cascade 29 Federal #5H (Rev2)	14517.24	90.00	179.64	9875.00	4661.80	-4616.36	649.32	399153.90	768746.10	N 32 5 42.81	W 103 35 56.32	4661.80	171.99	0.00

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	14517.236	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Cascade 29 Federal #5H Rev2