

**Conditions of Approval
Big Eddy Unit DI9 35H
30-015-42007**

Pilot hole plugging procedure approved as written. The BLM is to be contacted (575-361-2822) prior to tag of bottom plug, which must be a minimum of 210' in length.

CRW 032514

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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.*5. Lease Serial No.
NMNM14468

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.
NMNM1119498. Well Name and No.
HAYDUKE 34 FEDERAL COM 39. API Well No.
30-015-39355-00-X1

10. Field and Pool, or Exploratory

WILDCAT
SAGE DRAW, WC

11. County or Parish, and State

EDDY COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Contact: DEYSI FAVELA

CIMAREX ENERGY COMPANY OF CO-Mail: dfavela@cimarex.com

3a. Address

600 NORTH MARIENFELD STREET SUITE 600
MIDLAND, TX 79701

3b. Phone No. (include area code)

Ph: 432-620-1964

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 34 T25S R26E NESE 1880FSL 200FEL

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

TYPE OF SUBMISSION

TYPE OF ACTION

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

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.)

Cimarex Energy Respectfully requests changes to the BHL, etc.

Approved:

BHL UL:L, 34-25S-26E 1980 FSL & 660 FWL

DVT @ 2000'

KOP 9350'

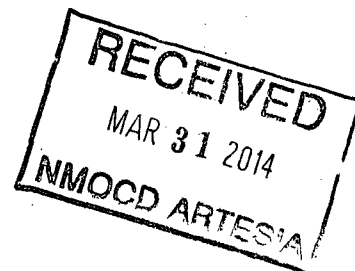
LP 4150'

MD 13995'

TVD 9682'

Change to:

BHL UL:P, 3-26S-26E 660' FSL & 760' FEL



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

Electronic Submission #239483 verified by the BLM Well Information System

For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad

Committed to AFMSS for processing by CHRISTOPHER WALLS on 03/24/2014 (14CRW0193SE)

Name (Printed/Typed) DEYSI FAVELA

Title DRILLING TECHNICIAN

Signature

(Electronic Submission)

Date 03/20/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHRISTOPHER WALLS

Title PETROLEUM ENGINEER

Date 03/25/2014

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 Carlsbad

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Additional data for EC transaction #239483 that would not fit on the form

32. Additional remarks, continued

KOP 9174'
LP 10209'
MD 16179'
TVD 9633'

9-5/8" intermediate casing weight to be 36#
7" casing will be 32# L-80 LTC/BTC (LTC 0'-9173', BTC 9173'-9824') Set @ approximately 9824 MD
4.5" liner will be all BTC (9173'-16178')
Lateral open hole size will be 6.00"

Change 7" Cement
2 Stage cement job with DV tool @ 5600'
Stage 1 Lead: 230 sx Tuned Light @ 11.0 ppg, 2.65 yield
Stage 1 Tail: 160 sx 50:50 Poz:H @ 14.5 ppg, 1.24 yield
Stage 2: 380 sx Tuned Light @ 11.0 ppg, 2.65 yield
Volumes are 25% OH excess

Drilling Plan
Drill to KOP. No Pilot Hole. Drill curve to approximately 75 degrees inclination. Run 7" casing and cement. Drill out and drill lateral to TD. Run 4.5" cemented completion system.

DISTRICT I

1825 N. French Dr., Hobbs, NM 88240

DISTRICT II

1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102

Revised October 15, 2009

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 30-015-39355	Pool Code 96890	Pool Name Wolfcamp Sage Draw, East
Property Code 38769	Property Name HAYDUKE "34" FEDERAL COM	Well Number 3
GRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3364'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	34	25 S	26 E		1880	SOUTH	200	EAST	EDDY

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
P	3	26 S	26 E		660	SOUTH	760	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
480.400			

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

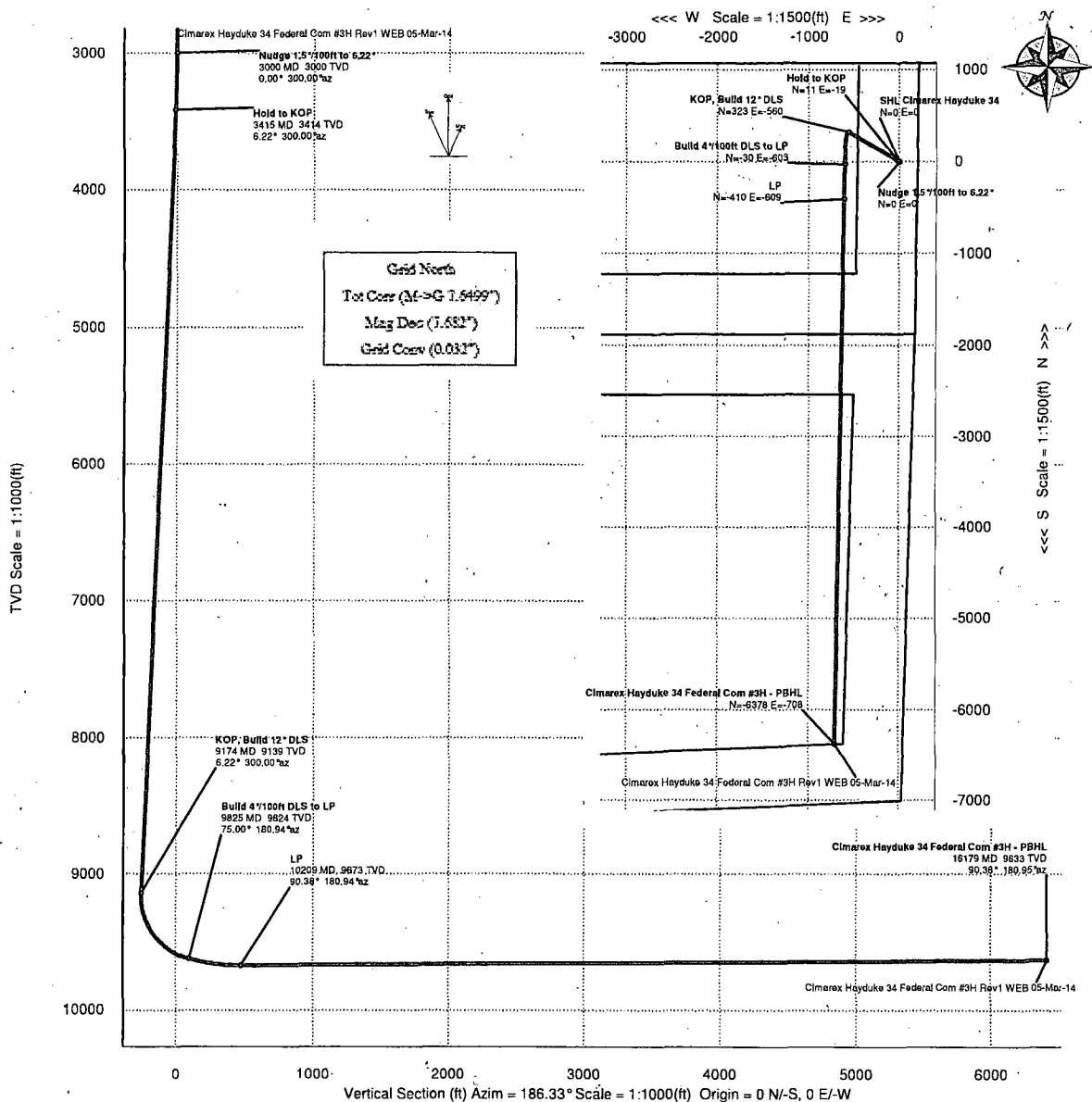
N: 397789.0 E: 554989.2 NAD 83 N: 392486.6 E: 554918.2 NAD 83 N: 387139.1 E: 554858.6 NAD 83	SURFACE LOCATION Lat - N 32°05'03.12" Long - W 104°16'22.55" NMSPCE- N 394373.8 E 560044.7 (NAD-83) PROPOSED BOTTOM HOLE LOCATION Lat - N 32°04'00.00" Long - W 104°16'30.81" NMSPCE- N 387995.9 E 559337.2 (NAD-83)	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> 3/4/2014 Signature Date Deysi Favela Printed Name dfavela@cimarex.com 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. Date Surveyed _____ Signature & Seal of Professional Surveyor _____ W.O. No. 24187 Certificate No. Gary L. Jones 7977 Basin Surveys
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Cimarex

PATHFINDER
A Schlumberger Company

WELL	Hayduke 34 Federal Com #3H		FIELD	NM Eddy County (NAD 83)		STRUCTURE	TBD
Magnetic Parameters	Dip: 58.848°	Dat: February 28, 2014	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet		Miscellaneous	
Model: BSGM 2013	Mag Dec: 7.682°	FS: 48153.167	Lat: N 32.6 3.118	Long: W 104.18 22.548	Northings: 294078.90 NUS	Grid Conv: 0.002°	Stat: Hayduke 34 Federal Com #3H TVD Ref: Ground (2844' above)
					Eastings: 560044.70 NUS	Scale Fact: 0.83895948	Plan: Rev1 WEB 05-Mar-14
							Sty Date: February 28, 2014



Critical Points

Critical Point	MD	INCL	AZIM	TVD	YSEC	N(+) / S(-)	E(+) / W(-)	DLS
SHL Cimarex Hayduke 34 Federal Com #3H	0.00	0.00	300.00	0.00	0.00	0.00	0.00	
Nudge 1.5°/100ft to 6.22°	3000.00	0.00	300.00	3000.00	0.00	0.00	0.00	0.00
Hold to KOP	3414.80	6.22	300.00	3413.99	-9.03	11.25	-19.49	1.50
KOP, Build 12° DLS	9173.79	6.22	300.00	9139.05	-259.62	323.33	-560.03	0.00
Build 4°/100ft DLS to LP	9824.50	75.00	180.95	9624.23	95.92	-29.67	-602.54	12.00
LP	10209.12	90.38	180.95	9673.00	474.60	-409.97	-608.82	4.00
Cimarex Hayduke 34 Federal Com #3H - PBHL	16178.59	90.38	180.95	9633.00	6417.62	-6378.49	-707.57	0.00



Cimarex Hayduke 34 Federal Com #3H Rev1 WEB 05-Mar-14 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: March 05, 2014 - 04:47 PM
Client: NM Eddy County (NAD 83)
Field: Cimarex Hayduke 34 Federal Com #3H / Hayduke 34 Federal Com #3H
Structure / Slot: Hayduke 34 Federal Com #3H
Well: Original Borehole
Borehole: Unknown / Unknown
UWI / API#: Cimarex Hayduke 34 Federal Com #3H Rev1 WEB 05-Mar-14
Survey Name: February 28, 2014
Survey Date: 99.698 ° / 7359.094 ft / 6.089 / 0.761
Tort / AHD / DDI / ERD Ratio: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Coordinate Reference System: N 32° 5' 3.11560", W 104° 16' 22.54780"
Location Lat / Long: N 394373.800 ftUS, E 560044.700 ftUS
Location Grid N/E Y/X: 0.0321 °
CRS Grid Convergence Angle:
Grid Scale Factor: 0.99990949

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 186.330 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground
TVD Reference Elevation: 3364.000 ft above
Seabed / Ground Elevation: 3364.000 ft above
Magnetic Declination: 7.682 °
Total Gravity Field Strength: 998.4795mgn (9.80665 Based)
Total Magnetic Field Strength: 48155.139 nT
Magnetic Dip Angle: 59.849 °
Declination Date: February 28, 2014
Magnetic Declination Model: BGGM 2013
North Reference: Grid North
Grid Convergence Used: 0.0321 °
Total Corr Mag North->Grid North: 7.6499 °
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 (ft/100ft)
SHL Cimarex Hayduke 34 Federal Com #3H	0.00	0.00	300.00	0.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	N/A
	100.00	0.00	300.00	100.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	200.00	0.00	300.00	200.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	300.00	0.00	300.00	300.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	400.00	0.00	300.00	400.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	500.00	0.00	300.00	500.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	600.00	0.00	300.00	600.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	700.00	0.00	300.00	700.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	800.00	0.00	300.00	800.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	900.00	0.00	300.00	900.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1000.00	0.00	300.00	1000.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1100.00	0.00	300.00	1100.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1200.00	0.00	300.00	1200.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1300.00	0.00	300.00	1300.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1400.00	0.00	300.00	1400.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1500.00	0.00	300.00	1500.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1600.00	0.00	300.00	1600.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1700.00	0.00	300.00	1700.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1800.00	0.00	300.00	1800.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	1900.00	0.00	300.00	1900.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2000.00	0.00	300.00	2000.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2100.00	0.00	300.00	2100.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2200.00	0.00	300.00	2200.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2300.00	0.00	300.00	2300.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2400.00	0.00	300.00	2400.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2500.00	0.00	300.00	2500.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2600.00	0.00	300.00	2600.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2700.00	0.00	300.00	2700.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	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)
	2800.00	0.00	300.00	2800.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	2900.00	0.00	300.00	2900.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
Nudge 1.5"/100ft to 6.22°	3000.00	0.00	300.00	3000.00	0.00	0.00	0.00	394373.80	560044.70	N 32 5 3.12	W 104 16 22.55	0.00	0.00	0.00
	3100.00	1.50	300.00	3099.99	-0.53	0.65	-1.13	394374.45	560043.57	N 32 5 3.12	W 104 16 22.56	1.31	300.00	1.50
	3200.00	3.00	300.00	3199.91	-2.10	2.62	-4.53	394376.42	560040.17	N 32 5 3.14	W 104 16 22.60	5.23	300.00	1.50
	3300.00	4.50	300.00	3299.69	-4.73	5.89	-10.20	394379.69	560034.50	N 32 5 3.17	W 104 16 22.67	11.77	300.00	1.50
	3400.00	6.00	300.00	3399.27	-8.40	10.46	-18.12	394384.26	560026.58	N 32 5 3.22	W 104 16 22.76	20.92	300.00	1.50
Hold to KOP	3414.80	6.22	300.00	3413.99	-9.03	11.25	-19.49	394385.05	560025.22	N 32 5 3.23	W 104 16 22.77	22.50	300.00	1.50
	3500.00	6.22	300.00	3498.68	-12.74	15.87	-27.48	394389.67	560017.22	N 32 5 3.27	W 104 16 22.87	31.73	300.00	0.00
	3600.00	6.22	300.00	3598.09	-17.09	21.29	-36.87	394395.08	560007.83	N 32 5 3.33	W 104 16 22.98	42.57	300.00	0.00
	3700.00	6.22	300.00	3697.51	-21.44	26.71	-46.25	394400.50	559998.45	N 32 5 3.38	W 104 16 23.09	53.41	300.00	0.00
	3800.00	6.22	300.00	3796.92	-25.79	32.12	-55.64	394405.92	559989.06	N 32 5 3.43	W 104 16 23.19	64.25	300.00	0.00
	3900.00	6.22	300.00	3896.33	-30.15	37.54	-65.03	394411.34	559979.68	N 32 5 3.49	W 104 16 23.30	75.09	300.00	0.00
	4000.00	6.22	300.00	3995.74	-34.50	42.96	-74.41	394416.76	559970.29	N 32 5 3.54	W 104 16 23.41	85.92	300.00	0.00
	4100.00	6.22	300.00	4095.15	-38.85	48.38	-83.80	394422.18	559960.91	N 32 5 3.59	W 104 16 23.52	96.76	300.00	0.00
	4200.00	6.22	300.00	4194.56	-43.20	53.80	-93.19	394427.60	559951.52	N 32 5 3.65	W 104 16 23.63	107.60	300.00	0.00
	4300.00	6.22	300.00	4293.97	-47.55	59.22	-102.57	394433.01	559942.14	N 32 5 3.70	W 104 16 23.74	118.44	300.00	0.00
	4400.00	6.22	300.00	4393.38	-51.90	64.64	-111.96	394438.43	559932.75	N 32 5 3.76	W 104 16 23.85	129.28	300.00	0.00
	4500.00	6.22	300.00	4492.79	-56.25	70.06	-121.34	394443.85	559923.37	N 32 5 3.81	W 104 16 23.96	140.12	300.00	0.00
	4600.00	6.22	300.00	4592.20	-60.60	75.48	-130.73	394449.27	559913.98	N 32 5 3.86	W 104 16 24.07	150.95	300.00	0.00
	4700.00	6.22	300.00	4691.61	-64.95	80.90	-140.12	394454.69	559904.60	N 32 5 3.92	W 104 16 24.18	161.79	300.00	0.00
	4800.00	6.22	300.00	4791.03	-69.31	86.31	-149.50	394460.11	559895.21	N 32 5 3.97	W 104 16 24.28	172.63	300.00	0.00
	4900.00	6.22	300.00	4890.44	-73.66	91.73	-158.89	394465.53	559885.83	N 32 5 4.02	W 104 16 24.39	183.47	300.00	0.00
	5000.00	6.22	300.00	4989.85	-78.01	97.15	-168.27	394470.94	559876.44	N 32 5 4.08	W 104 16 24.50	194.31	300.00	0.00
	5100.00	6.22	300.00	5089.26	-82.36	102.57	-177.66	394476.36	559867.06	N 32 5 4.13	W 104 16 24.61	205.14	300.00	0.00
	5200.00	6.22	300.00	5188.67	-86.71	107.99	-187.05	394481.78	559857.67	N 32 5 4.19	W 104 16 24.72	215.98	300.00	0.00
	5300.00	6.22	300.00	5288.08	-91.06	113.41	-196.43	394487.20	559848.29	N 32 5 4.24	W 104 16 24.83	226.82	300.00	0.00
	5400.00	6.22	300.00	5387.49	-95.41	118.83	-205.82	394492.62	559838.90	N 32 5 4.29	W 104 16 24.94	237.66	300.00	0.00
	5500.00	6.22	300.00	5486.90	-99.76	124.25	-215.20	394498.04	559829.52	N 32 5 4.35	W 104 16 25.05	248.50	300.00	0.00
	5600.00	6.22	300.00	5586.31	-104.11	129.67	-224.59	394503.46	559820.13	N 32 5 4.40	W 104 16 25.16	259.33	300.00	0.00
	5700.00	6.22	300.00	5685.72	-108.47	135.09	-233.98	394508.87	559810.75	N 32 5 4.45	W 104 16 25.27	270.17	300.00	0.00
	5800.00	6.22	300.00	5785.14	-112.82	140.51	-243.36	394514.29	559801.36	N 32 5 4.51	W 104 16 25.38	281.01	300.00	0.00
	5900.00	6.22	300.00	5884.55	-117.17	145.92	-252.75	394519.71	559791.97	N 32 5 4.56	W 104 16 25.48	291.85	300.00	0.00
	6000.00	6.22	300.00	5983.96	-121.52	151.34	-262.13	394525.13	559782.59	N 32 5 4.61	W 104 16 25.59	302.69	300.00	0.00
	6100.00	6.22	300.00	6083.37	-125.87	156.76	-271.52	394530.55	559773.20	N 32 5 4.67	W 104 16 25.70	313.53	300.00	0.00
	6200.00	6.22	300.00	6182.78	-130.22	162.18	-280.91	394535.97	559763.82	N 32 5 4.72	W 104 16 25.81	324.36	300.00	0.00
	6300.00	6.22	300.00	6282.19	-134.57	167.60	-290.29	394541.39	559754.43	N 32 5 4.78	W 104 16 25.92	335.20	300.00	0.00
	6400.00	6.22	300.00	6381.60	-138.92	173.02	-299.68	394546.80	559745.05	N 32 5 4.83	W 104 16 26.03	346.04	300.00	0.00
	6500.00	6.22	300.00	6481.01	-143.28	178.44	-309.07	394552.22	559735.66	N 32 5 4.88	W 104 16 26.14	356.88	300.00	0.00
	6600.00	6.22	300.00	6580.42	-147.63	183.86	-318.45	394557.64	559726.28	N 32 5 4.94	W 104 16 26.25	367.72	300.00	0.00
	6700.00	6.22	300.00	6679.83	-151.98	189.28	-327.84	394563.06	559716.89	N 32 5 4.99	W 104 16 26.36	378.55	300.00	0.00
	6800.00	6.22	300.00	6779.24	-156.33	194.70	-337.22	394568.48	559707.51	N 32 5 5.04	W 104 16 26.47	389.39	300.00	0.00
	6900.00	6.22	300.00	6878.66	-160.68	200.12	-346.61	394573.90	559698.12	N 32 5 5.10	W 104 16 26.58	400.23	300.00	0.00
	7000.00	6.22	300.00	6978.07	-165.03	205.53	-356.00	394579.32	559688.74	N 32 5 5.15	W 104 16 26.68	411.07	300.00	0.00
	7100.00	6.22	300.00	7077.48	-169.38	210.95	-365.38	394584.73	559679.35	N 32 5 5.21	W 104 16 26.79	421.91	300.00	0.00
	7200.00	6.22	300.00	7176.89	-173.73	216.37	-374.77	394590.15	559669.97	N 32 5 5.26	W 104 16 26.90	432.74	300.00	0.00
	7300.00	6.22	300.00	7276.30	-178.08	221.79	-384.15	394595.57	559660.58	N 32 5 5.31	W 104 16 27.01	443.58	300.00	0.00
	7400.00	6.22	300.00	7375.71	-182.44	227.21	-393.54	394600.99	559651.20	N 32 5 5.37	W 104 16 27.12	454.42	300.00	0.00
	7500.00	6.22	300.00	7475.12	-186.79	232.63	-402.93	394606.41	559641.81	N 32 5 5.42	W 104 16 27.23	465.26	300.00	0.00
	7600.00	6.22	300.00	7574.53	-191.14	238.05	-412.31	394611.83	559632.43	N 32 5 5.47	W 104 16 27.34	476.10	300.00	0.00
	7700.00	6.22	300.00	7673.94	-195.49	243.47	-421.70	394617.24	559623.04	N 32 5 5.53	W 104 16 27.45	486.93	300.00	0.00
	7800.00	6.22	300.00	7773.35	-199.84	248.89	-431.08	394622.66	559613.66	N 32 5 5.58	W 104 16 27.56	497.77	300.00	0.00
	7900.00	6.22	300.00	7872.76	-204.19	254.31	-440.47	394628.08	559604.27	N 32 5 5.63	W 104 16 27.67	508.61	300.00	0.00
	8000.00	6.22	300.00	7972.18	-208.54	259.72	-449.86	394633.50	559594.89	N 32 5 5.69	W 104 16 27.77	519.45	300.00	0.00

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)
	8100.00	6.22	300.00	8071.59	-212.89	265.14	-459.24	394638.92	559585.50	N 32 5 5.74	W 104 16 27.88	530.29	300.00	0.00
	8200.00	6.22	300.00	8171.00	-217.25	270.56	-468.63	394644.34	559576.11	N 32 5 5.80	W 104 16 27.99	541.13	300.00	0.00
	8300.00	6.22	300.00	8270.41	-221.60	275.98	-478.01	394649.76	559566.73	N 32 5 5.85	W 104 16 28.10	551.96	300.00	0.00
	8400.00	6.22	300.00	8369.82	-225.95	281.40	-487.40	394655.17	559557.34	N 32 5 5.90	W 104 16 28.21	562.80	300.00	0.00
	8500.00	6.22	300.00	8469.23	-230.30	286.82	-496.79	394660.59	559547.96	N 32 5 5.96	W 104 16 28.32	573.64	300.00	0.00
	8600.00	6.22	300.00	8568.64	-234.65	292.24	-506.17	394666.01	559538.57	N 32 5 6.01	W 104 16 28.43	584.48	300.00	0.00
	8700.00	6.22	300.00	8668.05	-239.00	297.66	-515.56	394671.43	559529.19	N 32 5 6.06	W 104 16 28.54	595.32	300.00	0.00
	8800.00	6.22	300.00	8767.46	-243.35	303.08	-524.94	394676.85	559519.80	N 32 5 6.12	W 104 16 28.65	606.15	300.00	0.00
	8900.00	6.22	300.00	8866.87	-247.70	308.50	-534.33	394682.27	559510.42	N 32 5 6.17	W 104 16 28.76	616.99	300.00	0.00
	9000.00	6.22	300.00	8966.29	-252.05	313.92	-543.72	394687.69	559501.03	N 32 5 6.22	W 104 16 28.87	627.83	300.00	0.00
	9100.00	6.22	300.00	9065.70	-256.41	319.33	-553.10	394693.10	559491.65	N 32 5 6.28	W 104 16 28.97	638.67	300.00	0.00
KOP, Build 12" DLS	9173.79	6.22	300.00	9139.05	-259.62	323.33	-560.03	394697.10	559484.72	N 32 5 6.32	W 104 16 29.05	646.67	300.00	0.00
	9200.00	5.37	269.58	9165.13	-260.04	324.03	-562.49	394697.80	559482.27	N 32 5 6.33	W 104 16 29.08	649.14	299.95	12.00
	9300.00	13.12	203.27	9263.97	-248.59	313.53	-571.68	394687.30	559473.07	N 32 5 6.22	W 104 16 29.19	652.01	298.74	12.00
	9400.00	24.55	191.37	9358.49	-216.92	282.63	-580.29	394656.40	559464.46	N 32 5 5.92	W 104 16 29.29	645.46	295.97	12.00
	9500.00	36.34	186.84	9444.56	-166.42	232.66	-587.94	394606.44	559456.81	N 32 5 5.42	W 104 16 29.38	632.30	291.59	12.00
	9600.00	48.22	184.32	9518.42	-99.29	165.82	-594.30	394539.61	559450.45	N 32 5 4.76	W 104 16 29.45	617.00	285.59	12.00
	9700.00	60.14	182.59	9576.85	-18.46	85.03	-599.09	394458.82	559445.67	N 32 5 3.96	W 104 16 29.51	605.09	278.08	12.00
	9800.00	72.07	181.24	9617.28	72.53	-6.18	-602.10	394367.62	559442.66	N 32 5 3.06	W 104 16 29.55	602.13	269.41	12.00
Build 4"/100ft DLS to LP	9824.50	75.00	180.95	9624.23	95.92	-29.67	-602.54	394344.13	559442.21	N 32 5 2.83	W 104 16 29.55	603.27	267.18	12.00
	9900.00	78.02	180.95	9641.84	169.01	-103.07	-603.75	394270.74	559441.00	N 32 5 2.10	W 104 16 29.57	612.49	260.31	4.00
	10000.00	82.02	180.95	9659.16	267.04	-201.52	-605.38	394172.30	559439.38	N 32 5 1.12	W 104 16 29.59	638.04	251.59	4.00
	10100.00	86.02	180.95	9669.58	366.04	-300.94	-607.02	394072.88	559437.79	N 32 5 0.14	W 104 16 29.61	677.52	243.63	4.00
LP	10200.00	90.02	180.95	9673.03	465.51	-400.85	-608.67	393972.99	559436.09	N 32 4 59.15	W 104 16 29.62	728.80	238.63	4.00
	10209.12	90.38	180.95	9673.00	474.60	-409.97	-608.82	393963.87	559435.94	N 32 4 59.06	W 104 16 29.63	733.99	238.04	4.00
	10300.00	90.38	180.95	9672.39	565.07	-500.83	-610.32	393873.01	559434.44	N 32 4 58.16	W 104 16 29.64	789.51	230.63	0.00
	10400.00	90.38	180.95	9671.72	664.63	-600.82	-611.97	393773.04	559432.79	N 32 4 57.17	W 104 16 29.66	857.60	225.53	0.00
	10500.00	90.38	180.95	9671.05	764.18	-700.80	-613.61	393673.06	559431.14	N 32 4 56.18	W 104 16 29.68	931.48	221.21	0.00
	10600.00	90.38	180.95	9670.38	863.74	-800.79	-615.26	393573.09	559429.49	N 32 4 55.19	W 104 16 29.70	1009.86	217.54	0.00
	10700.00	90.38	180.95	9669.70	963.30	-900.77	-616.91	393473.11	559427.84	N 32 4 54.21	W 104 16 29.72	1091.77	214.41	0.00
	10800.00	90.38	180.95	9669.03	1062.85	-1000.76	-618.56	393373.14	559426.19	N 32 4 53.22	W 104 16 29.74	1176.49	211.72	0.00
	10900.00	90.38	180.95	9668.36	1162.41	-1100.74	-620.21	393273.16	559424.54	N 32 4 52.23	W 104 16 29.76	1263.45	209.40	0.00
	11000.00	90.38	180.95	9667.69	1261.97	-1200.72	-621.87	393173.19	559422.89	N 32 4 51.24	W 104 16 29.78	1352.20	207.38	0.00
	11100.00	90.38	180.95	9667.02	1361.52	-1300.71	-623.52	393073.21	559421.24	N 32 4 50.25	W 104 16 29.80	1442.43	205.61	0.00
	11200.00	90.38	180.95	9666.35	1461.08	-1400.69	-625.17	392973.24	559419.59	N 32 4 49.26	W 104 16 29.82	1533.87	204.05	0.00
	11300.00	90.38	180.95	9665.68	1560.64	-1500.68	-626.82	392873.26	559417.94	N 32 4 48.27	W 104 16 29.84	1626.32	202.67	0.00
	11400.00	90.38	180.95	9665.00	1660.19	-1600.66	-628.47	392773.29	559416.29	N 32 4 47.28	W 104 16 29.86	1719.62	201.44	0.00
	11500.00	90.38	180.95	9664.33	1759.75	-1700.64	-630.12	392673.31	559414.64	N 32 4 46.29	W 104 16 29.88	1813.63	200.33	0.00
	11600.00	90.38	180.95	9663.66	1859.31	-1800.63	-631.77	392573.34	559412.99	N 32 4 45.30	W 104 16 29.90	1908.24	199.33	0.00
	11700.00	90.38	180.95	9662.99	1958.86	-1900.61	-633.42	392473.36	559411.34	N 32 4 44.31	W 104 16 29.92	2003.39	198.43	0.00
	11800.00	90.38	180.95	9662.32	2058.42	-2000.60	-635.08	392373.39	559409.68	N 32 4 43.32	W 104 16 29.94	2098.98	197.61	0.00
	11900.00	90.38	180.95	9661.65	2157.98	-2100.58	-636.73	392273.41	559408.03	N 32 4 42.33	W 104 16 29.96	2194.96	196.86	0.00
	12000.00	90.38	180.95	9660.98	2257.53	-2200.56	-638.38	392173.44	559406.38	N 32 4 41.34	W 104 16 29.98	2291.29	196.18	0.00
	12100.00	90.38	180.95	9660.31	2357.09	-2300.55	-640.03	392073.46	559404.73	N 32 4 40.35	W 104 16 30.00	2387.92	195.55	0.00
	12200.00	90.38	180.95	9659.64	2456.65	-2400.53	-641.68	391973.49	559403.08	N 32 4 39.36	W 104 16 30.02	2484.82	194.97	0.00
	12300.00	90.38	180.95	9658.97	2556.20	-2500.52	-643.34	391873.51	559401.42	N 32 4 38.38	W 104 16 30.04	2581.95	194.43	0.00
	12400.00	90.38	180.95	9658.30	2655.76	-2600.50	-644.99	391773.54	559399.77	N 32 4 37.39	W 104 16 30.06	2679.29	193.93	0.00
	12500.00	90.38	180.95	9657.63	2755.32	-2700.49	-646.64	391673.56	559398.12	N 32 4 36.40	W 104 16 30.08	2776.83	193.47	0.00
	12600.00	90.38	180.95	9656.96	2854.87	-2800.47	-648.30	391573.59	559396.46	N 32 4 35.41	W 104 16 30.10	2874.53	193.03	0.00
	12700.00	90.38	180.95	9656.29	2954.43	-2900.45	-649.95	391473.62	559394.81	N 32 4 34.42	W 104 16 30.12	2972.38	192.63	0.00
	12800.00	90.38	180.95	9655.61	3053.99	-3000.44	-651.60	391373.64	559393.16	N 32 4 33.43	W 104 16 30.14	3070.38	192.25	0.00
	12900.00	90.38	180.95	9654.94	3153.54	-3100.42	-653.26	391273.67	559391.50	N 32 4 32.44	W 104 16 30.16	3168.49	191.90	0.00
	13000.00	90.38	180.95	9654.27	3253.10	-3200.41	-654.91	391173.69	559389.85	N 32 4 31.45	W 104 16 30.18	3266.73	191.56	0.00

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 (ft/100ft)
	13100.00	90.38	180.95	9653.60	3352.66	-3300.39	-656.56	391073.72	559388.20	N 32 4 30.46	W 104 16 30.20	3365.06	191.25	0.00
	13200.00	90.38	180.95	9652.93	3452.21	-3400.37	-658.22	390973.74	559386.54	N 32 4 29.47	W 104 16 30.22	3463.49	190.96	0.00
	13300.00	90.38	180.95	9652.26	3551.77	-3500.36	-659.87	390873.77	559384.89	N 32 4 28.48	W 104 16 30.24	3562.01	190.68	0.00
	13400.00	90.38	180.95	9651.59	3651.33	-3600.34	-661.53	390773.79	559383.23	N 32 4 27.49	W 104 16 30.26	3660.61	190.41	0.00
	13500.00	90.38	180.95	9650.92	3750.88	-3700.33	-663.18	390673.82	559381.58	N 32 4 26.50	W 104 16 30.28	3759.28	190.16	0.00
	13600.00	90.38	180.95	9650.25	3850.44	-3800.31	-664.84	390573.84	559379.93	N 32 4 25.51	W 104 16 30.30	3858.03	189.92	0.00
	13700.00	90.38	180.95	9649.58	3950.00	-3900.29	-666.49	390473.87	559378.27	N 32 4 24.52	W 104 16 30.32	3956.83	189.70	0.00
	13800.00	90.38	180.95	9648.91	4049.56	-4000.28	-668.15	390373.89	559376.62	N 32 4 23.53	W 104 16 30.34	4055.69	189.48	0.00
	13900.00	90.38	180.95	9648.24	4149.11	-4100.26	-669.80	390273.92	559374.96	N 32 4 22.55	W 104 16 30.36	4154.61	189.28	0.00
	14000.00	90.38	180.95	9647.58	4248.67	-4200.25	-671.46	390173.94	559373.30	N 32 4 21.56	W 104 16 30.38	4253.58	189.08	0.00
	14100.00	90.38	180.95	9646.91	4348.23	-4300.23	-673.11	390073.97	559371.65	N 32 4 20.57	W 104 16 30.40	4352.59	188.90	0.00
	14200.00	90.38	180.95	9646.24	4447.78	-4400.21	-674.77	389973.99	559369.99	N 32 4 19.58	W 104 16 30.42	4451.65	188.72	0.00
	14300.00	90.38	180.95	9645.57	4547.34	-4500.20	-676.42	389874.02	559368.34	N 32 4 18.59	W 104 16 30.44	4550.75	188.55	0.00
	14400.00	90.38	180.95	9644.90	4646.90	-4600.18	-678.08	389774.04	559366.68	N 32 4 17.60	W 104 16 30.46	4649.89	188.39	0.00
	14500.00	90.38	180.95	9644.23	4746.46	-4700.17	-679.74	389674.07	559365.03	N 32 4 16.61	W 104 16 30.48	4749.06	188.23	0.00
	14600.00	90.38	180.95	9643.56	4846.01	-4800.15	-681.39	389574.09	559363.37	N 32 4 15.62	W 104 16 30.50	4848.27	188.08	0.00
	14700.00	90.38	180.95	9642.89	4945.57	-4900.13	-683.05	389474.12	559361.71	N 32 4 14.63	W 104 16 30.52	4947.51	187.94	0.00
	14800.00	90.38	180.95	9642.22	5045.13	-5000.12	-684.71	389374.14	559360.06	N 32 4 13.64	W 104 16 30.54	5046.78	187.80	0.00
	14900.00	90.38	180.95	9641.55	5144.68	-5100.10	-686.36	389274.17	559358.40	N 32 4 12.65	W 104 16 30.56	5146.08	187.66	0.00
	15000.00	90.38	180.95	9640.88	5244.24	-5200.09	-688.02	389174.19	559356.74	N 32 4 11.66	W 104 16 30.58	5245.41	187.54	0.00
	15100.00	90.38	180.95	9640.21	5343.80	-5300.07	-689.68	389074.22	559355.08	N 32 4 10.67	W 104 16 30.60	5344.75	187.41	0.00
	15200.00	90.38	180.95	9639.54	5443.36	-5400.05	-691.34	388974.24	559353.43	N 32 4 9.68	W 104 16 30.62	5444.13	187.30	0.00
	15300.00	90.38	180.95	9638.87	5542.91	-5500.04	-692.99	388874.27	559351.77	N 32 4 8.69	W 104 16 30.64	5543.52	187.18	0.00
	15400.00	90.38	180.95	9638.21	5642.47	-5600.02	-694.65	388774.30	559350.11	N 32 4 7.71	W 104 16 30.66	5642.94	187.07	0.00
	15500.00	90.38	180.95	9637.54	5742.03	-5700.01	-696.31	388674.32	559348.45	N 32 4 6.72	W 104 16 30.68	5742.38	186.96	0.00
	15600.00	90.38	180.95	9636.87	5841.58	-5799.99	-697.97	388574.35	559346.80	N 32 4 5.73	W 104 16 30.70	5841.84	186.86	0.00
	15700.00	90.38	180.95	9636.20	5941.14	-5899.97	-699.63	388474.37	559345.14	N 32 4 4.74	W 104 16 30.72	5941.31	186.76	0.00
	15800.00	90.38	180.95	9635.53	6040.70	-5999.96	-701.28	388374.40	559343.48	N 32 4 3.75	W 104 16 30.74	6040.80	186.67	0.00
	15900.00	90.38	180.95	9634.86	6140.26	-6099.94	-702.94	388274.42	559341.82	N 32 4 2.76	W 104 16 30.76	6140.31	186.57	0.00
	16000.00	90.38	180.95	9634.19	6239.81	-6199.93	-704.60	388174.45	559340.16	N 32 4 1.77	W 104 16 30.78	6239.84	186.48	0.00
	16100.00	90.38	180.95	9633.53	6339.37	-6299.91	-706.26	388074.47	559338.50	N 32 4 0.78	W 104 16 30.80	6339.38	186.40	0.00
Cimarex Hayduke 34 Federal Com #3H - PBHL	16178.59	90.38	180.95	9633.00	6417.62	-6378.49	-707.57	387995.90	559337.20	N 32 4 0.00	W 104 16 30.81	6417.62	186.33	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	9209.680	1/100.000	30.000	30.000	SLB_MWD-POOR	Original Borehole / Cimarex Hayduke 34 Federal Com #3H
	9209.680	16096.432	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Hayduke 34 Federal Com #3H