

Report Date: 4/3/2019

Bedrock Aquifer Evaluation Determination Tool

Denver Basin Aquifer - Specific Location Determination Tool

Applicant: PDC - CBO 11-32 (API 123-24082)

Receipt No:

Evaluated By:

Location: NW 1/4 of NW 1/4 of Sec. 32, T.7N, R.63W. (665 NSL, 855 WSL)

Basin Designation:

Ground Surface Elevation: 4730 Feet **Number of Acres:** 160

Aquifer	Elevation (ft)		Net Sand	DEPTH (ft)		ANNUAL APRPROP. (A-F)	STATUS
	Bot	Top		Bot	Top		
Upper Dawson							
Lower Dawson							
Denver							
Upper Arapahoe							
Lower Arapahoe							
Laramie-Fox Hills							

Plug and Abandon Surface Casing Check

Operator	PDC					
API or Doc #	CBO 11-32 (API 123-24082)			OG GR	WW GR	Elev Diff
SB5 / Base of Fox Hills	480	L-FH		4730	4250	
Deepest Water Well Within One Mile / number of wells	620	/	56	4730	4725	5
Deepest Water Well Within Two Miles / number of wells		/				
Sussex / Shannon Production within one mile	N	/	N			
Operator Existing Surface Casing Depth	720					
Production Casing to be pulled	0					
Required aquifer protection depth in this well	620	5	50	675		

Water Wells Selected From Map
Filter Results by Depth

620 ft
56 wells

WELL DESCRIPTION	LOCATION	WELL INFORMATION		
		Depth	Top Perf	Bottom Perf Aquifer
Receipt=0452944, Permit=222962--- SMITH, SCOTT A	NWSW 28 7.0 N -63.0 W	0	340	406 ALL UNNAMED AQUIFERS
Receipt=3604700, Permit=269731--- MARTIN, KEVIN	NWSW 28 7.0 N -63.0 W	406	340	406 ALL UNNAMED AQUIFERS
Receipt=3666720A, Permit=296024--- BROWN WILLIAM S JR & JUDITH	SWSW 28 7.0 N -63.0 W	400	320	380 ALL UNNAMED AQUIFERS
Receipt=3675439, Permit=301992--- GARCIA-ORTEGA, JOSE A.	SWSW 28 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0445837, Permit=218472--- BENNER SEACIL & MEARLYN	SWSW 28 7.0 N -63.0 W	400	320	380 ALL UNNAMED AQUIFERS
Receipt=0510102, Permit=250481--- GRIMALDO, RAYMOND	SWNE 29 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0034469, Permit=34469-MH-- TILL, BRU	NW 29 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0436841, Permit=214462--- FAULK, CODY M	SWNW 29 7.0 N -63.0 W	360	180	340 ALL UNNAMED AQUIFERS
Receipt=0428651, Permit=209656--- ERICKSON, BRAD	NESE 29 7.0 N -63.0 W	340	160	340 ALL UNNAMED AQUIFERS
Receipt=0354422, Permit=171069--- FLORES MARK & KAREN	SESE 29 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0488870B, Permit=240331--- MENDOZA, FRONCISCO	NESW 29 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0488870A, Permit=240330--- MENDOZA, FRANCISCO	NWSW 29 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0441350, Permit=216725--- JACKSON JERRY M & GAIL O	SWSW 29 7.0 N -63.0 W	300	250	290 ALL UNNAMED AQUIFERS
Receipt=3679081B, Permit=305113--- KINDSFATHER, MIKE	SENE 30 7.0 N -63.0 W	360	0	0 ALL UNNAMED AQUIFERS
Receipt=3679081A, Permit=305112--- FRIIS-HANSEN, ELAINA M.	SWNE 30 7.0 N -63.0 W	360	0	0 ALL UNNAMED AQUIFERS
Receipt=3679081A, Permit=305112--- FRIIS-HANSEN, CHARLES F.	SWNE 30 7.0 N -63.0 W	360	0	0 ALL UNNAMED AQUIFERS
Receipt=3617469, Permit=274357--- MORAN, KARL	SWNE 30 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0431765, Permit=211555--- MORAN, KARL	SWNE 30 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0478741, Permit=235797--- KIMSEY RICHARD & TRACY	NESE 30 7.0 N -63.0 W	0	0	0 ALL UNNAMED AQUIFERS
Receipt=0467958, Permit=229852--- KIMSEY RICHARD & TRACY	NWSE 30 7.0 N -63.0 W	400	220	400 ALL UNNAMED AQUIFERS
Receipt=0459123, Permit=225846--- KELLY RICHARD E & SHEILA R	SESE 30 7.0 N -63.0 W	240	190	230 ALL UNNAMED AQUIFERS
Receipt=0461182, Permit=209270--A-- PETERSON ROCKY & SUSAN	NENE 31 7.0 N -63.0 W	425	289	399 ALL UNNAMED AQUIFERS
Receipt=0427798C, Permit=209270--- PETERSON ROCKKY C & SUSAN M	NENE 31 7.0 N -63.0 W	300	250	290 ALL UNNAMED AQUIFERS

Receipt=0427798D, Permit=209267---	SENE 31	300	259	290 ALL UNNAMED AQUIFERS
MOORE JAMES G & CANDANCE D	7.0 N -63.0 W			
Receipt=0504307, Permit=249734---	NENW 31	300	220	300 ALL UNNAMED AQUIFERS
SPAUR BROTHERS FARMS LLC	7.0 N -63.0 W			
Receipt=0475938, Permit=236419---	SENW 31	0	0	0 ALL UNNAMED AQUIFERS
ZAHOUREK CONSERVATORY LLC	7.0 N -63.0 W			
Receipt=3658394, Permit=290257---	SENW 31	0	0	0 ALL UNNAMED AQUIFERS
SPAUR BROTHERS	7.0 N -63.0 W			
Receipt=0444181A, Permit=217689---	NENE 32	180	120	180 ALL UNNAMED AQUIFERS
LOVELACE, DONALD	7.0 N -63.0 W			
Receipt=0036166, Permit=36166-MH--	NENE 32	0	0	0 ALL UNNAMED AQUIFERS
HEISTERMANN, DEBBIE	7.0 N -63.0 W			
Receipt=0036185, Permit=36185-MH--	NENE 32	0	0	0 ALL UNNAMED AQUIFERS
DONALD, LOVELACE	7.0 N -63.0 W			
Receipt=0036165, Permit=36165-MH--	NWNE 32	0	0	0 ALL UNNAMED AQUIFERS
HEISTERMANN, DEBBIE	7.0 N -63.0 W			
Receipt=0444181B, Permit=217688---	NWNE 32	340	140	340 ALL UNNAMED AQUIFERS
LOVELACE, DONALD	7.0 N -63.0 W			
Receipt=0443912, Permit=217554---	SENE 32	340	120	320 ALL UNNAMED AQUIFERS
WRIGHT, WAYNE	7.0 N -63.0 W			
Receipt=3667334, Permit=296986---	SENE 32	400	320	400 ALL UNNAMED AQUIFERS
GRABER, BRIAN	7.0 N -63.0 W			
Receipt=3684003, Permit=308086---	SENE 32	400	0	0 ALL UNNAMED AQUIFERS
WRIGHT, MICHAEL	7.0 N -63.0 W			
Receipt=3684003, Permit=308086---	SENE 32	400	0	0 ALL UNNAMED AQUIFERS
WRIGHT, DEBRA	7.0 N -63.0 W			
Receipt=3684812A, Permit=308494---	SENE 32	400	0	0 ALL UNNAMED AQUIFERS
GRABER, BRIAN	7.0 N -63.0 W			
Receipt=3684812A, Permit=308494---	SENE 32	400	0	0 ALL UNNAMED AQUIFERS
GRABER, VICKIE	7.0 N -63.0 W			
Receipt=3684812B, Permit=308495---	SENE 32	0	0	0 ALL UNNAMED AQUIFERS
RAWLINGS, JAMES	7.0 N -63.0 W			
Receipt=9062453, Permit=17536---	NENW 32	0	0	0 ALL UNNAMED AQUIFERS
JONES, CHARLES	7.0 N -63.0 W			
Receipt=3604758, Permit=269438---	NWNW 32	260	140	260 ALL UNNAMED AQUIFERS
ROTHE, KEVIN	7.0 N -63.0 W			
Receipt=0438281, Permit=214928---	SENW 32	220	150	210 ALL UNNAMED AQUIFERS
KLEIN RICH & JULIE	7.0 N -63.0 W			
Receipt=0464707, Permit=214928--A--	SENW 32	433	376	396 ALL UNNAMED AQUIFERS
KLEIN RICH & JULIE	7.0 N -63.0 W			
Receipt=3600608, Permit=267757---	SWNW 32	220	150	210 LARAMIE FOX HILLS
PERINO, VALERIE	7.0 N -63.0 W			
Receipt=0440958, Permit=215849---	NESE 32	343	256	295 ALL UNNAMED AQUIFERS
TOMKAT PROPERTIES LLC	7.0 N -63.0 W			
Receipt=0465975, Permit=232914---	SESE 32	350	160	350 ALL UNNAMED AQUIFERS
KARNS ANN M & DAVID L	7.0 N -63.0 W			
Receipt=9064459, Permit=45691---	SESE 32	0	0	0 ALL UNNAMED AQUIFERS
ANDERSON, MARTIN	7.0 N -63.0 W			
Receipt=3679604, Permit=305545---	SWSE 32	300	80	290 ALL UNNAMED AQUIFERS
BUNT, DEBORAH	7.0 N -63.0 W			
Receipt=0465977, Permit=229632---	SWSE 32	300	80	290 ALL UNNAMED AQUIFERS

COALSON JULIANA & KOCH DWIGHT Receipt=0476957, Permit=229632--A--	7.0 N -63.0 W SWSE 32	0	0	0 LARAMIE FOX HILLS
COALSON JULIANA & DWIGHT KOCH Receipt=0477386, Permit=233872---	7.0 N -63.0 W SWSE 32	620	0	0 ALL UNNAMED AQUIFERS
COALSON JULIANNA & DWIGHT KOCH Receipt=0432538, Permit=212078---	7.0 N -63.0 W NWSW 32	343	133	303 ALL UNNAMED AQUIFERS
FAULK DAMON K & ANGELA S Receipt=0424300, Permit=207107---	7.0 N -63.0 W SESW 32	300	210	290 ALL UNNAMED AQUIFERS
MILLER, ROBIN Receipt=0302696, Permit=35392-F-R--	7.0 N -63.0 W SWSW 32	280	120	280 LARAMIE FOX HILLS
JORDAN DOUGLAS & MARIA Receipt=0302696A, Permit=35392-F--	7.0 N -63.0 W SWSW 32	0	0	0 LARAMIE FOX HILLS
CECIL, MYRTLE Receipt=0313395, Permit=157386---	7.0 N -63.0 W SWNW 33	0	0	0 ALL UNNAMED AQUIFERS
INTERMILL, LARRY	7.0 N -63.0 W			

Oil and Gas Wells Selected

Filter Results by Formation

WELL DESCRIPTION	LOCATION ID	LOCATION	WELL INFORMATION					
05-123-23904, WILSON 24-30 PDC ENERGY INC	306043	SESW 30 7N -63W (6) 40.539250, -104.482030	Sidetrack	Formation 0 CODL	Top 6970	Bottom 6980	TD 7148	Status PR
05-123-23924, WILSON 23-30 PDC ENERGY INC	306057	NESW 30 7N -63W (6) 40.542890, -104.482060	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6705 6705 6982	Bottom 6992 6820 6992	TD 7181 7181 7181	Status PR CM CM
05-123-26219, MORAN 30-14 NOBLE ENERGY INC	310315	SENE 30 7N -63W (6) 40.547170, -104.472720	Sidetrack	Formation 0 CODL	Top 6828	Bottom 6838	TD 7160	Status SI
05-123-26220, MORAN 30-13 NOBLE ENERGY INC	310316	SWNE 30 7N -63W (6) 40.546580, -104.477460	Sidetrack	Formation	Top	Bottom	TD	Status AL
05-123-33024, Wilson 24-30H PDC ENERGY INC	421713	SESW 30 7N -63W (6) 40.537805, -104.484350	Sidetrack	Formation 0 NBRR	Top 7201	Bottom 11312	TD 11312	Status PR
05-123-24928, HEINZE 31-34 GREAT WESTERN OPERATING COMPANY LLC	306569	SWSE 31 7N -63W (6) 40.524640, -104.476940	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6614 6894	Bottom 6748 6905	TD 7138 7138 7138	Status SI CM CM
05-123-24929, HEINZE 31-44 GREAT WESTERN OPERATING COMPANY LLC	306570	SESE 31 7N -63W (6) 40.524860, -104.472330	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6604 6604 6894	Bottom 6904 6736 6904	TD 7073 7073 7073	Status SI CM CM
05-123-27283, ZAHOUREK 31-31 PDC ENERGY INC	302166	NWNE 31 7N -63W (6) 40.535670, -104.476690	Sidetrack	Formation 0 CODL	Top 6975	Bottom 6983	TD 7174	Status AB
05-123-27284, ZAHOUREK 11-31 PDC ENERGY INC	302167	NWNW 31 7N -63W (6) 40.535670, -104.486110	Sidetrack	Formation 0 CODL	Top 6953	Bottom 6961	TD 7140	Status SI
05-123-27285, ZAHOUREK 21-31 PDC ENERGY INC	302168	NENW 31 7N -63W (6) 40.535610, -104.482690	Sidetrack	Formation 0 CODL	Top 6962	Bottom 6972	TD 7173	Status SI
05-123-27286, ZAHOUREK 32-31 PDC ENERGY INC	302169	SWNE 31 7N -63W (6) 40.532500, -104.476690	Sidetrack	Formation 0 CODL	Top 6954	Bottom 6962	TD 7137	Status SI
05-123-27287, ZAHOUREK 41-31 PDC ENERGY INC	302170	NENE 31 7N -63W (6) 40.535140, -104.473360	Sidetrack	Formation 0 CODL	Top 6945	Bottom 6953	TD 7146	Status AB
05-123-27288, ZAHOUREK 22-31 PDC ENERGY INC	302171	SENW 31 7N -63W (6) 40.532390, -104.482610	Sidetrack	Formation 0 CODL	Top 6931	Bottom 6941	TD 7141	Status SI
05-123-27289, ZAHOUREK 42-31 PDC ENERGY INC	302172	SENE 31 7N -63W (6) 40.532580, -104.473390	Sidetrack	Formation 0 CODL	Top 6940	Bottom 6948	TD 7146	Status SI
05-123-29728, HEINZE 31-33 GREAT WESTERN OPERATING COMPANY LLC	302747	NWSE 31 7N -63W (6) 40.528330, -104.477140	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6628 6628 6920	Bottom 6930 6762 6930	TD 7087 7087 7087	Status SI CM CM
05-123-29744, Heinze 31-54 GREAT WESTERN OPERATING COMPANY LLC	302760	SESE 31 7N -63W (6) 40.526470, -104.474800	Sidetrack	Formation	Top	Bottom	TD	Status AL
05-123-29746, HEINZE 31-43 GREAT WESTERN OPERATING COMPANY LLC	302762	NESE 31 7N -63W (6) 40.528170, -104.472560	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6635 6635 6918	Bottom 6926 6770 6926	TD 7090 7090 7090	Status PR CM CM
05-123-29758, HEINZE 31-23 GREAT WESTERN OPERATING COMPANY LLC	302764	NESW 31 7N -63W (6) 40.528250, -104.482170	Sidetrack	Formation 0 NB-CD 0 NBRR 0 CODL	Top 6623 6623 6912	Bottom 6922 6752 6922	TD 7082 7082 7082	Status SI CM CM
05-123-34596, SPAUR 31V-204 PDC ENERGY INC	426149	NENE 31 7N -63W (6) 40.534040, -104.471230	Sidetrack	Formation 0 N-COM	Top	Bottom	TD	Status SI
05-123-35445, Spaur 31V-214 PDC ENERGY INC	426149	NENE 31 7N -63W (6) 40.534130, -104.471230	Sidetrack	Formation 0 N-COM	Top	Bottom	TD	Status PR
05-123-35446, Spaur 31W-214 PDC ENERGY INC	426149	NENE 31 7N -63W (6) 40.533880, -104.471230	Sidetrack	Formation 0 N-COM 0 N-COM1	Top	Bottom	TD	Status CM CM
05-123-35546, Spaur 31V-404	426149	NENE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status

PDC ENERGY INC	40.533960, -104.471230		0 N-COM				CM
05-123-38693, Spaur Brothers EH 31-222HN	435635 NESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.529600, -104.471103		0 N-COM				PR
05-123-38694, Spaur Brothers EH 31-259HC	435635 NESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.529519, -104.471103		0 N-COM				SI
05-123-38695, Spaur Brothers EH 31-219HN	435635 NESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.529683, -104.471103		0 N-COM				PR
05-123-38696, Spaur Brothers EH 31-262HN	435635 NESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.529436, -104.471103		0 N-COM				PR
05-123-38746, Spaur Brothers EH 31-382HN	435708 SESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.523553, -104.471031		0 N-COM			1070	AB
05-123-38747, Spaur Brothers EH 31-339HC	435708 SESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.523717, -104.471031		0 N-COM			1070	AB
05-123-38748, Spaur Brothers EH 31-339HN	435708 SESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.523797, -104.471033		0 N-COM			1070	AB
05-123-38749, Spaur Brothers EH 31-379HN	435708 SESE 31 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
GREAT WESTERN OPERATING COMPANY LLC	40.523633, -104.471031		0 N-COM			1070	AB
05-123-24017, CBO 23-32	306122 NESW 32 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
PDC ENERGY INC	40.528420, -104.462470		0 NB-CD	6690	6862	7062	AB
			0 NBRR	6690	6706	7062	CM
			0 CODL	6852	6862	7062	CM
			Formation	Top	Bottom	TD	Status
05-123-24018, CBO 13-32	306123 NWSW 32 7N -63W (6)	Sidetrack	0 CODL	6876	6884	7062	AB
PDC ENERGY INC	40.528360, -104.467250		Formation	Top	Bottom	TD	Status
05-123-24019, CBO 21-32	306124 NENW 32 7N -63W (6)	Sidetrack	0 CODL	6882	6890	7094	SI
PDC ENERGY INC	40.535170, -104.463830		Formation	Top	Bottom	TD	Status
05-123-24020, CBO 12-32	306125 SWNW 32 7N -63W (6)	Sidetrack	0 CODL	6893	6901	7094	AB
PDC ENERGY INC	40.531500, -104.467920		Formation	Top	Bottom	TD	Status
05-123-24021, CBO 14-32	306126 SWSW 32 7N -63W (6)	Sidetrack	0 NBRR	6586	6708	7062	SI
PDC ENERGY INC	40.524690, -104.467220		Formation	Top	Bottom	TD	Status
05-123-24022, CBO 22-32	306127 SENW 32 7N -63W (6)	Sidetrack	0 CODL	6870	6878	7062	AB
PDC ENERGY INC	40.532420, -104.463750		Formation	Top	Bottom	TD	Status
05-123-24060, CBO 24-32	306148 SESW 32 7N -63W (6)	Sidetrack	0 CODL	6850	6858	7036	SI
PDC ENERGY INC	40.524750, -104.462470		Formation	Top	Bottom	TD	Status
05-123-24082, CBO 11-32	306156 NWNW 32 7N -63W (6)	Sidetrack	0 CODL	6895	6903	7094	SI
PDC ENERGY INC	40.535690, -104.467280		Formation	Top	Bottom	TD	Status
05-123-24631, WRIGHT 32-13	306427 SWNE 32 7N -63W (6)	Sidetrack					AL
NOBLE ENERGY INC	40.532550, -104.458370						
05-123-24766, TURMAN 32-42	306483 NWSE 32 7N -63W (6)	Sidetrack	Formation	Top	Bottom	TD	Status
NOBLE ENERGY INC	40.527890, -104.458150		0 NB-CD	6670	6860	7005	PR
			0 NBRR	6670	6692	7005	CM
			0 CODL	6850	6860	7005	CM
			Formation	Top	Bottom	TD	Status
05-123-26311, LOVELACE 32-12	310366 NWNW 32 7N -63W (6)	Sidetrack	0 CODL	6892	6902	7044	SI
NOBLE ENERGY INC	40.535680, -104.458380		Formation	Top	Bottom	TD	Status
05-123-33431, Armknecht 14-32H	422872 SWSW 32 7N -63W (6)	Sidetrack	0 NBRR	7404	11110	11110	PR
PDC ENERGY INC	40.523470, -104.466170		Formation	Top	Bottom	TD	Status
05-123-33602, Wright PC AC32-07	423467 SWNE 32 7N -63W (6)	Sidetrack					AL
NOBLE ENERGY INC	40.532050, -104.458350		Formation	Top	Bottom	TD	Status
05-123-34517, WAHLERT AC 33-66HN	425782 NWNW 33 7N -63W (6)	Sidetrack	0 NBRR	7420	10997	11125	PR
NOBLE ENERGY INC	40.535690, -104.450250		Formation	Top	Bottom	TD	Status
05-123-34519, WAHLERT AC 33-68HN	425782 NWNW 33 7N -63W (6)	Sidetrack	0 NBRR	7109	11010	11110	PR
NOBLE ENERGY INC	40.535790, -104.450250		Formation	Top	Bottom	TD	Status
05-123-34522, WAHLERT AC 33-67HN	425782 NWNW 33 7N -63W (6)	Sidetrack	0 NBRR	7366	11140	11226	PR
NOBLE ENERGY INC	40.535590, -104.450240						